

*International Fisheries Exhibition,*

LONDON, 1883.

---

SCOTCH EAST COAST,

ORKNEY AND SHETLAND, LEWIS AND BARRA

# HERRING FISHING.

BY

W. S. MILN.

[PRIZE ESSAY.]

LONDON:

WILLIAM CLOWES AND SONS, LIMITED,

13 CHARING CROSS, S.W.

1884.

International Fisheries Exhibition  
London 1883

THE FISHING  
INDUSTRY AND THE FISHERY

LONDON :  
PRINTED BY WILLIAM CLOWES AND SONS, LIMITED,  
STAMFORD STREET AND CHARING CROSS.

## THE SCOTCH EAST COAST HERRING FISHING.



FISHERMEN — NUMBERS EMPLOYED — HABITS AND SOCIAL CONDITION—QUALITIES AND CHARACTERISTICS—WEALTH.

THE number of fishermen actively employed in the herring fishings during the seasons, from Northumberland to, and including, Wick, and at Orkney and Shetland, and Lewis and Barra in the Hebrides, can be safely estimated at over 45,000 men and boys.

The habits of fishermen are distinctly discernible as pertaining to a broad sectarianism. Individually, their idea of bodily comfort consists in having on a superabundance of clothes. Even during the warm months of July and August, whilst working hard in hoisting their catch to the carts on the quay, it is ridiculous the amount of clothing they have on them. The great beads of sweat pouring down their faces and bodies, and the oftentimes visible steaming therefrom, does not convince them that they are overclad. 'Tis a pity they do not regulate their dress in accordance with the weather, as it is obvious that over-burdening one's self with clothing is unhealthy, and weakening to the body, especially during warm weather. What a contrast to the French fishermen ;—they having a

tendency to underclothe themselves, judging by their open-breasted semmit, or shirt. Our fishermen are likewise very much needing a thorough lecturing and training in the art of making clean by a judicious and plentiful use of soap and water, and an occasional total immersion. The fisherwomen might follow the example also with advantage. Of course there are exceptions, and they deserve commendation for their cleanliness. Their homes are comfortable, but are slightly overcrowded, generally clean, and the furniture more ancient than modern. Fish is their great sustenance, but when they are at the fishing centres the beef they then use makes up for the scarcity whilst at home during the winter. It is necessary to give a justly merited warning and particularly required denunciation regarding overcrowding at the large centres, such as Fraserburgh, Peterhead, Wick, during the season. House proprietors and lodging-house keepers are more to blame than the fishermen, as they should be made to provide suitable accommodation if they are to be allowed to lodge fishermen and their families. As for the fishermen, poor simple people, they are only too glad to secure any shelter during their temporary residence, no matter how filthy. The accommodation being limited, overcrowding is general, and the manner of their huddling together in outhouses, stores, lofts, and even worse places, is a disgrace to civilisation. To know about, and to have seen the overcrowding and filth, and to have inhaled the nauseous vapours when passing these temporary abodes, gives one the feeling that such living is not only disgusting, but degrading. Such mode of living is not the fishermen's choice, but is forced on them as a necessity. It is high time that a Parliamentary Commission be appointed to examine and report upon the accommodation available for the fisher people at the various

herring fishing stations. Let their visit take place during the heat of a season, and the disclosures will show an indecency and moral degradation of a most appalling nature. One visit would certainly be sufficient, and would be the means of raising the fishing community from a backward and unwholesome living, to one more healthy and modern.

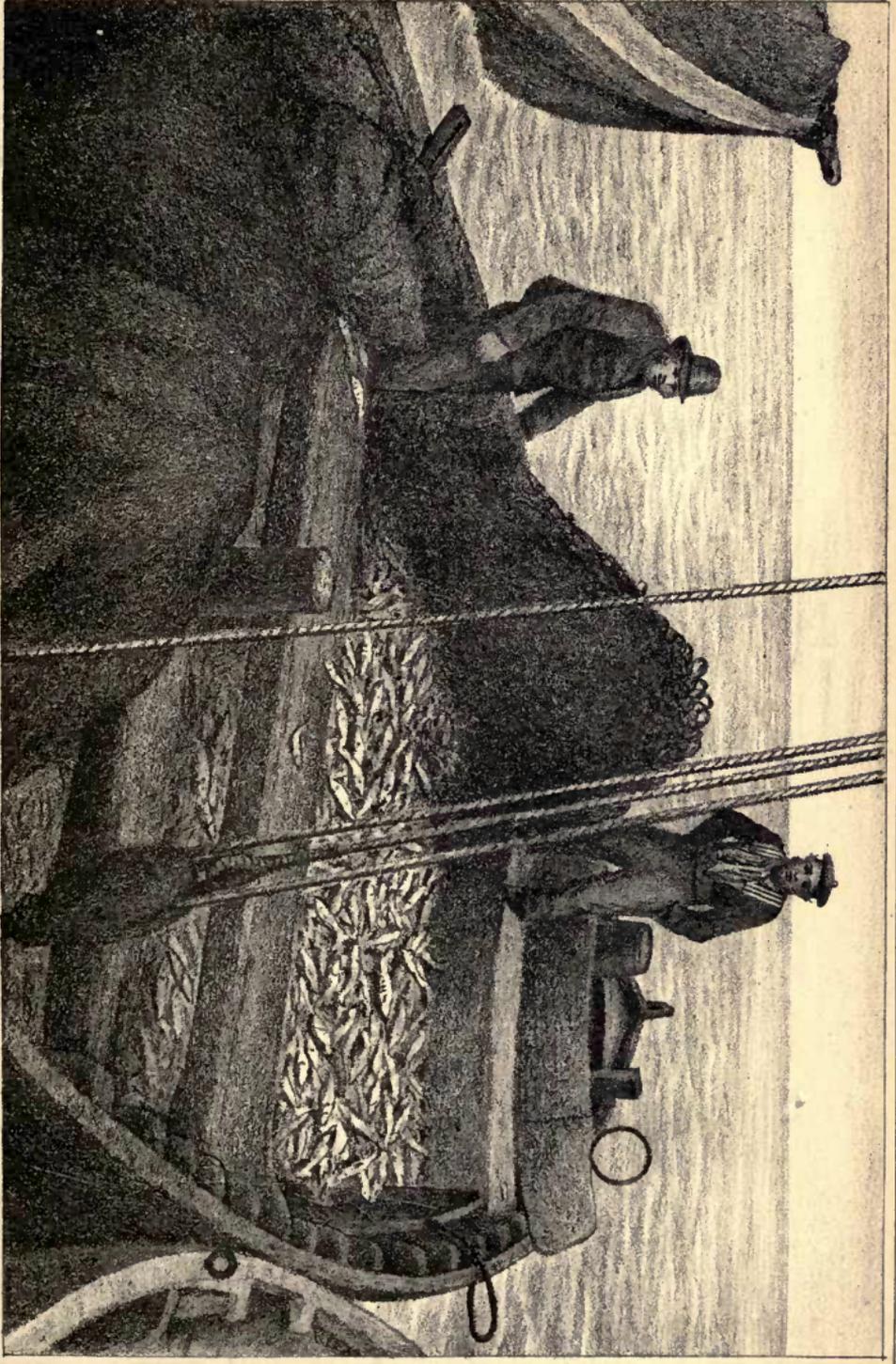
The qualities and characteristics of fishermen may also be said to be sectarian. Amongst the Highlanders intemperance is the prevailing vice, but it is gratifying to observe the wonderful alteration that is gradually making itself visible in their sect, and which augurs well for the hope that in the near future our fishermen will be known as a temperate race of men. Religion has also a considerable part of their attention. They are chiefly connected with the Gaelic Church. The southern fishermen are pretty well mixed up with all the denominations. Missionary work receives good support, is beneficial, and has a splendid ground to work upon. However, the fishermen, notwithstanding their regular church attendance and adhesiveness to their creeds—seeming equal to fanaticism—are found, on a close observation of their daily life, to be divided thus, one-third zealous, God-fearing, and good living men, while the other two-thirds are not, and a great part are (I am sorry to have to say it) in disposition inclined to the opposite direction. I draw my conclusions from close observance. Obstinacy in argument is a prominent characteristic. There is also a deep vindictiveness and revengefulness in their natures against those whom they may deem enemies. Without flattery, let us glance at the good qualities of our fishermen. To their employers they are respectful, and self-knowing, subservient; hard working and energetic in their occupation;

cautious (after a manner, oftentimes unnecessarily and unfittingly so); bold and daring in presence of danger; affectionate to their wives and children; ambitious to be affluent, and desirous to keep on a level with the times; but withal, retaining a strict adhesion to their caste.

Wealth is pretty equally divided. Well-to-do fishermen are sure to possess, first, a house and furniture; second, boat and gear, or perhaps shares of a large and a small boat; third, nets, lines, and other fishing materials. The heads of families are generally tolerably comfortable as regards means. A small proportion may, through unfortunate circumstances, be poor for a time, but perseverance soon overcomes the poverty. The various banks receive a goodly amount of money on deposit from them; and when we consider that mostly all the houses in the fishing villages which they inhabit belong to themselves for the greater part, we must allow that as a class they are both powerful and rich. Young fishermen, as they earn and save money, invest it in their fathers' or relatives' boats, thereby securing an interest in the boat, and therefore in the industry. They earn and save more money than any other class in Scotland, and as fortune and hard work seem to go hand in hand, the energy and instinctive ambition for supremacy entitles us to reasonably expect a continuous and progressive prosperity in the future.

