

GENERAL VIEW
OF THE
AGRICULTURE
OF THE
COUNTIES
OF
NAIRN AND MORAY;
WITH
OBSERVATIONS ON THE MEANS OF THEIR IMPROVEMENT.

DRAWN UP FOR THE CONSIDERATION OF
THE BOARD OF AGRICULTURE
AND INTERNAL IMPROVEMENT.

BY
THE REV. WILLIAM LESLIE,
MINISTER OF THE PARISH OF ST. ANDREW'S, STRANBRYD.

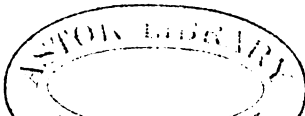
Break up your fallow ground, sow not among thorns.—Jer. iv. 3.
In the morning sow thy seed, and in the evening, withhold not thy
hand.—Ecc. xi. 6.
Be thou diligent to know the state of thy flocks, and look to thy herds.—
Prov. of Sol. xxvii. 23.

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It is proper at the same time to add, that the Board does not consider itself responsible for every statement contained in the Reports thus reprinted, and that it will thankfully acknowledge any additional information which may still be communicated.

N. B. *Letters to the Board, may be addressed to Sir JOHN SINCLAIR, Bart. M.P. the President, No. 32, Sackville-Street, Piccadilly, London.*

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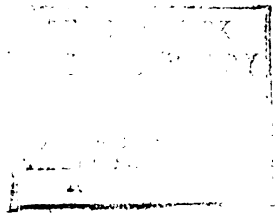
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High Street



London



H S

AGRICULTURAL SURVEY
OF THE
COUNTIES
OF
NAIRN AND MORAY.

INTRODUCTORY OBSERVATIONS.

IT is an important object of an agricultural survey, by exhibiting the condition of the inhabitants of the district, to discover the means, by which that condition may be improved. It is not proposed, however, in this place, to trace the more ancient history of the province to which this report relates; and, indeed, the topographical description of the district by the ancient historians being only general, merits notice, merely as exhibiting the estimation in which it was regarded by our ancestors. Fordun gives us no geographical description of it. The account by Buchanan, comprehended almost in a sentence, is merely copied from Boetius, with only a little improvement in the arrangement and stile. His contemporary, the Bishop of Ross, having frequently travelled over the country, and being himself acquainted with it, hath, of course,

given the most distinct and particular description of the district.

“ It is a country,” he hath said, “ celebrated among
 “ all others among us for its amenity, for it is plain,
 “ not fenny, and extremely pleasant by its numerous
 “ groves, fragrant herbs, meadows, wheat, and all
 “ kinds of grain, fruit-bearing gardens, and its bor-
 “ dering coast. Fogs and rain being much seldomer
 “ than elsewhere, the air here is highly salubrious,
 “ and on this account the number of chieftains is so
 “ great. Here the land, gradually falling back into a
 “ deep gulph, discharges five rivers into the German
 “ Ocean; the Ness, the Nairn, the Findern, the
 “ Lossy, and the Spey; in all of which, indeed, great
 “ plenty of salmon are caught, the greatest number
 “ however in the Spey; nor that commodity at the
 “ very mouth only, but it is drawn every where
 “ upwards, to the distance of 60 miles, even to the
 “ lake itself from whence the river flows. On ac-
 “ count of the fertility of the soil, and great mild-
 “ ness of the climate, are to be seen on both its banks
 “ the lofty castles of the nobility, such as the Earls
 “ of Huntly, of Rothes, of Athol, and of Moray,
 “ and some distinguished Fortalices; also, of a few
 “ squires: here the Squire of Grant, with his nu-
 “ merous clan in Strathspey, that is the valley of
 “ Spey; there, towards the source itself and the lake
 “ of Spey in Badenough, and other smaller districts,
 “ you meet the clan Chattan and their chieftain, whom
 “ they title Mac Intosh. Moreover, Moray contains
 “ a lake of fresh water, denominated Spynie, great-
 “ ly frequented by swans, in which there is a certain
 “ uncommon herb, with which the swans are greatly
 “ allured,

“ allured, we call it “ *the Ullerioire;*” it is more-
 “ over of this kind, that when it hath fully establish-
 “ ed its roots, it spreads itself so widely, that in
 “ my own memory, it hath extended its basis so far,
 “ as to have rendered five miles of the lake itself of
 “ Spynie, where salmon formerly abounded, alto-
 “ gether a shallow. Upon its green bank is placed
 “ the Episcopal Castle of Moray, which is also a
 “ most elegant Palace. Not far from the mouth of
 “ the river Spey is the handsome town of Elgin,
 “ much celebrated for the resort of merchants: it
 “ is decorated by the Episcopal Cathedral, with the
 “ College of Canons, a most splendid temple, in-
 “ ferior to none among us. Moray is besides adorn-
 “ ed by various monasteries, of which the principal
 “ is Pluscardine, of the fraternity of Cluny, and Kin-
 “ loss, of the order of the Cistertians. Not far dis-
 “ tant from thence is the town of Forres, not indeed
 “ magnificent, but inferior to no other in the amenity
 “ of situation. There is moreover in Moray a royal
 “ castle, called Darnway, of distinguished celebrity,
 “ where the chief residence of the Earl of Moray
 “ used to be.”

It being presumed, that the state of the agriculture
 of this quarter of the empire may be interesting to
 some English readers, it has been deemed proper to
 mention a few objects, with a degree of specialty,
 which is not requisite for the information of Scotch
 readers. English readers also being in general un-
 informed of the value of the measures and weights
 of Scotland, while Scotch readers are equally ac-
 quainted with those of both kingdoms, the English
 superficial measures, the Winchester bushel, and

INTRODUCTORY OBSERVATIONS.

the common pound weight of 16 ounces, have been in every case adopted, to which all statements and calculations have been reduced, where any of the Scotch standard weights' or measures are not specified.

CHAP. I.

GEOGRAPHICAL STATE AND CIRCUMSTANCES.

SECT. I.—SITUATION AND EXTENT.

IN a geographical point of view, the river Spey forms such a conspicuous boundary, that although one farm, politically appertaining to the county of Banff, is on the western side, and several in the same relation to the county of Moray are on the east, or Banffshire side of that river, yet in the district under survey, the Spey, with the greatest propriety, may be accounted its boundary on the east, from the coast inward to Crag-Elachy, where it meets the county of Inverness upon the south. The county of Inverness stretches down, from the sources of the Spey, farther on the eastern, than on the western side, yet the county of Moray encroaches there on the shire of Inverness also, by a considerable proportion of the parish of Abernethy, which is more than counterbalanced by an extent of the parish of Cromdale, comprehending Castle Grant and its decorated environs, stretched across the river and breaking in upon the county of Moray on the western side.

From Crag-Elachy, the counties of Moray and Nairn skirt upon that of Inverness, by limits in general undefined, along the mountainous desert, where the parishes, similar to those of Strathspey, are unequally allotted in the counties of Nairn and Inverness to the

shore of the Frith, where the parish of Arderseer borders with that of Nairn, about half way between the town of Fort George.

The Moray Frith, along the coast of the counties of Nairn and Moray to the influx of the Spey, forms the boundary of the district upon the north, by which the whole might be comprehended in an equilateral triangle of about 40 miles, equal to a superficies of about 800 square miles, containing 407,200 Scots, or 512,000 English acres. It is situated between the 57° and 58° of north latitude; the longitude at the mouth of the Spey is 3° degrees 6 minutes west.



SECT. 2.—DIVISIONS.

In the district surveyed in this undertaking it may be proper to notice, first the physical division, namely, of the low country and the high. The low country, both of Moray and Nairn, may be described as a large plain, extending from the Spey westward, between the shore and a range of mountains, for the whole length of the district, nearly 40 miles, but of unequal breadth from about 5 to about 12 miles, measured at right angles from the mountain to the shore. This plain, however, is diversified over its whole extent, by short ridges of lower hills, in general nearly parallel to the shore; the mean breadth may be estimated at 7 miles. Within the range of the mountain district, the country may be described as hilly; the arable land, in general, hanging upon the acclivities of the valleys, or spread out in narrow plains, upon the banks of the streams, which wind among the hills, the wideness of the valley bearing

DIVISIONS.

bearing a respective proportion to the largeness of the river. There are many plains on the course of the Spey, and some on the tract of the Findorn, of great fertility and beauty.

The district, in its political arrangements, is formed into the counties of Nairn and Moray, and is copiously provided in juridical accommodations: it is comprehended, however, with some parishes of Banff and Inverness in one commissariat. Although there is one Sheriff Court in Nairn, and one in Moray, each under its own sheriff substitute, both counties made but one sheriffdom, the decisions of the substitutes being liable to the review of the sheriff.

Besides the Sheriff Court, there is also in the town of Nairn,

2. Its own Municipal Court,
3. The Court of the Quarter Sessions,
4. The Court of the Justices of the Peace,
5. The Court for the more expeditious recovery of Small Debts,
6. The Court of Freeholders,
7. The Court of Commissioners of Supply,
8. The Court of the Commissioners for the Property Tax,
9. The Court of the County Lieutenancy.

Nine courts, similar to these, are also held in the town of Elgin, together with the Commissary Court, and also a court of Trustees, established by the Act Geo. III. in 1805, for the management of the high ways; in all eleven courts.

In the town of Forres there is only its own Municipal Court; and,

2. The Court for the Recovery of Small Debts in the town and its vicinity,

3. The Court of the Justices of the Peace,
4. The Court of Trustees for the management of the Highways.

The county of Nairn, in its ecclesiastical state, contains four entire parishes, namely, Ardclauch, Aultdearn, Calder, and Nairn. It contains likewise a part of other five, namely, a part of the parish of Dyke, in the county of Moray, a part of Urquhart, in the county of Ross, and a part of Croy, of Moy, and of Petty, in the county of Inverness.

The county of Moray contains 15 entire parishes; it contains besides a part of Bellie, of Keith, of Boharm, of Rothes, of Inveravon in the county of Banff; and a part of Abernethy, of Cromdale, of Duthol, in the county of Inverness, and Dyke, a part of which, as has been already noticed, appertains to the county of Nairn.

The ecclesiastical court of the parochial sessions, of the Presbyteries, and the Synod, have so little influence on the agricultural state, that it might ever be deemed improper to describe them with specialty here.

SECT. III.—CLIMATE.

Prevalent Winds.—The coast of this district, although within the 58th degree of north latitude, hath been ever distinguished for the mildness of its climate. The hardier kinds of fruit, all the varieties of the apple, and almost of the pear and of the plumb, by a little attention on the part of the proprietors, would be

be abundantly produced on every farm. Where a sufficient length of lease, or allowance for substantial enclosures offers an inducement, gardens are generally formed, and fruit trees cultivated. Fruits, also, of greater delicacy, the apricot, the nectarine, and peach, ripen sufficiently on a wall in the open air.

Although there is much variety, and much unsteadiness in every particular respecting the wind, yet the most prevailing gales are from the north west: it is seldom that the wind sets in from the south, without almost immediately veering either to the east or to the west; experience indeed hath fully established, that no reliance is to be placed on its permanency in either of those points, yet it may be trusted, that it will set in from some point of the west for about 260 days of the year; in the summer it is for the most part a gentle gale, oftener on the south than on the north side of the west; in the autumn and winter it is in general from the north of west, and from a brisk gale often rises into a tempest, sometimes with cold rain, sleet, hail, or snow. It is generally from the north west, or north, that the heaviest and longest continuing rain comes on; slight showers only, sometimes with thunder, or drizzling wet weather, accompany wind, either from the south or south-east. Sometimes, though rarely, a heavy flood falls out with an easterly gale. The wind from the north is always cold, generally fair, but sometimes with heavy rain. The most unpleasant weather in the year is generally towards the end of the spring, when oftentimes a dry, frosty, parching, easterly wind prevails for weeks together, which blasts the springing corn, the tender grass, and the budding blossom of every tree over the whole district: it is
severely

severely felt also by sickly people, and by delicate constitutions.

2. *Quantity of Rain that falls.*—The thermometer is not unknown, and the barometer has been long familiar; yet its indications are so imperfectly understood, that its practical use is of little importance. The nature of the climate of any district may be more certainly and more distinctly understood by an accurate register of the weather, than by the most extended specification; were such a register accompanied by the more striking appearances, previous to any change, its most important purpose would be, by similar future appearances, to indicate a like approaching alteration. The storm of the 25th December 1806, so fatal to the fishermen over all the coast of the Moray Frith, was preceded by a pleasant temperate sunny day, with a gentle gale from the south; the morning of that melancholy day was ushered in by a warmth in the open air, sensibly and strikingly unnatural at that season; the wind veered into the west, and rose into the loudest tempest in remembrance or in tradition, although, had the damage been restricted to the uprooted trees, the houses unthatched, and the corn-stacks drifted off into destruction, it would have comparatively attracted but a short-lived remembrance.

No meteorological register has been ever kept in this part of the country, excepting that the quantity of rain which fell at Urquhart, in the vicinity of Innes house, from the 1st of October 1795 to the same date in the year 1797, noted every month in inches and decimal parts, as in the annexed table, has been accurately observed.

At

At Gordon Castle also, at the distance of 3 miles only from Urquhart, on the same plain, the quantity of rain which fell in each of the 9 years succeeding 1799, has been accurately ascertained by James Hoy, Esq. and found, as by the annexed state, not to exceed the medium of 26 inches in that series of years, both measurements concurring in the verification of a supposition, which for several generations has been maintained, that along the coast there are 40 days in the year of more fair weather, than in any other quarter of the kingdom.

Measurement of the quantity of Rain which fell at Urquhart.

	1795.	Inches	1796	Inches
October	3,74	....	2,01	
November	2,22	....	1,95	
December	3,23	....	1,41	
1796.			1797.	
January	1,58	....	1,05	
February	1,76	....	1,25	
March	0,97	....	0,89	
April	0,57	....	0,96	
May	1,47	....	1,63	
June	3,27	....	3,33	
July	3,40	....	3,12	
August	1,69	....	5,04	
September	1,35	....	2,64	
	25,25		25,28	

Measurement of the quantity of Rain which fell at Gordon Castle.

	In the year	Inches.
1799	32,19
1800	20,06
1801	22,34
1802	30,61
1803	25,98
1804	21,51
1805	25,13
1806	29,75
1807	33,17

This part of the country has been described as an extensive plain, which, including the breadth of the Frith, stretches wide from the chain of hills upon the south, to the range of the mountains of Sutherland on the

the north: it presents no object so elevated as to attract the clouds, or impede their course, as they are wafted from the one chain of mountains to the other. On the same account, it is supposed that falls of snow are less frequent and of less depth, as they are drifted over the subjacent plain, which being but a little raised above the level of such an open inland sea, is supposed also to account for the snow continuing a shorter time upon the ground, than in the higher quarters of the district, insomuch that the operations of agriculture are but little interrupted by the inclemency of the weather, and the harvests are accounted precarious only from the loss by wind; there being no instance, between the year 1744 and 1782, in which any considerable damage was done by rain. In the famine, which prevailed over the whole kingdom, towards the end of the sixteenth century, owing to excessively rainy and extremely cold seasons, the coast of Moray continued so productive, as to spare great quantities of grain for the subsistence of other countries. It is well ascertained, that in those years of dearth, people came from the county of Angus, to buy oatmeal at the rate of £1. 10s. for the boll of 150lb. weight, to be carried across the Grampian mountains, at the distance almost of a hundred miles.

Although the sun is more vertical, and the length of the day greater in June, yet the cold of that month is often more severe than in November, February, or March; it is only from July till about the equinox that the weather can now be accounted warm, although, in the earlier part of the last century, the heat is represented to have been excessive, throughout the whole summer, from the end of March. In some years, September and October are uniformly the dry-

est

est and most pleasant, but in others the weather is rainy, from about the equinox till after the middle of October. November also, and the beginning of December, are often mild, calm weather: through the rest of the winter, the weather is extremely variable, sometimes clear and fine, often hard frost; frequently, though not always, attended with snow.

In some seasons, the weather is so dry in June and July, that the ear, both of barley and oats, does not shoot out freely from the stem; it is on this account found expedient to regulate the sowing of the dryer lands, so that the shooting into the ear shall not begin before the summer solstice, when, even in the continuance of drought, the damp of the lengthening night assists in that process of vegetation. There is also another circumstance which, along the coast, contributes in some degree to retard the sowing in the spring; namely, the mildness of the winter, which fosters the growth of weeds so much on those fields that have been ploughed in the autumn, that they must be ploughed again, before entrusting them with the seed in the spring; while in the higher quarters of the district, the whole power of vegetation is so entirely suppressed by the binding frost and the covering snow, that the fields which had been ploughed in the autumn are sown as early as the dryness of the soil admits, so that the sowing of spring corn commences in general about the same time over the whole district. The state of the climate may be therefore more distinctly conceived, by a statement of the periods at which the sowing of spring corn and reaping the harvest commenced, with the periods also when the harvest ended, on one particular farm, not distinguished either as early or backward

ward, and where the ancient establishment of a reaper for each five acres is yet continued.

1798	Seed time began	March 30	Harvest began	Aug. 28	Ended	Sept. 27
1799	.....	March 25	.....	Oct. 7	.....	Nov. 15
1800	.....	March 2	.....	Sept. 9	.....	Oct. 13
1801	.....	March 28	.....	Sept. 1	.....	Oct. 3
1802	.....	March 8	.....	Sept. 27	.....	Oct. 29
1803	.....	March 21	.....	Sept. 1	.....	Oct. 12
1804	.....	April 4	.....	Sept. 6	.....	Oct. 10
1805	.....	March 27	.....	Sept. 16	.....	Oct. 23
1806	.....	March 3	.....	Sept. 11	.....	Oct. 14
1807	.....	April 10	.....	Sept. 15	.....	Nov. 4

In the hilly part of the district, the average depth of the rain may be stated 5 or 6 inches more than the medium depth upon the coast; there the seasons are much less genial; there all the ills of an unpropitious and stormy climate are to be encountered, frequently even in the spring, while various operations of husbandry are diligently plied upon the coast. In the upper part of the country, at the distance but of a few miles, every kind of labour in the field is totally suspended by the severity of the season. In the more sheltered situations, the warmth of summer is greater than on the coast, where the noontide heat is oftentimes allayed by a cool breeze setting in from the sea, but there the harvests are generally late, always precarious, and often interrupted: what remains beyond the end of October is for the most part damaged by rains, which often, about that season, prevail: and, in some seasons, the harvest is terminated amidst all the rigours of premature winter, covering the uncut corn, or, though reaped, still in the field, under heavy snow, compacted by rigorous frost. The harvests of 1782 and 1787 were protracted over the fourth part of the year,

year, and this encroachment on the winter, forced the spring in course far into the season of summer.

In some situations, also, in the hilly tract of the country, the most promising crops in some seasons are blasted by a most pernicious mildew, which, towards the evenings of sultry days in the end of August, appears to rise like a pale vapour from slowly running stagnating streams, rather than from open lakes, or unsheltered swamps; repelled by the cooler temperature of the higher atmosphere, it smokes along the bottoms of the hills, hovers on the damper grounds, and settling on the unripe corn, blasts the milky substance in the ear, in one night destroying the hope of the year, which can only be restored by a brisk gale, or a heavy shower, clearing off this clammy vapour, before its poison is fixed in the stem by the condensing power of the succeeding sun. This cruel visitation, which is unfelt in the open country, on the banks of briskly running waters, or where the cultivation rises upon the hill, might probably be prevented by deepening the shallows, so as to discharge the stagnating pools in the course of the streams. This, at least, is in some measure ascertained by an example of the reverse, where, by making a mill dam, the adjoining field became liable to this disaster, where it was unknown before.

The influence of the sun, upon the whole, is less powerful, even in the most genial quarters of this district, than that which is experienced in the southern parts of the Island, where the front of the cottage is so frequently adorned by the spreading vine. It is certain, also, that the best quality of the grain grown in this district, particularly of barley and wheat, is greatly inferior to that which is sent down from Mark Lane.

SECT. IV.—SOIL.

The qualities of the *cultivated soil* over the whole district, are to be arranged under the classes of sand, clay, loam, and that which is a modification of peat earth, distinguished generally in Scotland by the name of *moss*, probably from its sponginess.

1. The class which is accounted *sandy soil*, is found in every quarter of the district, but its greatest extent lies in the eastern end of the plain which has been described, as spread out between the range of mountain and the shore. The parishes of Speymouth, Urquhart, St. Andrews, Lhanbryd, Drainy, the eastern quarter of Spynie, the greater part of Elgin, and the lower lands of Barnie and Dollas, are to be accounted a sandy soil. In this extent there are several small fields of clay: about the village of Garmach, the town of Elgin, at Kinneadur, also in Drainy, and in some other places, the soil is to be accounted a fertile loam. In this extent some inconsiderable fields, in Urquhart, and in St. Andrews Lhanbryd, are of the peat or mossy soil.

2. The greatest extent of clay soil is found in Duffus, part of Spynie, and in Alves. In every quarter of the district, clay is somewhere found and dug up for building.

3. The greatest proportion of the soil of the district is to be stated in the class of loam; extensive tracts of this soil appear in Duffus, Alves, Spynie, nearly the whole of Kinloss, Forres, Dyke, and the lower lands of Rafford, and Edinkilie. In the Nairn division of the district, the soil is generally loam, with the exception

tion of a narrow stripe along the shore, which is sandy. Some parts recently reduced from the moors into arable land, are a sandy gravel. The mossy soil of this county, with little exception, is restricted to the parish of Ardclach, in which an inconsiderable proportion is loam of a sandy cast.

In the upper quarters of the district, and within the range of mountain, the lower plains in the windings, both of the rivers and of the lesser streams, are to be stated in the class of sand, or sandy loam. A considerable part of the parish of Knocandow is clay-loam, which would be very productive if it were sufficiently drained; in this quarter there is also a considerable extent of mossy soil.

4. The proportion of peat earth, or mossy soil, is not considerable in comparison with the other classes, either in its extent, or in the value of its produce. It appears of different qualities, as it is more or less dry, or more or less blended with gravel or sand; it is in no place found mingled with loam or clay. In the campaign part of Moray, the mossy soil occupies the lowest grounds, from which it is believed that the sea in a remote age may have retired, as the under soil is generally sand, and the mossy surface mingled with the exuvixæ of timber, chips of the bark, and parts of the twigs of birch, willow, hazle, &c. This soil is crumbly and incoherent; in a hot day it discovers to the smell a sulphurous quality, by which the rising blade of the corn is converted into a pale green, shoots into a deformed or dwarfish ear, and forms only an imperfect and husky grain; when this soil has been dried and used for fuel, the sulphurous quality is offensive to the smell; it changes the colour of silver in the purse into a leaden hue, and in a short time

corrodes the kitchen utensils, whether of copper or of iron.

In the more inland quarters of the district, the varieties of the mossy soil which are cultivated, occupy the higher grounds; generally flat, or sloping fields upon the lower hills; its sponginess is corrected by sand, and when manured it is moderately productive.

5. There having never been any general survey, the extent of these varieties of soil rests only upon probable opinion; the statement, though not made with precision, is not widely different from strict accuracy. The whole extent of the soil which has been described as of a sandy quality may be estimated in Scotch acres, about 39,500

The extent of clay soil, chiefly occupying the middle of the district, may be stated at 12,500 and the aggregate amount of the detached fields in the other quarters of the district about 600

18,500

The extent of loam over the whole district may be estimated at 45,820 and the mossy soil at present in cultivation about 1,700

6. Although, in the champaign part of Moray there are several tracts for the course of a mile or two, in which no waste land is to be seen, such as the plain which forms the low land of the parishes of Alves and Kinloss, where the grounds much resemble the landscape between Cambridge and Ware, excepting that they are more diversified by the dwellings of the farmers, and the trees about

Carried forward 105,520

Brought forward 105,520

their small gardens, yet pretty extensive plots of waste are every where intermingled, the surface of which is thickly covered with whin bushes, broom, or the most stunted and useless kind of heath, and in a few cases affording a small extent of peat earth, dug up, and prepared for fuel, which, exclusive of the mountainous waste, bear a considerable proportion to that of the arable field; and if to these be added the extent of lakes, marshes, water-courses, and roads, the whole of the waste may be estimated at the large extent of 301,680

Total number of Scotch acres in the district .. 407,200

SECT. V.—MINERALS.

1. *Coal*.—When the trial was made, about the year 1797, to discover coal on the coast of Sutherland, it was presumed there were also indications of coal, on the Moray side of the Gulph, particularly on the coast of the parish of Aultdearn. Though all hope of making this important discovery has long since vanished, yet conjecture has laid up a store of this fuel, under both the unexplored depths of the free-stone cliffs, and the harder layers of the lime-stone beds, in the different quarters of the district.

2. *Lead*.—About the year 1773 an attempt was made to open a lead mine on the estate of Kinneadur, in the Coulard hill, westward of Lossymouth; though small nodules of ore are to be seen in the rock, yet after considerable expense, no vein worth working could be discovered.

3. *Iron.*—The York Building Company, about the year 1730, had established an iron foundry at Coulna-coil, on Sir James Grant's estate in Strathspey, the materials of which, the ore and fuel, were afforded both from the territory of this district, and from the bordering counties of Inverness and Banff. Their commercial concerns were carried on from the port at the mouth of Spey. From the expense of the wood for charcoal, and from an embarrassment in the affairs of the company, the whole establishment was in a short time wholly withdrawn, and scarcely a memorial of that, which was then of high consideration in the country, now remains. It is however believed, that were other circumstances favourable, a sufficiency of iron ore might, for many years, be found in sufficient abundance, in the higher parts of the country.

4. *Various*—Limestone is found in several places near the coast in the county of Moray. It was quarried about the year 1740 upon the Earl of Findlater's estate of Glas-green, southward of the lands of the community of Elgin, and carried for manure seven miles to the glen of Rothes. It was also wrought, about the year 1770, for manure, upon the farm of Stone-walls adjoining to the park of Innes House: it has been also wrought, for public sale, near Lossymouth. There is just now a very considerable work carried on by William Young of Inverugie, Esq, and the lime may be purchased, either calcined merely or as quick lime, in large quantities. The stone, though somewhat of a dusky colour, makes a very white, hard mortar, and its influence on the soil is found equal to the quick lime of the purer marble of Banffshire. Lime is also made at the quarry of the Coulternose, on the common of Mondole, used in that part of the country rather

rather for mortar than for manure. Limestone appears also, in the rock at the bridge of Findern, and in some other places of the low part of the country; but it has not yet been found in the more inland quarters of the district, where, as a manure, its use is more essential; for neither pease, nor red clover, will vegetate there, but on land to which lime has been previously applied.

Marl.—One species of this manure, in the form of stone, is quarried in the red rock at the bridge of Spey, which may be supposed to be the termination of a bed of that kind, which extends from the northern end of the hill of Bencagen over a considerable tract of the Enzie on the other side of the river. There is a little hill on the Earl of Findlater's estate of Clan Kum, in the parish of St. Andrews Lhanbryd, which consists almost entirely of marl, in the form of blue stone and blue clay; there is a small proportion also of common limestone. It is also known, that there is marl to a considerable extent in the Loch of Spynie. George Forreath of Newtown, Esq. has also applied, with much improvement to his highest and driest fields, the marl which he has found in draining a peat earth morass in the lower part of his lauds. The marl on the estate of Lord Cawdor, in the vale of Litie, in the county of Nairn, is of the purest and most valuable kind, and appears moreover to be of very great extent. This marshy vale stretches between the bottom of the great range of mountain, and a bare extensive heath called the *Hoar Moor*, that classic spot, where Macheth, returning from the western isles to Forres with his two noble associates, is reported to have had the interview with the weird sisterhood. This vale preserves the appearance of having been occupied, in that remote era, by the brook which now passes in an opposite course

along the side of the park of Brodie-house. It may be presumed, the brook was turned out of this vale by the Earl of Moray, at the time when the mill of Earl's Mill was first built; although the channel where it must have been turned aside be much deeper now than it could then have been, yet its level, even below the mill, does not admit of a drainage from the marl of the vale. In many places in the county of Moray, when a ditch is made or scoured in the autumn, retaining a little stagnate water, a small shell-fish is produced in the spring, which, if the water does not fail in the ditch, attains the bulk of a hazle nut. The fresh water muscle, also, is produced in the lakes where the bottom is of clay or loam, rather than of sand. If the brook, now called the Burn of Brodie, had at any period passed through the vale of Litie, it might be presumed, from the present levels, that a lake was thereby formed, which would be then discharged by the western end into the rivulet which flows by the house of Boath, into the river Nairn, and that both these kinds of shell-fish would be generated therein, and increase secure and undisturbed, till by withdrawing the brook, the lake would be changed into a marsh, when the bed of shell, gradually covered over by the layer of peat earth, would in the course of years be decomposed into the present exuvia, a bed of pure marl. In the same vicinity, on Kinsterie, the property of Charles Gordon of Clunie, Esq. a lake of the extent nearly of twenty acres has been drained in the course of the improvement, and under a similar layer of peat earth, a pretty thick bed, of the same kind of marl as in the vale of Litie, was found.

Freestone.—Although freestone is not found in every part, yet the district affords more than would rebuild the
the

the whole city of London and its environs, immense as they are. The principal quarries are at Lossymouth, on the property of John Brander of Pitgaveny, Esq. and on the shore of the parish of Duffus, on the estate of Sir Archibald Dunbar, Bart. The stone is cut for every purpose of architecture, and for pillars, rollers, pavement, &c. &c. At the distance of nearly six miles, the ridge of the hill of Quarrywood rises parallel to the shore, one vast rock of freestone, harder than the quarries on the shore : it is shared among the properties appertaining to the Earls of Fife, of Findlater, and Moray, Sir John Leslie of Findrossie, Bart. and George Forreath of Newtown, Esq. It is employed for building, for millstones, for pavement, and for slate, though in this last application, from its thickness and consequent weight, it is inferior to the other kinds of slate which the country affords. Still farther inland, and more westerly, the hill of Pluscardine stretches, also for the greater part composed of freestone, which though softer than that of Quarrywood, yet is in general harder than that upon the shore. It belongs to the Earl of Fife, and Captain Dunbar of Burgie. All these vast masses are easily wrought, and though in some quarries of a browner tinge, they are generally as white and as durable as either the Portland or the Lothian stone. There are quarries of the same kind near the Earl of Moray's Castle of Darnway, from which the Palace itself and the bridge of Findern were built. There are also quarries of freestone in the county of Nairn, on the estates of Cawdor and Kilravock, within a few miles of Inverness ; yet the Abbey of Kinloss was demolished, and the stone transported thence for the building of Cromwell's citadel at that town. Although these immense beds of freestone may be traced across

the gulph to the shore of Brora in Sutherland, yet no stone of this kind has been yet discovered westward of the county of Nairn.

Slate.—Besides the freestone slate that has been mentioned, there is a quarry of light thin slate on the Earl of Moray's property of Clunie, in the parish of Rafford. The slate is of a blue or grey colour, and sufficiently solid and durable; they are purchased at the rate of three shillings and six-pence per thousand untrimmed.

In the higher parts of the country, the rock is of different kinds, in some parts a brittle slaty stone, with much talc in its composition. Much of the rock is granite of various solidity and colour. About Rothes, on the banks of the Spey, a ferruginous matter seems to have indurated one kind of rock so much, that it cannot be reduced by the hammer to any proposed shape; under the name of porphyry it has been formed into toys upon the lapidary's wheel; it is of a purple colour, and admits the smoothest polish, but is in a slight degree diaphanous.

Peat.—The only other kind of fossil of any significance in the country is peat. The peat is covered by a layer of moorish turf, six or twelve inches deep, of such little value for fuel, as to be in general thrown under the feet of the labourers; the bed of peat earth under this is, from three or four, to six or eight feet deep, recumbent for the most part on a bottom of compacted stoney sand, or gravelly clay; its quality as fuel is better, and bears a nearer resemblance to coal, at the bottom of the layer, than towards the surface. There is nothing similar to this kind of earth mentioned by any of the writers of Greece or Rome; perhaps it had not been produced, even in the latest of the classic ages. It is believed that the Bishop of Ross, whose work

work has been already quoted, is the first and most ancient writer who describes it. Having observed in his topographical description of the kingdom, “ that
 “ the county of Fife not only supplies itself abundant-
 “ ly with coals like stone, but all the countries also
 “ northward of the Tay, in which these have not yet
 “ been found, save only in Sutherland, and even there
 “ but in his own day :” he notices, “ that by the con-
 “ venience of the coal, white salt is made by boiling
 “ sea water, both in Fife, and on the opposite coast,
 “ Lothian. But that in other places, because of the
 “ scarcity of wood, they cut out turfs and lumps
 “ from the earth, and dry them when cut out, by
 “ which, throughout almost the whole kingdom, they
 “ procure a bright and wholesome fire. But that
 “ earth, he observes, and that which it contains, is the
 “ occasion among us of no little admiration, for it is
 “ six, seven, or eight cubits in depth, of a peculiar
 “ viscid clamminess, but completely steril ; it produces
 “ nothing at all but puny grass, a weed, or what some
 “ call moss, others heath.”

The remains of these ancient forests have been explored and dug up for fuel, and employed to give light to the poor, from a period more remote than the age of the Bishop of Ross. “ But this,” continues he, “ fills the mind with peculiar admiration, that there is
 “ found beneath that earth great trunks of the largest
 “ oaks, and other trees, some rotten through age,
 “ others so sound as to be fit for buildings ; for it is
 “ clear as the light, that these trees have some time
 “ grown in the same places, and it is satisfactorily
 “ manifest, that they have been overturned by violence,
 “ and have not fallen by age, for many, as we have
 “ mentioned, remain even yet free from rottenness
 “ and

“ and decay ; yet it can be scarcely believed that the
“ earth overgrowing to such a height, could overwhelm
“ these thick woods, and we cannot sufficiently ad-
“ mire, by what means such vast forests, have at one
“ time grown, where now, such is the sterility of the
“ soil, that by no human art can the smallest twig be
“ made to spring. We therefore think, that by the
“ raging waves of the first universal deluge this dense
“ matter was superinduced, and, the roots previously
“ loosened, it overwhelmed the forests, and in course
“ of time grew up to that thickness and solidity of
“ earth : for if in any place, it hath been pared off
“ almost entirely by the people for fuel, in a few
“ years thereafter it has been seen again to grow
“ and increase, as if planted by the special kindness
“ of nature.”

Although others have followed the opinion of the Bishop, respecting this effect of the deluge, yet the Celtic names, such as Ardcoiling, denoting the *High-wood*, and other similar epithets which mountainous tracts in this situation still retain, concur with other circumstances to induce the belief, that both the woods and their destruction appertain to an era much less remote than the deluge. It is in situations too remote in the mountain for the carriage of peat, that the remains of these ancient forests have been explored. The labourers, provided with an iron spit, plunge it into the pervious peat earth, till it strikes upon the timber ; there opening a trench, they have, as the Bishop testifies, for more than four hundred years procured the quantity annually required : it is procured however with no little exertion and toil, and by the unskilful application of a clumsy lever. It is said, that however extensive and thick these ancient forests

may

may have been, that now but little of this subterranean depository remains. In the low mosses near the coast, it may be observed that fir trees are dug up, evidently bearing the appearance of having been felled by the axe, and also of having been destroyed by fire: but the forests of the distant mountains, in every case bear the manifest tokens of having been destroyed only by fire, and no appearance there of the use of the axe, has in any instance been seen. The oak, as the Bishop observes, and the fir, yet remain sound, and are employed in buildings: the birch, hazel, and alder retain their bulk and form, and by the bark are as certainly distinguished as those now growing in the groves; but the substance of the wood is so much reduced into a pulp as to be cut through by a moderate stroke of the spade: when dried, they are too brittle to be of any use but for fuel. The shell of the hazel-nut is hard and sound, but the kernel, dissolved, has long since vanished.



SECT. VI.—WATER.

1. *Streams and Rivers.*—It has been observed, that although the river Spey is not in every part of its course the political boundary of the counties of Moray and Banff, yet, in common estimation, this river is, without exception, regarded by all the inhabitants of each as their natural frontier. The farthest source of the Spey is traced to the mountain of Corryarlock, between Badenoch and Lochaber, where, collecting its infant streams into a lake of moderate size, it glides onward, for more than thirty miles to Crag-Elachy, at Aviemore,

Aviemore, where, in course inclining to the north-east, it first reaches the county of Moray, dividing it there from the shire of Inverness, which is stretched down upon its southern bank, till that county meets the shire of Banff.

Although increasing in depth and in rapidity, the Spey is not apparently enlarged in its course from Aviemore, onwards to Garmach. There it rushes into the Frith with a force that scarcely permits the influence of the tide to be perceived, at the distance of a mile upwards from the shore. Although its bed may be more level now than it was in ancient times, it is still the most rapid river in Britain; its fall for the last three miles of its course has been ascertained to be sixty feet. The breadth of its channel may be equal to that of the Thames about Chertsey, Windsor, or Henley. Although insignificant in respect of navigation, and greatly inferior in the fertility of its banks, it is supposed to discharge a greater quantity of water in the year than the Thames. In the middle and higher parts of its course, its branches stretch out to fifteen miles on either side, and the extent of the country which it drains, may be equal to 815,000 acres. It is only navigable for floating timber down from the forests of Strathspey, but the rents of its salmon fisheries exceed £7,000 per annum. Sloops of little burden just enter the river, and lie close to the beach on the Moray side, to which they are moored without danger.

The river Lossy winds its stream nearly parallel to the Spey, at the distance of about ten miles. Its sources are in that part of the mountainous waste which intervenes between Dollas and Strathspey, and the length of its course is about 20 miles, in which it works the machinery of a number of corn mills, besides part
of

of the manufactory of Messrs. Johnston and Sim, in the vicinity of Elgin, which town it enlivens on the northern side. The Lossy also forms the Port of Elgin, distant about 6 miles northward, at the village of Lossymouth, where the river terminates in the Frith. The river runs out between piers, which are constructed in such a manner as to form a small dock, but the surf on the bar near the entrance, and the shallowness of the water, about ten feet deep along the wharf, are inconveniencies which would require considerable expense to remove. In ancient times, the river yielded a rent to the Bishop of Moray, of two barrels of salmon and some dried trout; so few enter the river now, that the whole number are no object of attention. It cannot be ascertained whether this be occasioned by the alterations which have been made in the channel, or, whether terror for the censures of the Church, in the era of excommunication, protected the salmon in the breeding season, and that agreeably to an ancient supposition, the whole progeny returned from the sea to their mother stream; but it is certain none are now bred in Lossy; the whole river being required to turn the mills in the summer, it is so entirely turned out of the channel, that the fish could not get up even to the nearest dam, except only, during a flood. From the shallowness of the water, however, they are all immediately killed, when only a short way up the river. In such a river as Lossy, the natural history of the salmon might be completely investigated, at an expense comparatively insignificant. It may perhaps be deemed a reproach to the science of this age, that our knowledge of an object of so much consideration should have made no farther progress, than it had attained in the age of the Bishop of Ross, whose history has been already

ready

ready quoted, he having mentioned in his Topographical section, " That in the river Dee, at Aberdeen, it
" frequently happens that 300 large salmons are
" caught by one draught of the net: and that this
" frequently happened in the Spey and some other
" rivers, was known to himself and to all the world.
" That the cause of greater abundance with us, than
" with other nations where the rivers are greatly
" larger, is, that this kind of fish loath muddy and
" turbid waters, and are only delighted with limpid
" streams and pebbly shallows. Moreover," he con-
" tinues, " since we have frequently happened to men-
" tion salmon, it seemeth good to insert here a little of
" what we have learned, both by our public statutes,
" and by the most unquestionable experience. It is
" ascertained concerning salmon, that they pair in
" the autumn, in which season they are spared by us,
" and by no means can be taken, under a capital vio-
" lation of the law. In this security they rejoice, from
" the 26th of August to the 24th of December. Hav-
" ing excluded the embryo, they become so lean, the
" males exhausted by the spawn, and the females by
" the roe, that some have doubted whether those taken
" by a baited hook be really salmon, or some other
" kind of fish; and the cause of this uncertainty is,
" that they are never known to have any thing in the
" stomach, besides a glutinous humour, whence many
" wonder how they are supported, seeing they are in
" such good plight. They are small when first pro-
" duced, and when not larger than a finger, they
" swim down to the sea, where in one or two months
" they grow to a bulk almost incredible; but imme-
" diately, as if impatient of such abundance, they re-
" pair to these shallows of the rivers where they were
" at

“ at first produced, as if they returned in troops to
 “ their native country. Then they may be seen born
 “ along with such vehemence, not only against the
 “ most rapid streams, but through the most turbulent
 “ shallows, that they surpass the rocks and cataracts
 “ of the rivers by a bound, as if taken by storm, so
 “ great is their instinctive desire of revisiting as it
 “ were their natal soil: whence this trite proverb
 “ among us, that those who abound in wealth among
 “ foreign nations, constrained to return to the poverty
 “ of their own, are not unlike the salmon, who, having
 “ acquired fatness in the sea, waste it in the smaller
 “ rivers.”

The course of the Lossy below Elgin would afford sufficient space for all the salmon which come into the river, to accomplish the whole process of breeding; and at its mouth it would be easily practicable to form a wattled fence, of the same kind with the Yaare fishery, to retain both the parents and their whole progeny, with free access from the river to the sea water, and in circumstances also where they could be inspected when requisite, till their whole natural history shall be completely ascertained. It would be necessary to prevent public access to that space of the river; and perhaps also to supply a little food, such as the smaller kinds of fish, which their own industry in the open sea would procure.

Although the natural history of the salmon may be deemed an object more curious than useful, yet the supine negligence, both of the proprietors and of the tenants, of all the salmon fisheries in the kingdom, to the preservation of the fry in the upland streams, and to the destruction of seals and some other voracious fishes on the coast, must, notwithstanding the inexhaustible

haustible fecundity of the waters, be attended with incalculable loss.

The proprietors of the salmon fisheries are generally members of the Edinburgh Highland Society, and they might there form a plan for carrying both these objects into effect. In the interior of the country the business might be managed at a small expense, and fishing of every kind wholly prevented, from the end of August to the end of May. To extirpate the seals, one or two vessels on each side of the kingdom, sufficiently manned like a cutter, and provided with one or more caronades, or guns of other calibre and reach, might in a few years extirpate that noxious animal.

Dog-fish are another formidable rival to the tenants of the salmon fisheries. They could not be extirpated, as is in a great measure practicable with the seal, who cannot always live under the water; but a small premium to the crew of every fishing boat along the coast, would in a short time secure a very considerable diminution of their number. The chief value of the dog-fish arises from the oil which they afford.

The river Findern holds its course nearly parallel, as well as the Lossy, to the Spey; its remotest source, at the distance of 60 miles from its mouth, is a copious spring from the cleft of a rock, in the parish of Moy, in the county of Inverness, in which district it continues nearly for one third part of its course, winding along a yale, which bears the ancient title of Strathern. Another third part of its track stretches through the upper part of the county of Nairn, almost entirely in the parish of Ardclach. Proceeding only a short space in the county of Moray, it doubles the power of its stream, by the confluence of the united waters of the Duvie and the Darbac: the first deriving its origin
from

from a detached lofty mountain, the *Knock of Breachmoray*, and the other discharged from the lake of Loughnadurbe, on the banks of which, the counties of Moray and Nairn meet with the shire of Inverness.

Besides the forest of Darnway, there are extensive tracts of fir and birch along its course, on the estates of Lethen, Relucos, Loggie, and Altyre, which it admits of being floated down, not in rafts, but in unconnected logs. It forms the port at the village of Findern, where the harbour and quay are commodious, although the entrance is in some cases difficult, owing to the surge on the bar.

The salmon fisheries are principally on the Findern and the Spey. On the last of these rivers the right of fishing, which belongs to the Duke of Gordon, extends with the property on either bank for more than ten miles upwards from the shore, and of itself affords a handsome revenue. On the Findern, the Earl of Moray is the principal, though not the sole, proprietor.

The river Nairn begins its course from a lake in the county of Inverness. It runs nearly parallel to the Findern, at the distance of 8 or 10 miles. Skirting the southern side of the field of the battle of Culloden, it enters the county of Nairn, near the castle of Kilravock. It is not navigable even for floating timber, whereof there is but little on its banks. It glides into the Frith a little below the town of Nairn, scarcely forming a station even for a small vessel. It affords a small salmon fishery, rented somewhat above 100*l.* yearly, the property of Mr. Brodie, of Brodie.

Although these rivers discharge almost all the waters of the district into the sea, yet a number of considerable tributary streams wind through their own respective vales, which, though sometimes the cause of inconvenience, are yet greatly ornamental and beneficial to the country.

2. *Lakes.*—In a survey beginning at the eastern quarter of the district, the lake of Loughnaboe is the first which is presented. Its waters cover a surface of about 60 acres. A brook of some consideration is turned a little aside from its natural channel, and the lake is made up into a reservoir, for working a corn mill in the season of drought. It is surrounded by a forest of fir-trees, planted by the Earl of Fife about the year 1773. These are now so well grown, as to have procured an offer for the establishment of a saw mill, where the brook is discharged from the lake. Besides the surrounding wood, through which a road forming a pleasant ride is cut out, there are some small islands, prettily covered with wood of natural growth: on the largest of these there was once a small tower, or strong hold; some of the cut freestone may yet be seen, though the whole was almost carried out many years ago, to build the dwelling of a proprietor, then resident on its bank. It would neither be difficult nor expensive to drain off all its waters; but the bottom scarcely admits of cultivation, and it is doubtful if the value of the pasturage would be an adequate remuneration for the outlay of the money, and some other inconveniences that might follow.

The Loch of Spynie, though still the most conspicuous and greatest among those of this district, must be
now

now referred to the section on *Draining*, as it will soon cease to be numbered among our lakes.

The Loch of Inchstellie, in the parish of Alves, though considerably more to the westward, is in the same tract with the Lake of Spynie. Though the general declivity be to the east, yet it discharges its little stream from the western end, which, turning round a bank on its northern side, stagnates through a marshy tract towards the hill of Roseisle, where it has become so much increased as to have been industriously turned towards the shore, because in that course it presents a fall sufficient for two corn mills, one appertaining to the property of Roseisle, demolished many years ago, on the account of economical considerations, and the other to the estate of Gordonstown, of late but little used, because the sand along the shore drifts over the mill wheel, and fills up the canal. This might be easily prevented by building a chamber over the mill wheel, and the simple process of covering the canal, in that part where it crosses the short tract of the drifting sand. It may also be just observed, that there is no obstacle but these useless mills, to draining the Lake of Inchstellie, and a great extent of land, naturally fertile, stretching almost from the church of Alves, nearly to the bottom of the hill of Roseisle.

A great extent of fertile land might also be recovered, by a more complete drainage of the Loch of Mostowie, on the southern side of the hill of Alves, partly on the property of the Earl of Fife, and partly on the estate of the Honourable George Duff, of Miltown: the means of accomplishing this are obvious, provided a proper plan was arranged among the parties interested.

Loughnadurb is the only other lake in the district, which, though of no agricultural importance, it might be improper to omit. It is situated, as hath been already observed, in the mountainous waste, where the counties of Nairn and Moray meet with a portion of the shire of Inverness. It is more than a mile in breadth, and winds among the mountains nearly four miles in length; it is of such great depth as hardly to admit of being drained, and it discharges a stream of much consideration. It is peculiarly distinguished by its castle. It was of so much importance in the age of Robert Bruce, as to have been besieged under the personal conduct of the King of England. The ramparts rise from the edge of the water, all round the island. The walls, though for some centuries unroofed, are still almost entire, exhibiting the state of the building, which contained several large, and many small, apartments. Two courts, only separated by a wall, now bear rank grass. There are some bushes in the crevices of the wall, bearing gooseberries, both of the red and yellow colour: the flavour is high, but the fruit degenerated in size to the bulk of garden pease.

Lochloy is a small lake on the coast of the parish of Aultdearn, but of considerable depth; there is another lake in a similar situation of less depth, in the Downs, along the coast of the parish of Kinloss, and some others in different quarters, too insignificant to merit notice.

3. *Springs*.—There are chalybeate springs in every corner of the district, but none of them distinguished for much influence in a medicinal point of view. Though some are strongly impregnated with mineral qualities, they

they are not thereby perhaps endowed in any great degree with the sanative quality, and it is remarkable that the consecrated wells of ancient times, are generally of pure water, free from any mineral tinge.

CHAP. II.

STATE OF PROPERTY.



SECT. I.—ESTATES.

THE general outline of the district surveyed in this undertaking, has been already described: but in this section, the estates appertaining to the county of Moray, although on the Banffshire side of the river Spey, are taken in; and in those parishes which are divided between the shire of Inverness, and the counties of Nairn and Moray, the estates are comprehended according to their political establishment, without regard to their geographical situation.

The Duke of Gordon, the Earl of Fife, the Earl of Findlater, the Earl of Moray, and Lord Cawdor, have great estates, without the limits of this survey. There are five proprietors who have estates, both in the county of Moray, and in the shire of Nairn. The estates of the other proprietors, except only in what belongs to the jurisdiction of the Commissariat, are ranked in matters of civil justice, taxes, and parliamentary privileges, within their own respective counties.

The particular management of the greater estates are almost universally conducted by the intervention of stewards, (provincially factors), but this appears to have little influence on the cultivation of the land, for no superiority, in this respect, is to be perceived upon those

those estates, which are wholly managed by the personal attention of the landlord. The occupiers of the more extensive farms, with very few exceptions, by their education, manners and situation, are in the rank of independent gentlemen; and, excepting that their fields are, for the most part, unenclosed and unsheltered by plantations, they are managed in the same mode as those in the actual occupation of proprietors.

Upon most estates, the landlord is a more popular character than his steward: the blame in general rests on him, both for doing, and for refusing to do, many things for which his constituent is chargeable, besides the little humours and partialities, unavoidable in his own official department: in some instances, he is moreover subjected to the imputation of almost swindling for his constituent, by taking the advantage of some ambiguously expressed, or unguarded covenant, in the agreement for the lease. From the commercial and political state of the kingdom, the land rent for 60 years has been rising so generally, that proprietors have found no inconvenience from any mode, either of cropping or of disposing of the produce that may have been adopted by the tenant, during the last years of the lease; yet, on some occasions, more has been paid for the possession of a farm, that has accidentally fallen to be let in a state of high cultivation, than could be supposed to have been laid out by any judicious system, in the accumulation of its whole stock of fertility.

Little or no intercourse, in general, takes place between the tenant and landlord, respecting the circumstances or improvement of the farm, but were they occasionally to survey its state, in leisure and familiarity together, many improvements would be

planned and executed to their mutual advantage, with no considerable expenditure of money by either, which, owing to the want of more frequent or more friendly intercourse, are not likely to be accomplished.

The ascertainment of the yearly rent of all the lands of the kingdom, for the purpose of proportioning a tax for the exigencies of the State, is not peculiar to these times. Domesday Book, it is believed, was the third valuation of the lands of England. The lands of Scotland have been repeatedly valued, from the reign of the first William to that of the second Charles, in the year 1649. Supposing that some proprietors might have valued their estates lower than the rent at that time, it is also known, that many gave up a rental higher than what the land then actually yielded; in the extent, therefore, of a county, or of any considerable district, the amount of the whole would be nearly adequate. For more than one hundred years after this last general valuation of the kingdom, the rents were but little varied; in the course, however, of the last 60 years, they have exceeded this valuation in such various degrees, that on comparing the present real rent of several estates, with their valued rent, no general proportion can be stated; reducing the valued rent into sterling currency, and then multiplying by 8, or 10, or 12, in some cases by 14, or even by 15, exhibits the real rent. From such specialities of information, the estimate of the present rent, subjoined to the different classes in which the estates of the district are here arranged, according to their nearest approximating valued rents, exhibits a general view of the rank and fortune of the respective proprietors, both in former and in latter times.

The

The county of Nairn, in its political establishment, exclusive of several small estates included under the valued rent of the town, is shared among 14 proprietors: six of whom possess estates valued in the land-tax books of the county, *Scots Currency. Sterling.*
 from 4,325l. 6s. to 1,065l. 6s. £. s. d. £.
 amounting in all to 13,730 13 0

The present real rent of
 which may be estimated at 11,941

The other 8 have estates valued
 from 782l. to 73l. 12s.
 amounting to 2,460 5 2

The present real rent of which
 may be estimated at 2,559

£16,190 18 2 £14,500

In each alternate parliament, the county is represented by a commissioner, or member chosen by the county of Cromarty, on the other side of the Moray Frith. It might now perhaps be deemed interesting, to have the means of contemplating the reasoning which prevailed in establishing the principle, that the political influence of freeholders is greater, by being divested of their franchise for the half of every 14 years, than by being associated with those of another county, in the election of one common representative for every parliament.

There are at present 22 electors on the roll of freeholders, of which number, 7 have the property conjoined with the superiority of their franchise.

The county of Moray is shared among 41 proprietors, of whom,

5 possess

5 possess estates valued in the land-tax books of the county from 14,949l. 8s. 3d. to 4,327l. 13s. 2d. amounting	<i>Scots Currency.</i>	<i>Ster. Cur.</i>
in all to	£. s. d.	£.
	36,964 5 1	
The present yearly rent of which may be estimated at		32,636
7 possess estates valued from 2,615l. 10s. 10d. to 1,549l. 6s. 4d. amounting to	12 9	
The present real rent of which may be estimated at		12,502
7 possess estates valued from 1,263l. 0. 6d. to 1,005l. 2s. 4d. amounting to	8 1	
The present real rent of which may be estimated at		8,652
8 possess estates valued from 764l. 13s. 4d. to 400l. amounting to	5	
The present real rent of which may be estimated at		3,597
14 possess estates valued from 371l. 10s. 6d. to 6l. 16s. 2d. amounting to	5	
The present real rent of which may be estimated at		2,313

41 £63,637 10 11 £59,700

There are 36 electors on the roll of freeholders, of which number 21 have the property conjoined with the superiority of their franchise. Besides the landholders of the county, there are, moreover, the proprietors,

prietors of the burrow lands of the towns of Elgin, Forres, and Nairn, a small extent shared among many individuals, which is not valued in the books of the county, the land-tax thereof being annually ascertained by valuator appointed by the magistracy, along with the tax exigible from the dwellings and trade of the individuals of the town. The burrow lands are to be estimated at a much higher rate per acre than lands in the remote quarters of the county, to the above real rent of which they may, perhaps, upon the whole, make an addition of about 2,000*l.* sterling.

The glebe lands of the whole district may be computed about 200 acres, shared unequally among 24 clergymen, and though affording them domestic conveniencies, which could not in their situation be otherwise procured for money, yet in any other respects being in general too small to defray the expense of their own cultivation, they cannot be reckoned as adding much to the value of the district.

SECT. II.—TENURES.

All the lands of the kingdom were held at first of the king, and one mode of tenure was only known, and one tax alone, namely, military service, was originally paid. All the men of the lordship who were able to fight, or of the barony, slaves only excepted, attended the call of the proprietor, when summoned either by the sovereign against a national foe, or by the turbulence of the times against an hostile neighbour: the estate was therefore managed in such a manner, as to have soldiers always in readiness to march;

march; it was, moreover, burdened with the departments of the armourer and of the commissary. All the able men, for instance, of the parish of Calder, each with his shield and spear, his broad-sword and dagger, occasionally with his arrows and his bow, and always with his wallet full of bannocks, marched with their gallant Thane, to the sound of the bagpipe, conjoining, as they advanced, with the powers of other chiefs, through the south of Scotland, penetrating through the north of England, occasionally to the gates even of the city of York. Although the men were resolute and bold, yet in the alterations, which gradually took place, both in civil society and in military concerns, they became inferior in efficiency to professional troops. Other causes, however, besides inferiority of skill, which it is not necessary to enumerate here, rendered it expedient to have soldiers trained to that peculiar profession, and standing armies have been long substituted for military tenants; the sovereign having transmuted their services into money, the land itself became thereon an object of commerce, and some proprietors were occasionally induced to dispose of a part of their property in perpetuity, for the immediate advance of a large sum, to be possessed however, under particular reservations and rights, besides the payment, in some cases, of a small yearly rent; in other circumstances for a payment of little value, in token only of the vassalage. This kind of tenure has been distinguished from remote times, by the designation of *feu holding*, differing from that of a *freehold*, chiefly in deriving the title and right of succession, not from the sovereign, but from a fellow subject, in the incidents payable thereupon to him, in the annual payment also of the feu-duty, and in hav-

ing

ing no right to elect, or to be elected, a member of the House of Commons. In all other particulars a feuholding is the same with a freehold. Of the whole valued rent of the county of Moray, there is only about 1,500*l.* held by a tenure of this kind: in the valued rent of the county of Nairn, this proportion is still more inconsiderable. These two are now the only kinds of tenure by which property, in this district, descends to the heirs of the possessor, with the exception, only, of the burgage tenure, by which property is held of the magistracy in the royal boroughs instead of a single individual, as the intermediate superior between the proprietor and the king, and who have made no reservation either of incidents or of yearly feu-duties. Although there be scarcely the fortieth part of the valued rent of both counties held in feu, yet, nearly one-third thereof is held under entail; but on comparing the leases, management, and cultivation of these estates with those which are still unfettered, no difference in any case is to be perceived.

CHAP. III.

BUILDINGS.

SECT. I.—HOUSES OF PROPRIETORS.

THE proprietors occupying the grounds around their houses may, in general, be regarded as farmers; also giving a short account of their respective dwellings, therefore, which are at once so ornamental and so beneficial to the country, cannot be accounted improper in an agricultural report.

Beginning from the eastern quarter of the district, Innes House, formerly the mansion house of the ancient respectable house of Innes, now one of the seats of the Earl of Fife, first attracts the view. Though not the largest, it is ranked among the most handsome and elegant mansions in the country. Standing in a valley, stretching north and south, it is sheltered from the eastern blast. The park is of considerable extent, diversified by groves of lofty trees and rising plantations, and a small winding river, expanded, in some places, into a small lake, and at others, contracted so as to form a cascade, decorated along its banks by a gravel path, winding through a flowery and fragrant shrubbery. The approach to the house bends in a sweeping course through the park, and terminates in an open lawn, having an extensive irregularly formed garden on its southern side, in which there is an extensive fruit wall, covered with a rich variety of pears, cherries, plumbs, nectarines,

nectarines, and peaches; there are also some lofty forest trees, among which, numbers of fruit trees luxuriantly mingle. The building conjoins the magnificence of the gothic castle, to the elegance of the modern seat. The ground floor is occupied by the requisite household accommodations: the first floor contains a suit of three magnificent rooms, in which there are a number of portraits of kings, queens, princes, and other personages of distinguished memory, large as the life, and in the various dresses of their respective times. The plantations of this domain, clothing every little hill, embellish the whole country around, to the distance of several miles.

In the eastern quarter, also, of the district, Pitgaveny House, the family seat of John Brander, Esq. is a modern handsome building of four stories, having the roof rising in a double ridge within the battlement; the front is elegantly finished; the approach winds up a gentle acclivity, through a small grove between the orchard and the garden; the grounds beyond are enclosed and ornamented with thriving plantations, having the river Lossy flowing along the eastern side, and other interesting objects contributing to the beauty of the landscape.

Findrossie House, the seat of Sir John Leslie, Bart. is not far distant on the west. It is a modern showy spacious mansion: extensive plantations spread over the side of the hill above the orchard and garden, and an extent of fertile corn-fields stretches along the bank of the lake of Spynie below.

On the northern side of that lake, the house of Gordonstown, on the property of Sir William Cumming Gordon, Bart. is first presented from the east; it is situated on the plain, not many feet above the level of the
the

the lake when increased in the season of rain. It is a large square building of four stories, with large wings of the same form conjoined to it. A considerable part of the inside, though built a century ago, has never been finished. The approach is a straight road, between square enclosures and plantations, with an artificial pond on one side, about three hundred yards in length, and about fifteen in breadth. The offices are built round a court, perfectly circular, occupying one acre of ground; the pavement of the court is regularly concave. Some parts of this building are two stories high, which is supposed to be the cause that in stormy weather the wind, drifted down by the oblique gables and slanting roof, whirls round the whole circuit, and consequently furnishes little shelter within.

Duffus House, westward, in the same vicinity, the seat of Sir Archibald Dunbar, Bart. is a handsome new built dwelling: the public rooms are splendid and large. The rural embellishments are suitable and well adapted to the neighbourhood of a very fertile corn country, and a pleasantly varied landscape around.

Westward, about two miles, is Inverugie House, the dwelling of William Young, Esq. The family of Marshal had once a large estate in this quarter, where they had built a strong hold for their occasional residence, which they named after their chief castle in Buchan; near to its foundations, which are still distinguishable, the modern seat, with the ancient name, has been placed. It is conformably situated, on the southern side of a sloping field, sheltered from the blast of the north, and open to the warmest influences of the meridian sun. It is a neat, clean, and commodious dwelling, in which convenience, more than show, has been studied. The offices are conveniently disposed,

disposed, and the barns, stables, and cattle feeding-stalls, are arranged with much taste and judgment.

Towards the western end of the hill of Quarrywood; Newtown House, the seat of George Forteath, Esq. is a handsome modern dwelling of four stories, embellished by an extensive well-sheltered garden, fertile corn fields, substantially enclosed, and a great extent of thriving plantations.

William Brodie, of Milltown, Esq. has his family seat upon the northern side of one of those low ridges, which have been mentioned as rising on the plain, parallel to the shore. Its exterior appearance is not modern, yet indicating neat internal accommodation; it is decorated by a few trees, a large well-stocked garden, and a wide extent of level corn-field.

The country in the vicinity of Forres has a brilliant appearance, several handsome buildings being included in the same landscape. Among them, Darnway Castle claims the first notice. It was of distinguished magnificence, as has been already noticed, in times more ancient than even the age of the Bishop of Ross. The fabrick which he admired, continued to exhibit its original grandeur till only a few years ago: attention, in its structure, to the means of its defence, seemed to have greatly interfered with domestic convenience; and it would have baffled modern ingenuity to have contrived so much wall with so little accommodation. To a number of apartments which the present age would account mean, incommodiously arranged, and which were accessible only by steep, narrow, winding stairs, there was a hall conjoined, which admitted, it is said, the muster of one thousand armed warriors on its floor: its roof of ebon oak, similar to that of the Parliament House at Edinburgh, and of Westminster

Hall in London, remaining still unceiled, displays, at the height of nearly forty feet, the strength of the workmanship of the fourteenth century, for it was built in the minority of David Bruce. It was at first intended to furnish temporary accommodation, or hunting quarters merely, and the hall originally comprised the whole building. Tradition relates, that its floor was each night littered with green rushes or grass, and the Earl, with all his suite, reposed together in this single apartment, for their mutual protection. This hall, which was the first, is now the only part of the ancient castle which remains. A new and splendid palace, which to all the elegance of modern taste, conjoins in its exterior form, the style of gothic magnificence, is reared on the old foundations. It greatly surpasses every other dwelling in the district. In the plan formed by Mr. Laing, and by the superior taste of the noble proprietor, the old hall, in its original magnificence, constitutes a part: the decorations of its inside, though renewed, are still appropriate, in some measure, to its magnitude and ancient state. The new building, of cut polished free stone, rises to the height of four lofty stories, and stretches its front, decorated with pilasters and adorned with turrets, to the length of 160 feet. The great rooms on the first floor, though much less than the hall, are of the proportions and amplitude which modern taste in so great a house requires, and sufficient for the accommodation almost of the largest company. This elegant palace rises on a small green hill near the skirt of an aged forest, which spreads over a thousand acres, to which the Earl has added an extent of plantation, including the groves around the castle, of nearly 3000 acres more. Beyond these groves, which shelter large gardens, much meadow

meadow land, and extensive corn fields, the river Findern rolls its stream on the south, presenting, in its course through the forest, combinations of rock, water, and wood, which, in some cases, impress the idea of the rude sublime, and, in others, the image of the beautiful and tranquil. The northern side is covered by three well-cultivated farms, in the occupation of gentlemen resident in handsome dwellings, with neat commodious offices, impressing the idea of thrift and of rural plenty.

Northward from Darnway Castle is Brodie House, the residence of the family of Brodie, for nearly 700 years. It is a great building, and although not modern, yet displays all the elegant accommodation of the present times. It rises on a green lawn, in an extensive park; a small lake, partly artificial, is commanded by the front; a great extent of full grown wood, in all the variety of the forest rises on every side; long straight avenues stretch under its shade, and regular enclosures surround it. The domain stretches out a long way beyond the limits of Moray, into the county of Nairn, containing a great extent of natural grown birch wood, the pasturage of which, more than 50 years ago, yielded £20 per annum.

At no great distance, eastward from the park of Brodie House, is Dalvey, the seat of Captain Alexander Mac Leod, a modern fabric rebuilt on the ancient site, in a style of plain, yet elegant architecture, with large splendid apartments, highly ornamented, and richly furnished within. It is in a beautiful situation, a little elevated, and commanding one of the finest landscapes in the north;—several winding stretches of the river,—the bay,—the harbour,—the shipping, and the village of Findhorn; besides a wide

extent of cultivated plain, embellished by a variety of elegant houses, with their respective gardens and groves, and the city of Forres, with its beautiful green hill, which is now crowned by a tower, merely ornamental, the memorial of Lord Nelson, and of the battle of Trafalgar.

Besides these, Moy, Kincorth, and Sanchar House, appertaining to families of the name of *Grant*, are handsome edifices in the same vicinity. The first of these in particular is a noble structure, embellished by groves, enclosed ground, and a greater extent of thriving hedges, than any other part of the country exhibits. An excellent suit of offices, and a spacious hot-house, announce that Moy is the dwelling of taste and opulence.

In the same vicinity may be noticed Tannachy, the manor of Mr. Urquhart, a small country house of Mr. Gordon of Edintore, and the house of Waterford, the property of the Rev. Dr. Nicol, the parochial minister of Strathy, near Dundee.

Grange, the family seat of James Peterkin, Esq. must be readily allowed to be the first house in the district next to Darnway Castle. It is situated on the plain eastward of Forres, not far from the bay of Findern, and in the vicinity of the ruins and garden of the Abbey of Kinloss; various other objects also add their interest to the landscape. The manor-house is a new fabric, a quadrangle of 60 by 40 feet. The walls are of freestone, smoothly cut, and jointed accurately by the chissel, from the foundations for the whole height of the bottom story, in which all the household accommodations are contained. The two great rooms are on the principal floor, on either side of the hall into which the great door opens: they are large well-proportioned

tioned apartments, elegantly finished, and furnished in the richest manner. On the same floor within, there is a handsome breakfast parlour, with other family accommodations. A light spacious easy staircase leads up to the bedchambers, in the third and in the attic story. The square form of the building admits of having all the rooms more commodiously disposed, in relation to one another, than houses with more extended and more varied fronts, requiring long passages, and irregular communications within.

The offices form a handsome slated square court, at a little distance, on the north side of this splendid mansion; they contain neat accommodation for all the exigencies of a large establishment. The garden is pleasantly situated at a convenient distance on the south, sheltered in the bosom of a natural grown grove from every chilling blast, while it is open to the genial influence of the sun. A great extent of fertile corn-field, sufficiently enclosed, and covered by thriving plantation, bespeaks the residence of opulence conjoined with the most accurate taste.

At the distance of a mile or two, as the plain begins to rise upon the hill, is Burgie Castle, the family seat of Captain Dunbar Brodie, rebuilt in all the splendid elegance of modern architecture, at no great distance from the ancient castle, the highest tower of which is still preserved entire. There is much symmetry in the exterior of the modern structure, and a strikingly just proportion maintained in the relative extent of the wings. The numerous apartments are completed in all the showy magnificence which the exterior appearance bespeaks; and some great revolution must take place in the state of society, and in its requisite accommodations, before this noble mansion, like the

old castle in its neighbourhood, shall be taken down, merely on account of the change of fashion.

On the western side of Forres, at the distance of nearly four miles, is Aultyr, the seat of Sir William Cumming Gordon, rebuilt also near the ancient dwelling, the antiquity of which is established by the striking appearance of a long lane of trees, which sheltered the approach.

A little higher up, on the the river Findern, are the manors of Robert Cuning, of Loggie, Esq. and Thomas Lauder Dick, of Relucos, Esq. They are both in the same well-sheltered vale, and but little distant from each other. Both are also modern handsome dwellings, each embellished by natural grown and by planted woods, and by fruitful gardens. At Loggie, also, there is an extensive thriving orchard. There is also, in the sloping bank between the house and the river, a showy building of three stories, rising through a grove of lofty trees, containing a thrashing mill, a meal mill, a kiln, and a large granary. Both mills are wrought by one wheel, of such a perfect construction, as to be turned by a rill collected from two or three springs, from the neighbouring height. All this complete accommodation has been procured at the cost of nearly £600.

On the course of the Spey, not far from the coast, is Ortown House, the seat of Richard Wharton Duff, Esq. A level plain of fertile fields spreads backward about a mile from the river; a green bank sweeps circularly upon its other side, presenting, near its margin above, an elevated enchanting situation for the house, a modern large elegant building of four stories, with a neat pavilion roof. Eastward of the house there is a thriving orchard, within the skirts of a sheltering
grove.

grove. Under the bank is the garden, with a considerable extent of fruit wall, and a small green-house. The bank offers an inviting walk, with its ornamental shrubbery; groves judiciously disposed, and circling belts of rising trees, afford their shade and shelter to the surrounding fields, and a great extent of flourishing plantation of pine, larix, and forest trees, clothes the side of the mountain behind. On one prominent intermediate height, a neat modern watch-tower commands the course of the river, Gordon Castle and its decorated environs, all the plain northward, and a great extent of the sea.

Elchies House, the dwelling of Charles Grant, Esq. is the only other family seat within the district on the course of the Spey. The building, though not modern, has been reduced into all the handsome accommodations which the opulent of the present age require. It is placed on the plain, above a pretty steep bank, overhanging the river, closely covered by a beautiful wood of naturally grown birch, to which a considerable extent of plantation, sheltering a luxuriant garden, has been added.

In the eastern quarter of the county of Nairn, Kinsterie, the occasional residence of Charles Gordon, of Clunie, Esq. is first presented to view. The park is completed in a masterly style, it is of great extent, and, by the judicious arrangement of the groves and meadows, a considerable variety of elegant landscape, exhibiting also some beautiful distant views, has been formed. There is a handsome well managed garden. A large thriving nursery of all the varieties of forest trees, raises the expectation of much improvement beyond the limits of the park, which is not disappointed; for while the wastes are clothed by widely extended groves, and the cultivated lands of the estate

sheltered by belts of plantation, the whole country around is greatly ornamented.

In a green dale, near the village of Aultdearn, is the seat of the ancient family of the Dunbars of Boath, a handsome structure, on the banks of a winding brook, with a commodious garden, some sheltering, and some ornamental plantation. A little further inland than Aultdearn is Geddes, the seat of Dr. William M'Intosh, a modern showy building; a splendid court of offices, some ornamental plantation, and a large extent of substantially enclosed, well managed fertile fields, contribute both to the ornament, and to the riches of the country.

Calder Castle, Lord Cawdor's seat in the north, and the residence for many generations of ancient Thanes, is a magnificent structure of varied architecture. A royal licence was obtained, in the year 1454, for building the original tower. A large extent of building, though not modern, has been added in latter times. It is protected on the west by the deep rocky defile of the stream of Calder, and on the other sides by a ditch and draw-bridge. Its environs have from nature the embellishment of wood and water, which have been farther improved by the decorations of art. A green narrow path winds through the wood, along the brow of the bank above the stream, conducting to a remote and solitary hermitage, neatly formed of stakes interwoven with the boughs of the hazel and the birch, on a grassy hillock projected half across the glen, through which the stream of the Calder holds its course, concealed almost every where else, beneath the over-hanging trees. In one of the vaults of the castle, the trunk of a hawthorn tree still stands in the original situation
where

where it grew out of the rock ; over which tradition relates a dream, directing the situation of the fabric and promising prosperity to the race whilst it should remain. With the requisite assortment of modern articles, part of the ancient furniture and decorations have been preserved ; among these is the bedstead on which, it is said, King Duncan was assassinated by Macbeth, in the Castle of Inverness : it is entirely of timber, appearing never to have had curtains, and the frame and posts are adorned with figures in low bas relief, not inelegantly carved. There is, likewise, some ancient tapestry, exhibiting in vivid and unfaded colours, some gigantic human figures, said to represent some of the scenes of violence in a remote age.

Almost coeval, and in the neighbourhood, is the Castle of Kilravock, the family seat of the house of Ross, of an era long prior to the year 1390, when their *writes*, or charters, were lost in the burning of the town and cathedral of Elgin. To the ancient tower, supposed to have been built in the year 1460, an elegant modern mansion house on a rock over-hanging the river of Nairn, has been added ; an orchard and a garden, a considerable extent of natural birch-wood, and some planted groves embellish its environs.

Besides these, there are in the vicinity of the town of Nairn several handsome villas, completed at a great expense, and in the best fashion ; all of them contributing to the decoration of the country, and each bearing a conspicuous share in its improvement.

SECT. 2.—FARM-HOUSES AND OFFICES.

Though the alterations which have taken place in society, in manners and in fashion, have occasioned, within a few years, either the building of new, or the re-modelling the houses of the proprietors of this district, and at a vast expense, could the whole be ascertained; yet the improvements which have been made in them, are little compared to those which in the same time have taken place among the houses of the tenants. On the greater estates the mansion of the proprietor was always magnificent, according to the ideas of the times. But prior to the year 1760, in the dwellings of tenants, there were neither floors, ceilings, nor chimnies. In a few of them the low wall was rudely reared of stone and clay mortar, and had a small glass window; in one only of the apartments, was any plaster, and it was raked over the walls in the most artless manner; a loft on which the roof rested, without any side wall, distinguished a very few of the most respectable habitations. There was, in general, but one fire, (which served all domestic occasions), in the apartment where the servants and master, with his wife and maiden daughters lived, and fed together. In the higher parts of the district, the walls of the office houses were constructed of stone without mortar; in some cases with alternate courses of stone and turf, and the whole buildings were tightly thatched with sod, covered with straw, under a rope-netting of the same material, "at once the sign of poverty and thrift." In the
lower

lower part of the country, the dwellings of the tenants were more generally of turf, and in a less stormy climate, they were for the greater part thatched only with sod; they had no windows, or only a small aperture shut by a board upon hinges like a door. In most cases they consisted but of one apartment, divided by a timber bedstead, one end of which was closed in by a cupboard, which served also for the larder. The dwelling-house and barn were permanent buildings, the cow-house and stable were generally rebuilt every summer, their old walls being turned into the dung-hill. In the more stormy quarter of the district, the house and offices were arranged in two lines, or so contrived as to have the doors mutually sheltered by the opposite building, from the penetrating blast, or the drifting snow; but in the low part of Moray, the turf hovels were placed in all the irregularity which chance might exhibit.

The unwarlike genius of the people, more attentive in remote ages, to cultivation than arms, has been already mentioned. Towards the end of the 14th century, they permitted a band, not very powerful, of savages from Badenogh, under a natural son of Robert II. to burn the towns of Forres and Elgin, with its grand cathedral, and all their other sacred edifices with all their books and furniture. Other circumstances of depredation might be mentioned, inasmuch, that it became even proverbial, "that every man in Moray land was free to take his préy." In such a state of society, when neither the civil constitution, nor the spirit of the people, were able to protect their substance, they seem to have collected into villages of from 3 or 4, to about 16 families, and to have occupied the land in *run rig*, frittered down, into
separate

separate possessions each of one ridge, over every field, that each might suffer alike by a plundering enemy, and thence that they might be induced more readily to unite for mutual defence. In the higher parts of the district, where a great proportion of the arable land lies detached in separate vallies, this arrangement, though not unknown, could not be generally adopted. The proprietors there found it expedient, to enter into a contract with the captain of a gang of thieves, who, for the payment of an annual subsidy, secured them both from the depredations of his own band, and from that of others also in the same occupation.

This disgraceful, though prudent accommodation, was interdicted in England, (where it also prevailed), by the 43d Eliz. chap. 13; and though, about the same period it was declared to be treason, by an act in the reign of James VI. (Anno 1587), chap. 27, yet the fathers of the passing generation, for years after their establishment in life, secured their property by the same mode.

By such a review of the mean habitations which our fathers occupied, and of the humiliating grievances to which they were subjected, the improvements now made will be more distinctly comprehended, and the security which we enjoy will be more highly prized.

Upon every farm of any consideration, the buildings now are substantial, commodious, and neat. In general they are placed upon the most eligible situation in the farm, and constructed of durable masonry. In the milder climate of the champaign part of Moray, clay is generally used for mortar, and when the building is completed, the joinings of the stones are closed with lime mortar. The dwellings are in general of two stories, though in some the upper is but an attic

story. The windows are handsome casements, the roof in general slated, and the apartments finished in a neat, though plain, manner. The doors, chimnies, windows, and timber ornaments, are always painted; and though the apartments are not so large nor so lofty, they are furnished nearly in the same manner as the houses of the proprietors; they consist of a parlour and drawing room, and 2 or 3 bedchambers. The kitchen is in general a thatched building of one story, adjoined as a wing, with a similar building as a store room, or cellar, on the opposite side.

The offices are built in the same substantial manner, with stone and lime, or the joinings of the stone closed with lime mortar; in some cases they are slated, but more generally thatched with a thick, neat cover of straw, put on in the manner of slate, the upper half of each course securely embedded in clay: they are disposed in the form of a square court, nearly connected with the mansion house.

In the higher parts of the district, and on the western side of the river Findern, the dwellings of the poorer tenants, mechanics, and labourers, probably have not received much improvement since the first peopling of the country. With a few exceptions only, they are dark, mean, smoky hovels, reared of moorish turf; in many cases imperfectly thatched, in some, only with sod: whether from any remain of Roman catholic ideas, or from some frugality in the construction of the building, or accommodation in its internal arrangement, these black mansions are generally in the form of a cross, having the transverse in many cases extended across the hearth, and in some across the entrance, so as by one end to form a porch at the door.

SECT. III.—REPAIRS.

In the mean, thatched hovels on the small farms of former times, the walls of turf, or of stone without mortar, were of little consequence, but the timber being generally furnished from the woods of the proprietor, its value was estimated, and ascertained by particular record, and the tenant was bound to preserve that value undiminished, or to make up the difference at his removal, although the possession might have been continued even for several generations; but if, at that event, the timber should, by estimation, be found to have been improved, the tenant was allowed to carry off the superadded value, or to dispose of it to his successor, whose property in the same manner it then became. By this arrangement every farm was burdened with a certain stock belonging to the proprietor, transferred by appraisement from one tenant to another, through many successive leases. When the farms came to be enlarged, and occupied by a superior description of tenantry, the landlord allowed a particular sum, generally about a year's rent of the farm, covenanted by the lease to be paid only at the removal, if the walls, roof, and other materials of the building, should be then appraised to that amount. The tenant was thence induced to erect the buildings at an expense generally more than double the sum allowed, being from about £160. to about £400. in money, exclusive of the value of the labour of the farm servants and horses, for a considerable

considerable proportion of the three first years of the lease. The proprietor's stock of old timber being of no significance in the erection of the new buildings, affording only a little accommodation in fuel, is wholly lost sight of. When the farm, with these improved buildings, is let to another tenant, he has in the first place to advance to his predecessor the sum allowed by the landlord. As his predecessor was only obliged to leave buildings of the value of that allowance, he finds it more expedient, in the second place, to purchase also the surplus value, generally ascertained by appraisement, rather than to permit any part of the buildings to be taken down, and the materials sold off. But this convention, it is to be understood, must be ratified before the expiration of the removing tenant's lease, for if this should be neglected till after the term of his removal, the value surpassing the allowance by the lease, becomes the property of the landlord. Repairs are thus adjusted nearly upon the ancient principle, without the advance of money by the proprietor, unless the farm should by accident come into his personal occupation, when the buildings become his real property, by an actual payment of the value, ascertained also by appraisement. In this case the next succeeding tenant agrees to pay the legal interest yearly, and to maintain the buildings of undiminished value, or, if they are to be kept in repair by the proprietor, the agreement is generally at the rate of seven and a half per cent.

SECT. IV.—PRICES OF BUILDING MATERIALS,
AND ARTISANS' LABOUR.

In cases where the whole materials, stone, lime, sand, water, and timber, are carried to the work by the builder, the charge for masonry alone, in a building to the height of 8 or 10 feet of side wall, is at the rate of a guinea for 36 square yards, in which mensuration there is no deduction made for the space occupied by doors and windows, they being counted as if solid wall. Where the building is to be raised about 20 feet in the side walls, the charge for masonry is at the rate of £1. 12s; and where a third story is to be added, the charge is two guineas for the same extent of wall.

The quarries on the coast of Duffus, at Lossymouth, and in the hill of Quarrywood, being respectively let for rents of some consideration, the price of the stone is regulated by that rent, combined with the quarrier's wages, and the expense of his tools. The value of stone, rough as raised from the quarry, for building 36 yards of wall of the thickness of two feet, is now charged about £1. A load drawn by one horse in a cart is charged at 3 pence, and 76 or 80 such loads are required for that extent of wall. Stone of a size that may be cut for corners, roof stone, chimney mantles, jambs, and lintels, are charged at 3 pence the foot, measured in length, and 4 pence more for the plainest mode of cutting; at this rate, an ordinary chimney slab costs about 7 shillings; the two sides and mantle together about 10 or 12 shillings more, according to the measurement.

Lime

Lime is felt to be a considerable expense in the materials for building. It is carried from the parishes of Cairny, Keith, and Grange, in the county of Banff, by men who, occupying only crofts, make a kind of trade, during the summer, of selling lime, at the rate of two shillings for about 3 bushels. The carriage and the tolls are in this charge included, and the quantity brought in one cart is about 15 bushels. Of late there is a lime work at Inverugie, on the coast of Duffus, where it is delivered at the kiln at about the same rate, allowing the proportional deduction for the carriage and the tolls.

A considerable proportion of the slate used in the country is imported from Balahoolish and Aisdale, on the western coast of Argyle and Inverness-shire, and unloaded in the harbours of the Moray-frith, for about £2. 10s. for one thousand. The other kind of slate generally used in the district, is brought from the Earl of Moray's quarry in the parish of Rafford, as above described. The eastern quarter is supplied with slate, nearly of the same colour and quality, from the quarries of the Enzie in Banffshire. Both kinds are sold at their respective quarries, undressed, for about £1. 10s. the thousand—a little higher perhaps, if the demand be at any time more than commonly pressing.

Stone, lime, and slate, have been considerably raised in value, in the course of the last 15 or 20 years; but the proportional increase on the value of timber, in the same space, greatly exceeds the rise upon them. The price of flooring deals, for some time past, has been at the rate of sixpence for the square foot, being one quarter of an inch thick. Deals one inch in thickness, which are chiefly used for the roof, being nailed close on the outside of the couples,

and the slating nailed on them, are procured at the rate of three pence the square foot. The larger beams, 24 feet in length, and tapering from about 1 foot and 2 inches square at the greater end, to about 7 inches at the other, have been sold of late at 8 or 9 shillings each: but an equal cubical quantity of timber, in spars of 16 or 18 feet in length, being of an inferior quality, is charged at a rate proportionally lower, about 5 shillings each.

The wages of a mason for one day's work, without victuals, are half a crown; those of a carpenter, or joiner, somewhat less, about 2 shillings. Common window glass in Elgin is charged at the rate of one shilling and eight pence for the square foot. Nails of any kind at eight pence the pound.

The house painter charges at the rate of five pence the square yard for one coating in oil, eight pence for two coatings, and when completely finished by three, at the rate of one shilling; for painting mahogany or wainscot he charges one shilling and three pence per yard, and one shilling and six pence when such imitations are moreover varnished. The charge for common colours in size is only two pence the yard; for Olympian green four pence halfpenny, and for mineral green in size six pence.

SECT. V.—COTTAGES.

In the district under this survey, there are but few families resident in the county, who have not the accommodation of a little field; those dwellings which fall properly under the denomination of cottages, with very few exceptions, are occupied by poor widows,

widows, or superannuated men, rather than by families who live by the occupations of agriculture. In a few cases there is the family of a taylor, weaver, joiner, labourer, or other craftsman, who possesses no more land than a small garden planted only with cabbages and other coleworts, and who generally obtains a small plot from some neighbour farmer, to be manured and cultivated for a crop of potatoes. These dwellings begin also, of late, to assume a neat substantial form; a turf cottage in the low part of Moray is now rarely to be seen. Where the walls are still of sod, they contain two or three apartments, with a window in each, thriftily thatched, and the cold excluded by a door upon each room. Such dwellings are in general held of the tenant, in some cases from the proprietor; the doors, windows, and timber of the roof are generally provided for the occupier, who in that case must maintain them of undiminished value at his removal, completing what is farther requisite for the building at his own cost; where no labour is stipulated, the rent rises from 5 shillings to more than £1, in proportion to the value of the ground in the yard. There is no idea, however, of floor or ceiling, though often there is a daubing of clay plaster, which is sometimes white washed, and a chimney in that apartment which is not commonly used.