#### FISHING MATERIAL—BOATS AND GEAR—NETS—BASKETS AND SPADES—METHOD OF CATCH—DELIVERY.

Fifteen years ago the fishing boats were principally those which we know now under the name of the "skaffie," a fast sailing, but unhandy and very much inferior boat compared with the present new style. The cost of a





“skaffie” boat would then range from £175 to £210. The “KY”—i.e. Kirkcaldy style, is the most popular at present. They are first-class built, and will carry with comfort a catch of 70 to 100 crans of herrings, equal to 8 to 15 tons. Their dimensions and “rig” make them suitable for a further from shore fishing than the “skaffie.” According to the newest improvements and additional appliances, a first-class “KY” style of boat would cost over £300. There have been a good many highly superior boats launched during the past two or three years, their shape slightly differing from the “KY” style, but they are materially of the same class, with the exception that they are better deck-built and have the most modern appliances. They cost £20 to £50 more than the average “KY.” Gear comprises sails, ropes, anchors, chains, oars, &c., and their cost is included in the price of the boat. The following table shows the exact number of boats fishing at each station, from Northumberland to Shetland, and including Lewis and Barra, for the past five years.

Stations and Districts.	1878.	1879.	1880.	1881.	1882.
WICK to Keiss . . . . .	579	597	655	570	600
Lybster and Clyth . . . . .	131	132	141	147	140
Forse Station . . . . .	14	10	9	4	4
Latheronwheel Station . . . .	16	15	15	15	13
Dunbeath Station . . . . .	39	40	32	34	31
Helmsdale Station . . . . .	160	130	170	145	160
Portmahomack Station . . . .	26	16	22	28	30
Burghead and Hopeman Station	34	17	47	45	50
Lossiemouth Station . . . . .	13	24	42	47	42
Buckie District . . . . .	32	26	75	67	95
Portsoy Station . . . . .	35	38	39	40	46
Whitehills Station . . . . .	9	13	10	10	12

Stations and Districts.	1878.	1879.	1880.	1881.	1882.
Banff Station . . . . .	2	9	8	11	15
Macduff Station . . . . .	36	52	41	39	66
Gardenstown Station . . . . .	25	49	36	53	41
Fraserburgh District . . . . .	879	1006	944	1007	900
Peterhead District . . . . .	683	768	716	849	822
Aberdeen District . . . . .	490	400	361	501	482
Stonehaven District . . . . .	..	..	..	..	101
Montrose District . . . . .	233	204	244	225	166
Anstruther District . . . . .	35	36	70	36	20
Leith to Dunbar . . . . .	40	65	60	60	45
Eyemouth District . . . . .	321	233	373	282	381
Orkney Islands . . . . .	192	183	170	180	197
Shetland Islands . . . . .	120	206	206	284	372
Lewis and Barra . . . . .	871	1084	1381	1285	1300

Taking the year 1882, we have 6131 boats, which, calculated at an average cost of £275 per boat including gear, gives the handsome capital of £1,686,025 sterling invested solely by fishermen in these herring boats, altogether exclusive of nets. It is pleasing to relate that these boats are being covered against loss by Insurance.

There is now no regulation size of mesh or net. The net as bought from the manufacturer is 60 yards in length, but when hung on the back rope is only equal to 40 yards long. The depth is on average about 12 yards. The cotton threads comprising the net are of 9, 12, 15, 18, and 21 ply. The mesh is about 1 square inch, measured from knot to knot, and commonly there are 32, 33, and 34 meshes in the yard. As the nets get older, through shrinking, there are 34 to 38, and even 40 meshes to the yard. During a fair fishing the new nets are regularly "barked" once a fortnight. Old nets require "barking" only

once a month. "Barking" is the process of browning the nets by boiling them in cutch. The "swing rope" is a rope attached to the nets from the boat and is their safeguard, so to speak. The price of a net is in the meantime 33s., which, together with mounting 4s. 6d. + head rope 12s. 6d. + buoy 4s. 6d. + floats 3s. + bark 3s. 9d. + fishermen's labour estimated at 8s. 9d. = £3 10s.; and therefore that is the sum to be paid for a fair average quality net ready for use. A boat carries from 25 to 50 nets, and that quantity is termed a "fleet." Making the lowest possible estimates appear by allowing only 25 nets to each boat, we have in use 153,275 nets, which at £3 10s. per net, gives the value of £536,462 sterling.

The baskets for the measuring of the herrings are supplied by the curer, and, sad to relate, in too many cases are slightly larger than the regulation size. The remedy lies with the fishermen, and they have themselves to blame if they do not take advantage thereof. The regulation measurement of the cran is  $37\frac{1}{2}$  gallons imperial standard measurement. There are 4 baskets to the cran, and each basket is exactly one-fourth of the aforementioned required standard measurement. In shape they resemble a common tub, but are wicker-worked, having in circumference two or three inches more at top than bottom. The rim of the basket is heavy worked and has two handles for fixing the hoisting rope and lifting. There requires to be on board the boat from two to four spades or scoops for shovelling the herrings into the baskets. Formerly they were entirely wooden, but now the heads are of zinc. The fishermen supply these spades; they cost from 2s. 6d. to 3s. each. Baskets cost about 2s. each. Making a fair allowance for each boat we find that these articles presently in use would give a money value of £5000.

Method of catch is thus explained : the boat and crew being ready to proceed to sea the crew get aboard and commence to "red," i.e. fold the nets in methodical succession, head-rope being to "stern," and foot-rope to "bow." To counteract the weight and position of the nets stones are used to balance. That finished, the boat is pushed or rowed out of the harbour, sail is hoisted, and, according to the state of wind and tide, is steered out to the fishing grounds. Arrived there, sail is lowered, and the nets "cast" or "shot" over the starboard side of the boat. The "watch" is set. Shortly before sunrise, and with the disappearance of the phosphoric light, the nets are hauled aboard and the herrings are shaken, weather permitting, from the nets into the "hold," and the nets folded methodically. Should the sea be rough when the hauling takes place, the nets cannot be shaken ; but that no time may be lost, and to admit of the herrings being delivered in best possible condition, the fishermen always endeavour to have their nets shaken as they approach the harbour.

Delivery is here to be understood as from the boat to the carts on the quay. The fishermen shovel the herrings into the baskets and hoist them by means of ropes running through a "pulley" attached to the top of the boat's mast. When on a level with the quay, the carter, who has a rope fixed to the basket rope, draws to him, and the contents are emptied into his cart. A crew consists of five or six men and a boy, and in delivering the herrings, half of them attend to the filling of the baskets, and the other half to the hoisting. All have hard work, and there is no stoppage till every herring is delivered. The hoisting tells severely on the hands, and is not improved by the curious use of heavy worsted "mits" or gloves so often seen worn by the "hoisters."

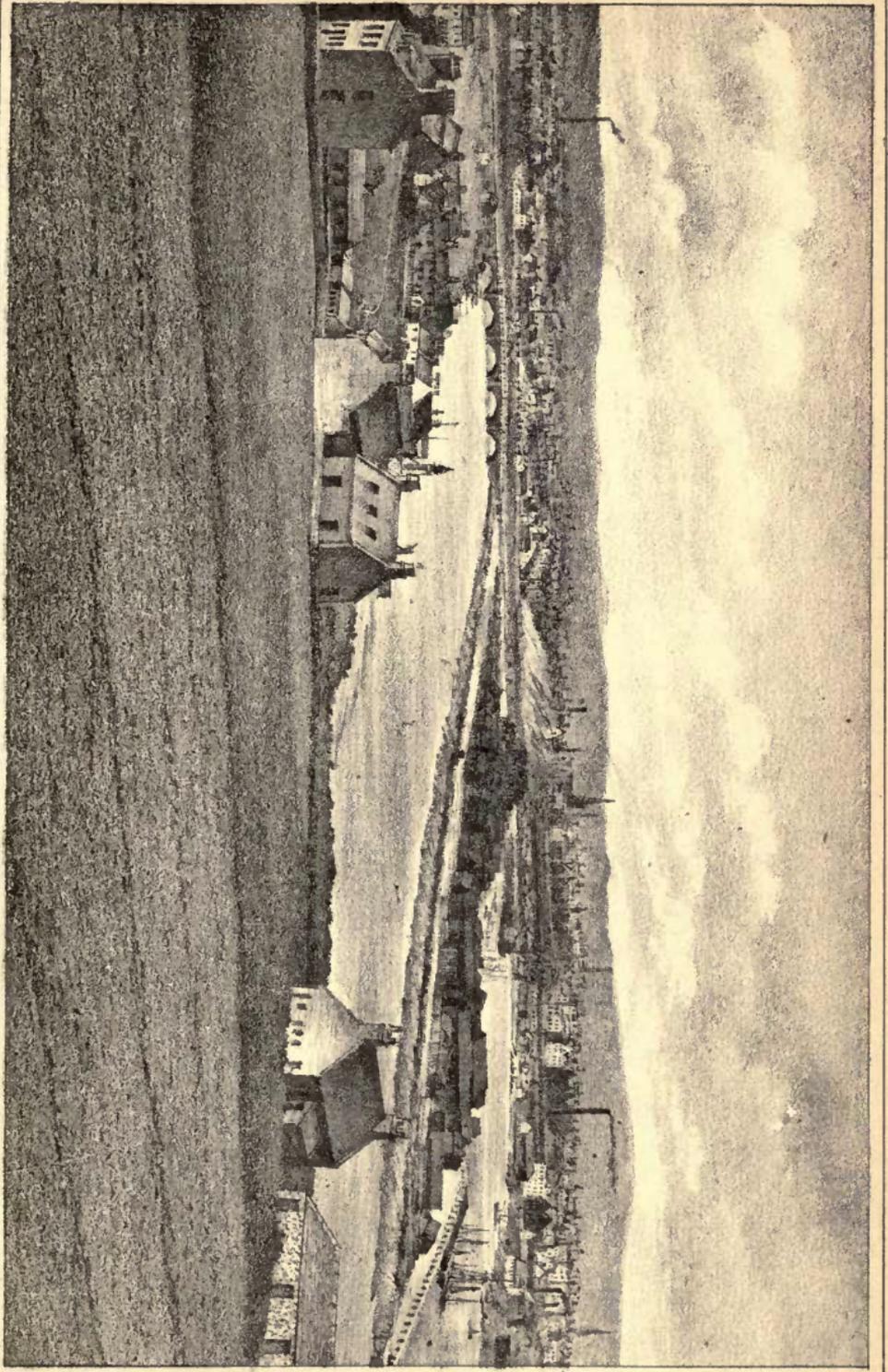
FISH-CURERS—CURING YARDS—PLANT—COOPERS—  
ORAMEN—GUTTERS—KIPPERERS AND SMOKERS—  
CARTAGE—STOCK.

There are about 500 firms engaged in the herring curing trade on the East Coast, Orkney and Shetland, Lewis and Barra. The capital invested would amount to from £720,000 to £1,000,000 sterling. Of all classes they are always the most dependent, entirely relying on the sea's product; independent, meantime, by their position and standing; enterprising yet rash and speculative—none more so. They are industrious, and are deserving of the country's best thanks for so carefully, laboriously, even expensively, but not withal judiciously, conducting their business, the methods and results of which are so highly gratifying as to command the esteem of millions of people at home and abroad. They have raised to a high pinnacle the fame of the Scotch herring trade, and long may they preserve the position and honour.

Presuming that a herring curer has fully made up his mind as to the extent of his business, let us glance at his requirements. In the first place it is necessary that a suitable "stance" be procured, near or at the harbour, whereon the yard is to be erected. Supplies of wood (staves) and hoops are ordered, and suitable 'plant' is bought. The coopers are engaged. Boat-engaging time comes on, and the curer looks out for the good boats, and endeavours to engage them. After fixing his boats, he gives his orders for the salt required. If he is a practical curer and cooper he assists in the cutting and making of heads for the barrels, and otherwise superintends the business.

Curing yards are commonly square shaped. The buildings constituting a yard differ very much, in fact every locality has a different style. At Fraserburgh and Peterhead some very fine yards have been built lately. The frontages are of stone, and perhaps several stores are also of stone, but generally there are one or more wooden erections, stones, kilns, or coverings. At Pointlaw, Aberdeen, there are thirty-five yards, which are all, without exception, built of wood. This is owing to the short leases obtainable from the Harbour Commissioners. Pointlaw is part of the reclaimed ground at the Inches, and it is specially set apart for fish-curing.

The portion fronting the street or lane is generally the "gutting shed." Through a swing door or doors in the front of this shed the herrings are tumbled promiscuously, and fall into a large square box, or tank, called a "farlin," i.e. a repository for the herrings, where they are "roused," and await the process of gutting. Adjoining is the "cooperage." In front thereof, at a distance of a few yards, is the "firing-plate and truss-hoops." Sufficient storage accommodation is required for the barrels, salt, hoops and staves. Of late I have noticed an improvement in the gutting-sheds; I refer to the laying of the floors with concrete. It is worthy of mention that the fish-curers at Shetland, while laying out capital on their yards, are likewise under the necessity of providing "jetties," or landing slips near their stations at their own expense. I sincerely trust their enterprise will be rewarded. Shetland may be said to have risen within the past two years from insignificance to eminence. Whereas last year curing was carried on under difficulty, the catch being rather too heavy to be worked properly, the temporary curing yards seeming swamps, shipment difficult, communication limited, and





house accommodation more so, this year the curers will have nearly all the advantages to be had at home. The telegraph service is extended, as also steamer and land communication. Several substantial "jetties" have been built, and likewise good curing yards have been put up. Even the remote parts of the islands have every prospect of seeing a general merchant open business when the fishing begins. Barra, on the west coast, is by Lady Gordon Cathcart's assistance gradually rising from obscurity to significance, and although last year was a failure, it is to be hoped that the future fishings will prove a steady increase compared to the former years. Stornoway has now assumed the supremacy of the west coast, and has a large trade. On account of the Barra failure last season, Stornoway being extra-well fished, it is likely that there will be a great increase of boats next season (1883). The west coast fishing is for the greater part prosecuted by east coast curers, and, with the exception of Stornoway, all the yards are of a temporary character.

Plant consists of farlins (already described); small tubs or baskets for the various selections; large rousing tub; hoop-bending mill, costs about £11 to £15; head-boring mill, costs about £4 or £5; grindstone for sharpening tools; firing-plate and truss-hoops; crisset and fender; steep for soaking hoops; head and side jointers; head and side planes, or pluckers; adze for notching hoops; trussing hammer and drivers; shore, croze, and fletcher or chime-howl; crumb or champhering-knife, head-knife, draw-knife; compass for taking the circumference of the barrel-heads; head and crosscut saws; two bits for boring the bung and spile holes; and stave-moulding axe, saw stool, head-cleaning board, dowl-dropper, and diagonal rod. Where there are kilns there are also required steeps for

pickling the herrings, tenters or spits for hanging the herrings while being smoked, together with other small utensils which are hardly worth mentioning. Be it understood that quantities of the above articles are required according to the extent of the business.

The coopers steadily employed in the trade are about 3000 in number, including apprentices. During the herring fishing the journeymen, on an average, receive 33s. to 35s. per week. Foremen a few shillings more. During the winter their wages are earned on the work done. The principal employment then is barrel-making. A good man can make by steady work 24 barrels a week. The price for making a barrel is 1s., and therefore the cooper can earn 24s. per week by steady work. He has a very responsible position, and is in reality the practical fish-curer. First, there is the necessity of making his barrels the exact regulation size, and showing an apparent good workmanship, tight fitting and well hooped. Second, care and punctiliousness in "rousing," i.e. salting to keep the herrings in good condition, till convenient to be gutted, and during the process of gutting. Third, the keeping in good working order all plant, and especially the farlins, tubs and gutting knives, and the superintending of gutting, selection, laying, and packing. Fourth, he has to devote particular attention to the pickling and filling up, and presentation for the brand. Although not receiving a remuneration equal in comparison to the amount of labour and responsibility, still, greatly to their credit, they are a contented, hardworking, thrifty, and energetic class of men, and by their excellent service are the instruments in making for the Scotch cure such a high fame as it has.

Oramen are only employed during the herring fishing season ; 400 or 500 might be the estimate of the numbers

employed. Their wages are about 20s. per week, and they are engaged to assist the coopers, and make themselves generally useful in the yard. Many of them are engaged as "cranners," that is, to attend to the delivery of the herrings from the boats, keep correct count of the baskets emptied into the carts, and in particular to see that the baskets are properly filled, and otherwise look to the interests of the fish-curer he is in service with. They are mostly of the labouring class, or persons out of employment.

"Gutters" are those engaged to gut the herrings on their arrival at the curing-yard. Women are employed as gutters. The fish-curer engages a "crew" of women for each boat. A crew consists of three persons. Two gut, and the other one packs the herrings gutted by them. There are over 20,000 women employed during the season. Their wages are at the rate of 8*d.* per barrel, gutting and packing, per crew. Those who are fortunately with a curer having a large average make a good sum of money for the season, but there are also those unfortunately with a curer with a poor average, and therefore their wages are comparatively small. The gutting of herrings is a laborious occupation. It is common in a yard to hear women singing cheerily at their work, they having commenced at mid-day and continued work in the same bent-figured attitude till the early hours next morning. Once commenced, there is *no* stoppage till the finish. While the herrings are before them, money is to be made. Work is no object. When the curer engages the gutting women, they are paid "arle" money of from 35s. to 55s. each woman, according to their known qualifications as "gutters."

Kipperers and smokers have quite a different class of work from the gutters. Kipperers, in the first place, have to "split" the herrings, and afterwards have to pack them into

the boxes. They are generally engaged for about 17*s.* per week, but sometimes we find them working for 3*d.* per hour.

Smokers are the men employed to attend to the smoking, hanging up, and taking down of the herrings. They get about 27*s.* to 36*s.* per week, and considering the heavy work they are not overpaid. They are continually "heaping" the fires, and one can easily imagine the unwholesome vapours and heat to be simply stifling. It only requires an "anxious inquirer" to put his head in at the door of a smoke-house to convince him that a smoker's duties are onerous, most trying to the health, and exceedingly dangerous.

For cartage of the herrings from the boats to the yard, and when cured from the yard to ship's side for export, contracts are entered into between the curer and carter. The contract rates vary at all centres, but 2*d.* per cran from the boat to the yard, and 3*d.* per barrel from the yard to ship's side, may be given as the likeliest average. The best style of bulk herring cart is a long, even-balanced body-cart, and is specially adapted for the trade. A temporary division in the middle of a common cart prevents the herrings from slipping backwards, thereby tending to overbalance the cart and spill the herrings. For conveying barrels a "lorry" is the best. The income derived from the cartage of herrings for the past few years is not less than £15,000 per annum.