SECT. VI.—BRIDGES.

No single improvement, more advantageous to the general interests of agriculture, nor more essential to the public accommodation of the inhabitants, not of this country only, but of the kingdom, has perhaps

been ever made, than the building of the bridge of Spey, on the post road from Fochabers to Elgin. It may not be necessary now to enumerate particularly the inconveniences, the loss of time, and the vexations which were occasioned, in getting across this river by the boat; the laborious exertions which were required, both in lugging the loaded carts on board, and getting them relanded on the other side, the trouble, fatigue, and persevering patience which were requisite, in compelling the frightened and resisting cattle to swim across to the Banffshire fairs, and the distress occasioned to their owners, in getting those unsold brought back, need not be dwelt on. Ferrying over a chaise generally required two voyages, the first with the horses, and the other with the travellers and the carriage. Frequently much fear with little danger, and sometimes considerable danger unperceived, without fear, and often, by the unmanageable alarm of the horses; and not unfrequently the passage was suspended for a day or two together, by the swelling of the river, or by frost.

As the increasing intercourse made all those grievances more frequent, and more heavily conspicuous, her Grace the Duchess of Gordon was fortunately led to take some active measures for their removal. By her Grace's direction a subscription was opened, in the year 1798, and under her patronage was filled up in less than six months, to the amount of £3,955, the greater part by the inhabitants on the banks of the river joining in it; owing to her Grace's representations to Lord Melville and Mr. Pitt, also the sum of £6000 was allocated from the public revenue to assist in the structure.

It is probable, that without her Grace's patronage and exertions, this work would not have been yet begun; and it is certain, that without the judicious and steady attentions of the Duke, it would not have been completed.

His Grace having, by the investigation of skilful engineers, ascertained the most proper station for the bridge, he procured, at a considerable expense, plans, estimates, and the requisite specifications. But the difficulties to be overcome in establishing the foundation of piers, in such a deep impetuous river, liable also, by a rainy day in the mountains, to be suddenly raised 2, 4, or 6 feet above the ordinary level, suggested such a general apprehension of risk and failure, of loss and disgrace by the undertaking, that Mr. George Burns was the only engineer, who offered to engage for the execution of this great work, one of the conditions being, to uphold it for the first seven years after its completion. After much mature consideration and the risk of every probable contingency, the contract was framed by a professional conveyancer, aided by the opinion of able council, and his Grace thereby obliged himself to advance to Mr. Burns the whole expense agreed on, at the capital sum of £11,700. The first foundation stone was laid on the 29th day of June, in the year 1801, by the Marquis of Huntly, attended by the Mason Lodges, and the Volunteer Companies of the counties of Moray and Banff, in a grand procession, from the Common Hall of the town of Fochabers: a strikingly eloquent oration was spoken by his Lordship; and an appropriate devotional service was offered by the Minister of Speymouth, in which ten thousand people conjoined, whom this deeply interesting occasion had assembled.

Beneath the stone which the Marquis of Huntly laid, in a proper niche cut into the firm rock, there was deposited a crystal bottle hermetically sealed, containing one of each of all the coins in circulation, and a scroll bearing this inscription, namely :

Deo Annuente
Pontis hujus
In Spey, olim Tuessi, Humine
Ducis de Gordon magnopere,
Civiumque finitimorum munificentia
Oque ac ore publico
Extruendi
Lapidem hunc primarium
Nobilissimus Georgius Marchio de Huntly,
Filius proœalti potentissimique Principis
Alexandri Ducis de Gordon, &c.
Artium omnium utilium et bonarum
Etiamque salutis publico
Benigne Vindicis et Amici
Posuit ;
Georgio tertio Dei Gratia regnante
Anno Christi M. D. C. C. C. I.
Æræque Architectonicæ V. M. D. C. C. C. I.
Viator
Perge et Plaude.

The remaining part of the summer was employed in providing the materials, having the stone to carry ten miles from the quarries, in the hill of Spynie, at the rate of 6 shillings per ton.

The foundation of the pier first built in the Spey, in the summer of the year 1803, was laid nearly twelve feet deep below the surface of the water in its lowest state ; the pebbles, gravel, and stones having with much labour, difficulty, and repeatedly renewed exertion, been

been previously scooped off to the bed of rock, over which the river in that part maintains its course. Although a wall one yard thick, of stiff compacted clay, supported on both sides by a close frame of plank vertically placed, and bound in the strongest manner together, was in the third summer completed, after several disappointed endeavours, yet the weight of the river pressing heavily on the space within, forced this fence, either beneath the clay, or through the fissures of the rock, in such quantities, that the united exertion of the workmen, aided by pumps, constructed on every known principle, scarcely permitted the first course of the foundation to be laid upon the rock. The basis of the other piers were with less difficulty established, the business being better known, and the obstructions, from the depth and weight of the stream not so considerable; and, in the autumn of the succeeding year, this elegant and substantial structure removed forever all that vexation by which the traveller had formerly been so much distressed.

The piers are 36 feet in length along the course of the stream, and each one occupies 12 feet of its breadth; they are all raised to the height of 18 feet from the rock on which they are laid, opposing to the attacks of the river a bulk of masonry of nearly 8000 cubic feet, united as a rock into one solid mass by substantial cramps of iron, bound in with lead. The piers oppose the stream, not in a sharp or salient angle, which of itself creates an undermining vortex, but in the round form of the prow of a ship, which not only sustains the weight without exciting the violence of the torrent, but, instead of opposing only one single stone, presents a large surface compacted of many loads, obviously diminishing the pressure in the

ratio of its extent: in this form it is contrived also to have the stone cut and placed so as to bear in such a manner on each other, that instead of being shaken, they are, by the pressure, more firmly locked together: and could one of them be dashed out, by the concussion of the corner log of a loaded raft, or by a heavy mass of ice drifted violently by the torrent, it could be again inserted with little prejudice to the building; whereas driving out the stone of the salient angle would be attended with serious consequences.

The abutments are founded on the rock as well as the piers, and the exterior courses bound together in the same manner with cramps. Four circular arches, with their appropriate ornaments, rise from the piers, at the height of 6 feet above the ordinary level of the river. The two narrowest arches rest on the abutments, each opening to the span of 75 feet measured along the diameter, being one foot less, while the two in the middle, each of 95 feet span, are 19 feet wider than the largest arch of Westminster Bridge, presenting a free water-course of 340 feet, which is 146 feet more than the water way of the Thames at London Bridge.

When this structure was completed, the height of 28 feet from the southern abutment to the plain obstructed the passage. This was foreseen and provided for in the contract, by the addition of eight arches, decreasing in height as they receded from the bridge, the expense of which had been limited to £398. But, by the suggestion of the Duke of Gordon, and the approbation of Messrs. Telford and Jessop, the civil engineers of government, when surveying the execution of the work, a mound of earth was afterwards deemed preferable, partly as
being

being more ornamental, (because the bank on the northern abutment was to be cut through down to the level of the path of the bridge,) and partly to confine the river to its proper course. The architect undertook to make this alteration, thus sanctioned, and to cut down the bank on the northern, and form the mound on the southern abutment, at the rate of 1s. 3d. for the cubic yard. At the abutment, where its height is 18 feet, its base is 115 feet in breadth, decreasing, as it rises to 35 feet at the top, where it forms an inclined plain, gradually diminished at the base, as its height decreases, till it runs out on the level at the distance of 1043 feet from the bridge, containing 23,000 cubic yards of earth and gravel. The sides of this mound are now clothed with verdant grass, its bottom is decorated by flourishing trees, and its steepness on either side is guarded by substantial timber rails.

The parapets of the bridge, instead of common rubble stone walls, which had been originally provided for by the contract, were improved into handsome hewn ashlar work. A commodious toll-house, the most elegant perhaps in the kingdom, was also built. These alterations, with the increase of the charge for the mound above the cost of the eight mean arches, made an addition of £3100 to the sum stated in the contract, making the whole amount equal to...£14,380

From the £6000 of the national mo-

ney, there were £152 retained as the

fees of the grant; the sum, there-

fore, which was actually granted,

amounted only to £5,848

Several of the subscribers having died,

and some having left the country,

Carried forward £5,848

Brought forward	£5,848.
and from other circumstances, there could only be recovered of the amount subscribed, the sum of	3,100
To this is to be added the sums subscribed by the Duke of Gordon and the Marquis of Huntly, amounting together to	1,105
	<hr/>
Making the whole contribution equal to	10,053
Leaving his grace under the obligation to advance farther, from his own private fortune, the balance, amounting to	4,827
	<hr/>
	£14,880,

exclusive of £100 of yearly rent for the ferry, which is now wholly lost. This may be, perhaps, in some degree compensated by the manifold conveniences, and the certainty, on every emergency, of a ready passage by the bridge; while the amount of the capital at once advanced is to be recovered only by the small and distant returns of the toll, which, by the act 1804, cap. 81, is restricted to the ancient rates of the ferry-boat, with even the diminution for the return of empty carts and carriages on the same day. These rates are let for the year ending on the 26th of May 1810 for

.....	£338
Which, after the payment of the legal interest of the debt due by the bridge amounting to	£244
Leaves a yearly fund for the discharge of this debt only equal to	94

£338

If

If the receipt from this toll should rise to £400 yearly, the highest sum which is expected, the sinking fund would be only increased to £156 yearly, the efficiency of which, for many years, at the beginning, will be but inconsiderable.

CHAP. IV.

OCCUPATION.

 SECT. I.—SIZE OF FARMS.

OVER the whole district, the extent of farms is varied only within a short scale. There are few that stretch to about 300 acres arable; a considerable proportion of the district is occupied in farms from that extent down to 140 acres, and another larger proportion lies between 120 and 60 acres. A greater number of individuals than in both these classes occupy a less proportion of the district, in farms between 50 and 20 acres, exclusive of the little fields occupied by horse-hirers, carriers, mechanics, and a few gentlemen in the towns and villages. Upon the skirts also of some of the larger farms, and upon the sides and bottoms of the mountains, there are lands, bearing but a small proportion of the arable grounds of the district, occupied in possessions from 5 or 6 up to 12 or 18 acres.

The size of farms is also frequently varied; on some occasions, the tenant of a large farm finds it convenient to let the more remote fields, in one or more separate small possessions: and again, an extent of land, occupied for many generations in four or six farms, is taken into lease by one tenant, the mean buildings of the former possessors turned into the dunghill, and an elegant

elegant villa, with handsome offices, erected in a new situation. Although a number of farms below the extent of 50 acres still remain, yet, in many instances, the farms, particularly in the champaign part of Moray, have been enlarged since the middle of the last century. The population of the country has been thereby somewhat diminished, and that of the towns and villages proportionally increased: but if it appeared of importance to the proprietors, an arrangement might be formed, by which, even though the farms were still farther enlarged, the population of the country districts might be rendered greater than what it could have been at any preceding period.

SECT. II.—FARMERS.

It appears that the profits which have been derived from the single pursuit of agriculture in this district have, in every age, been inconsiderable. If more than bare subsistence was made by any farmer in a preceding generation, in so far as can be now discovered, he conjoined some other concern to his agricultural occupation. In former times, a mill only, the profits of a tavern, or the making of malt for sale, appear to have been the most common subsidiary recourse, but still the whole business lay under the narrowest and most dependent circumstances. In some cases a chamberlain or steward might have been able to unite the character of a farmer and gentleman together; if any other of this profession maintained distinction, they were cadets of the families of some of the greater proprietors, who had obtained mortgages for their patrimony,

trimony, and possessed the farms which had been, on that account, alienated.

The passing generation is the first who saw the profession emancipated from such a degraded state: but he is still a poor man, conducting the labour of his farm by his own hand, who follows not, or who has not followed some other avenue to consideration and independence.

Those farmers in the rank of gentlemen, who have never followed any other profession, deal to a considerable extent in the traffic of corn and cattle; a few connect both these branches of business with the management of the farm. Several of the mercantile profession, of the law, of physic, of the army, and from both the Indies, with stewards, land surveyors, and artisans, have all entered into the business of agriculture. A few gentlemen, also, of the first character in the agricultural profession, at one time carried on the business of making malt spirits in the small licensed still, but from the unsteadiness and uncertainty of the excise law in this particular, this business has been long ago almost universally abandoned. In several instances, proprietors manage farms on their own estates. In former times, when gentlemen counted it mean and below their character to have the least connection with the cultivation of the soil, the clergymen, also, affected to be so totally occupied by the concerns of the future, as to be entirely ignorant of the affairs of the present world. By this folly, the people had the advantage only of their admonition, but were wholly deprived of the benefit of that good example of honesty and suavity of manners, in the intercourse of common life, which the transactions of a small farm, in conjunction with the glebe, have now
among

among their successors, pretty generally introduced. Besides the influence of this good example among the generality, the success of their admonitions is still farther promoted by the many little charities and kind offices, which the occupancy of a small farm enables clergymen to extend to their neighbours, in bestowing corners and stripes of pasturage, donations of corn for seed, of potatoes, turnips, or fodder, aiding the poor man in ploughing his ridge, and the widow in getting in her fuel, with many obliging attentions beside, which their predecessors had neither the will nor the means to bestow. The masters of inns, also, and the owners of post-chaises and horses, find a farm necessary in the prosecution of their respective professions.

Thus, in the district under this survey, the business of agriculture is carried on by men of every rank, from the peer to the peasant, and, with a few exceptions only, by people of every character and profession in this great empire. It is almost needless to add, that since this has become the case, the soil has been continued in a state of uninterrupted and increasing improvement, the face of the country greatly embellished, and the form and value of the cattle and horses greatly meliorated: and we no longer witness what our grandfathers saw, the lands lying waste without inhabitants, and the proprietors exerting every humiliating address to get people settled on their deserted possessions.

SECT. III.—RENT.

When the lord held his land by the tenure of being in readiness to obey the call of his sovereign with a band of armed warriors, or felt the necessity of being always prepared to repel the exterminating attack of his neighbour lord, the rents must have been principally suited for the maintenance of his retainers, and, of course, in a great proportion consisted of the actual productions of the soil. Where there was but little commerce there could be but little money; rent, in kind, therefore, must have been long continued after the occasions for military service ceased. In the higher quarters of the country, where the unpropitious climate made it often times impracticable to raise more grain than the inhabitants themselves required, the military service seems to have been converted into agricultural labour, and the revenue of the proprietor was frittered away in personal service, in live stock, and in poultry, with a very little money, and a little oatmeal. Although poultry, mutton, and a little labour, entered also into the rents of the corn countries of the coast, yet, until of late, they were principally paid in grain. A landlord could contrive to export a cargo of corn, when a tenant had no means of disposing of a small quantity, beyond the demand of his own vicinity. About 80 years ago, Mr. Bremner, of Portsoy, was the first and only corn-merchant of the country who purchased grain for the Frith of Forth; but, prior to the establishment of the excise, considerable quantities of

over, the addition of his proportion both of the rent and the expense of upholding the proprietor's mill, besides the payment of the manufacture of the grain into meal: the interest, also, of the sum expended for the accommodation of the farm-houses; and to this is to be added the proportion of the salaries of the parochial school and land bailiff, the contribution for the support of the poor, and in Moray the commutation road tax; which is uncommuted in the county of Nairn, where the six days statute labour on the roads is every year with regularity performed. These articles it is not possible to reduce under any proper average. Even upon eight or ten farms; taken together they are felt by the tenant to be considerable, though almost in every case disregarded both by the landlord and tenant in making the agreement for the lease. But, on the other hand, the tenant has the convenience of the school, of the parish church, and the advantages of a religious establishment, supported by the proprietor, if he is not so weak as to be at the expense of hiring some pretender in that profession for himself. The parochial school is kept in repair also by the proprietor, and the land-tax affects his revenue only; if these particulars are in any case apportioned on the tenant, they are regarded as part of the rent.

SECT. IV.—TITHES.

Whatever may have been in speculation maintained, it is certain that in practice, the *divine right of tithes* was at no period admitted in Scotland. Laymen, under

der various pretences, had, in remote times, alienated considerable portions of tithes to purposes wholly secular. It is, however, not a little surprising, that in the phrenzy of the reformation, and through the long and variously successful struggle which followed between prelacy and presbytery, the nation at last established an ecclesiastical constitution, by which the patrimonial interests of society, and the decent attentions to the ordinances of religion, have been both so carefully secured.

Had James the 6th, when he seized the whole tithes and all the lands which appertained unto the church, on the pretence they had been used for superstitious purposes, abandoned entirely the system of supporting the church by tithes, and for every parish allocated a farm of the church lands from 100 to 200 acres arable, for supporting the clergyman and the buildings of the parsonage house and church, our ecclesiastical constitution, light as it is, would have been much less burdensome, while agriculture, by the superior skill and good example of the greater proportion of the incumbents, would probably have been much farther advanced.

A short historical investigation of the state of tithes in Scotland, from the abolition of the canon law to the establishment of the *Court of Tiends*, might not perhaps be deemed improper here, yet it would extend this section too far, while it may be quite sufficient briefly to observe, that laws in favour of the farmer, regulating the drawing of tithes in kind, were only first made in the year 1606, and in little more than 20 years after, this privilege was granted wholly to the landholders for the payment of the fifth part of the yearly rent subjected to the burden of tithes: that

Landholders having ascertained the extent of this fifth part before the lords of session as a commission of parliament, in all matters of tithes, this extent can never after be augmented, whatever increase of rent may be afterwards superinduced on the estate: *that* each landholder after deducting the provision for the clergyman, has right to acquire the tithes of his own estate, at the rate of nine years purchase of the surplus of the fifth part of the rent thus ascertained, excepting only in a few cases where the crown, as succeededing to some parts of the revenues of the last bishops, has become the tithe owner: *that* except in small parishes where, at the time when the value of the tithes was ascertained, the whole rent exceeded not \$00l., the provision for the church is still greatly below the extent of the tithes, and which it can never in any parish exceed, however small their extent may be: *that* this surplus of tithes is the fund by which the house and church are kept in repair; but where this fund is exhausted by the provision for the clergyman, these repairs become a burden on the patrimonial estate of the proprietor: *that* the extent of the tithes in the district comprehended in this survey, can be only ascertained by an expensive investigation of the records of the Court of Tiends; but the provision for the Ministers of the Gospel, and for the celebration of the communion, being generally known, an accurate statement thereof is afterwards given in the statistical tables.

SECT. V.—POOR-RATES, AND OTHER PAROCHIAL TAXES.

In Scotland the poor first became an object of legislation about the year 1424, in the reign of James the 1st ; but for more than a century and an half, its intent was the punishment of the disorderly, not the relief of the indigent. Some of the particulars, in which the state of society in that age differed from the present, may be readily comprehended from the acts of parliament then framed for preventing, or punishing the disorders committed by the poor : they are in those national statutes, described as *bards, minstrels, tale tellers, vagabond scholars*, not licenced to ask alms by the Rector, or Dean of Faculty of the Universities of Glasgow, St. Andrews, and Aberdeen ; *strong and masterful beggars*, overlaying his majesty's liege subjects with horses and hounds ; *feigned fools and gypsies*, using unlawful games, such as fast and loose, with charming and prophecies, and other abused sciences, whereby they persuade the people that they can tell their fortunes and other phantastic imaginations ; persons also pretending to have been shipwrecked, or to have lost their all by burning.

The punishments which were to have been inflicted by these acts must appear to us as rigorously severe, and much infringing on the liberty of British subjects ; we know, therefore, that they were never strictly, if at all, executed, for in the ballads relating to that age, the pleasures of begging are invitingly displayed, and it is in them represented as not unusual for some of the

first men of the state to have occasionally taken the amusement of personating the beggar; of Argyle, it may be presumed, that he had not supported the character throughout with uniform skill, as some little circumstance appeared through the disguise,

“ I thought he'd been a gentleman,

“ At least the Laird of Brodie.”

A frolic even of the king, in the happier days of James the fifth, is supposed to be described in a witty madrigal, titled the “ Gaberloonzie Man.”

Although it may not, perhaps, be difficult to account for the neglect of the acts respecting the punishment of the delinquents therein enumerated; yet, it will not now be so easy to explain how the whole kingdom, without exception, disregarded the act of Charles 2d, 1672, chap. 18, for providing correction houses. By this act, which a proclamation by King William, in March 1698, again ordained, one house of correction should have been built at Elgin for the counties of Moray and Nairn, the district comprehended in this survey, “ with a large close, sufficiently inclosed for
 “ keeping in the said poor people, that they be not
 “ necessitate to be always within doors to the hurt or
 “ hazard of their health, and ordain the said magis-
 “ trates to appoint masters and overseers, by the ad-
 “ vice of the presbytery, and that betwixt—and the
 “ first day of October, under the pain of 500 marks
 “ quarterly, until provided, conform to the said act,
 “ and require the sheriffs and their deputies to put the
 “ said act in execution, and to give account of their
 “ diligence betwixt—and the first of December, under
 “ the pain, every one of them, of 500 marks, who
 “ shall fail and neglect to do the same, to be employ-

“ ed

“ ed for the use of the poor of the shire, and to be lia-
 “ ble in a 100l. weekly, after the said day, before they
 “ return an account of their diligence to our privy
 “ council to be employed for the use foresaid.”

The indigent and helpless poor had been for many generations supported in the monasteries, hospitals, and other religious establishments, which superstition conjoined with ostentation had, in early times, with an imprudent liberality, endowed; and which the rapacity of the reforming barons had, with indiscriminating selfishness, appropriated. It was thereupon found expedient to make a legislative provision for the support of the helpless and the impotent, as well as for the due restraint of rapacity and arrogance; a number of acts, therefore, were made for this purpose, and renewed with many alterations, between the years 1579 and 1691. It has been, however, said that it is impossible to execute any one of them without transgressing the enactment of some other, and that by an action in the court of session, it has been established, that there is no law in force in Scotland, by which an involuntary poor's-rate can be established in any parish. Notwithstanding this, almost the ninth part of the parishes of Scotland have admitted a poor's-rate, established generally on the interpretation of these acts, that the proprietors pay the one half, and the inhabitants the other, imposed by the proprietors in conjunction with the minister and elders of each parish. A considerable number of these parishes introduced this establishment between the years 1740 and 1750, and nearly all the rest between the years 1770 and 1780. In the statistical history of Scotland, which is the authority for these particulars, it is in general observed, by all the ministers, almost, of the parishes

where the poor's-rate is established, that the sum required has been greatly increased since this *tax* was first imposed: and while some of them have pathetically deplored the evils unavoidably consequent thereto, a great many have mentioned that the tax now has no influence in preventing common beggars. This tax is more generally established in the parishes which border upon England, and in the western quarter of the kingdom; it has in no instance been thought of, in any parish northward of Perth and Dundee. In the statistical history there are only 61 parishes, in which the number of the paupers enrolled, the amount of the tax levied, and the population of the parish, are respectively ascertained; by collecting these particulars, it is found, that at the date of the statistical accounts, these 61 parishes contained 2,687 paupers, that the amount of 5,504*l.*, exclusive of the former parochial provisions for the poor, was at that time the yearly burden imposed for their support, and that the population which bore this burden, was only equal to 162,313 of both sexes, and of all ages.

This result may be without difficulty applied to the 24 parishes of the district in this survey, and from which it must be readily inferred, that to establish the poor-rates in them would be immediately to impose a new additional growing burden, of about a 100*l.* yearly upon each parish, and without obtaining thereby the least degree of advantage of any kind whatever, and at the same time subjecting the inhabitants to all the moral ills which the uniform experience of every parish, both in England and in Scotland, where this tax has been imposed, has proved to be therewith concomitant. Among these, the several law suits which have already taken place in the courts of justice

in Scotland, respecting disputes in this object, should be ever kept in view.

It might, perhaps, be improper, in those parishes where this tax has been imposed, to abolish it at once; but it would be wisdom, steadily to pursue effectual measures for its gradual relinquishment, before it grows to be an insupportable and inveterate evil; for experience hath demonstrated that, however munificent the provision for the poor may be, their wants are not supplied,—their number is only thereby increased. Municipal provision for the poor, therefore, or compulsive charities, by whatever means accumulated, are attended by so many, and such great evils, that it may be regarded as an argument for the divine authority of our holy religion, that the general exercise alone of charity is recommended, and no special acts particularly, or peremptorily enjoined.

The commutation of the statute road labour for an assessment in money, is the only pecuniary tax that can be stated as properly parochial.



SECT. VI.—LEASES.

It does not appertain to this undertaking, to inquire into the state of society in Scotland, or the era of our history, when tenants first acquired leases of their farms in writing. During the subsistence of the feudal system, the circumstances of tenant and landlord did not make written leases necessary, and in most cases then, neither of them could read and write. Many improvements have originated in the church, and from the circumstances of the clergy in ancient times, it may be conjectured,

conjectured, that the first idea of a written lease was derived. In Scotland the number of 19 years has been fixed upon, almost by universal consent, as the proper period for the endurance of a lease; this term has been halved, doubled, or tripled, but if at any time it has been wholly abandoned, some special circumstance has interposed.

Indeed, where leases are granted by proprietors, the endurance is so generally for 19 years, that the few exceptions which may occur on either side, merit no particular notice. It sometimes happens by the desire of the tenant; when a few years of the former unexpired lease has been generally included, an additional rent commencing from the new agreement. On the small farms, where the rent is trifling, the poor tenant, trusting to the honour of the landlord, holds the possession without any written lease, the agreement being ascertained by a minute in the rental book; and the instances are rare, (sometimes, however, upon the introduction of a new steward,) that any misunderstanding has taken place.

Not many years ago, most leases contained a clause prohibiting a sublet to any person of equal or greater rank than the landlord, arising from the jealousy of neighbouring proprietors in ancient times. In most cases now, assignees, both in deed and in law, are specially excluded; in many cases however the clause regarding subletting is omitted, or allowed to sub-tenants, against whom the proprietor has no reasonable objection, the principal tenant continuing still bound for the rent. On two estates in the Moray part of the district, the tenants thus remaining bound for the payment of the rent, are permitted to sublet or assign as they may deem expedient, to any person they themselves

themselves may choose, without requiring the landlord's consent; this being accounted as one of the most influencing motives to lay out money on the improvement of the lands, when the tenant enjoys the full and unrestricted advantage, as in any other commercial concern. On one of those estates it is also covenanted with the tenants, that if they plant the sides of their fields, or the uncultivated corners of their farms, with the ordinary kinds of deciduous trees, plane-tree only excepted, such plantation shall be their own property, and to be cared for, managed, or felled during the lease, at their own pleasure, without the least degree of controul; and the proprietor has agreed, at the termination of the lease, either to purchase the trees to their appraised value if felled, or that the tenant shall have the privilege of felling and disposing of them to the best account for himself. Although the advantages resulting to the proprietor from this convention have not yet by experience been ascertained, yet the only disadvantage which it is almost possible to suppose is, that were it general, it might, on the larger estates, lessen the demand, and lower the price of the proprietor's plantations.

In every case the poor tenant considers himself at liberty to throw up the lease, and speaks of his privilege to give in a renunciation, as a most important advantage. There is no example, indeed, of such renunciation having been refused; the proprietor has no cause to fear that his farm will lie waste, nor would any gentleman allow it to be said, that his tenants were compelled to rent his estate. Besides the term of endurance, the landlord farther binds himself to be guarantee of the peaceable possession of the farm, at all hands, and against all mortal usurpation,
according

according to the laws of the realm. The tenant on the other part engages to pay the rent at each *Martinmas* after reaping the crop, and if a proportion of the rent is grain, to deliver it in the landlord's granary by the 2d of February, the term of *Candlemas* following, and to carry it thence on ship-board to some of the nearest ports, when required, or to carry it an equal, or a reasonable distance on land; to pay the school salary apportioned on the farm, and the perquisite of barley or meal to the bailiff of the estate; to grind in some cases the whole crop, the seed and horses' corn alone excepted, and in others only as much thereof as his own family may require for meal, agreeable to the former usages both of services in upholding the mill, and in the payment of the mill duties; and to forfeit the lease if two years' rent unpaid run together. On the greater estates there are stipulations for submitting to the court of the proprietor all questions respecting the cutting up of peat for fuel, natural meadow, and any questions regarding the mill or growing timber. Conditions regarding fences occur but in few cases, but respecting building many are particularly stated, the general import of which hath been already considered in sect. 3, of chap. 3. In some cases the landlord reserves a liberty of planting moor, on his own account, at any period of the lease he may incline, without alteration of the rent, and in some cases also, to work mines or fossils, allowing for the damage thereby done to the surface. In some leases the tenant is bound, spontaneously, to remove his family and stock, leaving the possession void at the termination of the lease, without any legal process of ejectment.

The possession of the houses, garden, and natural pasturage, commences on the 26th of May, which for this

this particular was originally ascertained by the statute 1620, chap. 39, and ratified by the 24th of Geo. 2d, chap. 23, substituting the Gregorian instead of the Julian calendar. The possession of the arable ground commences immediately on getting the crop of the last year of the lease taken off. Both landlord and tenant bind themselves to the mutual performance of the respective stipulations to each other, generally under the penalty of one year's rent of the farm, incurred by the party who may fail, but which penalty does not, by any means, relieve him of the obligations entered into by the lease; the deed is concluded by a clause for its registration and the other formalities, for obtaining, if there should be occasion, the sanctions of the civil law.

In contemplating the influence of leases on the state of agriculture some circumstances are peculiarly obvious. It is, to the most heedless observer, evident, that land in the personal occupation of proprietors is, with no exception, in a superior state of improvement to land demised to tenants; by this single circumstance, therefore, it is incontrovertibly established, that to obtain for our country the greatest advantages from the important labours of agriculture, the terms of every lease should be framed to approximate as near as may be practicable, consistent with the relation between landlord and tenant, to those by which property is held. In this point of view there are but two particulars which require consideration: the security, first, of such a duration as may be requisite for the recovery of the expense of labour and improvement: and farther, that every unnecessary measure of interference, or controul, in the management, by the proprietor, be excluded.

It is not, that proprietors are ignorant, that the security of possession is the indispensable pre-requisite for the improvement of a farm, and for raising it thereby to the highest possible rent; for there are few of that rank, even among the passing generation, who may not compare the state of the fields, the condition of the buildings, and the situation of the tenants, where the security of a lease is unknown, with the general appearance of these in every quarter, where even the inadequate duration of only nineteen years has been covenanted. Without this pre-requisite, neither fallow, nor turnip, nor cultivated grass, can be admitted into the rotation, and where these are excluded, the tenant must be a very poor man, and the rent must remain, to all generations, comparatively insignificant to that which the possession secured by an equitable lease, would, at its termination, produce; for even the improvement of drainage, essential as it is, must, without a lease, be abandoned; and in regard to building, which is the first consideration in a settlement, without the advantages of a lease, they are not likely to be made sufficiently commodious.

It might, therefore, be deemed petulant, to state the objects for which the proprietors make this great sacrifice of keeping their lands in that state of everlasting sterility, which either the want of leases, or leases of short, or of uncertain duration, must, of necessity occasion; for the case is but very little altered by a lease, which upon the failure of any of its conditions may be forfeited, or by a lease restricted to the tenant and his heir at law only, turning out his widow, on the casualty of his death, excluding his daughter, perhaps his only child, or his youngest son, the elder being previously established in a different situation.

Very

Very few, therefore, in the contemplation of these circumstances, will trust *their whole stock*, which is generally required for the profitable management of a farm, to the brittle thread of their own life, which they know the wing of every minute may divide, and although it is not very difficult to get into debt, yet fewer still of much consideration will risk the money of their friend in a situation, where upon so many contingencies it may be seized as the right of the proprietor: the natural progress, therefore, of agriculture, is thus violently retarded by that rank of society, who above all others are most interested in its advancement, and by whose concurrence alone it can be ever perfected.

The other particular, which it has been said, requires attention, namely, that every degree of interference or controul by the proprietor be excluded from the conditions of the lease, although certainly unfavourable, may, in some circumstances, be of less pernicious influence to the state of agriculture, than the occupation of farms upon short and uncertain tenures.

Where the tenant is in such a mean situation as to submit to occupy a farm without the security of a lease, it might be found extremely proper, that the mode of management should be annually framed by the landlord, and the rent accordingly adjusted to the estimated produce in money, of the grain, and of the cattle. But on the supposition of a lease, such management by the landlord, for the whole term at once, of its duration, must, in many instances, be found extremely inconvenient, and in some impracticable; even in practicable circumstances, it must, in effect, be the same as that of unconnected individuals, with unconnected interests, incongruously conjoined in the same concern.

In similar circumstances in other departments, as manufacture, commerce, military conduct, or naval enterprise, there is no example of success,

If this prescribed management implies, that the tenant is deficient in requisite skill, it must be observed that very few examples can be exhibited, of proprietors accumulating much wealth by the management of farms in their own occupation, balancing the improvement with its concomitant expense; and can it be ever presumed that this will be done, by their management of the farms in the occupation of their tenants?

If, on the other hand, prescribing the management implies, that the tenant knows the way of making the land produce more than the proprietor deems equitable, in proportion to the rent, and, therefore, that he must lock in a part of this produce, to be drawn out for his own emolument, on the next renewal of the lease, it is to be observed, that land can be made to produce exuberantly, by fertilizing manure and complete cultivation alone, and consequently how much more by these means the land can be made to produce, its value must be thereby proportionally increased.

If a tenant, therefore, continues punctual in the payment of the stipulated rent, any degree of controul in the management by the proprietor must repress his ingenuity, must incumber his operations, struggling often, at the same time, with adverse seasons, and in many cases must cut off the advantages he may derive from contingent circumstances. And although, even during the two last crops of the terminating lease, the manure in a great proportion should be withheld, yet the value of a farm, except in a lot or two, cannot be thereby considerably impaired. It would

would certainly be a great accommodation to the new entering tenant, to have his lot of pasturage at Whitsunday ; his lot for turnip, with the dunghill prepared, just ready for the seed ; his lot of fallow in a state of cultivation, and his lot of hay ready for the scythe : but these accommodations cannot be hoped for, without proportional compensation. If by a previous covenant in the terminated lease, they had been secured to the proprietor, to him the compensation must, in some form, be made, with the obligation moreover to restore them, also, on the conclusion of the new lease. If these accommodations are to be procured from the removing tenant, there will be such a considerable sum immediately to be advanced, that in most situations it will, on the whole, be found preferable for the entering tenant to procure them rather by the less convenient gradations of a new rotation, and continue, like his predecessor, to draw the whole produce of his farm, till the last day of his possession ; and as the first improving tenant did not relinquish his fields, his labour, and his dunghill, without adequate consideration, the advantages, even to the proprietor, of these anxious covenants at the termination of the lease, must be, in a great measure, wholly imaginary, from the beginning ; while, by the third renovation of the lease, the consequence to him must be evidently the same, as of the present unrestricted occupation.

The proof of these conclusions, by experience, is not yet to be obtained in this district ; but it is believed that it is sufficiently established in several counties in England, where the long effect of these covenants, about the management of the farm, during the currency of the lease, has sufficiently ascertained,

that they have neither contributed to the melioration of the soil, nor to the enriching either of the landlord, or his tenant.

In this district, the county of Nairn alone has shown in more than one example, how nearly the improvement of a farm has been made to approximate to that of the landlord's occupation, merely by the security of the duration of the lease. Lord Cawdor demised the farm of Auchnadune, on an increase of rent amounting to 55*l.* yearly, then accounted disproportionately high, for 19 years certain, and afterwards for the collateral lives of the widow, the son, and the two daughters of the tenant. From the improved state of the farm in the buildings, drainage, enclosures, and cultivation, it is now estimated at 200*l.* of yearly rent. His lordship also granted a lease of the farm of Bracklauch, on the same principles, and on nearly similar terms, at the rent of 37*l.* yearly; at the death of the tenant, who had not then completed the whole improvement, this farm was relet by his widow, at the yearly rent of 170*l.* As the duration rests upon collateral lives, it cannot be of a very unreasonable length, while eventually it may be, in a short time, returned to the noble proprietor, with an increased rent, to which it never could have been raised by leases, each limited to 19 years, in any assignable era, and with any probable deterioration of the value of money, or increase of the commerce of the nation.

SECT. VII.—EXPENSES AND PROFIT.

It hath been already observed, that where the profits of agriculture in this district are wholly derived from the mere production of the soil, they have been in every age found so insignificant, as to afford only a poor subsistence to the industrious labourer of the ground. Where the profits of any farm merit attention, the land must be accounted, rather as affording the means of carrying on a profitable traffic, than as being the means itself of making money. Upon those farms, where the tenant follows no other occupation but the traffic in corn and cattle, the profit depends on so many contingent circumstances in the rise and fall of markets, that no average can be satisfactorily instituted. In one year, the profit derived from the live stock may be considerable; in the next, that profit has been wholly lost, and not perhaps regained in several years after. A considerable quantity of corn may in general be spared from each of the larger farms, but after discharging the rent, and the great variety of articles arising from the expenses of one year's labour, the surplus is seldom adequate to the payment of the requisite family expenditure, even on the narrowest establishment.

In the present situation of things, if profit has in any case been derived merely from agriculture, it was by transferring the lease, with the buildings and the stock of corn and cattle, to some opulent speculator, solicitous to enter at once into a comfortable house, and a farm highly cultivated: the original capital has been in

this way in several cases considerably augmented. In a few accidental instances the lease has been transferred for the payment of double rent; yet, were the accounts of the expenditure of improvement fairly balanced, it is very generally believed, that by equal industry and skill, the profits would have been greater by almost any other application of the original capital. In several cases too, though money has not been acquired, yet a pretty numerous family have been supported by the farm, and the children educated by the skilful industry of the tenant, upon a capital originally small: but there are examples, also, where a patrimonial stock of some consideration has been wholly lost by misfortune, or want of sufficient skill in the complicated business of agriculture, although the strictest attention in domestic economy had been with the most unremitting care maintained. Upon the whole, the business does not seem to have the same attractions to the rising generation which it held out to their fathers, and it has been suggested, there may be some cause to apprehend, that the existing tendency of circumstances continuing, a great part of the capital now employed in the cultivation of the soil may be withdrawn into other channels, not perhaps of equal advantage to the state. The capital required for stocking a farm, will appear from the account of implements, live stock, grain, and labour.

The expense of management is proportionally greater upon a small than upon a large farm, making the proper allowance for various circumstances. There is but little variation over the whole district in the agricultural expense of the same number of acres: although maintaining the drainage in some, and the necessity of the use of lime in others, with the distance of
the

the markets and the carriage of corn, occasion variations of much consideration. Specifications have been procured from several farmers in different quarters, who have no other dependence for their support but the profits arising from the business of agriculture; from a slight review of these, the expense, in this respect, and the clear return, may be pretty satisfactorily ascertained.

Return to Queries respecting one Farm.

	<i>£. s. d. Acres.</i>		
No. 1. Acres in the whole farm			135
Rent, including 5l. being the interest of the sum laid out by the proprietor in the buildings.....	113	0	0
Amount, exclusive of bed and board of 4 men hired by the year, the agreement renewed half yearly.....	60	0	0
Amount of wages paid to labourers hired by the day or for particular work by measure, or by the job, reaping the harvest included	18	0	0
Amount of wages to female servants for the year, excluding maintainance, bed, and washing	8	0	0
Amount of wages to boys for herdsmen.....	8	0	0
Average amount of cartwright's, sadler's, and blacksmith's bills for the year, timber, leather, and iron, included.....	12	0	0
	<hr/>		
Carry over	219	0	0
			135

	£.	s.	d.	<i>Acres.</i>
Brought over	219	0	0	135
Assessed and property taxations, and the road tax commuted for statute road labour yearly, in all	22	0	0	
Expense of marketing, and un- avoidable incidental expense in the management of the farm, not being regularly noted and stated lower than the reality, at	6	0	0	
	<hr/>			
	£247	0	0	135
Mode of management, crop 1808, by which the expenditure is provided for. <i>Acres.</i>				
Number of acres in grass				47
Do. in wheat				7
Do. in bear or big				20
Do. in oats				30
Do. in pease, turnip, and potatoe, in whole				14
Do. in fallow				17
	<hr/>			
				135

The working stock consists of two pair of draught horses and one pair of oxen. There are 10 cows; their young are kept till the third summer, and the average is 10 cattle sold yearly at 9l. each. As it is seldom that ten calves are reared from ten cows, it is necessary, on that account, from time to time, to buy a steer, or a young cow, which diminishes the annual return from the cattle. It is likewise to be further observed, that the crop of potatoe, and the grass and turnip; consumed by the cows, cannot be stated as yielding any return in money. Were any value to be placed

placed on this side of the account; it must be taken credit for upon the other also, in the same manner as the value of the meal, the milk, and beer, consumed by the servants, the oats consumed by the horses, and the seed corn: the grass and turnip consumed by the marketable cattle can alone be accounted as making a return in cash. To include, in such an estimate, articles which can be never brought to market, is mere delusion.

No. 2. *Return to the Queries respecting another Farm.*

£. s. d. Acres;

Number of acres in whole of the			
farm	210		
Rent in whole, including 30l. being			
the interest of the sum required			
for the buildings.....	175	0	0
Amount of the expense, for the			
year 1808, of farm servants,			
reapers, and day labourers, ex-			
clusive of their maintenance....	90	0	0
Tear and wear, in which is in-			
cluded the yearly diminution of			
the value of horses and imple-			
ments, and the amount of the			
bills of the carpenter, sadler,			
and blacksmith, with the charge			
for iron, timber, leather, and			
ropes, the expense also of mar-			
keting, and about 18l. for the			
assessed and property taxation,			
and for the parochial road tax			
imposed for the statute labour..	50	0	0
	<hr/>		
H 4 Carry over	215	0	0
			210

EXPENSES AND PROFIT.

	<i>£.</i>	<i>s.</i>	<i>d.</i>	<i>Acres.</i>
Brought over . . .	315	0	0	
The farm is divided into 6 lots of				
35 acres each, of which 3 lots				
are in grass				105
in oats				35
in turnip, potatoe, pease				
and beans				35
in wheat and bear or big				35
	<hr/>			
	£315	0	0	210

The working cattle consist of two pair of oxen and two pair draught horses, the whole almost of the land being on an acclivity. There are 8 cows, and 20 young cattle kept through the winter on the farm: the number is regulated by the state of the market as they are bought or sold off, according to its rise or fall. In the winter also there is a flock of sheep (from 400 to 500) brought down from another farm in the hilly part of the country: they have an allowance of turnip, and pease straw, or hay; but were it not for their dung, black cattle would be preferred, because, with the same pasturage and provender, they would return more profit. Both sheep and wool have been, for many years, at so low a price in this part of the kingdom, that a market, affording a return adequate to the food and care which they require, can hardly be found.

A considerable addition to the expense of this farm arises from the purchase of lime, without the application of which the land will not produce pease or clover of any kind. A boll of calcined limestone, about 6 Winchester bushels, costs 4 shillings at the kiln, and the

the expense of the carriage adds 3 shillings more. About 20 bolls is the allowance to each acre, the expense of which is generally 7l. 10s.: but as this expenditure is not regular, nor to be laid on more than once, it has not been stated.

No. 3. *Return to the Queries respecting a third Farm.*

	£.	s.	d.	A.	R.	F.
The number of acres	71	2	18			
The rent by the lease, at 2l. 7s. each acre	168	5	6			
The wages of two men for the year 1808	29	0	0			
One boy for do	5	0	0			
Two maids hired for the busi- ness of the farm	10	0	0			
Labourers, at 1s. in winter and 1s. 3d. in summer	12	0	0			
Amount, exclusive of main- tainance to harvest reapers Plough-wright, sadler, and blacksmith's bills, including timber, leather, and iron . .	22	0	0			
Interest of the capital in stock, including the yearly dimi- nution of the value of the horses and of the wearing out of utensils	30	0	0			
	<hr/>					
	291	15	6	71	2	18

The live stock consists of four draught cattle, eight cows, eight young cattle of one year old, and this number kept up by purchase on any misfortune in rearing,

rearing, eight of 2 years, and then sold off. Their maintenance in summer, grass seed, rent of land, and tending, proportionally stated, amounts to the sum of three guineas each: they are fed within doors in winter on straw and turnips. Were it not requisite to secure the dunghill, it would return more cash to sell the hay at ten pence per stone weight of 24 pounds avoirdupois, than to send it to market in the form of live stock. The rotation of cropping is turnip, potatoe, or fallow, succeeded by bear sown with clover and ray grass seed, the grass which follows is broken up for wheat, and a crop of oats follows. The dung is never mixed with any earth, but put together and turned over till sufficiently rotted. The seed-wheat is steeped a few minutes in urine diluted by a little cold water when it is found rather stale, and dried by mixing with quick lime: there is never any smut.

No. 4. *Return to Queries respecting a fourth Farm.*

	£.	s.	d.	Acres.
The number of acres is.....				130
The rent in grain is 32 quarters; in money 160l. equal in whole to the money rent of.....	220	0	0	
Two men hired by the year, ex- clusive of maintenance and lodging.....	£26			
A lad hired by the year.....	9			
Two maid servants, do.....	8			
Two boys for herdsmen.....	8—	51	0	0
Wages of occasional labourers....	5	0	0	
Harvest wages for 4 men, exclu- sive of maintenance.....	£12			
Do. for 5 women, do.....	8—	20	0	0
Carry over.....	£296	0	0	130

	<i>£.</i>	<i>s.</i>	<i>d.</i>	<i>Acres.</i>
Brought over	296	0	0	130
Smith, plough, and cartwright, and sadler, iron, timber, leather, sacks, ropes, &c.	20	0	0	
Property and assessed taxes, and road tax	22	10	0	
Expense of marketing and inci- dents	6	10	0	
	<hr/>			<hr/>
	£345	0	0	130

Live stock 6 draught horses, 12 cows, and their young reared till the third summer, besides the bull. It is supposed that about ten cattle, at a medium, may be sold yearly for about 6l. each.

The grass yearly, about. 44 *Acres.*

In turnip, potatoe, pease and beans,
and fallow. 24

In wheat 24

In bear 12

In oats 26— 130

Wheat is sown after dunged potatoe in clay loam. Bear seldom thrives after turnip, unless dung be given to the land when the turnips are taken off.

To these it may be proper just to add the particulars of one of the smaller farms, on which the tenant performs the ordinary labour of a common hired servant, namely,

The number of acres nearly 60

The yearly rent is. £45

Carry over 45

Brought over £45

Exclusive of the labour of the tenant there
is one man and one boy, and a maid servant
hired by the year at the amount in whole of .. 23
One harvest reaper at 3
Carpenter, blacksmith, and incidents. . . . 5

£76

Horses. 3

Cows, 3

Young cattle 13

Management Crop 1808.

Grass about. 19 Acres.

Oats 20

Bear 6— 45

CHAP. V.

IMPLEMENTS.

SECT. I.—PLOUGHS.

WHATEVER may be the profits resulting from agriculture now, the expense in the course of the last 40 years has been multiplied manifold, although full allowance be made for the decrease of the value of money. The passing generation hath seen the whole iron work of a farm which employed 16 labouring oxen, comprised in the coulter, share, and a small hook on the side of the beam, for the muzzle of the plough; besides this, the timber spade was finished with an edging of iron, and several farmers were even frugal enough to point the wooden prongs of the dung fork with the same metal. A more minute investigation might have also recognised the reaping hook; and where carts were used, the short chairs which connected the shafts to the hem of the straw collar. Ropes, backbands, and traces, were twisted of the hair cut off from the manes and tails of the horses, and of the more pliant roots of the heath, and the stringy fibrous coatings peeled off the subterranean fir, dug from the peat morass. There is, in short, more iron consumed now in a year, upon any farm of an 100 acres, than was used in agriculture 60 years ago, over the whole of this extensive survey, and the value

value at present of a single plough on such a farm would have then furnished the whole implements of every kind, which any one required.

Upon several of the smaller farms in the more inland quarters of the district, the plough in general is still framed by the hand which works it, or it is made up with little regard to principle or rule; it is a clumsy instrument, for the most part of great weight, though without iron, except for the coulter, share, and bridle, exclusive of which, it may be purchased for 5 or 7 shillings.

Upon the larger farms every where, and on all the farms in the lower parts of the district, the ploughs are of the most approved and least complicated form, exhibiting little variety in the fashion or construction: in some, the beam is strengthened by a band of iron along the whole length of its underside, and the chain, for which this band seems to have been substituted, is very generally abandoned. The bridle is of sundry forms, some adding to the strength of the beam, and all of them contrived to regulate the breadth and depth of the furrow slice. In some instances the coulter is bent just under the beam, so as to bring the whole breadth of its side into the plane of the land side of the heel; this form, however, is more generally rejected, as adding to the friction, yet affording no advantage either in the draught or in the execution of the work. The mould-board is of cast iron, imported by the dealers in hard ware from the founderies in the south: though more commonly of one piece, it is in some cases of three parts, having that piece which runs in the bottom of the furrow so much thicker, as, notwithstanding the more constant friction, to last as long as the piece at the surface;

it needs hardly be observed, that whether in one or in three pieces they conjoin with the share in forming one appropriate curve. The heel is forged of common iron, adapted to enter into the share and keep it firm in its place: the share itself is imported in a form half completed. The handles are now generally connected by an iron bolt, from one end of which a rod of iron, nearly three feet in length, is stretched down to the beam, contributing much to strengthen its junction with the greater handle.

The plough is a handsome well formed implement; the timber generally of ash, under a close coat of paint, red, blue, or green; costs complete from about 3l. to 3l. 10s.; and with the requisite repairs of share and coulter lasts about 5 or 6 years. The yoke is nearly of the same workmanship as the plough. The traces are generally light iron chains clothed in pipes of leather where they rub on the sides of the cattle; the traces are supported by leather backbands, by the length of which the depth of the furrow is partly regulated. The collars, like those of a gentleman's chaise, are the workmanship of the sadler, and at the same expense. The whole tackling of the plough before its bridle may in general cost from 1l. 5s. to 2l.

There are ploughs with double mould-boards for the drill husbandry which may be adjusted to the breadth of the interval between the rows; but the most common drill hoe plough is of the common construction, but of a smaller and much lighter form. Where the field is large, the double mould-board is preferred, as the work is done in half the time; but the other turns the soil to a greater depth.

In some places, where the ground is to be broken up from the waste, a greater weight, both of timber and
of

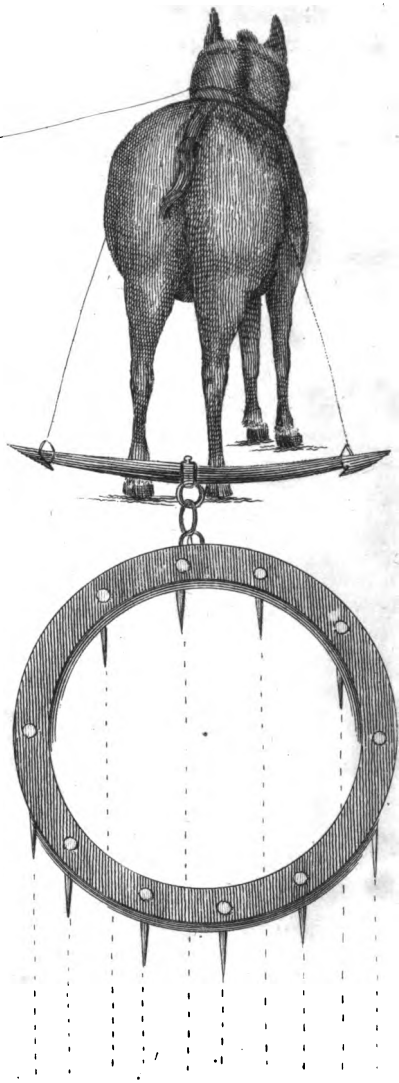
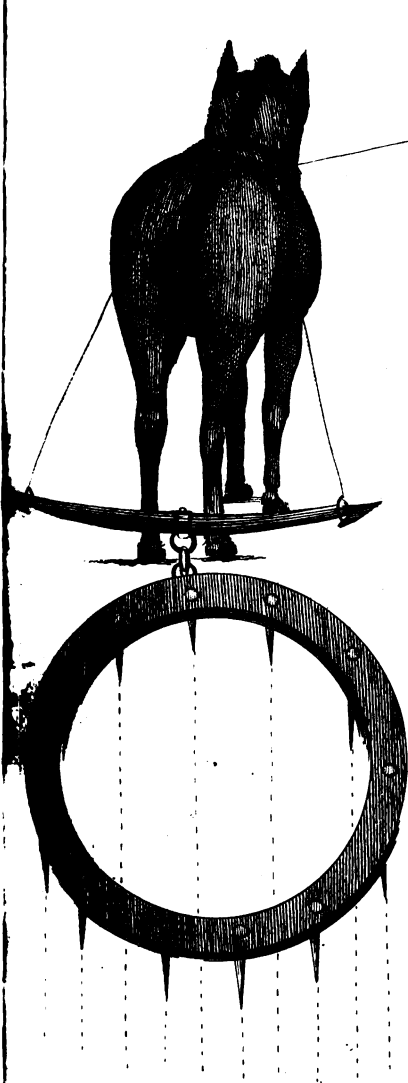
of iron, adds the requisite strength to the plough, and this comprehends the whole variety. It is believed there is not a ploughman in the district who ever saw this implement with the complicated appendages of wheels.

Ploughs made at Leith and Dundee have been occasionally imported, with some variations in the position of the coulter, but they have not in this country been adopted.

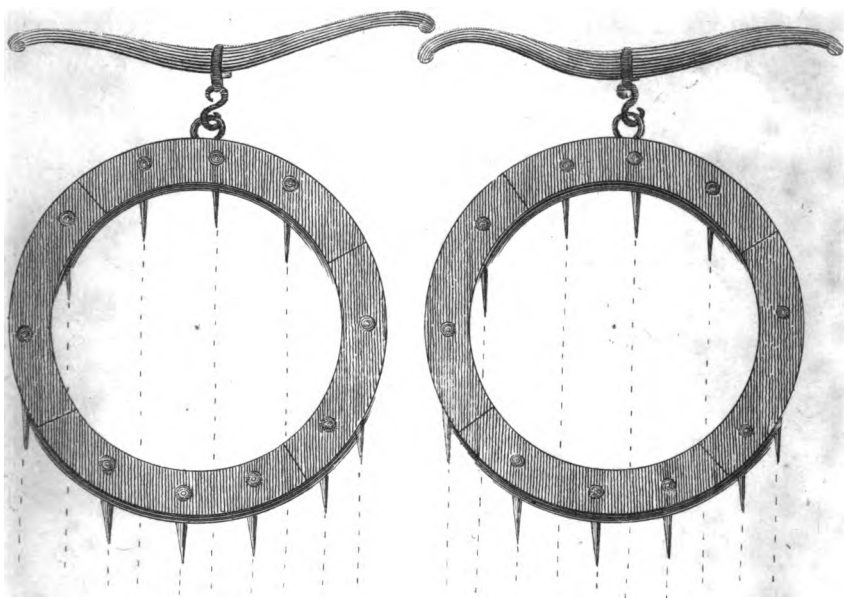
SECT. 2.—HARROWS.

Before the harrow was finished with iron teeth, it was the business of the ploughman in the winter evenings to cut out, and season over the fire, a sufficient store of timber teeth, to be in readiness for the occasions of the spring; and during its continuance, on a regular examination about noon, the damage of each day was repaired: the timber teeth are now almost universally abandoned. When people in the rank of gentlemen first began to cultivate the soil, some very heavy harrows the draught of 2 or 4 horses were not uncommon, where the ground was either improved from its natural state, or where old pastures, with a stiff or tough sward, were broken up. They were sometimes triangular, and sometimes two quadrangular parts connected by hinges. Their efficiency was found by experience to be but little superior to that of the best common harrow, and of late they have very generally disappeared.

The harrow in use among the poorer tenants, although furnished with iron teeth, is of little weight; it is about 3 feet square, but takes in little more than a space



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space of two feet in breadth. Even the best constructed harrow is still an imperfect instrument, although when complete, a pair, exclusive of the harness, costs from 1l. 4s. to 1l. 14s. ; it is about 4 square feet, and for the most part furnished with 20 teeth each, when new about 1 lb. in weight, but so many follow each other in the same track, that only eleven ruts are made in the breadth of three feet, and two of these in the corners are but slight, and frequently insufficient. Where the same number of teeth are disposed in a frame somewhat less in breadth, and of greater length, the execution is found to be more perfect. Sixteen teeth in the frame of 4 square feet, enter deeper into the soil, and are more efficient in rough or tough ground, but they do not leave the field so smooth as the harrow, in which the teeth are more thickly set.

Although it is not difficult to arrange the teeth in such a manner as that each shall be drawn in a separate rut, yet this improvement, in general, has been but little attended to; it has been proposed to make the frame perfectly circular, with a bar forming the diameter in the line of the draught, and it would require but a moderate share of ingenuity to set ten teeth in the periphery, forming the same number of ruts, six inches distant from each other. But experience is yet wanting to warrant this form of the harrow.

It has been also suggested, that if 16 teeth were properly arranged in the bars of a harrow of the square form, having the fore end two feet, and the hinder end 4 feet in breadth, and the length of the bars 4 feet, that covering the same space it would be more easily drawn, and more effectual than a harrow four feet in breadth at both ends; but experience also is wanting to verify this conclusion.

SECT. III.—ROLLERS.

The utility of the roller is well ascertained, yet the use of it has been only introduced on a few farms in the district, and even on them it is only applied in particular circumstances. The roller, almost without exception, is a cylinder of solid stone, about 4 feet in length, and one foot, or in some, a few inches more than a foot, in diameter. They are generally drawn by shafts like a cart; in some a small box is fastened above the roller, that its weight, when necessary, may be occasionally increased. In many cases, the roller is drawn in a square frame of the cheapest and most simple construction; but little attention has been hitherto paid to the improvement of this implement, and indeed that of enlarging the diameter, is the only one that has as yet been attempted.



SECT. IV.—DRILLS.

The only drill used in any part of the country is for the sowing of turnip, and there is but little variety in its construction. The form in most general use, sows but a single row, the seed is conducted to the depth of one or two inches into the soil, by a pipe drawn at some distance behind a spike of iron, like a large harrow tooth, projected forward at an angle, similar to that of the coulter of a plough, which removes any obstruction

tion that might prevent the regular deposition of the seed. To some drills a board has been added, to prevent interruption by rain. They are drawn by shafts like a cart. The seed box is suspended between two very light low wheels, to which is connected a light timber roller, about 8 inches in diameter, and about 5 feet in length, which stretches over two ridges at once, smoothing and levelling the sharp edge of one for the reception of the seed, and covering it by pressing down the sides of the rut on the other. Where the seed box is not contrived to be turned round on the axle of the wheels, the seed is shaken out from one small hole, by the motion of a spring striking on each of the spokes of one of the wheels. The machine is conducted along the line of the ridge, by two handles similar to the stilts of a plough.

There are a very few drills for sowing beans made on the model of those which are occasionally imported from Leith. Beans are however sown so accurately in the furrow, by the hand, that a drill for them is not very generally in request.

SECT. V.—HORSE HOES.

Potatoes, turnips, and beans, are almost without exception horse hoed. The implement as already noticed, which is most generally employed for this purpose is a light plough no way differing in its construction from the best form of the common plough, excepting in the slenderness of its timber, and in the narrowness of its heel; it is generally wrought with-

out a coulter, and framed to make a shallow furrow; and of little breadth. In some cases the mould-board is made to turn the earth to both sides, and by hinges upon the sheath it may be adjusted to the breadth of the interval, or one only of the wings may be shut close to the beam as the land side of the common plough; with this contrivance of the mould-board, the share is made with a fin on both sides. Dr. Coull of Ashgrove, has formed this implement on the best and lightest construction; he has added a hoe to each side of the heel, drawn a little behind the mould-boards; their handles are made to pass through a slit in the beam, into which they are fastened by a screw pin, and made to extend, or shut nearer together, adjusted to the same stretch to which the mould-boards may be opened.



SECT. VI.—SCARIFIERS, SCUFFLERS, SHIMS, BROAD-SHARES.

In the operation of hoeing the drill sown turnip, there are several simple implements mounted to a small plough beam and handles, with some slight difference in the iron cutting part, which, in general, are named *shims*; these instruments, in all their variety, are evidently much inferior in efficiency to the small hoe-plough mentioned in the preceding section; and whilst they all require the draught of a horse, and nearly the same time, for the same extent of land, they do not turn over such a depth of soil, nor bury the weeds so completely.

The

The Elgin Farming Club have brought down from London some hoeing implements, and some for working fallows. Among these may be mentioned a drill hoe harrow, about 4 feet in length by the sides, and the base made to be contracted or extended from about one to two feet; to be adjusted to the breadth of the interval: this implement, at the base of the triangle, is armed with two sharp shares, set in such a manner under the handles as to accumulate soil in a ridge in the middle of the interval. Mr. Duckett's trenching plough is to be also mentioned. It is contrived to make two furrows, the first a shallow paring off the surface, and the second to the farther depth of 8 or 9 inches, turned over the first. By this implement the service of one man only is saved, for two common ploughs, set into the same furrow, with no more strength in the draught, perform trench ploughing better than this complicated and expensive machine. There is also a third implement, all furnished by Mr. John Hill, Oxford Street, London; it is the extirpator, invented by Mr. Hayward, has only nine shares, and is directed by two handles assisted by two wheels; it may be set to the depth of 2 or 4 inches, and comprehends a breadth of four and an half feet. The club intend these instruments as specimens only, and to serve as patterns for the mechanics of the district, by which similar implements may be made both for any member of the club, and for any other farmer who may approve of their use.

SECT. VII.—IMPLEMENTS FOR THRASHING.

The operation of separating the corn from the straw requires much labour, and has in every age exerted no little ingenuity. In this district both flails and thrashing mills are made use of. The English flail is, in some respects, different from that instrument as made in this country. The flail of England is of much less weight than those made use of here, where, from the severity of the climate, the grain is sometimes necessarily beat out, when but imperfectly ripe. As flails are still necessary on small farms, and used occasionally even on farms accommodated with a thrashing mill, it may be observed that it would be an improvement of this simple instrument, to have the swingle, as in England, connected to the staff, by a swivel, so as to turn round by itself, keeping the staff by this means firm, and not as in this country turned about loose in the hands.

Although we are indebted, it has been said, to England for the general knowledge, of and for many important discoveries in the art of agriculture, to the merit of more recent improvements, Scotland has no inconsiderable claim. The principles of mathematics applied to the construction of the plough, its elegantly curved mould-board of cast metal, the superior skill of its management without a driver, and drawn by a pair of cattle only, yoked abreast, and the invention of the thrashing machine, appertain to Scotland, or have been carried there to the greatest perfection.

Although thrashing out the corn was not complained
of,

of, during the system of small farms, as either an expensive, or laboriously burdensome operation; yet from this circumstance alone, it cannot be certainly inferred, that the quantity of grain raised now is so much more augmented by the present improved system, as either to have occasioned the inconvenience and expense which were felt in consequence thereof, or to have called forth that exertion of ingenuity which has produced the thrashing machine; for were the thrashers as industrious now as they were 60 years ago, it is more than probable that no farmer in this district would have laid out a hundred guineas in building one of these machines.

The history of the invention of the thrashing machine and the principles of its construction, are now so generally known, that it is only requisite to mention here, that about the year 1787, the first thrashing mill, on the principle which was immediately thereafter universally adopted, and found alone to be efficient, was constructed by Mr. Meikle, of Honston Mill, in the county of Haddington, at Mr. Stein's distillery in the parish of Clackmannan. The principle of this machine being then untried, and its efficiency wholly unknown, it was mutually stipulated by the parties, that Mr. Steins should afford the timber, and if the machine did not serve the purpose, no payment should be demanded by Mr. Meikle for the ingenuity exerted, or for the labour performed. On all the larger farms of this district, thrashing mills, on the principle originally laid down by Mr. Meikle, have, in the course of the last 20 years, been found almost as indispensable as the plough.

There are but few thrashing mills in this district turned by water; in general they are wrought by 4 horses.

horses. The switch stock, or drum, in some is 4 feet in diameter, and 5 in length, upon which 6 switchers, or thrashers are fixed parallel to the axis of this bulky cylinder, which is adjusted to the motion of the wheel to which the horses are yoked, and to the teeth of the connecting pinion, so as to move through a space of 2,500 feet in a minute. It has been suggested as an improvement to have the switchers fixed, not in a line parallel to the axis of the stock, but forming a small angle with that line, or fixed upon a line that forms the diagonal between the opposite ends of each of the 2 switchers in the present disposition of the drum; by which, instead of striking at once the whole straw as drawn in by the feeding rollers, they would strike it in succession, yet without interruption, as the stroke of the following switcher would commence at one end of the drum, at the same instant that the stroke of its predecessor had finished off at the other, diminishing thus the resistance of the straw to the stroke of the switcher, without disturbing the equality of the motion of the machine; but the objection to this is, that the whole of the straw must be thereby collected and thrown out at one of the ends of the switching stock, and consequently without being subjected to the operation of the tossing teeth of the shaking cylinder.

The teeth of the wheel, to which the horses are yoked, are now, without exception, of iron metal furnished from the founderies of the south, in the segments of a circle of about 16 feet diameter, securely bolted upon the timber periphery, and the pinion-wheel and feeding rollers are wholly of the same material and workmanship; so that the machinery, in general, is but little liable to derangement, and is kept in repair, at a small expense.

The

The accident, which once or twice has happened through carelessness, of the arm being caught and destroyed by the feeding rollers, might be almost for ever prevented by a bar about 2 inches above the feeding table, and about the same distance before the rollers; it might be made so as easily to be taken off when required.

Ever since the first construction of thrashing mills in the country, much has been from time to time reported of machines upon such a small scale, as to cost from about 6l. only, to about 20l., and to be worked by 2 men, or at the utmost by one horse, but no machine of this kind has yet been tried in any quarter of this county or in its vicinity. One particular is indisputably established, that the chief resistance to the moving power, arises from the opposition of the unthrashed corn, to the stroke of the switchers, and that if their motion should be less than at the rate of 2000 feet in a minute, the corn would not be completely expelled from the straw; that to adjust this resistance and this velocity to the moving power, either the diameter of the switching stock must be diminished, or its length proportionally shortened, which may perhaps, on trial, be found the best, as the closeness of the switchers to each other, on a cylinder of small diameter, would probably choke the machine.

The quantity of grain which may be thrashed depends much on the quality of the corn, on the management of the machine, and on several other circumstances; about 4 quarters in the hour may be the medium quantity, but 6 or 7 are sometimes obtained in the same space of time.

SECT. VIII.—CARTS.

Although it might be presumed that the sledge from its simplicity might have been the first mechanical invention for the carriage of loads, yet from the notices of the earliest writers we must infer, that wheels, notwithstanding the great exertion of ingenuity, which must have been called forth both in the contrivance and in the application of their efficiency, were long familiar in every nation before the sledge was any where in use.

It is only of late, that in this country, carts have been employed in the business of agriculture, and in the more inland and hilly districts, they have not yet been introduced on every farm.

Before the introduction of dung carts, the manure was carried to the field in semi-circular baskets, hung upon each side of the horse, from hooks on the saddle, which was put on over a straw mattress, so large as to cover the back and both sides of the horse; the bottom of the basket was connected by a hinge to the flat side, and fastened by a latch to the other; by the turning of which the bottom falling out, discharged the load, equal to about the twelfth part of the load of a single horse cart. The corn was carried from the field in a lighter conveyance of two sides only, hung similarly on the saddle; its outer side rising only to the same height, made an acute angle with that which rested on the side of the horse; the sheaves piled high over the saddle were kept together by a rope from the two extremities. Grain, meal, and lime, were carried in sacks tied upon

upon the back of the horse, 4 or 6 bushels making the load.

The *kellach* seems to have been the first attempt to improve these panniers, and constructed as soon as wheels were introduced into the business of agriculture. This implement is still frequently to be seen in the interior of the country, but is only used for carrying manure from the stables to the field, and never goes beyond the bounds of the farm. In excursions to any distance the pannier would still obtain the preference. The *kellach* is also a wicker basket, pretty accurately formed into a cone, having the apex at its bottom, suspended in a square frame, which projects a pair of shafts from the axle of two ill-formed wheels; it is constructed wholly without iron, and although of late doubled in its price, may be still procured for less than ten shillings, of which the basket may be now a little more than one: it is equal to about the fourth part of the load of a cart drawn by the same horse.

Upon the larger farms, the cart in some cases is drawn by two horses in a line, but it is more generally constructed for the draught only of one. With an iron axle complete, a cart costs from about 12l. to 16l. Timber axles are also yet frequently employed; it is not observed that they make much difference either in the ease of the draught, or in the price, only the timber axle admits not of being repaired. The bushes, or *bushels* according to Dr. Johnson, were at first short iron rings wedged in at either end of the nave; not many years ago they were cast in one piece of the same length with the nave, and of late the whole nave itself has been made of cast iron, with proper mortises for the ends of the spokes; but with all these alterations, there is reason to believe that the proper form and position

sition of the arms of the axle is not yet certainly ascertained. Our knowledge also of the due proportion of the length to the breadth and depth of the body of the cart is in the same state of uncertainty and imperfection. About 1,200 lb. is accounted a sufficient load for one horse when carried to any considerable distance; less than half that weight of coal is the carter's load from the port of Lossymouth, 6 miles to Elgin. Peat and turf fuel is carried from the hills in lighter carts made only of rods and bars, and the dung carts used by the smaller tenants are proportioned to the size and strength of the horse; their wheels made of birch or alder, and wholly without iron, cost from 7s. to 12s. the pair. In some cases there are carts, drawn by two oxen, of the same dimensions as the cart for two horses; they are harnessed to the necks of the cattle by a pole, bows, and yoke, several attempts to harness oxen by the shoulder to a cart of two wheels having failed; although that mode is almost universal where oxen are employed in the plough.

SECT. IX.—WINNOWING MACHINES.

The employment of the fanners, though in this country long posterior to the cart in the business of the farm, was more than 20 years prior to that of the thrashing mill. This instrument, at the first, was commissioned from the shops of the artificers of Edinburgh and Leith at the cost of about six guineas. It was then complicated with sets of wire riddles and sieves, which increased the expense, added much to the

the fatigue in working, yet contributed nothing to the cleaning of the grain. Fanners are now made in the workshop of every cartwright, and employed in every barn and almost in every mill over all the country. The price with brass bushes, both for the axles of the fan, and roller, and the whole timber painted, is from about 3l. 3s. to 4l. The quantity of grain cleaned by the ordinary diligence of three people is about 3 quarters in the hour. The fanners in some instances are appended to the thrashing machine; it discharges the grain but half cleaned, and as a separate fanner is required the additional height which this accommodation demands, and which is attended by several inconveniences, counterbalances in some degree the advantage thereby obtained.

From the specific gravity of many of the seeds of weeds, it is not practicable to separate them from the corn, but by the operation of sifting. This labour is greatly lessened by an implement named the *corn harp*. It has obtained that appellation from being principally made of wire stretched over a timber frame, like the musical instrument known under that name.

The wire, or sifting part of the corn harp, is a parallelogram, set up so as to form an inclined plane, nearly 4 feet in height, and almost 2 in breadth, having two sides of board to prevent the corn from running off at the edges, by the continuation of the frame and sides, a hopper is formed at the top of the wire parallelogram, the bottom of which necessarily almost terminating in an angle, discharges the grain through a slit of the same breadth as the wire frame, and which by the simple contrivance of a board sliding in a groove, may be opened wider, or shut narrower, as occasion requires. The wire is not stretched in one uniform plane,

plane, but inserted into cross bars about 8 inches asunder, placed in the under edges or back of the sides, so as to form 6 steps, each about an inch in height, making as many little falls as the grain runs down along the wire, the strings of which are stretched so near to each other as to allow the little globular seeds, and the small imperfect grain to fall through. A leg is fastened by a hinge near the top of the under side, which is opened so as to support the frame in a more reclined, or less sloping position, as may be required. Its price is about 1l. 10s., and when diligently employed, it may clean, by the industry of two people, one filling the hopper, and the other, with a shovel keeping the harp clear at the bottom, about 6 quarters in the hour.



SECT. XI.—MISCELLANEOUS ARTICLES.

An enumeration of all the articles which are employed in the management of a farm would make a long list. Furnishing them at first, and maintaining their efficiency afterwards by frequent renovation, and the almost perpetual repair of some article or other, requires a much larger sum than any one, without particular consideration, could suppose, the perpetual expense of which is rarely calculated either by the tenant, or by the proprietor, in estimating the rent of the land.

The grain is not sown out of any kind of basket but from a linen cloth, or sheet provided for that special purpose. One side is brought under the right arm pit, leaving that hand quite unincumbered, and knotted

on the left shoulder, forming thus a kind of apron, it is collected by the left arm into the form of an open bag containing about half a bushel. When the ridge is of considerable length, the sower is assisted by a person who meets him with seed in a sieve, so as to save the interruption of halting for a supply, and by this means, 4 barrows are constantly employed in covering the seed for the whole of a yokeing of about 4 hours' continuance.

CHAP. VI.

ENCLOSING.

 SECT. I.—CASES BY ACT OF PARLIAMENT.

THERE is reason to believe that in Scotland, ground was rarely occupied in the same manner, as that description of property which in England is named *common field*. The mode of occupation in Scotland which in any measure resembles this, is in some few instances where a field has been possessed in single ridges by several different proprietors, or by all the tenants of a village; for instance, one field belonging to five different persons was divided in such a manner, that the first ridge belonged to one, the second to another, the third to a third, &c., so that over the whole extent of the field, four ridges intervened between the various allotments of the several proprietors, by exchanges, and purchases, and other agreements which take place among proprietors; there is now scarcely any instance of this mode of occupation in the whole of this district. There are but a few cases, also, in which the boundaries of the respective proprietors are not ascertained and marked, even where land is uncultivated.

An act to sanction general enclosures, which has been of infinite utility to Scotland, was passed by the first parliament of King William, in the year 1695, ch. 38,

ch. 38, " by which it is ordained; that all commonalties,
 " excepting those which belong to the King in pro-
 " perty, or to the community of royal boroughs; may
 " be divided, at the instance of any one having inte-
 " rest, by an application to the court of session;
 " who are to divide according to the value of the
 " respective interests of all concerned; and the Lords
 " may grant a commission to sheriffs, or others, to
 " take a proof of all the requisite circumstances,
 " which is to be reported to the Lords, who are there-
 " upon ultimately to determine the division. It is
 " also ordained, that the interests of proprietors in
 " any common, are to be determined by the valued
 " rent of their respective lands therewith connected."

It had been ordained, in the earlier part of the reign
 of Charles II., for the encouragement of persons in-
 clined to enclose or plant their ground, " that where
 " enclosures fell to be upon the border of any person's
 " inheritance, the next adjacent proprietor shall be at
 " equal charges in building the dyke which parteth,
 " their inheritance, and sheriffs and other magistrates
 " in the county are appointed to put this act in exe-
 " cution."

It was in a short time discovered, that this encou-
 ragement to enclosing was almost totally prevented, in
 those cases where the marches of bordering proprietors
 irregularly intersected each other; in order to remove
 this obstruction to enclosing; it was ordained in 1669,
 " that the sheriffs, justices of the peace, and other
 " judges of the county, should adjudge such parts of
 " the one or other proprietor's ground, as occasioned
 " the inconvenience from the one in favour of the
 " other, so as may be least to the prejudice of either,
 " and the dyke or ditch to be made to be thereafter
 NAIRN AND MORAY.] R " the

“ the common march ; and the parts so adjudged
 “ respectively being estimated to discern what remains
 “ uncompensated of the price, to whom the same is
 “ wanting.” There are other clauses in this statute,
 relating to cases of entail, and to preserving franchises
 without alteration from such *excambions* or exchanges.

These are the statutes for the encouragement of
 making enclosures ; the legislature of Scotland have
 also made sufficient provision for the preservation of
 fences, when they are constructed. In the year 1685,
 during the short reign of James VII. it was ordained,
 “ that no person brake down any hedge or dyke,
 “ under the pain of sixteen shillings and eight-pence,
 “ *toties quoties*, the half to the proprietor, and the
 “ other half for repairing bridges within the parish,
 “ by the decree of the sheriff, or the justices of the
 “ peace, before whom the offenders may be prose-
 “ cuted.”

It was at that time the practice for adjoining pro-
 prietors and tenants to pasture their cattle promis-
 cuously, and without any herdsman, from the conclu-
 sion of the harvest till late in the spring ; it was
 ordained, therefore, in the following year, (1686),
 “ that all proprietors, tenants, cottars, and others,
 “ herd their horses, nolt, sheep, swine, and goats,
 “ the whole year, as well in winter as in summer,
 “ and in the night time cause keep the same in houses,
 “ folds, or enclosures, certifying such as contravene,
 “ that they shall pay half a mark (about seven-pence)
 “ *toties quoties*, for each beast they have going on
 “ their neighbours’ ground, over and above the
 “ damage done, declaring it lawful to the possessor
 “ of the ground, to detain the beasts till he be paid

“ the

“ the said half mark for each beast found upon his
“ ground, and of his expences in keeping them.”

By these salutary regulations every obstruction to enclosing is removed, in as far as the legislature is concerned ; but the great expense attending it, is still a considerable obstacle.

Tending both sheep and cattle throughout the whole year, is now so completely established over all the country, that scarcely any instance has of late occurred, of apprehending cattle for the penalty, fixed by the Act of 1686, for a trespass on the open field.

An extensive tract, consisting of about 400 acres of good corn land, and nearly 100 more of pasturage, distinguished by the name of *Aughteen part lands*, in the vicinity of the town of Elgin, and holden of the community, which was very inconveniently parcelled out amongst a number of different proprietors, was divided into entire allotments about the year 1781, under the authority of the court of session, and the Act of William, in 1695. This valuable tract had formerly, it is said, been divided among sixty-four of the burgesses, each holding about 6 acres ; and these, there is reason to believe, were occupied in 1200 different subdivisions. In the course of time the number of proprietors had been diminished from 64 to 25, one proprietor having acquired the possession of 14 shares, another of 9, others of different portions, and some had even less than one of the original Aughteen parts. Their occupation however stretched over the whole extent, each having his property in a variety of detached shares, of different sizes, over a tract of more than 2 miles in length, while the pasturage was occupied in common by the whole 25 proprietors.

The lords of session appointed commissioners to carry on the division of this tract. The commissioners procured, in the first place, an accurate measurement and map of the property of each individual, in its detached allotments, and then procured a valuation by 4 of the most judicious farmers of the country, according to which the division was regulated. Notwithstanding the confusion of occupancy, the jarring of claims, and the intricacy of interfering interests, the whole of the proprietors were, *without exception*, pleased with their new allotments. The dues of the court, the agent's fee, the land surveyor's bill, and the expense attending the meetings of the commissioners and valuers, rendered the charges attending the division, about a guinea per acre ; but the average rent was almost instantaneously tripled, or even more ; for, on an average, it rose from £1 to £3 per acre, and the land of the best quality, which is a large proportion, was let for nearly £4.

About the same time, also, a considerable tract of waste land, covered with heath, belonging in common to the proprietors of the lands of the village of Garmach, and to the Duke of Gordon, was divided in a similar manner, by the arbitration of umpires, chosen by the several parties interested. A common of the same kind, in the vicinity of the town of Forres, has also been divided by private arbitration, between the borough and the neighbouring proprietors, by whom it had been in common possession. In consequence of these allocations, both these wastes are now in a great measure brought into cultivation.

SECT. II.—FENCES.

It has been already noticed, that the grounds about the dwellings of the proprietors are without exception enclosed. The fences are thorn hedges, stone walls generally without mortar, or earthen dykes and ditches protecting the plantations. But the fences in some cases are not so complete, as to prevent black cattle from occasionally breaking through, and they are in general so easily pervious to sheep, and so much exposed to damage from their inroads, that it has been found expedient to banish almost entirely this kind of stock, far beyond the possibility of injuring such enclosures.

The proprietors, and the greater part of their tenants, are convinced of the superior value of enclosed to open fields, for the pasturage both of cattle and of sheep. The enclosures about the houses of some of the proprietors are occasionally let for *pasturage*, from about the first of June to the end of September, for nearly three times the rent for which the adjacent unenclosed fields would let during the same time for the same purpose.

Among the tenants there are few farms enclosed, excepting where the stones can be procured without much trouble, in which cases there may be a field of a few acres surrounded by a dyke, seldom so entire as to keep cattle in; and on some there are short lines of hedge, which do not however form any complete enclosure. Some of the tenants find so much convenience in having a few acres enclosed, that they are

at the expense of surrounding a small field with hurdles, which, though sufficient at first, make but a very temporary fence ; the cost for timber and workmanship amounts to about four-pence per yard, and to keep up this kind of fence, besides almost unremitting attention, requires about five shillings annually for each hundred yards. On the estate of Boath, in the county of Nairn, there is an enclosure formed of turf, substantially built to about the height of 4 feet, and about 2 feet thick at the top, which is sown with a line of whins (*furze*), which, in two years, have grown up close about a foot and an half high, and if frequently and skilfully trimmed with the shears, will no doubt become a sufficient durable fence, though the original expense did not exceed four-pence per yard.

In the same county, on Mr. Gordon of Clunies estate, of Kinsterie, Mr. Skene, a gardener, obtained a lease for 19 years, of a farm consisting of about 40 acres, of a loose sandy soil ; the crops always failing in a dry summer, the rent at the commencement of the lease was proportionably low, about 7 shillings the acre. Mr. Skene, after building a commodious dwelling-house of 2 floors, with neat and suitable offices, enclosed a garden of considerable size, with a hedge, in which, besides a great number and a great variety of fruit trees, and other garden productions, he allotted a large proportion to a nursery, for raising articles for public sale ; he then enclosed the whole farm in separate fields of a proper size, by hedges, which, under his skilful management and attentive superintendence, became, in the course of a few years, adequate and durable fences, without any allowance from the proprietor. His name will be, however, deservedly remembered,

membered, as the farm has now obtained the name of Skene park, in memory of the improved condition to which it arrived, under his management. His merit has also been liberally acknowledged by the proprietor, who renewed the lease, with a considerable addition of adjoining land, and at a rent much lower than it would otherwise have been let for, and which, during the second lease of 19 years, will afford ample remuneration for the outlay during the first lease, to which the permanent improvement was owing. From the shelter of the hedges, the crops are now less liable to be injured by drought, and the arid sandy appearance of the soil is changed into that of a moist fertile loam.

A late very respectable writer on subjects connected with agriculture (Dr. Anderson, of Monkshill), has endeavoured to impress the advantages of abandoning completely the ancient practice of pasturage, by substituting that of continually feeding black cattle in stalls on mown grass, by which there would be no occasion for enclosures; he has not, however, estimated the expense, in wages and in the sustenance of the men and horses, which this method would necessarily occasion, even if it were always practicable to procure the requisite number: the increase of the expense of every kind of labour which this system would create, and the want of employment during two thirds of the year, for the mowers who must be retained, has been also omitted in the calculation of this ingenious author; neither has he taken into the account the impaired health and vigour (especially in growing cattle), which constant confinement and want of exercise, even in a place well aired, must naturally occasion. Although it might be therefore, proper, to adopt this practice occasionally, in the extremes of

heat and cold, it can hardly be carried into effect, where any considerable number of cattle are kept.

In regard to enclosures in general, it still remains an object of great importance to the proprietors, to concert with their tenants conditions mutually advantageous, on which enclosures may be constructed over all the country. There is no doubt but the tenants would readily enter into this agreement, for, several years ago, dykes of sod were pretty generally tried, and considerable sums were expended by the tenants on this kind of fence, but they were found to be wholly insufficient to prevent the inroads of black cattle and sheep, and have been for some time generally abandoned,

CHAP. VII.

ARABLE LAND.



SECT. I.—TILLAGE.

ALTHOUGH agriculture, in many respects, be yet far from that measure of excellence, which it may, and will probably attain, yet one of its principal operations, namely, *tillage*, on which the rest so much depend, has been brought to a high state of perfection; and the plough and the harrow, for the preparation of sowing potatoes, turnips, or flax, and some other crops, is now in general equal to any thing which the gardener with his spade, rake, and line, is able to exhibit; over all the district to which this survey relates, tillage is performed in as masterly a manner by the ploughman and his single pair of horses, without any other assistant, as in any province of all this great empire, both in regard to the quantity of work performed, and in the quality of its execution.

In every quarter of the country, the ploughmen are skilful in trimming the plough, both by fitting the harness, and by the adjustment of the coulter, share, and bridle, and also in ploughing the furrows straight, and in keeping the ridges of an equal breadth, from one side of the farm to the other. A few years ago, it was usual to have one pair of oxen yoked to the plough,

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in the same harness as that of horses, and the quantity of work done by them in the day, was not perceptibly less, and the execution fully equal. A few pair are still employed, but on the whole, the number is at present inconsiderable.

In the western and interior parts of the district, among the smaller farms, 4, 6, or 8 little sized young oxen are employed in the plough, attended by a boy, or occasionally, by a girl, as a driver. In some cases, with two such oxen, a pair of small horses are conjoined, and occasionally the poor man's two cows are yoked in, to aid the draught of two feeble horses. The season of labour, along the coast, which is more free from the interruptions of snow and frost, is so much longer, that two sorry horses manage a farm of equal extent in as strong a soil, where the condition of the tenants is in other respects on a par.

The position and breadth of the ridges, is determined only by the aspect of the field, and the quality of the soil. There are many examples where, in the same field, one half of the ridges lie S. and N., and the other half E. and W., yet no difference in the crop has been at any time perceived, and probably cannot exist, if the land be not ploughed up into very high ridges.

In a wet field, it has been generally accounted best, to have the ridges only about ten feet broad, and but little raised; yet in this mode, the whole field is kept wet, for during the rainy part of the season, there is water between every two ridges, which, by the attraction of the earth, is drawn up even to the middle of each ridge. But if the ridges in flat low lying lands, were made 12 yards in breadth, and gathered up three or four times successively to the middle, the power of gravity in so great a slope, would entirely destroy that
of

of attraction, and the water would run wholly off by the intervening deepened furrows, which, from their lesser number, would become also more easy to keep clear of obstructions; in such wet soils there must be also a loss, by the inferiority of the crop in each furrow between the ridges, the fewer therefore of these, the loss will be the less. A ridge of 12 yards appears in other respects to be convenient, being two ridges of six yards each, when it is proper to lower it in the middle, which is done without filling up the furrows upon its sides, a furrow newly opened being a bad conductor of water.

Where no consideration of the damage by wet, influences the adjustment of the breadth of the ridge, it is not regulated by any general principle, and of course no uniformity is observed; ridges of six yards are probably more common, than those of any other particular breadth, being the most commodious in spreading the manure, harrowing, sowing and reaping; besides, the square of this breadth, being the 160th part of a Scotch acre, the extent of any ridge, or that of a whole field, may be readily at any time ascertained, by dividing the number of yards in the length of each ridge, by 6, the number of yards in its breadth.

In the hilly parts of the country, it is the general practice to plough right up and down the acclivity; there, in the rainy season, it is not uncommon to find the crown, or middle of the ridges a miry bog, from the water following the track of the conducting vein or bed of under soil. To very few it has occurred, that turning the ridges aslant the acclivity, preserving a proper descent in every separating furrow, that each would make a most effectual drain for the ridge immediately along its side.

SECT. II.—FALLOWING.

Upon the larger, and best cultivated farms over the whole district, there is always a portion of each in fallow through the summer, completed by five successive ploughings, at the distance of 3 or 4 weeks from each other; it is harrowed immediately after each ploughing. No difference appears in the tilth, or in the crop of that half of a field, which may have got the first ploughing in December, from that of the other, which may have remained untouched till May.

About 30 years ago, the late James Walker, M.D. fallowed a field about 14 acres, for 2 years together, in the course of which, it was successively ploughed and harrowed for 15 or 17 times, a small quantity of pigeon dung was applied: the crop of wheat was not superior to that commonly produced, by one summer's fallow with the ordinary allowance of manure. That gentleman also, by what may be deemed an almost uninterrupted fallow, ascertained in the most satisfactory manner, the effect of tillage alone, without the least aid from manure of any kind. In the earlier part of his life, he entered with the whole ardor of enthusiasm into the system of horsehoeing husbandry as established by Mr. Tull, in which he continued with most unflinching steadiness, and for many years raised crops of wheat, barley, and beans in drills, without the least particle of manure, at first on damp dense clay loam, always fallowing the intervals about 3 feet wide, in alternate succession for each succeeding crop; and removing, he continued the same practice for almost 19 years,

years, on a dry loose sandy soil. Every operation was performed in the neatest manner, with the nicest accuracy, and in the proper season; yet the success was not such as to induce imitation; the quality of the grain was not inferior, but the quantity from the acre was always so much less, than if sown in the common way upon the same kind of soil, fallowed and manured in the ordinary mode, that there is no reason to suppose that this system, even though aided by the power of manure, and producing crops even of wheat in continued succession, would be more profitable than a rotation of the ordinary kinds of grain, judiciously intermixed with green crops, turned to the best account.

But besides having so completely in practice exhibited the theory of Mr. Tull, Dr. Walker has also the credit, of having introduced into this country, the cultivation of beans, turnips, and potatoes in drills, formed either for horsehoeing, or for being hoed by the hand.

In the autumn there is a substitute for winter fallow, under the designation of *brake-furrowing*, pretty general over the lower quarters of the district. By this operation, every alternate furrow only is ploughed and turned over on the intermediate space, which is left untouched. This work is accomplished, in less than half the time, which a common ploughing requires, and as one layer of stubble is folded over the other, a degree of fermentation is raised, which renders the untilled surface as tender as it would have been by a thorough ploughing, and has more influence in destroying weeds. This operation is generally performed across the direction of the ridges; when completed, the water furrows are all accurately cleared. Upon trying, however,

however, a ridge in the middle of a field thoroughly ploughed, and another managed as Lord Kames directs, namely, ploughed and harrowed and then immediately brake-furrowed, no difference could be perceived in any period of the growing of the crop, either in the common brake-furrowing, the complete ploughing, or his lordship's mode of the winter management of the soil.

SECT. III.—COURSE OF CROPS.

In the interior of the country, by the word "*corn*," oats only are understood; from which it may be inferred, that this was the only species of grain, which was known and cultivated, for some generations, after the knowledge of agriculture reached this quarter of our isle. Barley, however, was also at an early period introduced, but comparatively it was only of late years that wheat, rye, pease, and beans were cultivated; and it is within the remembrance of the present generation, that the culture of potatoes, turnips, and clover, and several kinds of garden productions, were introduced.

Agriculture had made but little progress, at the era of the reformation, when the wheat in the Bishop of Moray's rental, was but ten bolls, while the barley amounted to 1232. By the convulsions which then ensued, all improvement was suspended: high and low entered so eagerly into the reformation both of church and state, that they had neither leisure nor inclination to improve the soil; and excepting some beneficial laws, regulating the valuation and purchase of tithes, estab-

lishing

blishing parish schools, dividing commons, and preserving enclosures and woods, of which the present generation seem first, though not fully, to have perceived the use, agricultural knowledge was much neglected. During the troubles of the sixteenth and seventeenth centuries, it was so much on the decline as to be unable to withstand the seven unfavourable seasons which took place towards the end of the 17th century. In the higher parts of the country the husbandry was in that short period wholly abandoned; thousands of the people leaving their habitations, died of hunger in the highways and streets. The magistracy of Elgin established a police for burying, at every dawn, the bodies of those miserable strangers, who had fallen each night a prey to the famine. The bier in which the bodies were carried to the grave, in the neighbouring parish of Urquhart still remains; their ordinary attire served both for the shroud and coffin.

The vestiges of straight ridges of equal breadth, which still remain proofs of former cultivation, though now covered with heath, prove, that while the population which once occupied this district is not yet fully restored, the skill with which the plough seems then to have been managed, is scarcely yet exceeded; that skill however appears to have consisted in the accuracy of the execution, rather than a judicious system; and excepting where the remiss arrangement into *croft* and *outfield* had been adopted, one general rotation seems for many centuries, universally to have prevailed. By that rotation, each farm was divided into four nearly equal allotments, one of which in succession, was annually prepared by two or three ploughings, and the application of the whole manure of the farm, for barley; the other three allotments were under a crop of
oats,

oats, raised by one ploughing, varied in some cases by a crop of rye, where the soil was suited to that grain: sowing occasionally a small quantity of pease on a few only of the earlier farms, was probably the first deviation from this system. The whole of every farm was under corn by the first of June, when the plough with all its tackle, remained untouched till the conclusion of the harvest.

Whatever may be advanced respecting the advantages of an unwearied rotation, even of the most approved course of cropping; it is certain that greater profits are derived from white than from green crops, and if the half, instead of the fourth part of the farm, could have been annually manured, the old rotation, notwithstanding the inferiority of the cattle, which it must have continued, might even on a long lease, and certainly on a short one, have been more lucrative, than the most approved of the modern courses.

Green crops, it may be presumed, are not cultivated in this district, for their own intrinsic value, but rather as the most economical means of putting the land in a condition to bear better crops of grain, than could be produced by the old system, according to which four of these were taken successively, with only once manuring, and a much inferior method of cultivation: accordingly in the two last years of a lease, when the tenant is less interested as to the future management of the ground, green crops are discharged from the rotation, and his successor commences his operations by the application of all the manure he can procure, either for turnip, or for wheat, and as he generally finds great proportion of the farm (from about two-thirds, to five-sixths of the whole, tolerably free from weeds), he has but little cause to complain of the proceedings
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of his predecessor, towards the expiration of his lease. There are instances of the entering tenant having paid more money to his predecessor, for the three allotments of grass land, ground and dung for turnip, and land to be prepared by a fallow for wheat, than he could have lost, by commencing without these accommodations.

Although the course of cropping, since the ancient system has been abandoned, be not precisely the same on any two farms in the district, nor scarcely uniform for any number of years in succession, even on one, yet the principle by which it is conducted may be accounted the same on the larger farms over all the country. Horse-hoed beans, potatoes and turnips, are every where accounted equal to a fallow, and the two first mentioned in no respect considered as an inferior preparation for wheat. It is also an established principle that clover, and other grass, is not to be sown upon land, until it be first thoroughly cleansed of weeds, and adequately manured; grass seed is therefore sown, in ordinary management, with wheat, and with the crop which succeeds the turnip, which is sometimes oats, but more generally barley, and, of late, spring sown wheat. It is rather from peculiar circumstances, than from any established rotation, that a grass field is broken up at the end of its first season; the prevailing course is to keep the grass for three summers. The great want of uniformity takes place, in the mode of cropping after the grass. In some cases, it is wheat sown after two ploughings, sometimes with a slight application of dung, but often without manure: succeeded by pease, and then oats; sometimes by two successive crops of oats, rarely by a crop of barley. After two, or in the most desperate cases, after three such crops, on breaking up the grass the renovating part of the

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system, (fallow or turnip, horse-hoed beans or potatoes, and the manure as at the first,) is recommenced.

It has been noticed on some occasions in forming a different arrangement of the land, or in making some change in its shape or extent, that a corner of a field in the best condition, had been taken in with land so exhausted by the previous course of cropping, as to make this renovating part of the management indispensable; yet no superiority was perceptible in the crop of that part which had been in good condition, over that of the sterile part, to which, by the new division it had been conjoined; from whence it is to be inferred, that, as in the experiment by Dr. Walker of fallow continued for two years, there is nothing, or little to be gained by the shorter courses of cropping, in situations where, from the state of the markets or from other circumstances, the white crops are the most valuable. In the upper quarters of the district, barley is substituted uniformly for wheat, which, it may be stated, is cultivated only along the coast. A crop of pease occasionally intervenes and only on a few farms, and with little or no regularity.

On the smaller farms, the course of cropping is restricted principally to barley and oats, with potatoes, small portions of turnips, and of cultivated grass. A small plot of flax may be occasionally observed, manufactured wholly in the family, for its own domestic accommodation, though sometimes pieces of linen cloth are brought to the market.

SECT. IV.—WHEAT.

1. *Preparation.* There is a considerable degree of variety in the preparation for a crop of wheat. The most approved is a clean complete fallow, as already described: five ploughings and an equal number of sufficient harrowings, both along and across the direction of the ridges, destroy the greater part of the weeds, and reduce the field to the tilth of a garden.

The next most usual preparation for sowing wheat, is after a crop of drilled beans, or potatoes, in rows, to both of which dung had been applied, and both the horse hoeing and the hand hoe carefully attended to, during the period of their growth. On some occasions the manure is not applied till the wheat is to be sown; yet, while the crops of beans and potatoes are greatly benefited by the application of manure, no perceptible difference has been observed in the crop of wheat, whether the manure be directly applied to itself when sown, or to the preceding green crop. In the vicinity of Forres, the farmers are in the practice of carrying out the dung of the town during the winter, the owners of which dung trench the land in spring, turning up the ground by three operations of the spade, to the depth of 14 or 18 inches, spreading the dung near the surface in one layer, on which the potatoes are planted; they are kept clear of weeds, and cultivated through the summer, by the constant application of the hand hoe, and dug up by the owners of the dung, when the land is again reduced into the form of ridges by one ploughing,

ing, on which the wheat is sown. The owners of the dung give no other rent for the land, employed in this manner, but the dung, and their own labour, in digging and cultivating the crop.

On some occasions wheat has been sown upon the breaking up of a grass field, which, for this purpose, is either ploughed about the end of August, or turned over in a brake furrow, as described in the second section of this chapter. It is thoroughly ploughed about the end of September, and generally manured. It is not, however, always a certain crop; it has been sometimes known to have failed from the application of too much dung, and sometimes from the total want of manure.

Wheat of late has been sown in the month of March, after a crop of turnips, to which, as well as the turnips, dung has in some instances been applied. It has not, however, been yet ascertained, whether this will be advantageous, although the trials which have been hitherto made tend to prove, that the produce, though not, perhaps, a weighty crop of wheat, brings a higher and a readier price than a crop of barley or of oats, which used formerly to be sown after turnips, could obtain.

2. *Manuring.* It has been noticed, that manure is generally applied to a crop of horse-hoed beans, and, with some exceptions, to potatoes cultivated in the same manner as a preparation for wheat, occasionally on the breaking up of grass land for wheat, and, in some recent instances, where wheat has been sown in the spring after turnips.

A compost dunghill, consisting in general of layers nearly of equal thickness of yard muck and some earthen material, is always prepared in the summer
for

for the land which is fallowed for wheat, and spread just before the last ploughing for the seed.

3. *Season.* On some of the larger farms, the servants and horses are employed during the harvest, from about the end of August, in carrying out the manure, ploughing, and sowing the wheat, which in this way is completed before the middle of October. In moist situations, where there is reason to apprehend that the sowing might be prevented for a long time, by a series of rainy weather, it is thought safer and more expedient, to execute these operations the beginning of September. In the drill husbandry, by the late Dr. Walker, mentioned in the second section of this chapter, the seed was generally sown about the middle of August, and though the crop appeared beautiful in September, it was scarcely earlier than the neighbourhood; the ear was not longer and the straw was shorter; the grain, however, exhibited a fine sample, even the eighteenth crop, without manure. On farms where all the labourers are employed in reaping the harvest, the season of sowing wheat is necessarily deferred till after the middle of October, and in ordinary seasons is completed about the end of November. It is not yet sufficiently ascertained, that the sowing wheat after turnips in the spring, nor the sowing what is properly called "*spring wheat*," will be generally attended with advantage. It had been many years ago observed that spring sown wheat filled the bushel as well as that of the autumn, but did not yield the same weight of meal; this may, perhaps, be found to be still the case, even with this new species.

4. *Putting in.* The seed, almost without exception, is sown on the surface of the land immediately after it is ploughed; three courses of harrowing, the

middle one across the ridges, are generally sufficient. In some situations, where the soil is light and dry, it is sown before the field is ploughed; in this way the depredations by rooks and pigeons are entirely prevented; but in stiff or wet soils it might be apprehended that the seed, from the difficulty of penetrating through, might be liable to rot. Drilling and dibbling wheat seed are seldom or never practised in this district; however advantageous dibbling might be, it is quite impracticable in this country, from the want of the people acquainted with that operation.

It is certain that a striking degeneracy takes place in the seed imported into this country, from Kent or Essex; when it is sown here for several years in succession, it will by the third summer be considerably damaged by smut; some proportion also of that year's crop will undoubtedly be rye: this proportion of rye shooting into the ear about ten days earlier than the wheat, has been carefully lopped off, that the crop might be fit for the seed of the fourth year, in which the proportion of rye was, notwithstanding, so much more than in the preceding season, as to impress the idea, if not to ascertain the reality, that the whole in a few years more would degenerate entirely into rye. Were this ascertained, our knowledge of the natural history of both these kinds of grain would be considerably advanced, which might, perhaps, lead also to some improvement in their cultivation. Among the agricultural writers of Rome, the *Secale* rye was accounted only a variety of the *Triticum*, in the same regard as the *Siligo* and the *Far*, for the botanical characteristics of wheat and rye are the same: they are both of the *Digynia* order, they are both of the *Triandria* class, the calyx of both is a vivable gluma, both

both ranking under the fourth order of Gramina. Were the experiment continued in this country for 6 or 8 years, it might be ascertained if wheat would degenerate into rye; and by a similar process in a country less remote than Tibet; (in Sicily it may be supposed, or in some of the more genial islands of Greece,) it might also in the same number of years be ascertained, if even the small lilack rye of the Highlands of Scotland, could not be restored to the primeval bulk and the fairest colour of the most valuable wheat.

This tendency to degenerate can be guarded against in no other way that has been yet known or tried, but by continued importations of seed. Annually, therefore, or every second year, it may be stated, that a proportion of the seed of almost every farm is brought from London; the produce of which, though commonly more, is never less than the quantity of seed required for the whole sowing of the succeeding crop. Two varieties only are yet common in this country, the white wheat and the red, the last of which is deemed the hardiest and the most certain crop; the meal of the white kind is supposed to be the best. The qualities of the real spring or bearded wheat, as has been mentioned, are not yet ascertained by experience, but the circumstances of the country seem to bespeak a farther trial. It would, perhaps, be found advantageous, to try seed of the most weighty kind and of the largest bulk, the name of which is said to be *cone wheat*.

The land sown with wheat is, almost without exception, executed in the most masterly manner. The quantity of seed allowed to the acre is, in some degree, influenced by the season; it is in no case less

than three bushels, but if the sowing is not sooner than towards the end of November, about 4 bushels are generally allowed.

6. *Steeping*.—There are four modes of preparing the seed practised in the country; one, which it is believed was the first and is perhaps the best, is steeping the seed from about 30 to about 60 hours in sea water, strengthened by a solution of salt till it floats an egg, the light grain being carefully stirred up and skimmed off; when dripped from this brine, it is sprinkled and mixed with quick lime till it becomes so dry as not to stick in clots when sowing. The sea water is only preferred as a saving of the salt, common water being used at a distance from the shore.

It having been observed, that after the wheat had been 60 hours in the brine, it was scarcely swollen and that the salt had not penetrated into the meal, or substance of the grain, but might in an instant be washed off the outside of the husk; it was expected to gain all the advantages of the brine by a thorough washing in fair common water. In this mode, a quantity, about half a bushel, is put into a tub nearly filled with water, on the margin of the brook, and whisked about with a shovel or a besom, so long as any of the grains are thereby made to swim; this operation is repeated till the water be no longer defiled, which is generally effected by four successive washings; when dripped a little in a sieve or other basket, it is then dried, as in the former mode by sprinkling lime, and immediately sown.

This being not always found a certain protection against smut, a third mode of preparing the seed has been more generally practised. About half a bushel is put into a large tub nearly full of stale urine, and
being

being whisked about for nearly three minutes, and the light grains skimmed off, the whole contents are discharged into a sieve placed over another tub; the grain dripped a little is thrown out from the sieve into a cart, and a similar quantity of seed managed in the same manner; the urine is poured back into the first tub for plunging the third portion; in this way the business is continued till nearly a quarter is prepared in the cart, when, if more seed be required, a supply of unused urine is provided.

The last mode of preparing seed wheat is to lay up the whole quantity to be sown in the barn floor about one foot thick, and with a besom and a tub full of stale urine to besprinkle the whole, turning it over with a shovel till it be all thoroughly wetted, and then to mix with quick lime till the grain may be readily scattered in sowing. The inferior grain being all in this way retained, the former mode is more generally preferred.

It has been by experience discovered, that if grain prepared by urine and lime be not immediately sown, it is entirely divested of its vegetating powers; from whence it is inferred that the lighter grain floated off by the other process, is so completely destroyed by the urine and lime, as not to infect the strong seed during the season of its growth; but if the weak be thus wholly destroyed, it may be supposed that the strong must be in some measure injured, and the crop though free of smut, in some respects inferior. All these modes of preparing the seed have been often effectual, but they having all occasionally failed, it is believed that none of them would prevent smut with seed that had been successively produced in the country for 4 or 5 years.

7. *Water furrowing*.—Immediately after the seed is harrowed,

harrowed, this operation is carefully performed where the field is level, or subject to water lodging on the surface; where it is requisite, the furrows are farther trimmed up by the spade, and cleared at the out fall, it having been by repeated experience sufficiently ascertained, that where any pool has stagnated for any time in the course of the winter, the seed is entirely destroyed. To prevent any water being in this manner lodged, the ridges are laid up to the middle, both by the seed ploughing, and also by the ploughing immediately preceding it.

8. *Hoeing*.—The only example of hoeing wheat was exhibited by the late Dr. Walker in the parish of Spynie, the drills were at the distance of 2 feet 6 inches; the management was in every particular minutely accurate, both with the horse hoe plough, and the hand hoe, except only that no manure had ever been applied; the produce from the acre was in no year so great as to induce any to attempt the imitation. This country has yet exhibited no instance of a crop of wheat in rows adapted only to the hand hoe.

9. *Reaping and harvesting*.—The expense of harvesting of late, from the scarcity of reapers, has risen considerably above the proportion of other agricultural labour. This has occasioned the introducing the practice of cutting by the sheaf, which at the rate of 1½d. or 2 pence for each *stook* of 12 sheaves, making the band, exclusive of the knot, 3 feet in length, has been found, in many cases, to be advantageous; yet still requiring an expense, disproportionally high, several farmers began in the harvest of 1808, to mow the crop both of wheat and of other grain with the scythe. This mode is much approved of by some, and, as in similar cases, it is by others represented, as attended

tended with no advantage in forwarding the work upon the whole ; while the loss in the rakeing, which after the scythe is indispensable, is represented as a positive disadvantage. The reasons assigned for the use of the scythe were not specially determinate ; the strongest assertions were, that nine people, being three mowers, three gatherers, and three binders, were equal to twelve people with reaping hooks, the rakeing being accomplished by the binders without retarding the mowers. It will, however, readily occur, that more experience is requisite before the proportion in regard to the saving of expense can be ascertained, much depending on the state of the crop, as to standing uniformly upright, or flatted down, ravelled, and entangled, and much also upon the thickness and length of the uncut corn ; it is undisputed, that when the straw is of consideration, one eighth part more is gained by the scythe than by the reaping hook, but from the unequal arrangement of the ears in the sheaf, many escape the most attentive exertion of the flail, and more pass through the thrashing mill untouched.

Of late also it has become the practice on several of the larger farms, on which the ordinary establishment of servants was sufficient for bringing in and stacking the corn, to reap the crop by a contract for the acre, which has been generally undertaken at the rate of 9 shillings and 6 pence ; where the crop is light and the proportion of wheat but small for about 8 shillings ; and which, making a reasonable deduction for meat, drink, and lodging, is calculated to be much cheaper than the practice of our fathers, in providing a reaper for each 5 Scotch acres of the crop.

10. *Distempers.*—The crops of wheat, similar to those of other grain, are often less in quantity, and inferior

ferior in quality, when no cause within the reach of human penetration can be assigned. The obvious distempers which impair the value of a crop of wheat in this country are generally but two. In some seasons, soon after the ear is shot out, the stems, and husks also of the ear, are distinguished by red spots, by which the nutritive sap appears to be somehow turned off in its progress towards the grain, which, of course, becomes shrivelled in its substance, and greatly impaired both in its bulk and quality. This distemper is supposed to be brought on by a rainy season; but the manner of its influence is yet unknown, and no mode of prevention has been ever projected. The name of this distemper is *rubigo*, the same it is presumed, which is called the *red gum* in England: unless the tendency which the wheat in this country has to generate, or to foster *rye*, be accounted a distemper, *smut* is the only other of which there is cause to complain, and which, notwithstanding all the steepings and washings and other preventatives hitherto tried, does frequently deteriorate the crop.

From what has been learned by the experience of all the different modes of preparing the seed which have been mentioned, washing the grain perfectly clean in pure water, and afterwards steeping it for one complete day at least in brine which floats an egg, may be deemed the best. This is preferable to any of the modes in which urine has been employed, because, though continued for the space even of 50 or 60 hours, it invigorates instead of impairing the vegetative power. It has been observed that though all the modes of preparation occasionally fail, the washing quite clean in pure water and drying with lime, has been noticed to fail more frequently than the steeping in urine; but

seasons

seasons have occurred in which urine gave no degree of protection, yet several people have maintained that their experience of this practice for nearly 30 years carefully performed, warrants absolute prevention. One person, several years ago, by an advertisement in the newspapers, claimed a guinea for this nostrum, which had however been in this country for many years generally practised. It ought perhaps to be observed, that from an accidental circumstance, the quantity of about two bushels having been steeped in urine and dried with lime on Saturday forenoon, and sown on Monday thereafter, did not vegetate scarcely in a single grain; while the greater part of the same quantity, about two quarters, sown immediately when prepared on Saturday, was a luxuriant and a weighty crop.

It hath also in speculation been recently suggested, being yet wholly without experience in this country, that a slight drying of the seed upon the kiln is an effectual prevention of this misfortune: that the same advantage is also to be procured by sowing the grain of the preceding year; if that grain, though itself smutty, might have its produce clean. If, in the space of two years, this could be ascertained, this mode might with confidence be adopted. It ought however to be attended to, that on various occasions, a bushel or two of wheat brought from England for seed, has from accidental circumstance been kept through the year, apparently in the best condition till the succeeding autumn, and did not vegetate; while wheat, kept as long in a stack in the yard till immediately required for sowing, grew a weighty crop.

It has not yet been discovered whether this disease has commenced or not, until after the grain has shot fully into the ear. But if gentlemen, whose leisure and circumstances

circumstances enable them to try experiments, were to raise a few grains of wheat in a flower pot, or in the garden, some clean and others infected with smut, there is no doubt but they would come up both smutted and pure. If each blade as soon as visible, were daily examined by a powerful magnifying glass, it might perhaps be ascertained at what period of the growth the distemper first began, which might lead to the discovery of some of its causes, and the cure might be thereby on some principle ascertained.

11. *Stacking*.—Although wheat be very readily damaged by rain, yet in dry weather it becomes sooner fitted for the stack than any other kind of grain; for though not sufficiently withered to keep unspoiled if packed close in a deep mow in the barn, yet the firm cylindrical form of the stems allows the natural sap, or even a small degree of incidental moisture, which would destroy any other grain in similar circumstances, to be exhausted. Wheat in general, after the 4th or 6th day from the reaping, is carted into the corn yard, and built into stacks, the minute particulars in the erection of which it is hardly possible to describe.

12. *Thrashing*.—The larger farms having the accommodation of thrashing mills, this laborious operation is now in general with much facility accomplished. Where it is on any occasion expedient to engage labourers to thrash by the flail, the wages are always settled in money at a certain rate by the day, or by the quantity thrashed. The sagacity of Dr. Johnson having been unable to ascertain which of those modes of payment is to be preferred by the owner of the corn, it must still be left undetermined, and it may be observed that the thrashers are equally disposed to engage

gage in either way. On the smaller tenements, a large proportion is thrashed by the farm servants; it is not now, therefore, so much an object of consideration, as at the era of the doctor's tour in this country.

13. *Price.*—It must be allowed that the value of the soil depends on the price of its productions, and that with a view to the interests of the proprietors, this price must be an object of the first consideration. In the feudal times, the value of the soil to the proprietors depended on the number of the fighting men, which it could be made to support, and from all the notices of history it must be inferred that the proprietors, in those ages, which their descendants now account as barbarous, were neither ignorant of, nor careless about, the means of securing this interesting object. The number of fighting men which the soil may support, has of late become an object of legislative, rather than of individual, concern. It is not, however, the purpose of this undertaking to investigate in how far our legislature are attentive or remiss in this great object, although with due regard to the speculations of Mr. Malthus, it is not *wholly* regulated by the plenty, nor by the price of food.

To proprietors, therefore, the value of the soil in this country almost wholly depends on the price of its corn, to which its other productions, cattle, and the provisions for their support, are merely subservient; yet so far from any well directed concert existing among the proprietors, for aiding their tenants to obtain the highest price which their wheat and other grain might produce, it may be rather inferred, that there was a general agreement among them for enriching a few favourites by the disposal of the corn of the country. According to the ancient system, the rents were almost wholly

wholly paid in grain, the proportion in money being comparatively insignificant, as a farm which paid 60 quarters of barley, paid only about 7l. in money, at the rate of about 2s. to each quarter: no inconvenience was felt, therefore, in making the money part of the rent payable in December. Since the introduction, however, of fallow, turnips, and cultivated grass, the payment of the rent in corn became inconvenient to the tenants, and alterations also in the circumstances of the times made it likewise inconvenient for the proprietors to continue traffickers in grain; the rents, therefore, have been, in a great measure, converted into money; but the ancient term of payment has been still maintained. A few individuals perceiving the advantage which might be made by supplying the money for this rigorous exigence (as many tenants, though even of considerable stock, find it convenient to sacrifice distant profit for immediate accommodation), arranged their funds for securing this advantage. For many years, therefore, it has been the practice for a considerable number of the tenants, to engage in November, to deliver a great share of their marketable grain in the succeeding spring to the corn merchant, for an immediate advance of cash to satisfy the landlord's demands. The merchant thus seemingly the favourite of the proprietors, well acquainted with the circumstances of his neighbours, of their ability to fulfil their part of the bargain, and having both real, and also ostensible information from his correspondents in Leith and Mark Lane, secures a very handsome gain by his advance of money at very little risk. The fortunes which corn merchants have made may be accounted nearly as the loss which the tenants, and in the end the landlords also, have sustained,

tained, by being thus obliged to dispose of their grain at a season so unfit. This circumstance was briefly noticed in the original Report circulated in 1794, by the disgraceful, but notorious, epithet of the "poor man's boll."

It would be for the most part, however, impracticable for the poor man, and generally even for the tenant of almost any one of the larger farms, to send the small quantity of his own grain only, to the ports of Leith or London. The corn merchants, therefore, who have correspondents, and know the markets; who are provided with granaries for collecting complete cargoes; who have also ships and sailors requisite for this essential department of agricultural management, merit regard for their utility. It being impossible for them to bestow such great accommodation gratis, it is obviously necessary that they should be paid for their risk and labour; but it would be often convenient even for them, at all times advantageous for the farmers, and it would contribute, in a high degree, towards obtaining the just price of the productions of the soil, so essential to its proprietors, were they to adjust the time of the payment of the rents to the season when the price of grain might be established, and more generally ascertained; and which might give to the farmer, as well as the corn merchant, a little choice in the market.

As only a small quantity of wheat is produced in the county of Inverness, there are some dealers in the vicinity of Forres, who purchase wheat to some extent, which they also manufacture into flour, and carry in their own carts, from week to week, for the supply of the consumption about the town of Inverness. A small quantity of wheat about Elgin, is manu-

factured and disposed of, in the same manner, about the town of Banff, and the village of Keith.

The bakers also about Forres and Elgin who make bread for sale, purchase small quantities of wheat, which they also grind into flour as their own occasions respectively require. A more satisfactory statement of the *price* than can be given in this section, is exhibited for a considerable series of years in the table of the county Fairs, taking, however, into consideration, that the quantity sold in the spring and summer, after the Fair price is ascertained in February, rises higher from about three to about seven shillings on the quarter.

14. *Grinding*.—About 500 years ago it was deemed necessary, by our government, to make an act of parliament compelling every farmer, who was in such opulent circumstances as to have four yoke of oxen in his plough, to sow one bushel of wheat. Although this act had not probably any material influence on the state of agriculture in this district, yet a considerable quantity of wheat was annually produced in it; but its manufacture into flour, northward of the Grampian mountains, was unknown. On that account, the millers, who by ancient investiment claimed the grinding of the whole crop, seed alone and horse corn excepted, made no pretension to the grinding of the wheat, which, with very little reservation, was therefore disposed of at Leith, or elsewhere in grain, free from the thrall, (*thirle*, as it is in this country vernacularly pronounced), of the mill-exactions, and the consumption of the country was supplied by hard biscuit, imported in barrels from Leith, and by flour from London.

At first some country gentlemen purchased small bolting cloths, and after grinding the wheat as fine as
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by the common mills could be accomplished, had the flour imperfectly separated from the bran in their own families.

The first mill constructed for grinding wheat was at Linkwood in the parish of St. Andrews, Shanbryd, about the year 1756 ; as yet there are but three in the vicinity of Elgin, and the same number in the country near Forres. There are two in the county of Nairn, but one of them is not of much consideration.

When corn mills were first erected in this country, about the year 1220, it may be presumed that, from the scarcity of money in circulation, the duties were paid in a proportion of the manufactured grain, which mode has been almost ever since continued. But the circumstances respecting money were so greatly improved, before the construction of mills for grinding wheat, that the payment, as in most other cases, was adjusted in money, at the rate of about 4 shillings per quarter, at which sum, without variation, it has still continued. The bran is returned with the flour, and when the weight of both is compared with that of the entire grain, the diminution in passing through the mill is found not to exceed 8 lib, per quarter.

15. *Bread.*—A very inconsiderable proportion of the bread consumed in the country is made by the bakers of the towns. The inhabitants of every rank in general bake their own bread. When the whole requisite materials are sent into the baker's shop, the charge is four-pence for baking 8 lib. of flour into common loaves, and in ordinary times the same quantity of flour is sold in bread for half-a-crown. There is no assize of bread. The bakers, it is said, by threatening to abandon the business, and starve the town, if fettered by such restraint, got the better of the magistracy. It

may then be inferred, that bread is sold a little dearer about Elgin and Forres than in Edinburgh, or where any police respecting it has been established. The inhabitants, however, do not complain, and the bread is always well baked, and in every respect of a good quality.

SECT. V.—RYE.

There is some cause to believe that rye was cultivated to a greater extent about 60 years ago, than it is now. It is scarcely ever raised on the larger farms, nor upon a moist soil; on the drier soil of some of the smaller farms it is raised for bread. There are two kinds of this grain, the *small black spring rye*, and the *English rye*: the small black spring rye has been cultivated in the country for several centuries. In some cases a bushel of this species is sown with about 6 bushels of oats, on little more than an acre, in the spring, and ripens equally with them. This kind is also sown by itself at the same season, and ripens early in the harvest, but though the grain is accounted of the same value as oat-meal, it is not deemed a very profitable application of the soil. The other kind known by the name of English rye, is comparatively introduced into this country but of late. It is a larger grain, and of a fairer husk, and must be sown nearly at the same time with wheat. The perfecting of the seed, it is said, depends upon the farinaceous blossom not being prematurely shaken off on shooting into the ear; there is, therefore, a considerable variety in the
returns,

returns, from less than two, to about 6 quarters per acre. About 4 bushels of either kinds of rye are equal in value to 157 lib. of oat meal. The whole quantity of both kinds together produced in the whole district, may be estimated from 80 to 100 quarters. It is the larger species of rye, which it has been said rises among the wheat; which has been consecutively sown for 4 or 5 years, after having been brought from England.

Rye is not subject to any distemper similar to the smut in wheat, but the nutritive sap is occasionally so much perverted in its progress up through some of the tubes of the stem, as to form one or more of the grains in the ear more than 4 times as long, and twice as thick as the sound corn; though it has scarcely a husk the substance is white, under a skin nearly black: the taste of this defective grain is nauseous, and its quality is poisonous, though it is seldom so in such a quantity as to be found pernicious in the meal.

SECT. VI.—BARLEY.

1. *Tillage.*—During the many ages in which a portion of the revenue of the Bishop of Moray consisted in ten bolls of wheat, and 663 of barley (as appears by the Statistical History of Scotland, vol. v. page 4), it must be presumed that an inconsiderable breadth of the one, and a large extent of the other was annually cultivated. Similar to the opinion of modern times, respecting turnips, potatoes, clover, and beans, a crop of barley was, in those days, regarded both as a preparation for succeeding crops, and of its

self also as an important production of the soil. Prior to the introduction of fallow and the green crops which have been mentioned, barley was cultivated almost only on those fields that were too much exhausted to produce another crop of oats. On the smaller farms, and in the higher quarters of the district, this arrangement is, in many cases, continued. Land in this state, which is to be sown with barley, is ploughed in the autumn; in some cases it is only brake furrowed, as described in sect. 2. of this chapter. In the spring it is harrowed and ploughed a second time, and immediately after again also harrowed, that the root weeds may be brought on the surface and carried off, and that the seed weeds may be made to germinate, in order to be destroyed by the third ploughing, which is done for the sowing of the seed. Although, by this tillage the land may be in general cleaned of root weeds, and reduced to a pretty fine tilth, there is but a small proportion only of the seed weeds destroyed, as several classes of them begin only to vegetate at a later season of the year. There is scarcely an example of a barley field having been rolled during the course of its tillage, though it may, in particular cases, have been done. Where the field was a clay soil, the larger clods, in former times, were broken by malls, and other rustic implements, prior to the last course of the second harrowing. This might be, perhaps, more easily performed by the roller. Yet being somehow regarded by the junior part, at least, of the farmer's family, as a kind of pastime, it was managed so as not to occupy the horses, nor to interfere with the weightier operations of the season.

In the higher parts of the country the fields of cultivated grass are, in many cases, broken up for a crop of barley.

barley. The tillage, for the most part, is a *brake furrowing* in the autumn, by which the sward is completely rotted, and the land mellowed when subjected to the harrow in the spring. The seed is, in general, sown upon the second ploughing. Barley is also sown after turnips, in which case there are two complete ploughings before the grain is sown. Where it is sown after potatoes, which is pretty generally the case in the quarters of the district where wheat is not much attended to, the operations requisite in getting up the potatoe crop make one ploughing sufficient, at the time of sowing the barley.

2. *Manuring*.—When barley is sown after two or three crops of oats, manure in every situation is deemed indispensable. On some occasions, it is carried from the stables during the winter, and the loads laid down along the ridges, at the requisite distance for being spread out in the spring, and turned in at the second ploughing, that both the seeds of weeds in the dung itself, and those also which are in the land, may, in greater numbers, be more readily made to germinate by the influence of the manure, so as to be destroyed by the third ploughing. The manure, however, is more generally formed into a compact dung-hill in the course of the winter, which is not carried out upon the field, till it can be instantly ploughed in by the seed furrow, that its essence, in that dry season, may not be evaporated by the wind and sun.

3. *Time*.—Barley has seldom or never been sown in this country earlier than the month of January. Some experiments made to ascertain the effect of sowing it at that period, without establishing that it is the most proper time, have proved that the rising blade is not hurt by frost; and that, if otherwise desirable, or expedient,

pedient, barley might be sown without injury at the same season with wheat and rye. It has been more frequently sown after potatoes in the end of March, but it did not appear that the produce was better ripened, or weighed more by the bushel, than the grain sown about the first of May. Although the preparation of the field by potatoes admits of sowing the barley without inconvenience in March, yet its ripening, earlier in proportion than corn in general, exposes it to the depredations of rooks, pigeons, and other birds; the sowing is, therefore, commonly deferred till the usual season (namely May), after the sowing of oats, and the planting of potatoes, are accomplished.

On two or three occasions, Norfolk barley has been brought northward for seed from the port of Lynn, which, though sown early in April, did not ripen sooner than the native barley of the country sown in the end of May. It produced grain rather larger than the common sort, but it did not weigh in the proportion which its appearance bespoke. As its seed time interfered with that of the oats, and it was not found intrinsically better, either for meal or malt, it was not found advantageous, as in the case of wheat, to bring the seed annually from England; which practice, after a little experience, was therefore discontinued. It was, however, discovered, that this English barley, after three or four seasons, became gradually similar, in every respect, to its kindred species of that country, to which it had been transferred; and it was found to ripen in a shorter time than at first. When barley was generally sown on land that had been exhausted by successive crops of oats, the time required for the requisite preparation, and for the previous oat seed season, necessarily postponed the sowing of the barley till

till the month of May, and as instances frequently occurred, owing to the extreme drought about the summer solstice, that the barley did not shoot freely from the stem, but formed an imperfect ear within the blade, the sowing was delayed for 10 or 12 days, merely that the shooting, in case of the failure of rain, might have the aid of the moisture of the more lengthened night. But it ought to be observed, that though the barley ripened in due time, yet the grain did not attain that perfection and substance, or yield so much meal or malt, as a longer and more mature growth would produce; and instead of deferring the sowing till the first of June, it would be advisable to have the sowing completed, as in England, by the middle of April; when the greater degree of moisture naturally at that season in the soil, and the dew which falls more abundantly at that period, owing to the greater length of the nights, would contribute to the shooting of the ear.

4. *Sort.*— Only two sorts of barley are cultivated in this district, namely barley with two rows of grain in the ear, and the *Scotch bear*, which, with a shorter ear, has four rows, generally double the number of grains, but smaller, and ripening earlier in colder seasons, and in more exposed situations than the other species. The *Scotch bear*, however, seems to be merely a variety of the barley produced by the climate, and by the soil; for if the purest and most unmixed barley be sown in the more upland parts of the district, it will, in the course of a few seasons, be changed into pure and unmixed bear. This change has been frequently known to have taken place; but there is no example of again restoring bear to the improved form of barley.

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The return of bear from the acre is equal in general to that of barley, but its weight by the bushel is inferior, and its value both for meal and malt less, excepting in seasons in which the barley is not sufficiently ripened ; from which, the most fertile parts of the district, are not always exempted. The following fact may be adduced, to prove the decided superiority of the English barley over the Scotch bear. Several of the licensed distillers in the country about Forres, had found it, in the ordinary course of their business, so much more advantageous to import barley from England, notwithstanding the expense of commission, freight, insurance, and even a land carriage of 6 to 8 miles from the harbour, that the bear of the country was rejected, although offered at a lower price to be delivered at the distillery ; some of the proprietors, therefore, as justices of the peace, thought it necessary to have recourse to the utmost rigour of the law, namely, fines of 200*l*. It may be only farther observed, that a quarter of English barley yields 23 gallons of whisky, the same quantity of Scotch barley only ten gallons and a half, of the same strength, while Scotch bear, with 4 rows of grain in the ear, afforded little more than 7 gallons. The distiller finding the rent of his buildings, the expense of his vessels, the quantity of fuel, and the cost of labour the same for less than one third of the profits, exclusive of considerable advantages in charging the duties on the malt, and on the first distillation, must be very sensible of the inferiority of his situation, which condemns him to carry on such a manufacture with such miserable materials.

5. *Seed*.—The quantity of seed allowed in general, is about 4 bushels per acre ; where the soil is naturally a moist fertile loam, and the preparations in other respects

respects sufficient, half that quantity has been tried, and with much success.

In the higher parts of the district, where a late harvest is the greatest dread, the bear is sometimes sown so thick, as scarcely to admit of more than a single stem from each seed: by this management the whole crop is more equally and more early ripened, than in situations where three or four shoots branch out from the original stem, which, in this country, is known by the epithets of tillering and stocking.

6. *Harvesting.* The *Scotch bear*, with the small 4-rowed ear, has been reaped in the tenth week after it was sown: it is generally ripe in the twelfth week, the harvest commencing about the end of August, before that of oats. In the higher parts of the district it is cut only when dry, and immediately tied up and set in stacks of 12 small sheaves, 6 on each side on their root ends, supported by resting the crop ends against each other. In the lower and less rainy part of the country, the sheaves are made larger: were they to be immediately bound when reaped, they would shrink so much in the withering, as to be shaken out of the bands in carting home and stacking. To prevent this, the sheaves are left spread loose above the bands, to wither a few days before they are tied up, and as they are in this state occasionally subjected to rain, there is less attention paid to reaping when dry: It requires longer time than either oats or wheat, to be sufficiently withered for keeping unspoiled in the stack. It is reaped in the same manner, and at nearly the same expense as wheat.

7. *Produce*—The mean return of barley is about 5 quarters per acre. A quarter of fine barley weighs about 370lb. or 22 stone, but the ordinary grain does not

not exceed 350lb. The straw is always used for provender; it is not thought so good for black cattle as the straw of oats, and is therefore more generally given to horses.

Barley is manufactured into malt for beer and for spirituous liquors, into pot barley, and into meal. In the lower quarters of the district, the meal of barley is frequently mixed with that of beans and pease, or rye, and with that proportion of the wheat which cannot be dressed into a marketable condition. In the more inland parts of the country the meal is quite unmixed, and being kneaded without salt into dough, a little lump is made on a board by the hands into a thin supple cake, and baked upon a thin circular plate of iron, hung over the fire by a bow of the same metal; this cottage utensil has obtained the name of *the girdle*. On some occasions barley-meal is made with boiling water and a little salt, into a thinner kind of dough, and baked in the same way, which species of cake is deemed lighter and more cooling, than cakes made of oat-meal. By some, barley is ground like wheat, and bolted, and made into thin cakes, or soft biscuits, scarcely to be distinguished from biscuits made of flour. There are several mills in many parts of the country for making pot barley; it is sold by grocers nearly at the same rate as rice, and its application in broths, soups, and puddings, is the same.

In some years the whole produce is consumed in the country, but more generally considerable quantities are disposed of at Leith, and other harbours in the Forth, and sometimes in the London market. Small cargoes are occasionally sent to the Hebrides, and the returning ship is loaded with blue slate. The price of malt is regulated by that of the grain, to which the tax only

is added ; the increase of the measure, in the malting, being accounted an adequate remuneration for the labour of the manufacture. The price of barley will be more distinctly detailed in the tables of the county fairs, than by any statement which could be made in this section.

SECT. IV.—OATS.

1. *Tillage.*—A greater proportion of the cultivated soil of the country is occupied by oats, than by any other kind of grain ; they are sown also upon a more varied, and often a more negligent preparation of the land. It was formerly the general opinion in this district, that the best preparation for oats was, by sowing them after a crop of barley, for which the land had been prepared by three ploughings, and the whole manure of the farm. This management still prevails, to a considerable extent, in the more upland parts of the country. On ordinary occasions the land is immediately ploughed, on getting off the preceding crop of barley, and, without farther preparation, the oats are sown early in the spring, and the seed then harrowed in. In some cases the field is *brake furrowed* in the autumn, as described in the second section of this chapter, and afterwards harrowed in the spring, and then full ploughed for the sowing of the oats.

Grass is pretty generally broken up for a crop of oats, which are in that case sown after one ploughing. Along the coast where the climate is milder, and the soil more dry, the ploughing of grass land must be deferred,

deferred, till a little before the time of sowing ; because, if ploughed in the autumn, the growth of the weeds would be so rapid, as to render a second ploughing necessary at the sowing season ; by this much of the sward would be turned up, which would make the tilth less complete ; and the oats would be choaked in their growth by the grass. To prevent the seed from falling down between the furrows of the ley, half the requisite harrowing is done before sowing, by which attention the seed is lodged at a more equal depth, and altogether in the mould ; the surface being thus more completely turned down by the harrowing, than had been done by the plough.

It having been found that barley after turnips, on the sandy soil along the coast, is but a light crop, unless manure be added to all the previous preparation, oats have of late been preferred, as being more profitable. When the turnips are drilled, a ploughing and harrowing, previous to the seed-ploughing, have been found expedient.

In every quarter of the country, oats are also very frequently sown successively. A brake furrowing is done in the autumn where it can be accomplished. A crop of oats, under this management, is found fully equal to the general average, whatever has been alledged in favour of an intermediate green crop. Oats are, in many situations, found the most profitable crop ; in every situation, perhaps, even where the renovating scheme of fallow, turnips, or potatoes, is afterwards immediately to commence ; experience having shown, as was observed in the third section of this chapter, that the weight of a crop upon a field thus renovated by fallow and manure, is influenced in no perceptible degree, by the previous condition of the land.

2. *Time.*—If the weather should be favourable in the more upland parishes, oats would be sown there about the 20th of February. The month of March, and to the 20th of April, is accounted, in general, the most proper season.

3. *Sort.*—It has been supposed that oats may, perhaps, be indigenous in this country, but this has never been sufficiently authenticated. More than one instance has been mentioned, where, on digging up barren ground covered with heath, and broken up for the first time, wild oats, with charlock, some kinds of grass, and some other weeds, appeared shortly afterwards; but these allegations cannot now be satisfactorily proved. Land, in numerous instances that had been for more than twenty years in grass, in which no trace of wild oats appeared, exhibited almost a full crop, in the first season of its being again subjected to the plough. Upon the essay made for draining the Lough of Spynie, about the year 1780, (when almost a thousand acres were laid dry,) although some parts were found to have been cultivated in an era unknown and remote, the ridges having maintained their forms, distinct as when left by the plough, yet the larger proportion exhibited no token of agricultural industry. No sooner, however, was this ancient natural meadow, which had been submerged under three feet of water, from the reign of Charles I., subjected for the first time to the operation of the plough, than the wild oats sprang up a thick and luxuriant crop, and they still appeared to increase upon the land, being afterwards ploughed with a deeper furrow than at first.

If wild oats then be not indigenous, it must be allowed that they are most completely naturalized. Over
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all the more upland parts of the country, among the fields both of barley and oats they are a most pernicious weed. Like many other of the natural productions of the earth, they grow spontaneously in particular situations only, and in favourable circumstances; in some cases they have maintained their occupancy for centuries, of one side of a field, whilst no single stem has ever appeared in the other. Though they may be repressed for a time, by fallow, or other processes, yet in many situations it is found impossible to eradicate them completely; for after they had been many years apparently exterminated, this pressure of cultivation being removed, they have regained their former strength.

Though they are smaller than the cultivated oats, with a thicker husk, and yield less meal, yet this, without doubt, is to be solely ascribed to the little attention paid to them: were they to be fostered for a few years, with proper care and management, as they are found so congenial to the climate and to the soil, they might probably prove one of the most valuable varieties of their sort. They spring spontaneously in situations where neither red nor white clover will vegetate, until the soil has been previously improved by lime; sometimes, by a ploughing and harrowing in the spring they are managed for a profitable crop of provender, cut green like clover for the stall; they have been sometimes suffered to ripen, and the grain made into meal, but used for the greater part as bran for the consumption of the reapers on the field, for they ripen more than a month before any other kind of grain, and when thus cut down, the fallowing of the field is continued from the first of August and completed; with
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this valuable quality of ripening so early, they never degenerate like the more favoured species into black and bearded grain.

Prior to the year 1783, only three sorts of oats had been cultivated in this country. Two of these are not different in appearance; but the one kind which is sown in the later parts of the country, ripens 12 or 16 days earlier than the other; they are known on this account by the name of "*hasty oats*." The changes of the seed are brought from the lower parts of the county of Banff. In the warmer plains of the low country of Moray, this kind yields a short and light crop, and therefore the later kind, called the "*cold land seed*," is preferred in all the dryer and earlier situations. The seed of this kind continues undegenerated in the parish of Alves, and on the purer clay soil fields of Duffus, Spynie and Kinloss, whence the best changes of seed are obtained. When either of these sorts are repeatedly sown on the same farm, in any other quarter of the country, the grain becomes longer, thicker in the husk, of less weight in the bushel; and the proportion of the black husked and bearded oat is gradually so much increased as to give reason to believe, that if continued unchanged for 20 or 30 years, the whole produce would become of that kind unmixed and pure.

The third sort is the small black hairy oat, sown in the highland quarters of the country by the greater part of the poorer tenants, where the climate is severe, the soil wet, and the harvests late. About two quarters of this kind are required to yield 140 lib. of meal, that is a boll of 9 stone; but they yield a considerable quantity of straw for fodder; they ripen notwithstanding their being exposed to much cold and gloomy
NAIRN AND MORAY.] N weather,

weather, and they are hardly shaken out by the rudest blast. That the proprietors of those parts should have so long viewed, with unconcern, such a waste of their lands, and of the labour of their people, content with only half the rent, which the use of the greater oats would produce, without the least attempt on their part to induce their respective tenantry to abandon this unprofitable system of husbandry, is almost unaccountable, and is much to be lamented. Were the fields sufficiently drained, this degenerated species of grain might be wholly exterminated in this country.

Between the years 1770 and 1780, a sort called the "*Tartary oat*," having all the grain hanging on one side of the stem, was much in repute. The straw was inferior to the other kinds as fodder, and though the return from the acre was apparently great, yet the meal it produced was comparatively so deficient, that this sort, after having been tried during that period, was universally abandoned.

From the general failure of the crop of 1782, the earlier kinds of the white species of oats, known by various provincial appellations which it would be needless here to mention, were introduced into the later parts of the country. But as they require a more laborious preparation, yield a smaller proportion of fodder, and are readily shaken out almost by the slightest wind, none of these kinds have been raised for some years past. The "*potatoe oat*" has also been introduced of late, and met with much approbation, on a few of the larger farms, on the most highly prepared fields. This sort, which is extremely liable to be shaken, cannot be trusted to stand till fully ripe; the quality of the meal is, on this account so much inferior as not to be compensated by the additional quantity, and

and when sown in succession, on the same farm, a great proportion became smutty. Though not yet abandoned, the potatoe oat does not support the reputation which at first it had attained.

The *red oat* is not known in any part of the country, yet it seems in a peculiar degree to merit notice in the colder and more exposed parts of the district, as uniting all the good qualities of the small black hairy oat in yielding pretty large returns both of corn and straw, with little trouble in the preparation for sowing it; in not being readily shaken out; and in affording both quantity and quality of meal equal to either the "cold land seed," or the "hasty oats."

4. *Seed.*—The quantity of seed of the white sorts of oats is nearly four-fifth parts of a quarter per acre, and of the small black hairy kind, nearly twice as much. When the field is in high preparation, and the seed well cleaned, and of a good kind, about three bushels have been found sufficient. In the later parts of the country, a greater quantity of seed, as was observed of the barley, is bestowed with the same view, namely, that the produce may be restricted to one stem only from each seed, and the whole may consequently ripen earlier. The advantages, however, of this plan have not been clearly ascertained, and it may be attended, perhaps, with considerable disadvantages, besides the wasteful expenditure of seed.

5. *Harvesting.*—The reaping the oats, though not without exception, follows that of the wheat and the barley. Similar to these, oats are shorn with the reaping hook as closely to the ground as possible. The expense of reaping by the sheaf is somewhat less than that of wheat. It is probable that mowing oats by the

scythe will, in a few years, become the universal practice.

6. *Produce*.—The general return per acre is found to be about four quarters each, yielding nearly 150 lib. avoirdupois of meal. The return occasionally exceeds, but more frequently, falls below this statement.

7. *Straw*.—It may be observed that the poorest crops of oats have generally the best straw, being not only itself more nearly a grass than a richer crop of a stronger stem, but being also mixed with a considerable share of grass. It is by some reckoned nearly equal to hay as provender both for horses and cows. Its value, like that of other commodities, is regulated by the demand; it is seldom or never sold when thrashed; but a considerable traffic takes place in December or January, in the purchase of unthrashed oats, merely for the straw. The quantity of grain in the stack is ascertained by the *proof-man*, a professional character in the country, chosen mutually by the seller and buyer. He begins by throwing down 20 sheaves which are called the "stock," he then turns up three sheaves which he considers, choosing that one of them which he accounts of the same bulk, or most nearly equal in value, to the 20 of the stock. In this way he goes on till the whole stack is thrown down, which if consisting of one hundred stocks, will give 60 sheaves of proof, which is begun to be thrashed by one man for the buyer and one for the seller, who labour to have done nearly as soon as the *proof-man*. It is his duty to winnow, clean, and measure, the corn thrashed from the proof sheaves; which if it produces three bushels, that quantity being multiplied by 20, ascertains the stack to be
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7 quarters and 4 bushels, which is the quantity to be paid for, the proof being always given to the buyer, as belonging to his bargain. From this it appears that the value of the straw depends on the value of the grain at the time when it can be brought to market. The grain is sometimes sold for the same money that the unthrashed corn was bought for; more generally, however, the straw, from which a quarter is thrashed, costs the buyer from five to seven shillings, exclusive of the expense of thrashing, and half the wages of the proof-man; the other half being paid by the seller at the rate of 4 pence per quarter.

8. *Application*.—1. *Horses*.—Oats in this country form such a great proportion of the food of the people, that they are bestowed but sparingly on horses. In the busiest seasons of the wheat seed time in the autumn, and in the spring, when the horses are worked about ten hours in the day, they are allowed about the 8th part of a bushel, divided into two feeds, one for the morning and the other for the evening, in addition to their fodder. This allowance is in general chiefly composed of the lighter grain and empty husks, not in fact more nutritive than half the quantity of the heaviest oats. This is the general allowance; in some cases but one such feeding per diem, and in others three are allowed.

2. *Oatmeal*.—The first operation in the converting oats into meal, after the grain is winnowed, and sufficiently cleaned, is to have it properly kiln-dried; the perfection of which consists in moderating the fire so as not to affect the corn with any singed flavour, nor to tinge the meal with the least perceptible shade of a brown colour. The value of oatmeal is so great, or the quantity produced is so inadequate, that bread made

of it cannot be at all times allowed to the farm servants, the labourers, and the poor; but it forms the essential part of the breakfast of this class of the community. Water a little salted is kept boiling in the pot, while the meal gradually thrown in by one hand is stirred round with a little rod, or stick, by the other, till thickened into the consistence of a pudding, when the cookery is completed. This mess of pottage is eaten warm with spoons, accompanied by milk or beer for the sauce.

Though there is little variety in the bread of oatmeal, yet there is a considerable diversity in the mode of baking it. The meal is kneaded into dough with pure cold water, and beaten out by the hands into thin circular cakes, which are baked on the iron girdle described in the preceding section. The perfection of this operation is, to have the dough made with as little water and as little working, as possible, by which the cake is less tough and less hard. The perfection of the girdle management, similar to that of drying the grain, is, to avoid singeing or burning the cake, and to maintain for this purpose a due temperature of the fire. Sometimes cream or butter is kneaded in with the dough, and sometimes it is leavened with yeast, and baked in the oven like loaves of wheat bread, or in triangular cakes, about an inch in the thickness. The other little varieties in making oatmeal bread need not be stated.

Another variety in the application of oatmeal is to make it into "*brose*." The necessary quantity of meal is put into a bowl, and a ladle full or more of water in which beef has just been boiled, with as much of the fat on the surface as can be taken up, is thrown boiling among the meal and quickly stirred with

with the handle of the spoon or any such implement, till the meal is pretty thoroughly drenched, when the dish is cooked.

The ordinary supper of farm servants, and of the families of labourers consists of cabbages, or coleworts shredded, or minced small and boiled in water with a little salt. Of late yellow turnips have been preferred to the cabbages, and instead of being minced they are mashed, which is sometimes the process with the coleworts: when the vegetables are thus sufficiently boiled, a considerable quantity of oatmeal is stirred or beat into this mess, and boiled with it about half an hour. It is this addition of the meal that in a great measure renders this kind of soup nutritive.

Oat meal is also the principal ingredient of water-gruel which is generally the diet of the sick. It is sometimes formed by the poorer classes into a very nutritive substance by adding shred onions, pepper, and milk, when they can be procured, and rendered thick by a sufficient quantity of oatmeal. Butter, or honey, beer, or spirits, or wine with sugar, have been occasionally added to the simple gruel as a diet drink for people who may like it.

In the southern parts of the kingdom, where the people were many years ago relieved from mill restrictions, it there became a great object to the millers, to maintain that degree of popularity which might secure grist to their mills, and the more so when it became the practice of the miller to take the corn from the farmer's barn, to dry it on the kiln, grind it in the mill, and bring it back in meal. The millers' popularity must, on this account, in some measure depend on the greater weight of meal which he could return for the quantity of corn with which he was trusted. This

object, he, in part, accomplishes by retaining as much as practicable of the rind, or integument of the kernel of the grain. When the corn is properly dried, this covering splits in the grinding into equal halves, if the meal be pretty finely ground. The rind, in this detached form, is denominated the *sides*,^s corruptly pronounced the *sids*; if the meal is coarsely ground the sides are cut irregularly, instead of split entire by the natural seams, and considerable portions of them continue to adhere to the grit, in all the future management of the meal.

In this country, the farms in general being still restricted to their respective mills, there is no occasion for any struggle for popularity among the millers; the meal therefore is ground without any grit, and by the operation of the sieve, it is as entirely cleared of every particle of the integument or sides, as the finest flour. Besides the great superiority of the meal in bread, and every kind of gruel, the bran affords another variety in the application of this valuable grain, of which, by the coarse grinding, the people of the south are now deprived, and which they have in some measure forgot; the bran of their oatmeal being insignificant in quantity, and, in quality, almost only fit for the food of cattle. In this country the price of a quantity of bran is equal to the price of half the same quantity of meal, such a considerable proportion of the meal adheres to the bran, or *sids*, almost an impalpable powder, which can only be separated by steeping the bran in tepid water for about two days, when the *sids* are wholly separated by the strainer, and the emulsion assumes the appearance of milk. Being fermented for a day or two longer, it becomes a very little acidulated, and by boiling, it acquires the consistence of a pretty firm jelly ;

jelly; and under the denomination of *sowins*, a word derived from the Angle Saxon, signifying *collected*, it is eaten the same way as pottage or porridge, with cream, milk, or beer, for the sauce, making the principal dish at the ordinary dinners of the labouring class of the community.

In this country sowins are prepared at short intervals of about a week. In Caithness more art is displayed, the whole stock for half a year or more being made up at once; and similar to starch, is preserved, instead of the bran, in the form of dry paste; in which state it is sent to families resident in Edinburgh. A lump is cut out according to the largeness of the dish required, dissolved in pure water and boiled in the usual way. Oatmeal is so far from vitiating the blood, that sowins might be found of great efficacy against the scurvy in long voyages; if this paste were more perfectly dried, and made into cakes, it would probably keep sound at sea for any length of time that might be required.

That the food of oatmeal is heating to the blood, or has any tendency to produce inflammation, or cutaneous disorders, is only a vulgar error among the ignorant. This evidently appears from the quantities of oatmeal prescribed by physicians, in the form of gruel, as a remedy for colds, and for the generality of feverish disorders.

9. *Price.*—The price of oats and of the other kinds of grain is given in the tables of the county Fiars, afterward printed.

SECT. VIII.—PEASE.

1. *Tillage.*—Pease were more generally sown in every quarter of the country before the introduction of artificial grasses. They do not on any farm form a part in a regular round of cropping, and with a few exceptions, they are only sown on the farms along the coast. Two ploughings are deemed necessary in preparing for a crop of pease, though, on some occasions, they have been sown before the second ploughing; this, however, is not now the practice. Although pease will not thrive in a field that would not produce a tolerable crop of oats, yet the application of manure is seldom or never resorted to. A crop of pease is sometimes taken between a crop of wheat, and one of barley, and in the higher parts of the country, where wheat is not generally sown, between a crop of barley and one of oats, and sometimes also after a crop of oats.

2. *Time.*—Pease are seldom sown before the beginning of April, and seldom or never after the first week of May. It is found advantageous both to the corn and straw of pease, that they should not ripen before the end of August, and the sowing is, in some measure, regulated by this circumstance. It has, however, been found, that the corn has almost wholly failed, in some years, from the pease being suffered to grow till after the ripening season was past; the growth was not terminated by natural maturity, but checked by frost.

3. *Sort.*—Except in the garden, there are only two sorts cultivated; the large early grey kind most generally,

nerally, and a smaller black pea, which does not ripen early, but yields much straw; of late, however, this sort has been almost wholly abandoned.

4. *Seed.*—A grain of wheat or oats, after it has advanced a little in growth, shoots out two or more stems from the root, according to the fertility of the soil; the pea only a single stem from one seed, however rich the soil may be, which, however, when of luxuriant growth, spreads out in several branches. The quantity of seed is, on this account, regulated by the condition of the field; a thin crop of pease, not smothering the weeds, is prejudicial to the land; if the state of the field does not warrant the expectation of the branching of the stalks, it is endeavoured to compensate this defect by their number, and the quantity of seed is proportionally increased; it is never less than about half a quarter per acre, but on some occasions, although rarely, double that allowance has been given.

5. *Harvesting.*—Mowing the white crops was tried in this country, it is believed for the first time, in the harvest of 1808; but where a crop of pease was light, the use of the scythe was not a novelty. As pease generally bend towards the ground, the reaping of them when wet is not attended with inconvenience. This part of the harvest is often performed on dewy mornings, or during the slight showers, and the sheaves left unbound till they become dry; when, instead of being set up in stooks, they are put together in small round stacks of 6 or 8 stooks; perhaps, 100 sheaves, like a haycock, in which state, while very little exposed to wet, they are still subjected to much of the influence of the wind and sun, and when sufficiently withered for keeping, are carried to the yard, stacked

stacked and thatched like the other kinds of grain. Whether they are reaped by the scythe, or by the sickle, they are cut as close to the ground as practicable, and the stubble is of no significance.

6. *Produce.*—Pease are an extremely uncertain crop; the return varies from little more than the quantity sown, to nearly 5 quarters per acre. As garden pease are never known, in any season, to fail of being a good crop, it may be inferred, that it is not to the weather, but to the improper condition of the field, or to some mismanagement in the sowing, or covering the seed, that the failure of the crop is at any time to be ascribed.

7. *Straw.*—When well kept, the straw of pease is found a very nourishing food for farm horses. When wet, or in any degree spoiled, it occasions gripes and other complaints in their bowels; and these complaints have not unfrequently resisted all the veterinary skill of the country. The most useful application of pease straw, is for the sustenance of sheep; to them the straw of pease is much superior to hay; and though, perhaps, sheep cannot be fattened on the straw alone, without turnips, yet they are kept by it in such good condition, that on some of the farms, where sheep make a part of the stock, pease are sown wholly upon their account. Where there is not enough of straw, or the corn is but of small consideration, the unthrashed pease are given to the flock.

8. *Price.*—The price of pease will be found in the table of the county Fiars.

9. *Bread.*—Bread is sometimes made of the meal of pease, kneaded into dough, and baked into a cake; but pease are more frequently mixed with barley, or with the unmarketable wheat, or with rye, when it
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can be procured, ground all together, and baked in thin cakes. Some of the farmers, who are anxiously attentive to the feeding of their horses, mix pease with the oats, in the proportion of about one third-part of the allowance.

SECT. IX.—BEANS.

1. *Soil.*—Beans are cultivated irregularly, and in small quantities, generally over all the country. In the more upland parishes, however, there is no inconsiderable proportion of the people, who have never seen a field of growing beans. Although much of the soil, in that part of the county, appears not unsuitable to this kind of crop, yet frosty evenings, towards the end of August, must always prohibit the culture of beans there, until a more complete drainage of the soil shall remove that pernicious influence. Were there even no danger from this cause, yet the length of time requisite for withering beans in the pod, and the leafy succulent tops of the stem, must for ever debar the cultivation of this crop, in those parts of the country where the autumn is always wet, and where the winter often sets in before the harvest is completed.

In the more favoured situations of this district, beans are only cultivated where the soil is clay, and upon the denser loams.

2. *Tillage.*—Beans, as has been also noticed of pease, were sown to a greater breadth in the vicinity of
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of the coast, before the introduction of cultivated grass, than they are at present; and before Dr. Walker, of Sheriff Mill, as mentioned above, had taught the mode of drilling, and shown the advantages of hoeing, they were sown broad cast, and, for the most part, promiscuously with pease.

The land is always prepared for beans by two, and, very generally, by three ploughings. The first is in the autumn; but the land is not harrowed till the spring, when the second ploughing, about the time of sowing, is to be done. Where the field is to be three times ploughed there is scarcely any interval between the two last. The harrowing is kept off until the spring, on the theory that land is fertilized by frost, and that a greater surface is exposed to its influence in the unharrowed and roughest state. But, as in the tropical climates, where the efficacy of frost has never been felt, the lands are more fertile than in the temperate and frigid zones; the first part of this theory may be doubted; while experience has shown, that frost operates with a more uniform influence, penetrates farther, and mellows a greater quantity of the soil, when smoothly harrowed than when left unbroken. Whatever beneficial influence, therefore, the atmosphere may have, by which it fertilizes ploughed land, its advantages are more completely obtained, by harrowing at least very soon after the plough.

3. *Manuring*.—When the mode of drilling beans was first practised, it was not uncommon to apply dung, but no manure has been of late bestowed on this crop: when beans are sown in drills and hoed, with the intention of preparing the field for wheat, the manure is in general reserved for the wheat.

4. *Drilling*.—There is a machine, of the wheel barrow

row construction for drilling beans made in the country. The seed is also in many cases distributed by the hand into every second, and in some cases, into every third furrow. But the most approved method is by three ploughings to reduce the land to a fine tilth, in this state it is brake furrowed, as above described; the plough is also run along the rib, sharpening its prominent angle, without adding to the breadth of its base; the beans are sown thereon broad cast, and they all roll down, or are uniformly turned into the bottom of the furrows, by the harrow, which is afterwards drawn, first along and then across the direction of the ridges.

5. *Dibbling*.—Beans are dibbled but by a few of the artizans who have only a small garden field in their possession, and even this almost alone in the vicinity of the town of Forres. The dibbling instrument is like an ordinary grass rake, having a dozen of timber teeth, in the direction of the handle, instead of being set at right angles to it. The handle is not required to be so long, but the head is of somewhat greater breadth, that the course or print of the dibble may be more distinctly preserved; the teeth are nearly an inch in diameter, three inches in length, and set at the distance of three inches from each other; a garden line is stretched across the ridge along which this instrument, pressed down by the foot placed close to the handle, forms the holes, into each of which one bean is dropped; the line is then removed one foot up the ridge, till the whole is planted. The land is afterwards lightly harrowed or raked by the hand. The crop is hoed and weeded till the intervals of the rows are covered by the beans meeting at the top.

6. *Time*.—Beans are sown early in the spring,
sometimes

sometimes before, scarcely ever after the month of March.

7. *Sort.*—There are two kinds known in the field culture, the most common is the ordinary oblong small bean, the other is a flat kind known in this country by the name of the half Turkey bean, being of the same form, but of a smaller size, than the garden bean; they are indeed supposed to be the same sort somewhat degenerated, being occasionally furnished by gardeners.

8. *Seed.*—The quantity of seed generally allowed is at the rate of four bushels per acre. The poor people, who dibble a small piece of land, neither measuring the ground nor the seed, have not ascertained the quantity allowed in this mode; it is supposed to be about the half of that which is sown by the hand.

9. *Depth.*—Beans when sown in the field are covered by an ordinary furrow from about five to nearly eight inches thick. In dibbling the seed it cannot be more than three inches in depth; but it is probably by not falling to the bottom of the hole, sometimes less. Observation has not yet found this particular of much interest in the growth or value of the crop.

10. *Horse-hoeing.*—Since beans have been cultivated in drills they have been always hand-hoed, and very generally twice horse-hoed, commonly by a small plough made in all respects of the ordinary construction, drawn by one horse; a light furrow turned at first from the springing row, is accumulated in the middle of the interval: at the second hoeing, it is split and gathered up to the row on each side, on which the crop, having been weeded and hand-hoed in the row, is left to ripen without farther care. The expense of hoeing is about a guinea per acre.

11. *Distempers.*

11. *Distempers.*—Notwithstanding the expense of cultivation, beans are often a poor crop, and they frequently fail without any apparent distemper, and oftener in the cultivated rows than where the management is more remiss. When sown promiscuously with pease, beans are also subject to two different distempers, which, in the old system, were unknown, or happened so rarely as to obtain only that slight attention which, on the alteration of management, was in a short time wholly forgotten.

One of these distempers is a kind of blight, which instantaneously terminates all hopes of the crop. It is not ascertained whether the destruction which this pestilential breeze occasions, arises from frost or other causes. Its fatal influence is supposed to strike in the directions of the meridian line from the south, because a house, or wall, or bush, interposed in that point of the compass, has always protected the crop as far as the height could extend such influence; for under the northern side of any such object the crop remained uninjured, while on either side, and beyond its shelter, the farther vegetation of the beans was destroyed.

The other distemper, though less sudden in its progress, is more general, and equally destructive. It is occasioned by a swarm of small black insect vermin which gather on each stem, and suck out that nutritive sap, which would otherwise first expand the blossom and afterwards fill the pod. As soon as this cruel visitation takes place, the half expanded blossom is shrivelled, the leaves are blackened as by a December frost, the crop is ruined, and the straw, though of little value, is reaped, that the land may be prepared for wheat.

12. *Harvesting.*—Where beans have been cultivated on a clay soil, they have been frequently pulled up by the hand, with a view of securing the lowest pods, which are in many instances lost, where the reaping hook is used; and on a clay soil, the straw is not spoiled by sand sticking upon the roots, which, on other kinds of soil, makes it expedient to reap them, as close, however, to the ground as practicable. The crop, when reaped in either way, is tied up in small sheaves by ropes made of oat straw, and set in stooks of 12 sheaves each, which are left in the field for 5 or 6 weeks, till the straw be dried and the grain hardened. Where beans are sown to any extent, there is now generally a timber frame, of the form and size of a cottage in the side walls and roof, but without gable ends, upon which the beans are stacked, and neatly thatched under a netting of straw ropes; as the ends are left open for the influence of the wind, a convenient shade is thereby obtained for storing the stock of turnips, which may for several weeks be required through the course of the winter, as beans are scarcely hardened sufficiently for thrashing before the spring sets in.

13. *Produce.*—The produce, similar to that of pease, varies from one or two, to six or eight quarters per acre.

14. *Straw.*—Bean-straw has been always accounted a superior kind of provender for draught horses, and with very few exceptions, it is carefully reserved for their sustenance during the harder labours of the spring. Beans, however, are not cultivated on any farm in such large quantities as to form their whole food for any considerable time: while their allowance of provender through the night is given in oat or barley-straw ;

straw ; in the intervals of working, they are fed with bean-straw as more nourishing.

The Rev. James Hall, the ingenious author of "*A Scottish Tour by an unusual Route,*" has discovered, that a very strong kind of hemp may be made from the straw of beans. His communication on this subject, with which he sent a sample of this new manufacture, will be more readily comprehended, and more accurately appreciated, in his own words:—

“ While we admire the striking im-
 “ provements which have of late been made in the
 “ elegant arts, we cannot help being sometimes hum-
 “ bled on considering the slow progress in discoveries
 “ of those of the useful kind. It is, perhaps, not ge-
 “ nerally known, and has not been attended to, that
 “ every bean contains from 20 to 35 filaments, accord-
 “ ing to its size, running up all round the outside of
 “ the stem under a thin membrane from the root to
 “ its top, the fibres at the corners being stronger and
 “ thicker than the rest. And it is certain that next to
 “ the sea grass, called the Chinese, with which fish-
 “ ing books are generally fixed to the ends of the
 “ lines, the filaments of the bean plant are the strong-
 “ est and most durable yet discovered. These fila-
 “ ments, after the beans are thrashed, and the straw
 “ steeped for a few days in water, or brought by
 “ damp into that state of fermentation which is com-
 “ monly called “ *heating,*” are easily separated from
 “ the brittle substance of the stem, which, as bark,
 “ they envelope. This is effected as in flax, by a little
 “ beating, rubbing, and shaking, and in the same
 “ manner it is thereafter first brought through a coarse,
 “ and then through a fine, becke, for dressing into
 “ hemp.

" From carefully reckoning the number of bean
 " plants or stalks in a square yard, and multiplying
 " these by 4,840, the contents of an acre in square
 " yards, and then weighing the hemp of any given
 " number of stalks, I find there are, at a medium,
 " nearly 200 lib. of hemp on an acre, extremely pro-
 " per for being manufactured into canvas, cables, and
 " cordage, or any thing else of those kinds where
 " durability and strength, rather than fineness and de-
 " licacy, are required. Now as there are at least
 " 200,000 acres of all kinds of beans in the three
 " kingdoms of this great empire, and as there are so
 " many machines for the manufacture, and so many
 " paupers and poor houses, at present not employed
 " in any labour useful to themselves or advantageous
 " to the community, I regard it as a part of the duty
 " which I owe to my country, to give, by your
 " obliging notice, the requisite publicity to my dis-
 " covery."

It may not be necessary to speculate here on the
 merits of this discovery. It might, perhaps, be a very
 advantageous application of the straw of beans, in those
 parts of this island where the whole surface is produc-
 tive of food either for men or cattle, and a sufficient
 quantity of hay secured for the winter sustenance of
 the whole stock. But in this district, where so great a
 proportion of the surface is waste, and where the
 whole stock of cattle, though not greater than the
 proper cultivation of the arable land requires, yet in
 every three years require the whole provender that
 can be obtained from the hay and straw, and from the
 roots and branches of every article produced by cul-
 tivation, it would not be expedient to divert even a
 small proportion of useful provender to any other
 purpose.

SECT. X.—TURNIPS.*

1. *Soil*.—The island in the lake of Loughnadurb is probably the only place in Britain where turnips, of spontaneous growth, can at present be found. This island contains an ancient fortress, the walls of which are yet almost entire. Although it may be presumed that improvers, both from the country of Strath Spey on the one hand, and on the other from the parishes of Edenthalie and Ardclach, have made considerable improvements since it was visited by Edward the 1st of England, in the year 1303, it is still surrounded by a wide extent of moorish waste, and a boggy tract of peat earth. Though affording therefore a secure asylum in the time of danger, it could, at no period, have been the domestic residence of any family. From about that era to the present day no trace of its history can be found, except that in 1606, the Earl of Moray disposed it, with the contiguous pasturage to the family of Cawdor; yet as the Earl of Moray has still

p 3

some

* Turnips were cultivated by the ancient Romans, both as the food of the people and of the cattle. Pliny, in his Nat. His. book 18, ch. 13. relates, they had three kinds; one of which grew spontaneously without cultivation; the other two kinds, the *napus* and the *rapa*, differed so little from each other that they were mutually convertible, merely by the moisture or dryness of the soil: the *rapa*, it may be understood, was the kind which he describes as spreading flat and broad, and delighting in low and wet lands: the *napus*, as that which grew round like a ball, thriving in dry and sandy soils.

some property on one side of the lake, the transfer does not seem to have been completed, and the island is at present the undisputed property of Sir James Grant, of Grant. It may be presumed that the cultivation of turnips, cabbages, and other coleworts had been introduced from the Continent from pretty remote antiquity; and the small plot of ground within the walls of this fortress, could not be occupied by any crop more convenient for its temporary inhabitants than that of turnips and coleworts. It may be conjectured that the last crop, probably sown from 300 to 400 years ago, had never been gathered. Until of late the turnips in this island sprang up annually in a thick bed without culture. The root, in some favoured situations, it is said, had been found of one lib. weight, but they resemble in general the wild kind (the genus *Silvestre* of Pliny), having a long root like a small radish, of acrid juice, and a rough pointed leaf. Some plants of red cabbage were also distinguished among them. Both were used as pot herbs at the tables of the country people, on which account they are sometimes raised in their gardens. When they began to run to seed on the island, young cattle were ferried in to feed on them.

The Reverend Francis Forbes, minister of Grange, has seen rentals of the family of Craigyvar, from which it appears, that turnips were paid as an article of rent, in the end of the 17th century. The quantity (about 200 bushels), shews that they must have been applied as food for cattle. By the famine, which unfortunately took place at that period, however, every agricultural branch of industry was so deranged that this important object, instead of being extended, was, even there, wholly abandoned.

The

The cultivation of turnips, as a food for cattle, was first introduced into this district, from the county of Norfolk, by the late Earl of Findlater, about the year 1760.

The impression of the famine, although now completely effaced, remained, even at that period, so deeply stamped on the minds of the people, that an attempt to raise any thing but grain, upon a soil prepared with manure, was at first considered as a proper subject for derision, and viewed with the most marked disapprobation; and had his lordship's influence, great as it was, been restricted to admonition only, it would have been of no avail whatever. Lord Findlater, however, took several extensive farms upon the coast of Banffshire into his own hands, upon which he introduced all the improvements of the best systems then known; every thing appertaining to which, from a common hoe upwards, was then a surprising novelty in the country. The gentlemen of the neighbourhood who visited his lordship, and several of the farmers, were, of course, led to see and consider the example thus set before them: and they were soon convinced of the advantages which would accrue to them from the adoption of a system, of which they saw before their eyes so striking a practical illustration. Besides the cultivation of turnips, that of grass, both for green food and hay, together with fallows, straight regular ditches, and the best constructed implements of every kind, were first exhibited in this country by Lord Findlater.

Enlarging the farms to a suitable extent, and granting regular leases for 19, and even 38 years, both induced and enabled the tenants, on his lordship's estate,

to follow his example in almost every branch of improvement, which from thence spread gradually over the coasts both of Banff and Moray. They in general found their way also, though later, yet many years ago, in the higher parts of the country, where the extent of any farm admitted the adoption of such improvements. For the slender circumstances of the occupant of less than 50 acres, in any part of the country, still oblige him, with but little deviation, to follow the ancient, though less profitable, mode. In many instances, indeed, the situation of the place admits of no very material alteration; yet much remains to be done by the proprietors in general, in arranging the farms on their estates properly, and in framing leases, by which the whole stock and the whole labour of the tenant would be devoted to the improvement of the land he occupied.

It has been already observed, that a great proportion of the soil of this district consists of sand and a light sandy loam, and that the soil which is accounted clay, though with some exceptions, is limited comparatively to a small extent. Although the clay soil is not accounted the most proper for turnips, and though of course there is a smaller proportion of this kind of crop sown in the parishes of Duffus and Alves, which contain the greatest quantity of soil of this description, than many other parts of the district of a similar extent; yet turnips are now accounted an indispensable crop over the whole country, on almost every farm, great or small, where it is held on the security of a lease; in so much, that on the farms which are wholly of a clay soil, still there is a small allotment prepared for turnips: on those farms, which are for the greater
part

part loam, or sandy, wherever a lease has been granted, the proportion of turnips for several years past, has been gradually increasing.

2. *Tillage*.—Turnips, with few exceptions, are sown only on land which has been exhausted by a succession of white crops; for, like fallow, they are accounted the commencement of the course. The field is accordingly ploughed in the autumn; early in spring it is harrowed, and then ploughed and harrowed again. As soon as the spring sowing of white crops is completed, the field is afterwards ploughed a third time, and also harrowed; when, if there should be any roots of couch-grass or other weeds brought up, they are collected and generally burnt on the field. The land is then formed into drills and sown.

3. *Manure*.—Turnip fields are almost without exception heavily manured, generally with compost dung properly prepared on the field. In some cases, lime forms an essential ingredient in the turnip dunghill, and occasionally lime is spread over the land by itself, in addition to the manure. If turnips are at any time tried without manure, it is when the immediately preceding crops have been of such a kind as to render it unnecessary.

4. *Time*.—There is no kind of crop more limited in this district as to the time of sowing than that of turnips. If they are sown early in May, the plant immediately shoots into seed, without taking a strong root, and if delayed till considerably within the month of July, the season of growing is terminated before the turnip has attained a proper size. The best time is found to be from about the 8th to the 24th of June; yet in some seasons the crop has been weighty though
sown

sown as late as the 8th of July. It is however certain that of the two extremes, the early one is to be preferred; as in some instances, the crop has entirely failed from the want of moisture, when sown so late as the beginning of July. As the seed is readily procured, any misfortune which proceeds from too early sowing may be partly remedied by a second sowing, if completed about the end of June.

5. *Drilling*.—The mode of drilling turnips has of late become so general over all the country, that it is not necessary to notice the few exceptions; and the process adopted for that purpose is so universally known, and has been so ably described in the Berwickshire and other Reports, that it is unnecessary here to dwell upon it.

6. *Sort*.—Until within these few years the turnip with the red rind was generally preferred, being more nearly a globular than the white or green rind; it consequently throws off the rain more completely, and is not so apt to crack or to be injured by frost: it therefore stands the winter better, but is in no other respect superior. It is now said that the turnips with the white and green rind, both attain a larger size, and are also preferred by the cattle, unless they are damaged by the frost and wet of the winter. It has been always usual to sow some proportion of the field with yellow turnips, on the account of resisting the frost and wet, and of their not setting to seed so early in the spring. This kind, of late, has been considered preferable to any of the others, as affording on the same extent of land, a heavier and more nutritive crop. It must be observed, that in order to insure this, a greater proportion of dung is requisite than for any of the other
other

other sorts. Notwithstanding this, it is highly probable that in a few years, the yellow turnip will supplant all the other kinds in the field.