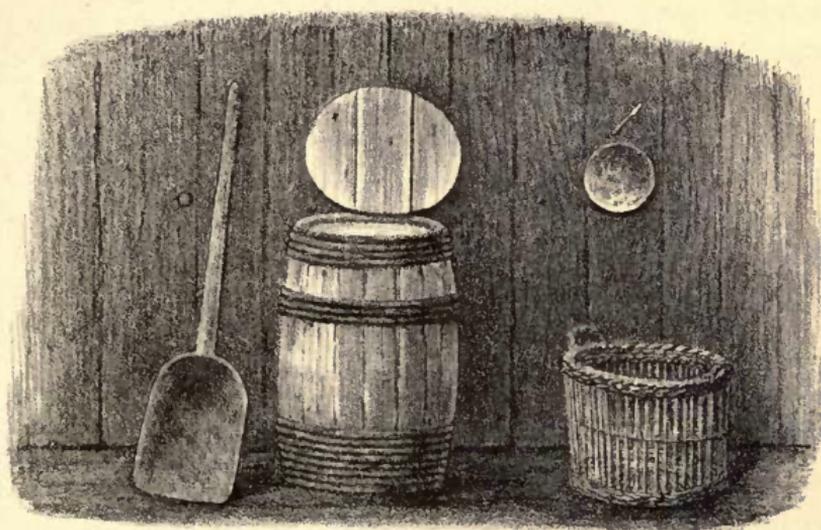
The principal articles of a herring curer's stock are staves and heading, hoops and salt. The curer may procure billet-wood and cut into staves by his own order; but generally the staves are delivered at the yard ready to be worked. The various woods used for barrel-making in the order of their value are larch, birch, ash, spruce, and Scotch fir. Larch is the dearest wood, and undoubtedly

makes the finest barrels ; costs from 80s. to 90s. per 1000 feet, and on account of its dearness is not so much used as it deserves to be. Birch is the medium quality, and is the most popular. Perhaps half of all the barrels made are of birch. Our greatest supplies are from Norway ; Mandal and Pörsgrund shipping the best qualities. Our home supplies are indeed very small, and there is nothing in the quality of the home birch that particularly calls for comment. The price is at present firm at 75s. per 1000 feet. Spruce and common fir have of late years come much into use, and are appreciated on account of cheapness. Likewise the curers can be supplied by the neighbouring wood merchants at such times as they may require, and in small quantities. The price is from 60s. to 65s. per 1000 feet. These woods are very soft compared to larch or birch ; and after the barrel has been filled with herrings and lain for 2 or 3 months in store, it is found that the pickle has become absorbed in the wood, the barrel has expanded, and therefore the herrings present a slackened appearance. I give it as my opinion that the less fir barrels are used the better for the trade. The curers may save a little in the price of the *barrel*, but they will certainly lose more than the amount in the sale of the barrels of herrings, for the simple reason that the German herring dealers have a dislike to fir barrels. It takes about 16 to 20 staves to make one barrel. 1000 feet of staves and 250 feet of heading will give about 70 barrels on an average. The nett cost of a barrel is from 3s. 3d. to 3s. 6d. according to the quality of the wood used. By these figures I estimate that it costs over £125,000 every year to prepare the stock of barrels for this herring fishing.

The hoops required for the barrel are in length  $7\frac{1}{2}$  feet, are about  $\frac{3}{8}$  inch thick, and vary in breadth from  $\frac{3}{4}$  to 1 inch.

They are of wood, and are principally either of ash, birch, elm, willow, and hazel. The great supply of hoops are bought through London merchants, and are collected by them from all parts. The finest finished hoops come from Surrey. The cash price of hoops is for whole barrel 34s., and for half-barrel 25s. f.o.b. London. From 16 to 18 hoops are required for each barrel. The money value for the total used during each year is not under £45,000.

The salt required by the curer is generally ordered about or immediately after the new year, and for delivery a week or two before the early fishing commences. The supply is calculated at from 12 to 15 tons of salt to the boat for a fair average fishing. Salt is in a great measure the responsible element in the cure, and it is therefore in the best interests of the curer to procure the best salt suitable for curing purposes. For "rousing," common salt is quite good enough, but for "packing and filling up" a great grained salt is required—first quality—is the proper requisite. Lisbon and St. Ubes salt has found much favour as a splendid salt for "packing," and on the west coast is much appreciated. However, this salt is not so much dealt in as its quality would warrant, but that is probably on account of the risk, measurement instead of weight, or a disinclination, from lack of sufficient profit, to deal therewith by the seller on this side. German salt has been tried at one or two stations, and its qualities proven satisfactory. It is, however, still in its infancy, and from all appearance may take some little time to get out of it on account of prejudice. I have had the pleasure of myself introducing it at Aberdeen, having contracted for 150 tons, for July delivery. This salt is exclusively for packing and filling up. It is beautifully clear, great grained, and stands an excellent analysis.



*Fishermen's Herring Shovel.*

*D° . . . . . D° . . . . . Basket.*

*Gutting-Women's Salt-Scoop.*

*D° . . . . . Knife.*

*East Coast Regulation-sized Herring Barrel  
and Head, shewing formation.*



ENGAGEMENTS BETWEEN CURER AND FISHER—  
 BOUNTY SYSTEM—ARLES AND DATES OF  
 AGREEMENT.

The bounty system has been in force for a great length of time. From 1720 (perhaps before that time) to 1830 there were bounties at irregular periods given by Government to aid in the further development and extension of the trade. For interesting examples, I quote the following. In the year 1727 a Board of Trustees was appointed to manage the sum of £20,000 per annum allowed by the Government from Scotch Revenue (*vide* Act, 23 Geo. II.). Great encouragements were given and assistance rendered in floating the "Free British White Herring Company," whose capital was £500,000. Bounty was then paid at 30s. per ton on "busses" from 20 to 80 tons burthen. The year 1757 saw the bounty at 50s. per ton. We read of the Scotch having earned bounty in 1767, amounting to £31,396, but in 1781 only £9,674. In 1782 the bounty was reduced to 30s., not on the tonnage now, but on the ton of fish delivered. In 1808 we know of it having been paid in the form of 2s. for every barrel qualified, presented, and receiving the Government brand. It was raised to 4s. in 1815, and altogether withdrawn in 1830. Such was the bounty system of the olden times. Good in its way, and having its origin in the best of intentions—viz. to promote the development, and by its monetary assistance to encourage the trade.

The modern system is quite different, and to my seeming is a dangerous practice. It is a "bond," or "service," money paid by the herring curer to the fishers owning the boat as the part price of the contract. The following table shows the average amount of bounty per boat paid during the

past six years. Before then the bounties were comparatively small, even as low as £5.

	1877.	1878.	1879.	1880.	1881.	1882.
Bounty paid . .	£20	£30	£40	£20	£40	£48

The fluctuations in bounty payments are entirely caused by the preceding year's catch and prices. Therefore the payments are purely speculative as to probable rise or fall for the coming year. A glance at the prices here given from the principal market—Stettin—will tend to prove this.

The quotations on 31st December were as follows:—

(Calculate 20½ mks. to £1.)

In	1877.	1878.	1879.	1880.	1881.	1882.
	M.	M.	M.	M.	M.	M.
Scotch Crownfulls .	44	38	52½-53	29-30	40½-41	38½-39
„ Crown Matties	29	27-28	34-37	21-23	34-35	31-32
„ „ Mixed	27	25-26	35-37	22½-23½	32½-34	31
„ „ Spents	26	25-26	37½-38	22½	31½	31

The curers argue that to procure good boats good bounties must be paid. If bounties of a necessity must be given, then I agree with them. But why should bounties be paid? For example, take two boats both getting the same amount of bounty. One takes 100 crans, and the other 200 crans; in which case it would appear reasonable to expect that the catch of 100 crans should only receive half the bounty of the other; but it is not so. They both have the same bounty, but the one boat's fish is considerably dearer than the other; this to show that the bounty is not well or even-balanced. Again, if a curer has engaged eleven boats this year, he has paid out of his capital slightly more than £500 six or seven months before

the fishing commences. There is an obvious risk in this speculative payment, and there is a chance of its being entirely lost. For instance, the Barra fishing last year (1882) was a complete failure. The bounty was £40 per boat. The curer's loss was averaged at £55 per boat. Had no bounty been paid, the loss would have only been £15 per boat.

To the fishermen this payment of bounty is supposed to assist them in passing through the winter, and to allow of improvements to their boats. As presents to the fishermen, without conditions attached thereto, such payments would be too highly commendable. But why not make this payment, if necessarily required by the fishermen, simply an advance to be repaid out of earnings? In some instances the bounty is misapplied, and it has been known to encourage laziness amongst the crews, especially in the early weeks of the fishing, when the cran is cheaper than in the regular set time. Bounties will come to a sudden stop the first year there is a backward and losing fishing. At present a good year to the curer means a greater speculative payment for the one that is to come, and that without any augury as to an equivalent return.

Arles are usually paid by the curer to the fisher over and above the bounty when the engagements are entered into. The arles are this year £1 per boat. As the fisher owning the boat has to "arle" his crew, I presume the £1 is given for that purpose.

The average bounty, including arles, paid on the east coast for the coming season, 1883, is about £48 per boat; inferior boats having £35 to £45; good boats £45 to £50; and first-class boats £50 to £53. Many boats are this year to commence fishing on the 1st July, but the engaged early fishing is from the 8th or 10th July till the 16th or 18th

July. The prices at these dates are 11s. to 14s. per cran. The regular fishing commences on the 16th to 18th July, and continues thereafter for eight weeks, or till the complement of 200 crans is delivered. In the event of a boat making its complement before the eight weeks are over, and exceeds it, the herrings can be taken by the curer at a less rate—14s. or 15s. per cran, but the curer is not bound to take them. The early fishing at Shetland commences this year during the first week of June. The price is 14s. or 15s. for the first 100 crans. The curers have it in their option to take more herrings at that money, or not. The regular fishing commences on the 1st July, and the price is 20s. for the first 250 crans. It is again in the curer's option to take more or not. The bounty and arles is on average £32 per boat. The native Shetland boats receive no bounty, and are engaged on the same terms as the "strangers." Curers on the mainland must have two stations (one on the west side, Scalloway, and one on the east side, Lerwick). This is accounted for by the theory that the herrings are only to be found on the west side during the first half of the season, and on the east side during the latter half. This theory may be correct or not, but at all events the curers and fishermen believe in it, and therefore the boats fish at two places, but under one agreement. The extension of the herring fishery at the North Isles only dates from last year. There are few stations on the west side, but all the season herrings were plentiful on the east side both early and late. The west coast fishing commences in the beginning of May, but the engagements generally run from the 10th May, the price being 15s. per cran. The regular fishing is from the 20th May till the end of June, and the price is 20s. per cran. The average bounty at Stornoway is £35 per boat, and

at Barra £45 per boat. According to qualifications the prices are low or high. The inferior boats have as low as £30, and first-class boats as high as £50.