7. *Seed.*—When turnips at first were sown in the broad cast mode, it was thought an object of no little importance to sow the field with as small a quantity of seed as could be equally scattered over it. But by this mode they generally sprang up so thick, that it was difficult to set them off single by the hoe, at a proper distance from each other. When the drilling system gained ground, the partiality for sowing thin continued at first, and from various accidents considerable spaces were found vacant in the rows. This is now also generally prevented, and though the plants rise thick, and crowded as it were on each other in the row; yet no difficulty, as was the case in the broad cast, is thereby occasioned in the hoeing. About 4 lib. is found to be the most proper quantity per acre.

8. *Fly. Preventatives.*—It is only in extremely dry seasons, when the rising and tender plant languishes for want of moisture, that any damage by the *fly* has been ever known. The only preventative that has been tried, is grounded on the principle of accelerating the growth of the seed, by sowing immediately after the plough, so as to give the seed the nutriment of the whole moisture of the land. Where this has nevertheless failed, and the plants did not appear thriving in the course of the second week after the sowing, the crop has been in two or three instances saved, by the application of water, discharged in a small jet from a cask, carried along the drills in a cart, care being taken that the shoot of water shall be broken in its fall, so as to be sprinkled, rather than dashed down upon

upon the dusty soil. It is to be observed, that this operation must be performed after sun set, and if the drought continue, it should be repeated for two or three evenings. There has been little precaution observed in the quantity of water, a gallon has been found sufficient for about two or three yards of the row. Common river water only has hitherto been used in this operation; but it might, perhaps, be advantageously thickened by an addition of cow dung, while still so moist and thin as to be easily mixed with the water.

9. *Hoeing*.—As soon as the turnips have attained to such a growth as to maintain their hold in the soil, the hoe is immediately applied, as the bulk which they may, in due time, attain, is supposed to be greatly dependent on the earliness of the first hoeing. The plants, by this operation, are left detached about 10 or 12 inches distant from each other; in the line of the row, a small space, 3 or 4 inches of the interval, is likewise cleared on each side of the row; the weeds which are getting up at a greater distance, being left for the more sweeping operation of the hoe plough, which is in like manner brought into the field, as soon as the rising crop is in no danger of being buried by any of the mould falling back; for the first operation of the hoe plough is to turn the soil from the turnips, into the middle of the interval. This is done by taking the furrow at as small a depth as possible, so as to cut up the weeds nearly in the same manner as the hand hoe. To effect this purpose is the intention of the hoe-plough framed by Dr. Coull, and others made on the same principle. It is also very neatly done, by the small swing plough formed on the common principle. These two operations of hand-hoeing the rows, and
horsc-

horse-hoeing the intervals, are only but a short time completed, when a second hand-hoeing is again required. For notwithstanding much care in setting the turnip single in the rows, yet from the smallness of the plants at the first hoeing, two in many cases had stood so near to each other as to appear but one, which, on a farther growth, are readily distinguished: the springing weeds also are again cut down. The second hand-hoeing having been for a few days completed, the soil which had been turned from the turnips into the middle of the interval, is again, by the hoe plough, gathered back to the row, with as thin a furrow as before, when the cultivation is for a while suspended, till the weeds appear to be again in vigorous vegetation; the hoe plough is then introduced a third time, and the soil again gathered up to the turnips with a pretty deep furrow to either side, by which the field is nearly restored to its original appearance, having the row of turnips growing on the top of the ridge. This in general completes the most approved mode of cultivation.

In some cases the soil is only turned from one side of the row of turnips at the first horse-hoeing, and restored; when the other side, by a similar operation, is in its turn left without support, and exposed to the influence of the drought: but the thinness of the furrow which is turned off, and the operation of the second hand-hoeing, which is almost immediately commenced, prevents any damage from the drought, while the weeds of the interval are more completely destroyed, by ploughing over the whole of it at once.

10. *Consumption.*— Turnips in ordinary seasons are not supposed to have completed their growth, nor to have attained their largest bulk and weight, sooner than

than towards the end of October. It is more frequently towards the middle of November, before they are given to any part of the farm stock. It is believed, that with no exception they are drawn. They have been always given in the crib to such cattle as are fattened for the shambles, but until of late the general mode was to spread out the turnips daily on a dry grass field, where the cows, and steers, and growing cattle fed on them together. In this way the strongest look about for such turnips as they deem most palatable. Their weaker associates repair to those which the stronger had deserted, though they appear to be influenced rather by the passion for variety, than by any superiority in the taste or flavour of one turnip over another, for they continue to wander about till the whole is consumed. From the exercise and free air which the cattle in this way obtain, they are probably more healthy and vigorous than when bound down to the crib; but while the manure is comparatively lost, they neither improve much in bulk nor become fat, and of course no adequate return is made for the rent of the field, and the expense of cultivation. Of late, therefore, on all the larger farms, proper accommodation of stalls hath been provided with every requisite convenience, for feeding the steers which are to be sold off in the spring, nearly in the same manner as if intended for the shambles. In the warm shelter of the house and a sufficiency of straw, the greatest growth is acquired, with the largest measure of fat, which the turnips of one season can put on; an hour or two once or twice in the week, being only allowed for exercise in the open air when the weather is dry and calm.

The cows are managed nearly in the same manner, except

except that they are abroad for some part of every fair day. The younger cattle of the farm have their allowance of turnips along with a sufficiency of straw generally in a sheltered shed on one side of an open court; they are also turned abroad for a part of every day with the cows.

In the district under this survey, such a large proportion of turnips is given to the cattle, that it needs only be noticed, that they are drawn for sheep, and spread out on some grass field in the same way as was used for the cattle; they are in no case fed on the land, and hurdling is wholly unknown.

Turnips of late have been given occasionally to horses, who are fond of them, and appear to thrive nearly as well on them as on carrots. It is to be noticed, that the preference which horses show for the yellow, to any other other kind of turnip, is obviously and peculiarly striking.

11. *Price.*—Turnips are never raised with the intention of being sold, as the same manure, with less cultivation, would always produce a crop of barley, which is generally more saleable, and more valuable. From accidental circumstances turnips have been occasionally sold, and to be drawn by the purchaser, at the rate of £6 or £8 the acre. If small quantities have been at any time sold by measure, the same rate has been maintained.

12. *Modes of Preservation.*—In some of the farms which skirt upon the larger plantations, which have for several years offered their cover to pretty numerous herds of deer, it has been found expedient to take up the whole crop of turnips at once, soon after the conclusion of the harvest. Little art, however, has been exerted in the mode of their preservation, they

they have been piled upon a dry platform, after cutting off the roots and leaves, in a sloping heap against an earthen dike, and thatched over with sods; and in this way they have been kept for about three months without much loss. It has been noticed above, that the stock for a temporary supply in the season of frost and snow, has been conveniently preserved under the timber frame which supports the stack of beans.

As the whole of the straw is generally required for provender, it would in general be found inexpedient to appropriate the quantity of straw which would be requisite for preserving any large extent of turnips, in the way which Lord Kames and others have suggested, of pyramids of alternate beds of straw and turnips, turning up the straw over the side of each layer of turnips, to the top, which is thatched in the same way as corn stacks. It is needless to notice that such pyramids could not be raised much higher than a person of ordinary stature could build, without either scaffolding, or getting himself upon the pile. In some situations, however, it might be found convenient to have a proper covered building, sufficiently pervious to the wind, for preserving the whole turnip crop.

SECT. XI.—CARROTS.

It is only in two or three cases, that carrots have got beyond the garden. They have been raised to the extent of little more than one acre. The land was cultivated through the winter by three separate ploughings and harrowings, and thereby sufficiently cleared

cleared of weeds and pulverized: it was then plentifully dinged in the drills, at an interval of two and an half feet. About 5 lib. of seed, at the price of one shilling and three pence each, were sown, which operation occupied a man and two little girls for 8 days; one of the maids opened a shallow channel along the line, the man put in the seed, and the other maid covered it with the soil; when the carrots could be distinguished, they were weeded by the hand; as the crop advanced they were hoed, and the intervals horse-hoed similar to drilled turnips, and, where too thick, part of the carrots were drawn up. The value of the crop was not ascertained by any measurement, but it was accounted weighty, many of the carrots being about 16 inches in length, and at the great end nearly 2 inches in diameter. They were taken up by the plough, which was more expeditious, and fewer of the roots were cut than when first tried by the spade. The leaves were lopped off as the roots were put into the carts, and given to the young cattle. The proportion given to horses was carefully washed; the cows also had a share. An equal extent of yellow turnips or of potatoes, when compared with that of carrots, will, it is believed, be found, in general, preferable, taking into the account the heavier expense and the longer continued attention which the cultivation of the carrots requires. The interference also with the sowing of the spring corn, which is the proper season for putting in a crop of carrots, appears to give such a preference to these other roots as a provision in winter for the stock, that it is not likely that the cultivation of carrots to any considerable extent, will soon become general. Besides the expense of hand-weeding, which turnips and potatoes do not require, in most situations

tuations of this country, it is impracticable to procure weeders. This species of crop, therefore, has of course been discontinued. Nor have cabbages yet become an object of much agricultural attention.

SECT. XII.—POTATOES.

1. *Soil.*—Potatoes have long been such an essential article of food, not only in this quarter, but throughout the whole of the highlands and islands of Scotland, that, by the majority of their inhabitants, the introduction of this esculent is accounted a more important discovery than that of the mariner's compass.

Had the cultivation of potatoes been introduced into the north prior to the year 1700, the deplorable dearth of that most disastrous era would have been completely relieved by them: and had the Board of Agriculture been instituted in the seventeenth century, and the practice of each district of the kingdom published by their care, and circulated over the whole empire, at large, the cultivation of potatoes would have been practised in Scotland, for more than one hundred years before that deeply distressing season.

Potatoes were not introduced into this country sooner than the reign of George the Second, about the year 1740. Being originally regarded only as an article of luxury, they were cultivated with care in the most favoured situations of the garden; they were put under the landlady's care, with her stock of winter fruit, and served at the tables of the opulent as a vegetable of the greatest delicacy. The servants and the poor
aspired

aspired not to such dainty fare. They are now produced in such quantities, that though still retained at the tables of the rich, they are eaten only through necessity, never through choice, by the poor; and, in many families, the servants refuse them wholly as a meal.

Although a dry loam, or sandy soil, be preferred to wet land or to heavy damp clay for potatoes, yet in practice there is not much discrimination in the soil. This kind of crop is raised on every soil; mealy potatoes are often produced on moist, even on moss or peat earth soil, and not certainly, nor always, on the driest loam or sand.

2. *Manuring*.—Muck is the only kind of manure which is used in the cultivation of potatoes; though this crop be often raised without manure, yet it is also very generally applied, and the return both in the bulk of the sample, and in the greater quantity of the produce is strikingly observable; it may, in every case, be stated as more than double. The manure which is applied to potatoes is scarcely ever from the compost dunghill, for the longest dung in the yard is accounted the best, because by keeping the ground loose about the soft swelling roots, it is supposed they expand to a larger bulk than if they were compressed by a firm soil: as the fermentation of long dung is carried on wholly in the soil, it is thereby kept longer in motion about the tender stems. Potatoes, however, become a weighty crop with well rotted, and with street dung. But the long dung being cheaper, people are often satisfied with causes merely imaginary.

3. *Modes*.—The drill husbandry, though as yet limited to potatoes, beans, and turnips, has been for many years by much the most general practice in the cultivation

cultivation of potatoes. The mode of planting in lazy beds has been long entirely exploded, except alone in the reducing of very rough waste ground into a state of cultivation. Although potatoes are thus with hardly any exception, cultivated in drills, yet a considerable variety takes place in the breadth of the intervals; there is, however, more uniformity in this particular since the raising turnips in drills became pretty general, and since practice taught the managing of narrow intervals by the plough. Where the crop is not to be horse-hoed the interval is only one furrow, scarcely the breadth of one foot, whether the planting of the sets be managed by the plough or by the spade. When the sets are put in by the spade, a small trench is opened along a line, the dung is first disposed in the trench, and then the sets, at the distance of about one foot in the row, opening the succeeding covers of the preceding line. In some cases, respecting small quantities, where the ground has been previously cultivated by the spade, as in a plot of the garden, the sets are put in by the dibble. On farms of any consideration, potatoes are planted in rows along the direction of the ridge, and at such distance as to admit two slight furrows in the intervals.

4. *Preparation.*—The land allotted for potatoes, for the most part, is not in condition to produce a good crop of grain. It is generally ploughed in the autumn; this object, with that of turnips, being the first care after sowing the wheat. It is harrowed in the spring, and afterwards ploughed by turning two, and sometimes four furrows together in one narrow ridge. These being sufficiently harrowed, both along and across the ridges, if the land is thereby reduced into proper tilth, the sets are put down at the distance of a foot from each

each other in the furrows between the ridges; manure, as has been noticed, being sometimes put under them, and sometimes withheld. If this culture should not be found sufficiently fine, light, and loose for potatoes, the ridges are again ploughed, and reversed by turning the half of each ridge into the furrows which thus become the crowns. The land is afterwards harrowed as before, and the root weeds, if there should be any, collected and carried off. The sets being then put down in the furrows, are covered with a slight slice from either side of the ridge. By this operation the number of the ridges are doubled, and reduced to half their former breadth, one containing the sets, and the other vacant, alternately over the whole field. Potatoes are planted from about the middle of April to the middle of May.

5. *Tillage*.—In the space of 4 or 5 weeks after the potatoes are planted, weeds and the springing blade appear; the whole field is then unsparingly harrowed, both along and across the direction of the ridges; a considerable proportion of weeds is, by this operation, destroyed without any injury to the crop; in some cases the field is ploughed over with a shallow furrow, before the harrowing; when weeds begin to appear again, the rows are hand-hoed as the crop advances; the remainder of the ridges, which were left vacant at the first covering of the sets is ploughed up to the rows, so that what was the crown of the ridge, when the sets were put in, is thereby made the furrow.

6. *Sets*.—It has been of late suggested, that the lightest and most inefficient grain will make as productive seed as the heaviest and most valuable sample, and that the mere buds of potatoes are equally prolific as the largest set. Although, perhaps, it may be

practicable to raise a stem of corn from a mere husk in a flower pot, or to produce a few potatoes only from the buds planted in the border of a garden, yet no one in this country, who depends on an adequate return, could be induced to make the experiment in the husbandry of a large field; the attempt would be deemed as preposterous as to rear calves and foals on the food of cows and labouring horses. The substance, both of the grain and of the potatoe set, are deemed necessary nutriment for the infant plant, till it acquires strength to forage as it were for itself in the field. It is accounted advantageous to cut the sets from the largest of the potatoe, and to leave but one bud, or no more than two, in each. If the set must be cut out of the sprouting end, which contains many buds, it is common to cut them all out but two. The set is sometimes made of a whole potatoe when it does not contain sufficient substance for making two, and in that case the buds are cut out save only one or two. By some experiments with whole potatoes, no superiority could be perceived over the cut sets. It has not been found of any consequence whether the sets be cut from end to end of the potatoe, or in any other direction, provided that there be a sufficiency of substance left in the set to nourish the growth of the young plant, till its roots spread into the soil.

7. *Sort.*—Besides the Surinam potatoe, which in this country is denominated the “*yam*,” and the “*horse potatoe*,” because it cannot be boiled or otherwise dressed for the table, there are only four varieties. First, the kidney shaped white potatoe, which was one of the two sorts originally introduced into the country, and which, in the course of 60 or 70 years, has neither degenerated, nor been improved. The
second

second sort, which is raised in considerable quantities, is comparatively but of late introduction. It is of a purplish colour, and its blossom of the same hue. It is irregularly globular; it is much more prolific, both in bulk and number, than the kidney white; it is later also, and not mealy, though in that respect, if well kept through the winter, it improves a little towards the spring. It yields nearly as weighty a crop as the horse potatoe, and is scarcely inferior at the table, save only in colour, to the white. A variety of this kind has still more recently appeared; the only difference is, that the roots are streaked with the white colour of the kidney; it is called the "*calico potatoe.*" The only other kind which need be mentioned is named the "*early potatoe,*" it is ready for the table almost three weeks before the kidney; it is not mealy, it carries no blossom, nor apple, and can only therefore be reproduced by planting the roots; it is of a reddish brown rind, and is a round irregular lump, like the purple potatoe.

8. *Tops.*—From the accidental trespassing of cattle, it is sufficiently established, that all interference with the tops is injurious to the roots, until they have attained to full maturity. Towards the end of September, or the middle of October, if the more pressing business of the harvest should make it expedient to delay taking up the potatoes, it is not unusual to cut off the tops day by day for a supper to the cows and calves; the potatoes are then supposed to be full grown, and at that season the frost of one night oftentimes entirely withers the tops; whatever, therefore, is in this way obtained is obviously gained without deduction of any kind. The theory of enlarging the roots by cutting off the blossoms appears at least to be specious;

cious; much however may also be stated in theory against it, and the loose experiments which have in this country been made do not support the mutilation.

9. *Taking up.*—Where the crop of potatoes appertains to any one who is the owner of a plough, it is with no exception employed in the business of taking them up. A furrow is first turned off from both sides of the row, the row itself is then turned up by the plough, and the gatherers, following each with a basket, take up all that are to be seen; labourers afterwards search the furrow with rakes and other rustic implements, whom the gatherers also follow: after this the field is harrowed, and the gatherers follow the harrows. The field is ploughed a second time, then gleaned only by the gatherers, it is also harrowed a second time, and still carefully gleaned; occasionally it is ploughed and harrowed and gleaned the third time, yet after all many potatoes lurk unseen, to appear in the spring growing as weeds in the succeeding crop. Instead of the labourers with rakes, a triangular harrow drawn by one horse, directed in the course of the row by two handles, like the stilts of a plough, has been found as efficient as six men in breaking up the furrow, and obtained at an expense comparatively insignificant. When the potatoe crop is taken up by the spade, attended by one collector, as many are left in the soil, as by the lighter work of the plough and its attendants.

10. *Storing.*—There is but little art displayed in disposing of the potatoe crop during the winter. Where there is a dry bank on the farm, a trench is opened which is filled with potatoes as they are taken up. They are covered by one course of sod, the
sward

sward side turned to the potatoe ; above this, the whole of the excavated earth is ridged up, and generally covered with sod, the sward side uppermost. In some cases the trench is first covered with plank immediately over the potatoe, and the earth ridged above the timber. The store in this way is easily accessible by opening one end of the trench, which is again closed by a mound of earth. This makes a permanent store room for potatoes. Where the farm is deemed too damp for the trench, the potatoes are ridged up on the surface, and under a straw thatch are moreover secured from rain and frost by a thick cover of earth neatly formed so as to discharge the rain like the roof of a house. Storing potatoes, either in the trench, or in the *pie*, on the surface, is found preferable to keeping them in any building which has been applied in this country to that purpose. While in this mode they are well preserved, it is obviously the least expensive. It is hardly necessary to observe that a few are kept under loose straw in the corner of some cellar, for family accommodation in the winter.

The potatoes are taken out of the trench, and removed also from the *pie*, about the beginning of summer, when room can be spared in the barn ; they are dried in the open air, and any springing shoots rubbed off, then spread out in a thin layer over the whole floor. Were attention given to move every individual but once every second day, it is said that all farther springing would, by that simple movement, be absolutely prevented ; rest in a place being one of the requisites essential to vegetation. It has been found almost with no exception, that keeping potatoes in this way on any deal board floor never fails to communicate a nauseously bitterish taste, which their own sap
some-

somehow imbibes from the timber. A brick or clay floor, or failing these, laying a pretty thick bed of dry sand over the timber, preserves them, with due attention to frequent movement, till the succeeding crop can be obtained.

11. *Produce.*—Where the soil is a fertile dry loam, sufficiently manured and properly cultivated, the return, though very considerable, is in no case found equal to several of the returns which are quoted from the happier clime, and more genial soil, of various districts in the southern parts of the island. The returns, however, extend over such a long scale that it is almost impracticable to find an accurate general average. Much depends on the sort, much on the manure, much on the cultivation while growing, without regard to the quality of the soil. The average return however may be stated at from 120 to 150 bushels per acre. The curl is a distemper almost quite unknown; but in some seasons, many potatoes which are apparently sound, are yet found to have a black rotten spot somewhere about the middle, not much larger than a common bean; which, though perhaps but little hurtful when given to cows or hogs, is yet found to taint the sound part with an unpleasant flavor, when dressed for the table.

12. *Price.*—There is less variety in the price than in the return; though like that of other commodities, it is influenced by the demand; the average price may be stated at from 2 shillings and 6 pence to 3 shillings the bushel.

13. *Application.*—The first and great application of potatoes is for the sustenance of the people. While they constitute a large proportion of the food of the labouring class, they form for 8 or 10 months of the
year

year one dish at dinner, and frequently also at supper, on the tables of those who in this quarter are accounted wealthy. There is but little art in the cooking. Though roasted sometimes in the oven, and sometimes by being buried under the hot ashes of the hearth, yet boiling is by far the most general mode. Being washed, sometimes scraped, or pared with a knife, they are put into the pot with less cold water than covers them as they supply the quantity wanted, in the boiling. However much the addition of salt might be an improvement, the high tax on that commodity renders it by much too valuable for such an application. Sea water is preferred by those who reside upon the shore. When boiled and the water poured out, the moisture is farther evaporated by replacing the pot a few minutes over the fire. On some occasions they are peeled, and then boiled a second time in milk. They are also fried in butter after being boiled and peeled; they are also put into the frying-pan to absorb a part of the gravy of roasting beef, or mutton. Sometimes after being boiled, they are mashed into a pudding dish, with butter or cream, and salt and spiceries, and baked in the oven; they are also sometimes baked into broad thin cakes, with the addition of a small proportion of oatmeal or flour. Steaming has been scarcely tried; it is said to divest them almost entirely of the mealy taste in which their perfection is accounted to consist, by adding to, rather than abstracting, their natural moisture, and although this mode may be found economical in preparing large quantities for cattle, it probably will not be adopted in cooking for the table.

Potatoes are given to horses, cows, sheep, hogs, and poultry. Hogs are the only kind of stock which have

have been fattened almost wholly on potatoes, but in this respect the potatoes must be boiled. Hogs can be only kept alive on raw potatoes, but they become very fat with little other provision than potatoes boiled and served with due attention. In serving them to black cattle there are two kinds of danger to be prevented. One, that of being choked by a bit sticking in the throat; the other, is, bursting the stomach as in the case of wet clover; both these evils are prevented by boiling or steaming the potatoes, yet it is in every case requisite to be moderate in the allowance. Feeding to the full, even with steamed potatoes, has been found in a short time to clog the stomach, so as to put black cattle from eating any thing whatever for a day or two. Every species of poultry thrive well on boiled potatoes; geese and ducks require only to have them mashed a little: but hens scarcely eat them unless the mash is made up with nearly an equal quantity of any kind of meal, or bran. When given in such small proportions, as to be eaten while the mash is still warm, it is said they make the hens lay more eggs than any other kind of food usually given them, in this quarter of the kingdom.

14. *Exhaust or Improve.*—In the more ancient system of husbandry, the fertility of the soil was impaired by the variety of weeds which the imperfect mode of cultivation fostered into rankness. The weeds were but partially extirpated by the weak attempt to fallow, which was made for the crop of barley, and resumed in a short time their former full domination. The cultivation of potatoes, however, requiring not only as much previous preparation as that of barley, and moreover the almost uninterrupted tillage of hoeing by the plough, and by the hands nearly during

ring the whole time of their progress to maturity, besides the thorough dressing which the land receives in taking up the crop, destroys entirely the weeds, and thereby even without the influence of manure, must contribute much to the fertility of the field. A crop of potatoes is in every case accounted equal to a fallow, and when manure is added either to the potatoe, or to the succeeding crop, their cultivation is found an adequate preparation for barley or wheat, the last of which succeeds them generally upon the coast, and the first almost without exception in the interior of the country. If potatoes were to be planted without manure, and to receive no tillage during their growth, it is certain the field would be much deteriorated; but as it is not practicable to raise a crop of potatoes by such management, it is not possible to believe, that the land, under a judicious system, can be exhausted by their cultivation.



SECT. XIII.—CLOVER.

1. *With what Crop Sown.*—The sowing of grass seed was not introduced into this country so early as the cultivation of potatoes. Much of the land in the higher parts of the district will not produce either pease or red clover until lime or marl has been previously applied; on this account, in the progress of improvement, the sowing also of turnips in general preceded that of grass.

It has by experience been found that it is not practicable to raise a weighty crop of grass, but upon land
cleaned

cleaned of weeds, properly drained, sufficiently manured, and in all respects in the best possible condition. A crop of corn may have on some occasions been lost by the application of too great a quantity of manure, but in the cultivation of grass, the value of the crop has been uniformly in proportion to the quantity of manure bestowed. Grass seed is now, therefore, very generally sown with a crop of wheat, almost always with barley on farms of any consideration, and for the most part also with oats, when this grain is made to succeed either turnips or potatoes. It is not unfrequently sown also with a crop of flax; it acquires such a firm hold of the soil as not to be in any measure injured by the pulling of the flax in August; it is an advantage to the grass to be relieved as it were from the flax at that season.

2. *Seed.*—Although in every case red clover is the principal part, yet it scarcely ever makes up the whole of the seed wherewith land in this country is laid down. The quantity allowed to an acre may be 8, or 10, or 12, or 14 lib.: but to the quantity of red clover, a proportion of white clover and rib grass, about 3 lib. of each, and from one to two bushels of ray grass, are usually added. The whole of these kinds are previously mixed with much care, and by one operation sown at once together; not that the crop is deemed more nutritive by the addition of rye grass, but more certain and more weighty. The white clover and rib grass seed are added on the account of making the second crop of the same season thicker and more substantial, in which the ray grass does not rise, and also in respect of the pasturage of the second or third years, in which the red clover bears little or no part.

3. *Time.*

3. *Time.*—When artificial grasses are raised with wheat, the time of sowing is about the end of April, when the wheat, which was sown in the autumn, has become so firmly rooted as not to be torn up, and the blade at the same time neither so tall, nor so broad, as to be injured by one close course of the common harrows. At that season there is a sufficiency of moisture in the ground, and the harrowing, as a kind of hoeing, is accounted beneficial to the wheat. In some situations, instead of the harrows, the roller is preferred. The grass seed has been also sown in a rainy afternoon towards the end of May, when the wheat had grown too tall for either the harrow, or the roller, and prospered as well as with the most approved cultivation.

When grass seed is put in with barley or oats, it is sown just before the field gets the last finishing stroke of the harrow ; by that attention, the seed is well covered, yet not put down too deep for vegetation. A few only of the little round seeds of clover being taken up with almost a handful of the ray grass seed, there is no peculiar dexterity required in the act of sowing.

4. *Use.*—Artificial grasses are mown green day by day for the sustenance of farm horses, labouring oxen, and for cows yielding milk, from the earliest season that it can be cut, till the conclusion of the harvest. The field which affords the first supply, grows up in due succession, to yield a second cutting by the time the red clover is fully blown, and has attained its greatest procerity, when that part of the first crop which was not thus mown green, is cut and stacked for hay.

When the winter provender fails before the cultivated grass can be cut, the horses are pastured on a
part

part of it, being teddered in the field ; sometimes after the first year, oftener after the second, the grass land is resigned for pasturage to the cattle.

On farms of consideration, it has been of late the most approved practice to maintain the labouring horses in the stable on grass mown every day : where this usage cannot be followed they are only fed in this way during the night, being teddered in the field when unemployed in the day. On many farms, a diet of cut grass is given to the cows at night, and occasionally during the heat of the day, when they could not pasture undisturbed in the field. In some instances, swine are maintained through a great part of the summer and autumn on red clover, when the proportion of ray grass does not predominate.

5. *Seeded.*—Some successful experiments in saving the seed both of red and white clover, have been made in the country. The clover was saved as hay till the beginning of summer, when it was thrashed in the warm sun, with considerable labour, to burst the husk bags ; after this the seed was easily winnowed, and exhibited as fine a sample as any brought from the London market. On one occasion also the labour of cleaning the seed from the husk was saved by following the instruction offered by nature, thrashing the hay as corn in the barn, no farther than to break down the head, or ear of the clover into its individual husk bags, and after a slight winnowing, sowing the husk unbroken. The clover sprang at the usual time and the crop was weighty.

This management, however, has never been an object of agricultural attention. Red and white clover seed, and rib grass or plantain seed, are annually imported from the seedsmen of London, with ar-

articles

ticles of grocery for the whole demand of the country ; the mean price at which it is retailed in the shops may be stated at 1 shilling and 4 pence ; it is, however, more frequently above than below that statement. White clover is generally a little higher than red, and rib grass, for which there is not much demand, is sold for less than half the price of clover seed ; it is on this account sometimes found craftily mixed with red clover, and a proportion, though readily distinguished by the attentive, is imposed for grass seed of the highest value. Great regard is bestowed upon having every kind of grass seed of the best and purest quality, and of the crop of the immediately preceding season. The seeds of one or two years old are easily known by inspection ; many of them it is believed would not vegetate, and the price is proportionally lowered, but no experiments have been made for ascertaining this particular in any of its circumstances.

6. *Is the Land tired of Clover ?*—It was observed in the 2d sect. of this chap. that the suspension of the prolific quality of the soil, which though no doubt depending on the alteration of its chymical properties, is yet mentioned in terms borrowed from the enfeebled state of animal nature, such as “ want of rest,” “ exhausted,” “ scourged,” “ worn out,” and “ tired.” The employing of these figurative terms both conceals our ignorance, and prevents our acquiring knowledge. Until a few years ago the lands about the towns and villages had been in uninterrupted tillage for more perhaps than 400 years. By that mode of management, when the barley became to be nearly ripe, the soil was so uncompact as not to support the weight of the ear, and the stems fell down, (the roots loosing their hold of the ground) and all farther progress to-

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wards ripening was terminated. The cause of this misfortune was obvious to any one who considered the state of a field when just completely fallowed, and at the time of reaping the wheat eleven months after ; and on that principle it was entirely removed, merely by continuing the condensing power of gravitation uninterrupted for two or three years. From this circumstance it may be inferred, that where a course of cropping, or rotation, by which grass has only been continued for one year has been long persisted in, some chymical property may be thereby suspended, which may prevent the prospering of clover or turnips. In this country all the lands being in their turn rested 2 or 3 years, have never exhibited the smallest symptom of tiring of any of the crops which they have been accustomed to produce : and so long as nature shall be left to the undisturbed efficacy of her own influence, for the space occasionally of three years together, there is no cause to apprehend that the land will ever exhibit any such symptoms.

From the information which has reached this country, of the soil of Norfolk tiring of turnips, or the lands of Suffolk of clover, it would be presumption to say that laying out the grounds in grass for 3 or 4 years, would renovate their powers ; yet, perhaps, it might be prudent to make the trial.

In this country there are some cases where the clover was weak and poor for the first crop, but the second cutting of the same season was greatly improved : and the crop of the second summer exhibited no token of the deficiency of the preceding season.

SECT. XIV.—RAY GRASS.

Ray grass is scarcely ever sown, otherwise, as has been mentioned, than along with clover. The seed is partly saved in the country, and partly brought both from England and the southern districts of Scotland. The seed of ray grass ripening sooner than the clover seed, with which it is cultivated, the field is often mown as soon as the ray grass is mature, and being thrashed out on the door of any of the offices laid down upon a sheet in the field, the seed is winnowed, and dried by frequent turnings on the floor of the granary, or any other unoccupied loft.

There is either a new species of this grass lately produced, or a variety which was unknown to the Rev. Mr. Dickson of Dunse, to Dr. Anderson, and to Lord Kames, who all represent ray grass a perennial, or continuing at least for 7 or 8 years. It is only about ten years ago that an annual ray grass was first heard of in this country. This kind is taller, and a more weighty crop than the perennial species. But people, who proposed to keep their field in grass for three summers, are deeply disappointed by this short-lived annual. It is not to be distinguished by its appearance, and in this country, if it were known, it would be uniformly rejected.

The mowing of grass commences about the first of July, the wages by the day are considerably higher than for any other kind of agricultural work, from having been at the first only undertaken by the most

skilful of professional gardeners, and the farmers have yet so little concert as to continue the distinction. By the acre it is undertaken at the rate of from three to about four shillings, to which a bottle of beer in the day must likewise in general be added. A considerable proportion, however, is performed by the servants of the farm, who are now in general skilful in this operation.

There is but little art displayed in saving the hay. This is now done with much less trouble and expense, than attended it for a long time after the sowing of grass was first practised. When cut dry it is immediately put up into small cocks of 3 or 4 stone weight, pretty neatly trimmed around the bottom; in this way there is little occasion for farther trouble till it is to be stacked. If the ray grass seed is to be saved, very little is shaken out from grass put up when so immediately cut; when it is to be thrashed a rope is girded round the bottom of the cock, the loop is slipped into the hook of the swingle of the harness of a harrow, and the horse hauls it entire to the simple thrashing floor which has been mentioned, and which is easily transported to any part of the field.

When the grass is cut wet, it is allowed to lie in the swath untouched till it becomes so dry as to keep in small stacks of 20 or 40 stone. It is of late understood that the less trouble there is generally taken in saving hay, it is the sooner and the better done. From tending, little advantage is found by experience to be derived, but much damage and much trouble are thereby often occasioned.

SECT. XV.—FLAX.

The labour bestowed on flax when growing does not, like that of turnips and potatoes in the same state, contribute to the fertilizing of the soil. There is a prepossession, therefore, though not established by experience, that flax is more prejudicial to the prolific quality of the land than any other kind of crop. But although this should be more imaginary than real, it is certain that a crop of flax gives no winter fodder,—that it makes no return to the dunghill,—that the operations of pulling and watering and grazing interfere much with the more interesting cases of hoeing the turnips, of managing the hay, and occasionally of reaping the corn:—that the indispensable attendance on a market may keep the flax a day too long in the water to its utter destruction,—and that the want of care, or want of skill at the mill, may scutch away the whole advantage of the crop. Flax, therefore, although cultivated in every quarter of the district, is so seldom raised on farms of any consideration, as scarcely to be noticed as an object of agricultural attention. It is for the most part restricted to the yards, or gardens of the cottages, or to the end of a ridge which had been broken up from grass, or upon which barley had been cultivated the preceding crop. The land is always brought into the smoothest cultivation that is practicable, and every weed which may have been turned up is gleaned off with care.

Several years ago the best seed was imported by the
dealers

dealers in groceries from Holland, more lately from Riga, and from N. America, and retailed in small quantities, generally from about the fourth part of one bushel to about two bushels; it is sown at the rate of about three bushels per acre.

The time of sowing is in the end of March, or as soon as the season of frost, by which the springing plant would be injured, is supposed to be over, the proverb being, "*that March tow is better than April lint.*" It is weeded with care, when about 4 or 5 inches in height; though flatted by this operation, it is not supposed to be thereby injured.

The raisers of flax in this country are more solicitous for having it strong than fine; it is not, therefore, pulled till it is supposed the rind or bark has attained the greatest degree of substance which the plant can put on, and before that takes place, the seed also is nearly ripened. It is tied up by bands of itself into small sheaves, and instantly put into the pond as soon as it is pulled. In some cases the bolls are taken off by drawing handfuls of the green flax through the teeth of an appropriate iron comb; the bolls are thereafter dried for preservation, and the seed beat out in the spring. There is little nicety observed in the watering, save that the statute, prohibiting the steeping of flax in a stream, is rarely, if at all, transgressed; from a persuasion that running water washes away a part of the rind, and thereby diminishes the quantity of the lint; a pond is formed near the bank, which a rill from the brook supplies, it is often steeped in the margin of a little lake. The flax is kept under the water by a few sods. Much attention is found requisite in ascertaining the completion of the process of watering; and besides attention, although the theory be simple, yet a degree
of

of skill, which it is alleged can be only by practice acquired, is moreover deemed to be essential. The error of over doing, which is irreparable, is said to be frequently committed. In ordinary circumstances, between the 2d and 7th day is found sufficient to make the rind separable from the boon, or the bark as it were from the wood, this object is more perfectly attained by spreading the flax thinly after it is watered, for two or three weeks, on any field where the grass is slow in its growth. There are only three flax mills in the district comprehended in this survey. By many of the poorer tenants the whole process, from sowing the seed till it is carried in yarn to the weaver, is performed in the family. The flax break, scutching stock and scutcher, rustic implements, and the appropriate heckles being provided, they are occasionally procured for hire at the rate of 2 pence or 3 pence for the night; the friends of the family convene in the evening of a winter day; all hands labour hard at the break, and scutching stock, and the first or coarsest heckling; a little rustic feast is prepared for the supper, and this management is carried round through the vicinity of a parochial circle. The yarn is spun both from the tow and lint. The coarser yarn of the tow is made into sackcloth, canvas and ticking, and the coarser cloths for table and bed linen, and shirts for the family. The yarn of the lint is occasionally made into webs of fine linen bleached for the market, and in some cases, the yarn is sold to the shopkeepers of the nearest town, for the demand about Glasgow, to the extent of £3, or perhaps £14, to answer for the payment of the rent. The flax raised in the country has not been dressed to the same degree of fineness as that which was imported from Holland, and consequently

sequently it sells at a lower rate, about 1 shilling and 6 pence the lib. ; it is only, however, occasionally, that heckled lint, of the country produce, is sold at all.

It is not doubted but the seed might be produced of as good a quality as that which is imported from America, or Riga, were the sowing less thick,* and the ripening perfected. But though the seed be sometimes saved, it is only a secondary object. Its value, either for oil, or for the more immediate use of rearing calves, has scarcely ever been attended to in this quarter of the country, which may be accounted for from the small quantities which by any person are regularly cultivated.

* For raising seed, half the usual quantity of sown seed is sufficient.

CHAP. VIII.

GRASS LAND.

ALL that can be accounted meadow, or natural pasture, in the tract under this survey, merits no particular attention. Were minuteness however required there are three kinds to be described. In the hilly part of the country there are banks of the extent of some acres too steep to admit the plough, with an irregular narrow stripe between the bottom, and a winding stream, which are clothed with grass produced by nature, without any influence of human design or art; and to this kind may be added the whole of the pasturage between the arable ground and the edges of the rivers, and brooks in every part of their respective courses: this would no doubt be of importance, could it be laid together in portions of larger extent; but the insignificant proportion of each farm adds little to its accommodation or value. There are several situations in the hilly part of the country where the stream, running in the bottom of a deep narrow valley, forms the boundary of the farms upon either side, and where a commodious well sheltered enclosure could be formed along the brow of the steep upon each of the farms, either by a little accommodation between the mutual possessors, or by an allocation to each, of a section of the glen at the expense only of a partition fence.

Another

Another species of meadow, which may be accounted natural, is the few ridges of arable ground upon the generality of the smaller farms, left for a year or two, to furnish such natural herbage as the soil itself may spontaneously produce. Where this kind of natural grass is pastured from the month of May, the crop which is yielded appears of little value: when it is intended to be cut green, a light crop is produced by the end of July. The poor people who are reduced to this unprofitable shift, begin to supply the want of green food from an earlier part of the season, by sowing red clover in a corner of their little gardens. A small consideration from the landlord, or even a little attention in the framing of the lease, would readily induce them to extend this plot of clover to an extent adequate to all their occasions.

The third kind of natural pasturage is the ornamented grounds around the seats of the respective proprietors, of which enough hath been already said.

CHAP. IX.

GARDENS AND ORCHARDS.

IT has been noted above, that prior to the reformation among our ancestors in this quarter of the island, there were no gardens or orchards of any kind, except what belonged to the castles of the chieftains, and to the monastic, and other buildings of the clergy.

From several circumstances in the progress of improvement it may be inferred, that the little gardens of the burgesses, and people of the towns, planted only with coleworts, were the first kitchen gardens in the country. Among the poor people all over the district, this is still the only species of horticulture. It may be presumed that none of the gardens of the religious houses fell to the lot of any of the reformed clergy. The walls of the gardens, at the Bishop of Moray's seats of Drainy and Spynie, might be yet, at a small expense, repaired; but for several generations the ground within has not been distinguished by tree or shrub of any kind. The gardens of the monastic establishments of the priory of Pluscardine, and the Abbey of Kinloss still remain; several of the aged trees, with their moss crusted trunks, long prostrate on the ground, maintain an interesting struggle with Time, the dead and mouldering stumps intermingled with the young shooting branches, bearing blossom and fruit in their season. The gardens also of several

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of the religious houses about Elgin remain, still exhibiting some of the pears which were esteemed the best in Scotland about 200 years ago.

Some of the gardens which belonged also to the castles of the great men of other times, still likewise remain. But since abandoned by their proprietors, they have generally fallen, not into the possession of gardeners, but of poor farmers who, without cultivation, have been contented with the fruits which are now as it were spontaneously produced. There are several varieties of apples, but it is probable that at present they are of smaller size, and of less flavour, than when the trees were young and properly treated. The variety of pears were only an early, and a later kind; the trees which produce them as yet bear no marks of decay, and it is probable their fruit retains its original qualities. If there were any cherry trees, they have yielded long ago to the power of time. The plum trees which remain produce only the common kind, nearly of the same colour, and in flavour but little superior to the sloe. Several little branches of the gooseberry bush have scarcely preserved their existence in some crevices of the walls of the castle in the lake of Loughnadurb, which has been mentioned above in the section on turnips. The gooseberries are both of the white and red colour; they have retained the richness of their flavour, but in bulk they have degenerated to the size of common pease. Had any of the gentlemen in this vicinity been curious in gardening, or much interested in such objects of natural history, the full influence of modern cultivation would have been sufficiently tried both on the turnips and on the gooseberries of this ancient fortress.

A pretty accurate idea may be formed of the gardens

dens of the proprietors, from what has been already mentioned in the chapter on their buildings. Among the tenants, horticulture is not much attended to; but the ordinary garden stuff, onions, leeks, pease, salads, with a variety of gooseberries, cabbages and coleworts, are in general in abundance for domestic accommodation. Nothing is sent to market from the gardens of the farmers, but the consumption of the towns is supplied from gardens in their respective environs cultivated solely for their markets. There great quantities of onions are raised for the smaller tenants and artizans over all the country, who have not leisure, or skill to raise that seasoning vegetable for themselves; plants of cabbages and coleworts to a considerable amount are also disposed of by the gardeners of the towns in the same way.

The district is rarely able to supply its own demand for apples, and a considerable quantity of English growth, is imported along with oranges, groceries, &c.

CHAP. X.

WOODS AND PLANTATIONS.

THE natural wood, with which it is supposed that this district formerly abounded, is now very much diminished: still, however, along the banks of the rivers, and several of the smaller streams, little groves of natural wood, such as alder, birch, hazel, and a few oaks, are occasionally to be met with; and in the country called Strathspey, on the estates of the Duke of Gordon, Sir James Grant, and Mr. Grant, of Rothymurchus, in the parishes of Abernethy, Cromdale, and Duthel, both in the counties of Moray and Inverness, forests of natural pine have, from time immemorial, occupied very extensive tracts, both upon the sides of the hills and on the extensive plains, contiguous to them.

The income arising from the sale of the wood on Sir James Grant's estate, although variable, must be very considerable. It covers an extent of nearly 20,000 acres in the three parishes which have been mentioned, and has been annually thinned to a certain extent and made use of for various purposes for more than eighty years; although the wood, therefore, be in a very thriving state, it does not at present exhibit the bulk, or hardness, or quantity of rosin which is found in timber of more mature age.

It is still remembered in the country, that the only
mode

mode which was known of making deals, was by splitting the timber with wedges, and trimming the boards with the axe; an upper room in Castlegrant is floored with deals formed in this manner, never smoothed by the plane. In those times the landlord got only a mark Scots (about thirteen pence) per annum for as much timber as one man could prepare in this manner and dispose of. By degrees it had risen from 1 shilling and 8 pence, and 3 shillings and 4 pence, to 5 shillings and 6 pence. About the year 1730, when the York Building Company purchased the timber of the woods of Abernethy, to the amount of nearly £7000 sterling, they commenced their operations, provided with every kind of implement of the best construction, and 120 draught horses, and waggons, elegant wooden houses, saw mills, and an iron foundery, all of which were surprising novelties in the country.

Their example and instructions occasioned a very great improvement in the skill and dexterity of the people of the country. Besides the two mills which they constructed, and the roads which they formed through the forest, Mr. Aaron Hill, the poet, the secretary to this establishment, first taught the mode of forming rafts upon an improved construction, upon which deals and other timber, to the value in the whole of £20, or £30, was navigated down the river. This navigation is conducted at the medium hire of two guineas for each voyage, which in general, with the returning journey by land, requires the space of one week. The master floater engages a young man as his coadjutor, desirous to acquire skill in the business, who is allowed about the sixth part of the hire, besides maintenance till his return.

Before the visitation of the English poet, they could
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only carry down a very small quantity of timber, bound together by a cord in a very hazardous manner; a man was seated in a vessel made of a hide, in a cylindrical or conical form, with its sides distended by hoops of wood, who managed it by a paddle, and the timber was tied to the conductor's leg by the noose of a rope, to be slipped as occasion required, that he might return behind the raft, to set it free from any shallow. This vessel which has been used by barbarous tribes, in distant quarters of the globe, the man carried home upon his shoulders by land, as the floaters still preserve the tackle of their rafts. At the rock of Tom-dow, in the parish of Knocandow, the river dashes with so much rapidity at right angles against the cliff, that by the violence of the collision the rafts were shattered; to avoid this mischief, the Company cut a new channel, by which the floats are still generally conducted.

Tradition relates that this establishment was the most extravagant set ever known in the country; that their wasteful prodigality ruined themselves, and in part corrupted others; their profusion was frequently displayed in bonfires of whole barrels of tar, and entire hogsheads of brandy were broached among the people, by which, one night, five men died. It is likely, however, that their well-intended plan for conciliating the good will of the natives, might appear as astonishing wastefulness among poor and simple Highlanders, and like other marvellous relations, might be exaggerated in the succeeding repetitions of it.

Nearly of the same kind, but completed with a very fortunate issue, was the contract made by Messrs. Osburn, of Hull, and Dodsworth, of York, with the Duke of Gordon, for all the marketable timber of the forest

forest of Glenmore, in the parish of Abernethy, at the price of £10,000 to be felled, within a limited, but a sufficient, term of years. It was then believed, from the appearance of the trees when felled, and other circumstances, that they must have been upwards of 200 years old. This aged forest stood around a circular lake about two miles long, discharging a stream into the Spey, through a course of six miles, which having been deepened and cut straight, and a sluice constructed, a flood was formed as occasion required, by which the heaviest logs, and masts even for the royal navy, were floated down to the river, which conveyed them to the dock yard erected by the Company at Garmach. The timber was also formed into rafts, which were navigated by two men at the rate of about £2. 10s. to the dock yard, being a longer voyage than from Sir James Grant's forest. The heaviest logs were floated often in single pieces, to the number occasionally of 20,000 at once, escorted by 20 or 40 men travelling along both sides of the river, setting them off by boat hooks as they stuck upon the shallows, or were washed out upon the banks. Each man was hired at the rate of 1 shilling and 3 pence for the day, and a moderate allowance of spirituous liquor. It having been only the trees which exceeded a specified circumference of bole, which were by this contract to be felled, and which has been completed several years ago, the younger wood has already made a great advance, and plants, past all possible enumeration, have sprung up over the whole extent of the forest, from the seed annually provided by the trees which were spared to supply in competent time the place of those which were cut down. Although the value, therefore, of this forest has been much lessened,

yet it still maintains its appearance of extent undiminished.

The forests of Rothymurchus in the parish of Duthel are also of great extent. They are produced in the county of Inverness, but being also floated down the Spey to Garmach, they are counted in the same relation to this county as the timber which is produced within its own limits. These forests have never been disposed of in the manner of wholesale, but the proprietors for several generations have regularly drawn a considerable annual revenue, by supplying the never failing demand of the country.

The parish of Edinkilie borders on the north with the district of Strathspey. Its name, in the Gaelic, imports, that the whole face of the country was originally covered with wood. It is proved by charters granted towards the end of the fifteenth century, that it then contained two royal forests, Drumynd, now destitute of wood, and the forest of Darnway extending more than five miles along the opposite bank of the river Tindern, exhibiting a large extent of oak, ash, elm, beech, and fir. To the natural forest which extends nearly over a thousand acres, the Earl of Moray has added 2,500 acres planted with oak and other deciduous trees, amounting, altogether, to the number of ten millions five hundred and ninety-one thousand. A proportion to the value of nearly £400 yearly, is felled for the convenience of the country. Conjoining almost with his lordship's forest, there are the extensive plantations, on the estates of Altyre, Relucos, Loggie, and Dunphail.

In the low part of Moray the quantity of natural wood is inconsiderable. The largest is a tract of oak-wood on the estate of the Earl of Fife, through which the

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the highway upon the road from Elgin to Forres, has been formed. It is enclosed, and has for several years been kept clear of brushwood, properly weeded by cutting out where the trees crowded on each other, and otherwise well preserved. Though the timber be as yet but small, the wood has been for a considerable time in a thriving state. Similar to the forest of Darnaway, the extent of this natural wood has been greatly enlarged by extended plantations principally of fir.

The county of Nairn is not destitute of natural wood, but it consists chiefly of birch and aller. On the estate of Inshock, belonging to the family of Brodie, skirted in part by the highway from Forres to Nairn, there is a large extent of birch wood, to which the plantations of the park of Brodie House are nearly conjoined. The great extent of natural wood in the environs of Calder castle has been already briefly noticed. Where Lord Cawdor's estate stretches along the banks of the river Nairn, there are every where groves of full grown and rising aller tress. On the estates of Kilrayok and Lethen, there are also several natural groves of the same kind. These supply the exigencies of the country, and leave a considerable surplus besides, which is made up into the ruder, and cheapest kind of the implements of husbandry for the eastern part of the county of Moray; being made into carts, harrows, ploughs, and axles, which are disposed of at the Elgin fairs.

There is reason to believe that in every period, in which castles and great houses have been built in this district, their environs have at the same time been planted both with fruit and forest trees. But excepting such plantations, no wood was planted in the country much farther back than 60 or 70 years ago, when the

Earl of Fife made some plantations both in Banffshire and Moray. Except a few ash or plane trees planted round the gardens of the small farms, by which the country was then occupied, his lordship's plantations were wholly of Scots fir, planted in regular rows by the line, and at equal distances from each other, both along and across.

The care with which these plantations were carried on may have been the cause that few of the plants failed, and that all the trees have acquired nearly an equal height. And whatever may be said about the departure from the arrangement of nature, the regularity of these plantations is more pleasing to the eye, and arrests the attention more powerfully than the artless negligence of the present mode. It may be worthy of notice that these plantations seem to have attained to their highest perfection, and such as have not been felled bear rather the marks of decay than the indications of farther growth, and give cause to believe that none could survive above an hundred years. This is equally the case upon the sea coast, in the vicinity of Innes House, and in the interior of Banffshire, in the environs of Balvenie Castle, at the distance of 20 miles from the shore, and beyond many an intervening hill. Yet the trees of the same species, planted by nature in the district of Strathspey, and in his lordship's forest about the sources of the Dee, exhibit no symptom of decay at the commencement of the third century of their age; while many, not very distant from the sea, in the forest of Darnway, but also of spontaneous growth, promise to enjoy the same duration. Where the facts are so few, it is in vain to speculate about the cause; it is probable that it is occasioned by the quality of the soil rather than by
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the treatment of the seed, or of the infant plant, or by the temperature of the climate in which they grow.

It is also to be observed, that there appears to be no era fixed to the duration of the forest tree, the oak, the ash, the elm, and the beech, with other kinds of trees which have flourished for many generations about the houses of the proprietors in every quarter of the country, as has been already noted.

About the same period in which the Scots firs were planted by the Earl of Fife, there were also plantations of various trees raised in the environs of Brodie House to a considerable extent. They were also imitated by Sir Robert Gordon, at Gordons Town, and upon the hill of Melundie, at his seat of Rininver in Dollas. It cannot now be ascertained what time intervened between the Gordons Town and the Melundie plantations. The first, like the Earl of Fife's, begin to yield to the power of time, but the last though of greater bulk, and now thinned and applied to various purposes, still appears thriving. It may be also noted that the plantations which have begun to decay, are, comparatively with that of Melundie, but of inconsiderable extent.

It was about, or not much before, the year 1770 that the proprietors of this district began generally to form plantations, and in which they have, since that period, persevered. The plantations, at first, consisted wholly of Scots firs, and were planted so thick as to cover the ground by the growth of 8 or 10 years. They are now gradually cut out, and forest trees, with a great proportion of larix, have been planted in the sheltered voids. It is quite unnecessary to attempt an enumeration of the extent of the plan-

tations on particular estates. It may in general be only observed, that the hills of moderate height, and a great proportion of the grounds unfit for cultivation, have every where been planted, and that the plantations of the smaller proprietors bear, in general, a greater proportion to the extent of their estates, than those of the nobility and greater proprietors, considerable as they are, bear to their more extensive properties.

One particular has been ever scrupulously attended to by all, without which, indeed, it is but folly to attempt to raise plantations, namely, to prevent the trespass of cattle of every kind, and to keep the fence in perfect and perpetual repair.

The larix and the fir seem to prosper in every situation, excepting on the most exposed summits of the mountains, or on marshy swampy soils. About the ninth part of the forest trees, it is computed, die before the spring of the third year after they are transplanted from the nursery. Those which survive that term, being more hardy, are less liable to fail. The fir trees, which are still cut out, sell by much too high to be used as fuel, but they are applied to so many, and to such necessary purposes, that it is not easy to conceive, by what means the country was formerly supplied with what it required for various uses. They are cut out by particular direction and arranged in small parcels of 10 or 20 trees along the avenues formed through the plantation, and sold for ready money by the way of auction, and immediately carried off by the purchasers. The produce of the sales by the twentieth year is supposed equal to the original expense of the plantation, including that of cutting out the trees, and replanting, in some cases, the voids with

with forest trees, for which the ground receives a degree of cultivation, by throwing up the earth more than a foot in depth, and about a yard in breadth, several months previous to the season of planting. When mellowed and fertilized by the weather, it is replaced round the root of the plant.

As natural oaks are frequently met with on soils similar to those on which great numbers of firs have been planted, it is to be regretted that these plantations were not originally formed of oak, which is, in every respect, so much more valuable a tree. As the planted fir does not acquire the bulk, the hardness, nor the quantity of rosin, which those of spontaneous growth attain, and are never accounted sufficiently durable for buildings of any consequence, it would be both an important national object, and an object very beneficial to individuals to substitute oak in their room; every proprietor might, at an inconsiderable expense, form a nursery of oaks, to be annually transplanted where the growing firs can be profitably cut out, and also where plantations entirely new, are to be formed. As it is certain also that the larix attains a greater bulk, in the same time, than the fir,—is better fitted for every purpose in building than the best timber from the Baltic, and in most of the implements of agriculture, it is preferable to the elm and the ash; would it not be expedient to substitute this wood wholly in those situations where the fir would be otherwise planted?

Since sheep have been entirely banished from the vicinity of the planted fir, the seed drifted by the wind into the lee side of the grove has readily sprung up as in the ancient natural forests, but it would be left to succeeding generations to discover whether firs thus

spontaneously produced, acquire the solid texture of the mountain pine, or are as inferior to it as their parent trees.

As it may be an object of curiosity in other parts of the island to know the expense of forest plants in this country, it has been deemed proper to annex a table of the prices of the various kinds. Mr. Brown, who has an extensive nursery at Linkwood, and had the care, during many years, of directing large plantations in every part of the country northward of the Grampians, has obligingly furnished, on this subject, the annexed communication, viz.

“ The common manner of planting moors is to put
 “ in 5000 Scots firs, at 1 shilling the thousand, and
 “ generally 1000 larch, 4 shillings the thousand,
 “ making the expense of the plants, for one acre, 9
 “ shillings. Forest trees, such as beech, birch, ash,
 “ elm, and plane, are not introduced till the Scots
 “ firs have grown to afford shelter; they are com-
 “ monly planted in clumps where the soil is adapted
 “ to the respective kinds; exclusive of the Scots firs
 “ and larch the other kinds are furnished, spruce firs,
 “ 2 years old, at. 6s. for 1200
 “ Silver firs of the same age at. 10s. for do.
 “ Elm 2 years from the seed bed at. 8s. for do.
 “ Ash 2 years old at. 6s. for do.
 “ Oaks 2 years old at. 10s. for do.
 “ Beech 2 years old at. 8s. for do.
 “ Planes 2 years old at. 8s. for do.
 “ Mountain ash 2 years old. 7s. for do.
 “ Sweet chesnuts. 12s. for do.
 “ Hollies. 10s. for do.
 “ Laburnum. 7s. for do.”

These kinds are furnished also by Mr. Skene, at his
 nursery

nursery at Skene Park, near Nairn, at similar rates; he adds *weeping birch* plants, from 2 to 3 feet high, at 4 shillings for the 120. Sweet briars, at 3 shillings for the 120. Gooseberry and currant plants, at 3 pence each. Apples, pears, cherries of various kinds, from 1 shilling each to 1 shilling and 6 pence.

Prevost Brown adds, " that the forest tree plants
" are transplanted from the seed bed into nursery lines
" for three or four years, and being nearly 4 feet high
" when planted in the forest are set in pits dug about
" a foot and an half diameter; and that such plants
" (as is also stated by Mr. Skene,) are furnished at the
" rate of 4 shillings or 5 shillings for each 120."—
Mr. Brown understands the Scots acre, which is 1 *acre*
and 1-5th part of an acre in England.

CHAP. XI.

WASTES,

UPON surveying the present state of the uncultivated wastes, in this district, a large extent of dry heath plain, which generally, in Scotland, is denominated *moor*, beginning from the east, presents itself immediately beyond the lands of the village of Garmach, which are situated in the angle formed by the influx of the Spey into the gulph of the Moray frith. This plain, as it spreads out towards the south west, is elevated into a hilly track, through which the highway from Fochabers to Elgin is formed, and where a plantation of almost nine square miles of fir, with a few larix trees, has been made where the estates of the Duke of Gordon bound the property of the Earl of Fife; with an unlevelled surface the moor is conjoined to the bottom of the mountainous track, which has been described as forming the great physical division of the country, which, with increasing breadth and growing elevation, stretches onward till it is lost at Alvie-moore on the limits of the district, among the vast ranges of the Grampian mountains. Along its southern side the Spey winds its powerful channel, which, with its tributary streams, hath cut out of this mountainous district, all the cultivated grounds upon its course which compose the entire parishes of Speymouth, Rothes, Knocandow, with the whole region of Strath-spey,

spey, the half of which, in its political state, as has been observed, belongs to the county of Inverness. It may be here remarked that the cultivated plains along the course of the river are of varied breadth and of diversified extent, as the river sweeps along the bottom of the valley on the Banffshire side, or washes the base of the mountain on the opposite bank. On its tributary streams, the extent of the land is in proportion to the volume of water which they respectively exhibit, and which the slope of the mountain directs into the river. Of these the Dulnan is the greatest, having formed what was the original parish of Duthel, before its annexation to that of Rothymurchus, on the southern, or Inverness-shire, side of the Spey. The Dulnan is itself a river of no small consideration, holding a course of nearly 30 miles, of which about two-third parts (though with the exception of some intervening moors) are cultivated. The other streams which, in this district, contribute to the Spey, are only to be accounted brooks; yet they have formed each its own winding vale, containing much fertile land, and supporting a considerable population. In the season of rain they are swollen into roaring torrents, and frequently into rapid and destructive inundations.

The northern side of this mountainous range has been described as terminating the plain spread out to the shore of the Frith. Besides several brooks which are sent down from this side; there are the rivers of Lossy, Findern, and Nairn. The parishes of Birney and Dollas are cut out of the mountain by the course of the Lossy, before it winds its oblique channel through the plain. One of its tributary streams, named the Loughty, in a shorter course and nearly parallel, has cut out the beautiful vale of Pluscardine,

awing of the parish of Elgin, decorated by the gardens and the ruins of the Abbey. The parishes of Rafford and Edinkilie may be described as vallies on the streams which run into the Findern, which has itself formed, far within the mountain, the parish of Ardclach. The cultivated lands upon that part of the course of the Nairn, which is within the mountain, appertains, like the parishes of Moy and Dalarossie, on the sources of the Findern, to the county of Inverness, without the boundary of the district under this survey.

The proportion which the aggregate of the waste still bears to the cultivated surface, as nearly as can be estimated, has been stated in section 4, of chapter 1. From the steepness, height, rock, and other qualities, a great part of that proportion must for ever remain superior to the industry of man, whatever the population of the country may become, and of which perhaps, the most useful application would be to resign it entirely for the propagation of game. There are also extensive tracts which, though not susceptible of being reduced to arable land, might nevertheless be improved from heath into meadow grass, by the simple process alone of irrigation. There are also tracts, the pasturage of which might be much improved by judicious draining. A considerable proportion of dry moorish ground might, no doubt, be improved by the proprietor's building only suitable accommodations, and laying off the ground for small commodious farms, to be let for 30 years, the first ten thereof without rent, and a gradual yearly rise during the other twenty to the amount of 15 shillings, or a guinea, the acre, according to the quality of the soil. Wherever there is such ground, the buildings would attract settlers, and
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instead of withdrawing labourers from the agriculture of the country, the population would, in some measure, be increased. Perhaps the cultivation of the waste over the whole empire might be more profitable to the state than the formation of colonies in distant regions, even although the inducements upon a well digested comprehensive plan, to individual settlers, were apparently inferior. Suppose a very small proportion of the public revenue to be allocated in this respect for bounties to such proprietors as should establish a specified number of tenants upon the waste, in some proportion to their respective rent rolls, each family to have as many acres in the possession as should afford occupation for one team. But while the difficulty of finding farm servants, and the present exorbitant expense of labour continue, it must be found more for the advantage of the landlord, the tenant, and the community at large, to employ the whole labour of the country upon the old arable lands rather than in any extensive improvement whatever of the present waste, except only by building such accommodations for new settlers, by irrigation, and by draining, as has been suggested, on the account of pasturage, and by adding to that extent of ground which has been already by plantation improved.

It has been observed that the plain between the great range of mountain and the shore is diversified by several short ridges of low hills, nearly parallel to the coast; of these, however, it may be proper to mention only the hill of Quarrywood, which is a moorish ridge disjoined as it were by a pretty wide gap from that part of the mountain which forms the northern side of the glen of Pluscardine. It stretches eastward with a decreasing elevation for nearly 3 miles in length, and

and more than one in breadth till it is flatted down into the plain in the environs of the ruin of the Bishop of Moray's Palace of Spynie, containing about 4000 acres, clothed with thriving plantations; and the naturally growing oak wood which has been mentioned, saving only one beautiful, but solitary, improvement, begun about 20 years ago, by a tenant of the Earl of Fife, in the bosom of the wood.

It is yet in remembrance, that till about the middle of the last century there had been commons in the vicinity of most farms, which were either peculiar to the few tenants who resided in a little hamlet together, or were the general pertinent of a considerable extent of country, in which the whole live stock of every kind sought their scanty pittance promiscuously together. By this accommodation a very small proportion of the arable land was then reserved for summer pasturage. The Earl of Fife was the first of that generation who broke through this arrangement, by settling tenants on the skirts of the hills upon his estates of Dipple and Coxtown, and in the parish of Dollas. His lordship's example was immediately followed by his contemporary Sir Robert Gordon, who, with a lease of 19 years, gave the timber requisite for the turf walls of the dwelling and offices, at the rent only of a hen for the first year, to which 1 shilling was added for the second year, and continually increasing by that addition till the end of the lease, extending to 18 shillings yearly at the end of 19 years, when the improvement was let off new at its proper value. In some of the best situations which maintained a flock of sheep on the common, a lamb or a wedder yearly, as well as the hen, was also added. By these means considerable additions have been made to the rentals of the proprie-

tors of grounds in such situations. The improvements made in one valley of the Earl of Findlater's estate of Rothes, yield now more than £170 of yearly rent, and a corn mill was long ago erected for the accommodation of this new colony.

Although the *hoar-moor*, the scene of the supposititious interview between Macbeth and the weird sisterhood, be still preserved in its classic state of absolute sterility, yet the road which has been lately formed in the tract which the ancient chiefs would have most probably traversed, in a journey from the Hebrides to Forres, shews the soil to be in general a light loam, susceptible of much fertility, and inviting to its cultivation, which has been probably hitherto refused from its being an undivided common between the families of Cawdor and of Brodie. Besides this moor, which may have probably obtained its name, as somehow indicative of the reverence, which the tradition of the miraculous visitation might inspire, there is a very great proportion of the surface of the county of Nairn still uncultivated, and almost unproductive; even exclusive of the mountainous range, the aggregate may be estimated at about two third parts of the whole. Yet the waste has not been able to maintain its ancient domain wholly undisturbed. The park at Kinsterie consisted originally of several tenements disjoined by a considerably intermingled extent of barren ground, in broad irregular plots. The proprietor, Mr. Gordon, of Clunie, with some perseverance, and with much cost, reduced the whole into one great regular cultivated field of nearly 200 acres, judiciously enclosed, and properly sheltered by woods and groves, and stripes of plantation. He is still extending his improving operations, having lately drained and cultivated

vated the ground of a lake on the western side of the park, and improving the circumjacent waste, its present extent may in a short time be doubled.

The proprietors of the village and lands of Garmach, a few years ago, by a decree arbitral, obtained the division of the moor which has been mentioned in that vicinity, by which the proportion appertaining to them has been separated from the shares thereof, which were appropriated to the estates of the Duke of Gordon and of the Earl of Fife. The Garmach allotment was also subdivided among the proprietors, in the proportion of their respective interests in the cultivated land: each of whom soon became industriously occupied in the new cultivation, which, in a short time, will make a large addition to the ancient field.

There is a considerable tract of peat earth morass, about 50 acres, on the estate of the honourable George Duff, of Milltown, in the parish of St. Andrews, which was let to Mr. Young, of Inverugie, on a lease of 30 years, upon the condition only of his restoring this tract a well-drained cultivated field at the termination of the lease. Mr. Young immediately completed the necessary drainage and roads, at the expense of about £40, and thereupon let the whole for 19 years at the rate of a guinea for the Scots acre of yearly rent, after the first year to six or eight people, who have erected their dwellings, and are busy in the improvement of the ground, adding somewhat to the population, and somewhat also to the most essential riches of the nation.

Along the shore of almost the whole district, there is a tract of uncultivated plain of unequal, though, in many places, of considerable breadth, and for much the greater part incapable of cultivation. Between the mouths

mouths of the rivers Spey and Lossy is bare uncovered beach, and extensive deep beds of water-rounded pebble, on which no kind of vegetable has been ever able to gain establishment. This tract may be supposed the alluvion of the Spey, washed up upon the shallow shore by the violence of the surge, impelled by all the weight of the northern storm. Through this tract also, the river itself seems for some time to have maintained its course, the deserted channel remaining for the whole space of 9 miles along the shore. Although this great extent, almost a dozen of square miles, be incapable of cultivation, (except that Scots fir promises to prosper upon the tracts which are constituted of sand rather than of stone,) it may be still accounted an acquisition from the sea. But farther west, upon the coast of the parish of Kinloss, the sea has gained considerably upon the land. The town of Findhorn once stood upon a pleasant plain, a mile north west from its present situation, and where the ocean now rolls its wave. The irruption, though completed in one night, and by one tide, had long been apprehended, and the people had gradually withdrawn; at that time a level moor stretched in a right line, along the shore from Findhorn to Burghhead, for the distance only of five miles; the encroachments of the sea in a semicircular bay, have made the distance by land now more than ten. The inhabitants of Findhorn were mostly supplied with fuel from this moor, the cutting up of which might have been the cause of the encroachment; many roots of oak and fir trees were then found in the moor, and a few are still dug up, in a morass at a little distance from the shore, establishing the truth of the tradition, and of the historical memoir of Ferrerius, respecting the Abbey of Kinloss,

that a forest once occupied what is now the bottom of the sea, and the whole extent of the downs between Findhorn and Duffus. The sand banks oppose but a feeble barrier to the power of every storm from the north, by which they are themselves forced farther on the shore, and beds of peat earth are thereby discovered 4 or 6 feet below the sand. Within the flood mark of the bay of Findhorn, where the estate of Muirtown borders with West Grange, pretty extensive beds of peat earth were discovered from two feet only to about three under the sand, not in a continuous bed, but in broken banks, as if covered by the sand when formerly wrought, in a period beyond the remembrance of the passing generation.

A visitation, no less irremediable and hopeless, has been made upon the coast of the parish of Dyke,—the astonishing accumulation of sand,—by which nearly the whole barony of Culbin has been overwhelmed. It pays the land-tax in the county of Moray, corresponding to the valued rent of £913 18s. 4d. Scots money, from one farm scarcely yielding a rent of £80 sterling; although, had not this misfortune befallen, the yearly rent roll must have risen to more than a thousand pounds. It still qualifies its owner to be elected a member of the House of Commons.

The time in which this dismal visitation originated hath escaped the notice of particular record. It must have been some dreadful commotion, both by land and water to have amassed the ample store of such a ruinous accumulation. There is reason to believe that it may have been produced by encroachments upon the shore near the head of the Frith. At some distance from the mouth of the river Ness, a considerable space within flood mark, there is a large pile of stone
of

of very remote antiquity. *Cairn-aire*, its present Gaelic appellation, denotes the “*monument of the sea* ;” a beacon apprises vessels entering the harbour of its danger ; westward in the Frith, three other similar piles remain ; one a huge heap near the middle of the estuary, yet accessible at low water. From the *urns* which have been discovered in them, they must have been sepulchral monuments, and they must have been originally placed at a considerable distance from the water’s edge, when it is probable the gulph terminated at the influx of the Ness, and the course of the river Beaulie alone winded along the margin of the vale ; when a promontory, (of which the name *Ness* now alone remains, expressive, when conjoined with the term *Inver*, of the situation of the town), stretched far out into the Frith, still forming by its base the narrower passage of the ferry of Kessock. It may be just briefly suggested that the name of the town would be naturally extended to the country around, depending in some degree on its jurisdiction and its market.

Similar to its promontory it may be also conceived that the flat point on which Fort George is erected had been originally a head land, rising high within the Frith. The appearance of the ground, in the smoothness of the compacted gravel of the level plain, greatly resembling the situation of Kessock, and the steepness also of the sandy bank, suggest the idea of the cape having been washed off, yielding to some assault of the waves, in those weighty storms which it must in the course of ages, have sustained. Etymology here also, as well at the Ness, lends its feeble support to the conjecture founded on these natural appearances. *Airdersier*, in the Gaelic, signifying “*the edge of the height*,” as if a steepness almost artificial, rather

than a natural declivity had been formed under the eye.

These conjectures may perhaps account for the production of those astonishing mounds of sand, which exhibit such a striking and singular landscape on the coast of the parish of Dyke. They are not composed of different strata or beds, and they have no mixture of pebbles, sea-weed, or shells; but they are immense accumulations of pure washed white sand of the minutest grit, having their situation, bulk and form, determined by the wind. The smallest particles, though the first that are suspended, are the last which are deposited by the water, and thereby exposed to the power of the wind, while pebbles, shells, and heavier sand, remain upon the beach. It may be presumed that at first they extended not so far upon the land, as the sand has now spread; for in the century before the last the barony of Culbin, and the contiguous lands, were distinguished "*as the granary of Moray;*" cultivation, therefore, was long continued, and it is likely that when a little sand only had been deposited, the fertility of the ground might be thereby increased. But this vast magazine having accumulated for several centuries upon the shore, began to drift in the tract of the western wind, and even the greater part of these singular mounds themselves, have migrated considerably eastward from their first station; the heavier sand, when moved by the gale, settling upon the lee-side of the mound. The encroachments were every year gradually extended; the rents proportionally reduced; the tenants, one after another, and their landlord, with all their families, mournfully expelled; their habitations and possessions covered, it is supposed, to the height of the trees of the garden
around

around the manor; a twig just peeping up, has been seen in bloom upon the sand in a calm moist spring. The desolation was completed prior to the year 1695. The narrative of the act of parliament, then made to prevent the pulling of bent (a reedy grass which establishes itself in this steril region), relates, that "the barony of Culbin, and house, and yards thereof, is quite ruined and overspread with sand." The farm of Ern-hill, without the tract of the sand, accommodated for a time the ruined proprietor, and still remains, as has been said, in cultivation; though no part of the buried lands has been again laid bare, yet the whole body of the sand is in some degree progressive from the west, being little affected by the wind from any other quarter. But its final destination can with as little certainty be ascertained, as its remote original. That considerable quantities are drifted into the bay of Findhorn admits not of doubt, as part, by every strong gale, is borne quite across the water. But whether it be carried eastward by the tide to be deposited on some other shore, or only washed back again in perennial succession upon its own coast, may, in the course of some succeeding age, be perhaps discovered.

The plain which has been mentioned as still spreading out between the bay of Findhorn and the cape at Burgh-head, appears, it has been said, to have undergone more than one interesting alteration. At the foundation of the Abbey of Kinloss it was a forest, and at some distance from the shore. To this forest a peat earth morass succeeded: at present, while probably more than the half of this plain is submerged under the billows of the gulf, the portion which remains is deeply overrun by the sand drifted from Culbin; though

from the moisture of the low ground it is now generally covered with a bare sward of grass. Nor was this disastrous overspread limited to this low flat ground; it drifted up the acclivity of the hill of Roseisle, the farthest projection of which forms, as it were, the promontory of Burgh-head, and overwhelmed nearly twelve hundred acres of the most fertile and dense loam of the country, in the northwest quarter of the parish of Duffus; which may be represented as doubly unfortunate, having been assailed from the east by water, and from the west by this desolating sand. Tradition relates that this distressing event began in the harvest of 1697, and before the end of the succeeding spring had overlaid the whole extent which has been mentioned, to the depth generally of a foot and an half; the ploughs and harrows, it is said, were often so deeply covered in one night, that in the morning their place could scarcely be found; that the drifting, with casual intermissions only, was continued for seven years until 1704, in which time all that populous quarter, similar to the barony of Culbin, was left entirely desolate, the names even of the farms, and the fishing villages being now unknown; though the ground, like the downs of Kinloss, has acquired a sward of short and almost useless grass, the pasturage only till of late of a few scattered and ill-managed sheep.

Mr. Young, of Inverugie, having with his other lands acquired about 600 acres of this desolated tract, rebuilt upon the solitary shore one of the ancient fishing villages under the new name of Hopeman; though yet but in the fourth year of its duration, it numbers more than 200 inhabitants, in neat buildings on a regular plan, with a suitable garden appertaining to each dwelling, on leases of ninety-nine years; among them

are

are three boat crews, each of seven persons, able and expert fishermen, who bring in large supplies of all the varieties in the Frith, and are ready to act as pilots when required. The people of this village have dug down the sand, and regained fertile garden mould to the depth of more than a foot, bearing weighty crops of corn, and of all the ordinary garden stuffs of the country.

Mr. Young has also recovered about 230 acres by the same operation of the spade at the rate of from £8 to £13 the acre, he states the average at.....

	£.	s.	d.
rage at.....	11	0	0
To each acre he applies lime from his own quarry at the rate of.....	3	12	0
And he states for stable, manure, and cultivation	2	0	0
	<hr/>		
	£16	12	0

The first crop returns 30 bushels of wheat, from which he deducts 3 for the seed, and reckoning the balance equal to..... 11 12 0
 He finds the expense of regaining the acre 5 0 0
 The land sown with grass seed may be then let at the rate of £1 10s. the acre.

Mr. Young states the low price of the lime he has hitherto used to arise from the peculiar accidental circumstance of finding the limestone quarried and broken ready for calcination. The lime employed in the construction of Fort George was dug from this quarry. Mr. Adams, the architect, employed the country people to carry the stone on ship board at the distance of a mile, to be calcined at the work. The carts in use at that time, about the year 1747, made of bars and timber rods both in the sides and bottom, kept in only the larger

larger stones ; the chips and smaller bits were thrown aside as rubbish, affording now a magazine equal to all the occasions of the present owner, by which, clearing also the rock, he prepares for working larger quantities to be exported for the accommodation of other quarters of the country. The unavailing strugglings by the unfortunate occupants, against that disastrous visitation, were beheld with the feelings of commiseration during the more vigorous exertions of Mr. Young. In the course of that melancholy era, they had endeavoured, probably with the spade also, to regain a portion of the soil, and a thin layer was frequently found between two beds of the sand, each more than a foot in thickness. Despair, upon the second hopeless overspread, enervated every future endeavour, and nearly the fourth part of the parish remained in forlorn desolation for the long period of one hundred years, till the foundations of Inverugie were laid.

CHAP. XII.

IMPROVEMENTS.

SECT. I.—DRAINING.

THE advantages of rendering fenny lands dry are so well known, that no specification of them is requisite for the instruction of the proprietor, or of the tenant, in any quarter within the influence of the Board of Agriculture; yet the securing of these advantages is still very generally neglected. *That* negligence in this part of the country is to be imputed to want of money, rather than to want of skill. In many situations however, considerable sums have with that view been expended, without attaining the end which was thereby proposed: the principles therefore by which this improvement may be with the best hope undertaken, and with the best success accomplished, cannot be too generally diffused.

1. *Elkington's Mode of Draining*.—For the principles on which this most important source of improvement is conducted, the reader is referred to a most instructive treatise on that subject, printed under the authority of the Board of Agriculture, and a copy of which ought to be in the possession of every proprietor, and

and of every extensive farmer in the kingdom : * in several of the reports, also, of the agricultural state of the different counties where any drainages of this nature have been effected, accounts of them are given. It may be sufficient in this place to observe, that it is by the judicious use of the auger, that the object is accomplished, sometimes by raising the water, in the manner of a spring, and at other times by piercing the pan which retains the water on the surface, and making it subside into the pervious or absorbing bed of sand or gravel below.

2. *Open Cuts.*—So many ditches have been made for draining more perfectly the cultivated ground, on farms almost of every extent, in the course of the last 40 or 50 years, and the greater part of these drains are so efficient and so necessary, that before their formation it might be supposed, that no great proportion of the fields which they now drain could have been subjected to the action of the plough. Their having been so is to be accounted for, by the consideration only of the very high ridges, in which it has been said, all wet grounds were formerly laid up. A great proportion of these drains have been also formed for the cultivation of the grounds which have been gained from the waste. They are of various sorts as circumstances require : where no particular obstruction occurs, the expense differs from one penny to fourpence per yard. In the champaign part of Moray, the annual expense of keeping the drainage efficient, amounts in the

* See Johnston's account of Elkington's Mode of Draining, in one vol. 8vo., price only 6s. To be had at all the Booksellers.

the aggregate to a sum of much consideration ; if neglected but for two or three years, the expense of the scouring is equal to that of the original formation. It has in this respect been found economical with the proper slope of the sides, to have the bottom as narrow as possible ; the weight and current of the water prevent the growth of weeds, and obstructions of every kind are more easily removed : a shallow body of water creeping slowly over the miry sole of a broad bottomed ditch, fosters the growth of weeds, and in a short time forms such a thick congeries of tough matted roots, as to defy the power of the spade, and can be torn out only by the iron rake with three or four long teeth. In these level situations, the most advantageous form of a ditch would be, to carry back the slope from the middle of the bottom to the distance of fifteen or twenty feet on each side, which in a drain three feet deep, would have the appearance of the sides of two high gathered ridges, with the water furrow between them, which might be scoured with the plough, the horses walking dry on each side of the drain. Reducing a ditch into this form, would afford a large magazine of earth for the compost dunghill, or for any other purpose on the field, notwithstanding that the most fertile part of the mould might be retained to form the new surface, and it might be completed as such exigence required, or as the business of the farm allowed ; these slopes also of 15 or 20 feet with a small measure of attention might be occasionally cultivated for corn down to the water edge, when expedience, or any circumstance should make grain preferable to grass.

In the open cut mode of drainage, the most interesting enterprise was undertaken about the year 1780,

by

by Mr. Brander of Pitgaveny and his father, and net wholly for himself alone, but also for his neighbours, who have property upon the banks of the lough of Spynic.

There is reason to believe from tradition, from the appearance of the country, and from written record, that this lake had been originally a strait of the ocean, forming the parishes of Drainy and Duffus into an island, the western end of which has been ever distinguished by the name of *Roseisle*. The Chartulary of Moray records a protest by Bishop Alexander Bar in the year 1383, against John Dunbar Earl of Moray, and the Burgesses of Elgin, respecting the right of the fishery and of the port, instructing that the mouth of the river Lossy, and the harbour were then at Spynie, whence the fishers sailed out to the sea, and returned nearer to Elgin by four miles than the present harbour, where the fishery is now carried on at the village of Lossymouth. From several accumulations of muscle and cockle shells which were uncovered a few years ago, upon the scite of the village of Spynie, it is evident those ancient fishermen were not unskilful in their profession.

The general elevation of the beach by which the lake is now separated from the sea is nearly twenty feet above the level of the high water mark, but it is cut out in many channels almost to the level of the sea, through its whole length waving parallel to the shore; in some places it has acquired a thin surface of soil, producing dwarfish heath and bushes of juniper, planted several years ago with Scots fir, which are in a thriving state; but there are every where broad wastes to the extent of many acres, which have never acquired

quired the least speck of sward, the pebbles being still loose and bare as when just left by the sea.

This great extent of beach, several square miles, bears every token of having been discharged by one sudden immense irruption from the sea, rather than by the gradual and imperceptible alluvion of the ordinary tides. It has been accordingly protruded farther into the shallows along the sides of the strait, than in the middle where the greater depth of water would give the strongest opposition, and a semicircular mound of striking regularity forms the eastern bank of the lake.

Although it cannot now be ascertained by what means the river Lossy was turned clear off the lake, its course now occupies the only gap across this beach in its whole length from the hill of Garmach to the cape of Lossymouth, and which may be supposed to have been opened by the lake immediately upon the suspension of the greater violence and weight, by which it had been confined. By this same passage through the beach, a canal from the lake had, in ancient times, been formed parallel to the course of the river.

It cannot now be ascertained at what period the canal had been originally formed, but its efficiency must have been greater at one period after its first formation than its most improved condition has of late exhibited. Neglected probably during the disastrous struggle between Prelacy and Presbytery, the lake had extended to the length of nearly six miles, and covered a space of more than 2,000 acres. In this state the family of Pitgaveny were induced to enlarge, deepen, and improve the canal wholly at their own expense. When this undertaking had been almost finished, its
ultimate

ultimate completion was interdicted, at the instance of Sir William Gordon, of Gordons-town, upon a claim of the property of all the bottom, and of the whole water of the lake. In the course of the litigation hereby excited, the Court of Session appointed a survey and map of the lake, and of the adjoining grounds, ascertaining the depths, levels, and many other particulars from which the circumstances here mentioned have been chiefly obtained.

Upon surmounting this opposition, the canal was opened, and 3 feet 4 inches of the perpendicular depth of the lake were thereby taken off, by which 1,162 acres were recovered.

Scots acres.

Of which there appertain to the estate of Duffus.....	632
To the estate of Pitgaveny.....	300
To the estate of Gordons-town ..	104
To the property of the Earl of Findlater, and of the Earl of Fife, including what appertains to the crown as succeeding the Bishop of Moray	72
To the estate of Findrossie	51
To the estate of Westfield.....	3

Scots acres..... 1162

The manifest tokens of an ancient, yet perfect, cultivation, were immediately discovered; such as ridges of uniform breadth and accurately straight, (of which it was doubtful if they had ever acquired any sward,) the formation also of artificial roads, and enclosures regularly square. The buildings however must have been only earthen hovels, as the traces of the wall of one of them remained; upon breaking up the ground, a quantity
of

of peat ashes were discovered, and among them a small number of coins, a little treasure that had been concealed under the hearth, upon some alarm of danger. At that time also a causeway emerged, formed of free-stone from the quarry, quite across the lake, with openings covered by broad flag stones, for the passage of the water flowing down from the west, which revived the recollection of a circumstance upon the verge of perpetual oblivion, “ that this causeway
 “ bore the name of the *Bishop's Steps*, having been
 “ formed by his influence that the vicar might officiate
 “ each Sunday in the forenoon at St. Andrews, and in
 “ the evening at Ognestown, annexed since then to
 “ the parish of Drainy.”

These are the circumstances from which it has been inferred that the lake had been anciently reduced to a less extent than even its present bed, which still extends over the space of more than nine hundred acres, on a bottom of deep fertile loam. The levels, it has been noted, were every where accurately ascertained, by which it is established that this great extent of rich soil is more than six feet higher than the level of the low water mark, with the exception only of a small space on the eastern side of the castle of Spynie, where it may be presumed the Lossy had once entered, and where Bishop Pilmore, who preceded the incumbency of Alexander Bar, had deepened the situation of the ancient harbour.