COPY OF AGREEMENT GENERAL WITH FISH-CURERS  
AND FISHERMEN.

“ Sir,

“ We, the undersigned crew of herring fishermen, having good boats and proper fleets of nets in our possession, hereby agree diligently and faithfully to prosecute the herring fishing for you at ——— and deliver to you all herrings we catch as per agreement during herring fishing season 188 commencing on the — July at — shillings per cran, till — July, and from that date until eight weeks, at the rate of — shillings per cran for two hundred crans, and — shillings for all crans afterwards. All the herrings to be delivered in good (fisherman's) workmanship order and condition, before — P.M. of the day after which we leave the harbour for the fishing grounds.

“ Besides the above rates per cran we receive — as bounty and earnest. You supply net ground and cartage of fish and nets. All herrings not up to terms of agreement we will offer you at what they are worth.”

6d. Agreement Stamp.
----------------------------

CURING — FRESHING — KIPPERING — RED HERRINGS—  
TINNING—FAMOUS PICKLE CURE—A FEW REMARKS  
AS TO THE UTILITY OF FISH OFFAL.

The trade in sending to the English markets, inland towns, and the larger country villages, receives a good deal of attention, and is very lucrative, unless there be a heavy fishing, and therefore a probable glut. There are only a few fish-curers who work this "fresh trade." It is principally carried on by fresh-fish buyers, and they buy from the boats or the curers their daily supplies at prices according to the markets and prospects. Stornoway in particular does a large "freshing" business. To explain the "freshing," let us suppose a supply of herrings has been got. They are "roused" and well laid with small grained salt; straw, and perhaps matting, is put over the top of the barrel mouth and made firm. Boxes, barrels, or tubs will do, although iron-hooped boxes are the correct thing—and all that is wanted is expeditious transmission to the consignee.

There are a good many curers engaged in making kippers. A few of the many are long established, and therefore have a fairly wide known popularity as to their cure and merits. This coming season will see a great extension in kipping, as at large stations, such as Montrose, Aberdeen, Peterhead, Fraserburgh, Lerwick, and Stornoway, there are more curers entering on this branch of the trade. "Kippers" are at present a very popular edible, but there is only a limited home consumption, and as they do not keep their condition after two or three weeks, there is a danger in too fast extension, which will without doubt bring down the prices, and probably overstock the markets. It must be remem-

bered also that the English cure a large portion of their catch in this style, and will prove dangerous competitors.

Red herrings are not cured so much for the home markets as for foreign. The countries around the Mediterranean are the largest consumers, and prices therefrom are good. The cure is thus described. The herrings are soaked in salt and saltpetre till they are rigid. The pickle is then removed. They are hung on the spits for a few days, and afterwards smoked until they are of the required colour. It takes eight or nine days to cure red herrings properly.

The tinning of herrings for the greater part is confined to Aberdeen, and Australia is the great market. Last year (1882) there were close on  $2\frac{1}{4}$  millions of tins exported from Aberdeen for the various warm countries. There are from three to five herrings in a tin, and the tin and herrings weigh 1 lb. The process of curing and putting up is pretty much kept secret, and in case of mistakes I had better not endeavour to describe the method.

The famous Scotch pickle cure, the most important of all methods, now deserves special reference. The "pickle cure" was first practised as an article of trade in Holland in the year 1307. Immediately on the herrings being delivered by the carter at the yard, and deposited or "tumbled" into the farlin, i.e. gutting-tub, the coopers are careful to sprinkle them well with salt. This sprinkling of salt—called "rousing"—preserves and revives the condition of the herrings while they are being gutted. The gutting women lose no time in commencing their work. With their short knife in the right hand, and the herring in their left, they, by a dexterous and experienced movement withdraw the viscera and gills. All bloody matter is included therewith, and its withdrawal prevents the fish

from turning a sickly colour, they would otherwise turn if the bloody matter remained. First-class cured fish keep beautifully clear and free from smell for nine or twelve months. After that time an unhealthy appearance makes itself manifest. As the herrings are gutted they are dropped into tubs according to their qualities. These tubs are placed close to the large gutting-box or farlin, and there is one for every selection. The gutters should be most particular in selection. The small tubs are carried by the "packers" to where the packing is taking place—generally in the centre, or open part of the yard—and emptied into a larger tub. Here they are again "roused." Two or three turns over with the hands is sufficient. In packing, the herrings are "laid" on their backs, and the packer sees that a proper quantity of salt is sprinkled over every tier. Attention is paid to pressing and refilling after the barrel has stood for a few days. Whereas small grained salt is the best for rousing, great grained salt is necessary for laying and packing. The various selections of the pickle cure on the east coast and Shetland are—1st, Fulls, i.e. full-sized, having roe or milt developed; 2nd, Matties, i.e. undersized, roe and milt immature; 3rd, Spent, i.e. spawned fish; 4th, Tornbellies, i.e. fish either split in the side, breast, or belly, while being gutted or torn in these parts in being shaken from the nets. The curers at various intervals—commonly near the end of the season—have another selection, viz. Mixed, i.e. matties and spents in equal quantities to be packed promiscuously in the same barrel. This mixed cure finds much favour with the North German and Russian dealers. I may also mention that since 1880—the disputing year—many curers are making two selections of the "fulls," viz. large fulls and medium fulls. This is praiseworthy of the curers, and in my opinion is

the only way to keep the Mattie selection entirely distinct. Formerly, in a barrel of matties there was an equal—or very nearly so—quantity of small fulls. Such should not be. I say that immature fish—"matties"—should be kept separate from mature fish, even though the mature fish be small sized.

As the fish offal accumulates, it is carefully collected and transferred to old barrels set apart for that purpose. A barrel of herring offal realises from 1s. to 1s. 6d. per barrel. In the beginning of the season the farmers contract for a certain supply. Fish offal as a manure is now well known and appreciated as a good crop-raising stimulant. It is estimated that at the lowest possible over 75,000 barrels were taken delivery of by farmers on the east coast of Scotland alone, and the money value thereof to be not less than £5000 sterling. In its raw state the offal is, in the event of its too heavy application to the soil, apt to "burn." To prevent this burning it is apparent that it must have a compost. Our fishing centres should not be without manufactories for the drying and compressing of offal with such composts as, say, peat-moss, road sweepings, fine ashes and cinders from gasworks, or even from the common ash-pits. The composts are easily obtained, would make a capital all round manure, and for cheapness hardly to be beaten.

#### THE BRANDING SYSTEM—HISTORY—THE BRAND EXPLAINED—STATISTICS—QUALIFICATIONS.

In the 36th clause of Act of Parliament, 1808, we first hear of a brand on herrings. The presentment of a barrel of herrings of sufficient merit to receive the branding stamp thereon entitled the curer to the sum of 2s. In

1815, that sum was raised to 4s., and thereat remained till 1830, at which date it was altogether withdrawn, but branding under the old regulations still continued. In 1859, a Parliamentary Commission of Enquiry reported favourably on the brand, and gave it as their opinion that the system of branding was beneficial in the interests of the curers, was a great facilitator of business—more especially in the foreign export trade—and was likewise a guarantee for the contents of the barrel and also the quality of the fish therein. A fee of 4*d.* per barrel branded was then imposed, and remains in force at this present day. Only lately has the brand received another vote of confidence, as it were. I refer to the report of the Select Committee appointed by the House of Commons in March 1881, to enquire into the expediency of continuing the system of branding herrings, &c. Their voting was as 12 against 3 that the brand was deserving of continuance.

The brand is a guarantee that the barrel is of the legal standard measurement, and that the herrings, for quality, selection, and packing, are up to the requirements of the Scotch Fishery Board. The brand is given to only four selections, viz. fulls, matties, spents, and mixed. There are twenty-six districts, and the branding officers employed throughout the whole, in 1882, numbered thirty-seven. As branding is now extended to Shetland, whose rapid growth is so visibly apparent, an increase in the branding staff must necessarily take place. The herrings to be entitled to receive the brand must be properly cured and packed, and have lain in the barrel twelve\* clear days from date of catch. The curer signs a request note to the officer stating the number of

\* The Fishery Board stipulate that to receive the brand the herrings must have lain *ten* clear days, *exclusive of catch and packing*. I therefore feel justified in quoting *twelve* clear days from catch.

barrels he desires branded. This has the officer's due attention. Previous to the examination of the "parcel," the officer receives a declaration to the effect that the herrings have been cured conformably to the regulations set forth, and also gets payment of the branding fees. He proceeds to examine the parcel, and to those entitled applies the branding stamp. The curer has had a fire prepared wherein to heat the officer's branding-iron, and when the iron is red-hot it is applied to the barrel, leaving an impression similar to the one here given. Every selection has a different stamp.



The above is for Packed Matties, branded in 18-71, and the J J is the branding officer's initials. There is no brand given to the west coast herrings, nor is one required, as the herrings are not selected further than the curers deem expedient. Perhaps one-third may be selected, entitling them to the name of "prime" or "choice," the other two-thirds are packed promiscuously.

That the brand is highly appreciated, and yearly gaining in appreciation, the following results will sufficiently prove.

Year.	Barrels Branded.	Fees therefrom.		On Barrels.		On Fees.	
		£	s. d.	Increase.	Decrease.	Increase.	Decrease.
1859 . . . . .	158,676	2,644	12 0	...	...	£	s. d.
1869 . . . . .	244,522½	4,075	7 6	85,846½	...	1,430	15 6
1879 . . . . .	342,323	5,705	7 8	97,800½	...	1,630	0 2
*1880 . . . . .	689,286	11,488	2 0	346,963	...	5,782	14 4
1881 . . . . .	494,182½	8,236	7 6	...	195,103½	...	...
1882 . . . . .	462,612½	7,710	4 2	...	31,570	...	3,251 14 6
							526 3 4

\* The fishing of 1880 was the heaviest on record, in fact it proved by its unexpectedness quite too much of a good thing. We must therefore not consider 1881 as a year of decline, but, as it were, calculate proportionately as an increase over 1879. While 1882 proves another decrease, it must be mentioned that the branding officers were most stringently exacting in fulfilment of their duties, and the rejections were more numerous than in former years. The tenor of the quality under the brand is, in my opinion, raised thereby, and a continued strictness under the regulations as to quality and selection makes us hopeful that the brand will score a further success, and still remain prosperous in itself. The Lybster to Helmsdale coast fishing proving a comparative failure also helps to account for the slight decrease.