It being thereby ascertained that a direct communication with the low water mark would be sufficient to drain off the whole water of the lake, the proprietors of the grounds upon its banks formed a general concert in the year 1805 for this great undertaking. In the first place they again procured new surveys and obtained

tained the opinion, both of the editor of Mr. Elkington's mode of draining, and of Mr. William Hughes, one of the engineers of the Caledonian Canal. Mr. Johnston proposed to carry up the level in the tract of the present outlet, with an embankment for the whole length along the side of the river. Mr. Hughes proposed a course almost in the shortest direction from the northern side of the lake, at its eastern end, to the harbour of Lossymouth, at a distance, and every where beyond the apprehension of any intrusion by the river. This upon mature consideration appearing to be the most expedient, the proprietors concluded a contract with him for the completion of the undertaking at the sum of seven thousand pounds, for which Mr. Hughes has become bound to form the canal from the lough to the sea in such a manner as to drain the lake, and to maintain its efficiency for three years after its completion, which, by the contract, is to be the 20th of November in the year 1810. For the security of the performance of his side of the contract, a proportion of the sum is to remain deposited in the bank, under the power of the proprietors, until all the conditions of the bargain shall be fully on his part performed. It is agreed on by the proprietors that their payment of this large amount shall be in the proportion of the value of the acres which they shall respectively acquire, as their lands upon the banks shall be extended over the ground which shall be drained: and all questions respecting this object or any other which may be brought forth, are submitted to the amicable arbitration of Mathew Ross, Esq. a member of the College of Justice, who is also chosen the umpire of any misunderstanding which may take place between Mr. Hughes and his employers.

After

After the complicated adjustment of all the preliminary measures, the commencement of the undertaking was retarded for several months by the king of Sweden, who, before the late revolutionary derangements in March 1809, had invited Mr. Hughes along with Mr. Telford to direct the tract of a canal from the northern ocean to the gulf of Bothnia. Having returned from this expedition, the operations commenced in the spring of the year 1809, and a number of men have since been industriously employed in the excavation, the length of which, from the end of the lake to the low water mark in the harbour, is 3,800 yards. It cuts in an oblique direction through one of the highest of the ridges, which have been mentioned on the beach, and gaining the widest of the deep channels, it is therein continued to its termination, which is to be completed with a flood gate of the most substantial masonry, requisite both in the execution of the work and in the efficiency of the canal; its bottom is to be carried up at the uniform breadth of fifteen feet, with the slope of one and an half foot, to one of the perpendicular depth, opening where it cuts the highest ridge to the wideness of 122 feet, varying with the depression of the ground as it declines nearer to the level both of the lake and of the sea. The greater part of this canal is carried through sand, pebbly gravel, and yielding loam; the excavated earth is carried out, therefore, on wheel-barrow to the distance of fifteen feet from either edge of the brim. One bridge is required where the road from Elgin to the port crosses the tract of the canal, and one at the harbour in the village of Lossymouth.

There are 6 or 7 small brooks which fall into the lake on its western end and northern side, which

could be turned off by new channels into the sea at a small expense. There is no doubt but it would be expedient to have these kept from the ground which may be won, and as the tide can be retained by the flood-gate, and discharged at the ebb to wash out the sand which may be occasionally drifted into the canal, the advantage of this measure may, with convenience, be afterwards considered.

Exclusive of the great extent which is covered by the lake, there are from 300 to 400 acres subject to much deterioration from the superabounding moisture, and in the season of rain wholly inundated. This extent yields a rent of £1. 5s. the acre at present; were the drainage completed, the whole might be estimated at £3 the acre, and the land thus acquired will be gained at the rate of less than seven years purchase.

The success of this great undertaking is ensured by the drainage of the lough of Cottes in the same vicinity, on the eastern side of Lossy, and on the same level. This lake spreads its water over 120 acres in the driest season, and during more than half the year eighty more were added to its extent. It was supported by two streams from the mountain, each of such consideration as to work the corn-mills on their respective courses. Its outfall was into the Lossy at the distance only of 400 yards lower down from the lake, and so much on the same level, that instead of receiving its water in the season of rain, and in a thaw, the river sent back a large stream into the lake, generally continued for two days together; the deepest part of its water was nearly 4 feet, and its bottom so nearly on a level with the ocean, that the tide flows back into the lake when risen but to two third parts

of its height, so that similar to the lough of Spynie the canal was to be carried up at the level of low water.

In this situation, William Young, Esq. of Inverugie, holding the farm of Inchbroom, on the side of the lake, from the Earl of Fife, made a bargain with his lordship in the year 1800, to expend to the amount of one thousand pounds in that drainage upon the security of the bottom of the lake for nineteen years, to commence at Whit-Sunday 1802, without any yearly rent, and with a lease of his farm, and of the lands subjected to deterioration by the lake, at an addition of £30 to the former rent during the same period. On these conditions, in January 1801, Mr. Young began the operation of carrying up the canal 2,200 yards from the sea, to the margin of the lake uniformly ten feet wide at the bottom, and stretching at the brim from 25 to 60 feet in maintaining the requisite slope through the varying elevation of the ground. The excavation was undertaken at two-pence, and in the higher grounds at three-pence the cubic yard; but an unforeseen obstruction in a short time occurred, which had well nigh baffled the utmost exertions of ingenuity, though supported by unstinted wealth, and almost rendered the most strenuous endeavours to complete the drainage vain. The Lossy terminates its course as has been noticed through a part of the beach, which has been superinduced between the lough of Spynie and the sea; its bed is consequently higher than the level on which the canal is carried up, and long before that level was gained, the water percolated through the pervious material of the beach in such copiousness as to obstruct the work, yet not with power sufficient to maintain its course through an intervening

space of sand, between the high and the low water mark; the trench in this space, about 300 yards over, being smoothed up to the level of the shore at every tide, retained the water where the labour was carried on to the depth of three feet. Pumps of various construction, wrought by the united power of men, and by the more persevering labour of horses, were found of no avail. The labourers despaired, mutinied, and threatened desertion. By fair words, and the exhilarating encouragement of the proper quantity of whisky, they were induced to resume the labour on a new system, which by its simplicity was greatly recommended: a dyke of sods was built across the canal, and the rising water was baled over it by the manual labour of an appropriate number of men with timber scoops, who were on that account retained to attend the others who were engaged in the excavation. By their united perseverance, removing this cross embankment from space to space as the excavation advanced, the level was carried up nearly one foot and an half under the deepest part of the lake, the requisite trenches were cut through its bottom, and in autumn, 1804, several hundred quarters of grain were reaped from off the ground which had been a lake or unwholesome fen the preceding harvest.

Notwithstanding the united power of the two streams, the canal, when completed, was unable to maintain its course across the space of sand which is covered by the sea at high water. Its channel in this part was also sometimes filled up by the sand which the wind drifted along the shore, which dammed up the canal to the level of the flood mark. To prevent this, a low bank was formed of small stones entangled in brushwood, secured by rows of piles on each side of the efflux, which

which operating somewhat with the efficiency of a pier, in keeping the water in its collected strength, the channel is maintained against the drifting by the wind, and the sand lodged by the flood is immediately discharged at the ebb.

The roads crossing this canal made it necessary to build two stone bridges of one arch each, and as the spring tides would run up a larger stream than that of the fresh water running down, a third arch was required in the erection of a proper flood gate a little above the high water mark, which hanging on hinges from the lintel is shut close by the rising tide, and again set open as it ebbs, by the weight of the water which it dams back in the canal, nearly from the time that the tide reaches its highest elevation.

3. *Hollow Drains*.—An insignificant proportion of the ordinary drainage of the country has been covered. The most general mode where this is done is having the bottom of the ditch about two feet wide, and half its depth filled up for its whole length from the source by small stones or the larger pebbles thrown in at random covered with sod, the sward turned down on the stone; the other half of the depth is filled up by the earth which had been thrown out in the formation of the ditch. By having so large a bulk of conducting material, the efficiency of the drain is scarcely liable to any casual obstruction.

In some cases the foundation as it were of a wall is laid on each side of the bottom of the ditch, supporting a course of stone laid across forming a regular covered channel; the caliber about one foot square; small stones gathered off the fields are thrown in at random about the ends and over the covering stone, to

prevent them from shifting or sliding down, and the ditch filled up with sod, and the earth as before.

Billets of wood have in two or three cases been also used along the bottom of the trench. They are perhaps most eligible only where the drain is carried through soft peat earth or miry clay. In such situations only the heavier stone being absorbed, the drain has become unserviceable. Where the ditch has been cut out to the gravel, no instance, it is believed, has yet occurred where repairs have been found requisite.

Much ground remains to be more perfectly drained in every quarter of the country, both in the occupation of the landlord, and of the tenant. In some situations, the tenants perhaps may want the skill, but more frequently they could not spare the requisite expense from the recurrence of more peremptory demands. But the uncertainty of a reasonable remuneration during the term of a short lease, more frequently prevents this essential improvement, so profitable to the proprietor, to the tenant, to the state, and in some degree contributing also to the melioration of the climate. In this respect it might be of advantage for the conterminous proprietors to ascertain the most proper course for the complete drainage over the whole, both cultivated and waste ground of an entire district of the country, and to engage a band of labourers to execute the general plan. The present duration of the leases would in general be an object little entitled to attention; yet, where any such patrimonial interest should intervene, there is no doubt but the tenant would contribute a proportional share of the expenditure.

To this might be also conjoined an object of no small importance,

importance, although in some measure of an opposite kind ; to spread the water wherever it is practicable over the side of the mountains, that the brown and useless heath might be thereby almost every where converted into green and nutritious pasture ; and ground, at present not worth six-pence the acre, by this simple and not expensive operation of leading out the water from every brook near its source, might, in the space of three years, be improved to more than a guinea of yearly rent.

SECT. II.—PARING AND BURNING.

In the new settlements upon the skirts, or in the vallies of the mountains, the poor people sometimes improve a small plot of moorish ground immediately from the waste, by cutting up the surface into turf by a particular spade in a semilunar form, with a long head upon the top of the shaft, by which it is pushed underneath the surface by the power of the arms, assisted by the pressure of the thighs of the man who works it. In this country it is known by the name of the *Flaughter*, as if the *flaying* spade, and it is principally used for cutting up the thin sods for thatching houses. The turf thus flayed off and dried a little, is imperfectly bound, and the ground ploughed once ; a scanty and unequal crop, generally of barley, is obtained.

Where the ground had been previously in cultivation and to be broken up from grass, the surface is ploughed in furrows with alternate intervals, as has

been described before by the name of brake furrow, whereupon the turf collected in heaps, and a little dried is burned, and the whole being then ploughed, a pretty good crop of barley, followed by another of oats, is obtained. All the ground yearly under this management may be comprised in about 50, or 60 acres.

Were this operation to be repeated but a few times in the low grounds upon the coast, in those places where the soil is of the quality of peat earth, it has been apprehended that so much of the substance would be consumed, as to superinduce a lake in its stead. In any other quality of soil this operation has in no instance been tried, and in such situations in that quarter of the district, it has been very seldom attempted.

SECT. III.—MANURING.

1. *Marl*.—The varieties of marl which are found in the country have been mentioned in the 5th section of the 1st chapter. The red stone marl at the bridge of Spey is dug up by the Duke of Gordon's tenants of the fields in the vicinity, and applied without measure, and without prices in such proportions as they deem proper. Yet the expense of digging and carriage is such, that it has not been very widely laid on.

The blue marl, partly in the form of stone and partly in that of clay, on the Earl of Findlater's estate near Elgin, is managed in the same manner. Though restricted to the farms adjoining to the little hills, it has been

been applied to a greater extent, and though obtained merely for the requisite labour, the expense is estimated about £5 the acre; yet its influence is found so meliorating as to encourage the continuance of its application.

The white pure marl in the marshy vale of Litis has of late become an object of commercial speculation to the proprietor; it is got, and carried out to the dry moor, by people who pay a yearly rent for it to Lord Cawdor, and is sold by them to people in the neighbourhood, at the rate of 1 shilling the boll, about 8 cubic feet. Its fertilizing influence will no doubt increase the demand, as its beneficial effects become more invitingly conspicuous.

The small stream, which is now sent out from this marshy vale, winds through the park of Brodie-House, and both concert and accommodation are requisite to get the level carried up for completing the drainage so as to render the marl easily accessible. It may, however, be observed, that it is practicable to exclude the stream by a dike, from the place where the digging is carried on, and to keep the pit clear of water by the application of one or more siphons, as is more particularly noticed in the following chapter.

The marl at Kinsterie, though equally valuable, does not appear to be of such extent as to admit of its application, very far beyond the grounds in the present occupation of the landlord, to which it has been with sufficient liberality and answerable profit, applied.

2. *Lime*.—The successful application of this mineral, as a manure, has been known in the country almost for an hundred years, yet it has never in this respect been very extensively used. Along the whole reach of country bordering on the Spey, neither red clover nor
pease

pease will grow, until the field has received a considerable allowance of marl or lime, and its fertility both in barley and oats, is in many places exceedingly increased by that application. In this district it has been observed that marl can only be procured for the lands near the red rock at the bridge of Spey; some efforts have been therefore occasionally made for more than twenty years past, in procuring lime for the lands along the course of the river. The earliest exertions on this account were by purchasing the lime calcined and slaked, where it could be procured at the shortest distance on its other side in the county of Banff. From 200 to 300 bushels were in this way applied at the expense of £5 to £7 the acre. About the year 1790 several cargoes were first brought from the frith of Forth, and from Sunderland; the calcination having been completed, it was carried unslaked, and in the lightest state, by the farm horses and servants, to the distance of four or six miles from the harbour. The expense even in this way, was found to be nearly the same as from the county of Banff, but the quantity desired, was readily and at once procured.

Although the expense, the inconvenience of the correspondence, and the distant carriage from the shore, must ever prevent the importation from being carried on to great extent, yet the vast alterations which have taken place in the state of society, in commercial ideas, and in the sentiments of the people, in the course of 400 years, naturally attract our attention. It would not have been possible to have persuaded our ancestors who were opposed to each other in the battle of Bannokburn, that the inhabitants of Moray, should in any period bring almost their whole
fuel,

fuel, and part of the manure for their lands, from the other side of the Tweed.

The application of lime as a manure in the other parts of the country, though occasionally used in small quantities in every quarter, merits not any particular detail. It may be only proper briefly to notice, that the fishermen of the village of Findhorn, collect considerable quantities of muscle shells, for the purpose of procuring bait for their hooks, which they dispose of in the neighbourhood to be calcined for lime, which is generally used for manure, and found to be of a purer quality, than lime stone wrought in any of the quarries of the country.

3. *Sea Weed*.—Wherever sea-weed is washed up upon the shore, every other operation on the farms in its vicinity is suspended, and men, women, and horses, are day and night employed in one great exertion, to secure the whole quantity which may be deposited. It is spread fresh upon the land, and no difference in the effect is discovered, whether it be instantly ploughed in, or allowed to wither and dry upon the surface for any length of time. It is however, probable, that this manure is more beneficial to the proprietor, than to the tenant. Before the introduction of turnips, it was always applied to the culture of barley. A greater quantity was thereby no doubt produced, but the rent was proportionally augmented above that of those lands, which had not the means of this external manure: the expense of securing it upon the beach, and transporting it to the farm, (being generally a servant and a pair of horses additional for each 60 or 80 acres,) a mile distant from the shore, cuts also very deeply from the profits to the tenant, of this adventitious benefit.

4. *Yard*

4. *Yard Dung*.—Under this title, may be comprehended all the variety of muck, both in the towns, and villages, and on the farms in the country. More labour perhaps than skill is bestowed on this species of manure. Potatoes it has been said, are the only crop for which dung is applied, just as it is thrown out from the stables. For barley, wheat, and turnips, the other crops on which manure is in general bestowed, it is with few exceptions made into a compost dunghill. The scourings of the house, with the promiscuous produce of the stables and yard, with the ashes and soot, are accumulated on the field which is to be manured, with some matter of the earthy kind in alternate layers, the mould of any useless turf dike, the scourings of a ditch previously dried, or often times a layer of pure sand from the nearest bank. The whole mass compacted by the pressure of the carts, during its gradual accumulations, remains but little altered, until about twenty days before it is to be spread over the field, when it is carefully cut down, the composing materials intimately mixed, and made up again upon a basis partly new, and somewhat contracted, and with as little pressure as possible. It is deemed in a peculiar manner expedient to have this compost carried out while it is still hot, the fermentation having in that state been found to recommence more speedily on being mixed with the soil, and exciting that genial warmth therein, which is requisite in vegetation, more readily, than if the whole fermenting quality had been previously exhausted in the dunghill. This object being secured, it is understood that this terrene addition is in two respects advantageous, first in absorbing the superabounding moisture, thereby moderating the heat, and restraining the fermentation from advancing

vancing too fast, and from being carried too far, and thereby lessening the quantity and impairing the quality of the yard muck, which in the technical language of the country is termed "*fire fanged*," that is seized on by the fire, as by the fangs of a wolf or a boar: and secondly, instead of lessening, greatly increasing the quantity, as the addition of earth imbibing the substance which the heat would otherwise dissipate in the form of vapour, becomes thereby itself a most efficient manure.

In the ancient practice the addition of earth was more than two third parts of the whole accumulation; this proportion has been gradually diminished, and in theory at least, mixing any kind of earth with muck has been disapproved, and in some instances, rather perhaps, from occasional expedience, than from the conviction of correctness, has been omitted. Tossed up and turned altogether with no other pressure but its own gravity, the muck is left to ferment, till its putrefaction be nearly completed, its component parts thereby assimilated, and any seeds of weeds, which it may contain, destroyed. This mode however being rather adopted to answer the urgency of an immediate demand, is denominated a "*hasty pudding*," and that instant is watched for spreading it over the land, when the fermentation begins to advance to impairing exhaustion; but it can scarcely be made to spread so far, and to the same efficiency, as a well managed compost.

Where the earth therefore could not of itself contribute to the increase of fertility, the acme of the skill exerted in forming the compost dunghill, consists in limiting its quantity to what is just sufficient to absorb the moisture, which would be otherwise dissipated in vapour,

vapour, and to controul the fermentation within the due degree.

Where cattle are fed in the yard, the earthy part is put in first; so as to be under the muck, and afterwards occasionally as it becomes expedient for absorbing the moisture; the whole being turned over, mixed, and gathered into a heap to be more perfectly assimilated before it be added to the soil.

In the eastern quarter of the country, for many preceding generations, sand was the only substance used for making up the dunghill; it was often so liberally bestowed, that when carrying out on the field in the spring, the smaller quantity of muck being completely rotted, almost disappeared, and though little but pure sand could be seen, yet one good crop was always produced by such manure; the effect is greatest where the particles of sand are of the largest grit,—very fine soft sand is almost inefficient.

The sand which is taken from the bed of the river Lossy over-runs the field with thistles: a similar visitation of *sorrel*, has always resulted from making up the dunghill, with the crumbly kinds of peat earth in the marshy grounds of the low country mosses; but no investigation has been ever made for discovering the causes of either of these effects.

The dung of sheep is here accounted the most powerful. In this country, a cot is always provided for them, and where the flock is of any amount it is accommodated with a yard; both are kept dry by beds of turf, or mould not sandy, and is generally littered, as occasion requires, with straw, rushes, or fern, making a pretty deep compost dunghill over the whole, which in that situation is sufficiently decomposed
without

without being turned over, till it is carried out upon the land.

5. *Pigeons' Dung*.—Though there are many dove-cotes in the country, and although all the dung is carefully and with propriety applied, yet on the whole the quantity is inconsiderable. In former times, it is said, that pigeons' dung was reduced to a pretty fine powder, by the operation of thrashing with flails. In this more skilful age, the same effect is produced merely by the chymical process of fermentation. For this end the whole quantity thrown out only once in the year, is made up into a conical mound; when it has attained the greatest heat which it is supposed it ought to reach, it is carried to the field, and scattered by the hand in the same manner as corn is sown, and generally about the same time, so that both may be harrowed at once. Pigeons' dung is more generally bestowed on wheat or barley than on any other crop, and the ordinary allowance to an acre is about twenty bushels.

SECT. IV.—IRRIGATION.

Fertilizing land by means of water has been heard of by many, and by a few individuals it may perhaps have been seen in other places; yet in every quarter of this much diversified and extensive tract, it is hitherto almost wholly unknown. In many situations, however, this improvement is of all others the least expensive, and also the most permanent. It obstructs not the yard dung, neither does it encroach like lime or marl on

on the pocket, and it not only improves the field on which it is practised, but by increasing its produce, it contributes to the fertility of the other lands of the farm.

There are some situations near the coast where nature seems to have denied this improvement, but in the more upland districts of the country, with little ingenuity, some mutual accommodation, and at an expense, compared with the return but of small consideration, it might be almost every where obtained. Even from levels to which the water has never yet been raised, it might be found practicable to continue the irrigation to other fields, where at present such a measure could scarcely be supposed practicable.

Although it be not the purpose of this undertaking to frame a system, but merely to detail the state and circumstances of the agriculture of the country comprehended in this survey, yet the advantages of irrigation, both in fertilizing the meadows for grass, and in enriching them also for corn, are of so much consideration, as to merit special attention to its general rules, and to the most approved mode of managing this essential mean of cultivation. Exclusive of that which has been represented above, of producing by irrigation nutritive grass, instead of useless and dun heath, (as the green tracts every where in the mountains, where the water is shed over an unbroken surface, strikingly demonstrate) its peculiar advantages to the inhabitants of this country would consist in having grass in April, equal to that which otherwise they could scarcely hope for in June.

The next object to be considered is, that the field or either naturally dry, or completely drained, it being obvious,

obvious, that spreading water over a swamp, must increase the cause which keeps it unproductive.

The third particular to be attended to, is, that the water shall be slowly progressive, and in no place entirely stagnate, nor that it shall be in any place so deep, as to exclude the air from the grass; as in that case instead of nourishing, it would rot the roots and destroy the sward. In this respect it is proper that the water should filter through the grass, at little more than one inch in depth, and with the quickness which is given by a descent of about two inches in the yard.

The first season for admitting the water is, as soon as the grass is eaten off in October, and to be continued till it produces a scum of a whitish colour, which is the beginning of a putrefaction. This scum will be produced sooner in warm, than in cold weather, at first, perhaps, not before five or six weeks, when the water should be turned off for a few days, that the grass may have also the nutriment of the air, during the whole of which interval, the field should be completely dry, when the water is to be again returned as before; the intervals of its continuance are gradually shortened till about the first of March, when vegetation commences, and when it may be prudent to terminate as it were the first parts of the process. When the spring crop of grass is wholly depastured, the water is to be again returned for enriching the meadow for a crop of hay. At that warm season, four or six days will be sufficient, and the grass will be fit for being mown in six weeks after. As soon as the hay is carried off, the water is to be again returned for a few days, and the third crop will be luxuriant for

cattle and horses till the month of October as before. It is to be particularly noticed, that sheep are to be carefully excluded from watered meadows in the autumn, for the grass at that season certainly occasions the rot.

This is the theory or principle on which the improvement of irrigation is recommended. The practice, by ordinary reflection and attention, is readily accommodated to every possible situation. In the hilly district of the country, the fields are for the most part on a declivity: in that case the stream of water, being conducted in a trench along the upper end of the field, is by slits in the bank, or stops at the proper intervals, made to spread over as much as the quantity of water allows, an equal quantity being taken out of the trench at the crown of every ridge from which it is gradually shed out, on both sides to the furrows. When the whole stream has in this way got down into the furrows (which is often the case before one fourth part of the field is supplied with water) a new trench parallel to the first is cut across, and the process again repeated till the whole water is again got into the furrows, when another trench is in the same manner opened as often as occasion requires, till the water has thus reached the lower end of the field.

In so far as the field may be fertilized by the quantity of sediment; whether it be calcareous, loamy, or of the nature of muck, it is to be presumed that the first or highest compartment, will have the greatest advantage, and that the water may be divested of all its meliorating influence before it reaches to the lowest end of the field. But it is also certain, that the whole
fertilizing

fertilizing quality of the water does not consist in its sediment alone, but that itself simply is a kind of vegetable nutrition, which the plants draw and assimilate to their own substance. Even the quality itself of the soil will by its renewed application be at length altered from a red sandy steril earth to a rich black mould. The less nutritive and the unpalatable kinds of grass disappear, and those of a micer and sweeter nature are spontaneously as it were produced in their stead. When the field is to be broken up by the plough for a crop of corn, the irrigation may be continued through the whole winter, and the process finished in such time only as to have the land completely dry for cultivation in the spring.

It may be also proper to notice that a mode of spreading the water over level ground, is a little varied from that which has been described on a sloping field. The water is at once conducted along the crown of the ridge from the one end to the other. The channel is made wider and deeper where it is first taken off from the trench, and gradually contracted as it advances, in such a manner as the contraction of itself sheds out the water with small occasion either for slits or stops, as the acclivity requires. It is unnecessary to mention the provision which at last must be made for conducting the water back to its original course, nor to repeat the suggestion which was made of carrying it forwards to other fields which were not at the first considered as capable of irrigation.

What is here noticed may be deemed sufficient to recommend experiments to be made in this country in such situations where it is easily practicable, and may be completed at an expense comparatively insignificant.

When such trials shall have exhibited its advantages, and a little experience taught the practice, it may be presumed that this improvement will become of much importance, and universally extended.

CHAP. XIII.

EMBANKMENTS.

SECT. I.—AGAINST THE SEA.

THERE are considerable tracts of barren ground along the shore, from one end of the district to the other, and where the county of Moray borders upon Nairnshire, a large extent might be made more productive than it has ever been. But in the whole length of the coast, the only space where embankments could be of advantage is on the flat ground near the influx of the river Findhorn. In this quarter too, embankments of some consideration have been made, and it has been thereby shown that much more ground of great value might, in the same manner, be obtained, were it not held in common by several proprietors, who, by negligence almost natural regarding property in that state, have permitted the ministers of Kinloss to acquire a right merely by the law of prescription, as the parsonage land had been allocated about the end of Cromwell's usurpation, from the grounds of the ancient abbey, without the specification of such a tolerance. It may be even presumed from the ancient course of the river, and the influx of the tide, that the boundaries of the estates were then distinct, and that this large tract, although peat earth and pasturage, was

not overflowed by every tide, nor then occupied as a common.

The smallest of these embankments was executed about the year 1795 by the tenant, wholly at his own expense. The field was only inundated at spring tides, and twelve acres were brought into regular cultivation at an expense comparatively small.

The greater embankment was executed in the summer and autumn of the year 1802. It secures more than 60 acres of fertile soil, over the greater part of which the sea had formerly flowed. In several large spaces of this meadow the sward was broken up so deep, as always to retain the water generally more than two feet. The tenant was the undertaker on an allowance of about £200 made by Mr. Peterkin, of Grange, the proprietor. The embankment stretches 1400 yards, of which about 800 in a right line present a green bank 12 or 14 feet in height measured along the slope, which sustains the weight of the surge rolled in directly along the bay; about 300 yards at either end turned nearly at right angles are affected only by the oblique pressure of the tide. The water appears to rise to about half the height of the sloping bank. The mound is raised six feet of perpendicular height, and over the broken hollow places, 8 or 10 feet; its base is from 12 to 22 feet in breadth, the slope and the level on the top which is two feet broad, being both maintained uniform throughout; at one hollow place where the water was retained, it was filled up to the depth of 5 feet, 50 feet broad, and for the length of 150 feet before the foundation of the mound was laid. The embankment is constructed of earth firmly compacted, and protected on both sides by a sloping wall or facing of turf well bound in courses laid alternately

ternately across and along the line of the mound. The uniformity of the slope was preserved by cords stretched between two timber frames, forming sections of the embankment at the distance of 50 or 70 yards from each other, framed in such a manner as to have 2 feet in breadth for one in height. In the execution of the work, spaces were left for the easy reflux of the tide, the last of which being closed in at the ebb, it has been since then excluded.

The field now is nearly as dry as could be wished, and has been long included in the same course of cropping with the other fields of the farm. A small stream of water runs along its western side, which is conducted through the embankment in a hollow drain completed with a sluice hung from the lintel which the weight of the tide shuts close, to its own exclusion, and which on its retreat the pressure from within opens before any inconvenience arises from the retention of the brook. A little water also rises in some of the hollow places, which is discharged through the embankment by timber pipes, each with its valve on the same principle as that of the sluice.

It might, however, be suggested, that siphons perhaps would be found preferable. By raising the banks of the channel of the brook so as to have its water high enough to admit the discharging limb of the siphon to be efficient even at high water, there would be less risk of damage to the mound, and of accidental impediment also (such as a coil of floating sea-weed) to the regularity of shutting, or even opening the valves.

The sea side of the mound, soon after its completion, was clothed with a green sward, and it appears not to have yet received, or scarcely needed any repair.

pair. This concern has been hitherto trusted to the tenant, but at granting the current lease, it was undertaken by the proprietor, who, at little cost, may make the trial of a siphon upon the first accidental derangement of any of the present contrivances.

It may be also here observed, that there are some situations in which lakes might be emptied at a smaller expense, by the application of one or more siphons than by a canal, or the construction of any wheel. In other works of drainage also, or of irrigation, in conducting a stream over any rocky bank, or across any interposing hollow, this simple implement might, with much frugality, be employed. Siphons having been employed occasionally in clearing mines of water, recommend, by experience, the advantages of such application.

SECT. II.—RIVERS.

The embankments required in the rivers of Nairn or Findhorn in the lower parts of their course, are not so much for the purpose of preventing their overflowing the fields, as for the ravages on the soil, through which they respectively flow.

In the year 1768 the post road was wholly carried off along the lands of Balnageith by the river Findhorn, upon which it became a question whether the proprietor, individually, or the county at large were obliged to provide a new one for the general accommodation. This matter being ascertained by proper legal investigation to fall upon the county, a survey was made,
and

and it was found that three fourth parts of a Scotch acre were required for the new road. This was purchased by an assessment on the valued rent of the shire by the estimation of a jury under the authority of the sheriff at the amount of £60: the consequent requisite expense to about the half of that sum was moreover added.

The steep undermined bank, a layer of loam above a bed of gravel, to the depth of 8 or 10 feet, was reduced to a slope by young fir trees from the plantations on the estate, laid almost in the direction across the stream, or with a small inclination of their tops along its current; the root ends resting against the bank were secured by the weight of a competent accumulation of stones covered with green sod. This slope was still projected from 3 to 5 feet farther into the river by a fringe as it were, or border of the rounded lumpy stone, large and small, carried through the river from the beach on the other side. This shelving shore has been very little deranged by the most powerful torrents; an inconsiderable proportion of the pebbles which are tossed in at random, are washed in towards the middle of the river in the course almost of every winter; but in the lowest state of the river in the month of July, the bank has been every year made up in the same way by carting over stones from the opposite beach, and turning them out in any place where the slope appeared to have been made less shelving.

In the autumn of 1807, by floating logs, a small breach was made in the bank, a little lower down on the river, where the lands of Balnageith are bounded by Mr. Gordon, of Edintores estate of Grieveshop; which was in the same manner repaired in the summer
of

of 1808. From the assaults of several heavy floods in the succeeding winter, this mode of securing the banks of rivers may be recommended both from the experience of its efficiency, and of its frugality, where circumstances easily admit of its execution.

Mr. Gordon has continued this embankment in a strong sloping structure of large heavy stones from the quarry, built in the form of a pier; its foundation is also protected by an accumulation of the lumpish pebbles loosely tossed in, to prevent undermining below, while its weight and solidity above promise to resist the power of the stream. If any damage shall be again occasioned by the floating of timber, it must, no doubt, be repaired by the owners thereof.

The river Lossy, almost in the whole length of its course, as well among the hills of Dollas as in the plain between the mountains and the sea, has long been the source of much mischief on its banks and adjoining fields. These evils have been but unskilfully resisted, and imperfectly guarded against, along the upper part of its course, above the town of Elgin. In the lower part of its course between Elgin and the beach upon the shore, embankments have been formed wherever they are required, continued on both sides to the extent in all of 10 or 12 miles. These embankments are green sloping mounds about four feet in height, on a base of 8 or 10 feet wide, rounded in the top. They have in general been executed by the proprietors, at an expense varying with the convenience of the materials. They range in general from 20 to 30 feet from the brink.

William Williamson, Esq., a tenant of the Earl of Fife's, has executed the embankment on his farm of Foresterseat, nearly 2 miles in length from the estate of
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of Barmuckity to the farm of Cauldcots, upon the condition of being repaid the expense by appraisement at the termination of his lease. Some part of this embankment recedes considerably from the river, with a stripe of plantation intervening. - Where it is continued at the general distance the bank is made to slope uniformly from the bottom of the mound to the edge of the water, which is obviously of much avail in preventing ravage by a flood. In some other places this is guarded against by a fringe of willows kept low and occasionally plashed.

The most improper mode of all others, which has been tried on the course of this river, is lining the banks with a close row of perpendicular stakes. This form, though at the first appearing to confer security, operates with all the influence of a pier in deepening the river; the soil in which the stakes are planted is washed off, and deprived of their hold they fall forwards from the bank. Where in this manner it is expedient to have stakes employed, it might perhaps be found preferable to drive them in shelving, so as to form a slope from the bank. To check the current which might be supposed would set in under them, courses of stakes should be driven at proper intervals in a vertical position, in a direction across the stream between two of those which form the slope, and cut close over along the plane of its surface. The position of the sloping stakes would be thereby strengthened, and the vacuity underneath would be, in a short time, filled up. As the stakes would be supported both by each other and by the piles, they need not be driven very far into the earth at the bottom; but it might contribute to their firmness to have a long timber pin driven down into the earth through the end of each, which rests upon the bank.

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The security of stakes can only be obtained where the course of the river cuts through a soil of loam or clay. In such situations where the quantity of timber requisite for this mode could not easily be procured, it might be found expedient, to have larger piles driven at the distance of 12 or 16 feet from each other, in the same sloping position, connected by bars along the bank inserted into proper mortises previously cut out, forming a course as it were of great hurdles, and the bars along the bank closely wove with straw ropes, which, when completed, would exhibit the same shelving appearance as the sloping stakes. Slips of willow might be planted through the straw roping, and the bank would be for ever protected against the violence of the river,

CHAP. XIV.

LIVE STOCK.

 SECT. I.—CATTLE.

1. *Breed*.—ALTHOUGH it be certain that the ancient breed of the cattle of this district are not the offspring of those wild white cattle, which, it is well known, formerly existed in Scotland; yet it is not possible now to ascertain where the original stock were derived. All the varieties, it is presumed, were at first occasioned by the difference of the pasturage and climate, under which the posterity of the first settlers were for several generations reared. In more ancient times the whole labour of ploughing was performed by bullocks; it is yet scarcely 60 years since the horses in this district were first yoked to the plough. Upon the manors of the proprietors, the lands in the occupation of the church, and among a few of the wealthier tenants, the cattle were bulky, and would be accounted valuable, even among the skilful of these times. They were well kept by pasturage in the summer and autumn, and they were supported, without falling much off, by straw in winter, to which a sheaf of corn was added daily during the harder labour of the spring. But although the stock was pure, yet there is reason to believe that no attention was given to the selection of the

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the bull, on whom all the valuable qualities of the race are, by modern breeders now, supposed to depend.*

From the general want of attention to this species of stock, which from the circumstances of the kingdom must have prevailed from the reformation, till long after the union, it will be readily perceived, that without any cross, the cattle must have suffered much deterioration. They were so hardly treated, and so poorly fed, through the winter, that before the grass grew in the spring, the cows and larger cattle were in general unable to rise, without the assistance of the owner. While many died at once, and many through the consequences of want of food, the handsomeness or beauty of form in the survivors, would by that management be wholly destroyed. Numbers, however, acquired so much flesh, as to be fit for market by the end of August, though still so imperfectly fatted as not to admit of being salted for a voyage only of a few months.

By the end of January there was no beef or mutton much better than carrion even in the shambles of the metropolis. It is well ascertained that so late as the year 1730, many gentlemen of Edinburgh, brought their butchers' meat from Berwick, during the greater part of the summer, fed in the counties of Northumberland and Durham.

When there was no market without the district itself

* That opinion is entirely the reverse of the doctrine in the age of Virgil. "If any one," he says (Geo. iii. *ver.* 49), "admiring the prize of the Olympic Games, breeds horses, or any one strong bullocks for the plough, he specially regards the form of the mothers."

self for its cattle, when it was with so much difficulty, that they were supported through the winter, and when there were no means of fattening them but by pasturage and corn, although indispensable both for the plough and converting the straw into manure, they could be regarded but little as an object of agricultural profit. Although sometimes the market for corn almost failed by the exuberance of plenty, yet the exportation of malt to the Baltic, and the frequent recurrence of seasons of dearth, kept the whole attention fastened upon the raising of grain. By the superinduction of the excise, which quashed the manufacture and the trade in malt, and the natural progress of cultivation and commerce, in the age of tranquillity, which began to arise after the revolution, a market for the cattle of this country, was gradually opened in the south of Scotland, and in England.

The price of beef regulates that of every other kind of meat in the shambles; and though meat for many years hath borne nearly an equal proportion to grain, in the subsistence of the people, yet live stock has been hitherto transported, and of late to an immense value from one end of the island to the other, unsupported by any bounty, and unfettered by any statute, or any regulation of police. Although it be impossible to foresee the influence of any law, regulating the disposal of grain, yet from analogy to this other great branch of husbandry, it might be inferred, that the raising of corn would be prosecuted with more assiduity and success, were the same unrestricted circulation allowed around the island, into whatever quarter the demand might arise.

To purchase a thousand cattle from a multitude of individuals, and march them, in one or more great battalions,

battalions from the extremity of Scotland, into the centre of England, at the expense only of a few shillings on each, is an undertaking, which requires genius, exertion, and a provision for many contingent circumstances; besides the knowledge which is requisite for their disposal to such advantage, as may encourage the continuance of the trade.

Mr. Hamilton, a steward on the Duke of Gordon's estate of Strathbogie, was the first, it is believed, who attempted this adventurous expedition, which though then, perhaps, attended by advantages which exist not now, was counterbalanced also by corresponding inconveniences. The speculation was unprofitable to Mr. Hamilton; he joined in the more ruinous adventure with the last Prince Charles, and in the rank of Governor of Carlisle, exhibited a mournful example of the evils of revolution.

Although the trade was for some time after suspended by the derangement which then shook every branch of business in this great empire, this traffic afterwards increased, from speculations at first insignificant and obscure, to the great consideration which it has now attained; and although, as in every other course of commerce, some have failed, it has been carried on for a number of years, by several persons of respectability and honour, resident principally in the county of Banff, and in that part of Aberdeenshire where it seems to encroach on the confines of that country.

When the influence of this speculation respecting cattle began to be perceived at empts were made to improve their bulk, and their value, principally in the low country of Moray, where from the coarseness of the straw, the want of shelter in winter, and the
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scanty over-stocked pasturages of the bleak grazings and glens, in which they were generally quartered during the summer, the greatest deterioration had taken place:

But at that time, ignorant of the effects, and wanting also the means, of abundant nourishing food continued through the whole year, the first attempt was to introduce a better breed, and principally cows. A tradition had reached this country from Fife, that when James the Sixth was preparing to make his entrance into England as the monarch of both nations, he borrowed money from his neighbours about Falkland, to enable him to support an appearance sufficiently respectable in the idea of the more opulent classes of his new kingdom;—that the gentlemen, of that quarter, had each accommodated his Majesty with all the specie, which, on the spur of the occasion, they could spare to his request;—that the King, on his journey through England, was every where struck with the superiority of the cattle he saw there, over those which he had left in Fife;—that instead of repaying money to his obliging neighbours, he sent cows with a few bulls to each, in proportion to the debt he owed;—that from this circumstance the cattle of Fife became superior to any other of Scotland, and from thence selecting only the largest, a considerable number of cows were introduced about the middle of the last century into Moray.

Elegance of form, or the idea of beauty, had not at that time been ever connected with cattle; bulk and weight were the only qualifications required. This kind, distinguished by the name of the "*Dutch breed*," were far from being handsome, the head small, the neck rather long and slender, appearing as if set on

rather than originally a part of the thin shoulder ; the back rising high, though still lower than the huckle bones, which are set out wide from each other ; the belly large ; the legs long and seemingly weak ; the tail short, and but little decorated by hair ; the pile and skin being both thin, and the constitution delicate, they were unable to endure cold or wet ; the quantity of milk not greater, than the greater proportion of food which they required might naturally afford, and its quality inferior to that of the original stock. They were never, therefore, propagated among the tenants who had not at that time generally the means of their support, and saving the varieties from cross breeding they have almost without intention gradually disappeared.

In the attentions given by the noblemen and gentlemen of the country, to improve the breed of cattle, cows of the Alderney and Holderness kind were introduced, and also some cows and bulls of the Galloway race. But the reputation of all these was quashed, before they were generally known, by a kind denominated the "*Lancashire breed*," which for several years were the only favourites ; scarcely could any other obtain the least attention, and bulls, and cows, and steers of this kind, had gained almost the entire possession of the low country along the coast.

Meanwhile the introduction of cultivated grass, turnips, and sufficiency of fodder through the winter and spring, imperceptibly improving the original stock in the interior of the country, where it had remained unadulterated and almost in its indigenous purity, it was discovered that the cattle of this breed were the best adapted to the climate and to the soil ; their size and weight also, in the course of a few generations, were
found

found to depend on the richness and quantity of their food, no way influenced by the race from which they sprang, which with all the symmetry peculiar to its kind, by the progressive enlargement of each succeeding generation, may be raised to any magnitude that the species has ever attained; and it may be affirmed, that the twelfth or fifteenth generation of the smallest Shetland bull and cow, if translated to the pastures of Lancashire or of Derby, each reared in the full exuberance of plenty, would rival in bulk, any stock which these counties can now in general exhibit. It was farther discovered, though with several individual exceptions, that the females of this kind, could be reared to yield as much milk, the quantity and quality combined, as the Alderney or Holderness, or any species in the island, and that their disposition to fatten was not in general inferior to the most distinguished of their kind.

Of late, therefore, the whole country have tacitly united in purging off every cross, and every foreign breed, which has been in a great measure accomplished; and in a short time it is likely, that the original stock will be reared in its highest purity and perfection. In this respect bulls have been brought from the isle of Skye, where this breed, remaining wholly unadulterated, had only decreased in bulk. Handsome cows also, and of the purest blood have been with the greatest care selected. There is not any strict regard paid to the colour of the cows, but at present no bull would be reared or purchased, excepting such alone, as are of pure and unmixed black. With some who are not in the extreme of nicety, a pretty dark brown, brindled with some deeper shades of black, might, perhaps, be tolerated; but merely on account of the

colour, they would not meet with unqualified approbation.

2. *Beef.*—The number of cattle reared in the country is much greater than is required for the supply of the market with meat. During three or four months in the summer, there is very little beef in the Elgin market; lamb, veal, and mutton, forming at that season the principal supply, and the case is similar in the other towns and villages. In autumn and winter, old cows, and such steers and heifers, as from accidental circumstance were not disposed of in the end of summer, are fattened, some better than others, for the increased consumption of beef at that season.

Those who desire to be ranked as spirited farmers, would, in some measure, account it a degradation to feed for the shambles of the country. The most approved mode is, to procure as many handsome steers in the summer and autumn, partly reared and partly by purchase, as the turnips and fodder will fatten in the course of the winter. Instead of yards and sheds they are now generally put up in well contrived stalls, both for bringing in the turnips at one side, and cleaning out the dung on the other. They are carefully attended, in both these particulars, by persons retained for the special purpose. In some cases they are turned out for air and exercise for an hour or a little longer daily, when the weather is fair; as the object is, to have them also in vigour for a journey to Morpeth, perhaps, to Barnet, in the month of April, when the dealers in cattle generally take them off by private bargain.

When this mode of disposal fails, they are carried to the fairs of the neighbouring counties of Banff and Aberdeen, or sold to the best account in those of the country.

country, as circumstances appear to be most expedient. The poorer tenants, who have not the means of adopting this mode, put their young cattle in good condition by the summer pasturage, and sell them off in the autumnal months as occasion admits. The great endeavour is to obtain the rent, and a proper value for the grass bestowed, or for the turnips and provender furnished, in which the wages and maintenance of the attendants are included. Steers fed in this way for four or five months in the winter sell for about £9 to £15 each, according to the state of the market, which is influenced by causes unknown, and which can be as little foreseen as those which regulate the weather.

3. *For Milk.*—From what has been mentioned of the attention to steers, it may be inferred that the dairy is an object but of secondary consideration. The knowledge of this branch of husbandry had made such little progress so late as the year 1770, that on many farms along the coast, no better way of making butter was known, than by a woman whisking about the cream, with her naked arm in an iron pot. Plunge and barrel churns were, however, also known before that time in the country.* Some poor cheeses were then also made in the country. The families now, of all who occupy any land, are supplied with milk, butter and cheese, from the cows upon the farm. Excepting, however, by a few in the vicinity of the towns, scarcely any of these articles are sent to the

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market.

* Till long after that time, considerable quantities of butter, made up into the form and bulk of a middle sized globe, partly wrapped in the allantois of a calf, and partly without any covering, were imported in open boats, from Caithness. The pastry of the bakers' shops of Elgin and Forres, were then enriched with this importation.

market. Butter and cheese to some consideration are still brought from Banffshire, and no small proportion of the cheese which is in general consumed is imported by grocers, the produce of Cheshire and Gloucestershire. On the farms of any extent, few cows are kept who give less than from three to six gallons in the day. They are milked in the morning about six, and again at noon, and a third time in the evening about eight of clock. They are supplied with cut grass in the cribs during the sultry part of hot days. The making of cheese is now well understood every where, and patent churns both in the barrel form, and in the form of a square packing box, which allows taking out the *dash* to be more completely cleaned, begin to supplant the plunge churns. Several years ago large basons of stone ware, and cisterns with a lining of lead, for setting the milk to raise the cream, were in estimation by ladies who took the care of the dairy. But vessels of such materials, transmitting both heat and cold with more facility than the wooden workmanship of the cooper, were themselves more strongly affected, by the heat and cold of the common air; in sultry weather the milk turned sour and coagulated before the whole cream had risen, and in the cold season, its separation was repressed by the growing coldness which the vessel acquired. Small tubs, therefore, made of oak and sometimes of fir, have been of late, from experience, almost universally preferred. The price of ordinary cows is about £10. some may be purchased about £6, and a few occasionally at £20.

4. *For Work.*—For several years about the end of the last century, a considerable number of pairs of oxen were employed in the draught, both in the plough and in the wain. It was not then uncommon to see the
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the pair, each yoked in his cart, like two horses, and conducted by one man: but they were more commonly yoked abreast in a wain with a pole drawn by the necks, in bows connected by a yoke. In the plough the draught was by the shoulder, harnessed in collars like horses. When trained to the draught, they are reckoned worth from about £30 to nearly £60, according to their weight. There are only a very few pairs used, and in an agricultural point of view, they are of little importance to the country. It partly arises from the influence of the servants, who, in any journey beyond the farm, prefer driving the carts, as their superiors do the barouche or the curricule, much beyond the speed of the ox, that his service has been relinquished. An ordinary tenant could not hire servants at all, were oxen only to compose the teams, and though the advantages are obvious to a poor man, whose possession exceeds not 40 acres, yet fashion dominates over him, and his landlord gives him no support in resisting its sway.

5. *Rules pursued in Breeding.*—The most handsome of the unmixed highland breed of both sexes are esteemed, as has been noticed, as the proper breeding stock. It is instructed in a memoir published at Paris on the period of the gestation of domesticated animals, that in 160 cases of cows,

14 calved between 221st and 266th day	
3 on the 270	do.
50 from the 270 to 280	do.
68 from the 280 to 290	do.
20 upon the 300	do.
and 5 upon the 308	do.
<hr/>	
160 deduce 221	do

making a difference of 87 days between the shortest and the longest term. The most approved method, when the calf is produced, founded on the order of nature, is first to allow the cow to lick the calf till it is almost dry, when it is removed beyond the hearing of its mother, to a warm and well littered place. The cow in the mean time, is refreshed by a drink of tepid water gruel, in which there is a little salt, and she is afterwards fed with dry hay, or a sheaf of unthrashed barley. When she is milked, in four or six hours, that milk, or part of it, with as much of the natural warmth as possible, is given to the calf. It is specially attended to, that each calf has its own mother's milk for the first eight or ten days, a meal at each of the three hours of milking; the milk at that period being supposed to be specially fitted by nature, to the state of the stomach, and to the powers of the digestion of the calf. In all attempts which have been made to find a substitution for the mother's milk, earlier than the first two months, the calf has been subjected to some fatal disease. In the third month, an infusion of hay, with milk, in equal quantities, is given without danger, the proportion of milk is gradually diminished, and the stomach accustomed to the nutriment imparted by grass, till it can forage for itself in fresh pasturage. The calves in general are sent into the field with their mothers, who never, after the first removal, take any notice of the relation. The operation of castrating is performed the third or fourth day, that the grown ox may have as little of the make, and of the horns of a bull as possible. Feeding calves for veal is conducted nearly according to the most approved practice, except that the chalk is wholly omitted and blood-letting seldom observed. The ideas which prevail in this country,

country, allow little credit to the influence of these practices in contributing to make the veal white. The substance of the flesh, it is imagined, is supplied from the blood, and it is believed that the colour of the blood is not influenced by any quantity of chalk which may be taken into the stomach; but were the blood made thereby less red, the colour of the meat it is said does not depend on the colour of the blood, but rather on getting the whole circulating mass completely drained off by the skill of the butcher.

On the supposition likewise, that letting blood frequently contributes to make the veal of a whiter cast, it has been urged, that although blood-letting, by retarding the circulation, may, perhaps, contribute somewhat to the fattening, by diminishing, perhaps, for a time both the secretions, and the excretions; yet in so far as the blood continues to flow in its accustomed channels, the withdrawing a small quantity from the whole mass, must in colouring efficiency be wholly insignificant. It is observed that a recent stroke, or contusion, impresses a livid colour on the part affected, as the blood, thereby in some measure extravasated, stagnates among, and discolours the fibres.

The whiteness of the veal is believed to depend on the good health of the calf, whereby the blood duly circulated in the proper vessels, will be entirely drained off by the opening made by the knife of the butcher.

The same principles have been also applied to the theory of the late Mr. Bakewell, namely, that by coupling a bull of the indigenous race of one country, with a cow of another, the proportions of the circulating fluids will be altered in the mongrel, from what they were in the unadulterated breeds, so that a proportion

portion of that which flowed to the bone of the parents, shall divert to the flesh of the offspring, and that in all succeeding generations the bone shall be smaller, and the membranes more weighty, and that a proportion of fat which accumulated on the kidneys, on the paunch, and on the flanks of the parents, shall in the offspring collect upon the rump, the rounds and the sirloins.

These ideas however have not had any extensive influence in this part of the kingdom, and the farmers of the north must restrict their speculations in breeding, to the size of their farms and the limits of the intrinsic value in the shambles. The highest value therefore which the agricultural annals of this country record, is £32 for a bull of fourteen months of age, at an auction, or public sale, in June 1797.

6. *Food.*—In winter, the cows, the calves, and that proportion of the stock which is not to be sold off in the spring, are fed in the morning with oat straw. One or more cart loads of turnips being strewed over a dry grass field, they are turned out to them in the middle part of the day, except in frost, or when the ground is covered with snow. When put up again to the crib in the evening, there is another meal of straw. Wheat straw is sometimes given while turnips continue in abundance. The cows and calves are uniformly put up in a warm house; other stock are sometimes fed from racks in a shade built on the side of the yard. As the cold seems to improve the fur of the beaver, and other wild animals within the arctic circle, the pile of the cattle which are wintered in the shade, seems to be also regulated by the same law. It is more sleek and glossy where the litter is not stinted, than the pile of those which are taken into the crib.

Of late, since raw potatoes have been found to be attended

attended with some danger, from the swelling and bursting of the stomach, or by the pressure of the stomach preventing the action of the lungs, similar to pasturing on wet red clover, the boiling, or cooking this root, by the application of steam begins to prevail, as food for milk cows, and the cattle which may be fattening. It is presumed that in a few years the cultivating of potatoes, on this account, will be considerably enlarged.

After the cows have calved, and before the grass be grown up in the spring, they are now generally fed with hay instead of straw.

In summer, the mode is almost universal to send the cattle forth under the care of a boy, occasionally a little shepherdess, into the unenclosed fields prepared for pasture, where they feed in the morning till near noon, and in the afternoon from two or three o'clock till almost nine, when they are put up, either in the stable or fold during the night. On some farms, mown grass is given to the cows after they are milked in the evening. They are regularly conducted to a watering place, if there be no brook or pond in the pastures, every day of the year, with the exception only of those which are fattening on turnips in the stalls.

7. *Distempers*.—The “*quarter ill*,” described in some books under the epithet of the *black quarter*, is of all others, the most frequent and the most fatal disease. The cure is attempted by letting blood profusely and continuing to dash cold water on the rump; to pinch also, and to pull up the skin in the part most affected; this is sometimes, but rarely, successful; the disease is violent, and generally in a short time vanquishes the most vigorous modes of resistance.

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There is a distemper, not very frequent, which it is believed has not been described in any of the books respecting the diseases of cattle. Although it is of the lingering kind, it is seldom successfully resisted. In this country it is called the *rot*. The first symptom is, the beast falls off in its appearance and health, a soft tumour is next observed to rise and grow, sometimes between and sometimes under one of the lower jaw bones, and the whole bowels become evidently disordered, and the dung is in a liquid state. The mode of cure is nourishing food of a cooling quality, such as raw potatoes mashed, or undried oats or barley mashed and moistened with cold water, with a handful of salt, and a proportion of sulphur. An issue is also put into the neck to draw off, or divert the disordered humour from the head. The disease however is more frequently protracted in its progress than thereby removed.

There is one distemper also, which, if not wholly peculiar to some parts of the coast of Moray, is altogether unknown in the upper parts of the district, and in the adjoining counties on either side. The only name by which it is any where known, is the "*croich-lys*." The young cattle from the second year of their age are liable to it. Cows are more frequently its victims. At first one apprehends a dislocation, or other cause of lameness, in the hip joint; while attending to that, the other leg is discovered to be in the same state, and in a short time the lameness appears in all the legs. Some sulphureous quality in the low grounds, which it is supposed may have been, in a remote period, occupied by the sea, is believed to taint the pasturage, and occasions some humour settling so heavily in the joints and in the limbs. Accordingly, when noticed early,

early, it is cured by removing the patient to any of the upland pasturages free from this noxious quality. It has been also cured by keeping the beast well littered, and fed with mown grass, in the crib, and a drink once in the day of warm water-gruel, with a handful of salt, and an ounce of flour of sulphur, continued for eight or ten days till the cure is completed.

The disease, in its progress, sometimes fastens in the sole between the toes of the hoof, and in some desperate cases, the hoof has entirely festered off. The usual mode of management, along with the endeavours for the cure, is to fatten the beast for the shambles by the readiest practicable means.



SECT. II.—SHEEP.

1. *Breed.*—It may be difficult to ascertain whether the owners of the original sheep of the country, have not suffered materially by the stock being able to preserve their existence on the scanty and meagre productions of the bare and steril wastes, since it has occasioned incalculable loss, in the degradation of the form, bulk, and vigour of the flock,—in the weight and value of the fleece,—and in the fatal disorders to which they have been thus subjected, from the combined effects of cold and hunger. This degradation may have been also in part occasioned by their being over-heated at times, and shut up stifling in the foul air of a low cot, littered only by the dung of its crowded inmates.

The original stock of the country have, by these
means,

means, been in every point debased. In many cases of late, they have been somewhat improved by being blended with other breeds: yet they are of the same tribe with the celebrated race of Shetland, the fineness of the wool is nearly similar, the weight of the fleece (little more than 1 lib.) is the same, and the size of the animal scarcely superior. Hair also is mingled with the wool, but from the different mode of management, it is not so conspicuous.

Between the middle of May, and the middle of June, the sheep of this race would cast their fleece annually, were it not shorn; its connection with the skin becomes so lax that it might be plucked off without giving any pain. When it is shorn, in this state, the young fleece, resembling the pile of a white calf, or a lamb, is left without any mark of the shears. If it be shorn before this state of maturity, instead of being cleared off by cutting the few locks by which it partially adhered, the whole must be clipped away, and the shears being pushed in through the wool by some exertion, cuts closer at the point than at the handle end, and for some time the inequalities remain greatly prejudicial to the appearance of the sheep. If the shearing be too long delayed, while the old fleece in part falls off, and the succeeding one in part grows up through it, the same unskilfulness in the shearing appears, and as the portion of the rising which is cut off with the falling fleece is too short to be of use, a loss in both is incurred by this delay.

Were the purest of this race selected, and placed to propagate in a sheltered enclosure, where the fleece would be kept clean, and for a time improved by the whole influence of the climate, like the fur of other animals in a state of nature, it would soon become superior

superior to cotton in its gloss and in the lustre also of its whiteness. Scarcely even a doubt would remain but this animal, so mean at present in its appearance, if supplied with abundance of food, and the most elegant forms only kept for continuing the race, would, in a few generations, rival the Dishley, and surpass the Cheviot breed in the quality of the wool, and even in the symmetry and bulk of form; perhaps also in the smallness of the bone in proportion to the weight of the flesh, and in the wished for propensity of laying much of the fat on the outside of the meat.

The mutton of this race, after the fourth year of its age, is the best at present in the country, both in regard to the delicacy of the meat and in the richness of the gravy. A quarter weighs only from 5 to 9, and thence to 12 lib.; and the live animal, in its best condition, may be purchased from seven to twelve shillings according to the general state of the market at the time. This race is now to be found only among the poorer tenants on the skirts of the hills, or in the more inland glens of the mountains.

The *Linton*, or black faced tribe, the first aliens which were introduced about 40 years ago into the country, maintain also their occupancy. From better treatment, perhaps, or, it may be, from a remote variety in the breed, they exhibit a larger frame and a greater weight of fleece, and without examination they were, therefore, presumed to be more hardy, and to be better able to withstand hunger, wet, and cold. This race is still preserved pure in several situations, and notwithstanding the coarseness of the wool and the inferior delicacy of the mutton, they sell for a higher price, generally from sixteen shillings to a guinea.

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The next sort introduced were the large hornless tribe, called the "*Lincolnshire breed*;" but the numbers on any one farm have never been so many as to be deemed a flock, for it was found that they required the same expense of food to maintain each of them in good condition as was sufficient to rear a handsome steer, and though the lamb was generally sold to the butcher for a guinea, and the full grown sheep for more than two, yet the value both of the mutton and wool conjoined, scarcely equalled half the value of the steer. Upon coupling the small native ewe with the ram of this breed, the offspring, it was found, participated much more of the qualities of the sire than of the mother; the want of horns, and the length of tail, were the same; the kind of wool also, the bulk and the form were more than half assimilated to the father; and this cross breed, in its various degrees of blood, would, before now, have gained the whole occupancy of the country along the coast, in so far as this species of stock is kept up, had they not been supplanted by a third tribe, which have been more recently introduced under the epithet of the "*South Down breed*." Their mutton being deemed much superior to the large breed, and their wool finer, they have already become such general favourites as to have almost wholly exterminated the Lincolnshire settlers over the country.

But neither have they been able to maintain the possession undisturbed; a fourth generation called "*the new Leicester, or Dishley breed*," have of late begun to gain on the South Down. The whole of the sheep kind, however, has been, in some measure, generally dismissed from the country upon the coast, with the exception of a few flocks, each containing from about

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five score to nearly five hundred, which, on the account of peculiar circumstances of accommodation, are retained upon some of the larger farms. These flocks, though kept in good condition, are a mongrel breed, being the offspring of the indigenous ewes, with South Down sires, and these of late, generally crossed again by half blood rams of the Dishley stock. From the manner in which they are treated, independent of the crossing, they are much superior, except in the fineness of the wool, and in the delicacy of the meat, to the indigenous stock.

2. *Food.*—There is in general little provision made for the support of sheep in winter. When there is no snow they are commonly permitted to shift over the farm from about nine in the morning, till nearly four in the evening, being only excluded from the lot which was sown in the preceding spring with grass. When the snow locks up this means of subsistence, they are fed with pease-straw, hay, turnips, and occasionally with potatoes. On some farms there is a lot sown with pease chiefly for the support of the sheep during the continuance of snow; the straw of pease being in this respect found greatly preferable to hay. The flock may trespass occasionally on the turnip field, but where any allowance is made the turnips are daily carted off, and either spread on a grass field, or in the court of the sheep cot.

Over the whole hilly tract of the district, *heath* is the main dependence for the winter support of the sheep. This vegetable maintains the circulation of the sap, and continues in a growing state for a much greater proportion of the year, than any other shrub or herb in the kingdom. Although it contains but little nutriment in proportion to its bulk, compared with any

other kind of pasturage, its sap continues in circulation from about the first of June to near the middle of March. It blossoms in August, and in that state affords honey to the bees, and a pasturage, which fattens both the Linton and the country stock, and, in open moderate weather in winter, with assiduous diligence, they gain their daily food. When the snow lies deep they are assisted by all the people of the family in clearing off a small space of the heath with shovels and spades, for their parsimonious fare, and they are themselves abundantly dexterous in this operation with their feet. In those hilly tracts the ewes and lambs are admitted to the farm pasturage in the spring, and wherever there is a flock, their pasturage through the summer is continued on the same ground where it is in winter.

3. *Cotting*.—The sheep, it has been noticed, are shut up every night throughout the year in a house. When the flock is of consideration, the cot is accommodated with a high-walled court. Both the cot and the court are equally bedded with a layer of earth, and in wet weather they are generally littered with straw.

4. *Wool*.—The weight of the fleece of the indigenous breed has been already mentioned to be little more than 1 lib., its length may be from about two to nearly seven inches. The fleece of the Linton breed is of double weight to that of the indigenous white-faced breed; it is of a coarser quality, but nearly of the same length. Fleeces weighing from about seven to nearly 12 lib. were shorn off the large Lincolnshire breed, and the length of the longest part of the wool has extended to about fourteen inches. The mean weight of the South Down and Dishley fleeces is from
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about three to nearly 5 lib., their length not exceeding that of the Linton or of the original wool of the country, to which last it is inferior in respect of fineness. Wool may be in general purchased at 1s. and 3 pence per lib.; it is considered as dear, when the price rises to 1s. and 6 pence per lib.

5. *Distempers.*—When the weather throughout the winter is severe, and the flock long distressed by that kind of famine to which they are thereby subjected, the mortality both of the ewes and lambs, in the spring, is very great. As this never falls out, where a few only are kept, and well fed throughout the winter with the cows, it only remains to be considered, how far the expense of their preservation, by the provision of a proper store of food, would be on the whole more profitable, than the saving of this expense, combined with the loss of the sheep.

The other distempers to which the flock are liable, are comparatively light, and it is believed that, with only a few exceptions, they might be all prevented by a competency of dry, wholesome pasturage, and a proper regard to their accommodation. The rot, and the sturdy are seldom attempted to be cured, no successful remedy for either being known. The purging malady is cured by a little alteration in their regimen, to which a table spoonful of common salt, given by way of medicine, for six or eight mornings is added. The salt is put into their mouth by the hand, and they devour it with much seeming gratification.

The scab is cured by washing the whole body, with a strong decoction of tobacco, and in a day or two afterwards, where convenience allows, they are again washed in the sea. But a remedy communicated to the society for the *Encouragement of Arts, &c.* by Sir Joseph

Banks, is supposed to be a more effectual application. It has been published in several books more than twenty years ago, the expense is stated at from five to seven shillings for a score, and it may be procured in all the medicine shops of the county. It is an ointment, made in the proportion of one pound weight of mercury, half as much of Venice turpentine, half an English pint of oil of turpentine, and four pounds weight of hogs lard, by rubbing in a mortar, till the mercury be quite incorporated with the other ingredients. This ointment is to be applied in a line, made by parting the wool along the neck and back, till the skin can be touched, and drawing the finger slightly dipped in the ointment so as to leave a blue stain on the skin.

Similar lines are in the same manner anointed along the shoulders and thighs to the legs, and if the sheep be much infected, a line may be also anointed along each side. It is better to have this done in the warm season, but there is no instance known of the least injury to the sheep from the application, which is said to improve the wool, to destroy the sheep vermin, and in no degree to affect the mutton.



SECT. III.—HORSES.

1. *Breed.*—In the 5th vol. of the Statistical History of Scotland, page 6, there is an authority cited which proves that oxen were yoked to the waggon before the middle of the fourteenth century. In the same page also there is an inventory of the moveable estate of an ancestor

ancestor of the family of Findlater, quoted from his testament in the year 1565, from which it appears, that he possessed fifty draught oxen, and but five work horses. Of such importance, however, in a national point of view, were horses considered in those times, that some statutes were framed for the improvement of the species and for preventing their exportation. We must entertain a poor idea of the breed of horses in France, in the reign of James VI of Scotland, (which notwithstanding the growing improvement of succeeding times, modern tourists have confirmed) when an act of parliament was thought necessary in 1567, to prohibit the exportation of Scotch horses into that kingdom. The great men were also individually attentive to the improvement of the breed of horses among their respective vassals. The family of Gordon, in particular, kept up a horse race at Huntly castle, by the annual prize of a piece of plate of the value of £10 sterling. A silver cup with a lid, gained in the year 1710, remained till lately, in the family of the gentleman by whom it was won.

It is certain, however, that in the management of the tenants of the whole of this district, the race of horses had so far degenerated, that about the middle of the last century, few pairs were equal to the draught of a plough. Among the poor tenants in the smaller farms, more generally in the highland districts, this is still the case; their horses scarcely rise to the height of nine or ten hands, and their value, in their prime, exceeds not that number of guineas. It is proper, however, to observe, that if well chosen, and properly kept till their fifth year, they become able, sure-footed ponies for the saddle. There has not, however, been any trial made of improving the small-

ler country nags. The gentlemen have long been in the practice of bringing horses from Suffolk, from Yorkshire, and from Clydesdale, to improve their stock. They have crosses also with horses of the highest blood, and with large draught horses of the Lanark breed, which are brought down and carried round the country for hire. The owner gets a crown with each mare for travelling expenses, and £1 more next spring, if they should bear foal, but otherwise, nothing more than the five shillings; when the foal is not in this manner ensured, the hire is only about ten shillings. The horses, therefore, among the proprietors and gentlemen farmers, are equal to any in the kingdom; valued in general, when in their prime, at about forty guineas and upwards each. Horses cannot be reared to any considerable price but at great cost, and although numbers are reared, yet they must be regarded as an object, not of commercial profit, but of much agricultural expense.

In the memoir above cited on the gestation of animals, published at Paris by Tessier, there are 102 cases of mares.

3	.... foaled on the	311 day.
1	..... do.	314 do.
1	..... do.	325 do.
1	..... do.	326 do.
2	..... do.	340 do.
47	.. from the 340 to the ..	350 do.
25	.. do. .. 350 .. do... 360 do.	
21	.. do. .. 360 .. do... 367 do.	
and 1	..... on the	390 do.

102 deduct the shortest time 211 do.

Making between the extremes .. 79 days.

2. Number

2. *Number kept to Space of Land.*—There is little uniformity in the proportion of the number to the extent of the farm. It is in theory understood, that one pair is sufficient for the management of from 50 to 60 acres, but small farms of less than 30 retain a pair, and the larger farms are managed with fewer horses, in direct proportion to the extent, than those which are of the small class. In the busy season, a pair of horses plough about an acre in the day. On the larger farms, where the thrashing mills have relieved the ploughmen from the toil of the flail, the labour of the horses, in the cart or plough, is of late performed at once for the day, or with a short interval in the summer. Where the ploughmen must also thrash the straw for daily provender, the labours of the field are carried on for about four hours in the morning, and as long in the afternoon.

3. *Food.*—Horses are principally fed with oat-straw during the winter; on some farms, with hay for a few weeks in the spring. The allowance of oats is generally half a peck given at two meals to each in the day, and on some farms, occasionally, a small proportion more. In the spring, also, it has been for several years the practice, to give a meal of raw potatoes clean washed. Some gentlemen have begun to cook the potatoe for horses by steam. The implement is a pretty large barrel, having the bottom pierced by the bores of a wimble, and luted by some simple device into the brim of a kettle, covered, on the open end above, by a piece of blanket. A pipe is contrived in one of the staves, or in the inside of the barrel, for supporting the expenditure of the water in the kettle. In the summer they are fed on grass, generally without corn, and for the most part tedered on the meadow

during the day. At night they are led into the stable, and an allowance of mown grass provided. In some cases they are fed in the stable on mown grass through the day also, which in theory is much approved.

4. *Shoeing*.—The shoeing is in general performed in the most approved manner. Some of the farriers were taught by the celebrated Mr. Clerk of Edinburgh. A horse hoof, with a shoe made and put on by the veterinary professors of London, has been procured for a pattern; the horse-shoe nails are also made according to the best veterinary models. The shoeing of a horse at present costs about four shillings.

5. *Harness*.—The harness is executed by the saddler in a neat substantial manner, and at a proportional cost, nearly equal to the London prices. It would be of much advantage to establish the same attention in cleaning and oiling the harness of the cart and plough, that is bestowed on the harness of a coach or chariot.

6. *Expense*.—A farmer estimates the annual expense of a pair of horses, maintained in the most frugal manner on the produce of the farm, with the wear and tear of their harness, shoes, and the implements wherewith they are employed, at about £30 yearly, and he adds as much for the wages, and sustenance of the man who works them. Particular cases of the real expense of cash, exclusive of the provisions abstracted from the produce of the farm, are stated in the last section of the 4th chapter.

7. *Decline in value*.—Although a horse is not supposed to decline in value, till he has completed his eighth year, yet, exclusive of accident, he is in general estimated only at the value of his skin, in the seventeenth of his age; and if worth about £40, when

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at his best in the fifth year, the decline in value may be computed at nearly £3 yearly; this computation will, however, be varied according to the original value. If a gentleman bring down a pair of handsome Suffolk mares at the expense of an hundred guineas, and they supply him with foals, suppose only once in two years, which he sells for about £40, on completing the third year of their age, it may be, perhaps, alleged that their value, instead of declining, has been considerably increased during the ten or dozen years, in which their capability remained.

8. *Distempers.*—The most frequent, and the most dangerous distemper, to which the horses in this country are liable, is an inflammation with extreme pain in the bowels. The most effectual remedy is an injection or some proper laxative, first to clear the bowels, and afterwards to give nearly two ounces of laudanum in two English pints of warm small beer. Colds are also frequent, but they are not attended with so much danger, nor with such painful and distressing symptoms. Although the horses of this country are not exempted from any casualty incident to their race, yet other distempers are not common, and they are to be ascribed to want of care, or proper grooming in the stable, to which even the masters are not sufficiently attentive, and the servants, compared with their brethren in the south, are miserably deficient.

SECT. IV.—HOGS.

1. *Breed and Breeding.*—The original stock of this district are but of a small size, and swine have never been accounted here an object of much agricultural profit. In the course of the last forty years have been introduced, the first variety, which is here called the “*Berkshire breed,*” and it is believed were originally brought to the county of Aberdeen, and thence imported here. They may be reared to about three times the weight of the original small sized breed.

About the year 1794, a small race of swine, the second variety, named the “*Chinese breed,*” were introduced, it is believed, by a gentleman returning from India. They have short legs, and compared with the others, are rather tame and gentle. They are not ravenous, and can be fattened on a quantity of food, which would scarcely support the existence of the others; but they more generally fail in bringing forth their young alive. All these three breeds may yet be found unmixed, but the offspring of the two last, in various degrees of affinity, are now more generally reared.

Many of the proprietors, and of the farmers, rear and fatten two or three hogs for family use. A few are generally reared about mills, which supply the markets in the country; and pork, to a small amount, while the distilleries were allowed, was reared in them, salted in barrels and exported from Findhorn. Pigs for roasting are never brought to the market. The price
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of pork is equal to that of beef; of hams, somewhat higher.

2. *Food.*—There is no kind of system observed in any thing regarding the management of hogs. The miller, the distiller, and the brewer, generally have some rule to go by; but in most other situations no regular system is followed. The scourings of the dishes, the weedings of the garden, raw potatoes (sometimes, however, they are boiled), and red clover fresh mown, in general, make up the ordinary fare of this stock over all the country. The contributions of the dairy are of no significance. The only difference is, when they are to be fattened, they get about half a peck additional of pease, of bran, or of oats, in the day, and the potatoes are boiled, in preference to serving them up in a raw state; more attention also is given in keeping them dry and warm, and in supplying them with plenty of water.

3. *Sties.*—Swine are rarely permitted to go at large, though with a little attention, they might be trained to pasture with the cows, as they discover an inclination to associate with cattle. There is scarcely any contrivance in the erection of the sty; where they are kept in such numbers, that the occasional separation of one, or more from the common stock is requisite: another little low hovel, the work of an hour, is put up in another corner of the little yard, and a division is made by temporary rails which scarcely last the occasion.

The advantages to a cottager of feeding a hog, or, in many situations, of keeping a pair of breeders, and selling the pigs twice in the year, (the one half of each litter in three weeks for roasting, and the other half when weaned, the first nearly at a crown for each,
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and the others at 7 shillings, occasionally even at 10 shillings,) need not be pointed out. Yet the cottagers, with hardly any exception, prefer a dog which is of no kind of use, and which requires to be fed with something more than the crumbs which fall from the table. Formerly a hen from every family, whether of the cottagers or tenants, made a part of the proprietors' rent. It would, no doubt, contribute to introduce this more substantial kind of stock among the poor, if a sucking pig should yet be substituted, in the place of the *reck hen* from every cottager who has a cow, a garden, and a small plot of potatoes.

In no instance, perhaps, has nature shown her economy more than in the production of swine. Their stomachs are a receptacle for every thing which other creatures reject, and which in this country, where swine are so few, is entirely wasted; and it may be observed, that the value of a hog, in general, is equal to that of a calf of the same age.

Mr. Saunders, of Gloucestershire, published a pamphlet in 1807, recommending *hay tea* as a profitable food for swine. He fed 50 of all ages, at the rate of 120 lib. of boiled or steamed potatoes mixed with the decoction of 20 lib. of hay, that is less than $2\frac{1}{2}$ lib. of potatoes, and 4 oz. of hay to each, daily served up luke-warm. He boiled great quantities of potatoes at once, which he says, in that state keep good for one year. He observed, that this food was not laxative to swine, nor purging, but rather the reverse. When sucking pigs were scoured too much, he put a little alum into the mother's food. A boar should be about a year old, and a sow about 7 months before they begin to procreate. She goes 115 days or 4 months, and by a little attention in the management, she will give two litters

litters in the year. Both the male and female are at their prime when two years old, after which, it is not profitable to keep them. There are only 15 cases in Mon. Tessier's memoirs, already mentioned; one farrowed on the 109th day, ten from the 110th to the 120th, two on the 121st, one on the 122d, and one on the 123d.

SECT. V.—RABBITS.

There are a few rabbits in the country, but they are propagated without the care or industry of man. It is probable that any extent of the sandy Downs upon the coast of Moray, that might be found fit for a warren, is better employed at present in the feeding of a few sheep; while it is more than probable that none of the inhabitants have sufficient information about this species of stock, for ascertaining whether the employment of such grounds as a warren would, or would not, be a profitable speculation.

SECT. VI.—POULTRY.

1. *Turkies*.—It has been already observed that those who account themselves spirited farmers, deem it a degradation to feed beef for the shambles. To rear any species

species of poultry for the market, would be regarded as a much deeper mark of inferiority in this respectable occupation. Turkeys, however, may be occasionally purchased, and gentlemen, both proprietors and farmers, rear a sufficient stock for their own tables. They are fed when young with curds, mixed with a considerable proportion of black pepper; as they grow up, their food is changed to dried oats entirely divested of the husk by the corn mill; they are kept with their mother in a dry, warm apartment, and only permitted to run out a short while under her protection during the warmest part of a sunny day, till they shall have acquired strength and hardihood adequate to the ordinary temperature of our climate.

2. *Geese*.—This species of fowl was formerly reared in greater numbers in this country than they are at present. It may be presumed they have been, in some measure, supplanted by Turkeys, because these, exclusive of their eggs, may be brought to the table throughout the year, while there are several months which would not be accounted a proper season for geese. In an economical point of view, the feathers of the geese should restore the preference, and the more so, as they are reared with less care, with much less expense, and made fat at less than half the cost. In the accommodation of the table it may be observed, that two full grown hens, which may be readily procured at all seasons of the year, will supply the place of the Turkey at less than half the price, whilst they are equal in the weight of the meat, in the value of the feathers, and in the superior delicacy of the flesh: even a capon, in the fourth year of his age, is little inferior to the Turkey, in any of these particulars; before that age, not having attained his greatest weight
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and bulk, he is not much better than a common cock. The blasting east wind in the spring, is sometimes fatal to the gosling, during the first month of its life, after which they do not require much particular care. Geese may be occasionally purchased for half-a-crown or three shillings, their feathers are sometimes sold at the rate of one shilling for one lib. A few might be plucked off both from geese and ducks, perhaps, without injury, if done with care at the proper season; but it is not known that this plan has as yet been tried in this country.

3. *Fowls*.—It is almost needless to observe, that both proprietors and larger farmers, with hardly any exception, maintain an establishment of this species of poultry, sufficient each for his own table. The public markets also are pretty well supplied, by the numbers reared for sale in the families of the smaller tenants, cottagers, and rural artisans. From the number of capons which appear in the old rentals, it might be inferred that our forefathers, more frugal than we, did not eat chickens, or that the capon was formerly an object of much more consideration than at present.

Of this species of poultry there are, in this country, six varieties. The indigenous breed are hardy, easily fattened, and fully naturalized to the climate and the subsistence of the country. In the upland district, where this breed is yet uncrossed and pure, it resembles, in some respects, the common pheasant, and is superior in respect of delicacy at the table. To the pheasant it is doubtless nearly allied, or from them, there is reason to believe, that this breed may have originally sprung. Under the title of Hebrydal pheasant, Mr. Latham describes a mixed breed between the

the pheasant and the cock. This gentleman also mentions that wild pheasants sometimes come into the farm yards, and generate a cross breed with the common hen.

This valuable kind may be managed in such a manner as to breed twice in the year, and the hen, when properly kept, besides rearing both broods, will lay nearly 200 eggs.

The second most valuable variety is distinguished by the name of the "Hamburgh breed." It has nearly all the good qualities of the indigenous race, except the glossy plumage which many individuals of that species possess, and that it cannot provide so effectually for its own subsistence; but it attains to a much larger size. It generally has five toes on each foot, is adorned by a ruff of feathers round the neck and ears, and is commonly of an unmixed, though not very bright, white colour.

Although no species of gambling has been ever fashionable in the country, (in which it is believed that a cockpit was never formed,) yet the game breed is a third variety, frequently to be seen in every quarter. They weigh about 4 lib. but producing few eggs, and being delicate when young, they are not a profitable breed for farmers.

A fourth variety, known by the name of the "bantam breed," is distinguished by having the legs covered with feathers to the toes, which greatly incommode it when walking in snow, while any advantage of this distinguishing mark is not obvious. They weigh scarcely more than 2 lib., but they produce a great number of small eggs.

The fifth species is also a small breed, called the "French fowl," having the feathers partly erect and
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for the greater part curled towards the head. Similar to the bantam breed, they only weigh about 2 lib., and they produce a great number of eggs, but as they are very imperfectly protected by their plumage from the cold and from the rain, they are rather delicate for this severe climate.

The sixth variety is peculiarly marked by having neither rump nor tail.* They weigh more than either the bantam or the French fowl, yet less than the natives; they lay however a greater number of eggs than any of the other kinds, the shape of which is globular, rather than what may be called the long oval.

Although this kind of stock requires comparatively but little care, yet they will not thrive in a confined, damp, ill-aired, or in a very cold and exposed situation; neither will they thrive well in conjunction with Turkeys, geese, guinea fowls, or ducks, nor without access to clean water, and to gravel. They rejoice in

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* This want is supposed to have led to the detection of an error in the natural history of poultry, which has been very generally believed under the authority of several gentlemen eminent in that branch of science. They have represented it as one of the instances of divine wisdom, that poultry are furnished with a provision of oil in the rump, which they squeeze into their bill for the purpose of anointing their feathers, that they may better withstand the rain, with the foreknowledge of which they are also by nature endowed, and which they thereby foretel. This rumpless breed however having no organ for the making such secretion of oil, have of course no occasion for the endowment of anticipating rain; it was discovered that feathers did not need to be thus oiled, that the secretion in the rump was not oil, that it was not applied to the feathers, and that the whole store, at any one time, was insufficient for the dressing even a single feather, and that their foretelling the approach of rain thereby was merely imaginary.

the warm shelter of a little grove, or stripe of plantation. Their habitation also should be frequently cleaned, and it should be never crowded.*

The young brood should be kept by themselves when under the care of the mother, and for some time after she leaves them. A bolus of butter and oatmeal, about the bulk of a pigeon's egg, given daily, will, in four or five days, cure the disorders to which they are in general subjected.

In summer, with a little boiled potatoe, cabbage, or turnip, they will thrive on the grass, with the assistance of the worms, seeds, and insects which their own industry procures. In winter they require a little corn (oats or barley). To make a hen lay an egg daily, in that season, she must have a mess or two of warm oatmeal pottage, or of something warm and equally nutritive, besides the common feeding. A comfortable degree of warmth is also in such a degree essential, that some gentlemen, it is said, have placed a stove under their roost, gaining thereby the advantage of the experience of the poor widow, with her two hens and her cock, living almost over the fire of her little cottage.

Fowls are not particular in the choice of their fare; it is probable that with their kindred the pheasants, they

* The vivifying speck, without which the egg is unproductive, may be easily perceived in the sun beam, or between a candle and the eye; its situation on the *top* of the egg determines the chick to be a male, when on the *side* it will certainly be a female; it is therefore easy to propagate either sex at pleasure, which, unless by the management of the bees among themselves, is not yet known to be the case, in any other class of the animal creation.

they could make an occasional meal on carrion. The poultry of the fishing villages feed so much on the garbage to be found there, as to communicate a fishy flavour, nauseously disagreeable both to their eggs and to their flesh. Any kind of food, very much salted, is said to poison them.*

To preserve eggs fresh they are to be smeared over with butter, mutton suet, or lard, immediately on being taken from the nest, but the vivifying speck is thereby destroyed. This germe is presumed to be itself the principal cause of the corruption of the egg; for those laid by hens which have had no communication with the cock, have kept sound for several months without being any way smeared; the evaporation proceeded through the pores of the shell, the yolk became somewhat thickened, and the white part was considerably diminished.

While a Turkey sells for 4 or 5 shillings, the price of a hen is only 1 shilling and 6 pence; chickens nearly half as much, and eggs about 4 pence per dozen.

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4. Ducks.

* M. De Reaumur, of the Royal Academy of Sciences of Paris, in the *mémoires* for hatching poultry in ovens and by the heat of dung, has ascertained that giving one hen, in the yard, as much barley as she chooses to eat, she cannot consume more than two Winchester bushels in the year; that four measures of barley boiled till the husk split and burst, swelled so as to measure ten, and that *three* measures boiled in this manner, was in the efficiency of feeding, equal to *five* given dry in the natural state; that they prefer boiled grain to raw, that they discover no preference to barley, oats, or wheat, that they prefer either of these to rye: that a hen at large will find the half of her subsistence, in worms, insects, and grass, in which situation one bushel will maintain her through the year.

4. *Ducks.*—Ducks are more easily reared than even geese, and they are propagated in greater numbers. They are frequently carried into the market by the women of the poorer classes, and sold for about the same price as the hens. They are not so profitable as either turkies or geese, and are more voracious than any other of the domestic fowls, but they will provide a considerable proportion of their subsistence from any pond or swamp in the vicinity of their station. In a lake of considerable extent they are apt to return to their natural wildness, and fly away, if their wings, or rather one of their wings, is not kept short. There is one variety of the species, named the "*Moscovy duck*," more weighty and of less vivacity than the common breed. This kind was brought, it is said, from Africa; it obtained the appellation from emitting, in some circumstances when alive, a slight smell of *musk*, and not from any connection with the empire of Russia.

SECT. VII.—PIGEONS.

1. *Advantages and Disadvantages.*—Pigeons in this country are less an object of agricultural commerce, than even any of the kinds of poultry. In the lower part of the country a considerable number of dove-cots may be seen, but they are, in general, appropriated to the tables of the proprietors; very few have fallen into the occupancy of tenants, but in several cases, they have contrived a little accommodation in some gable end, or otherwise about the offices.

Although

Although a few are sometimes sold in the market for about 3 pence or 4 pence per pair, yet in a pecuniary point of view, this species of stock is of little value, the principal advantage being derived from the dung. The quantity of manure depends on the management; one gentleman feeds his pigeons in winter to the amount of nearly three quarters of barley, and he occasionally covers the floor of the dove-cot with a pretty thick layer of chaff; he is able to manure nearly three acres in the year, but in the ordinary management, a dove-cot scarcely suffices for one.

The damage done by pigeons in fields newly sown, though of some consideration both in the autumn and spring, is on the whole but lightly felt. Where the complaints of the damage are loudest, its computation seems not to be founded on data accurately ascertained. In the statistical history of the parish of Auchterdewan in Fife, the damage of a pigeon-house, in the seed season, is estimated at 200 quarters. In the agricultural survey of Mid-Lothian, the damage in the filling season, is estimated at 5 quarters to each of 300 pigeon houses. But in the statistical history of the parish of Drainy, in this county of Moray, where there are 4 pigeon houses, the damage for the whole year is estimated only about ten quarters.

The views of the legislature also regarding this object appear to have varied as much as those of these estimators. In the reign of James Ist, it is probable the dove-cots being only mean buildings, were more easily broken into than at present, and a special act of parliament was accordingly passed to prevent this offence, as early as the year 1424. About 80 years after, in the reign of James IVth, every proprietor is, by statute, ordained to build a dove-cot, which ap-

pears to have been so generally fulfilled, that in little more than an 100 years after, in the reign of James VI, the privilege of building dove-cots is arbitrarily restricted to such proprietors only as had ten chalders of yearly rent. It may be conjectured that in aid of this restraint the clergy during that period had interposed the terrors of superstition, cunningly laying hold of the advantage it may be presumed of some accidental circumstance to impress the belief which is not yet wholly effaced, “ *that building a dove-cot must occasion the landlady’s death within the same year.*”

2. *Houses.*—The dove-cots of this country are now substantial workmanship of solid masonry, secured in the structure against the depredation of all the ravagers of the quadruped kind. They are generally square buildings, but the most approved form is a circular tower, having the roof contracted into the form of the frustum of a cone, so as to require no timber, and to be wholly covered by one rounded flag, in which there is an opening, in some cots the only entrance and egress for the pigeons; in others of these towers there is, besides, a small window in the southern side of the roof. A ladder, one side of which is formed an axis, from which the other side slopes wider from the top, so as to fit the greater diameter of the building towards its bottom, allows every cell to be easily visited; mounting the swing side, the ladder is turned round by a slight push of one foot against the side of the wall. The cells are made of flagstone neatly squared, built into the wall as the masonry of the structure is advanced. The expense of building a pigeon-house may be in general estimated at nearly £50. Where a few pigeons are kept by any of the tenants, the cells are made of timber, or occasionally of rude clay plaster.

SECT. VIII.—BEES.

Although bee-masters appear enthusiastic in recommending this kind of stock, yet it is apprehended the attention which they require cannot be easily spared by the industrious farmer: they might however be a profitable concern to the generality of labourers, and to all the rural artisans. Among them the introduction of this sort of stock, where the situation is favourable, might be encouraged by the proprietors, by commuting the rent into a bee-hive, instead of a few shillings. Honey and wax can never be raised in this country in such plenty as to overstock the market. There is no reason to believe that the number of bee-hives was greater in any former age than at present. Although bee-hives do not always thrive, notwithstanding every proper accommodation, yet the many flowers now inaccessible to cattle in the enclosed plantations, the fields also of cultivated grass, and the greater proportion of land now occupied as garden ground, have, undoubtedly, enlarged the extent of their pasture, and seem to offer a greater measure of encouragement to multiply this stock than former times could afford, unless the superior warmth of their summers counter-balanced this advantage.

Although this be not intended a treatise on the management of bees, it may be observed that the ancient practice of destroying the stock by the smoke of sulphur, whatever may be said, will be in general

found the most profitable to the owners. Mr. Bonner declares, "that an *experienced* bee-master can only "perform the work of forcing the bees to leave the "hive:—That it always has been, and ever will be "very destructive to the bees, if performed by un- "skilful persons," which, it is certain, the generality of country people must, in this particular, be always found. Second and third swarms are seldom able to survive the winter: in this district there are some seasons in which they have not been able to save any honey by the middle of September. These may be, therefore, conjoined or united to a first swarm with the greatest advantage. With this view they are put into a hive without the rods fixed in its inside; when it begins to be dark, the first swarm is lifted off its stand, on which the other is instantly so struck by one smart blow, that the whole swarm is shaken out, and the first swarm immediately replaced. Before next morning both swarms are cordially united into one industrious colony.

Some gentlemen have got ornamented covers of lead for the protection of their hives from wet. Mr. Bonner recommends covers of pottery or earthen ware. But a poor man, in a remote quarter of the country, has no means of getting covers of either kind. In this country, a new hive, made so large as completely to cover the hive which contains the bees, has been substituted. This cover is plastered with lime mortar on the outside, and accommodated with a proper gateway. By the plaster, all rain is as perfectly excluded as by the pottery cover, and the inside of the covering hive may be lined with tow as Mr. Bonner directs, or the outside may, with better effect, be neatly thatched

ed

ed with straw, tied over the plaster with a cord. These hive covers are not liable to be broken like those of earthen-ware, and any part of the plaster that may be injured can be easily repaired; they can be easily procured, they cost little, and they last almost for ever.

By Count Rumford's doctrine, that common air quiescent and confined is the most perfect protection from cold, it will be better without the tow, if the cover be closely luted to the stool. To complete this, it is required to have a wooden, or a tin-plate passage, not higher than requisite, and so broad as to admit the march of three or four bees abreast, to reach from the outside of the cover to the inside of the hive. If the luting connect this closely with the stand, and the outside of the cover, the air between it and the hive, must be perfectly still. The advantage of the warmth, to be thus obtained, may, in the fullest manner, be procured, although this passage be of such height as to admit the introduction of an appropriate tin-plate trough, with honey or other supply for the support of the bees, under the apprehension of famine. This trough is accommodated with a cover of the same material, thickly pierced with small holes like a sieve, which, when the trough is empty, just occupies the bottom, but which rests on the surface of the honey or of the other provision, with which it sinks, as the food is consumed, and prevents the bees from being entangled and lost in their own supply; a handle extended from the end of the trough serves to push it in, and to draw it out, without lifting up the hive from the stool.

If Count Rumford's theory be right, the inconvenience

venience of excessive heat, sometimes also injurious to hives, will be entirely prevented, while its practical application to bee-hives is thus easily contrived at much less cost, than the double windows of glass, for excluding the rigorous colds of the northern regions.

CHAP. XV.

RURAL ECONOMY.

SECT. I.—LABOUR.



1. *Servants*.—In the original survey of the county of Moray in 1793, the wages of a ploughman for one year, exclusive of board and lodging, £. s. £. s. £. s. £. s., were then stated at... 6 0 or 7 0

In the year 1809 they amount to..... 15 0 or 18 0

The wages of a female servant were then.... 2 0 2 10

In the year 1809 they amount to 3 10 4 4

A boy for tending cattle in 1793 had..... 1 16

In 1809 his wages may be stated at..... 4 4

2. *Labourers*.— A male reaper with board and lodging for the harvest season had..... 1 4

His wages in 1809 for the same business are 3 3

A labourer

A labourer was paid in					
1793 without victuals					
			£.	s.	d.
for the wages of a			£.	s.	d.
day in winter	0	0	10		
And in summer	0	1	0		

In 1809 he earns in win-					
ter. without victuals					
	0	1	3		
And in summer	0	1	6		

The labourers on the turnpike roads, and in making the canal from the Lough of Spynie, received in 1809 three shillings for the wages of a day, and a reaper hired by the day in harvest, has two shillings, with his breakfast, beer in the forenoon, and at his dinner.

The earnings of a labourer, however, for the whole year, are scarcely more than equal to the maintenance of himself, his wife, and four or five children. His wife is little able, by any industry on her part, to contribute to the support of the family; for the domestic cares which are indispensable, require her most assiduous diligence. Her children are in general suckled more than a year: the eldest of five, when about 7 or 8 years of age, whether boy or girl, by tending the cows or sheep of some of the smaller tenants, is then able to earn daily bread in summer, the little fee also contributes to afford the clothing; about that age, during the winter, they generally attend the parochial school, and as they grow up, one is kept in rotation for half the year at school, till they all can read the bible, and in general write, and keep a short account. By this thrifty management, the number of the family, seldom rises to six. In the case of twins, which occasionally happens, the mother is assisted in hiring a nurse by a pittance of the parish funds, and the sympathising attentions of her neighbours. Besides the

the convenience of a little garden, and three or four drills of potatoes, the meal to be purchased for each individual is about 12 bushels, or nearly 500 lb. The road tax moreover, the rate of the friendly society, fuel, house rent, and clothing, remain to be provided for. The number of days in the year which a labourer counts on for wages is stated, at a medium, about 260 in the year. However loud or just the complaints of the luxury of the age may be, it is hereby evident, that in this country, there can be but little in the dwellings of this class of the community.

3. *Hours of Work.*—A labourer hired by the day counts the hours of work from 6 in the morning to the same hour, or a little later in the evening, between the vernal, and the autumnal equinox, with the interval of nearly an hour to breakfast, as long for a rest at noon, when the exertion is so great as is required for mowing grass, and reaping corn, and a third hour for dinner. Hoeing turnips, and other work of a lighter kind, require no rest at noon. During the shorter days, from about the autumnal to the vernal equinox, the hours of work are from day-light till a little after sun-set, without resting at noon, and shorter intervals for meals. The wages for the shortest day are only counted about two-pence less than for the longest.

4. *Piece Work.*—There is little uniformity in the rates of piece work. For several years the corn has been reaped on some farms, at the rate of three-pence for twelve sheaves, each requiring a band of a yard; in wheat, or in a weighty crop, the rate has been settled at four-pence. The mowing of hay is the most expensive work on the farm, which is accounted for by gardeners having been the first mowers, and then charging for skill like other artisans, as well as for labour,

labour; about two shillings in the day, and half a gallon of beer are the ordinary wages, and from three to five shillings per acre adjusted by the weight and other circumstances of the crop. Hoeing turnips twice, about ten shillings per acre. Ditching is adjusted by the kind of soil combined with the depth and wideness of the trench: in ordinary draining, from one penny to four-pence the yard, may comprehend the whole scale.

5. *Cottages, attached to Farms.*—In the times which preceded the middle of the last century, the farms which are now rented by one, were in general occupied by four tenants; each working his own plough, and requiring only the assistance of one servant, to aid his family in their rural labours. In those days there was no hay-harvest, no potatoe, nor turnip hoeing, nor any fallow. It is obvious then, that there must be now more cultivation, and yet fewer cultivators, natives of the country. The deficiency is at present supplied from the highlands of Inverness-shire, and from the counties on the northern side of the Moray Frith. But it may be presumed, from the improving state of those districts, that the whole of this class of their inhabitants may, in a short period of time, be employed in the cultivation of their native soil. It might be, therefore, deemed a prudent foresight in the proprietors of this district, to enter now into a pretty general concert, to erect dwellings on every farm, at their own expense, for as many labourers as would be sufficient for all its operations, and to annex to each dwelling a small garden, and as much land as would be sufficient for the summer maintenance of a cow, as it would not be difficult to purchase straw for provender in winter. There is no doubt, but that such

such dwellings, would in a short time be occupied. Labourers would be every where, and for every purpose, readily found, and even the population of this great empire would be increased, by a number of hardy, gallant and virtuous citizens. If these dwellings were to be an appendage of the farms, and dependent on the tenants, it would be proper that the cottager, upon a reasonable obligation of working when required, should have the security of a lease of equal duration with the lease of the tenant, or at any rate that he should not be arbitrarily, or capriciously ejected. There are a few cottages of this description on some farms, the occupant of which is one of the ploughmen, but they bear too small a proportion to have any perceptible influence in an agricultural point of view, although of much convenience to the farms on the skirts of which they are placed. This arrangement may be supposed to be of greater importance, from its having been long observed, that very few male farm servants are to be procured from the towns and villages of the country.

6. *Expense proportioned to space of Land.*—This particular may be accurately ascertained, either by one, or by the medium of all the statements in the 7th section of the 4th chapter. By the first, which is in circumstances similar to the other parts of the country, it appears that exclusive of the rent, the expense of management for 135 acres amounts to an outlay in money of..... £104 0 0

On this space of land it is found expedient to retain 4 men, 2 boys, and 2 female servants, to whom the reapers in harvest and occasional labourers,

Carried forward.... £104 0 0

equal

Brought forward £104 0 0

equal to one through the whole year,
make in all 9 ; whose maintenance is
yet to be added, and which stated only
at 6 pence daily for each of that num-
ber, amounts to 82 5 6

The result will not be considerably less,
although this calculation be made on
the customary allowances to servants,
who cook their own victuals in cot-
tages attached to farms, namely, 6
bolls of oatmeal to each of the men,
and 5 bolls to each of the boys and
maids, equal to 200 bushels, or about
7,200 lb. which, charged in money
at the medium price, amounts in all
to £62 10 0

To which is to be added the
farther charge of only 6
pence weekly to each for
procuring fuel for cooking,
with milk, or small beer,
eaten with the pottage or
bread, into which the meal
is dressed : which with the
requisite addition for the
small beer given to the reap-
ers at noon during harvest,
will amount, exclusive of
the expense of beds and
other furniture, to 12 10 0

£75 0 0

Carried forward £186 5 6

Six

Brought forward....	£186	5	6
Six horses stated only at the low charge of but £10 yearly for each		60	5 0
Showing the whole expense of managing 135 acres to be.....		<u>£246</u>	<u>2 6</u>
Or at the rate of.....	1 16 6	per acre.	
To which if the rent and seed be added, at the rate of..	1 16 6	do.	

Making..... £3 13 0 for each acre :

it is clear that the tenant, with his wife and children, must be parsimonious and thrifty in the expense both of their dress and table, and that but a poor remuneration remains, after cutting off the proportional return for the number of acres in fallow, for the capital, risk, and personal attention of the occupier.

It is evident then, that the expense of agricultural labour, has exceeded its proper bounds, and is beyond the proportional increase of the price the farmer yet receives for corn. About fifty years ago, the average price of the boll of grain was twelve shillings, and the yearly wages of a ploughman about £2. At present though more expensively subsisted and much less industrious, his wages have risen five hundred, while one hundred per cent. is yet equal to the increased value of corn.

This exorbitance, in the expense of labour, has arisen from several causes. Government have exerted their utmost endeavours to keep the price of corn low, while they have not been attentive to the inordinate expense of labour ; to which, also, the proprietors, and other gentlemen, who have engaged in

agricultural occupation, have above all other causes contributed. Their ploughmen are engaged by their bailiff, or by a cunning confident, who regards the interest alone of some connection, or favourite of his own; and no ploughman will serve for less than the very highest wages which any one of his brethren receives, to which, also, little additions, even beyond the truth, never fail to be made. Besides this, a gentleman is ardent in the accomplishment of some agricultural object, and for a few weeks a penny or two of additional wages, is no important object. By purchasing the exemption of his own personal attention, by the labour of an additional servant, otherwise unnecessary, more time for meals and for resting, a later hour of coming forth in the morning, an earlier departure at night, and more languid exertions through the day, have inveterately taken place over the whole country. And notwithstanding the most careful attention and diligence of him, who has no other dependence than the production of the soil, he must submit to the same exorbitance of wages, and to the same relaxation of labour, which his more opulent and careless neighbour has thus introduced and chooses to indulge. Excepting the single article of the quantity of land ploughed, the general influence of these circumstances united, has been estimated as diminishing the quantity of labour, about one-fourth, during the rotation of every year, by which it is needless to state that the cost of labour, is in the same proportion still farther advanced.

To this there is yet to be added, that the exaggerated reports which are circulated in the country, of still higher wages at the great works or manufactories of the south, carry off all the avaricious, all the giddy,
all

those who are captivated with novelty, and those who prefer the effeminate occupation of manufacture within doors, to the more wholesome labours of the field.

The labourers who remain at home therefore, are hereby enabled to dictate almost the terms on which they will condescend to serve. In perusing the statistical history of Scotland, it is pre-eminently obvious, that those clergymen who live remote from the stations of the greater manufactories, represent the want of such establishment, as among the heaviest evils affecting their quarter of the country; whilst those who are situated in the vicinity of any of those establishments, are pathetic in the display of their concomitant evils. From which it may be inferred, that while the manufacturer with limited foresight, selfishly pursues his own immediate concerns, the proprietors over the whole kingdom are in general supinely regardless of all those regulations of police, of such importance both to their personal, and their family interests.

Whatever may be alleged of the diminished population of the rural part of the kingdom, it is well known, that before the introduction of the linen manufacture into Scotland, while the art of spinning was generally unknown, all the branches of agricultural labour (the business only of the plough and of the flail excepted), were carried on equally by male and female, and that the lasses were then more blooming, and less subject to consumption, and female disorders than now: yet such is the power of fashion, introduced no doubt at first with much influence, difficulty and address, that a maid prefers to earn three-pence in the day, by the most unremitting assiduity in spinning, than six-pence and subsistence, by guiding (as did her grandmother) the cart, and harrows, or hoeing
turnips,

turnips, and performing various other agricultural operations, suited to her strength and sex, but which the attention only of the proprietors could again in this quarter introduce.

The farmers in the mean time, seem to be gradually turning their attention to cattle, with the view perhaps of raising the price of corn; but more immediately in lessening the quantity of labour required for its production. Nor can any apprehension be entertained of ever overstocking the market, with the articles of beef and mutton; as it is, at times, with corn; while the taste for butcher's meat, which has of late so generally prevailed among all ranks of people, remains. For by the lowest estimate, it requires fifteen times as much land to maintain any given number of people, wholly upon meat, as it does upon any kind of grain.



SECT. II.—PRICE OF PROVISIONS.

Grain, being the most indispensable article of provision, by the price of which all other kinds are so greatly influenced, merits naturally the first attention.

The price of each kind of corn, as has been already noticed, will be most distinctly seen by the tables of the county Fiars. This mode of judicially ascertaining, and registering the prices of all the kinds of grain of every crop, being unheard of in every other kingdom, except France, an account of its origin, and history, must

must be deemed, in a peculiar manner, interesting. After much unsuccessful investigation in the country, application was made to the deeper researches of George Chalmers, Esq. of the Board of Trade, who most obligingly made a complete, and very satisfactory communication, which it is obviously proper to present to the reader, in his own words.

Extract of a Letter from George Chalmers, Esq. to the Rev. Mr. Leslie, dated London, 24th November, 1808.

“ It gives me pleasure to observe, from your letter
 “ of the 15th ultimo, that you had been induced by
 “ the Board of Agriculture, to write the survey of
 “ the counties of Moray, and Nairn; and I should cer-
 “ tainly be much gratified, if I could be of use to you
 “ in so laborious an undertaking.

“ I concur with you in thinking that, *in such a work,*
 “ *it is of some importance, to give the origin, and history,*
 “ *of the singular establishment of the sheriffs fiars,*
 “ *which is peculiar to Scotland.* This subject is one of
 “ the most obscure among the juridical antiquities of
 “ North Britain: I have not found a trace of it in any
 “ of the Chartularies, which I have had occasion to
 “ turn over, with very different views. And I have
 “ followed your tract of inquiry, in searching the an-
 “ cient laws and statute-book of Scotland, without
 “ meeting any more than you did, the least intimation
 “ regarding the sheriffs fiars. I cannot, therefore,
 “ concur with those Scottish antiquaries, who speak of
 “ this georgical practice as being coeval with record
 “ itself. It is in vain to talk in such language, when
 “ the records contain not a single allusion to such a
 “ practice. On the contrary, it may be thence in-

“ ferred that the practice of striking the fiars, by the
 “ sheriffs, is as modern, as the early part of the seven-
 “ teenth century. An exchequer *MS.* in the Advo-
 “ cate’s Library, from 1580 to 1593, contains an
 “ order of the Lords Auditors, to the collectors of the
 “ monks’ portions, within Lothian, and the west coun-
 “ try, to charge therefore at the rate of five marks,
 “ for each holl of wheat, 53 shillings 4 pennies, for
 “ each boll of barley, for each boll of meal 40 shil-
 “ lings, and 30 shillings, for each boll of oats. If, then,
 “ such a practice as the sheriffs fiars had at that time
 “ existed, such an order of the auditors of the ex-
 “ chequer would not have been issued, or at least, it
 “ would have been with a reference to the prices, as
 “ ascertained judicially by the sheriffs. We may in-
 “ fer, that it was issued in those terms; because the
 “ sheriffs fiars did not then exist.

“ This practice did not even exist at the demise of
 “ James VI, in 1625. The Privy Council Register
 “ of the 1st November, in that year, being the 1st of
 “ Charles I, bears, *Anent the articles proposed to the*
 “ *convention, that a price should be set upon all sorts of*
 “ *victual for the better ruling of the time and order of*
 “ *importation and exportation of victual; the estates*
 “ *understanding, that there is a dyet already appointed*
 “ *to that effect, before the council upon the 6th of De-*
 “ *cember next, remit the same to the consideration of*
 “ *the council.* From such recorded proceeding of the
 “ *estates*, it must be presumed, that the practice of
 “ fiars did not then exist, as such proceeding, for re-
 “ gulating the export and import of victual, could not
 “ have taken place, had the average price of grain
 “ been judicially, and publicly, ascertained. Similar
 “ proceedings of the Privy Council, in 1626, and 1627,
 “ impress

“ impress the same conviction. In the first of those
 “ years, the council directed the justices of the peace,
 “ to ascertain, and report the prices of victual, wool,
 “ nolt and sheep. And on the 27th of July 1627,
 “ there was a proclamation, *charging the justices of the*
 “ *peace to make their reports respecting the prices of*
 “ *victual, wool, nolt and sheep, upon the 29th of Au-*
 “ *gust.* The same inference, that this judicial practice
 “ had not, at that time, taken place, must be made
 “ from the consideration of the ordinance about weights
 “ and measures, dated Feb. 12, 1618. In the statute
 “ of 1621, chap. 17, prohibiting *the peck to the boll,*
 “ there is no allusion to the fiars.

“ Yet, this singular establishment was, obscurely, and
 “ partially introduced about this era. It originated, in
 “ the county of Hadington, with the crop of 1627.
 “ We learn this fact from the Transactions of the An-
 “ tiquary Society of Edinburgh, vol. 1, page 90 and
 “ 91; which exhibit a series of the fiars, from that
 “ year to 1789. It does not appear either from that
 “ publication, or from the county records, which I
 “ have caused to be searched, by what authority that
 “ practice was introduced. From 1627 to 1639, the
 “ fiars of wheat, and bear, only, were ascertained,
 “ though, in 1635, and 1636, the prices of oats are in-
 “ terlined upon the record. When, or by what au-
 “ thority, this peculiar regulation was established, in
 “ other shires, I have not been able to ascertain. I
 “ only know, that the commencement, and mode are
 “ various in several shires.

“ The court of session, it is believed; did not in-
 “ terpose till 1723, when the lords made the act of
 “ sederunt; dated the 21st December, appointing the
 “ manner of striking the sheriff's fiars: ‘ the lords of

“ ‘ council and session, considering that the use of the
 “ ‘ sheriff’s fiars is to liquidate the price of victual in
 “ ‘ divers processes, that come before them, and the
 “ ‘ subordinate judicatories, and that there is a gene-
 “ ‘ ral complaint, that the fiars are struck, and given
 “ ‘ out, by the sheriffs, without due care, and inquiry
 “ ‘ into the current, and just prices; and that when
 “ ‘ some sheriffs proceed in striking the fiars, by way
 “ ‘ of inquest, yet they get not sufficient evidence to
 “ ‘ the jury, and that other sheriffs proceed, arbitrari-
 “ ‘ ly, and without an inquest: and that some of them
 “ ‘ entirely neglect to strike fiars, which creates great
 “ ‘ uncertainty, and much delay, and expense in the
 “ ‘ administration of justice;—appointed, therefore,
 “ ‘ and required the sheriffs to summon juries yearly,
 “ ‘ betwixt the 4th and 20th of February, and to
 “ ‘ summon before them a competent number of per-
 “ ‘ sons, who have knowledge and experience of the
 “ ‘ prices and trade of victual in their bounds; and
 “ ‘ from them to choose fifteen men, whereof not fewer
 “ ‘ than eight shall be heritors, to pass upon the in-
 “ ‘ quest, and return their verdict on the evidence,
 “ ‘ or their own proper knowledge, concerning the
 “ ‘ fiars, for the preceding crop of every kind of
 “ ‘ victual, the product of that sherrifdom, and ad-
 “ ‘ duce the properest witnesses, and other good evi-
 “ ‘ dence, concerning the price, at which the several
 “ ‘ sorts of victual have been sold, since the 1st of No-
 “ ‘ vember immediately preceding, and also concern-
 “ ‘ ing all other good grounds and arguments from
 “ ‘ whence it may rationally be concluded, what ought
 “ ‘ to be established as the just fiar prices of the said
 “ ‘ crop; and any persons then present may, in open
 “ ‘ court, and no otherwise, and observing due order and
 “ ‘ respect,

“ respect, offer information to the jury, concerning
 “ the premises, and the evidence adduced; and if it
 “ appears to the sheriff, or to the jury, that the pro-
 “ per evidence has been any way disappointed, or
 “ is defective, the sheriff shall adjourn the jury till
 “ a certain day, that sufficient evidence may then
 “ be laid before them, and on or before the first day
 “ of March, the sheriff shall pronounce sentence,
 “ according to the said verdict, determining the
 “ prices for each kind of victual, the produce of
 “ that sheriffdom; which fiars he shall forthwith re-
 “ cord in his books, and the clerks shall give ex-
 “ tracts thereof to any who may ask, for the pay-
 “ ment of seven shillings Scotch money, and no more,
 “ for the whole fiars of one year.’ The provisions
 “ of this act were enforced, by another act of sederunt,
 “ dated the 29th February, 1728. From every informa-
 “ tion, which I have obtained, it is believed, that these
 “ acts of the court of session have never been strictly
 “ complied with; the practice of ascertaining the
 “ fiars is varied, in the different shires, and in some it
 “ is very inadequate to the end. The practice of the
 “ late Mr. Law, the sheriff of Haddington, a great corn
 “ county, was in the following manner:—In place of
 “ calling a jury, he used every year, in the beginning
 “ of March, to summon sixty, or eighty, buyers and
 “ sellers, from the several quarters of the county; these
 “ he examined upon oath, and from their evidence
 “ struck the fiars, collecting the total quantity proved
 “ of each species of grain, from which he found the
 “ medium price of one boll; he then collected the total
 “ quantity of what had been sold above the general
 “ medium, and found the medium of that; then all
 “ that had been sold under the general medium, and
 “ thus

“ thus found the medium thereof; to each of these
 “ mediums, he added $2\frac{1}{2}$ per cent. and the medium of
 “ what was sold above the general medium with this
 “ addition, formed the *first fiars*. The general me-
 “ dium with the same $2\frac{1}{2}$ per cent. added, formed the
 “ *second fiars*; and the medium of what had sold
 “ under the general medium, with the like addition,
 “ constituted the *third fiars*. The reason for adding
 “ the $2\frac{1}{2}$ per cent. was, that about four fifth-parts of
 “ the grain sold by the fiars was at six months credit,
 “ which he considered as equal to $2\frac{1}{2}$ per cent. For
 “ the victual, which had been proved to be sold, for
 “ ready money, a proportional allowance was made.
 “ Such was the accurate practice of that intelligent,
 “ and upright magistrate, whose picture has been
 “ placed in the Shire-hall, by the united voice of the
 “ county. A less accurate investigation, however,
 “ prevails in other shires, and in some, it is believed,
 “ the fiars have never been struck. I am assured, by
 “ a friend in Peebles, that the fiars had never been
 “ struck in that shire, till 1798: and from a friend, in
 “ Selkirk, I have learned, that they had never been re-
 “ gularly struck, in that shire, until the practice was
 “ begun by the authority of the corn-act, in 1791. I
 “ have also, by similar correspondence, learned, that
 “ the fiars were first struck, in the county of Argyle;
 “ for the crop of the year 1797; and that in the shire
 “ of Bute only for bear and oats before the year 1798:
 “ and in Caithness, that some years no fiars are struck,
 “ that they were struck for the crops of 1790 and
 “ 1791, but none for those of 1789, 1792, 1793,
 “ 1794, and 1795. The sheriff of Lanarkshire, it is
 “ believed, does not strike the fiars, in that county.
 “ I am informed, that the commissary of Hamilton and
 “ Campsie,

“ Campsie, has yearly struck the fiars, from 1746, to
 “ 1796, of which I have a copy. In the shires of
 “ Ross, and Cromarty, owing to particular circum-
 “ stances, arising in 1780, the barons of exchequer,
 “ who have the charge of crown rents there, rejected
 “ the fiars of Ross, as being unfairly struck, and di-
 “ rected a rate for the payment of those rents in these
 “ counties, to be adjusted by taking two third parts
 “ of the fiars of Fife. By comparing the fiars of Ross-
 “ shire, for crop 1795, with the real prices, as return-
 “ ed under the corn-act, it appears, that the fiars were
 “ but one third part of the current prices.

“ From those facts, your better judgment will easily
 “ determine, whether the legal practice, as laid down
 “ by Erskine, in the latest editions of his institutes,
 “ B. iii. T. 3. §. 4. be quite accurate. Perhaps, he
 “ may have taken his legal definition of the fiars, from
 “ the acts of sederunt already noticed, supposing the
 “ fiars were actually settled, by the sheriffs in their
 “ respective shires, as those acts of the court of session
 “ require. I need not intimate to one so well inform-
 “ ed as you are, that a new mode of ascertaining, and
 “ returning the prices, of the several sorts of grain,
 “ both in England, and Scotland, was prescribed by
 “ the corn-act 31 Geo. iii. chap. 30, for publication
 “ in the Gazette.

“ I perceive too, by your letter, that you had in-
 “ quired, for the etymology of the word *fiars*, without
 “ success. The derivation of the term is as obscure,
 “ as the commencement of the practice. I see no-
 “ thing in the Saxon word-books of Somner, and Lye,
 “ from which we could infer, that the word existed in
 “ that language, and it may be undoubtedly traced,
 “ like many other words, in the mouths of the Scottish
 “ people,

“ people, to the old French,—perhaps, to the ancient
 “ Gaulish. The French undoubtedly had the same
 “ practice, as we may ascertain, from the collection of
 “ the *Coutumes de Paris*, (that is, the customs or
 “ usages of Paris), chap. 1. art. 38, wherein we may
 “ seè, that the *feurs* signify *les frais faits pour la cul-*
 “ *ture, production et recueil des fruits,*” (that is, the
 expense made in the culture, production, and in-
 gathering of the crop). See *Ménage*, fol. edit. 1694,
 p. 311, “ in voce *feur*. The same word, signifying
 “ the same practice, existed of old in other districts of
 “ France. *Feur en ces manières de parler, au feur, de*
 “ *cing sols pièces, au feur l’emplage, &c.* signifie à la
 “ *raison, à la proportion, selon,*” (that is, *feur* in this
 manner of speaking, the value of five penny pieces,
 the full value, &c. signifies the rate of, in proportion
 to, according to). “ In the same manner, we may
 “ trace the same word, for the same practice, in the
 “ *Coutumes de Troyes*, art. 68 : and also in an *Or-*
 “ *donnance du Roy Jean*. You thus perceive the
 “ origin of the thing, as well as of the word, in
 “ France. See moreover *Lacombe’s Dict. du vieux*
 “ *langage François*, in voce *feurre*, signifying, *prix,*
 “ *taux, estimation, taxe,*” (price, toll, valuation,
 “ tax). “ See the same, in voce *fiere*, signifying
 “ *foire, marchée, nundinæ,*” (fair, market, market-
 place). “ See likewise *Borel’s Trésor de Recherches*
 “ *et Antiquités Gauloises et Françaises*, in art. *feur*
 “ and for, signifying *prix* (price); also the *forum* or
 “ market-place, *au feur l’emplage, à proportion, ou*
 “ *proratá de ce dont il s’agit,* (in proportion to the rate
 “ of the object in question). You may see, also, in
 “ *Kelham’s Norman Dict.* *au feur* signifie ‘ after
 “ the rate of.’ If you were disposed to trace this
 “ obscure

“ obscure word *fiars*, from the old French, to the an-
 “ cient Breton, you might consult Bullet, in voce
 “ *feur, une certaine mesure réglée et remplie au juste,*”
 (a certain regulated measure justly filled). “ From
 “ the Breton, you might diverge into Owen’s Welch
 “ Dict. in voce *fair*, an eminence, a public place, a
 “ forum, a fair. Throughout the whole, there appears
 “ a close connection, and appropriate application, both
 “ to the *thing*, and to the *word*, which are the subjects
 “ of inquiry.

“ After turning over those various dictionaries, I
 “ was surprised to see, that Sibbald, in his Scottish
 “ glossary, under the article *feirs of the year*, had hit
 “ upon the true origin of the word in question, from
 “ the French *feur, estimatio venalium, præti con-*
 “ *stitutio;*” (the valuation of commodities, the esta-
 “ blishment of the price). “ *Affeurer, annonæ venali*
 “ *pretium edicere,*” (to publish the price of marketable
 “ grain). “ I was surprised to see this, as the gothic
 “ glossarists are so apt to turn into the wrong road.
 “ In a common book, Boyer’s Dict. *affeurer* is to
 “ assize, to set the price, *mettre le taux aux denrées,*”
 (to fix the price of provisions). “ And hence, in the
 “ same place, *affeurage*, assize, *taux, prix que les*
 “ *magistrats mettent aux denrées,*” (toll, that is, the
 “ price, which the magistrates set on provisions). “ But,
 “ Doctor Jamieson is not to be satisfied with so ob-
 “ vious an origin of the *fiars, feirs, or feurs*; it is not
 “ gothic enough for his taste. You, and I, are search-
 “ ing, for the origin of this custom, *the feirs of the*
 “ *year*, and we find it in the ancient *Coutumes de*
 “ *France*, and for the etymon of the term, which also
 “ we discover in the old language of that country,
 “ while the lexicographer refers us to the Islandic *fiar*,
 “ or

“ or fear, the genitive of *fe, fie*, the common fee, or
 “ wages, *pecunia, opes, bona, pecora*.

“ Thus have I endeavoured, Sir, to answer both
 “ your questions, though difficult ; yet I hope, in a
 “ satisfactory manner, from such intimations as I could
 “ hastily collect, amidst a thousand avocations. Du-
 “ ring the times, in which no trace, or allusion, is to be
 “ found, in Scotland, the practice was common, in
 “ France. At the first, we dimly discover its imperfect
 “ beginnings, in wheat only and in bear, limited to one
 “ county ; the other kinds of grain were gradually in-
 “ cluded, and the practice was extended by slow, and
 “ interrupted attentions even in the neighbouring
 “ counties ; and after struggling, as it were, with much
 “ irregularity, for an hundred years, in gaining ground,
 “ the supreme court first recognise, and sanction the
 “ procedure, though they interpose, but a feeble au-
 “ thority, for punctuality in its observance, and unifor-
 “ mity in its execution. These circumstances to some,
 “ are more conclusive than positive historical record.”

The Scottish denominations, and county measures, being retained in the annexed tables of the fiars, it may be proper to observe, that one boll of oats is the same with the English quarter of grain ; that one boll of wheat, rye, pease, and beans is nearly equal to half a quarter ; that one boll of bear or barley is equal to four-fifth parts of the quarter ; and that one boll of oatmeal is 140 pounds avoirdupois, the common pound weight of England, in the shops of all the grocers in London.

The act of sederunt, by the court of session, has been strictly observed, in ascertaining the fiar prices, for more than forty years. An assize of the requisite number
 of

of intelligent proprietors, and well informed farmers, is summoned by the 20th of February yearly, to meet on some convenient day fixed after the 22d, out of which fifteen are formed into the jury. Several who are deemed competent witnesses, being dealers in grain and meal, are summoned to the same compearance. The inquest proceeds in the open court. The verdict is returned, the sentence given forth, and put upon the record in due and regulated form.

TABLE OF THE FIARS

OF THE

COUNTIES OF MORAY AND NAIRN,

BEGINNING WITH THE CROP OF THE YEAR 1786.

<i>Moray.</i>		<i>Nairn.</i>	
1786.	£. s. d.	1786.	£. s. d.
Mean price of the			
boll of wheat	. 0 18 0	Wheat . . .	1 0 0
Do. of bear or barley	0 15 6	Bear or barley . . .	0 17 0
Do. of oats	0 15 0	Oats	0 15 0
Do. of oatmeal	. 0 13 4	Oatmeal	0 15 0
Do. of rye	0 13 0	Rye	0 15 0
Do. of pease	0 12 2	Pease	0 15 0
Do. of beans	0 12 2	Beans	0 15 0

Moray.

<i>Moray.</i>		<i>Nairn.</i>	
1787. £. s. d.		1787. £. s. d.	
Mean price of the			
boll of wheat	. 1 0 0	Wheat	. . . 1 0 0
Bear or barley	. 0 16 0	Bear or barley	. 0 17 0
Oats	. . . . 0 15 0	Oats	. . . . 0 13 6
Oatmeal	. . . . 0 13 9½	Oatmeal	. . . . 0 13 0
Rye	. . . . 0 13 4	Rye	. . . . 0 15 0
Pease	. . . . 0 13 3	Pease	. . . . 0 15 0
Beans	. . . . 0 13 3	Beans	. . . . 0 15 0
<hr/>		<hr/>	
1788.		1788.	
Wheat	. . . . 1 1 0	Wheat	. . . . 1 4 0
Bear or barley	. 0 12 0	Bear or barley	. 0 14 6
Oats	. . . . 0 12 0	Oats	. . . . 0 13 6
Oatmeal	. . . . 0 10 0	Oatmeal	. . . . 0 13 0
Rye	. . . . 0 10 0	Rye	. . . . 0 13 0
Pease	. . . . 0 11 0	Pease	. . . . 0 13 0
Beans	. . . . 0 11 0	Beans	. . . . 0 13 0
<hr/>		<hr/>	
1789.		1789.	
Wheat	. . . . 1 2 6	Wheat	. . . .
Bear or barley	. 0 13 0	Bear or barley	. 0 15 0
Oats	. . . . 0 12 6	Oats	. . . . 0 13 0
Oatmeal	. . . . 0 11 2	Oatmeal	. . . . 0 13 0
Rye	. . . . 0 10 6	Rye	. . . . 0 13 0
Pease	. . . . 0 10 4	Pease	. . . . 0 13 0
Beans	. . . . 0 10 4	Beans	. . . . 0 13 0
<hr/>		<hr/>	
1790.		1790.	
Wheat	. . . . 1 2 0	Wheat	. . . .
Bear or barley	. 0 14 0	Bear or barley	. 0 16 0
Oats	. . . . 0 14 0	Oats	. . . . 0 15 6

Moray.

Moray.

1790. £. s. d.

Mean price of the			
boll of oatmeal	0	12	6
Rye	0	12	0
Pease	0	12	2
Beans	0	12	2

1791.

Wheat	0	18	0
Bear or barley	0	17	0
Oats	0	16	0
Oatmeal	0	14	2 ³ / ₄
Rye	0	13	0
Pease	0	12	2
Beans	0	12	2

1792.

Wheat	1	0	0
Bear or barley	0	16	0
Oats	0	14	6
Oatmeal	0	12	5 ⁶ / ₁₂
Rye	0	12	0
Pease	0	11	3
Beans	0	11	3

1793.

Wheat	1	0	0
Bear or barley	0	16	0
Oats	0	15	0
Oatmeal	0	13	4
Rye	0	14	0
Pease	0	14	0
Beans	0	14	0

NAIRN AND MORAY.]

Nairn.

1790. £. s. d.

Oatmeal	0	15	0
Rye	0	15	0
Pease	0	15	0
Beans	0	15	0

1791.

Wheat			
Bear or barley	0	18	0
Oats	0	18	0
Oatmeal	0	16	0
Rye	0	16	0
Pease	0	16	0
Beans	0	16	0

1792.

Wheat			
Bear or barley	0	17	0
Oats	0	14	0
Oatmeal	0	14	0
Rye	0	14	0
Pease	0	14	0
Beans	0	14	0

1793.

Wheat	1	0	0
Bear or barley	0	17	6
Oats	0	15	0
Oatmeal	0	15	6
Rye	0	15	6
Pease and Beans	0	15	6
Barley in the straw	0	0	0
Oats in the straw	0	19	6

2 B

Moray.

<i>Moray.</i>		<i>Nairn.</i>	
1794.	£. s. d.	1794.	£. s. d.
Mean price of the			
boll of wheat	1 1 0	Wheat	1 1 0
Bear or barley	0 17 0	Bear or barley	0 19 0
Oats	0 15 6	Oats	0 15 6
Oatmeal	0 13 9 $\frac{1}{2}$	Oatmeal	0 16 0
Rye	0 15 0	Rye	0 16 0
Pease	0 15 0	Pease and beans	0 16 0
Beans	0 15 0	Barley in the straw 1	2 6
		Oats unthrashed	
		in the straw	1 3 3
	1795.		1795.
Wheat	2 0 0	Wheat	1 10 0
Bear or barley	1 0 0	Bear or barley	1 0 0
Oats	1 0 0	Oats	0 19 0
Oatmeal	0 18 0	Oatmeal	0 18 0
Rye	0 18 0	Rye, pease, and	
		beans	0 18 0
Pease	0 18 0	Bear with its straw 1	3 0
Beans	0 18 0	Oats with the straw 1	2 0
	1796.		1796.
Wheat	1 2 6	Wheat	1 3 0
Barley or bear	1 0 0	Bear or barley	1 2 6
Oats	0 17 0	Oats	0 16 0
Oatmeal	0 15 0	Oatmeal	0 16 0
Rye	0 15 0	Rye, pease, and	
		beans	0 16 0
Pease	0 15 0	Bear unthrashed	
		with the straw 1	5 0
Beans	0 15 0	Oats with the straw 1	1 0

Moray.

Moray.
1797. £. s. d.

Mean price of the			
boll of wheat	. 1	0	0
Bear or barley	. 0	17	0
Oats . . . . .	. 0	15	0
Oatmeal . . . . .	. 0	15	4
Rye . . . . .	. 0	15	0
Pease . . . . .	. 0	15	0
Beans . . . . .	. 0	15	0

1798.

Wheat . . . . .	. 1	0	0
Bear or barley	. 0	17	0
Oats . . . . .	. 0	16	0
Oatmeal . . . . .	. 0	14	2 ^s _{7^d}
Rye . . . . .	. 0	15	0
Pease . . . . .	. 0	15	0
Beans . . . . .	. 0	15	0

1799.

Wheat . . . . .	. 2	0	0
Bear or barley	. 1	6	0
Oats . . . . .	. 1	6	0
Oatmeal . . . . .	. 1	3	3
Rye . . . . .	. 1	6	0
Pease . . . . .	. 1	6	0
Beans . . . . .	. 1	6	0

Nairn.
1797. £. s. d.

Wheat . . . . .	. 1	1	6
Bear or barley	. 0	19	0
Oats . . . . .	. 0	16	0
Oatmeal . . . . .	. 0	16	0
Rye, pease, and			
beans . . . . .	. 0	16	0
Bear in the straw	1	2	6
Oats in the straw	1	2	0

1798.

Wheat . . . . .	. 1	2	0
Bear or barley	. 0	17	0
Oats . . . . .	. 0	17	0
Oatmeal . . . . .	. 0	17	0
Rye, pease, and			
beans . . . . .	. 0	17	0
Bear in the straw	1	3	0
Oats in the straw	1	4	0

1799.

Wheat . . . . .	. 2	0	0
Bear or barley	. 1	6	0
Oats . . . . .	. 1	2	0
Oatmeal . . . . .	. 1	5	0
Rye, pease, and			
beans . . . . .	. 1	5	0
Barley in the straw	1	14	0
Oats unthrashed			
with the straw	1	16	0

<i>Moray.</i>	
1800.	£. s. d.
Mean price of the	
boll of wheat	3 0 0
Bear or barley	2 3 0
Oats	2 2 0
Oatmeal	1 17 4
Rye	2 0 0
Pease	2 2 0
Beans	2 2 0
<hr/>	
1801.	
Wheat	1 12 0
Bear or barley	1 10 0
Oats	1 1 0
Oatmeal	0 17 9 ¹ / ₂
Rye	1 1 0
Pease	1 1 0
Beans	1 1 0
<hr/>	
1802.	
Wheat	1 5 0
Bear or barley	1 1 0
Oats	0 17 0
Oatmeal	0 15 1
Rye	0 17 0
Pease	0 17 0
Beans	0 17 0

<i>Nairn.</i>	
1800.	£. s. d.
Wheat	2 10 0
Bear or barley	2 6 0
Oats	2 6 0
Oatmeal	2 6 0
Rye, pease, and	
beans	2 6 0
Bear unthrashed	
with the straw	3 4 0
Oats not thrashed	
with straw	3 5 0
<hr/>	
1801.	
Wheat	1 11 6
Bear or barley	1 15 0
Oats	1 2 0
Oatmeal	1 2 0
Rye	1 2 0
Pease	1 2 0
Beans	1 2 0
Bear with the straw	2 2 0
Oats with the straw	1 15 0
<hr/>	
1802.	
Wheat	1 11 6
Bear or barley	1 8 0
Oats	0 18 0
Oatmeal	0 18 0
Rye, pease, and	
beans	0 18 0
Bear with the straw	
unthrashed	1 10 0
Oats with the straw	
unthrashed	1 4 6

Moray.

Moray.

	1803.	£.	s.	d.
Mean price of the boll of wheat . . .	1	1	0	
Bear or barley . . .	1	0	0	
Oats	1	2	6	
Oatmeal	1	0	0	
Rye	0	17	0	
Pease	0	19	0	
Beans	0	19	0	

1804.

Wheat	1	15	0
Bear or barley . . .	1	5	0
Oats	1	0	0
Oatmeal	0	17	9 $\frac{1}{2}$
Rye	1	0	0
Pease	1	0	0
Beans	1	0	0

1805.

Wheat	1	5	0
Bear or barley . . .	1	2	0
Oats	1	0	0
Oatmeal	0	17	9 $\frac{1}{2}$
Rye	1	0	0
Pease	1	0	0

Nairn.

	1803.	£.	s.	d.
Wheat	1	5	0	
Bear or barley . . .	1	5	0	
Oats, and oat- meal	1	5	0	
Rye	1	6	0	
Pease	1	6	0	
Beans	1	6	0	
Bear with the straw unthrashed . . .	2	7	0	
Oats and the straw unthrashed . . .	2	7	0	

1804.

Wheat	1	15	0
Bear or barley . . .	1	6	0
Oats	1	6	0
Oatmeal	1	6	0
Rye	1	6	0
Pease	1	6	0
Beans	1	6	0
Bear and the straw unthrashed . . .	1	10	0
Oats and the straw unthrashed . . .	1	5	0

1805.

Wheat	1	10	0
Bear or barley . . .	1	5	0
Oats	1	0	0
Oatmeal	1	1	0
Rye	1	1	0
Pease and beans . .	1	1	0

<i>Moray.</i>	
1805.	£. s. d.
Mean price of the boll of beans	. 1 0 0
<hr/>	
1806.	
Wheat . . . . .	. 1 15 0
Bear or barley . . . . .	. 1 4 0
Oats . . . . .	. 1 2 6
Oatmeal . . . . .	. 1 0 0
Rye . . . . .	. 0 18 0
Pease . . . . .	. 1 1 0
Beans . . . . .	. 1 1 0
<hr/>	
1807.	
Wheat . . . . .	. 1 10 0
Bear or barley . . . . .	. 1 10 0
Oats . . . . .	. 1 8 0
Oatmeal . . . . .	. 1 6 8
Rye . . . . .	. 1 6 0
Pease . . . . .	. 1 8 0
Beans . . . . .	. 1 8 0

<i>Nairn.</i>	
1805.	£. s. d.
Bear and the straw unthrashed	. 1 9 0
Oats and the straw unthrashed	. 1 5 6
<hr/>	
1806.	
Wheat . . . . .	. 1 15 0
Bear or barley . . . . .	. 1 4 0
Oats . . . . .	. 1 3 6
Oatmeal . . . . .	. 1 3 0
Rye, pease, and beans . . . . .	. 1 3 0
Bear and the straw unthrashed	. 1 8 0
Oats and the straw unthrashed	. 1 9 0
<hr/>	
1807.	
Wheat . . . . .	. 1 12 0
Bear and barley . . . . .	. 1 10 0
Oats . . . . .	. 1 10 0
Oatmeal . . . . .	. 1 11 0
Rye . . . . .	. 1 11 0
Pease . . . . .	. 1 11 0
Beans . . . . .	. 1 11 0
Bear and the straw unthrashed	. 2 7 0
Oats and the straw unthrashed	. 2 12 0

Moray.

<i>Moray.</i>		<i>Nairn.</i>	
1808.	£. s. d.	1808.	£. s. d.
Mean price of the			
Boll of wheat	2 2 0	Wheat	2 4 0
Bear or barley	1 12 0	Bear or barley	1 12 0
Oats	1 9 0	Oats	1 8 0
Oatmeal	1 6 8	Oatmeal	1 11 6
Rye	1 8 0	Rye, pease, and beans	1 11 6
Pease	1 12 0	Bear and the straw unthrashed	2 2 0
Beans	1 12 0	Oats and the straw unthrashed	2 1 8

There is nothing established for ascertaining the quantity of butchers' meat consumed in the district. Many families feed mutton for their own table, and partly beef and pork. On the whole the quantity of butcher's meat, though vastly greater among the labouring class than it was sixty or seventy years ago, is still less in proportion to the population, than in great cities, or in more wealthy manufacturing districts. There is a greater proportion of mutton brought to the market, than of beef; both are generally sold about the prices of the Edinburgh market, the mutton often somewhat cheaper, and the beef for several years past nearly one penny the pound dearer. The price of beef, in the Elgin market, has been from about four-pence to seven-pence per pound, generally about six-pence when a quarter is bought at once.

Although the price of fish has risen more than 100 per cent., yet there is a great quantity caught along the whole sea coast, and distributed all over the country by the fishermen's wives, daughters and widows.

Compared with the price of fish, in the more wealthy southern districts, it is still so cheap an article of provision, as to be generally neglected at the table, where mutton and beef are in abundance. Haddocks are sold about one penny each; cod about a penny the lib.; whittings are still cheaper, less than halfpenny each; salmon are in general to be procured only by way of favour, at the rate of one shilling per lib; potatoes are sold in the market by a loose measure, scarcely equal to a farthing the lib. There is such a small proportion of the milk of the district brought to the market, that no knowledge of its value, can, in that form, be obtained. Half a gallon, English wine measure, is sold in Elgin for two-pence: butter about one shilling per lib; cheese is frequently sold by the eye, without ascertaining the weight, the mean price about one-half of the cost of cheese from Gloucester or Cheshire; it may be in general estimated at 3 pence the lib.

SECT. III.—FUEL.

About the middle of the last century, coals were almost wholly unknown in any part of the district. They are now the principal fuel used in many parts of the district. A quantity called a barrel, about thirteen stone weight, is generally sold at the port, for about half a crown. Coal is carried more than a dozen of miles into the country for the families of gentlemen. About that distance from the coast, the lesser tenants and poor people depend wholly on peat fuel, for which they toil, with much precarious labour both
of

of men, women and horses, throughout the greater part of the summer. It requires from 30 to 50 cart-loads, the draught of one horse, to maintain one little cottage fire throughout the year, when managed with the most frugal economy and thrift. The coal and the small quantity of peat requisite for the domestic occasions of the thriftiest farmer, in the character of a gentleman, costs, exclusive of the carriage, from £12 to £16.

CHAP. XVI.

POLITICAL ECONOMY.

CIRCUMSTANCES DEPENDENT ON LEGISLATIVE AUTHORITY.

SECT. I.—ROADS.

ALTHOUGH the roads began to attract the attention of government as early as the reign of David II, about the middle of the fourteenth century, yet unless it might have been, that during some period prior to the reign of James II, in which the distances of places from one another were accurately ascertained in Scotch miles, (two of which in every case were equal to three of that denomination as now by statute established), no means appear to have been adopted for the general improvement of the highways, until long after, when an act was passed, (the 5th of Geo. I. chap. 30, which was a little improved by the 11th Geo. III. chap. 53,) by which the whole labouring men were ordained to work by the appointment of the justices of the peace and commissioners of supply, for three days between the end of the seed time and the last of June, and for three days after harvest, under the penalty of one shilling and six-pence for the failure of each day, to be recovered upon the certification of the overseer. Besides this, by the great road-

road-act, passed in the year 1696, there is a tax on the proprietors of land to the amount of ten-pence on each £100 Scotch of their valued rent, for building and repairing bridges on the brooks and rivulets. By the station of the labouring people in the community, they are but little affected by many other taxations, and as this tax on the proprietors may be deemed a sufficient equivalent for the labour on the roads which might fall on them, these acts appear to have been framed with much equality and wisdom. By this code, therefore, the police of the roads in the county of Nairn is still managed. The assessment on the proprietors amounts to a little more than £6 yearly, and with due discretion they are attentive to the actual efficiency of the other provisions thereby made.

In the county of Moray the proprietors had been in the practice for many years of having this statute labour, each of his own tenants, allocated in the yearly meeting of the 30th of April, for the roads alone on their own respective estates; of the smallest interference of each in the appropriation of this labour, they were all equally and extremely jealous. After this appointment, however, the business was managed with but slight attention, and the roads accordingly over the whole country had fallen into very great disrepair. In this situation the act of 1805 was obtained, at the expense of £600, by which the post road from the river Spey at the east, to the limits of the county of Nairn at the west, is to be made turnpike, under the management of the proprietors possessing lands, valued in the tax-roll down to £100 Scotch, and of the sheriff and his substitute, and of the oldest magistrate in each of the towns of Elgin and Forres. By this act, the toll for each six miles is one shilling and six-pence,

pence, for a carriage drawn by two horses, four-pence for a cart by one horse, and two-pence for one saddle or other horse, and in other cases according to these proportions; there is also a provision for regulating the weight of waggons, and other loaded carriages, similar to those in other districts.

In confidence of the yearly returns from these high allowances, a number of the proprietors, invested each a specific sum, amounting in all to about £4220, for the expense of making the road, and for compensating the damages to individuals by its formation. The road was thereon completed from the bridge of Findhorn near Forres about fourteen miles to Elgin, partly in the old, and partly in a new tract. It is formed thirty feet broad, having a trench or bed in the middle fifteen feet wide, and from six inches to a foot in depth filled to the level with broken stones, or gravel, smoothed over with a slight layer of earth. The commerce of the country does not yet require a road of so much breadth, but it was perhaps a wise foresight to make such provision for its increase.

One inconvenience has been hitherto complained of, not in this road alone, but in all the turnpikes, almost every where in the kingdom. The old roads were only about 20 feet broad. Yet all that breadth was clear of every incumbrance; mire only was to be apprehended. But the new roads are every where incumbered by little heaps of broken stone, deposited in waiting for any requisite repair. Although a traveller may keep the road in the dark, his horse often stumbles, and sometimes falls over these heaps near the middle of his course. When the ground is covered with snow, it is dangerous for a carriage even in the day-time: in the dark, it is by chance alone, by no skill

skill or care of the postilion, that being overset is avoided. It is said, that by these nuisances the mail coach is occasionally overturned. It has been imagined, that the trustees might be found liable in a court of justice for any injury occasioned by this criminal negligence.

There are three toll bars, on the 12 miles between Forres and Elgin, but to the traveller passing the whole, the toll is exigible only at two. The yearly receipt of all the three conjoined amounts to about £220, from which there is about £40 to be paid for the interest of borrowed money, and for the annual compensation of damages, it may require also £10 or £12 for the annual repairs of the road. On the supposition therefore that the receipt of the tolls has already reached the highest amount, there is only a fund of about £170 yearly for the gradual repayment of the capital invested.

There is yet no fund created for continuing the road westward from the bridge of Findhorn, nor eastward from the town of Elgin to the limits of the county. The tract in which the road is to be continued to the bridge of Spey has been determined, and for the greater part to be about a quarter of a mile on the southern side of the present highway, which being the shortest course will thereby also increase the accommodation of the traveller, but will not lie in the tract which serves the inhabitants of that quarter. But the same act has made provision also for this circumstance, by converting the labour appointed by the statutes that have been quoted, into an annual pecuniary assessment.

In this respect, the country is by the act apportioned into five districts. The proprietors of each of these,

these, who are trustees on the turnpike, with the oldest magistrate of Forres in that district, and the sheriff with his substitute, and the oldest magistrate of Elgin in the district to which that town pertains, are authorized to lay on the assessment, from ten shillings up to £2 on each £100 of the valuation of the country. The assessment accordingly of the western district is £2, in the eastern quarter only £1. 10. Three-fourth parts of this assessment are imposed on the occupiers of the lands whether tenants or proprietors; the balance of *one-fourth* only on the proprietors. Besides this assessment on the lands which make up the valued rent of the county, there is a farther assessment of fourpence, as the maximum on each £1 sterling of the rent of borough lands and fishings not valued in the land-tax roll, with the same proportional relief on the tenants of such property. This comprises all the descriptions of land possession. There is moreover an assessment on houses occupied without land, of one shilling, where the rent is £1: up to ten shillings, where the rent is £20, and at the rate of £3. 6s. 8d. per cent. where this amount is exceeded. There is still farther an assessment of three shillings on all men above 16 years of age, who possess lands or houses of less than £1 of yearly rent. The difficulty in the application of this clause has not yet been felt, it having been only observed that in some cases it would be an advantage to the tenant to have his rent raised. There is also an assessment of two shillings on all hired and carriers' horses, and on all pleasure nags on whose owners the assessment for lands and houses is less than £1.

Although this assessment has not in every case been laid out in the most frugal manner, nor have the most
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necessary roads been first put in repair; yet much in this respect has been done. Many of the roads are greatly improved, both in the course of the tract, and in the formation of the path: and it is obvious, that in a few years every necessary road may be in the best manner completed, when the assessment will be lowered down to ten shillings, sufficient to keep them every where in due repair, which will be but two shillings and six-pence to the proprietor, and seven shillings and six-pence to his tenant on an extent of land, which in the reign of William was rented at £8. 6s. 8d., and at present nearly at £100 sterling per annum.

There are some inconveniences in the act, which would have been easily prevented, had it been subjected to the consideration of the gentlemen of the county, before it was brought into the house of commons. It terminates in the year 1826. It is probable that the money at present invested in the turnpike, will not even at that time be repaid. By those who are then interested, the act will be of course renewed, and while the inconveniences at present felt will be removed, the obligations also will be suited to the exigencies which before that period will arise.

A sloop of 40 tons, with a neat cabin, and the hold fitted up for horses, cattle, and carriages, has been established a packet to sail weekly on Friday from the Gulf of Golspie to the port of Burghhead, from whence the return is weekly upon Tuesday. By this navigation, generally accomplished in six or eight hours, the circuitous route by Inverness to Elgin of an 100 miles, and the uncertain passage of four dangerous ferries in open crazy ill-rigged boats, are avoided. From Burghhead it is proposed to open a new road in a straight line almost to Edinburgh, continuing the road

road direct from Elgin to Knocandow, by a tract which, from ancient times, has been known by the title of the *Scots road*: crossing the Spey, by a bridge to be built at the Cliffs of Tomdow, which may be at present accomplished for less than £1500: getting forwards through Inveraven, to the Duke of Gordon's village of Tomnatuil, and thence along the bank of Loughbuilg to join the military road at his Majesty's barracks of the castle of Breamar, whence the road proceeds by Perth, reducing the route from Elgin to Edinburgh, to the distance only of about 120 miles, and enabling the traveller to reach that metropolis, from Johnny Groat's house, on one horse, by the evening of the fourth day.

This packet will render the improvement of the ferries at Fort George and Kessok, and in Cromarty, Ross, and Sutherland, of less importance. Yet as the journey must be occasionally made by these ferries, it may be suggested, that the boats should be constructed on the approved principle of the *life boat*, and of a keel so large as to receive at once the horses and the carriage of a gentleman. Piers should be also formed so as to admit of the horses getting in, and out of the boats, without that desperate exertion, and danger of being made lame, which is the case at present.

SECT. II.—CANALS.

It would be no difficult matter to project canals, but it is not certain, were the funds procured for their formation;

formation, that the trade to be carried on by them for many years to come, could afford an adequate compensation for the expenditure. From this however might be perhaps excepted, a canal from the harbour of Lossymouth to the vicinity of Elgin, through the lough of Spynie and along the course of the Syeburn to the Earl of Findlater's property of Bishopmill, by which the carriage of goods by land, to and from the town of Elgin, at present nearly seven miles, would be reduced to less than one. Though the distance would be considerably greater, the execution otherwise would not be more difficult, were a canal made from Burgh-head to the same spot. A similar canal from the harbour of Findhorn to Forres has been frequently spoken of, and which could be, no doubt, accomplished, at an inconsiderable expense, compared to the smallest of the others.

The practicability of a canal from the harbour of Garmach, along the course of the Spey, has been also mentioned: but it is probable there would be a height of more than 100 feet to be surmounted, before it could be carried ten miles up the country. In the present state of society, there are many other objects of police demanding more immediate attention.



SECT. III.—FAIRS.

Like all other useful institutions fairs may be abused, and although attended with considerable convenience to farmers, they are also the cause of some dissipation,
 NAIRN AND MORAY.] 2 c and

and the loss of one day's industry on all the farms within six or eight miles around; for to all the ploughmen, labourers, and young girls, a fair is still as much a holiday, as it was when accounted sacred to the saint, to whose honour it was originally instituted, and whose name it still bears. Similar to Easter-Monday at Greenwich, or some other of the English fairs, where all is pastime, without the least intention to traffic: it is the resort of a great crowd, without even the pretence of business; although pedlars generally dispose of to some amount, among the frequenters of these scenes, the inferior, or spoiled goods, with which their packs are replenished.

The chief importance of fairs, to the farmer, is the means they afford for the disposal of his live stock. It is however but seldom that much is done in this respect at the fairs on the northern side of the Spey; except the little traffic among the farmers with each other, the whole demand for black cattle is made from the south: it is but rarely that the fairs of Moray are benefited by the attendance of the first-rate dealers from that quarter of the kingdom, although on some occasions, they have agents slyly purchasing for them. The cattle of this part of the country, are in general brought into the fairs of the county of Banff, where almost in every parish, village or town, they succeed each other throughout the year, in close and uninterrupted regularity, from one end of the county to the other. Though some of these are but little regarded, beyond the narrow sphere of their own vicinity yet several of them are great cattle fairs, and in them the dealers are sure of meeting their object, by a shorter journey, and at less expense, than in the markets of Elgin and Forres. To the farmers between the rivers
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of Findhorn and Spey therefore, the fairs of Banffshire, are more an object of consideration, than those of their own county, and the more so, as none of the Morayshire fairs are markets for sheep, though in one or two at Forres, a few sheep, from the upland quarters of that vicinity, are to be found ; yet the only markets for the disposal of sheep, to any great account, as well as for the sale of cattle, are in Banffshire.

The borough of Nairn has six annual fairs. From their ancient connection with the moveable festivals of the church, there is a contingency for the space of a fortnight in the days of their celebration, and they are still so much interwoven in the Julian Kalendar, as to baffle the attempt of noting them in modern computation.

The 1st, is celebrated on the third Wednesday of February.

The 2d, upon the first Tuesday of March.

The 3d, on the first Tuesday of June, by the Julian Kalendar.

The 4th, on the last Wednesday of August.

The 5th, on the 20th of September, or on the Friday after the 20th of September, and also on that day a fortnight after.

The 6th, on the third Tuesday of December.

There are also two annual fairs in the neighbouring village of Aulder. The first on the second Tuesday of June, and the other on the fourth Tuesday of November.

The only other fair in the county of Nairn, is at the village of Calder near Cawdor Castle, on the second Tuesday of July.

The royal borough of Forres numbers six fairs in the year.

The 1st, is Candlemas fair on the first Wednesday of Februray, Julian Kalendar.

The 2d, is Pasque fair on the second Wednesday of April, Julian Kalendar.

The 3d, is Midsummer market on the twenty-fifth of June, Julian Kalendar.

The 4th, is St. Lawrence fair on the tenth of August, or the Wednesday after it.

The 5th, is St. Leonard's fair on the second Wednesday of November, Julian Kalendar.

The 6th, is St. John's fair on the first Wednesday after St. John's day, Julian Kalendar.

At the village and harbour of Findhorn, there are three annual fairs.

The 1st, on the second Wednesday of March.

The 2d, on the second Wednesday of July.

The 3d, on the second Wednesday of October.

In the county town of Elgin, there are six fairs.

1. Easter eve, or the first Wednesday after the new moon which follows Candlemas, by the Julian Kalendar.

2. Pasque in April, on the Thursday after Easter Sunday, by the Julian Kalendar.

3. Trinity fair on the last Wednesday of May, Julian Kalendar.

4. St. James's fair on the first Wednesday of July, Julian Kalendar.

5. St. Michael's fair on the last Tuesday of October, Julian Kalendar.

6. St. Andrew's fair on the last Wednesday of December, Julian Kalendar.

In the village of Shanbryd, there is one fair on the first Wednesday of November, Julian Kalendar.

In the village of Garmach there is one fair, St. Margaret's, on the first Tuesday after the 18th of June, by the Julian Kalendar.

These seventeen are all the fairs of the county of Moray, unless it be a new market, which the magistracy of Elgin have been for some years struggling to establish at their village of Lossymouth, but which they have not yet raised to any considerable celebrity.

The magistrates both of Forres and Elgin also, in order to increase the receipt of their custom duties, have, from a remote age instituted a secondary market to each of the established fairs which have been noted, and which are formed of the people only of the neighbourhood, collected by the proclamation of the town drummers, at the preceding principal fair. These subsidiary markets, are for traffic only, nothing of pastime in them, nor any pedlars, and they are always held a fortnight after their own respective fairs. The farmer of the custom of the Shanbryd fair, imitates this example of the boroughs, by the intimation of the sexton, and the passing bell of the parish. By these thirteen intercalary markets, the fairs of the county amount in all to thirty.

SECT. IV.—MARKETS.

There are weekly markets on Friday in each of the towns; yet, except that they are places of meeting for the farmers with each other, they are but of little importance in any agricultural point of view. The meal

used by several of the families of the towns, and the whole of the butchers meat are brought in weekly from the country, besides peat for fuel, a small number of poultry, occasionally some cheese, a little butter, or a small load of potatoes:—sometimes a few of the cheaper kind of shoes for servants and poor people. Fish are brought to the towns every day, on which the fishing boats return from the sea. Potter's ware and such other articles as may be required for the country, are also displayed on stalls, and about the doors and windows of the shops, on the days of the weekly market.



SECT. V.—WEIGHTS AND MEASURES.

1. *Land.*—The standards of the original measures have been almost in every nation derived from the dimensions, though not accurately uniform, of the human body, or of the grains of barley and wheat. The word *inch*, introduced by the Saxons, signifies an *unit*. This measure, similar to the *palm*, the *cubit*, the *foot*, and the *fathom*, was adjusted from the thumb of a man of middle size, or by the length of three grains of barley; and from this, the measures both of length and of capacity, have been in general raised, and have been preserved unaltered from the oldest antiquity. From the English manufacture of variously graduated scales, and measures of length, the inch, and foot, of that kingdom, have been so universally adopted, that it is not generally known now, that any difference subsists between the standards of the two kingdoms,

or that it requires 186 English feet to equal 185 of the Scottish standard.

The original *Scots ell*, (established by King David I.) of 37 Scots inches, is sometimes used in the measure of cheap woollen cloth. In the county of Nairn, it is extended even to 38 English inches; it is also occasionally used in the measures of ditches and fences, or ground delved by the spade: but the English yard is almost in every case adopted.

The distance of places from each other, is very accurately ascertained by a standard mile of unknown original and antiquity, two of which however being uniformly equal to three statute miles, it must be thence presumed that a standard Scots mile (equal to 2640 English yards), had been established at some period of the reigns either of David I, or II, or of Robert I, or II, who, of all the Scottish monarchs prior to James I, bestowed the greatest attention on the police of the kingdom. By this standard, the measure of all the cross roads of this district is still generally computed. But upon the posting roads, the statute mile of 1760 English yards, established only in the year 1685, by the first parliament of James VII, ch. 44, is without exception adopted, and the duties on posting are thereby exacted. The old denominations, by which a certain extent of land was designated, *viz.* davochs, oxgates, husband lands, merk lands, and forty-shilling lands, are now but little known.

There is still a considerable proportion of the arable land of the country, which has never been surveyed, and there are comparatively but few of the tenants, who know the extent of any of their fields otherwise than by a guess from the quantity of seed which they

find may in general be required. The profession however of *land-surveying* has been long established in the country, and many of the proprietors have accurate maps of their estates. But instead of a plan of each farm, delineated by a large scale, both as it is, and as it ought to be laid out, the whole is exhibited together, upon a small scale affording but little particular information, and suggesting no hints for improvement.

The chain used in surveying land, is 74 feet in length, and ten square chains, making 5760 square Scots ells, has been the statute acre of the kingdom preserved unchanged since the reign of David the first.

2. *Corn*.—The *firlot* is the general measure for corn over the whole of Scotland; although by the 17th article of the *Union* between the two kingdoms, “It is ordained that the same weights and measures shall be used throughout the united kingdom, as are now established in England, and that standards of weights and measures shall be kept by those boroughs in Scotland, to whom the keeping of the standards of weights and measures does of special right belong, all which standards shall be sent down to such boroughs, from the standards kept in the Exchequer at Westminster.”

The duties payable to government, and the bounties allowed for exported grain, are regulated by the bushel of this standard, besides which, a proportion of the grain of which the district disposes, is occasionally sold in the London market, and a quantity of wheat for seed is annually brought from thence, all estimated by the quarter and bushel; yet this article of the union has been wholly disregarded by every county of

of the kingdom, that of Ayr alone excepted, where the Winchester bushel has been for many years introduced. There is no doubt but were the proprietors, or any one of superior respectability among them, disposed to enforce obedience to the law, this object might be easily effected; by which, without a troublesome calculation, the measure and value of grain of every kind, could be compared with the average of the whole kingdom of England. But the whole of the proprietors, in all their leases and contracts, the court of session in all its decrees, and even the British parliament itself, in all its posterior ordinances, have not enforced this wise regulation. For after such a solemn transaction between two great kingdoms, could it have been supposed that in the reign of George II, by stat. 24, ch. 31, 54, it would have been without cause ordained, "that hemp-seed, and lint-seed, shall be sold by the Linlithgow barley measure straiiked, under the penalty of forty shillings for buying or selling by any other measure," while duties, upon their importation, are nevertheless to be levied by the standards appointed at the Union. Lintseed however is never sold in this district by any of these measures, but rather by the common measures of the country.

By an Act of the Parliament of Scotland, all the measures were to be reduced to an equality with that of Linlithgow, which was understood to have been for nearly sixty years, most generally used through the greater part of the kingdom. Prior to that period, malt, barley, and oats, were measured by heaping the firloft, but it was thought more expedient to calculate how much the heap added to the measure, and to make a separate firloft for these kinds of grain, which being stroked over by a ruler, should contain exactly
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the same quantity with the other firloft heaped, and from this circumſtance, in both the counties under this ſurvey, there are two corn meaſures, not conformable to that of Linlithgow, but each raiſed from the ſtandard of its own reſpective county town. By theſe means, the meaſure of a boll of malt, barley and oats, is equal to ſix buſhels and little more than half a peck of the ſtandard meaſure appointed at the Union; the other meaſure of the boll of wheat, beans, pease and rye, and of ſalt alſo, when ſold by meaſure, is equal to four buſhels and one and an half peck, nearly of the ſame ſtandard. The boll of four firlofts is every where accounted the legal proper meaſure, but this quantity of oats ſeldom yields the boll of meal. In the higher parts of the diſtrict, in every vicinity or pariſh there are, on this account, two or more of the firſt reſpectability among the country tenants, both for integrity and ſkill, who perform the ſervice without any fee, of appraiſers between the buyer and ſeller, eſtimating how much more will in every ſample be required, to make the boll of meal, generally from one to nearly three pecks. In the more plentiful country along the coaſt, both of Moray and Nairn, a peck of oats being accounted but a ſmall matter, the general allowance for a boll of this grain, and by which the fair price has been always aſcertained, is counted *five firlofts*, and which, as has been mentioned, is found to correſpond exactly with the Engliſh quarter. In the county of Nairn, the firlofts, both for wheat and barley, are a little larger than in Moray, the little firloft being a boll of nearly five buſhels, and the other making the boll ſix buſhels and two and an half pecks of the ſtandard appointed at the Union.

As the people of this country have transactions in the articles of grain, and meal and flour with their neighbours of Inverness on the one hand, and of Banffshire on the other, besides their dealings in the Forth and Thames, in each of which the measures are different from their own, when they had scarcely acquired sufficient information to adjust their practice to this vexatious variety, the court of session are increasing and complicating the troubles in this respect by superintending a third firloft, which is not to be employed in civil transactions, but is restricted only to clerical concerns; this is attended with much inconvenience, which is in no degree counterbalanced by any sort of advantage. In some of the stipends, which have been modified of late, the court have decreed the victual to be measured to the minister by the Linlithgow firloft, which, besides other unnecessary cares and calculations, obliges the minister to measure it over again a second time to the corn merchant or other purchaser, by the standard firloft of the county.

3. *Liquids*.—The measures for liquids are made of tin in the founderies about Glasgow, Leith, and Aberdeen, for the whole kingdom: they are therefore every where of the same capacity. They are raised from the gill, four whereof are equal to a mulchkin, two mulchkins are a chopin, which is the common bottle, and two chopins make a pint, which exceeds the English pint, nearly as their pound sterling exceeds the pound Scots money, as two Scots pints are equal to the English gallon. By these measures oil, and spirits and treacle are sold in the shops of the grocers; ale and spirits in the taverns, in which of late the more elegant crystal cruets has taken the place of the tin jug.

4. *Weights*.—

4. *Weights*.—The weights also, similar to the measures, were originally formed upon a standard, not of absolute uniformity, but upon the weight of grain. It may be supposed that money was the first substance of which the quantity was ascertained by weight.

By an assize of David I. at Newcastle, about the year 1130, the sterling penny was appointed to weigh 32 grains of good round wheat: the ounce or shilling, 20 pennies: and the pound 15 ounces. When weights of more varied denominations were introduced, money weight, from its consisting of these three particulars, became distinguished by the epithet of *troie*, from the latin word *tres*. Instead of 32 grains of natural wheat, 24 artificial grains of metal were substituted, and this weight has been always common over the whole of this country for plate, jewels, and medicines, but the pound weight is somewhat differently divided from what it is in England.

The common English avoirdupoise weight, of which the pound contains 7000 troie grains, came gradually to be introduced into this district, as the merchandize and traffic with London gained ground after the Union: hence, in this country, it is still distinguished by the title of *new weight*, in contradiction to the old *Scots troie*, known also, from an ancient commercial connection, by the name of the “Dutch, or Amsterdam weight,” of which the pound contains 7616 English troie grains, and which, except for leather, flour, and salt, is still continued for the other produce of the country.

These three weights are the same over the whole district, but there is also a fourth weight, which may be distinguished by the name of the *trone*, and which is not precisely the same in any two quarters of the district;

district; although prohibited by several statutes even prior to the Union, it has been still continued for butter, cheese, tallow, wool, hay, and flax, produced in the country. This pound is divided into 16 of its own ounces, and 16 pounds make a stone, and a stone equal to 21, 22, and 24 lb. of the old Scots or Amsterdam weight, forms the most usual varieties of the *stone* in this district.

The ordinances of the British parliament have been more inconsistent still, with the 17th article of the Union in what relates to weight, if possible, than to that of measure. By the act already quoted for measuring hemp and lint-seed, the stone avoirdupoise is made to consist of 16 instead of 14 pounds, for the weight of these two articles in the raw material. By the 13 Geo. III. also, ch. 43, s. 16 and 17, the boll of oatmeal must be understood to be 8 stone troie, that is Dutch or Amsterdam, as if it had been framed to ratify the act 1696, William and Mary, substituting that weight in place of the boll measured by the firlof of Linlithgow.

Besides this diversity in the measures of length, capacity, and weight, even in their application, there is but little uniformity. The flour and meal of wheat, as has been observed, is sold by the standard of the Union. Oatmeal is sold by the Dutch, or old Scots troie at 9, and sometimes at 8 stone, while the boll of barley meal, mixed occasionally with rye or pease or other grain, under the name of household meal, by the same weight varies from 9 to 10 or even to 12 stone for the boll.

The rate of coals is different in a small degree at the different ports. The barrel by which they are meted, is understood however to be equal to three

Winchester

Winchester bushels heaped, and weighs about 13 stone Scots troie or Dutch weight. This vexatious diversity, the occasion sometimes of wrangling litigation, and fraud, is still farther aggravated, by each mill almost having a set of measures differing from all others and peculiar to itself, for recovering the duties chargeable for grinding the corn. These duties being in part also uplifted in the grain, when divested only of its outer husk, and partly in the meal before its separation from the bran, it is not possible for the owner to discover with accuracy what proportion of his stock may be exacted.

It may be readily perceived, that since much of the value of grain depends upon its quality, that neither weight alone without regard also to the measurement, nor the measurement without reference also to the weight, can afford an accurate criterion of its worth. For 20 stone of barley, of which the measured boll weighs only 15 stone, is vastly inferior in quality, and in no respect of equal worth, to the same measure which weighs 20 stone. It may be therefore presumed, that a law which was several years ago proposed, for ascertaining the quantity of grain by weight alone, could not be probably adjusted to any useful purpose.

It is also obvious upon the whole, that almost every interference of the legislature, with the weights and measures, since the twelfth century, has increased, instead of removing their inconvenient diversity.

It would however be an easy matter for the court of session, supporting their authority by the controul wherewith they are invested over the sheriffs, to gain the most punctual observance of the 17th article of the Union, both in regard to measures and weights,
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in every quarter within their whole jurisdiction, which without any deep mathematical investigation, or learned philosophical adjustment, and without much deviation from the present arrangements, would remove all the difficulties which have been so heavily felt in commercial intercourse, and serve every purpose in the ordinary transactions of common life.

SECT. VI.—MANUFACTURES.

It is scarcely necessary to observe, that a very considerable proportion of the inhabitants of the district, have been, from the first peopling of the country, in the uninterrupted practice of manufacturing their own blankets, and nearly their whole attire both of wool and of flax, even to the production of the raw material, by their own domestic industry, except the weaving only, it not being in every case, that either a professional tailor or shoemaker is employed; but it is needless to inquire either into the number of the manufacturers, or the extent of their manufacture: though it employs the most assiduous diligence of many thrifty matrons, and innocent maidens, yet were it altogether reduced into money, the amount would be considered by many as insignificant.

Independent therefore of these branches of domestic industry, it is to be observed, that the first manufacture that was ever known in the district, still subsists, although not perhaps with all the vigour which it had once attained, yet without any great symptom of decay: this is the spinning of flax, for the manufacturers

turers of Aberdeen : and in those parts of the district which border on Inverness, for the thread manufacture which is there established.

There is nothing which can be called a linen manufacture, yet from the number of looms in the country, and from the show of webs bleaching about the villages, and dwellings of the peasants, there must be a greater quantity made, than is used by the inhabitants. The surplus finds its way to other countries, through the medium of the merchants in the different towns. In the same way, coarse woollen cloths called *plaiding*, made in private families, are disposed of to a considerable amount.

The manufacture of woollen cloth established at Newmill in the parish of St. Andrew's Shanbryd, by Messrs. Johnston and Sim, merits notice ; circulating yearly about £1,200 among more than fifty work people, of whom about eight are Yorkshiremen, bred to the various branches of the manufacture in their own country ; a proportion of those who are employed, might be almost still accounted but children. The advantages to society, and the disadvantages of such establishments, have been stated in other places where they are more obvious.

In this manufactory, there is about two thousand stone of wool annually manufactured into narrow cloth, sold from two shillings, up to eight shillings per yard, in the same measure of perfection, and considerably cheaper than in Yorkshire. Besides the cloth, there are duffles also, and bajzes, kersies and blankets of every size, and every degree of fineness which the shop of the woollen draper can exhibit. They are disposed of in the shops of the different towns, both in the north and in the south of Scotland, and of late the

the market has been extended to some account even to the West-Indies. The whole process of carding, and spinning the wool; weaving, and dyeing the various colours; dressing, and pressing the cloth; is completed in this establishment. Besides all the machinery usually requisite, the company have four carding machines, chiefly employed in the service of the private families all over the country: Mr. Johnston has also of his own, two carding machines in the parish of Inveravon in Banffshire, for the accommodation of the people in those parts, who spin their own wool. The operation of the carding machine is performed with so much more expedition, so much less waste, and the wool is so much better prepared for being spun, than it was formerly by the hand cards, that it is brought in from all the country around, for the distance of nearly twenty miles, to be carded by these machines, at the rate of three-pence per pound weight avoirdupoise, including also the requisite allowance of oil. Nearly 60,000 stones are thus carded by these machines in both counties in the year, for private families, who afterwards complete the manufacture themselves into plaiding for the market, and other kinds for their own domestic occasions.

In the vicinity also of this manufacture, Mr. Johnston has a bleachery of linen, where a great proportion of the cloth made in the private families in the different quarters of the country is whitened, and made up in the best manner.

In the neighbouring village of Bishopmill, Mr. James Miller has begun a manufacture of cotton cloth. He purchases the yarn in all its varieties from the spinning mills about Aberdeen, and occasionally from about Glasgow; and thereby employs six looms in weaving

ginghams, shirting cloth, shawls, and other kinds of cotton cloth, which he disposes of in the country, and in a considerable proportion in the vicinity of Inverness, partly wholesale and also partly in retail.

In Forres there is a tan work, and a small establishment of the same kind in Elgin; where there is also a tawing work of some consideration, the manufactured articles of which are chiefly sent to London. The wool is readily disposed of in the country.



SECT. VII.—COMMERCE.

In the commerce of the district, nothing is taken into account, but those articles that are brought in, or carried out beyond its boundaries.

It has been already observed, that cattle must be regarded as among the most important branches of its export trade. From the number of markets in every season of the year, their want of connection, and distance from each other, and from many of the cattle being privately sold on the separate farms, it is impracticable to ascertain the number, and still more so to calculate the value, of those which may be sold yearly from the district. But on comparing the extent of the pastures and turnip fields, allocated for black cattle, with the extent of the lands cultivated for corn, the value of the one should be nearly on an equality with that of the other, and might be estimated in ordinary seasons, from about ten to thirteen thousand pounds; supposing the value of the cattle retained, equal to the value

value of the grain required for seed and breeding. There are however some years in which there is no demand for cattle, and some also in which there is little corn that can be spared.

The corn which may be exported from the country of Nairn, is for the most part disposed of in the upland quarters of the county of Inverness: and the whole of the surplus grain of Moray, with a very small occasional exception only, has been exported from the harbours of Findhorn, Lossymouth, and Garmach, disposed of sometimes about Dundee, but more generally in the frith of Forth, partly about Leith, and partly sent westward by the canal. The surplus wheat of the county, generally from eight to ten thousand quarters, is, to some extent, occasionally disposed of in Mark-lane.

The sheep and swine have been generally purchased by butchers about Aberdeen; a small quantity of pork has been salted and exported from Findhorn in the spring of the years 1807 and 1808. There is a speculation of extending this branch, including also beef from the new harbour and village of Burghhead.

Exclusive of the export of *men*, noticed in the statistical history of the parish of Duffus, the only other article to be mentioned is salmon. The price is so high in the country, that salmon is only exhibited at a feast, an event which does not recur with such frequency, as to make the consumption at home of any consideration; the whole quantity therefore, which all the rivers produce within the district under this survey, may be understood to be exported to London. An idea may be formed of the extent of this article of export, from the amount of the fishing rents of the rivers Nairn, Findhorn, and Spey, including in that

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amount,

amount, the expense of the fishing crews, boats, nets, cruives, and the yare, and not omitting that also of the sailors, and the ships employed in the voyage to London. The ships are distinguished by the title of salmon smacks, as being almost solely engaged in this trade. The cost of every voyage, by each of these vessels of 80 or an 100 tons, it is said, amounts to £60. As they appear in the offing at Spey, and in the same way at the other fishings of the same tenant, the salmon, entire and fresh, previously packed to the number of three or five in a box with pounded ice, is carried out in boats, put on board, and commonly reaches the London market between the 5th, and the 9th day. There are a number of smacks engaged in this concern, following each other in uninterrupted succession, taking in any number of boxes which may be ready at the time, and proceeding with the utmost practicable expedition; they keep the sea in every kind of weather, and get forward almost by every direction of the wind. It is said, that when salmon sells at no higher price than six-pence the pound, towards the latter part of the summer, it is then boiled and packed in kits, for the same market. For the fresh mode, a great store of ice must, in its season, be provided in the ice-house at every station: in the pickled way, a great quantity of vinegar and salt is required.