The brand is an excellent trade-mark, and as such facilitates the buying and selling. This last year (1882) the buying and shipping of herrings was commenced and almost finished within a period of five months. The number of barrels exported is given as  $782,290\frac{1}{2}$ =(500 to 600 cargoes, and a money value of over £1,000,000). These figures give but a vague estimate of the immense business effected in so short a time. Every barrel bearing the "brand" may be bought and sold by local buyers to continental firms on the mere faith of the word "Crown-branded," and that *also without any examination whatever as to the contents of the barrel and the quality of the fish.* It is therefore plainly to be seen that the brand makes business transactions between the buyer and seller comparatively easy. As a contrast, I may state that the unbranded herrings are never bought unless subject to inspection before accepting delivery, or failing that, the seller's guarantee as to quality. Opinions as to quality may differ widely, and therefore contracts for unbrands are not only dangerous but difficult in negotiation. Also, inspection means labour. Labour is money. There is also time lost by seller and buyer. It is clear then that the brand is much to be esteemed, a valuable adjunct, and great facilitator of business, and it is to be hoped that the prestige it has given to the trade may never decline.

For further and more explicit information concerning the brand I would recommend a perusal of the essay on the herring brand—"Fish and Fisheries, 1882."

#### BENEFICIAL RESULTS—LOCAL TRADE—RAILWAYS— SHIPPING—BANKS—FOREIGN TRADE.

The benefits derived from the Scotch herring fisheries are marvellous in extent and distribution grand in results,

and invaluable in wealth. Indirectly the shopkeepers of whatever nature in the herring districts are more or less influenced by its prosperity and continuance. In turn the merchants and manufacturers are benefited through the shops. An extensive and extending business means steady employment for manual labour, and by the necessity of supply so does the labourage increase. Directly, we have the fishermen and their families entirely dependent on the results; and labourers, gutters, coopers, builders, wood merchants, salt manufactures, railways, mercantile marine, banking, and in fact every trade and profession is receiving a support from this great industry. It is no exaggeration to say that the herring fishing is the great industry on whose success or decline the greater part of the Scotch east coast, Shetland, and the Hebrides hang their dependence. Any one acquainted with the Scotch coasts cannot fail to appreciate the great value of the herring fishing.

The basket and net manufacturers have a large field for their output. Every year there is a steady and heavy demand for baskets and nets. There are also the wood merchants at home and abroad being greatly benefited through the trade in supplying them with the different woods necessary for the making of barrels, as also the erecting of sheds and stores. Even the wood shavings or refuse find a good market with those curers who have kilns. Multiply the various instruments described under "plant" by 3000, and you will find that the instrument makers have to be exceedingly thankful for the trade. We must not lose sight of the great demand for wooden spades for the fishermen, salt scoops for the gutting women, gutting knives, hammers, nails, &c. Again, there is the tear and wear in the boat, frequently requiring repairs or improvements

at the hands of a boat-builder, a replacing of worn-out ropes and sails and all boats' gear. The wood-hoop merchants find a profitable and extensive business. Builders of fishing boats have been kept exceedingly busy during the past ten years. We must take into consideration the great number of people employed by the merchants and manufacturers in the preparing of the articles requisite by their necessary assistance to the carrying on of fishing and fish curing, all of whom by the demand are enabled to earn good wages. Last, but not least, let us glance at the salt trade. The quantity of salt used yearly is about 100,000 tons, and to the salt manufacturers gives a money value of from £55,000 to £60,000, nett, f.o.b., at places of shipment. The principal manufactories are represented at Runcorn or Liverpool, from whose docks the great bulk is shipped. I give this example to show that benefits are not confined locally, but here we have our sister country reaping benefit from the trade.

Railway Companies are greatly benefited by the vast traffic caused by the herring trade during the season. There is the continual carrying of fresh herrings to the English markets ; the occasional transfer of barrels, for export, from the smaller fishing districts to Aberdeen or other large centres for steamer shipment ; the carriage of supplies of wood from our home merchants ; salt occasionally, hoops, plant, and, above all, the great passenger traffic consequent on the temporary but necessary removings of the fishermen and families for the east coast traffic alone. I estimate that the charges made by the railway companies for the carriage of wood, staves, hoops, salt, plant, and of passengers and their luggage and other necessaries, and of fresh and cured herrings, would be at the lowest not less than £75,000.

Shipping has in the herring trade one of its greatest

supports. Calculating that the average export for the past ten years is 600,000 barrels yearly, that would give as from 500 to 600 cargoes yearly. The average freights to the five principal herring-receiving ports on the continent, viz. Hamburg, 1*s.* 8*d.*; Stettin, 2*s.*; Danzig, 2*s.* 2*d.*; Königsberg, 2*s.* 3*d.*; and Libau, 1*s.* 11*d.*—total average 2*s.* per barrel. The total export for 1882 is given as 782,290½ barrels, and therefore the gross freights would realise at the 2*s.* freight, £78,229 1*s.* A significant fact, showing the great importance attached to the herring trade by those interested in shipping, is to be found in the marvellous rapidly increasing building of superior steamers especially adapted for the carrying of herrings. Vessels of about 100 tons register are those principally engaged in the trade, and are most suitable.

The banks receive from the fishermen money on deposit at a moderate rate of interest (under 2¾ per cent. for the past few years), and through the great amount of business arising from the trade, and their getting the bank notes put into circulation, thereby receive a great assistance, and derive a considerable profit. I calculate the deposits by the Scotch fishermen to exceed £500,000. As shown in a calculation made later on in this essay, the circulation of notes would be over £1,000,000 yearly. The fish-curers, although turning over a large amount yearly, and thereby being instrumental in the banks' circulation, yet are more generally debtors than creditors of the banks. Their capital is soon absorbed in bounties and stock, and in too many instances they are pretty deep on the wrong side with the bank, but generally such is balanced by heritable or personal security. When the boats are paid off, heavy temporary overdrafts are required. The fish-curer's reputation and character is sufficient to procure

that. For some time past the North of Scotland Bank, Limited, has been fully alive to this important industry, and to their credit they have been the means at various centres—notably Fraserburgh—by their monetary assistance to curers, of furthering the development, encouraging its continuance, and of making by its extension a prosperity so plainly discernable. A sufficient compensation is found against the risk in the excellent interest charged by the banks for their accommodations.

The foreign export trade has now assumed an astonishing magnitude. It is not my intention to write regarding the trade in tinned herrings with Australia, or in red herrings with the Mediterranean countries, both of which are of considerable importance, but are comparatively insignificant as compared with the export of pickled herrings to Germany and Russia, of which I endeavour to make a few observations of interest.

In the early part of this century the demand for our herrings in Germany was very limited indeed. For instance, up till 1850 the Danzig market was sufficiently supplied with a yearly import of about 10,000 barrels of Scotch herrings. We must remember, however, that Germany was the great emporium of Norwegian herrings, and it was only on the Scotch cure and catch attaining the supremacy over all other herring fisheries that the demand in Germany increased. For, as the demand and favour for Scotch herrings increased, the prices gradually did the same, and to counterbalance which we have ample evidence that the prices and favour for all other kinds of herrings imported gradually decreased in a corresponding ratio.

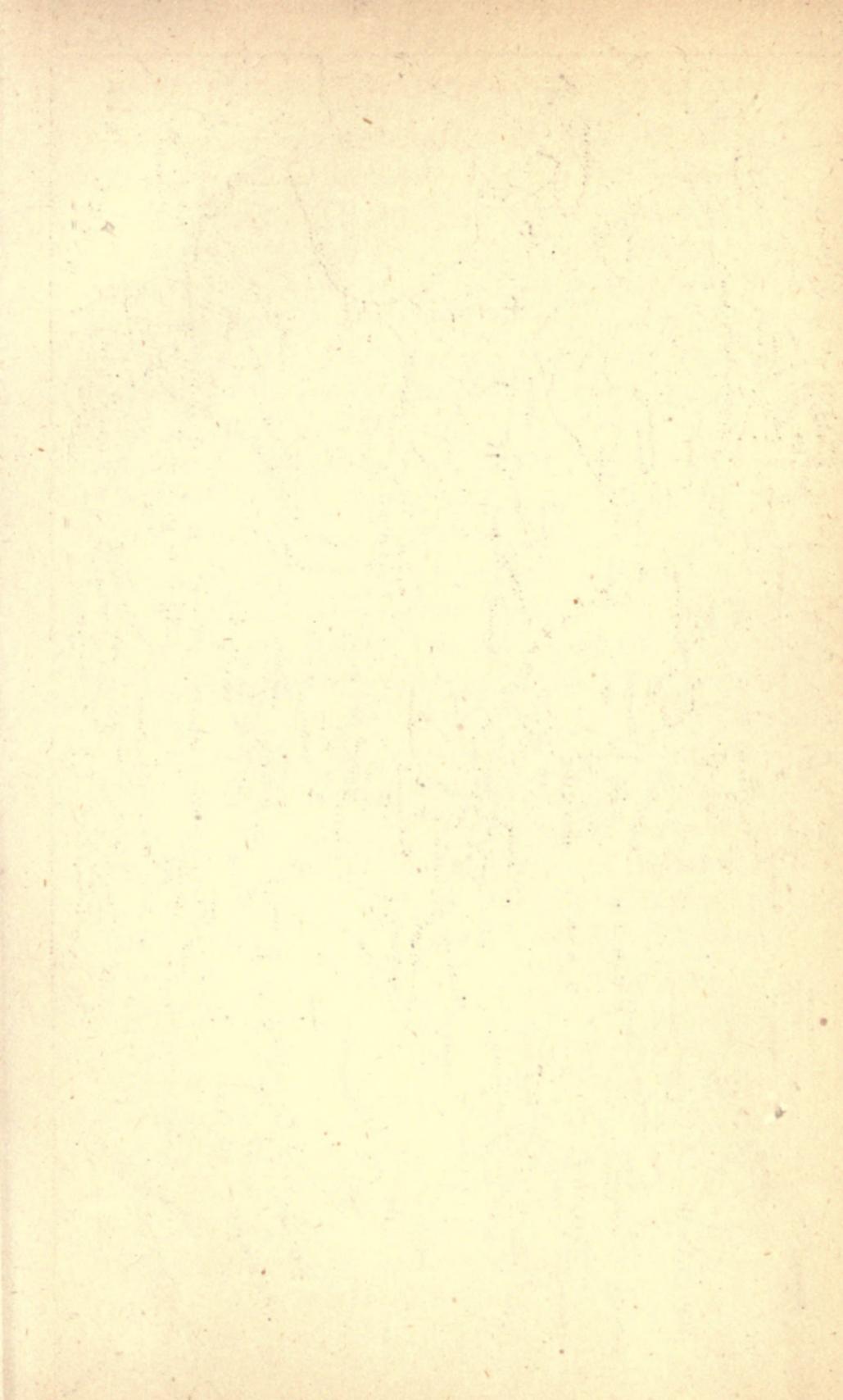
There are four great herring centres in Germany, viz. Hamburg, on the Elbe ; Stettin, on the Oder ; Danzig, on