To provide for the payment of the rents, which may in the whole amount to more than £8,000; for all this expenditure, for any adequate compensation, and for the attention, capital and risk, the return for this article of export must at least be equal to £25,000. The total amount of all the other commodities exported from the district, grain, meal, and cattle, sheep, swine, yarn,

yarn, cotton, woollen, and linen cloth, is computed not in general to exceed £30,000 yearly.

For several years, a considerable quantity of timber has been exported from Garmach, but as it is, in a great measure, the production of the county of Inverness in the forests of Strath Spey, it can be scarcely estimated among the exports of this district.

Although the different kinds of the articles exported are not many, it would naturally, on the other hand it is believed, occasion some wonder, to contemplate for a moment how few of the necessaries of life are provided within the county, and the great variety of those matters in constant use, which are furnished only by importation.

The articles imported from London are tea, coffee, sugar, hops, porter, cheese, mustard, and spiceries, silk, woollen, and cotton cloths, hats, ribbons, threads and buttons, seed wheat, grass seeds, and several kinds of garden seeds, tanned leather, household furniture, hard-ware of every kind, stationery ware, wafers, wax, quills, ink, blacking, quack medicines, drugs and toys. The four or five vessels employed in this trade, take in goods for all the ports of this district, for Cromarty also, and Inverness; they perform their voyages in a kind of rotation, arriving one after another generally every three or five weeks.

The ships employed in carrying out the corn, bring home occasionally, coal from the south of Scotland, more generally from Sunderland, Newcastle being generally avoided, on the account, it is said, of a higher duty.

From Leith, there is imported yearly a considerable quantity of salt, soap, tanned leather, tallow, foreign bar iron, and manufactured iron from Carron, cart-

wheels, and some other agricultural implements, bottles, window and crystal glass, English and Scotch stoneware, English hard-ware, manufactures from the looms of England, and from those of the west of Scotland, grass-seeds, and wine.

From Aberdeen is imported a considerable quantity of heckled and undressed flax, ropes, hard and soft soap, and some foreign bar iron. The flax is sent in a great measure only to be spun, and is returned in yarn.

The facilities of commerce will be very considerably increased, by the formation of the harbour of Burgh-head. Along the whole southern coast of the Moray Frith, for an hundred miles from Inverness to Buchanness, there was no good harbour, being all of difficult access in stormy weather, and deficient in depth of water. The prevailing winds being from the west and north-west, it frequently happened in a gale from that quarter, that vessels unable to get into Cromarty, were driven to leeward without shelter, till they could reach Peterhead, always with danger, and they were sometimes wholly lost. It was obvious that this would be prevented by a proper harbour at Burgh-head, which presents a bottom of clay or sand, and a depth of water at spring-tides of about seventeen feet, and to which the wind, that forces a vessel past the opening into the bay of Cromarty, almost of itself would bring them. On these patriotic considerations eight gentlemen, namely, Mr. Sellar, of Westfield, Mr. Young, of Inverurie, Mr. Forteach, of Newtown, Mr. King, of Newmill, Colonel Francis Grant, of Grant, Mr. Brander, of Pilgaveny, Sir Archibald Dunbar, of Duffus, and the Duke of Gordon, entered into a formal concert for the accomplishment of this interesting object. The situation is a rocky headland, rising from
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the plain of the coast with a gentle elevation, and projected a little way into the Frith. In former times this station was an object almost of the first national importance; it had been seized by an invading army of the Danes, and fortified by them, was considered as impregnable as Gibraltar. The stone of the ramparts had been probably removed for building the village, in other respects the fortifications, impaired by the hand of time alone, remained till they were cut through, and levelled, in the spring of 1809, by the gentlemen of this partnership, for the new streets of their village. A lofty rampart surrounded the citadel, an oval area of the extent nearly of an acre. The gate was protected by three parallel out-works across the whole peninsula, which in their late decayed state, appeared steep grassy mounds, and deep trenches between; it is believed that these mounds could not at the first have been climbed over, and the only access to the gate was by traversing all the trenches round by the end of each of the mounds, and where each narrow pass might be blocked up, and defended. A little plain, nearly of the same extent with the area of the citadel, spreads out between the bottom of the head land and the sea; this was also fortified by a rampart. An obscure tradition doubtfully intimated, that the well of the fort had been in the southern corner of this quarter of the works, under the highest part of the head land. There being no water sufficient for the store of a ship in the immediate vicinity, the partnership gave directions for having this particular ascertained; on removing a few loads of the loose broken stone, they were encouraged by the appearance of a square apartment, on which part of the plaster remained. This was thereupon cleared out, and a narrow

stair was discovered cut out of the rock, as if between two walls, leading down ten or twelve steps from the level of the plain to a chamber about twelve feet square, the floor of which was occupied by the well, a square also of eight feet on each side, with the path about two feet broad on each of them, decorated by a cut stone moulding round the well. It contained about two feet depth of water on a bottom of rock which had never been trimmed smooth; one stone served as a step in drawing up the water, and one in the corner of the path, offered itself as a seat. A niche in the southern angle seemed a stand for a statue. Upon the side of the head-land the rock was hewn out nearly twenty feet in depth; but on the other sides scarcely eight feet below the level of the plain. Common masonry supplied some accidental breaches in the natural rock, and the whole appeared to have been neatly plastered with lime mortar. The water is light, and quite free from brackishness, though the bottom of the well is five or six feet below the level of the sea. When an arch is built over at the top, and a proper pump erected, it will be sufficient, both for the accommodation of the village, and for the supply of all the vessels with water, which may have occasion for that article at Burgh-head.

Although it be not the object of this undertaking, to enter into any ancient history farther than in connection with present circumstances, it may be just briefly observed, that other remains of the art employed in constructing this fortification were discovered in the works carried on by this partnership. Besides some beams of oak, which had formerly been taken up from some casual breaches, there were obviously the ruins of a chimney vent, built with lime mortar, though every other

other part of the ramparts, the larger stone having been taken off, was composed only of rubbish, earth, and stone. There were also some flag stones turned up, on which the outline figures of animals, evidently intended to represent the ox, are rudely portrayed, nearly with as little skill as if done by a boy with a nail; yet as all these figures, to the number of five or seven were exactly of the same size, and the little channels by which they were defined were every where of uniform excavation, it is not possible to suppose that they were not deemed of importance, in the age when the fortification was constructed. Some other little objects of antiquity which were discovered, being no way instructive of the arts, or manners of the ancient inhabitants of this fortress, need not be farther noticed.

The partnership having acquired the property of this head-land, and the adjoining plain, to the extent together of about thirty-six acres at the price of £2,605 they laid out of their funds. 4,695
and they received from government. 2,000

all which amounting to £9,300
has been expended in the purchase and in the formation of the harbour, and the necessary roads therewith connected.

One grand mole wards off the violence of the northern surge, and a long pier, parallel to the side of the head-land, affords the requisite protection on the west, which the headland itself presents without art, on the east, and thus form a port capable of containing sixty sail, each of the burden nearly of one hundred tons.

The village, which contained nearly 500 individuals, exhibited

exhibited an irregularity in the disposition of its buildings so difficult to alter, that the company brought down Robert Burns, Esq. an eminent architect from Edinburgh, to form a regular plan for a new village, which he drew up, without paying any respect to the interesting monuments of Danish antiquity. Mr. Burns' plan contains eight streets, each bearing a name complimentary to one of the partners; the whole containing 300 feus, each forty-eight feet along the street and sixty feet backward, they are disposed of in perpetuity at a price regulated by the advantages of situation. Nearly one third part of the whole have been already purchased.

Mr. Young of Inverugie has formed a small secure haven, at his new fishing village of Hopeman, about three miles eastward of Burgh-head. It will contain six or eight ships of as great burden as commonly navigate the Moray Frith, being intended to receive vessels loaded with coal for the lime work, and for the exportation of corn, and of the calcined limestone. The pier affords shelter from the north and from the east; the basin is in part excavated out of the rock. This work, with the formation of a convenient access from the village, has been executed entirely at Mr. Young's own private expense, and has already cost above one thousand pounds. Though this haven be in every respect commodious, and efficient for the purposes of its construction, the mole is not yet quite completed, and it will be necessary also to have the dock still farther excavated.

Effects on Agriculture.—It is evident that without the commerce of the country, its agriculture would soon sink into the same state of degradation, which it exhibited in that barbarous condition of society, when
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the tillers of the ground were distinguished by the appellation of "*villains*." The rents and the taxes, as they were in that era, must again be paid in kind, and the highest aim of cultivation could never rise above a mere sufficiency only, of the most homely productions.

Although people in short may reason against the beneficial influence of commerce upon agriculture, as with deep ingenuity has been done against the existence even of material objects, yet they impress no degree whatever of conviction. Commerce and agriculture mutually support each other, and every considerate mind entertains the warmest regard for the growing prosperity of manufactures and commerce, as well as of agriculture.



SECT. VIII.—POOR.

1. *Their State and annual Provision.*—A few individuals, as farmers of some standing, occupying land of from about £10 to nearly £40 of rent, together with some respectable tradesmen to the number of six or ten, according to the extent and population of the parish, are after suitable admonition, and an obligation to fidelity on their part, solemnly ordained in the assemblies of public worship, to the office of the *eldership*. Each Sunday, and other days of public worship, they, in rotation, collect the voluntary contributions from the people in the church, which in this district

district constitutes almost entirely the whole provision for the poor.

The elders make these collections by going round to each with a ladle or small box with a handle to it, when the public worship is concluded, or in the churches of towns before the sermon begins, by attending a basin on a stand at the doors. The produce of each collection is carefully noted in a book by the session clerk. A dividend is made quarterly or half-yearly by the elders, generally in presence of the minister and clerk, and the trifle debursed to each of the poor upon the roll is carefully noted, shewing the annual expenditure equal to the amount received. This amount is in some parishes, also, in part composed of the interest of small sums, which had been formerly left to the poor by proprietors, or other respectable inhabitants of the parish. A small proportion of the funds of the poor is also occasionally derived from other sources, which it might be deemed tedious more minutely to detail.

By these means the funds of the poor have been managed, for more than a century and an half, by men in a humble station of life, with considerable trouble to themselves, without reward, and without the imputation, or even the suspicion of fraud; and the poor, not only in this district, but it may be said almost of the whole kingdom (aided by their own parsimonious industry, and a little private charity), have been supported, without the intervention of the proprietors, without murmur, and without even cause for complaint.

In those sixty-one parishes of Scotland, which have imprudently admitted an assessment for the support of the

the poor, the number of paupers, and the amount levied on the aggregate of the population, has been collected from the statistical history of the kingdom, and stated in §. 5, of chap. iv.

The annexed statement exhibits these particulars in each of the parishes included in this survey, and it may in general be observed, that by their own industry, and the frugal management of their little means, aided only with the pittance of the parish funds, the poor have, "*meat, clothes, and fire,*" and live with as much comfort as the paupers who are supported by established exaction, and moreover, with that additional elevation of mind, which their own exertion, for their own maintenance, naturally furnishes.

PARISHES:	Population	Number of	Amount of an-		
	in 1809.	Poor.	£.	s.	d.
1. Speymouth	1136	40	21	3	4
2. Urquhart	1010	33	18	10	0
3. St. And. Shanbryd	746	31	26	12	2
4. Drainy.....	1063	35	30	2	8
5. Duffus	1397	60	24	1	1
6. Spynie	860	18	12	2	4
7. Elgin.....	4537	114	80	0	0
8. Birnie.....	402	18	7	10	0
9. Alves.....	996	34	22	12	0
10. Kinloss.....	1030	29	14	10	0
11. Forres.....	3127	125	57	0	0
12. Rafford.....	1037	38	15	10	0
13. Dollas	826	24	10	8	0
14. Edinkilie.....	1132	35	30	0	0
15. Dyke.....	1523	60	32	0	0
Carried over.....	20822	694	402	1	7

PARISHES.	Population in 1809.	Number of Poor.	Amount of annual Provision.		
			£.	s.	d.
Brought over	20822	694	402	1	7
16. Duthel.....	1123	24	8	0	0
17. Abernethy.....	1770	27	6	0	0
18. Cromdale.....	3025	30	14	2	5
19. Knocandow.....	1484	21	13	0	0
20. Rothes.....	1532	27	16	0	0
	29756	823	459	4	0
County of Nairn :--					
21. Aultdearn.....	1409	40	16	1	3
22. Nairn.....	2700	80	30	0	0
23. Caudor.....	852	40	13	0	0
24. Ardclach	1186	34	5	2	9
Total of Nairn.....	6147	194	64	4	0
Total of Moray.....	29756	823	459	4	0
Total.....	35903	1017	523	8	0

By a comparison of the result of these specialties, proportionally with the sixty-one parishes who have established exaction, it will be discovered, that in them, in relation to the population, the number of the poor is one to about sixty: while in the parishes of the counties of Moray and Nairn the proportion is one pauper to about thirty-two of the population. It is to be observed, that no considerable alteration has ever taken place in the number on the poor's roll in the parishes

parishes of Moray and Nairn during any period of the session records: but that in the parishes subjected to exaction, the number of the poor *has increased, is increasing, and is not likely to be diminished.* For in this respect it is to be observed, that several of the ministers have mentioned in their statistical accounts, that that delicacy of sentiment which formerly prevented all, but the most helpless of the indigent, from soliciting to be admitted on the poor's roll, appears of late in this country with diminished influence; that some proportion of every roll is composed of paupers who have abandoned the established church, and having been first duped nearly of their all, for the support of those vagabond gospellers, who ply with assiduous delusion and cunning, among the silly and the weak, are afterwards impressed with the belief that it is meritorious, to elicit all they can in this way, to be piously bestowed on the support of the pure preachers *of faith without works*; and which the sessions, under the impression of its being on their part illiberal, to a poor erring sectarian ignorantly led astray, weakly countenance. But although the parochial sessions may have thus permitted the poor's roll to be in several cases improperly augmented, and a part of the parish funds entrusted to their care, to be thus even perniciously applied; yet the rate of expenditure scarcely exceeds the average of nine shillings each, on the whole number of the poor in these two counties, while it amounts to nearly two guineas each, to those who are under the provision of assessed exaction in the sixty-one parishes, whose example, as a warning to others, is thus exhibited.

2. *Box-Clubs.*—For a poor labouring man to be solicitous when in health, by a voluntary contribution, whether weekly, monthly, or quarterly, from the gains
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of his industry, to lay up for himself a provision against the misfortune of sickness, or the infirmities of age, to secure also a subsistence for his destitute widow, or his infant children, if they should be left fatherless ; must, without controversy, be allowed to be a strong indication, both of the most honourable and virtuous dispositions, and a generous and independent mind. The great proportion of the labouring classes in every parish over all this district, the tenants of small possessions, tradesmen and artisans of every description, who have entered into the societies for these useful purposes, bear ample testimony of the virtue, sobriety, and discretion, which that rank maintain, and it must be gratifying to every one interested in the welfare of his country, to contemplate the long roll of friendly societies which the district under this survey presents.

1. In Elgin there is the Guildery, a very respectable association of merchants, with funds which from a small beginning have accumulated to such consideration, that they divide nearly £100 annually, among the widows and families of deceased Guild Brethren.

2. The incorporation of Hammermen.

3. Glóvers.

4. Tailors.

5. Shoemakers.

6. Weavers.

7. Square wrights.

Each of these have their club-box for indigent members.

8. The Friendly Society.

9. Adam's Lodge.

10. St. Giles Society.

11. Farmer's Society.

12. The

12. The True-blue Gardener Society.
 13. The Free Joiners.
 14. The Elder Society.
 15. The Labourer's Society.
 16. The Female Friendly Society.
 17. The Labourer's Club.
 18. The Bishop-mill Society.
 19. The Lossymouth Society.
 20. The Rothes Friendly Society.
 21. Kilnalemnok Lodge of Operative Masons.
 22. Rothes Operative Lodge of Free-masons.
- In Forres there are,—
23. St. John's Operative Lodge of Free-masons.
 24. St. Lawrence Operative Lodge of Free-masons.
 25. The Friendly Society.
 26. The Wright's Society.
 27. The Weaver's Society.
 28. The Shoemaker's Society.
 29. The Gardener's Society.
 30. The Guild Brother's Fund, similar to that establishment at Elgin.

In Nairn there are,—

31. The Guild Brother's Fund.
32. The Trades Society.
33. The Friendly Society.

All these societies have their preses, their cashier, and their clerk, and their whole concerns have been hitherto managed in the most frugal manner, and without any tavern expenses. It is scarcely possible for imagination to suppose any one disadvantage that can arise from such associations, and the more so, as one of the regulations is, that any member guilty of gross indecent immorality is to be expelled; this might eventually indeed be the source of litigation, if such

unworthy member should have the means of carrying on a law-suit. Were the security of any of the funds to fail, and the stock of consequence to be lost, reproach and discord might perhaps arise among the members; but none of these disadvantages have hitherto in any degree been felt. These institutions certainly merit the support of all the proprietors in the country, by which is meant, not any interference on their part in the management of the funds, which might be productive of harm, but by procuring an exemption in favour of these box-clubs from the claims both of the property tax and of the legacy duty.

Although it is not necessary to notice here, the provision for the widows of the parochial clergy, as it has been for many years every where sufficiently known, it may be proper, however, to mention the provision made for the widows and children of the parochial schoolmasters of the kingdom, by the act of 1807, which is framed in similar terms, and with conclusions similar to the act, for the widows of the clergy. The rates of contribution rise from one guinea, up to five guineas yearly, as each contributor may make his election, which is unalterable. The annuities follow the same proportion, from £5 up to £25 yearly. It improves a little on the clerical act, by the appointment of a collector in the bounds of each Presbytery, to receive the rates in the country, and remit to the general collector in Edinburgh, and to arrest any arrear where the salary is payable. It has adopted also the same stinted parsimony of the clerical act; namely, divesting the widow of her right upon any future marriage. Were schoolmasters, or ministers, enabled to secure the annuity as a jointure, they could, in general, form more respectable matrimonial connections than

than the present niggardly system admits; they would, in this respect, be placed more on a par with the upper classes, in the contemplation of the connubial state. The restriction in this respect is disadvantageous to the contributors themselves, and also to the advancement of their children in life. On some rare occasion, the widow might be enabled, with the assistance of such a small jointure, to improve her own situation by a subsequent union with a young man, dependent at first entirely on his own industry; but whose situation, without the jointure, prohibits such connection. This enactment might be supposed to have been framed on the erroneous principle, that the second husband must be able, from his own means to provide for his wife, but its stinted liberality is betrayed, *by the generous allowance of half the jointure to the widow*, who shall be so fortunate as to catch a contributor. While this restriction is thus also disadvantageous to the small number of widows who might otherwise find it occasionally in their power to make a new connection, it is, in no respect, of the least advantage to the fund, inasmuch as itself renders widowhood perpetual.

The other provisions of the act appear to be wisely framed, and adapted to the circumstances of the parties intended.

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SECT. IX.—POPULATION.

It is the practice of the ministers of the church of Scotland, in the examination of their parishioners, to

make up yearly a roll of the whole number of persons within the bounds, though the list is sometimes restricted only to the examinable part of the inhabitants.

The particular state of those actual enumerations, within the limits of this survey, has been obtained, composing the first column of the table in the preceding section, and exhibits the number in each parish, and the aggregate amounting in all to 35,615, of both sexes and of every age.

By the act 41. Geo. III. in the year 1801, government procured an accurate state of the population of the kingdom, by the special inquisition of the parochial schoolmasters. This account was first returned to the quarter sessions, and put into their books by their clerks in each shire. Besides the simple enumeration of persons, this investigation was extended to other circumstances, peculiarly interesting in an agricultural point of view. It has been obligingly communicated by the clerks of the justices, in the respective counties, for the advantages of this survey, and is here annexed. The whole of the population of the parish of Cromdale amounting to 3025, and a part of that of the parish of Abernethy amounting to about 843, as pertaining to the county of Inverness, appear not to be comprehended in this statement. Making allowance for this, it will be observed, that no important alteration has taken place between the years 1801 and 1809. Notwithstanding even of a small decrease in the parishes of Speymouth and Alves, there appears an increase on the whole amounting nearly to 300 souls.

2. *Is the District over or under peopled?*—From the difficulty of finding people for the labours of agriculture, and from the quantity of grain which is annually exported from the district, it must be inferred, that it is underpeopled. It is only in the concerns of husbandry, however, that any scarcity of inhabitants is felt. In all other professions, the individuals of each are pressing on each other. It would be advisable therefore, both for the proprietors and the tenants on the larger farms, to unite in promoting the increase of that useful rank, upon which all the rest are so much dependent. This, it has been seen in Sect. 1. of Chap. XV. may, without inconvenience, be accomplished by attaching cottages to every farm, with the accommodation of a garden and the summer maintenance of a cow: it being certain that such accommodation, if any way in the form of a permanent settlement, will readily find occupants, who, with the greater part of their offspring, will naturally follow the healthful pursuits of cultivation. It may be observed, that the inhabitants of the villages, each with a few acres, are poor; yet their own concerns engross all their industry, and they afford no aid to the agriculture of the country around. Even their boys are educated in such desultory habits, and in such idleness, that in few instances they have the attention which is requisite for tending a herd of cattle on the pasture. The children of a cottager, more accustomed to a degree of solitude, and habituated to less variety even in their amusements, are in this respect greatly to be preferred. The colony which Mr. Young, of Invergie, settled in the moss of Barmuckity, each with about six acres only of what was a sterile peat morass, at a guinea per Scotch acre

of yearly rent, confirms the idea that this kind of population depends almost entirely, on the permanency of a settlement which affords milk and fuel. As the price of labour in this district is, in some measure, regulated by the price of oatmeal, it is presumed that it is not from any apprehension of want of food that any decrease of the population has taken place. The advantages of enlarging farms from 200 to 400, or 500 acres are manifest ; and were there a cottager, with its suitable accommodations as has been already mentioned, built for every 50 acres of which a farm may consist, the population would almost immediately exceed what it ever had been, under the ancient system of small farms, and all the clamour about consolidations of this kind would be for ever quieted. The difficulty also of procuring people for the business of agriculture would be thereby removed, and even the expense of agricultural labour would be diminished.

If these suggestions merit consideration, in what estimation is that wisdom to be held, which lately brought an action for the forfeiture of the lease, because the tenant had granted a settlement to a cottager. The action was dismissed, as the cottager was in the character of a labourer on the farm, and not in that of a sub-tenant.

3. *Healthiness of the District.*—The healthiness of any country depends more on the quality of the air and of the water, and on the occupation of the people, than on the nature of their food. Much also depends on the airiness and the cleanliness of the dwellings. From the quality of the soil and the want of stone, it is obvious that over the greater part of England,

land, the cottages of the poor must be built of brick, and it is equally obvious, that a brick cottage, covered with tile, must have the appearance, and often the reality of more cleanliness than the turf walls, and the thatch of sod in the cottages of the north. The thin slight wall, and the light roof of the English cottage, more pervious to the cold than the thick earth embankment, which forms the dwelling of the northern rustic, may be also more free from damp and fetid vapour. The foundations of the brick wall also are not laid very deep in the earth, and the floor of the dwelling is generally above the level of the ground on the outside. In the dwellings of the northern poor, the soil of the little garden rises, for the most part, to half the height of the back wall, which generally forms the fence on that side; and the dunghill, in a hole scarcely a yard distant from the door, sends in its nauseous effluvia. Owing to these circumstances, notwithstanding the fumigation of the tobacco pipe and of *peat-reek*, rheumatic and scrofulous disorders are too prevalent, and fevers of different kinds; but all equally and greatly infectious, frequently take place. It were much to be wished, that the dwellings of the poor were framed in such a manner, that the seeds of disease should not be suffered to lurk in them. There is little cause to suppose that disease is at any time to be imputed in this district either to the want, or to the quality of the food, or to any immoralities among the poor.

It is observed by the author of the Account of Boharna in the 17th volume, of Sir John Sinclair's Statistical Account of Scotland (page 367), "That from the nauseous

" draught of train oil in Lapland, and the more disgust-

“ ing beverage of Otaheite, it may be inferred, that
“ man cannot be satisfied by the simple element alone of
“ water.” It is unfortunate, therefore, that the war-
tax on malt, excludes the labouring class from the use
of small beer altogether, both in drinking, and in eating
with their pottage and sowins. They are occasionally
able to procure some *whisky*, but only in the tavern,
and for a lesser sum than would procure a small quan-
tity of small beer for the little household: but in the
families of the poor, in general, there is nothing better
than water, to those who have not a cow. The artisan
or labourer, who has toiled for weeks on oatmeal pot-
tage, barley cake and potatoes may be, in some degree,
excusable for a little irregularity at a fair; but modera-
tion grows into excess, which may from time to time
be repeated, until a fever takes place, which spreads
its contagious influence far and wide, and which has
been known to originate from a debauch at a fair.
This might, in a great measure, be prevented by such
an adjustment of the excise law, as would again allow
the frugal artisan, and parsimonious labourer, to brew
their peck of malt, as formerly, not as a luxury, but
an essential necessary of life; and by finding that
supply in his own family, to remove the temptation to
idleness and dissipation and the ruinous consequences
of disorderly habits, which from an innocent, almost
a necessary, refreshment at the first, have insensibly
grown up into inveterate mischiefs, both physical and
moral.

Upon removing these causes of disease, which
might be effected, partly by means of the proprietors,
and partly by the paternal care of the government
of the country, there is not a doubt that this dis-
trict

trict would soon be as healthful as any quarter of the kingdom: and the constitutions of its inhabitants would be rendered abundantly healthy and vigorous.

CHAP. XVII.

OBSTACLES TO IMPROVEMENT.

IT is unnecessary to take notice of such obstacles to improvement, as can neither be surmounted nor removed: those which are not of this class may be imputed partly to the statute law, and partly to the land-holders, who do not in every instance give the farmers that degree of security for carrying on their business, which the trader and the manufacturer possess.

There has been so much already published regarding the influence of the corn-laws on the production of grain, that any discussion of the obstacles to improvement which are ascribed to them, must be deemed improper here. The uncertain and variable price of grain, and the impracticability which occasionally occurs of finding any market, are among the greatest discouragements to improvement which this country experiences, and they are in part to be attributed to the influence of those laws.

It has been however found almost always impracticable, to ascertain the immediate cause of these inequalities in the price of grain. It is certain they are not always regulated by the abundance, or by the deficiency, of the crop. The act of the 31 Geo. III. ch. 30, for regulating the importation and exportation

of

of grain may, perhaps, have some influence on the price, but it can never be traced nearer to this country than the variations which it may produce in Mark-lane, and even they seem to have no perceptible influence on the state of the market here. But the frequent alterations in the distillery law are, in a peculiar manner, felt distressing to the farmer; his whole system is embarrassed, and his rotation of cropping altered. Were distillers nearly in the same circumstances over all the kingdom, it would not be difficult to suggest alterations — (supposing the prohibition of distilling grain to be only temporary,)—which would be advantageous to the country, and not injurious to the revenue; but by those who only see a small part of a whole, suggestions of amendment must be always presumptuous, and frequently erroneous. Since, however, there was no licensed still, in the whole of the two counties of Aberdeen and Banff, and only two in Moray, when the distillation of grain was permitted, it must at once without dispute be admitted, that the duties were too high for the circumstances of the country. For when these duties were lower in a former state of the law, the licensed small stills supplied in every quarter the whole consumption of these three counties, and fraudulent distillation, so extremely pernicious in every respect, was then almost totally and happily suppressed.

Seeing it requires expensive previous arrangement to set up even a small licensed still, some confidence in the steadiness of the law must be regained, before this business could be now at any time set up, but by the few who carried it on before. Were the distillation of corn to be again permitted, restricted solely to the produce, and limited to the consumption of the country,

country, to the duties proportioned to the substance of the grain, and to the other circumstances of the manufacture, so inferior in its return to that of the great stills, saving *permits* for exportation upon the payment of the highest duties; it admits not of doubt, that while the quantity exported would be insignificant, the public revenue, the agriculture of the country, and the morals of not a few of its inhabitants, would be thereby considerably improved. Not that their morals are relaxed by the ills of intoxication from smuggled distillation, but the whole business is a mere, and upon the whole, an unsuccessful speculation; every honest, every creditable pursuit is but of secondary consideration, and while the parents, the children, and the whole connections are carrying on this illicit trade, deceit and fraud take deep root and spread wide; bankruptcy follows in the train, the family is dispersed, and both the industry and the population of the country thereby impaired. Were the circumstances of the revenue to be even reversed, to be diminished instead of being increased by again licensing small stills, on duties moderated so as not to bar their establishment, it would yet be clearly wisdom in the government to sacrifice such an insignificant portion of its revenue, for the prevention of such great and complicated mischief.

The line which bounds the privilege of small stills with moderated duties, prohibits the inhabitants on the north side of the street of Elgin, from the accommodation which is thereby permitted to their neighbours on the south side; other parts of the country in similar situations, are subjected to the same partiality: they must either drink of the smuggled distillation, or import their spirits at the vast additional expense

expense of navigation, from the distant provinces of the southern quarters of the kingdom. This bounding line ought therefore to be laid down more suitably to the circumstances of the country ; if these should be properly attended to, it would be directed from its present head at the estuary of the Clyde, along the southern bottom of the Grampians to the German ocean at the Girdleness, their most easterly cape. By this slight alteration, the law would be equitably adapted to the natural circumstances of the country,—the people would be all pleased,—smuggled distillery would be entirely prevented over that great proportion of the kingdom, where, from the ill adapted law, it has almost always hitherto prevailed, and its proper object in the national revenue, would not be defeated by its own preposterous regulations.

The legislature of Scotland was peculiarly attentive to the encouragement of agriculture, and the cultivation of the soil in every age, to as remote a period as any statute is found extant. As early as the reign of James I, about the year 1424, there was cause to complain of the scarcity of labourers for the purposes of husbandry ; *“ and the common people were then under a penalty, ordained to apply themselves to the labouring of the land.”* And among other statutes in the reign of James VI, in the same point of view it is enacted, that *“ they who have work to carry on may take man or woman within their bounds, and employ them at the common wages of the country.”* About the beginning of the 17th century also, it appears that farmers began even then to feel the exorbitance of the cost of agricultural labour, accordingly *“ justices of the peace are empowered to regulate the wages of labourers, workmen and seroants.”* The
state

state of society about that time might have allowed the practicability of their executing this statute, perhaps, as far down as the year 1661, when it is again renewed; although it might be supposed that it could at no time have much influence, and since the middle of the last century it has been wholly neglected. If this object be at all under the controul of the legislature, it must be moderated by regulations of police, or by statutes operating with a general influence, and by an aim apparently much less direct. A suggestion relating to the establishment of families of cottagers upon the larger farms, and to bringing back young women to the lighter services of husbandry, has been already offered.

But besides the expense of agricultural labour, another obstacle to improvement is, the insolent wastefulness and sulky carelessness of farm servants. The author of the account of the parish of Boharm, had made this an object of his consideration, and in Sir John Sinclair's statistical account of Scotland (vol. 17, p. 365), he has offered a suggestion which it may not be deemed improper here to insert. "The want
 " of all police, he has said, either conventional or
 " legal, respecting this object, has of late been so
 " heavily and universally felt, that, perhaps, any
 " speculation that might contribute to turn the atten-
 " tion of the more discerning, to this interesting
 " object, may not be deemed entirely nugatory.

" In so far as this grievance hath arisen from the
 " diminished value of money in the present opulent
 " age, when, as in the days of Solomon, it may be
 " said of silver, that it is not any thing accounted of,
 " it cannot be regarded as any cause of complaint,
 " for the price of labour must be proportional to that
 " of

“ of other articles: but in so far as the evil arises
“ from the combined fraud, the falsehood, the stub-
“ bornness, and the domineering insolence of that
“ rank of society, it ought to be repressed, although
“ in due consistence with the rights of men; and
“ much delicacy in this regard is no doubt requisite.
“ It might tend, perhaps, to check the evil, were
“ every agricultural servant, by law obliged to pro-
“ duce to the master with whom he engages, and to
“ deposit with the church session of the parish when
“ required, a certificate from the master whom he last
“ served, granted before two legal witnesses, of the
“ wages which he received, and of the discretion, fide-
“ lity, and diligence which he maintained, during the
“ period of his preceding service; the engaging mas-
“ ter to forfeit equal to a quarter of the year’s wages,
“ and the servant as much to the parish fund for every
“ omission of such formality, to be recovered at the
“ instance of the cashier of the session in Scotland,
“ and of the churchwardens in England, by the war-
“ rant of one justice of the peace, or other judge ordi-
“ nary. It does not appear that such a law could be
“ attended with much inconvenience to any party,
“ and while it would in general prevent imposition on
“ the master, who engages by an exaggerated account
“ of the wages paid by the last master, as is now so
“ generally the case, it would in most cases have the
“ effect of rendering the servant discreet and diligent,
“ when so much as a quarter’s wages depended on his
“ behaviour.”

The land-holders may not at present perceive how deeply they are concerned in procuring the establishment of some general police, for correcting the growing extravagance of this class of society, and of introducing

producing less licentious habits among them ; but from the recent alterations in the sentiments and manners of the lower class, it is much wanted.

Although it has been noticed in a former chapter, that the fertility of enclosed grounds, more especially under crops of cultivated grass, appears so superior to the contiguous open field, that it could hardly be imagined the difference consisted wholly in the cultivation ; yet were a farm to be managed entirely without cattle, or could the whole live stock be for ever confined to the stall and in a thriving state, speculations might be entertained, about balancing the advantages with the expense and inconvenience of enclosure.

It is however by experience ascertained, that cattle are reared in the enclosures of some of the proprietors of this country, to the same value they generally attain in the enclosures of England. If this be practicable in the open field, under the management of a young attendant, the instances are so very rare, as of themselves to prove, that one great obstacle to the improvement of the country is, the want of sheltered and sufficiently fencible enclosures, where the cattle, in full possession almost of that freedom, which they originally enjoyed in their native forests, and exempted also from the many hardships to which they must in that state have been exposed, would rise to superior bulk with all the symmetry of figure, and other properties attainable by the species.

All ranks indeed, are feelingly alive to the advantages of enclosed fields, but no fund for effectuating this improvement is very likely to be soon established. If it is to be done wholly at the expense of the proprietor, the rent in general would immediately rise to about five shillings on each arable acre, and the tenant would

would keep the enclosures in due repair, during the subsistence of the lease: or if it were to be done at the tenant's expense, either a proportional diminution of the rent would be required,—or a length of lease granted, until the whole cost of the enclosures might in that way be recovered, which a lease of nineteen years only, will in no case admit. But so much variety must occur in the terms, from the different circumstances in which the proprietor and the tenant find themselves, that any inquiry regarding the means of enclosing all the farms of the district, need not be dwelt upon.

Although a considerable proportion of the moors and uncultivated ground in the district is covered, as has been already observed, with thriving plantations, yet from their situation, wholly detached from the arable land, the fields are still naked and quite unsheltered. But there are irregular small plots of uncultivated ground, either upon the limits, or interspersed among the fields almost of every farm, of no advantage to the proprietor, and of no significance in the value of the farm.

When the want of natural wood, once so abundant over the whole kingdom, began at first to be felt, the laws which were made for its preservation were suited to that state of society; but from the alterations which have happened in the condition, rank, and sentiments, of the tenants of the greater proportion of the arable ground in Scotland, even the language of some of these statutes has become ridiculous. The act for instance of the first parliament of King William, ch. 16.

“Ratifies and approves all former laws made for planting and enclosing grounds, and ordains, that all tenants shall *preserve* and *secure* all growing

NAIRN AND MORAY.] 2 F “ wood

“ wood and *planting* that is upon the ground they
 “ possess, that none of it shall be cut, broke, or pul-
 “ led up by the roots, or the bark peeled off any tree
 “ under the pain to be exacted by their masters *alle-*
 “ *narly*, of ten pounds Scots (sixteen shillings and
 “ eightpence) for every tree within ten years old, and
 “ twenty pound Scots for each tree above that age.”

In the succeeding statutes from the 1 Geo. 1st sess. 2, the language is changed from that of *master* and *heritor*, to the *person damaged*, and the *owner* : by which it might be inferred, that if a tenant planted trees upon his farm, he himself, and not the landlord was the owner. But still the general understanding of the country supposes all the growing timber, by whomsoever planted, to belong to the proprietor ; in so much that a tenant, having planted a pretty broad irregular belt of willow and aller coppice wood along the bank of the river Lossy, and his widow afterwards wishing to lay the ridges straight, grubbed up the irregular projections on the land side, amounting in the whole to nearly twenty square yards, upon which she was prosecuted before the justices of the peace upon the statute 6 Geo. III. ch. 48, although seventeen years of the lease at that time remained ; and she would have been found liable to damages, had she not during the process, engaged to replant the ground, and preserve it solely for the behoof of the landlord. Whatever therefore may be the just interpretation of these statutes, their influence must be, to prevent tenants from planting any trees ; either for coppice wood, or for timber. Yet a farmer on a lease of nineteen years, would find it a profitable extension of his business, to improve such barren plots by planting trees for himself, were he allowed to dispose of such as the landlord or
 succeeding

succeeding tenant did not choose, by appraisement to purchase; while the succeeding tenant could afford even additional rent for the accommodation from such plantations, and become bound at the same time for every tree he felled, to plant another. It would be also an easy matter to make it the interest of each tenant to raise fruit trees, apples, pears, plumbs and cherries, both in the kitchen garden, and along all the fences enclosing the farm.

The frosty, blasting easterly winds in the spring, which it has been mentioned are so prejudicial to the growth of grass at that season, and consequently so adverse to the prosperity of live stock in general, forms one striking obstacle to the improvement of the whole district. As it is not likely that this evil will be ward- ed off by the obviously practicable means, of a gene- rally concerted plan of belts or groups of plantation, so arranged as to protect and shelter the whole coun- try;—inducing the tenants to raise trees for themselves upon each farm, would in a few years afford, if not a complete, yet a very considerable relief from this com- mon source of injury.

The imperfect state of the drainage, both of the arable and of the uncultivated grounds of the country, is no doubt to be regarded among the obstacles to the improvement not only of the soil, but also of the cli- mate; it is however, only necessary here to refer to the chapter on that subject. It may be proper, how- ever, here to notice an allegation, that during eight months of the year in the higher districts of the coun- try, half a gallon of water may be pressed out of every cubic foot of the cultivated soil, taken up to the depth of the furrow seven or nine inches, and though some of the uncultivated ground may not contain so much

water in the same bulk, yet a great proportion contains more. If this observation, which rests at present only on probable conjecture, be not very far from the truth, the whole of the inhabitants may be considered as dwelling in a great morass.

Though the arable land be pretty dry for nearly three months in summer, yet the pernicious influence of this excess of moisture, is obvious upon its productions, and though unperceived, it is supposed also to be of great importance to the health and constitutions of the people. The greater degree of cold which prevails in the hilly part of the country, is ascribed to this circumstance (which might be removed at an expense comparatively inconsiderable), rather than to its higher elevation above the level of the sea.

Although the raising of corn and cattle are the important objects in agriculture, (experience not warranting farmers to divert much of their attention to the cultivation of flax, or other crops not commonly produced) yet it has been already observed, that flax is cultivated in small quantities over the whole of the district. An obstacle to the improvement of this crop is found to be the want of a mill for expressing the oil from the seed, which on this account, is commonly entirely lost. In the same view it may be proper to mention a mill for making the oil of rape-seed, which being a green and drill-hoed crop, would contribute to the fertilizing of the land,—to the spring food of cattle by the leaves,—and to their winter subsistence by the seed cake. Were there also a manufacture of mustard-seed established in the country, similar to that of Durham, it could be raised in considerable quantities, and in some cases to advantage. But none of these measures for the improvement of the country is

so much wanted, as the means of more easily separating the seed of clover from its husk or bag. It has been already seen, that the expense of sowing an acre with red and white clover, is considerably more than with any kind of grain, and that the seed, for nearly the fifth part of the arable land of the district, is annually imported; yet both kinds of clover ripen sufficiently along the whole coast, though, perhaps, not to that degree of maturity as to part so readily from the husk as it does in Holland or in England, yet were the means introduced of cleaning the seed which the country itself would produce, this heavy article of expense would be in the greater part removed. Either the labour, or the want of the skill requisite for this operation, has hitherto discouraged the saving of the seed, except merely for an experiment, which has shown that the ordinary produce of an acre, amounts to about four bushels, weighing when completely cleaned, more than 200 lib.*

It may be farther just noticed, that if clover be ripened by the farmer for his own accommodation, there is little occasion for divesting the seed of its coat; it grows equally well, if the head, or ear, is only broken down, so as to separate the seeds from each other; the quantity required is readily ascertained by the eye, before it be covered by the operation of the harrow.

In the political economy of the country, the fisheries along the coast, must be accounted an object of much
2 F 3 consideration.

* There are mills for that purpose in England, and an excellent one at Mr. Coke's at Holkam.

consideration. It has been long generally imagined, that the extent of this business might be greatly enlarged, and the number of the melancholy disasters, which from time to time occur, greatly lessened, were the boats formed of a construction better fitted to weather the storm. The boats at present used are open ones, generally less than eight tons, and rigged in such an unskilful manner, that upon every alteration of the course, the sail must be lowered quite down, when the vessel is resigned to the most dangerous influence of the wave until the sail can be trimmed anew. In some positions also of the sail, the boat is extremely liable to be upset, and a wave breaking over it, certainly sinks it.

It has frequently been suggested, that these fishing boats, should be constructed of a size somewhat larger, yet not so bulky as to be unmanageable by oars in a calm; that they should be rigged similar to a sloop with a bowsprit sail, and that the ballast should be so disposed, as not to be shifted by the rolling of the vessel, and that there should be space enough under the deck, as to prevent their being sunk by a wave breaking over them; such a vessel, it is believed, would live in the Moray frith, so as to reach some port in safety during any storm, and while it would last more than three times the duration of the boats in use, would be procured at only a trifle of additional expense.

Such vessels it is presumed, the legislature of Scotland enjoined to be provided, as long ago as the year 1491, in the 4th parliament of James IV, chap. 49.

“ It is ordained, that there be ships and busses made
 “ in all boroughs and towns within the realm, *and that*
 “ *the least of the said ships and busses be of twenty tons.*
 “ And if officers of the boroughs, or sheriffs of the
 “ shires

“ shires be found negligent either in putting forth the
“ said ships and busses, or compelling the said idle
“ men to pass in them for their wages, they shall pay
“ to the king an unlaw of twenty pounds ilk one of
“ them, that is to say the officiar of the borough for
“ the tme, and the sheriff of the shire for which they
“ shall be charged in the checker, and give count
“ thereupon.”

Were the fishing craft constructed with the advantages of the life boat, though even of a size somewhat less than those which are at present used, the additional expense would be inconsiderable; and the materials employed, without being impaired, would serve for the building of many in succession.

It must in short be readily allowed, that though no consideration in political economy is of more importance, than that which hath for its object the preservation of the lives of the people of the kingdom yet in this particular it has scarcely ever obtained any degree of attention; while every ship on the ocean ought now to be provided with a life boat, the same construction of fishing craft has been continued unimproved, from the first rude devices of the most artless and ignorant times.

Were all the fishing vessels round our isle, rigged and navigated more resembling ships of war, our people, while their lives would be in general safe, would be initiated, almost from their infancy, into much more of the practical part of navigation, than the awkward and the dangerous form of the boats in present use admits.

In this country, the mole has been found a pernicious enemy to agriculture, and notwithstanding the utmost persevering attention, their destruction is far from

being accomplished. A new iron spring trap, which appears to be more easily managed, than those used by the professional mole catcher, has been lately introduced from England, but its superior advantages have not yet been ascertained by experience. *

* A mode of destroying moles by the smoke of sulphur, has in one or two cases been found successful; it may not be improper therefore to endeavour here to describe a few molehills; five or seven, to about fifteen or perhaps twenty, are found to have a common subterranean connection as if they were but one establishment; by a little consideration of their vicinity, the extent of such establishment may be in general nearly ascertained. A molehill supposed to be about the middle of this settlement is cut open, and a circular pit formed more than a foot in diameter, and a little deeper only than the tract of the mole; the earth is cleared out by the hand from the two or three passages which will be found to open into this pit; four or five other molehills on opposite sides towards the extremities of what is supposed to be in connection round about, are opened in the same way, and the earth cleared out with care from all the subterranean passages that in each can be explored. An English pint or two of tar with an ounce or two of flour of sulphur are mixed in a piece of any broken iron or earthen pot, and made to burn in the central pit. When it is properly lighted, the pit is loosely covered with a board, admitting as much air only as may support the fire. In a short time the smoke pervades all the subterranean windings, and is seen in eight or ten minutes to rise from two, or perhaps more of the pits which were left open to draw the smoke towards the extremities, and if skillfully managed through the earth also of some of the untouched molehills. If the fire can be continued for nearly half an hour, the destruction of that colony may be supposed to be accomplished, and all the molehills thereof may be spread out in the hope that no other will be again thrown up, and the business of suffocation may in the same manner be extended wherever the inroads of this enemy appear. The smoke is said to pervade the subterranean passages better in a windy day, than in a calm. The tar both maintains the fire and makes the smoke more dense; it is allowed that the sulphur only is efficient in the suffocation, but could not of itself be made to burn. Gunpowder has been also mixed with the tar and sulphur but without any apparent efficiency.

Shreds

Shreds of old leather have been also added in the view of making the smoke more dense, it being supposed, though perhaps erroneously, to be forced more powerfully through the windings in proportion to its density. It is supposed that the fire may not be so readily extinguished if covered by an old empty hive, rising up like the head of a still, as by a flat board. It has not been seen that any of the moles have at any time endeavoured to escape by flight; it is supposed they are soon stupefied by the smoke. The experiment however has not been very often repeated.

CHAP. XVIII.

MISCELLANEOUS ARTICLES.

SECT. I.—AGRICULTURAL SOCIETIES.

SOCIETIES under the title of *Farming Clubs* have, from many years, been established in each of the towns of Nairn, Forres, and Elgin, and they at present comprehend nearly all the respectable proprietors and tenants in the districts around these boroughs. In the first section of their records, the principles of their constitution are specially ascertained. Besides the regulations which relate to the admission of members, the form of the proceedings, and the expense of the meeting (which in all of them are similar), the societies of Nairn and Forres have each formed engagements among themselves, not to hire the servants of any member of their respective clubs, without the allowance of the master, and without a certificate also of the wages, discretion, and ability or skilfulness of the servant.

They have also instituted *ploughing matches*, with premiums in cash, to three or four who shall be adjudged the best performers.

Discussions both of agricultural and of economical questions are generally carried on by all the clubs at every

every meeting ; the question, with the sentiments of the majority are put upon the record of their proceedings. It might perhaps be an improvement in this particular, to record also the opinion of the dissentients, annexing the reasons of such dissent.

In the Forres club, a committee is annually appointed to manage an importation of coal, for the supply of the members, into a share of which, all widows resident in the district in which the club itself is comprehended, are also admitted, and the supply which they may respectively require, upon a timely notification to the committee, is furnished at the same rate as to the members, which is understood to be at prime cost, and is always considerably under the price charged by the ordinary importers. The Forres club have also conjoined with their brethren of Elgin, in forming an establishment at Burgh-head for the curing and exporting of pork in barrels. For this object which may be also extended to the exportation of beef, both clubs have subscribed a loan, for some years without interest, in shares not less than £10, amounting in the whole to about £600. If this establishment shall become of importance, it is presumed that the whole proportion of land at present managed in simple fallow, will be more profitably employed in a crop of potatoes which can be cultivated to much account, without the application of manure, and except only the business of taking up, at scarcely any additional labour or expense more than what is requisite for a well-managed fallow. The rearing of swine in greater numbers, may be in other consequence also, highly beneficial to the country, not yet even in speculation contemplated.

The

The Elgin club have formed no concert, nor regulation respecting farm servants, but they agreed, as an encouragement of the manufactory of cloth, carried on by Messrs. Johnston and Sim, at Newmill, near Elgin, to be dressed, at each meeting in a kind of uniform of that manufacture; they have farther agreed to present a coat of the same cloth, which they have chosen for themselves, with silver plated buttons, exhibiting this inscription, "*the reward of faithful service,*" to each of the six servants of members of the club, who are at present found to have continued twenty years in the service of the same master.

This club, as has been already noticed, have brought down from England several of the most celebrated of the new invented implements of agriculture, to serve as models to the artisans of the country. They have been also peculiarly attentive to the improvement of the breed of horses. They have likewise established a library for the use of the club, which already contains all the reports yet republished by the Board of Agriculture, and is to comprehend the rest, as soon as they are given forth, with the whole of the Farmer's Magazine, and other books of distinguished celebrity on subjects relating to the general improvement of rural objects.

Much friendly communication and mutual good neighbourhood, have been evidently promoted by these societies: information of many circumstances has been more generally diffused both among the proprietors and the tenants, and their attention directed more closely to objects both of rural improvement and of political economy than would otherwise have been the case; and there is reason to hope that the beneficial influence

fluence of these societies will soon be perceived in the more improved state of the agriculture of the country, to which their exertions and example may essentially contribute.

THE GLOSSARY.

IT would be presumption to suppose that the farmers of England can derive advantage from the knowledge of the agricultural practices, an account of which, as adopted in the counties of Nairn and Moray, is here presented. This survey, it is to be hoped, will be of more use in the district to which it relates, than in other parts of the kingdom, not from the information which it contains, but by the discussion which it may lead to, regarding the circumstances by which the advancement of its cultivation, and the success of its cultivators, may be most successfully promoted, which without such a survey, and the discussion resulting therefrom might not have been suggested.

By affording also to other districts the opportunity of knowing wherein the usages and the practice of this country differ, and wherein they agree, with those of their own, similar discussions may likewise be produced, and measures of improvement, suitable to their respective circumstances, may thence also originate.

That such comparisons may be the more readily made by the farmers in other parts of the kingdom, every provincial and peculiar term has been avoided, in the detail of the various particulars regarding the agricultural state of these counties; some information may, however, be obtained even from the language of agriculture

ture itself. In some things the situation, and in others, the sentiments of the people may be thereby more distinctly apprehended. It was highly expedient therefore in drawing up these reports, to require an explanation of provincial words and expressions, as an object of rational curiosity even among farmers of remote counties. In reading the surveys of the English counties, the want of an agricultural vocabulary, it is believed, is generally felt all over Scotland.

The following glossary of provincial terms in the two counties to which this survey relates has therefore been prepared, in the drawing up of which, besides the particular technical terms, connected with the proper business of agriculture, it will necessarily extend itself to that part of the vernacular language, which is peculiar to the country: for there are few words of this description which are not directly or indirectly applied, either to the business or to the circumstances of agriculture. Although many of these words may be found in Dr. Jameson's Dictionary of the Scotch language, yet it is not to be supposed that such an expensive publication will be generally within the reach of the readers of agricultural reports. In the course but of a few years, the present vernacular language of this country may be an object of curiosity even to its own inhabitants. On these and other considerations which might be stated, the propriety of attempting the following glossary will be generally admitted. Being restricted solely to the words at present in use in this district, and to their present application also, it will be regarded rather as a register of its peculiar language than as a deep philological disquisition into the parental tongues; the more so, as on account of the present application of the words, the interpretation may

may be in some cases different from the import exhibited in glossaries of more learned aim. The English words, which are only a little disguised in the pronunciation such as *mair* for more, *siller* for silver, are wholly omitted.

A.

- Acrospire**.....The growing blade in malting when too far advanced.
- Airt**.....The point of the compass from which the wind may blow.
- Arles**.....The earnest penny given at engaging servants.
- Assedation**.....The assessment of rent payable from the farm to the landlord.
- Audie**.....A careless or stupid fellow.
- Aumry**.....The larder.
- Aver**.....An old lean horse.
- Awte**.....The line in a stone where it naturally may be split by the strokes of the hammer, or where the block in the quarry may be separated from the cliff.

B.

- Backwoodie**.....The band over the cart saddle by which the shafts are supported, made originally of platted withes; now it is generally an iron chain:
- Bailie**.....One of the aldermen of a Scotch borough.
- Bamboozle**.....To hallucinate, to befool, to disappoint a purpose by trick, which attention might have resisted or detected.

- Bannock**.....A circular oatmeal cake baked on the gridiron.
- Barm**.....The vernacular name of yeast.
- Bather**.....To fatigue by impertinent remonstrances, or by ceaseless prating.
- Bearge**.....To persist in clamorous repetition though disregarded.
- Beik**.....A nest of wild bees; any hidden collection of small matters.
- Beene**.....Having plenty in a low station; also to swell by steeping any vessel of the cooper, when the staves have shrunk so as to gape a little from disuse.
- Bing**.....A heap, such as of corn, lime, sand, or any other matter trimmed up to considerable height.
- Bir. Birle**.....The whizzing sound of a spinning wheel, or of any other machine in rapid gyration.
- Birn**.....Any burden borne on a person's back.
- Birsle**.....To toast hastily, or fry.
- Birth**.....An establishment, an office, a situation good or bad.
- Blate**.....Bashful, also easily deceived.
- Blaud**.....To spoil, to fatigue with wet and mire.
- Blea**.....The livid colour occasioned by a bruise or blow.
- Blinked**.....Wort somewhat soured before the fermentation is begun.
- Boll**.....The common measure of grain, about four bushels of wheat, rye, pease, beans, and meal, and about 6 bushels of oats and barley.
- Boen**.....The reed of flax when separated from the rind.
- Brattle**.....The cattle driving too hard at work, any brief exertion of labour.
- Brawn**.....The calf of the leg; a mode of preparing pork.

- Brea**..... A sloping bank, the side of a hill.
- Breakfurring**..... Turning over furrows on spaces of unploughed land of the same breadth over a whole field, which is thereby half ploughed, and the stubble of both surfaces conjoined so as to rot and mellow together.
- Brockil**..... In cattle spotted white and black; in oats the black and white growing promiscuously.
- Brogues**..... Shoes of leather tanned in an inferior way by private individuals; if the shoes are well made of this kind of leather, they resist the wet of snow better than the best tanned leather. Brogue also denotes any foreign accent such as the English brogue, the Dutch brogue, &c.
- Brookit**..... White sheep with a black face. In people the face defiled by any black stain.
- Bruckle**..... Easily broken, brittle.
- Budge**..... To move any heavy body a very little; to make a lazy fellow begin action.
- Buff**..... The skin, the abbreviation also of to "*buffit*," to thrash a sheaf without unbinding it so as only to beat out the weightiest grain; a field of growing corn much shaken by the storm, is buffed.
- Buist**..... The first milk of a cow newly calved, adapted by nature to the state of the stomach of her calf; it may be boiled into the consistence of a pudding.
- Burn**..... A brook; also water heated less than boiling for brewing or for washing.

C.

- Cackle**..... The cry of a hen when she has laid an egg.
- Cadge

- Cadger**.....A carrier of fish through the country for sale.
- Cadgie**.....Contented, quite happy.
- Cancart**.....Irrascible, easily provoked to anger.
- Canny**.....Respecting a person, it means skilful; when applied to any instrument, well-fitted, convenient.
- Carle**.....An old fellow for whom no one cares or esteems. Cairline is the feminine gender.
- Cea**.....A small tub.
- Chad**.....A bed of compacted gravel.
- Chaffer**.....To exchange or barter, also to traffic.
- Chaffer**.....A chafingdish for holding live coals to keep the tea kettle boiling without the chimney.
- Chafts**.....The cheeks or jaw bones.
- Chanve**.....A colour among black cattle when white hair is pretty equally mixed with black hair; also a swarthy person being pale.
- Clams**.....The blacksmith's vice.
- Clash**.....To marplot, to tell what was wished to be concealed.
- Claupt**.....To get a hold of any thing by a sudden exertion.
- Cleckit**.....Hatched.
- Cleek**.....A hook with a long handle.
- Clort**.....A lump of soft clay, mire, leaven, any thing that sticks to and defiles what it is thrown upon.
- Clotch**.....A worn out cart shaking to pieces, or any other machine almost useless; a person with a broken constitution.
- Clump**.....A small planted grove.
- Cod**.....A pillow, the bolstering under the oxen yoke.

- Coft..... Bought.
- Cogue..... A small dish made by the cooper,
- Coish..... A confined comfortable, or warm situation.
- Connach..... To waste thriftlessly, to spend without the show of expense.
- Coup..... A tumbrel, a dung cart; a good bargain also, any thing purchased below its just value.
- Crabit..... Peevish, irritable, surly.
- Crap..... The stomach of a fowl; metaphorically, resentment.
- Craig..... The throat, also a cliff, or rocky precipice.
- Creined..... A starved lamb or calf, a shrivelled apple, the opposite of plump or sleek.
- Creish..... Grease, soft tallow, spoiled butter; also a bribe.
- Cröse..... To whine in sympathy with any person in pain or in distress.
- Crook..... The iron chain with its appropriate hooks by which the vessels for cooking are hung over the fire.
- Cruive..... A trap built in a river to catch salmon.
- Cuff..... The end of the sleeve turned at the wrist; also the back part of the neck.
- Cummer..... A midwife.
- Curn..... A handful, a small quantity of dry things, such as corn, confections, &c.

D.

- Daberlack..... A kind of long sea-weed; any wet dirty strap of cloth or leather.
- Dackle..... The fading of the fire when its heat abates.

- Dacre**..... To search a dwelling or a person for stolen goods.
- Daft**..... Foolishly or troublesomely playful.
- Dandally**..... A spoiled favourite, the handsomest lass in the parish.
- Deliverly**..... Incessantly, continually.
- Dight**..... To wipe, to clean, to exterminate.
- Ding**..... To throw down, to vanquish.
- Dit**..... To stop any small current or pipe, by a lump of earth or any kind of clot.
- Divot**..... A thin sod for thatching cottages and offices.
- Dorty**..... Sullen, sulky, pettish; any vegetable which it is difficult to propagate is said to be dorty.
- Doss**..... Any ornamental knot, as a tuft of ribbands, flowers, hair, &c.
- Dowie**..... Sickly, weak, infirm.
- Draff**..... Malt after it is brewed, and the substance extracted.
- Dreich**..... Tedious, requiring much time to accomplish.
- Drookit**..... Wet by being under the rain.
- Dub**..... Mire.
- Duchus**..... The paternal seat, the dwelling of a persons ancestors.
- Dud**..... A clout, a rag.
- Duthe**..... Substantial, efficient, nourishing, lasting.
- Dwine**..... To fall off, to decay, to be sickly.

E.

- Effair**..... To relate to, to appertain to.
- Eitheren**..... The straw rope which catches or loops round the vertical ropes, in the thatch of a house or corn-stack, forming the meshes of the netting.

- Eigg**..... Insidiously to ferment a quarrel, to inspirit a coward.
- Eik**..... An addition made to any thing, less than the principal.
- Ellion**..... Fuel chiefly of peat.
- Ettle**..... To endeavour without success.
- Ewether**..... A suffocating vapour or smell; a distortion perhaps, of the word *ether*.

F.

- Factor**..... The steward of a lord's estate.
- Faik**..... A plaid.
- Fairly**..... A new, or wonderful thing, such as may be seen at a fair.
- Fash**..... To trouble, to vex, to fatigue.
- Feal**..... Turf, or sod cut out of grass ground.
- Feasible**..... Plausible, likely to be true, appearing to answer the end proposed.
- Feaze**..... To have the edge of a razor, or other sharp instrument irregularly turned to a side, instead of being blunted by use. To have the woof also at the end of a piece of cloth, or ribband rubbed out from the warp. To have the end of a rope untwisted and flatted back so as to form a kind of brush, by which any pipe, such as the barrel of a gun, may be cleaned.
- Feeze**..... To turn a screw nail, to insinuate into unmerited confidence or favour.
- Filly**..... A female colt, a romping lass
- Firefang**..... Having the quality of a dunghill impaired, by too high a degree of the fermenting heat.

Flaughter

- Flaughter spade** ... A flaying spade for cutting up the thin sod for thatching houses.
- Fleems**..... An instrument for letting blood of cattle or horses, it is driven into the vein by the smart blow of a mallet.
- Fleep** A thriftless, selfish, slovenly fellow.
- Fleg**..... To fright, also an alarm.
- Flinders** Splinters.
- Flyp**..... To ruffle back the skin, to pull off a stocking by its top, to turn out the inside.
- Fob** To gasp from violent running, to have the sides heaving, the heart beating violently.
- Foosome** As if frousome, nasty ; also mean, worthless.
- Footh** Plenty, exuberance of provisions:
- Fow**..... An iron fork of two appropriate prongs in a long, slender, smooth, elastic handle or pole, for throwing up the sheaves in building a corn stack, and for throwing down the stack.
- Fream** Not of a person's kindred, no way related to a family.
- Froque**..... A colt, male or female about three years old.
- Fruish** A quality of timber, the opposite to tough ; brittle.
- Fuff** To puff.
- Funnied** Extremely susceptible, or impatient of cold.
- Fye** An imaginary foreboding of disaster or death from cause unconnected with effect. Sneezing is sometimes said to be a fye token.
- Fykie** Busily troublesome to others, by insignificant purposes about a person's self.

G.

- Gab** The mouth, the bill of a bird.
- Gaff** Loud and continued laughter.
- Gam** Any thing set awry, one tooth over or before another.
- Gar** To compel a thing to be done, to force obedience.
- Garron** A small sized draught horse, a large iron nail.
- Gash** The mouth, squabbling impertinence.
- Gancie** That degree of corpulence which scarcely impairs activity or vigour.
- Gaud** An ill habit, applied properly to horses or cattle.
- Gaunt** To yawn.
- Gavelache** An iron lever or crow.
- Gawpus** A silly awkward fellow, with his mouth always open.
- Gear** Wealth, furniture.
- God** The pike fish.
- Gigot** A small joint of mutton, corresponding to the round in beef.
- Gimmer** A young ewe, a sportive damsel.
- Gimp** Neat, accurately fitting.
- Gizzen** The state of any vessel of cooper's work, when the staves are shrunk so as not to hold in the liquor, ale, milk, water, wine, &c.
- Gizzren** The stomach of a fowl.
- Glead** The kite.
- Gleig** The faculty of hearing readily, quickness in conceiving what is said, or to be done.
- Gleikit** Playful, sportive, idle.

- Glour** To stare hard, to look amazed, angry or affrighted.
- Gotherlitch** Want of delicacy, either in sentiment or manners.
- Gouff** An unpleasant smell of any thing smoaking hot.
- Gowk** The cuckoo, a person sillily awkward, and of little sagacity.
- Gowpen** Both hands joined at the little fingers as a dish, the quantity of meal, corn, &c. that may be thereby given away, "*gold in gowpens, great wealth.*"
- Grace** A pig.
- Graith** Plough or cart harness.
- Greep** The pavement made for cattle, to lie upon in the house.
- Grieve** The overseer of farm servants, reapers, or day labourers.
- Grist** The miller's wages or gain.
- Groze** To press a person or thing so as to hurt or damage by the squeeze.
- Guide** To be frugal in the expenditure of any store of provisions, or cash.
- Gurk** A child rather thick in proportion to his tallness; any of the young of the live stock thriving and bulky for its age.

H.

- Haggies** A dish made principally of the liver and heart of mutton, minced with suet, biscuit, spiceries, &c. and dressed in the paunch.
- Hain** To reserve a pasturage for future exigence, to consume provisions or fuel with extreme frugality.

Hantle

- Hantle** A large quantity of any thing.
- Harle** The reed or brittle part of the stem of flax separated from the filament; also to overcast a wall with lime mortar; and to drag a disabled limb in walking.
- Harns** The brain, *harn pan*, the skull.
- Haugh** A horizontal or flat plain on the side of a river, or smaller stream.
- Hand** A squall.
- Haudie** A midwife.
- Hawkit** A black ox, or cow with a white face: a dark coloured horse with the greater part of his face white.
- Hawse** A shallow in a river; the oesophagus.
- Heague** Two bulls or oxen trying their strength by the pressure of their heads against each other.
- Heck** The rack in which hay or straw is served up to horses in the stable. The front of a salmon cruive made as a rack.
- Heally** Taking an affront in silence; a bird forsaking her nest and eggs, heallies it.
- Heely** At leisure.
- Heriter** One who has a right to heritage.
- Herrying** Robbing a person nearly of his all, generally by some iniquitous, or oppressive legal exaction.
- Hirplin** Walking lame.
- Hog** A sheep two years old.
- Host** The cough, perhaps, as from *hoist*.
- Houkit** The earth or other matter dug or scooped out, so as to form a hollow somewhat as a vault.
- Hurkle** To walk in painful stooping gait.
- Hyne** Hence, straightway, clear off.

J.

- Jabart** A starved horse, over-worked, and unfit for service; fish out of season, as a haddock in January.
- Jamph** To trifle, to elude doing the duty required.
- Jee** A call to begin motion, understood by cattle and horses.
- Ingle** A fire on the hearth greater than common.
- Joe** The sweetheart of a lass.
- Juke** To bow in reverence; a temporary yielding to the pressure of circumstances.

K.

- Keavle** The part of a field which falls to one on a division by lots.
- Kebback** An entire cheese.
- Kebbar** The stakes, or branches used for the lath which bears the thatch of cottages, or farm buildings.
- Kail** Cabbages or coleworts dressed, raw, or growing.
- Kilnloggie** The pit, or dark chamber below the drying floor of a corn kiln.
- Kilt** To tuck up.
- Kinch** A cross rope capped about one stretched along and tightening it; an advantage unexpectedly obtained.
- Kitchy** Sauce for the diet of poor people, milk is the kitchy for pottage. Kitchy fee, is the grease which is preserved in dressing meat:
- Kittle** Ticklish, somewhat unmanageable; a spring

spring trap or gun-lock discharged by the least touch, is kittle.

Knivelach A stroke which raises a tumor.

Kyte The belly.

L.

Lagh Low.

Lappard Blood clotted; milk thickened by being a little soured.

Leal Loyal, trusty, a person in whom confidence may be placed.

Leep To scald with boiling liquid, to burn slightly, to scorch the outside of any thing roasted, while it is raw in the middle; to cheat one in a bargain.

Lhagairt Entangled, encumbered, clotted and fatigued with mire or snow.

Lia A precipice in the course of a stream; also the pool of the water fall.

Lit To dye any colour; materials prepared for dying.

Lith A joint, the part of a limb, as of a horse's tail which is between two joints.

Loof The palm of the hand.

Lout To stoop.

Low A gleam, a flame; also to bellow as a cow does.

Lucken An unsplit haddock half dry; the toes or fingers grown together from distemper, or an ill-managed wound.

Lueky A corpulent and respectable matron.

Lum The chimney-top of a cottage made of timber or plaster.

Lxart Gray hair'd, hoary.

- Ley**..... Cultivated ground left unsown, and un-
tilled.
- Lythe**..... Well sheltered, warm

M.

- Mailison**..... A curse, a malediction.
- Mairt**..... An ox or cow fatted, not for the market,
but only for family provisions.
- Mant**..... To stutter.
- Mark**..... Dark.
- Mask**..... To infuse as malt in the vat, perhaps to
mash.
- Maun**..... A bread basket made of boards for the
servants' table.
- Maughs**..... Maggots, worms bred in meat.
- Mawkin**..... A hare.
- Mavis**..... The thrush.
- Mearen**..... A slip of uncultivated ground of various
breadth, between two corn ridges.
- Meith**..... A boundary, a marsh, the mark by which
a bewildered person recognizes his
course.
- Ment**..... To lift up the hand affectedly, without
intending the blow; to attempt ineffec-
tually.
- Menzie or meingie**.. A disorderly company, a mixed group.
- Miadin**..... A compost dunghill.
- Minnie**..... Mother.
- Mister**..... Need, want, occasion.
- Mows**..... Jest, not in earnest, a business not serious.
- Mulcture**..... The hire paid in meal and grain for grind-
ing at the mill.
- Mulloch**..... The crumbled offal of a peat stack.

N.

- Neave**..... The fist clinched. Neavel, a blow with the neave.
- Neers**..... The kidneys.
- Niffer**..... To barter, to exchange.
- Nout**..... Black cattle; among men, a stupid fellow.

O.

- Oxter**..... The bosom, the arm pit.
- Oye**..... A grand-child.

P.

- Paddock**..... A frog.
- Pan**..... The great timbers of a cottage laid across the couples parallel to the walls, to support the laths or *kebbars* laid above the pans and parallel to the couples. In English *pan* also is a kitchen or cottage utensil of brass for boiling. The *pans* at Elgin are the glebe lands which belonged to the canons of the cathedral.
- Pang**..... To stuff, to overload the stomach, to cram.
- Pantry**..... The larder of a cottage where *all* the provisions are stored.
- Parrock**..... A collection of things huddled together, a group.
- Pejorate**..... To deteriorate.
- Peigh**..... To breathe with labour indicative of pain.
- Pingle**..... To labour to little purpose, to strain inefficiently.

- Ply**..... A discord, a quarrel; to get a *ply* is to be scolded.
- Pres**..... To taste, to prove the goodness of meat or drink.
- Prone**..... The bran of oatmeal, of which sowins is made.
- Puckle**..... A small quantity, a single grain, also a particle.

Q.

- Quoy**..... A young cow.
- Queet**..... The ankle.

R.

- Raffle**..... A kind of lottery.
- Rantle tree**..... A beam above the cottage hearth on which the iron chain with its hooks is hung, for supporting the pot a little above the fire for boiling victuals.
- Ramsh**..... Inconsiderately rash, arrogant; harshly tasted.
- Rax**..... To overstretch, to extend.
- Reath**..... The quarter of the year where payments are made quarterly.
- Reesh**..... Rough boggy grass pasturage.
- Rickle**..... A small stack of peats put up to dry, any small collection loosely piled up.
- Rift**..... To belch.
- Rig**..... A ridge of ploughed land, the rack.
- Rigging**..... The roof of a house.
- Roan**..... Ice, where there is no water under it.
- Rock**..... The distaff.
- Roup**..... An auction.

- Rug.....To pull rudely ; a great bargain of any thing.
- Rumgumption.....Sagacity, mental ability.
- Rung.....A cudgel, a short baton, a stick.
- Ryfe.....Plentiful.

S.

- Sanshaugh.....Sarcastically clever.
- Sarking deals.....The lath of the roof of a building on which the slates are laid.
- Saugh.....Willow.
- Scad.....To dash boiling water into a vessel to clean it by such chymical application. In some cases it is also a kind of cookery. It denotes also a painful fretting of the skin by travelling and sweat during a sultry day.
- Scaff.....Homely provisions in plenty for either man or beast.
- Scag.....To have fish spoiled in the sun or air.
- Scame.....To singe clothes or cakes, or other dry matters ; it is not applied to singeing of soup or any dish.
- Scaphart.....A slap in the face.
- Scone.....A thin supple cake of flour or barley meal ; to flog with the palm of the hand.
- Scoog.....Shelter, protection, concealment.
- Screed.....A rent in cloth, also a slip of cloth torn off.
- Scrimp.....Not sufficiently large, not enough, too small.
- Scrog.....A branch torn off from a tree, a withered branch, an ugly low tree.
- Scull.....An oblong coarsely made basket.

- Scunner**.....A disgust at any dish from having formerly been made sick by eating it.
- Seg**.....A castrated bull from a Latin word, "*that has been cut.*"
- Set**.....Becomes a person, either in action, or any articles of dress.
- Shargar**.....A dwarfish lean person, or beast.
- Shoggle**.....To shake a thing without lifting it; to rock.
- Sib**.....Related by consanguinity.
- Skail**.....To cut up the seam of needle work; to let grain be lost from a sack burst at any place; to scatter with profusion what can never be gathered.
- Skeg**.....To flog with the palm of the hand.—In England it is a species of oats.
- Skink**.....To crush the sides of any thing, as of an egg, together. To break in pieces by weight or pressure; to fill the glasses to a company round a punch bowl. Skink denotes also a dish of soup, very common in this country, although Dr. Johnson was so unfortunate as not to get any of it.
- Skirl**.....To scream.
- Sleeband**.....The ancient muzzle of the plough.
- Slough**.....The husk, any skin that can be torn off; the whole dress.
- Smatchet**.....A dwarfish and worthless boy or girl, any worthless person, or beast of small stature.
- Smeddum**.....The substance of grinded malt. Good sense and spirit united.
- Snapper**.....To stumble, to blunder.
- Sneeshan**.....Snuff.
- Snell**.....Sharply severe, nippingly cold in a calm morning:

- Snod**..... Tight, neat, trimmed by pruning or cutting, divested of furniture or apparel.
- Bob**..... To sigh heavily, to weep.
- Sod**..... Singular, odd, unaccountable, strange.
- Soss**..... A dish of several ingredients boiled so as to be thick.
- Souff**..... To quaff; also a wizzing sort of low whistling.
- Sough**..... The buzzing sound of wind among trees; the roar of a torrent heard at a distance; any rumour that engages general attention.
- Sowing**..... A size made of batter and tallow, with which the warp of a web is trimmed to make the woof slide more readily across in the weaving — The dish called *sowins* is a modification of this word, perhaps its original.
- Spang**..... To bound or leap; the spring of any elastic body.
- Speals**..... The chips of wood in the workmanship of the carpenter.
- Spear**..... A slit formed in a gown for the pockets; in a petty-coat for the adjustment of its tyers.
- Speat**..... The swelling of a river or brook by rain, or snow in a thaw.
- Speer**..... To ask, to inquire.
- Spring**..... A tune on the bagpipe, the fiddle or tramp.
- Spunk**..... A gleam, live coals nearly burned out, also vigour, spirit, courage.
- Staig**..... A young horse.
- Stank**..... A ditch neglected till it becomes a bog or marsh.
- Stark**..... Strong, able.
- Steading**..... The whole buildings of a farm.

- Steals..... The shafts of a barrow, as if the stays.
- Steik..... To shut up, to close any vent or small opening, to clinch the fist.
- Stirk..... A calf during the second year of its age; a big ignorant boy.
- Stob..... A small nail, any instrument that pierces by pressure only.
- Stolm..... A pinch of snuff; as much ink as a pen retains for writing with.
- Stoop..... A post serving for a pillow.
- Stoor..... To pour leisurely out of any vessel held high.
- Stot..... A steer.
- Streen..... The preceding evening.
- Strinkle..... To strow any thing, corn, water, or dung, in a line, whether straight or waving.
- Studdy..... The anvil, a distortion perhaps of *steady*.
- Stue..... Dust raised and making an offensive smell in an apartment; the dust drifted by the wind on the high-way.
- Styme..... A glimmer, or glimpse of light; a disease also of the eye.
- Styte..... Absurd prating, nonsense.
- Suken..... The district adstricted to grind at one mill, synonymous with *thirlage*.
- Swack..... Elastic, agile, clever.
- Sweer..... Indolent; also reluctant, unwilling.
- Swines' seam..... Hogs' lard.
- Swithers..... In doubt which of two courses to follow that may be swayed to either side.

T.

- Taek..... A farm, also a lease.
- Targat..... A piece of flesh torn up by a wound hanging

- hanging to the sound part. A slice of skate cut off to be dressed.
- Tarrow**..... Springing corn, turned sickly, and not advancing; the pettishness of a spoiled child refusing his pudding.
- Taupy**..... A slattern young woman; a thriftless indecent matron.
- Tauvs**..... To touse, to wrestle in sport, to ravel.
- Teem**..... Empty.
- Tent**..... Attention.
- Thets**..... The ropes, or chains by which the plough, harrows, or cart with two horses, is drawn.
- Thig**..... A young poor farmer requesting the boon of a little seed corn among his neighbours, to aid him in setting up and in getting his first crop sown.
- Thirl or thirlage**... Perhaps *thrall*, *thralage*, the district bound to grind at one mill.
- Thrill**..... To pierce or wear out any thing of the clothing kind into many small holes.
- Thrapple**..... The wind pipe.
- Thraw**..... To twine; *thraw-crook*, an implement for twisting straw ropes.
- Threap**..... To allege a fault falsely.
- Tholl**..... To endure, bear, suffer.
- Thud**..... A blow on the shoulders.
- Tig**..... To provoke a person, dog, or other beast, by twitching or other affected injury in play.
- Tiller**..... The rising blade of growing corn shooting out several stems from one seed
- Tillysoul**..... An inn erected by a proprietor at no great distance from his house, to receive the horses and servants of those who

- him, whom it may not be in his power to accommodate.
- Time**..... To loose *tint*, lost.
- Tit**..... A gentle snatch, or pull by the finger and thumb only.
- Ted**..... The fox.
- Toll booth**..... The gaol.
- Tosh**..... Neat, trim, little-sized.
- Trachle**..... To incumber, to hamper, to entangle.
- Trams**..... The shafts of a cart; long unhandsome legs in a person.
- Tread woody**..... The chain which connects the harrow to the harness.
- Trou**..... To pour any liquor frequently between two vessels from the one into the other.
- Tryst**..... To engage persons to hold a meeting, two concerting to meet at place and time agreed on.
- Tuillie**..... A struggle, a battle where personal strength is much exerted.
- Tyke**..... A dog, a selfish snarling fellow.

U.

- Unca**..... Strange, foreign.

W.

- Wadset**..... Lands held a mortgage as security for a debt, and the fund for payment of the yearly interest.
- Wag**..... To shake, as a man his head, a dog his tail.
- Wallop**..... To leap irregularly; much awkward and affected movement in a person's gait; shaking his coat conceitedly.

- Wee**..... Little, small, insignificant.
- Win**..... Hay or corn in the field fit for being stacked. It is neither synonymous with dry, nor with withered, for it is dry when newly cut and it retains its plumpness when fully win. The English language scarcely affords words for expressing the idea with accuracy, which the word *win* suggests to a Scotchman.
- Witters**..... The barbs of a hook, pertinaciously resolute.
- Wou**..... To howl.

Y.

- Yape**..... Impatient for victuals, sharply hungry.
- Yare**..... Sharp, eager, keen,
- Youkie**..... Itchy.
- Youl**..... Christmas.

CONCLUSION.

MEANS OF IMPROVEMENT AND MEASURES CALCULATED FOR THAT PURPOSE.



IT appears from the review of the present state of the agriculture of the counties of Nairn and Moray, that although improvement has made a great advance, it is still far below the summit of perfection. It likewise appears that the tenants have borne their part in carrying improvement forwards, as far as their circumstances could in any measure admit of it. In all that relates to tillage, in shaping the fields, in straightening the ridges, in the skilful adjustment of white and green crops, and in procuring the best constructed implements of every kind, they have obviously excelled the practice of the proprietors in general; nor are they in the least degree behind, in the improvement of the breed of cattle, horses, and sheep. The proprietors have only taken the lead, in the single particular of having the ground in their personal occupation, or around their respective mansions, more completely fenced and sheltered. As occupiers of land, the proprietors have evidently contributed to raise the price of labour, by their readiness in granting higher wages, and by the idleness, dissipation, and wastefulness, which they are too apt to suffer among their farm servants, but which it is now their interest by every exer-

tion in their power again to repress. In their character of landlords it would encourage most essentially the improvement of the country, if they were to concert measures with their tenants for extending the advantages of enclosure; for promoting, on every farm, the accommodation, the ornament, and the shelter of plantation, and for establishing a more complete system of draining both the corn-fields, and also the pasturages and wastes; by such a system much advantage would certainly be obtained, not only in regard to the fertility of the fields, and the increased sweetness of the pastures, but also by improving the climate; would it not then be highly expedient to form a general association for having every pool and swamp, and marsh, from the bogs on the skirts of the mountain of Cairngorum to the fens on the coast of Duffus, completely drained, so that all the corn-fields should every where be dry even in winter, and that rushes, starwort, and every other sour aquatic, should be completely extirpated?

If such a general system of drainage could be effected, scarcely would a case occur where the property of one landlord would be injured, or even required for the drainage of the property of another, though in some instances one farm might be made subservient to the accommodation of another. Were the expense allocated upon each, in proportion to the extent of the surface meliorated, it is believed that to each individual it would not be found burdensome. While there is no case, in which the tenant would refuse to contribute in an equal ratio to the advantage gained, he would, in every case, as has been already stated, become bound to maintain the drainage on his own grounds, at all times in repair during the currency of his lease. The example

example of the manner in which the roads are managed, has, in some measure, established the principle that such a general association is the only efficient mode for securing an object of so comprehensive a nature.

Although there are in general four of the farm buildings erected at the expense of the proprietors, yet in the present improved ideas of accommodation necessary for a farmer, the inadequate allowance to be paid by the next entering tenant, has, in general, been found a sufficient encouragement to make the buildings commodious and complete, even on the short tenure of an ordinary lease, with its precarious limitations. The tenant lays out his money in the confidence of obtaining a preference at the termination of his lease, and the instances of such confidence having been misplaced, must, in general, be ascribed rather to incidental circumstances than to any deliberate intention.*

The

* Among many honourable men, the liberality in this respect of the family of Cawdor is pre-eminently distinguished. On many of the farms on their estates in Nairnshire, the third and fourth generation are at present to be numbered, even without any written lease, besides, that in some cases, the widow, and in others the son-in-law, continue in the possession of the deceased occupant, and even where these have also failed, some collateral relation has been established in the farm. Such considerations and regard to the local attachments of the people, have continued between the proprietors of this estate and their tenants, ever since the feudal times; and his lordship is now regarded as the father of his people. One instance to this point may, as an example, be adduced. A young man succeeded to the farm held by his grand-father and his father, neither, of whom had ever desired a lease. Similar to the spirited improvers of modern times, this gentleman immediately began to lay out the fields according to a new arrangement, and to trench up many balks by which they were formerly misshapen and incumbered,

The establishment of families of cottagers, both on the larger farms, and in every proper situation in the wastes, by lessening the difficulty of procuring labourers, would greatly tend, it has been already observed, to the improvement of the country, in some measure also to the population of the kingdom. The family of Relucas have the merit of exhibiting, by experience, the advantages of this suggestion. A long range of commodious cottages, like one side of the street of a village, forms an interesting object on the farm in the personal occupation of the proprietor, and contains such a thriving nursery of growing peasants, that Mr. Laudor Dick has bestowed on them the accommodation of a free-school, in one of those apartments

incumbered, and of course he had many a load of heavy masses of rude granite to remove to the sides of his arable land. The buildings also being both decayed, and ill-arranged, he constructed a new and neat dwelling-house of three stories, with a commodious establishment of offices at the expense of more than £500, wholly on the confidence which the liberality of the family of Cawdor had so long maintained. Nor was he disappointed in his expectations. As soon as the circumstances of the case were represented to him, the noble lord granted a formal lease with an allowance for improvement in the buildings and in the fields together, to the extent of £700, and upon such other encouraging conditions, as will both induce and enable the tenant to carry on the improvement of the fields, to that superior state of cultivation which will be in proportion to the improvement which he has made in the buildings. For as has been already observed, a settlement is an object of the first consideration, and if the family and the cattle are not commodiously accommodated within doors, it has ever been found, that slovenliness maintains without, an undisturbed pre-eminence.

ments for training them up with a few others in the neighbourhood in the habits of industry and virtue.

On the whole, the measures best calculated for the general improvement of the country, and which may be looked for from the exertions of these enlightened times, are the security of leases to the tenant, his obtaining the advantages of sheltered enclosure, and the accommodation of well-constructed houses and offices; a complete drainage both of the cultivated and of the waste land in the district, together with the establishment of a competent proportion of cottages, by means of which labourers would be provided, to carry on every species of improvement.

APPENDIX.

 No. I.

THE legal provision for the clergy of our established national church, and the provision also, made for educating the rising generation, are closely connected with the most important interests of the landed proprietors and of the people at large; the two annexed tables exhibiting the present state of these interesting objects, not having fallen within any of the sections in which the chapter on political economy has been arranged, are therefore subjoined as an appendix. As these provisions are raised from the land, they must of consequence affect its value in each parish. Two columns exhibiting the *valued rent*, and an estimation of the present real rent, have been likewise annexed to the first table.

It may be proper to notice farther, that in constructing these tables, the value of the barley, more properly *bear*, or according to the English denomination *big*, has been stated at the average of £1. 3s. the boll, which by some is deemed too high, as the fiars, in some of the neighbouring counties, for several years past, have been lower. As others however, maintain that the value of *bear*, cannot fall under £1. 1s., while the present land rent, and agricultural expense remain, it is presumed that the rate of the tables may be a proper average. In some parishes also, the bear is delivered

delivered by the firiot of the borough of Linlithgow, 5 per cent. less than the firiot raised from the standard pint jug of the town of Elgin, which is the measure in other parishes: in some cases likewise, the oatmeal is calculated at the rate of 8, and in others at 9 stone per boll, though uniformly valued in the tables at the rate of £1. As the state of markets however, is so considerably, and so frequently varied, one general average of the meal also, has on the whole been deemed preferable.

The assessed taxes have been stated, as bearing uniformly equal, upon all the glebes, though in some cases there may be one saddle and two draught horses; and at present there are two or three cases in which there is no horse of any kind, and in some also there may be no dog. This must be accounted however, only an occasional or temporary arrangement. Horses on whom the tax is charged, are in such cases to be hired both for the saddle and the plough, when the tax of course is added to the hire, and the expense of hiring is generally above the ordinary management.

The generality of the ministers having chosen the £20 class in the widows' fund, it has not been deemed requisite to state the £1. 6s. 3d. to the deductions of a few who have chosen the £25 class.

It may be also observed, that the lowest rate of expense, consequent on the celebration of the sacrament has been only stated, though in many parishes, it is one-third part more than is mentioned in the table.

In stating the inevitable official expense under the title of *Synodals*, for which in England an abatement of the property tax is admitted, no allowance has been made for the outlay, about twenty guineas, resulting
from

from an occasional attendance on the general assembly, and it might be easily shown, that this article, exclusive also of the expense of synods, and presbyteries, and their respective clerks and officers, is more than the sum stated in the table.

APPENDIX.

No. I.

PROVISION FOR THE ORDINANCES OF THE GOSPEL.

PARISHES.	Explanations and state of the inevitable deductions.	Amount of stipend as in gross received.	Efficient living stated in cash.	Valued rent in Scots currency.	Estimation of present real rentsterling.
No. 1. Abernethy	Stipend payable in cash - - - - £15 10 8 Property-tax - - - - - Assessed taxes are 1 saddle horse - - £2 13 6 1 male servant - - 0 5 0 1 draught horse - 0 14 0 1 dog - - - 0 7 0 Expense of communion, bread and wine included - - - 8 0 0 Widow fundrate - - - 5 5 0 Carried over - - - 33 4 8	B. F. P. £. s. d. 158 6 8	£. s. d. £. s. d.	£. s. d.	£.

Parishes.	Explanations and state of the inevitable deductions.	Amount of stipend as in gross received.		Efficient living stated in cash.	Valued rent in Scots currency.	Estimation of present real reutssterling.
		B. F. P.	£. s. d.	£. s. d.	£. s. d.	£.
No. 1. Abernethy.	Brought forward - 33 4 2 Synodals or the requisite official expense - - - £4 4 0	- - - -	158 6 8	120 18 6	1053 16 0	1552
No. 2. Alves.	The whole stipend being stated, the whole valued rent both in the county of Inverness and Moray, is also here stated. In cash - - - - - In bear or big - - - - - In oatmeal - - - - - The victual is not payable in kind, but at the rate of fiats each year, the average of which is estimated at £17 6 0 Property-tax - - - - - Assessed taxes as specified No. 1 - - - - - 3 19 6 Synodals or official deductions as specified No. 1 17 9 0	- - - - 96 0 0 16 0 0 - - - -	46 13 4	124 6 10	5462 12 2	5161

No. 3. Birnzie.	Stipend in cash - - - - -	- - - - -	- - - - -	- - - - -	52 14 4			
	Do. in bear or big - - - - -	- - - - -	- - - - -	24 2 0				
	Do. in oatmeal - - - - -	- - - - -	- - - - -	26 1 3				
	Property-tax - - - - -	£10 14 0	- - - - -	- - - - -	54 7 0			
Assessed taxes as specified	- - - - -	- - - - -	- - - - -	107 1 4				
No. 1 - - - - -	3 19 6	- - - - -	- - - - -					
Synodals or official deductions as stated No. 1 - - - - -	17 9 0	- - - - -	- - - - -					
					32 2 6	74 18 10	734 13 6	691
No. 4. Cromdale.	Stipend in cash - - - - -	- - - - -	- - - - -	- - - - -	75 0 0			
	Do. in bear, or big - - - - -	- - - - -	- - - - -	96 0 0				
	Property-tax - - - - -	18 10 0	- - - - -	- - - - -	110 8 0			
	Assessed taxes as specified	- - - - -	- - - - -	- - - - -	185 8 0			
No. 1 - - - - -	3 19 6	- - - - -	- - - - -					
Synodals or official deductions as stated No. 1 - - - - -	17 9 0	- - - - -	- - - - -					
					39 18 6	145 10 6	2469 5 0	2318
<p>The whole of the stipend being stated, the whole, both of the valued, and of the estimated, present rent is also stated, including in this regard that part of the parish belonging, in its political arrangement, to the county of Inverness.</p>								

Parishes.	Explanations and state of the inevitable deductions.	Amount of stipend as in gross received.	Efficient living stated in cash.	Valued rent in Scots currency.	Estimation of present real rent sterling.
		B. F. P.	£. s. d.	£. s. d.	£.
No. 5. Dollas.	Stipend wholly in cash - - - - - Deduct property-tax - - £9 18 0 Do. assessed taxes as specified in No. 1 - - - 3 19 6 Synodals or official deductions as specified in No. 1 17 9 0	- - - - - - - - - - - - - - - - - - - -	99 11 3		
No. 6. Drainy.	Stipend in cash - - - - - Do. in bear or big - - - - - Deduct property-tax - - 16 6 0 Do. assessed taxes as specified in No. 1 - - - 3 19 6 Synodals or official deductions as specified in No. 1 17 9 0	- - - - - - - - - - 91 0 0 - - - - -	68 4 9 1392 5 10		1305
No. 7. Duffas.	Stipend in cash - - - - - Do. in bear or big - - - - - Deduct property-tax - - 20 1 0 Do. assessed taxes as specified in No. 1 - - - 3 19 0	- - - - - - - - - - 128 0 0 - - - - -	37 14 6 53 6 8 147 4 0 200 10 8	125 5 2 3044 17 4	2855

No. 7. Duffus.	Synodals or official deductions specified in No. 1	17 9 0	-	41 9 6	159 1 2	3120 6 1	2986
No. 8. Duthel.	Stipend in cash Do. in bear or big Do. in oatmeal Deduct property tax Do. assessed taxes as specified in No. 1 Synodals as in No. 1	- - - - - - - - - 15 15 0 3 19 6 17 9 0	- - - 40 0 0 40 0 0	71 13 4 86 0 0 157 13 4 37 3 6	-	-	-
No. 9. Dyke.	The whole of the stipend being stated, the whole valud rent both in the county of Inverness and Moray is also stated. Stipend in cash Do. in bear or big Do. in oatmeal Deduct property tax Do. assessed taxes as specified in No. 1 Synodals or official deductions as in No. 1	- - - - - - - - - 17 16 0 3 19 6 17 9 0	- - - 106 1 0 7 2 0	48 8 6 129 13 0 178 1 6 39 4 6	199 9 10	1286 17 8	1208
					138 17 0	5674 6 6	5233

Parishes.	Explanations and state of the inevitable deductions.	Amount of stipend as in gross received.	Efficient living stated in cash.	Valued rent in Scots currency.	Estimation of present real rent sterling.
		B. R. P.	£. s. d.	£. s. d.	£.
No. 10. Edinkylie.	Stipend in cash - - - - -	- - - - -	123 6 8		
	Do. in bear or big - - - - -	- - - - -	58 12 0		
	Deduct property-tax - - 18 4 0	50 3 3			
	Do. assessed taxes as specified in No. 1 - 3 19 6		181 18 8		
	Synodals or official deductions as in No. 1 - 17 9 0				
			39 12 6		
No. 11. Elgin.	Stipend of one minister in cash - - - - -	- - - - -	5 0 0		
	Do. in bear or big - - - - -	- - - - -	276 0 0		
	Deduct property-tax - - £98 2 0	240 0 0			
	Do. assessed taxes as specified in No. 1 - 3 19 6		281 0 0		
	Synodals or official deductions as specified in No. 1 17 9 0				
			49 10 6		
	Stipend of the other minister is exactly the same - - - - -	- - - - -	243 9 6		
			243 9 6	6330 1 4	5938

No. 12. Forres.	Stipend in cash - - - - -	78 6 8			
	Do. in bear or big - - - - -	98 0 0			
	Do. in oatmeal - - - - -	20 0 0			
	Deduct property-tax - - - - -	132 14 0			
	Do. assessed taxes as specified in No. 1 - - - - -	211 0 8			
	Synodals or official deductions as in No. 1 - - - - -	41 10 6	169 10 2	2954 6 6	2771
No. 13. Kinloss.	Stipend in cash - - - - -	58 17 9			
	Do. in bear or big - - - - -	64 0 0			
	Do. in oatmeal - - - - -	64 0 0			
	Deduct property-tax - - - - -	137 12 0			
	Do. assessed taxes as specified in No. 1 - - - - -	196 9 9			
	Synodals or official deductions as in No. 1 - - - - -	41 1 6	155 8 3	3723 18 11	3493
No. 14. Knocandow.	Stipend wholly in cash - - - - -	140 0 0			
	Deduct property-tax - - - - -	-			
	Do. assessed taxes as specified in No. 1 - - - - -	35 8 6	104 11 6	1987 18 10	1865

Parishes.	Explanations and state of the inevitable deductions.	Amount of stipend as in gross received.	Efficient living stated in cash.	Valued rent in Scots currency.	Estimation of present real rent sterling.
		B. F. P. £. s. d.	£. s. d.	£. s. d.	£.
No. 15. Rafford.	Stipend in cash	58 6 8			
	Do. in bear or big	96 0 0			
	Do. in oatmeal	32 0 0			
	Deduct property tax - £20 1 0 Do. assessed taxes as specified in No. 1 - 3 19 6 Synodals or official deductions as specified in No. 1 - 17 9 0	<u>148 8 0</u> 200 14 8			
No. 16. Rother.	Stipend in cash	41 9 6	159 5 2	2613 18 10	2452
	Do. in bear or big	35 0 0			
	Do. in oatmeal	63 0 0			
	Deduct property tax - £14 7 0 Do. assessed taxes as specified in No. 1 - 3 19 6	<u>103 5 0</u> 148 10 0			

No. 17. St. Andrews Shanbryd.	Synodals or official deduc- tions as in No. 1 -	17 9 0	-	-	-	-	-	-
	Stipend in cash	- - - -	- - - -	- - - -	- - - -	- - - -	36 5 6	
	Do. in bear or big	- - - -	- - - -	- - - -	- - - -	- - - -	25 0 0	
	Deduct property tax	- £20 18 0	160 0 0	- - - -	- - - -	- - - -	184 0 0	
	Do. assessed taxes as specified in No. 1	- - - 3 19 6	- - - -	- - - -	- - - -	- - - -	209 0 0	
	Synodals or official deduc- tions as in No. 1	- - - 17 9 0	- - - -	- - - -	- - - -	- - - -	112 5 6	2496
No. 18. Speymouth.	Synodals or official deduc- tions as in No. 1	17 9 0	-	-	-	-	-	-
	Stipend in cash	- - - -	- - - -	- - - -	- - - -	- - - -	42 6 6	
	Do. in bear or big	- - - -	- - - -	- - - -	- - - -	- - - -	53 6 8	
	Do. in oatmeal	- - - -	77 0 0	- - - -	- - - -	- - - -		
		- - - -	34 0 0	- - - -	- - - -	- - - -		
	Deduct property tax	- £16 12 0	- - - -	- - - -	- - - -	- - - -	122 11 0	
	Do. assessed taxes as specified in No. 1	- - - 3 19 6	- - - -	- - - -	- - - -	- - - -	175 17 8	
	Synodals or official deduc- tions as in No. 1	- - - 17 9 0	- - - -	- - - -	- - - -	- - - -	156 13 6	3960
							4222 1 8	
							137 17 2	2771 17 1
							38 0 6	2600

Note.—The valued rent of the salmon fishery, is taken off from the valued rent of the parish of Speymouth.

Parishes.	Explanations and state of the inevitable deductions.	Amount of stipend as in gross received.	Efficient living stated in cash.	Valued rent in Scots currency.	Estimation of present real rent sterling.
		B. F. P. £. s. d.	£. s. d.	£. s. d.	£.
No. 19. Spynie.	Stipend in cash - - - - -	- - - - -	8 6 8		
	Do. in bear or big - - - - -	111 0 0			
	Do. in oatmeal - - - - -	63 0 0			
	Deduct property tax - £19 18 0		190 13 0		
Do. assessed taxes as specified in No. 1 - - - 3 19 6			198 19 8		
Synodals or official deductions as in No. 1 - - - 17 9 0					
			41 6 0	157 13 2	2865
No. 20. Urquhart.	Stipend in cash - - - - -	- - - - -	8 6 8		
	Do. in bear or big - - - - -	96 0 0			
	Do. in oatmeal - - - - -	96 0 0			
	Deduct property tax - £21 10 0		206 8 0		
Do. assessed taxes as specified in No. 1 - - - 3 19 6			214 14 8		
Synodals or official deductions as in No. 1 - - - 17 9 0					
			42 18 6	171 16 2	5222
			Total . £	62608 3 0	58787

COUNTY OF NAIRN.

No. 1. Ardclaugh.	Stipend in cash	-	-	-	-	85 0 0			
	Do. in oatmeal	-	-	-	31 0 0	31 0 0			
	Deduct property tax	-	-	£11 12 0	-	-			
	Assessed taxes as specified in No. 1 in Moray	-	3 19 6	-	-	116 0 0			
	Synodal as specified in No. 1 in Abernethy	-	17 9 0	-	-	-	33 0 6	82 19 0	2358 1 5
									1998
No. 2. Aultdearn.	Stipend in cash	-	-	-	-	48 0 0			
	Do. in bear or big	-	-	-	96 0 0	110 8 0			
	Wedders one year old, 14	-	-	-	-	4 4 0			
	Deduct property tax	-	16 5 0	-	-	-	162 12 0		
	Assessed taxes as formerly specified	-	3 19 6	-	-	-	-		
Synodals or official deductions as formerly specified	-	17 9 0	-	-	-	37 13 6	124 16 6	7155 0 7	6061
No. 3. Caudor.	Stipend in cash	-	-	-	-	75 11 1			
	Do. in bear or big	-	-	-	40 0 0	40 0 0			
	Do. in oatmeal	-	-	-	40 0 0	-			
	Deduct property tax	-	£16 2 0	-	-	-	85 0 0		
	Do. assessed taxes as specified in No. 1 above	-	3 19 6	-	-	-	161 11 1	207 16 0	9513 2 0	8059
	Carried over	-	£20 1 6	-	-	-			

Parishes.	Explanations and state of the inevitable deductions.	Amount of stipend as in gross received.	Efficient living stated in cash.	Valued rent in Scots currency.	Estimation of present real rent sterling.
		B. F. P.	£. s. d.	£. s. d.	£.
No. 3. Caudor.	Brought over - - - 20 1 6 Deduct synodals or official deductions specified in No. 1 Abernethy above 17 9 0	161 11 1	207 18 0	95 13 2 0	8059
No. 4. Nairn.	Stipend in cash - - - - - Do. in bear or big - - - - - Do. in oatmeal - - - - - Deduct property tax - £24 15 0 Do. assessed taxes as specified in No. 1 Abernethy - - - - - 3 19 6 Do. synodals or official deductions as above - - 17 9 0	37 10 6 58 6 8 88 0 0 88 0 0 189 4 0 247 10 8 46 3 6	124 0 7	1763 12 0	1484
	Total . £		201 7 2	1480 19 3	1264
			533 5 9	12747 13 3	10797

APPENDIX.

No. II.

PUBLIC PROVISION FOR THE EDUCATION OF
YOUNG PEOPLE.

FROM the act of parliament in the reign of James 4th, ordaining barons and free-holders to put their *oldest* sons to the grammar school, under the penalty of £20. (1 13s. 4d. ster.), it must be presumed that even long within the sixteenth century, few of our forefathers in the shires of Nairn and Moray, could either read or write. Prior to the epoch of the reformation, there were a few schools supported by the revenues of the catholic clergy; a struggle was made by those of the first reformers, for the continuance of the salaries of those schools, but notwithstanding a royal proclamation of an act of the privy council of James 6th, in 1616, ratified by an act of parliament in the reign of Charles 1st, in 1633, it is believed there were but few parochial schools in this district supported by public provision, before the influence of the act of William and Mary of 1696, began to have effect. There was no school in the parish of St. Andrews until the year 1759, and it is only but a few years ago, that the parochial school of Dollas was established. It is by the act 43 Geo. III, chap. 54, 1803, that the provision for the parochial schools, as stated in the table annexed, is now adjusted. By this act the proprietors, associated with the minister of the parish, were required to determine the salary for 25 years, restricting the highest to £22. 4s. 5½d. and making the lowest equal

to £16. 13s. 4d. They were not permitted in any case to diminish the old salary, and they were obliged to continue any proportion formerly paid in bear or oatmeal, estimated in the amount of the salary, at the rate of about 14 shillings the boll.

In those situations where any considerable district of a parish cannot be accommodated by the parochial school, the Society for propagating Christian Knowledge, support also another school. This society originated in the reign of Queen Ann, from the pious and patriotic exertions of a few gentlemen about Edinburgh, commiserating the forlorn condition of remote districts in the highlands and islands of Scotland, in their want of the means of instruction in the principles, and duties, and consolations, of the gospel. Their funds were formed at the beginning by private subscription. By the recommendation of the general assembly in 1704, a public contribution was made over all the church of Scotland. In 1709 their funds amounted to a capital of £1,000, when the society was established by letters patent under the great seal of the kingdom. A second patent confirmed and extended their powers in the reign of Geo. I. Their conduct has always merited the approbation, and gained the confidence of their country, in such a high degree, that they have been entrusted with more liberal donations, it is believed, than any other incorporation in the realm. Their capital, at this time, amounts to more than £40,000; and at present they support by salaries, in few cases higher than those stated in the table, about 400 schools, training up about 15,000 of the rising generation of both sexes, in the rudiments of knowledge, in the sentiments and duties of religion, and in the habits of virtue and of industry.

APPENDIX.

No. II.

PUBLIC PROVISION FOR THE EDUCATION OF
YOUNG PEOPLE.

Parishes.	Explanations and particular Statements.	Amount of whole sa- lary stated in cash.	Average number of scho- lars.
No. 1. Abernethy.	The parochial school . . .	<i>£.</i> <i>d.</i> <i>s.</i>	40
	A school supported by the society for propagating Christian Knowledge . . .	15 3 2	40
	The society farther allow to the wife of the teacher of this school for instructing girls in sewing, &c. . . .	15 0 0	30
	The proprietors also allow a small field for the main- tenance of a cow. Fuel also, and a little garden .	4 0 0	
No. 2. Alves.	Salary in cash . . . £9 14 5		
	Do. in bear 12 bolls estimated at 13 16 0	23 10 5	30
No. 3. Birnie.	Salary parochial school . .	15 0 0	26
No. 4. Cromdale.	The district of Inverallan was originally by itself a parish, and still retains its own parochial school . . .	11 2 3	40
	In the village of Grant Town in the middle dis- trict of the parish, the school is supported by the society for propagating Christian Knowledge by a salary of £10 And by an ancient en- dowment under the management of the Presbytery 10	20 0 0	40

Parishes.	Explanations and particular Statements.	Amount of whole sa- lary - stated in cash.			Average number of Scho- lars.
		£.	s.	d.	
No. 4. Cromdale.	The society farther allow a school mistress in the village for the education of girls	6	0	0	30
	In the Cromdale district, in the eastern quarter of the parish, the school salary is also	11	2	3	40
No. 5. Dollas.	Parochial school	16	13	4	25
No. 6. Drainy.	Parochial school	16	13	4	30
No. 7. Duffus.	Parochial school, salary in bear 12 bolls . £13 6 0 Do. salary in cash	23	0	5	30
No. 8. Duthel.	Parochial school	11	2	3	35
No. 9. Dyke.	Parochial school, salary in bear 16 bolls . £8 18 0 Do. salary paid in cash 10 0 0 Salary by an an- cient endow- ment 3 15 6	32	3	6	40
No. 10. Edinkylie.	Parochial school. Three of the proprietors pay at the rate of the highest salary allowed by the act 1803, amounting to . £13 12 0 The other two <i>only</i> at the rate of the lowest salary allowed by that act 5 16 6	19	8	6	30
	Where this parish skirts with Aultdearn and Dyke, a very populous quarter, the society for propagating Christian Knowledge sup- port a school for the gen- eral accommodation of those parts of these three pa- rishes	14	0	0	50

Parishes.	Explanations and particular Statements.	Amount of whole salary stated in cash.	Average number of Scholars.
		£. d. s.	
No. 10. Edinkylie.	<p>To which the Earl of Moray, with a stock of fuel, adds a small field and a little garden.</p> <p>There is a third school supported partly by the <i>society</i> and by Laudor Dick, of Relucas, Esq. with fuel, a small field, and garden .</p>	14 0 0	30
No. 11. Elgin.	<p>The masters are engaged by the magistrates for the term only of three years. The salaries paid quarterly are also occasionally varied. That of the grammar school-master at present is</p> <p>The present salary of the English school</p> <p>The salary of the mathematical school</p> <p>The society for Propagating Christian Knowledge maintain a school in the sequestered glen of Pluscardine near the ruins of the priory, with a salary of £10</p> <p>The inhabitants of the Glen pay 5</p> <p>and the requisite fuel</p>	<p>40 0 0</p> <p>35 0 0</p> <p>35 0 0</p> <p>15 0 0</p>	<p>30</p> <p>103</p> <p>20</p> <p>35</p>
No. 12. Forres.	<p>The proprietors allow a small field, as in Elgin the salary is by the magistrates from the revenue of the community to the grammar school</p> <p>To the English school</p>	<p>30 0 0</p> <p>20 0 0</p>	<p>60</p> <p>80</p>
No. 13. Kinloss.	<p>Parochial school, salary in cash £16 19 9½</p> <p>Salary paid <i>pkts.</i> in bear b. 7 1 2 } Do. in } 10 9 2 oatmeal . 2 0 0 } —————</p>	<p>27 8 11½</p>	<p>40</p>

Parishes.	Explanations and particular Statements.	Amount of whole sa- lary stated in cash.			Average number of scho- lars.
		£.	s.	d.	
No. 14. Knocandow.	Parochial school in the Knocandow district to- wards the western quarter	16	13	4	25
	The society for Propagat- ing Christian Knowledge, maintain a school in the village of Balnatom for the middle district of the pa- rish: salary	15	0	0	30
No. 15. Rafford.	The proprietor adds a little garden and a small field and the people give fuel.				
	Parochial school in the eastern quarter, which ori- ginally was the parish of Macallan: salary	16	13	4	20
No. 16. Roths.	The act 43 Geo. III d. of 1803, not having been ap- plied, the ancient salary payable in bear or bigg is 14 bolls . . . £16 2 0				
	And in cash . . . 13 10½	16	15	10½	30
No. 17. St. Andrews Shanbryd.	Salary of the parochial school	22	4	5	65
	Salary payable by the pro- priators in cash £11 2 2½				
No. 18. Speymouth.	By an endowment by William Duff of Dipple 1 7 9½				
	Salary in bear 18 bolls 20 14 0	33	4	0	16
No. 18. Speymouth.	Salary of parochial school in cash £11 2 4				
	Do. an endow- ment by Mr. Peter Gordon, watch- maker, at Edin- burgh 5 11 2				
No. 18. Speymouth.	Salary payable in bear b. 2 1 1 pks. 2 13 0				
	Do. in oatmeal 8 0 0 8 0 0	27	6	6	30

Parishes.	Explanations and particular Statements.	Amount of whole salary stated in cash.	Average number of Scholars.
No. 18. Speymouth.	<p>In the southern end of the parish bordering on Rother the society for Propagating Christian Knowledge for the accommodation of both parishes support a school by a salary of £15 0 0</p> <p>By an endowment by William Duff of Dipple 2 15 7</p> <p>By his Grace the Duke of Gordon, for the maintenance of a cow and for fuel, 3 bolls of oatmeal, and in cash 1l. 10s. 4 10 0</p>	<p>£. s. d.</p> <p>22 5 7</p>	20
No. 19. Spynie.	<p>Parochial school salary in cash £12 4 6</p> <p>Salary in bear 8 bolls 9 4 0</p>	21 8 6	16
No. 20. Urquhart.	<p>Parochial school salary in bear or big, 19 bolls £21 17 0</p> <p>An endowment by Lord Dunformline when he was proprietor of the lordship of Urquhart of 12 bolls meal 12 0 0</p>	33 17 0	36
	Total	£695 16 11	1199

Parishes.	Explanations and particular Statements.	Amount of whole salary stated in cash.	Average number of Scholars.
		£. s. d.	
COUNTY OF NAIRN.			
No. 1. Ardclaugh.	Salary of parochial school .	22 4 5	36
No. 2. Aultdearn.	Salary of parochial school in cash £12 10 0 Do. in bear 10 bolls 11 3 0 In oatmeal 6 bolls 6 0 0	<hr/> 29 13 0	40
No. 3. Candor.	Salary of parochial school in cash £11 2 3 In bear or bigg 10 bolls 9 4 0 In oatmeal 6 bolls 6 0 0	<hr/> 26 6 3	60
No. 4. Nairn.	Salary of parochial school in cash £11 2 3 In bear 16 bolls 18 8 0	<hr/> 29 10 3	100
	Total for the County of Nairn	£107 13 11	230
	Total for the County of Moray	£695 16 11	1199
	Total for the whole district	£803 10 10	1429

Besides the amount of the school salaries, raised as in the table from the value of the land of the district, it is proper to notice that there are moreover the school fees, claimed quarterly on account of the scholars which each school retains, which, although but a few shillings in the year from each of the scholars, are of so much consideration to the poor people, by whom the largest proportion of every school is furnished, that while much arrears and much irregularity in the payments always prevail, a great part of the fees for the harvest quarter

ter is generally eluded, by keeping back the children from the end of the vacation, to the commencement of the next quarter, although in general the harvest vacations are little more than a month.

The act of 1803 continues that clause of the act of William and Mary in 1696, by which parochial schoolmasters are constituted the clerks of the church sessions, but they are also charged with the duty of conducting the musical department of the devotions of the people, and not being generally qualified since any degree of art began to be introduced into this part of the public worship, this article of their perquisites from about £2 to £3 is so generally required for the hire of the substitute, as not to be admitted into the table.

The public provision for the education of the youth of the district amounting to the sum of £800, and their constant number being equal to 1400, it may be proper to make brief accounts of the general course of education which is thereby maintained.

The children even of the poorest class are all taught to read the bible cleverly; their parents deeming this essential for the implementing of their own baptismal engagements.

In reading English, it has been for several years attempted to imitate the pronunciation adopted in the academies about London; in this regard *primers*, and other spelling books have very generally supplanted the *Westminster catechism*, which had been used among beginners, ever since it was recommended at the era of the solemn league and covenant, "for such as are of weaker capacity." Being able, however, to rehearse the catechism is still accounted a most essential part of Christian education. By the young people it was always rehearsed merely with the same rote, as "*the house which Jack built*," but since all have been taught to read, and other tracts of higher estimation having got into their hands, the catechism is disregarded as childish, and obliterated from the memories of the generality, as they engage in the business of life, which was not the case with their fathers.

Besides being thus taught to read, writing also is deemed essential for the girls, as well as for the boys, and both are taught a short system of arithmetic, which comprehends the varieties of the rule of proportion and the management of fractions. Several are also taught book-keeping, and are instructed (though not deeply in the principles,) in the practical part of mensuration.

In every school almost, there are also some boys learning Latin, and in some cases the Greek tongue. Less alteration of the practice of our fathers in this branch of education has taken place, than in that of teaching to read English. The rudiments, as improved by Mr. Thomas Ruddiman of the advocates library, from those of Wedderburn and Simpson, are preferred to the accident of the English schools: In a few particulars, the rudiments might, perhaps, be still improved; but without the least variation it has been taught almost universally over Scotland, for nearly one hundred years. The syntax begins to be acquired, as the Tyro struggles through the 100 colloquies of Maturinus Corderius; and this essential part of grammar is presumed to be completed, when he has mastered the exemplification of the rules of construction, originally selected in a great measure from the classics by Mr. Clarke of Hull, and somewhat thereafter improved by Mr. John Mair. Along with these exercises of the syntax, the proficiency of the learner is carried on by his being taught to translate a considerable portion of the Roman History by Eutropius, from which he advances to the lives of the gallant commanders by Cor. Nepos, part of the commentaries of Cæsar, the whole, it is believed of Sallust, and a part of Livy, read in alternate lessons, with selections from the metamorphoses of Ovid, from Virgil thereafter, and lastly from Horace. During this long stage of the course, the student is set forward from Mair's introduction, to an abridgement of Kirkwood's improvement of Dispaüter's Grammar, by Mr. Watt; and it then also becomes a part of his daily employment, in some schools for four, and in others only

only but for two days of the week, to make a version in writing of a few sentences of English into pure classic Latin, and alternately to make a translation in writing of some part of the pure classics into correct English. When this short grammar, the business only of the morning, is mastered, the course is presumed to be completed, in a term generally of four, or at the farthest of five years.

Although considerable attention is bestowed on prosody, yet no attempt as in the schools of England, has been ever made to frame Latin verses, neither is the English fashion of pronouncing Latin in the least degree of estimation; the mode which is said to have been continued on the continent, since the era when the language was vernacular, as ascertained by some of the disquisitions of Aulus Gellius in the *Noctes Atticae*, is still persisted in, though in the future concerns of life attended with occasional disadvantage.

The teachers have deviated from the better usage of their predecessors in a circumstance or two, which merits a brief regard. They have entirely abandoned the practice of speaking Latin, not only in the ordinary business of the school, but also in the management of the lesson. All the rules, both of the accidence, and of the syntax are taught in the English tongue, whence it is long before the young student acquires ease and readiness even in the enunciation of Latin, and scarcely ever that familiarity with its ideoms and phrases, which in the old school was insensibly attained. By this ancient practice also, the learner was led, though but in a limited extent, to think in the language which he was labouring to acquire, which is one mean of no small consideration in the advancement of the object in view.

The use of literal translations merits yet also some re-consideration. Both Mr. Clarke and Dr. Goldsmith, seem to be mistaken in supposing the great difficulty of a Latin lesson to consist in the labour of the dictionary: the difficulty which a boy meets with in finding the English of any Latin word, is comparatively insignificant to the mental exertion which is

required, to arrange the words of a Latin sentence in the disposition of its syntax, and in the order of its import. In school books, where that arrangement is previously made, and a literal translation annexed, no degree of this mental exertion is called forth, both genius and ingenuity lie dormant, and experience hath demonstrated that no proficiency whatever in this great object is made, not so much as even the idea is formed of what in this point is required, and both the labour of the teacher, the time, however precious of the boy, and the money of his father are altogether wholly lost. In some of the initiatory school books an edition, perhaps, might be prepared, having the more involved sentences reduced a little nearer to the syntactical arrangement, or an interpretation of such sentences annexed in the style of the *usum delphini* classics. If translations are at all to be permitted, they should be of the freest kind, that is in the most proper English, and they should be locked up by the master, as soon as the scholar has got once over the lesson, which is thereafter to be completely learned by his own proper exertion, with the aid only of the dictionary.

In this respect, it might be also farther suggested, that the recent substitution of Eutropius, instead of the selection of the dialogues of Erasmus which had been adapted to the proficiency of a beginner, is no improvement in the conduct of the course. The briefness of the historian resembling much the information only of an index, makes no impression on the mind of a boy, and with the narration, the words also in which it is conveyed, are in a short time wholly forgotten. Though a boy cannot be supposed to have information sufficient to comprehend the purpose of the satyrst, yet the tale by which it is applied, makes an impression, which connects the language with the mental entertainment which the incident bestowed, and the pleasures of reading, so essential through the whole of life, are even thence begun to be acquired.

The

The modern teachers also have fallen behind in the industry of their predecessors, particularly in never setting any kind of task to be learned at home, during the hours of vacation, which it is believed are longer and more frequent than in the old school. The boy instead of being trained up in habits of voluntary diligence and attention, so essential in the business of the world, by lessons suited to his proficiency and his own powers, is dismissed to all the bad habits of dissipation, insomuch as to return to school not only with the disadvantage of having in part forgotten what he had been taught there, but farther with his attention dissipated upon other objects, and his mental powers from want of due exercise, even impaired.

The modern teachers also restrict their attention merely to the bare verballity of the lesson; they have no time now, to direct the attention of their pupils to the historical narration, to the beauty of the style, or to the morality of the sentiment, and as the memory is not now improved by the exercise of storing up any of the more interesting passages of the poets, a short time in the business of the world obliterates their classic lore as entirely, as the Westminster catechism is forgotten by the young ploughman, or the apprentice of the mechanic. While the gentleman, citing passages from the poets with precision and taste over his wine, on the verge of his seventieth spring, proves that though they might have been acquired when a boy with diligence and care, they have contributed to his respectability in company, and added to his pleasures in retirement throughout the course of a long life.

Not intending, however, an essay on classic education, it needs only to be added, that where Greek is taught in the schools of the district, the same plan is followed, which the teacher carried with him from the university, where with scarcely two exceptions, all the schoolmasters of the country have completed, or are completing, their own education.

APPENDIX.

No. III.

REMNANTS OF THE REVENUE OF THE BISHOP-
RICK OF MORAY STILL LEVIED BY AN OF-
FICER APPOINTED BY THE CROWN.

BESIDES the imposts on the lands of the district for the provision of the ordinances of the gospel and for the education of the youth, both objects of the first importance and which together may be stated at about £4000 yearly, there is yet another exaction from which no advantage to the inhabitants is derived. It is a remnant of the revenue of the Bishop of Moray, and is now an insignificant *item* in the revenue of the empire. About the epoch of the reformation the benefice was greatly dilapidated by the Bishop himself, and the portion which was afterwards appropriated to the crown was farther alienated by grants to private persons. "Like the gleaning of grapes, however, when the vintages are done," several small sums are still levied from sundry estates in every quarter of the territory which composed the diocess. From these particular exactions, it was presumed those estates were to have been relieved along with the redemption of the land tax. But as it was there overlooked and is not generally known nor in regard, it may be proper to make a statement here of the particulars as they are now levied.

Names

Names of the lands.	Proprietors' Names.	Scots currency.	Bear. B. T.	Meal. B. T.
Lands not known.	Sir Jas. Grant, of Grant	£. s. d. 144 0 0		
Easter Elchies	The Earl of Findlater .	11 5 0		
Carron	Charles Grant, of Wester Elchies	9 3 4		
Balnadalry . . .	Sir Jas. Grant, of Grant	51 6 8		
Dalvey	Sir Jas. Grant, of Grant	36 0 0		
Auchmerie . . .	Sir Jas. Grant, of Grant	7 0 0		
Mr. David Polson's land	Evan Baillie, of Kilmylies	40 0 0		
Hugh Baillie's lands	Evan Baillie, of Kilmylies	20 0 0		
Kinnaries	James Fraser, of Kinnaries	18 0 0		
Phoyers	Hugh Fraser, of Phoyers	8 14 8		
Provost Cuthbert's house	James Reid, merchant, Inverness	1 0 0		
Alex. Chisolm's house	Thomes Young, merchant, Inverness	1 0 0		
M'Intosh lands .	Capt. Aeneas M'Intosh, Esq.	20 15 0		
Caudor	Lord Caudor	27 0 0		
Hajme	John Rose, of Holm, Esq.	9 11 0		
Kilravok	Hugh Rose, of Kilravok, Esq.	56 0 0		
Lethen	Lewis Dunbar Brodie, Esq.	26 8 8		
Cantra	David Davidson, of Cantra, Esq. . . .	10 2 0		
Clays	David Davidson, of Cantra, Esq. . . .	10 14 4		
Loggie Ardrie . .	Lewis Dunbar Brodie, Esq.	14 0 0		
Altyr	Sir William Cuming Gordon	24 0 0		
Altiplies	Duncan Forbes, of Culloden	1 6 8		
Kempcairn . . .	The Earl of Findlater .	11 8 0		
Auchoinanie . .	The Earl of Findlater .	23 6 8		
Birkenburn . . .	John Steuart, Esq. of Birkenburn	5 6 8		
Edindick	The Earl of Findlater .	5 6 8		
Pillury	Peter Steuart, Esq. Auchluncart	22 6 8		
Milltown	The Earl of Findlater .	4 2 0		
Blarvie	The Earl of Fife . . .	81 7 2		

Names of the lands.	Proprietors' Names.	Scots currency.	Bear. B. T.	Meal B.T.
		£. s. d.		
Easter Bin of Moy	Col. Hugh Grant, of Moy	1 4 0		
Drumriach	Capt. M'Leod Dalvey	2 0 0		
Pherp	Sir William Cuming Gordon	10 5 0		
Inverlochty . . .	The Hon. Geo. Duff .	52 2 6		
Middletown . . .	The Earl of Findlater .	18 0 0		
Roths	The Earl of Findlater .	4 14 0		
Stank house . . .	The Earl of Findlater .	25 9 0		
James Steuart's lands, Birnie .	The Earl of Findlater, <i>objected to</i>	10 19 0		
Kilnhead, of Birnie	The Earl of Findlater, <i>objected to</i>	6 17 4		
Dyke side, Birnie	The Earl of Findlater, <i>objected to</i>	13 17 8		
Kinneadur	John Brandor, of Pitgaveny, Esq.	117 0 7		
Spynie	The Earl of Fife	26 6 8		
Dipple	His Grace the Duke of Gordon	24 11 4		
Gordonstown . . .	Sir William Cuming Gordon	288 12 0		
Moris town	The Earl of Fife, <i>refused</i>	2 16 8		
Sheriff mill . . .	The Earl of Fife	2 0 0		
Bishop mill . . .	The Earl of Findlater .	66 13 4		
Inchbroke	The Earl of Fife	15 16 10		
Findrossie	Sir John Leslie, of Findrossie	36 7 0		
Essil	His Grace the Duke of Gordon	10 2 0		
Kirk hill	The Earl of Fife	4 9 8		
Tiskings, of Spey	His Grace the Duke of Gordon	200 0 0		
Kellas	The Earl of Fife	71 0 0		
Cadboll	Æneas M'Leod, of Cadboll	16 0 0		
Kirk town, of Dollas	Sir William Cuming Gordon	5 12 0		
Myreside	The Earl of Findlater .	20 0 0		
Lovats Tack duty	The Hon. A. Fraser, of Lovat	40 0 0		
Drives Tack duty	The Hon. A. Fraser, of Lovat	1 10 0		
Recinct lands of Spynie	The Earl of Fife	150 0 0		

Names of the lands.	Proprietor's Names.	Scots currency.	Bear. B. T.	Meal B. T.
Pitgaveny . . .	John Brandor, Esq. . .	£. s. d.	16 0	16 0
Barflathills . . .	Mr. King, Newmill, ¹ / ₂ . . .			
	The Earl of Fife, ² / ₃ . . .		12 2	
	The Earl of Findlater, ¹ / ₃ . . .			
	The Episcopal Chapel, ¹ / ₃ . . .			
Inch broom . . .	The Earl of Fife . . .		3 0	
Link wood . . .	The Earl of Findlater . . .		20 0	
Maisendieu . . .	The Minister of Elgin allocated to them . . .		8 0	
Total . . .		£1944 17 11		

	Scots currency.
	£. s. d.
Of the amount of this table, the whole sum levied from the estates of Sir James Grant is gifted to himself, amounting to the sum of	238 6 8
There is likewise allocated for the support of one of the ministers of Inverness, the sums levied from the lands of David Polson	£40 0 0
of Hugh Baillie	20 0 0
of Kilravok	56 0 0
of Blarvie	81 7 2
of Inverlochty	52 2 6
of Rothes	4 14 0
of Kinneadur	117 0 7
of Spynie	26 6 8
of Dipple	24 11 4
of Gordonstown	288 12 0
of Bishopmill	66 13 4
of Sheriffmill	2 0 0
of Inchbrock	15 16 10
of Findrossie	36 7 0
of Essil	10 2 0
of Kirktown of Dollas	5 12 2
of Myreside	20 0 0
	867 5 7
There is the farther allocation to the stipend of Spey-mouth the sum levied from the Spey fishery amounting to	200 0 0
	And

	Scots currency.
	<i>£. s. d.</i>
And to the stipend of Birnie from the Earl of Findlater's, in that parish of Stank-house, Kilnhead, and Dykeside, the sum of	32 12 2
	1338 4 5
It is understood the balance is paid into the exchequer amounting to	606 13 6
To which is added the yearly fiars price of the bear and meal in sterling money about £75 at the rate of the preceding tables, with the money £125 sterling	£ 1944 17 11

APPENDIX.

No. IV.

THE COMMISSARIAT OF MORAY.

THE exactions, as levied in the preceding table, are now comparatively light: other exactions were made by the bishop, not so directly from the lands, as from the people of the district, which are still continued and still felt, by all the weight which they bore, even in the heaviest pressure of papal influence. Besides the proportion of his lordship's ample revenue drawn with certitude from the land, another large share, equally certain, though apparently more contingent, was derived from those objects of civil justice, which in the ages of ignorance and superstition, it was deemed a profanation in secular judges to determine. These were then dignified by the title which they still retain, of spiritual causes, and the judicatures which are alone accounted competent to determine them, have the queer appellation of spiritual courts. The difference however between the temporal and spiritual courts, is not so much in the justice of the decision, as in the secular judge being supported by a public establishment, and the spiritual judge by the parties at his own bar. Another difference, more essential at present in the jurisprudence of England than as yet in that of Scotland, is, that all interposition of a jury is wholly excluded from the spiritual court. All those matters which relate to the goods and chattels and testaments of the deceased, before their proper heirs can obtain the possession, must be determined in the spiritual court; marriage also, as having been once accounted one of the seven sacraments, consequently dowries and divorces;

voces, as connected with marriage, scandals also, and such other objects as by any ingenuity have been fancifully connected with religion, belong to the spiritual court.

In consequence of the reformation, the bishop's court was abolished in 1560, and in spiritual causes justice appeared thereby to be cut off. But instead of replacing such causes under the jurisdiction of the ancient established courts, where they ought always to have been retained, new subsidiary secular courts were, in about three years after, instituted in the room of the spiritual, in which those kinds of causes are decided, nearly in the same mode, and at the same cost, proportionally to the times, as under the jurisdiction of the bishop.

These subsidiary courts, from the burthen of which it was generally supposed the people were to have been wholly relieved, upon the recent improvement in the administration of civil justice, stretch out their jurisdiction into the remote quarters of other counties and into various presbyteries, which were originally comprehended in the respective bishopricks. The extent therefore of the commissariat of Moray is not very generally known; mistakes in this particular sometimes take place, and considerable inconvenience is thence occasionally superinduced. On this consideration it has been deemed proper to make the table of the parishes comprehended in this commissariat, distinguishing the county and the presbytery to which each parish at present appertains.

PARISHES OF THE COMMISSARIAT OF MORAY.

Parishes.	County.	Presbytery.
1. Aberlaur.	Banff.	Aberlaur.
2. Abernethy.	Moray & Inverness.	Abernethy.
3. Aultdearn.	Nairn.	Nairn.
4. Ardclaugh.	Nairn.	Nairn.
5. Alves.	Moray.	Elgin.
6. Ballig.	Banff and Moray.	Strathboggie.
7. Birnie.	Moray.	Elgin.
8. Boharn.	Moray and Banff.	Aberlaur.
9. Betspie.	Banff.	Strathboggie.
10. Cairny.	Aberdeen and Banff	Strathboggie.
11. Caudor	Nairn.	Nairn.
12. Crowdale.	Moray & Inverness.	Abernethy.
13. Dollas.	Moray.	Forres.
14. Drainy.	Moray.	Elgin.
15. Duffus.	Moray.	Elgin.
16. Duthel.	Moray & Inverness.	Abernethy.
17. Dyke.	Moray and Nairn.	Forres.
18. Edinkylie.	Moray.	Forres.
19. Elgin.	Moray.	Elgin.
20. Forres.	Moray.	Forres.
21. Gartly.	Aberdeen and Banff	Strathboggie.
22. Glass.	Aberdeen and Banff	Strathboggie.
23. Grange.	Banff.	Strathboggie.
24. Huntly.	Aberdeen.	Strathboggie.
25. Inveravon.	Banff.	Aberlaur.
26. Inverkeithny.	Banff.	Turriff.
27. Keith.	Banff and Moray.	Strathboggie.
28. Kirkmichael.	Banff.	Abernethy.
29. Kinloss.	Moray.	Forres.
30. Knocandow.	Moray.	Aberlaur.
31. Marnoch.	Banff.	Strathboggie.
32. Nairn.	Nairn.	Nairn.
33. Pelly.	Inverness.	Inverness.
34. Rafford.	Moray.	Forres.
35. Rhynie.	Aberdeen.	Strathboggie.
36. Rothiemay.	Banff.	Strathboggie.
37. Rothes.	Moray and Banff.	Aberlaur.
38. St. Andrew's Shanbryd.	Moray.	Elgin.
39. Speymouth.	Moray.	Elgin.
40. Spynie.	Moray.	Elgin.
41. Urquhart.	Moray.	Elgin.

APPENDIX.

No. V.

ROYAL BOROUGHS AND VILLAGES.

THE Royal Boroughs and Villages having been mentioned but generally in the course of this Survey, and as the state of the agriculture, of the political economy, and of the commerce of the country, are by them influenced, a short account of each, will, in this undertaking, be generally deemed essential. This could not have been comprehended in any of the chapters or sections of the plan transmitted for the conducting of this Survey, but by the incumbrance of a digression, or by the extension of an appendix, which last, as making no incroachment on the plan, has therefore been preferred.

1. The situation of the village of Garmach has been formerly mentioned in the eastern end of the country, in the angle formed by the Frith and the Spey, at the influx of the river. The village, coeval perhaps with Elgin, is now possessed under his grace the Duke of Gordon, the superior of the lands and houses which appertain by feu holding to the proprietors. A proportion of the feu-duty was originally paid in barrels of salmon, which is now the only memorial of the right which the proprietors once had to a share of the fishery: it is believed, that as the value of the fishery began to increase as the business of exportation prevailed, this right, insignificant from the small shares in which it was frittered off, and more troublesome than profitable, by the labour, and the cost, and the implements required, may have been purchased by the superior, and the duty paid in salmon commuted into the cash now exigible.

The village contains several neat houses, though the greater
part

part of the buildings are composed entirely of clay made into mortar with straw, in some cases having a foot or two from the foundation built of stone. In the execution it is necessary to suspend the work a little on the addition of every yard of height, that it may not warp from the perpendicular; with this precaution it is raised to the height of two stories, bears a slated roof, and is neatly completed within. If sufficiently covered on the top, it is equally durable, and more impervious to wind and damp, and when daubed over on the outside with lime mortar, it appears equally handsome, as a wall of stone in the common fashion. The number of the inhabitants, is nearly 700, and they bear such a large proportion to the whole population of the parish, that they are accommodated with the parochial school. The superior has the privilege of establishing a magistrate of police, but they all behave in a manner so discreet and orderly, that they have been always trusted to the influence of the gospel, and the sanctions of the civil law. Similar to the lots of the tribes of Israel, each proprietor held, with his house and garden, a small field about the extent of six acres. These lots have been in some cases divided, and consolidated in others, according to the incessant mutation of human affairs, yet the original allotments are still recognised under the title of the *Garmach Acres*. The first consideration almost, which now occurs, is the many generations which have passed away, during which this village has continued stationary in regard almost to every kind of improvement, remaining still without trade, without manufacture, or other business, save alone the cultivation of their little fields, which, even in this country, would altogether be regarded but as one farm. It does not appear that the superior would in particular derive any advantage from its improvement, but its commercial facilities were originally equal to those of Aberdeen, and superior to those of Glasgow. The sea flows up to the end of the village, and even at neap tides there are nine feet of water on the bar. Messrs. Dodsworth and Osbourn for the temporary

purpose merely of launching three or four vessels, excavated a canal nearly of the same length, and almost one third part of the breadth of the West India Dock, and little more than doubling their labour would, of itself, form a harbour easily accessible, secure from every storm, and of a capacity sufficient for the whole trade at once of the Moray Frith : whatever alterations may, in ancient times, have taken place, the permanence of the entrance into the river during the whole of the last century, hath shown that there is no great cause of apprehension in this regard, either from the violence of tempest in the sea, or from the rapidity of the swollen river during a flood upon the land. After all, there is experience more than sufficient to establish, that the commerce of any place does not wholly depend upon the commodiousness of its port.

2. In a progress from the eastern end of the country, the village of *Urquhart* appears at the distance of four miles from Garmach. The street, exclusive of the church, the manse, and three or four houses as a suburb, consists of about only a dozen of dwellings on each side, with this peculiarity, that the back of all the houses on its southern side is towards the street, and each house at the distance of its own length from its neighbour, by which disposition, the inhabitants on the north side enjoy the only boon, which Diogenes in his tub requested of Alexander the Great ; the Sun is not excluded by any of the dwellings on the southern side, and the village apparently is twice its real length. The inhabitants, the schoolmaster excepted, are all employed in the concerns of agriculture ; three or four acres are annexed to each dwelling, and both without a lease possessed. The accommodation is however deemed so valuable, that the inhabitants, with the tame obsequiousness of Russian peasants, submit to the will of the proprietor and of his steward, rather than by the lowest murmur of refusal to occasion their removal ; proving thereby how cleverly all the improvable moor might be reduced into cultivation, were the proprietors to build commodious cottage dwellings, annexing to each ten
or

or twenty acres, with the permanent security of an equitable lease.

3. Elgin is next presented in a course towards the west ; at a little distance it appears to promise a greater degree of magnificence than the reality performs ; in the approach from the south, the view in some measure resembles Oxford when first seen on the road by Henley from Windsor. Although a plain of considerable breadth intervenes, the town appears to be close and snugly sheltered under the southern side of a wooded bank ; the gentle stream of Lossy winds along its northern and eastern quarter, and which, having three bridges, is now also, similar to London, to be accommodated with a fourth. The town consists of one street a little longer than a mile winding from east to west, widened to such breadth towards the middle of the town as to have the church placed upon it, a low misshapen fabric at once deforming and incumbering the street. In the middle also of the street, at a little distance westward, is the town, or mansion house, a mean building containing the halls in which the magistracy and the courts meet ; adjoined to the gaol, a clumsy square tower, almost without windows. The houses which front the street are generally of three stories ; between every two a narrow lane is extended backward on either side for the length of eight or ten dwellings, in some cases separate properties, and for the most part containing distinct families. In the ancient construction of the town, which yet in some places remains, these lanes were continued into the street, which of consequence exhibited only the gable ends: Many of these lanes terminate at the gardens, through which a more pleasant and immediate access is afforded to the country, than the few public avenues offer:

The community have charters in divers eras, from the reign of Alexander II, in 1234, to that of Charles I, on March 8, 1645, conferring lands and privileges, the whole of which they at no time possessed. By a little investigation into the history of patronage, it might be still possible to

explain how it is, that although the king then granted the right of patronage to the town, yet it has always by the crown been retained.

The municipal constitution of the city consists of seventeen magistrates annually elected by themselves, with the change only of five; burgesses dwelling in the town being only eligible. The magistracy commission a jury of other fifteen to apportion the taxes affecting the trade, but no private tax can be imposed without the consent of the majority of burgesses in their head court upon the second Tuesday of September, in which also the expenditure of the revenue may be investigated.

The city conjoins with the royal boroughs of Cullen and Banff, Inverary and Kintore, in electing one representative in the House of Commons; yet it must be presumed, that both the population and the trade of Elgin alone, have in every age, been superior to many of the English boroughs that have each two representatives.

The city is placed in the middle of an extensive tract of corn field, which is wholly occupied in various measures by the inhabitants, and is, with little exception in different shares, their property. It supplies such a large proportion of grain required for their support, that, in an agricultural regard, it is but insignificant. The lands also require nearly the whole quantity of manure which the town provides. In years of plenty the poorer farmers and millers who bring meal into the weekly market on Friday, in a low shed adjoined to the bottom of the wall of the gaol, are greeted with sneering contempt by the lower class of citizens, and buyers and sellers both, seem to account a purchase at the common price of the country, as in some degree a favour conferred upon the seller. In the season of dearth this class of the citizens by no means allow it as any favour to bring meal into the market; on the contrary, they regard it to be as much the duty of all who traffic any way in grain, to supply their market at a rate even somewhat lower than the general price
of

of the country, as it is to pay any onerous debt; upon almost the slightest symptom therefore of scarcity, the mob thickening to near a thousand, make a destructive visitation in the dark to some hapless dealer, or some luckless miller, whom report distinguishes as having grain or meal in store. What in this way they find, has been occasionally brought to the market and sold in triumph, at the price the mob deemed reasonable, but they have more frequently destroyed it at the place. Neither the sheriff, the representative of Majesty, nor the fiscal, the representative of the Attorney General, nor the magistrates, the Commissioners of Police, nor the justices, the Guardians of the Peace, have ever regarded this outrage as criminal in any degree, and in so far as the longest prescription can confer right, the mob may plead, that in this regard they have obtained the most legal sanction for the most illegal enormity. The unfortunate sufferer has never ventured on his part to complain, having the strongest apprehension, not only of not obtaining redress, but farther, as in their vengeance, suffering by a more destructive and calamitous visitation. To make any reflections on this article of the police, would no doubt be accounted needless, if not weak impertinence. In every consideration in short, that can be presented, the city provides the occasions of expenditure to the farmer, rather than affords any of the means of adding to his stock.

From there having been no instance in this country of the act 39 Geo. III. Ch. 55, "*For encouraging the improvement of lands subject to the servitude of thirlage,*" being ever put in execution, it is to be presumed, that this burden has not, in fact, been so onerous as it has for many years been represented; or that the act itself is not framed for affording the proposed alleviation.

It is not necessary to inquire here by what right the monarch of Scotland adstricted his citizens of Elgin to the mill which his Majesty built at Old Mills, not only for all the grain which themselves can cultivate, ("*grana omnia crescen-*

tia") but farther for the corn and ungrinded malt which the citizens may elsewhere purchase (*"invecta etiam et illata"*) if it be subjected (*tholes*) to either fire or water within the limits of the adstricted district. The eleventh section of this act confers the privilege on any one inhabitant of Elgin, "of purchasing relief *for ever* from this servitude, and from all the services and prestations incident thereto," for a price to be determined by a jury under the authority of the sheriff, or of the sheriff substitute, yet none of the proprietors have taken the advantage of this privilege during the eleven years, in which they have already enjoyed it. The value, it might be presumed, would not greatly exceed ten years purchase of the price of the quantity of the mill dues, paid for the grinding; may it not be then inferred that the pressure of the times has kept them all in such necessitous circumstances, that none can easily contrive to make such an advance at once from the requisite annual expenditure. The public revenue of the community, about £200, could not perhaps be more profitably laid out for the general advantage of the citizens, than in the acquirement of such an important immunity.

It must be presumed that Elgin was of great consideration, prior to the date of its first charter almost 600 years ago, and although then consisting mostly of thatched wooden hovels, it was probably more upon an equality with the first class of the Scottish boroughs than it is now. The situation of the town, seven miles distant from the port, seems to have been chosen with no imagination whatever of the advantages of commerce. Its inland situation, the imaginary protection of the castle, reared on its own green hill in proud pre-eminence above it, the river Lossy, though more distant now, then close upon its northern side, and the Morass of Strathcant guarding its lands upon the south presented a station, which, in the rude state of society, conferred at once security and plenty. It was consequently at a remote era adorned with the palaces of the ecclesiastics, and the endowments of monks and friars. The superstition of the most ignorant age seems never to have exhibited

exhibited in Moray, the deplorable establishment of a nunnery.

In the chartulary of Moray there is the record of the bishop having arrested a ship loaded for two of the burgesses, with ale, and flour, and tallow, on the 7th of June in 1283, about 150 years after the charter of Alexander had raised the citizens to that respectable rank in the community, because they had unwarrantably encroached upon the water which, with the whole channel, he claimed as the property of the church. This of consequence upon the substitution of *Presbytery*, became the civil right of the proprietor of Kinneader, and the extent of the trade of the city, similar to that of Dornoch and Tain in the passing generation, seems not to have much needed the accommodation of a port for the long space of 315 years, when the magistracy in the year 1698 without claiming the right which their own charters conferred, "of all the ports and stations, bays and creeks, between Spey and Findhorn where any ship or boat can be received," made a bargain for the ground.

4. Where the village of Lossymouth is placed, for the yearly rent of £2. 1s. 7d. subjecting the inhabitants, and even their own incorporation to the humiliating vassalage of the feudal age.

The expense of the harbour which they began thereupon to construct is said to have amounted now to £3,200. It is commodious for vessels of 80 tons. The property acquired by the town extends to 80 acres of barren sand and gravel. 175 feus for houses and gardens, each 120 by 180 feet have been laid off by the plan in four principal streets, each 42 feet broad at right angles to the shore, with commodious cross lanes equal to half their breadth, and a large square, and handsome market cross in the middle. There is also an irregular street carried out behind the quay, and in a quarter a little detached, a neat arrangement of cottages built for the accommodation of the fishers. There are now a number of handsome houses of two and three stories, and the manure produced

duced has formed such a soil with the sand, as now furnishes each dwelling with the ordinary productions, fruits and vegetables of the garden. The number of inhabitants are about 300.

The rock of the Coulard hill, formerly mentioned, is said to stretch across the whole breadth of the harbour to the foundation of the pier on its southern side, which prevents the power of the stream from making it of greater depth. It has been on this account suggested, that the present harbour might be commodiously converted into a dry dock, and a more efficient haven formed along the southern side of the last erected pier, by carrying out a new mole in proper connection therewith, and turning the river into this bason, where it has been found the rock does not extend. Less than three thousand pounds, it is calculated, would procure this great accommodation.

5. Bishop Mill is a small village of great antiquity, to which an extension of modern buildings, in a regular arrangement, has been recently added. The name carries back the consideration to the first construction of a common meal mill, wrought by water, to that poor condition of society, and to that inferior state of the arts, when such simple machinery could not be constructed but by persons of the first consequence in the state; and nearly about the same era, Elgin was accommodated respectively with the king's, the sheriff's, and the bishop's Mill. It is to be observed that the Lossy, in this part of its course, winds through such level ground, that no natural fall is presented for any of these mills, nor for several others of a more recent construction in the same quarter: the ingenuity however of those times, simple as they were, supplied this deficiency by a dam in the river, which raises the water about three feet above its natural level. The river, by this means, is forced into the stilness of a lake for a quarter of a mile above each of the dams: yet it has never spread wider than its natural bed, and even in a flood the water glides over the dam, rarely on such occasions
doing

doing any damage. This ancient ingenuity, in other similar situations, might be obtained. Water being a more steady power might, in some cases, be found preferable to wind, and in others less expensive than the use of steam.

The village, although without the limits of the royal charter, and though at a little distance in the parish of Spynie on the other side of Lossy, may nevertheless be regarded as a suburb to Elgin. The new streets are built in the same fashion as that of Urquhart, upon a pretty elevated plain, extended back from a sloping bank which rises from the river. There are about 60 dwellings, and nearly 400 inhabitants, some of the houses are elegant mansions of three stories, but in general they are only of one, under a thatched roof. They are held of the Earl of Findlater as superior, who is the proprietor of the adjoining lands.

6. Forres, at the distance of twelve miles westward, bears a pretty close resemblance to Elgin, and though it scarcely contains half the population, yet, at first sight, it appears nearly as large. The green elevation which nature presented at its western end, as an admirable situation for a castle, and the extensive fertile fields which spread every way around, may, as in the case of Elgin, have determined the situation long before even the idea of commerce or of its advantages had been formed. A considerable stream from the neighbouring hills, embracing half the circumference of the bottom of the castle hill, winds close behind the town on its northern side, which, at either end, is adorned by stone bridges. The houses in general are modern, and mostly of three stories, though several of the lower habitations of a preceding age yet remain, with their gable ends to the street, upon which, near the middle of the town, the gaol and public hall are built. The church and cemetery are in a recess off the street, upon its northern side, occupying more than an acre of ground shut up by an undecorated wall.

From King Duff having brought the chiefs of several bands of robbers from Caithness and Ross to Forres, that their execution

execution there might be the more conspicuous, it may be inferred, that Forres was of more consideration, in the middle of the tenth century, than either Inverness or Elgin. Its charter of royalty, by James IV, in 1496, bears, that those of more ancient date, in the times of war, had been destroyed by fire. Its municipal establishment is the same with that of Elgin, except that gentlemen resident at a distance any where in the country, may be elected for its magistracy; and that each singly, and also in their incorporate faculty, are invested with the authority of the sheriff, who, by their charter, is prohibited from the discharge of the functions of his office in matters of civil justice, and in those also of criminal jurisdiction within the limits of the royalty. The revenue of the community is little more than £100 yearly. Forres is conjoined with the boroughs of Nairn, Inverness and Fortrose, each, in its own respective county, in electing one representative in the House of Commons; if the number of those who are represented, add any thing to the respectability of their representatives, he could reckon, it is said, above 20,000 inhabitants in the towns from which he is elected.

A broken range of low hills, stretches down for several miles from the west, and terminates in a mount somewhat higher than the general elevation, at a little distance behind the town on the south. From the track of a ditch and earthen rampart carried round a little below the summit, this mount appears to have been in ancient times a fortified military station, but no kind of tradition suggests even a conjecture of such remote occupation. Were it ascertained that the noted obelisk near its base had been set up as the memorial of the expulsion of the Danes from Scotland,* with justice of
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* We have much to regret, that from the low state of literature in the era when the obelisk was set up, it has for many centuries failed

the people of Forres, it might be said, that by their attentions to the objects of national glory they had been in every age

failed in recording the patriotism by which it was erected ; for the conjecture of the expulsion of the Danes is only a modern suggestion. Allowing the hamlet of the *Cain* to have derived its appellation from *Camus* their chief, still their distant station on the coast of Duffus, urges the question, *Why the obelisk should have been set up at Forres ?* This admits not of satisfactory solution ; it may therefore be with more probability conjectured, that this stately monument was erected in memorial of the assassination of King Duff : the emblematic figures which yet remain distinct, seem to relate to the execution of malefactors, rather than to such as might be devised for designating a victory : on the northern side, two human figures, as if in the act of mutual salutation : under the cross the emblem of the gospel age, may represent the first meeting of the king with the traiterous governor of his castle. In the highest or first compartment on the other side, a body of cavalry, as if in pursuit of warriors on foot, suppose the robbers, some armed with the arrow on the bow ; others with the sword and shield : next below are represented guards with their spears erect near to a heap of human heads on the one hand, and the headless trunks ranged upon the other. The lowest compartment, in which are horses held by the bridles as if kept in waiting, and the heads and trunks as of those whom they had borne to execution lying near, may, as in the concluding scene, represent the vengeance on the murderer and on his coadjutors, referring thus both to the cause of the crime, and to its punishment. The vacant spaces at the top, on either side of the cross, and the two narrow sides of the stone, are decorated with ancient laboured vignette. It is allowed that the similar, though less splendid monument at Glamis, was erected as the memorial of the murder of Malcolm II. And from the tradition of the miraculous obscuration of the sun for six months, in sympathy with the national grief, it may be inferred, that this murder was in that age accounted a deeper calamity than the fire of London in the reign of Charles. In an age so much inferior in science, the business of quarrying, carrying, and erecting such a column,

must

age distinguished. For, on the summit of this mount, they have erected a lofty tower, as a memorial of Lord Nelson and the victory of Trafalgar. The tower is an octagonal fabric, on a diameter of 24 feet including the walls at the base, raised to the height of 70 feet, and completed by a battlement and a flagstaff, with ropes resembling a mast; but similar to the monument of London it is constructed only for being seen, not being convertible to any useful purpose. It will doubtless carry down to many generations, the patriotic object of its builders.

7. The village of Findorn stands in the same relation to Forres which Lossymouth bears to Elgin, being only about two miles nearer, and instead of appertaining to the community, the village is on the estate of Sir Alexander Monro, of Novar. The act of parliament respecting the harbour was made in 1778: besides the tolls for the accommodation which it affords as the equivalent for the expense of its construction, the act contains regulations also for the good government of the shipping in their various relations to each other during their occupation. The harbour will always remain an object of great accommodation,

must have been a more expensive and interesting undertaking than the construction of the monument of London, while the sculpture both in its design and execution rivals the emblematic figures of that elaborate structure.

Standing on the estate, it must now be deemed the private property of the Earl of Moray, whatever interest the nation may be presumed to have once had in its preservation. By all who feel any regard for our national monuments, it is regretted that the stone itself, as well as the figures which it exhibits, are not protected from the wasting influence of the weather, by the simple expedient of a coating or two of paint, if the expense of a small ornamental building over it, should be deemed too great a sacrifice to an object, interesting now only as a record of the state of the fine arts among us, before the introduction of letters into the kingdom.

accommodation; although if the commercial interests of the nation continue to prosper, the obvious facility of bringing vessels up to the side of the town, will, probably, at a day not very distant, render it less frequented than at present. The population of the village nearly 400 souls, has not for many years been increased. The houses are close upon the shore of the bay, and with a few exceptions are only mean cottages.

8. *Roths*, although in the interior of the country about ten miles southward from *Elgin*, and about the same distance up the course of the *Spey* from *Garmach*, occupies a beautiful situation upon the western side of the valley which spreads out a broad cultivated plain, nearly four miles in length. The population amounts to about 400 individuals; the dwellings, each with its little garden, containing 720 square yards, pay a yearly rent of ten shillings to the Earl of *Findlater*, the proprietor. The village, though built for almost 40 years, hath not as yet any manufacture; though, were the roads properly completed, and bridges erected on the *Spey*, as is proposed about *Aberlaur* above, and the boat of *Brigg* below the village, its command of water and other facilities, would render a good situation for such establishments. It is accommodated with the parochial church, and school, with a meal-mill, a fulling-mill, and a flax-mill, with a freemasons lodge, and more than one inn.

The ingenuity of a rude age, in procuring falls for the mills about *Elgin*, has been already noticed. At *Roths*, it is strikingly observable, that much expense and labour have been, through many generations, employed in forcing the stream into an artificial course without any measure of convenience or advantage for the mill, besides what the natural channel of the brook, which intersects the village, obviously presented.

The inhabitants subsist in poverty by the cultivation of a few acres annexed to each dwelling, let for a rent probably less now, than would be paid were the land laid out in two

or three farms, as the more enlarged extent of modern occupation requires. Prior to the year 1776 the lands, at present in the occupation of the villagers, were let in seven farms. And whatever may be said of the increased population, a village, without any kind of manufacture, furnishes but melancholy reflections.

9. Balnatom is ten miles higher up on the course of the Spey than Rothes. It was built by Sir Archibald Grant, of Monymusk, several years before the village of Rothes was projected. Soon after its foundation the property of the village was transferred to another family. Although the intention therefore of the respectable founder might have been different, yet from all that has hitherto taken place, it must be presumed, it was merely for the cultivation of the waste that this remote situation was chosen:

It might however be practicable to establish a manufactory of wool to some consideration at Balnatom: the requisite number of hands, and the material for the manufacture, could be readily procured: the country around would supply every article of subsistence. The mountain in which the village is placed, would for many generations afford peat for fuel; a very small measure of skill in the engineer would conduct a powerful stream across the street five hundred feet above the level of the Spey, which would offer a succession of waterfall, more than sufficient for any machinery that could be required; and the little weight of the manufacture, when completed, would admit of its being carried to market, at an expense not trenching much upon the profits.

10. The city of Nairn, of the same name with the county, and with the river on which it is beautifully placed, stands on the shore of the Frith, eleven miles westward from Forres. The High Street lies east and west, the houses upon it are well built and elegant; the lanes, projected to the river on the one hand, and to an extensive cultivated plain upon the other, exhibit buildings greatly inferior. The gaol and town hall, as in Elgin and Forres, encumber the middle of the street in
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the best part of the city. The church and cemetery occupy a green head land, projected as it were into the course of the river upon the southern side of the town. The municipal establishment consists of the same number and rank as in those towns, and similar to Forres it may be made up of gentlemen resident at a distance in the country, except the three Bailies, the Dean of Guild, and the cashier; yet the police appears superior to that of Elgin and Forres, for the street is always kept clean, and at night as well lighted as Cheapside or the Strand, while in both the other towns, the streets are greatly darker, than the roads in the open country. A considerable wing of Nairn, stretched out towards the shore, is wholly inhabited by the families of fishermen; their vernacular speech is the *Earse tongue*, which is not understood by the other citizens, and which obliges half the service of the public worship in the church, to be delivered in that language; this circumstance also suggested a *joke* which was fathered upon James 6th; being a little piqued by the misplaced compliments of a courtier on the population of the cities of England, he is said slyly to have replied, “*that none of them equalled the extent of one of the cities of his native kingdom, which was so large, that one half of the inhabitants did not understand the language of the other.*” This has been the case at Nairn, ever since the English language was introduced.

Commercial views are just beginning only to open to the inhabitants of Nairn, and of late they have been entertaining speculations for the construction of a harbour. Mr. Telford has surveyed the ground, and given his opinion that it would be most commodiously maintained behind the town, wholly unconnected with the river, which from its little power in the ordinary state, would be insignificant in keeping the harbour clear of the alluvion of the sea, and owing to some of its floods might deposit gravel, which its stream would not carry off. It is believed that the particular place is not yet determined, nor the plan for its construction formed. It is calculated that from £2,800 to £3,000 would be sufficient

sufficient for its completion; of this sum there are only yet £800 provided, being a subscription by the gentlemen of the town and country to the amount of £500, and a donation of £300 by the convention of boroughs. It is expected that other gentlemen, connected with the county, though resident in other quarters, will extend the subscription to £1500, and thereupon that the other half will be obtained from the fund arising from the forfeited estates. The accommodation, both to the mercantile and landed interest of Nairn, is sufficiently obvious, and were the intercourse more frequent on the Moray Frith, by the completion of the Caledonian Canal, it would be of general and essential utility.

It may be just observed that notwithstanding Mr. Telford's high professional skill, his opinion of having the harbour unconnected with the river, gains not unquestioned approbation, it being observed that the floods in the river do not carry down gravel, and that its stream might at times be useful in clearing out the slime deposited by the tide, which, without the aid of the river, would require a laborious and costly exertion. On this account it has been suggested, that the harbour could be commodiously formed, and at the least expense, in the shape of a canal, or narrow dock, excavated from the sea upon the western side of the river, through which it might be occasionally sent down, to clear out the sand which might be floated in by the tide.

11. Aultdearn is a pretty large village, in the vicinity of Nairn on the south; all its inhabitants earn their subsistence by the cultivation of their respective little fields, although a large stream flows through the street, and another holds its course at a little distance on the east; yet this village of unknown antiquity, has never been the seat of any manufacture. The abundance of corn in the country around, joined to its other advantages (which need not here be specified), with suitable encouragement by the proprietor, and not aiming at high things at first, might, in a few years, by the establishment of a linen, cotton, or a thread manufacture, or a well regulated distillery, make it flourish beyond our present conception of improvement.

APPENDIX.

No. VI.

ANTIQUITIES.

ALTHOUGH it may be presumed that none of the towns or villages which have been mentioned, were extant in the age of the son of Fingal, yet, excepting Urquhart, Rothes and Balnatom, the original construction of the rest preceded all record. Some of the ruins which the country yet exhibits are of the same unknown antiquity, and which, on this account, with a few others whose first establishment may be ascertained, merit a brief notice.

It will not be difficult to assign a cause why there are yet the ruins of more castles in half a dozen of the northern counties of Scotland than in a considerable portion of England. The situations best fitted for defence in the turbulent times of our ancestors, were, in general, found so greatly inconvenient, after the security and peace which a steady government ensured, longer both in duration, and superior in experience to any imaginary description of tranquillity and peace which the poets ever sang, that these strong holds were, for the most part abandoned; while the firmness of their stone walls, with that complete petrification of their ancient mortar, which, it is believed, no architect, nor chemist could now exhibit, hath hitherto withstood the scythe of time, and the ravages of man.

Where any castle had been similarly built in England, the situation almost in every case admitting the improved decorations of modern taste, was not abandoned; the building was kept in repair, and still occupied. The higher degree also to which the reformation was carried in Scotland, left in this country all the clerical endowments, the monuments only of the religion of our ancestors. Three only of these ancient

FAIRN AND MORAY.] 2 M structures

structures having been rebuilt for modern accommodation, the greater part of the rest remain, in the opinion of some, the decorations, and in that of others, the deformities, of the country.

It is probable that the Castle of Elgin exhibits the remains of the most ancient building in the county. The protection, which, in the insecure state of society, on every emergency it afforded, must have determined the situation of the town, which therefore must be accounted more modern than the castle, though nothing of its original be known. The castle hill of Elgin resembles, in some measure, the mounts on which the castles of Stirling and Edinburgh are built; but that it is almost equally steep all around, is of less extent, and in no part exhibits any kind of rock. It was a citadel on the level top, fortified by a rampart carried round on the declivity a little below the summit of the hill. No particular of its history remains; like Falkland, it is said to be yet the property of the crown, and the Earl of Moray is its heritable keeper. The tradition which has been transmitted through many generations, that the *pestilence*, long hovered over it, a dark blue vapour, to the heavy grievance both of the town and country, and which by one sudden great exertion was pulled down and buried in the hill, may, with some probability, be referred to the garrison of Edward, which was surprised by the great Bruce, in his unexpected progress from the Hebrides, when this, with the other castles of the north, was destroyed.

A garrison of English soldiers in that age must have been a cruel pestilence, and the destruction of the castle itself, banishing the apprehension of its return, might have been justly represented as its burial: and similar to the allegories of ancient Greece, the fable in after times might have been ignorantly transmuted into a credible story.

The castle of Forres on its own green mount, was, in many respects, similar to that of Elgin. The assassination of King Duff is the only particular in its history which is preserved, unless it may be that Macbeth and his two associates

met King Duncan there, and attended him back to Inverness, where, in like manner, he was traiterously murdered.

The castle of Forres has been granted away by the crown from a remote era. In latter times the original foundations of the castle have been dug up, even the mount itself was levelled, and its area thereby somewhat enlarged for the accommodation of a modern fabric, the lowest story of which having been scarcely completed, the work, for reasons unknown, was abandoned.

The castle of the Earls of Rothes was by its situation of great strength before the era of artillery. It was built on a promontory projected upon the plain from the higher ground wide spreading behind, from which it was cut off by an excavation, impassible, but by the draw bridge stretched across from the gate. A lofty tower protected its walls on the west, and north, in which were the principal apartments, of an extent which would yet be deemed magnificent. But many small and dimly lighted chambers, each within thick solid stone walls, supplied the other accommodations then deemed requisite, and like the chambers of other castles during the ages of chivalry, were no doubt occasionally the scenes of much pleasure and much pain, sometimes of rude jollity and glee, oftener it may be supposed of violence and crime, of affliction and of sorrow. The greater part of this ancient fabric has been of late taken down for building the dwellings of the village, and the lime mortar of its walls has been smashed for manure to the lands in the neighbourhood.

The castle of the Lords of Duffus, and a pretty extensive garden, remain on a mount in the middle of a marsh on the margin of the lake of Spynie. The buildings were of great extent, and the walls protected by a broad deep ditch quite round the bottom of the mount, and which its natural situation kept always full of water. The solidity of the building is exhibited by the insecurity of the foundation; a part of the mount on the northern side, partly it may be supposed the work of art, having slipped down into the ditch, a whole chamber has been of late thereby overturned entire, so that one of its sides now occupies the position of the floor.

An old woman of the parish, who survived the year 1760, related that she was a servant in the castle, and remembered to have waited on the company at table, when Lord Dundee was a guest; that she brought the claret to the table from the cask in a timber *stoup* (a jar, the workmanship of the cooper); which was drunk from a silver cup; she said the viscount was a swarthy little man, with lively keen eyes, his hair black, verging towards gray, having a lock covering each ear, rolled up on a slip of lead, twisted together at its ends. This visit was probably made about the year 1689.

Four castles are yet numbered in Moray as the seats of the Bishop. Of these, his town-house yet remains entire in its walls, now the property of the Duke of Gordon. The castle of Spynie, with the ground which was the garden, a few acres beside, and some natural pasturage, appertains now to the crown, and yields a small revenue paid with regularity into the exchequer. This ecclesiastical palace, though the workmanship of the thirteenth century, contained accommodation which would yet be deemed magnificent. A broad light stair, led up to two lofty rooms, 60 feet by 40. The walls of the tower in which this accommodation was, are ten feet thick, in which are formed several commodious closets, opening from these principal rooms; the whole buildings are arranged in a court 200 feet square within, having a gate in the middle of the eastern side; besides the ordinary bolts and locks, it was farther secured on the inside by a massive iron-grate let down from above, through an appropriate groove in the wall.

The cathedral at the eastern end of Elgin, impresses the idea of ancient magnificence in building, more strikingly than all the other objects of antiquity together, which the county presents. The idea of this magnificence is impressed by the lofty bulk of the fabric, conjoined with the greatest profusion of the most elegant and laboured sculpture, which it is said no workman, nor architect, in these times, would undertake to equal. When it is considered that the uniformity of design could have admitted but a few in the execution, their persevering

persevering diligence astonishes the mind of modern sculptors. Although the cathedral was burned in 1390, yet it may be presumed that the damage thereby done to the walls, was comparatively insignificant, and it yet exhibits an example of the architecture of an era much more remote. When entire it was precisely the model in every particular of the cathedral of Litchfield, but on a much larger scale, more art exhibited, and more laboured ornament bestowed in its structure.

The situations are well known, and the ruins may be yet traced, of six or seven of the religious endowments of the Roman Catholic era; but the Priory of Pluscardine alone remains so entire as still to preserve the plan of the building, and the various accommodations of its venerable inmates. Gentlemen who are acquainted with similar establishments on the Continent can easily point out the respective application of its various apartments. Besides the church and its aisles, they show the chapter-house, the cellars, the larder, the kitchen, the dining-hall, which they denominate the *Refectory*, and the bed-rooms of the monks which they style the *Dormitory*, and which appears to have been composed of sixteen little chambers ranged on the opposite sides of a floor of 114 feet in length by 30 in breadth, with an area of common communication between; the sixteen windows in the opposite walls yet remain, but no appearance of any chimney or place for a fire. In a contiguous corner, within its own thick stone walls, a small chamber remains entire, in which it is said the monks and others made their confessions to the abbot, underwent the penance, which his discretion, sometimes, perhaps, his humour, deemed proper to inflict; and receiving absolution, came forth to begin the repetition of the same frailties.

The whole buildings, with the court and gardens, occupying nearly a dozen of acres, were enclosed by a wall, almost yet entire, of fifteen feet in height; a corn-mill was included within its bounds, and the prior's dwelling, an ordinary building of three stories, which, without magnificence, afforded

forded neat accommodation ; it opened also into the country connected with the gates of the abbey. There is a vault under the kitchen in which, it is said, the bodies of the dead were buried. The floor of one of the aisles must have been employed many years as a burying ground before the dissolution of this establishment : it yet contains several tomb-stone monuments, one of them, for a respectable proprietor, having the inscription in the Saxon alphabet, which could have only been executed by one of the monks. Some little fragments of the painted decorations on the plaster may yet be noticed ; the moon and some stars, and one of the evangelists with his emblematic attendant.

The revenue of this establishment was in grain, meal, and malt, 220 quarters in all, of which only about three quarters were wheat, and £525 Scots currency, of equal efficiency then as the British currency is now. Their fishery on Spey produced them 30 lasts of salmon yearly. Their lands in different quarters of the country furnished beef, mutton, and fowl in unstinted supply. The bed chambers of the monks might perhaps have been limited to 16. But it must be presumed that the sumptuousness of this establishment, was equal to that of their neighbours of Kinloss, where it is known from the MSS. of John Ferrerius, that, with a revenue scarcely equal, they had 50 beds of down, two of which had curtains of silk, and 28 bed coverlets of arras. Their table furniture was pewter, the manufacture of England. Edward the first lodged for twenty days at Kinloss, in the autumn of the year 1303, and a detachment of his army was quartered there for a much longer time. The library of Kinloss must have been accounted of great consideration, nearly one hundred volumes ; of which the greater part treated on subjects of theology. Ferrerius was brought from Italy by the abbot for the instruction of the monks, and besides lectures on theology, and the whole Aristotelian lore, he taught also logic, rhetoric, and the Latin classics, for which, besides his commons, he had an appointment of £40 Scots currency, at that time equal to the appointments of several
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of the professors in the English Universities, and his system of instruction nearly the same with theirs.

The situation of the castle at the town of Nairn is not now particularly known. Besides the two ancient entire structures of Cawdor Castle and Kilravok, the county of Nairn yet shows the ruins of other five; Penic, Inshough, and Moiness, Rait castle and Loughnadurb.

Penic, near the village of Aultdearn, was the country seat of the Dean of Moray. The roof being yet entire, it might be restored into a comfortable dwelling, and although none of the Deans have left any specimen of the ancient taste in the ornament of ground around their residence, the situation, at a moderate expense, would admit of great decoration.

Inshough, a ruined fabric in the vicinity of Penic, both now forming a part of the estate of Brodie, yet exhibits the multifarious accommodations, which its ancient occupants enjoyed.

Moiness and Rait castle, though supported by but narrow domains, were yet places of great consideration in former times: their ruins show the fabrics to have been of great extent, and impress the idea that strength, rather than elegance, was attended to in their construction.

Loughnadurb has been already mentioned nearly with all the requisite specialty of description. Situated far within the mountainous desert, almost 20 miles distant from any inhabited region, and in the midst of a deep lake, it is difficult to form an idea of that state of society, which made this fortress of importance. Yet we know it was once besieged and taken by each of two Edwards, monarchs of England, conducting in person the assault. To the passing generation it must seem wonderful, how any Englishmen could have even heard of such a place, and what purpose could be gained by the possession of it.

The notice of the obelisk at Forres, in its connection with the monumental tower to Lord Nelson, both being objects of great national interest in their respective eras, was almost unavoidable. The county of Nairn, in its most remote and
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almost wildest district, contains a monument of the same kind with the obelisk, though formed with less art, and much less magnificence. It is scarcely half the height of the Forbes obelisk, and so thin a flag, as might be carried to some distance by two vigorous men practised in such exercises: it is erected in a narrow and very solitary vale, on the bank of the river Findorn, about a mile down its course from the bridge of Dulcie. It is set up by the side of a high raised heap of shapeless large stones, taken up from the bed of the river. This cumulation suggests the idea of having been piled over a grave, as if to prevent its violation by the bears when they roamed over the forest. The sculpture is nearly the same on both sides. In the lowest compartment of the side turned from the grave, there are two human figures obviously in the highland dress, in the attitude either of struggling with, or of embracing, each other. On each of the sides there is a circle in pretty high relief, nearly one foot in diameter, the whole surface being occupied by eight or ten little globular figures ranged around a little cup in the centre. The rest of the sculpture all over both sides, may be described as ancient vignette. It exhibits no trace of any letter, nor any emblem referring to the christian era. The tradition of the country represents it as the monument of two hapless lovers,—the daughter of a Norwegian King, and the Chieftain of a highland tribe,—that the mutual hostility of their respective friends opposed their union, and in their elopement they lost their lives in the river.

It may be proper to add that similar to other districts in the North, this county shows temples of the Druids—the strong holds called Duns—and the sand hillocks on which the blaze anciently flamed, to summon the warriors of the land to repel the invading foe. These objects have been often described in other tracts, and no new observation has occurred respecting the states of society in which they were respectively in use.

State of the Population of the County 15.

PARISHES.	TOTAL	
	<i>Inhabited.</i>	<i>Persons.</i>
Abernethy.....	198	927
Alves.....	240	1049
Birnie.....	100	366
Dallas.....	198	818
Duffus.....	309	339
Duthel.....	243	113
Drainy.....	232	057
Dyke.....	334	492
Edinkylie.....	283	123
Elgin.....	1001	345
Forres.....	663	114
Kinloss.....	197	917
Knocandow.....	201	432
Rafford.....	222	030
Roths.....	379	521
Speymouth.....	304	236
Spynie.....	203	843
St. Andrew Shanbryd....	160	799
Urquhart.....	228	023
Total.....	5992	705
Ardclach.....	314	256
Aultdearn.....	329	406
Caudor.....	230	060
Nairn.....	572	700
Total.....	1445	422