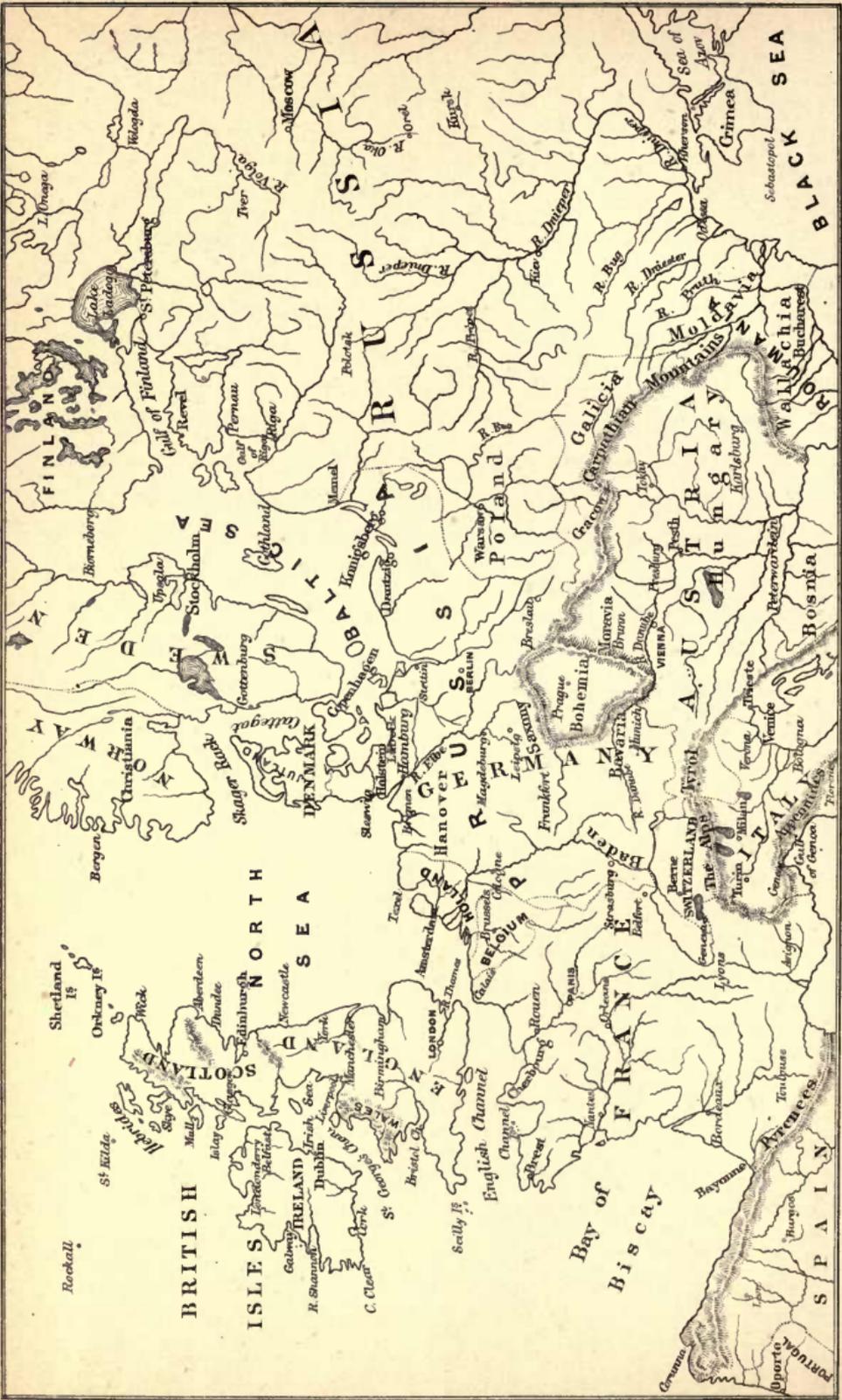
the Vistula ; and Königsberg, on the Pregel ; and whose imports for 1881 and 1882 are as under :—

	1881.		1882.
Stettin . . . . .	248,336	..	267,107
Hamburg . . . . .	112,349	..	150,612
Danzig . . . . .	127,138	..	142,550
Königsberg . . . . .	94,308	..	101,995
Total ..	<u>582,131</u>		<u>662,264</u>

These figures show that these four centres alone receive about five-sixths of the total exports from Scotland, and the exportation statistics are here given showing the various quantities shipped from the several districts in the respective years :—

	1881. Barrels.		1882. Barrels.
Stornoway . . . . .	25,038	..	32,073
Shetland . . . . .	47,594 $\frac{1}{2}$	..	98,292
Orkney . . . . .	5,990	..	10,658 $\frac{1}{2}$
Wick . . . . .	55,335	..	73,064
Lobster . . . . .	17,183	..	2,912
Helmsdale . . . . .	15,085	..	6,330 $\frac{1}{2}$
Cromarty . . . . .	746 $\frac{1}{2}$	..	2,205 $\frac{1}{2}$
Findhorn . . . . .	7,660	..	3,781 $\frac{1}{2}$
Buckie . . . . .	9,360 $\frac{1}{2}$	..	9,266 $\frac{1}{2}$
Banff . . . . .	25,080	..	24,131
Fraserburgh . . . . .	165,362 $\frac{1}{2}$	..	178,136 $\frac{1}{2}$
Peterhead . . . . .	158,155	..	156,026 $\frac{1}{2}$
Aberdeen . . . . .	83,206 $\frac{1}{2}$	..	82,407
Stonehaven . . . . .	13,723	..	7,359
Montrose . . . . .	26,425 $\frac{1}{2}$	..	27,662 $\frac{1}{2}$
Leith . . . . .	35,138 $\frac{1}{2}$	..	46,607
Eyemouth . . . . .	19,160 $\frac{1}{2}$	..	21,377 $\frac{1}{2}$
Totals for the two years ..	<u>710,244<math>\frac{1}{2}</math></u>		<u>782,290<math>\frac{1}{2}</math></u>
			<u>710,244<math>\frac{1}{2}</math></u>
Showing an increase for season 1882 of ..			<u>72,046</u>





A few of the other German ports are Harburg, Bremen, Lübeck, Pernau, and Memel, but they do not receive regular supplies. There are also numerous inland towns noted for their extensive transactions in herrings, the principal being Magdeburg, Halle, Leipzig, Breslau, Berlin, Frankfurt, Posen, and others of lesser note too numerous to mention. Russia seems to give a preference to Norwegian and Swedish herrings, the duty on which is much lighter than that on the Scotch. The duty on Scotch herrings is by far too heavy. Nevertheless, Scotch herrings to a limited extent command good prices through such markets as Libau, Riga, and St. Petersburg. These three Russian centres have a fair share of our west coast herrings, but they only receive a stray cargo now and then from the east coast. West coast and east coast early herrings, from their oily tendency, are in much demand at medium prices, but between the excessive charges and duty to be paid, the Russian people cannot afford to pay high prices. If the duty could be reduced to about level with the German, then an extended business would be the result; in the meantime the Russian prices and currency are of so fluctuating a character, that our curers and buyers must be cautious in the trade with Russia. However, Libau is strengthening its connection with us, and proving a great rival to its German neighbouring centre—Königsberg. Odessa, in the Black Sea, has lately been doing a direct business—principally through London agents—and it is hoped that such business will rapidly extend itself in the future. A glance at the accompanying map will show the situations of the centres I have referred to, and how admirably they command the interior business throughout Germany, Austria, and Russia.

CONCLUSION—HISTORY AND LEGISLATURE—STATISTICS  
SHOWING PROSPERITY AND WEALTH—MUCH REQUIRED  
AND EXPECTED IMPROVEMENTS REFERRED TO.

There is very little authentic information to be had regarding the Scotch herring fisheries before the sixteenth century. Having gradually risen from obscurity by slow but steady degrees, it was then in importance in close rivalry with the Dutch. There is mention made of the fishings as early as the 13th and 14th centuries, and as in the 15th century it must have left its mark on some of the old records of that time, surely, by diligent searching, some information might be got at once interesting and valuable.

From 1630 to 1650 a further impetus was given to its prosecution, was successful, and apparently every year proved a steady increase. In 1676, a reaction set in, and its downward career was swift. The companies then in vogue were utterly quashed. However, private enterprise was quietly persevering, and thanks thereto, the herring fishing had by the end of the century actually got ahead of the Dutch.

From 1695 to 1707 success attended the enterprise and efforts of improvement. But the next seven years again saw a retrograde period, and the fishing nearly ceased altogether. This probably principal national industry was, by the stupid and complicated regulations and laws of the Legislature immediately after the union, nearly suppressed, and that at a time when its supremacy over other nations was most promising. In the years 1714, 1720, 1727, 1750, bold attempts were made to revive the trade. Large

companies were again established, backed up and assisted by the Government, but the expected great results were never realised. A better year happened to be 1757, and the fishings kept steady thereafter till 1767, after which came the periodical backwardness, culminating in 1782, when we read the total catch was only 12,522 barrels for that year. The legislation of 1808, on fishery laws and regulations, laid the foundation of all its future workings, and it is from this period that we have a continual and progressive success. Several excellent alterations and additions were made by the Act 55, Geo. III. 694, 14th June 1815, and about this time the east coast seemed to be endowed with a new life. Herring curing seemed prosperous, and the small coast villages in many cases in a few years grew into fair-sized and prosperous towns. Perhaps the best example is Fraserburgh. Twenty years ago an insignificant 'Burgh indeed, but at this day the Scotch herring capital. Built on and around Kinnaird Head, it has the command of the Moray Firth. To the south lies its beautiful bay. Jutting out from the Kinnaird Castle is the breakwater, extending south and at the middle south-east, and shelters the harbours and the bay. It is 810 yards in length, and its average thickness about 30 feet. At its point there is a good lighthouse. The Balaklava Harbour at Fraserburgh is the largest herring boat harbour on the coast. It is  $12\frac{3}{4}$  acres in extent.

The growing importance of the herring fishing has caused several inquiries and commissions to take place, and the results have always tended to its well-being. I refer to such years as 1832, 1843, 1852, 1859, and the more modern but the most important of 1881.

The following statistics show the total catch of herrings

for the past twenty-six years, for the entire east coast including Shetland, Lewis, and Barra, viz. for—

1857 . . .	329,251 crans.	1869 . . .	403,633 crans.
1858 . . .	393,035 "	1870 . . .	596,421 "
1859 . . .	302,943 "	1871 . . .	562,865 "
1860 . . .	463,100 "	1872 . . .	562,737 "
1861 . . .	485,645 "	1873 . . .	714,717 "
1862 . . .	520,280 "	1874 . . .	720,964 "
1863 . . .	439,210 "	1875 . . .	655,606 "
1864 . . .	432,064 "	1876 . . .	406,440 "
1865 . . .	395,157 "	1877 . . .	561,439 "
1866 . . .	413,065 "	1878 . . .	618,597 "
1867 . . .	474,098 "	1879 . . .	516,406 "
1868 . . .	366,068 "	1880 . . .	930,307 "

	1881. Crans.	1882. Crans.
Stornoway . . . . .	41,950	45,980
Shetland . . . . .	46,500	102,250
Orkney . . . . .	14,418	16,018
Wick . . . . .	61,742	81,792
Lybster . . . . .	16,688	1,730
Helmsdale . . . . .	16,388	6,404
Cromarty . . . . .	1,638	1,376
Findhorn . . . . .	6,890	4,872
Buckie . . . . .	7,173	7,630
Banff . . . . .	22,106	23,003
Fraserburgh . . . . .	132,642	139,451
Peterhead . . . . .	124,878	124,185
Aberdeen . . . . .	78,702	80,363
Stonehaven . . . . .	19,355	15,910
Montrose . . . . .	26,012	28,820
Leith . . . . .	7,216	3,660
Eyemouth . . . . .	59,486	59,825

683,784                      743,269

Deduct season 1881 .. 683,784

Showing an increase for season 1882 of .. 59,485

And for the past five years the total catch at the individual stations :—

Stations and Districts.	1878.	1879.	1880.	1881.	1882.
WICK . . . . .	84,248	63,094	113,186	55,542	69,926
Lybster and Clyth	6,910	9,240	12,371	15,231	1,626
Forse . . . . .	282	620	592	219	28
Latheronwheel .	512	790	637	1,237	78
Dunbeath . . . .	1,502	2,800	1,056	1,802	504
Helmsdale . . .	7,600	10,855	10,285	13,783	3,920
Portmahomack .	858	1,391	1,790	1,515	1,376
Burghead and Hopeman . . . }	1,122	3,009	5,200	3,090	2,328
Lossiemouth . .	819	4,896	7,600	3,800	2,544
Buckie District .	2,864	3,832	12,413	7,173	7,630
Portsoy . . . . .	4,935	4,670	6,950	5,600	4,650
Whitehills . . .	1,102	1,610	1,667	840	1,174
Banff . . . . .	250	1,360	1,913	1,606	3,030
Macduff . . . .	4,756	7,384	8,530	5,538	9,762
Gardenstown . .	4,058	7,007	6,915	7,685	4,387
Fraserburgh . .	175,820	105,037	218,504	132,613	139,500
Peterhead . . .	122,456	83,200	177,300	124,800	124,185
Aberdeen . . . .	69,231	36,400	78,810	78,657	80,253
Stonehaven . . .	..	..	..	..	15,910
Montrose District	26,758	30,048	54,091	45,352	28,820
Anstruther „	3,975	6,490	7,840	3,660	3,145
Leith to Dunbar .	1,500	5,460	4,600	4,110	2,722
Eyemouth District	25,407	52,149	48,715	59,486	59,825
Orkney . . . . .	14,722	8,364	16,142	14,418	16,160
Shetland . . . .	6,240	6,700	38,700	46,250	102,000
Lewis and Barra .	50,670	60,000	94,500	41,100	45,240

Stonehaven has been this year disjoined from the Montrose district, and erected into a separate station. In the foregoing tables we therefore give the results for 1882 separately, although for the previous years they are all included in the Montrose district.

A perusal of the foregoing statistics will prove that although yearly fluctuations have taken place, yet that every periodical decade proves that the prosperity as regards the catch is steadily on the increase. The quality and selection have also much improved, thanks to wise regulations and our national characteristic intrepidity. The prices also are year by year becoming more firm, are less speculative, fluctuate less than in former years, and are now entirely regulated according to supply and demand. The supply, apparently always increasing, is at the present moment very great, but it is pleasing to state that the demand is proportionally quite as great and strong.

In recapitulation, the following calculations are here given to show the reader some idea as to the wealth of the herring trade.

## CAPITAL.

	£
Fishermen's boats, all necessary gear included—	
6131 boats at £275 per boat . . . . .	1,686,025
6131 boats' "fleets" of nets at 70s. per net, allowing	
25 nets to each boat . . . . .	536,432
Fish-curer's invested capital, lowest estimate . . . . .	720,000
Total ..	<u>£2,942,457</u>

## ONE YEAR'S BUSINESS (1882).

	£	s.
Bounties paid to fishermen—		
6131 boats at £40 per boat . . . . .	245,240	0
Prices paid to fishermen for herrings—		
743,269 crans at average of 18s. per cran . . . . .	668,942	2
167 new boats, with all necessary gear, at £310 per boat	51,770	0
167 new "fleets" of nets—30 per boat, at 70s. per net .	17,535	0
For new nets distributed amongst the fleet . . . . .	15,000	0
Lowest estimate for repairs on the fleet (paid to boat-builders, rope and sail makers, block and tackle manufacturers, Cutch dealers, &c.) . . . . .	12,500	0
Total paid "to" and "by" fishermen ..	<u>£1,010,987</u>	<u>2</u>

Fish-curer's outlay, interest on capital, rent of yard, plant, stock and work, wages to coopers, gutters, labourers, cartage, shore dues. Equal to about 8s. 6d. per barrel . . . . .	<u>£394,862</u>
--	-----------------

Fish-curer's income—return for herrings— 743,269 crans = 929,086 barrels at 30s. per barrel	<u>£1,393,628</u>
--	-------------------

We must not forget that the fishermen own seven-eighths of the houses they inhabit, and also, that they are heavy depositors with our Scotch banks. Many of the fish-curers are affluent, and possess both money and property. Likewise, the Scotch buyers for foreign export, who may be said to turn over once more the great money circulation of this trade.

Of the much required and expected improvements, it is apparent that harbour accommodation is the most needed. It is gratifying to note that the surplus branding fees are to be devoted in that improvement, and that a large Government grant may be shortly expected for an east coast harbour of refuge. Whilst large centres are receiving every assistance, even at present, there are small centres who receive little or none. Some are most deserving, and ready to spring into a new energetic life whenever they get a new harbour, or an extension.

With a rapidity quite amazing, the improvements in our boats, gear, and nets, have sprung into force within the past dozen of years. The herring fishing is year by year being prosecuted further from the shore, and large and finer sea-going boats are becoming necessary. If such continues, to prevent the quality of the fish retrograding, the application of steam to our fishing boats will be necessary. Already I can see symptoms of an east coast steamboat herring fishing.

Last, but not least, comes the great necessity for improving the social condition of our fishermen, and especially of providing suitable and proper accommodation for them at the herring centres. I sincerely hope that circumstances may arise at an early date that will demand an inquiry, the result of which will tend to the much needed rectification of a backward mode of living. A very slight monetary expenditure and a few forcible regulations, are all that is requisite to right this matter. The success of the trade is due in a great measure to the fishermen and their steady enterprise, but they have nearly gone as far as they can; at least, it is not their business to provide temporary residences at every place they may go to fish. It must therefore lie with the curers (employers), or through Government agency to provide the needful. Our fishing is progressive, so let us hope that our fishermen will also be so. Progress the watchword, and Prosperity the result.