

CHAPTER IX

BRIDGE-BUILDING

DURING the Civil War the price of iron went up to something like \$130 per ton. Even at that figure it was not so much a question of money as of delivery. The railway lines of America were fast becoming dangerous for want of new rails, and this state of affairs led me to organize in 1864 a rail-making concern at Pittsburgh. There was no difficulty in obtaining partners and capital, and the Superior Rail Mill and Blast Furnaces were built.

In like manner the demand for locomotives was very great, and with Mr. Thomas N. Miller¹ I organized in 1866 the Pittsburgh Locomotive Works, which has been a prosperous and creditable concern — locomotives made there having obtained an enviable reputation throughout the United States. It sounds like a fairy tale to-day to record that in 1906 the one-hundred-dollar shares of this company sold for three thousand dollars — that is, thirty dollars for one. Large annual dividends had been paid regularly and the company had been very successful — sufficient proof of the policy: “Make nothing but the very best.” We never did.

When at Altoona I had seen in the Pennsylvania Railroad Company's works the first small bridge built of iron. It proved a success. I saw that it would never do to depend further upon wooden bridges for permanent

¹ Mr. Carnegie had previous to this — as early as 1861 — been associated with Mr. Miller in the Sun City Forge Company, doing a small iron business.

railway structures. An important bridge on the Pennsylvania Railroad had recently burned and the traffic had been obstructed for eight days. Iron was the thing. I proposed to H. J. Linville, who had designed the iron bridge, and to John L. Piper and his partner, Mr. Schiffler, who had charge of bridges on the Pennsylvania line, that they should come to Pittsburgh and I would organize a company to build iron bridges. It was the first company of its kind. I asked my friend, Mr. Scott, of the Pennsylvania Railroad, to go with us in the venture, which he did. Each of us paid for a one fifth interest, or \$1250. My share I borrowed from the bank. Looking back at it now the sum seemed very small, but "tall oaks from little acorns grow."

In this way was organized in 1862 the firm of Piper and Schiffler which was merged into the Keystone Bridge Company in 1863 — a name which I remember I was proud of having thought of as being most appropriate for a bridge-building concern in the State of Pennsylvania, the Keystone State. From this beginning iron bridges came generally into use in America, indeed, in the world at large so far as I know. My letters to iron manufacturers in Pittsburgh were sufficient to insure the new company credit. Small wooden shops were erected and several bridge structures were undertaken. Cast-iron was the principal material used, but so well were the bridges built that some made at that day and since strengthened for heavier traffic, still remain in use upon various lines.

The question of bridging the Ohio River at Steubenville came up, and we were asked whether we would undertake to build a railway bridge with a span of three hundred feet over the channel. It seems ridiculous at the present day to think of the serious doubts entertained

about our ability to do this; but it must be remembered this was before the days of steel and almost before the use of wrought-iron in America. The top cords and supports were all of cast-iron. I urged my partners to try it anyhow, and we finally closed a contract, but I remember well when President Jewett ¹ of the railway company visited the works and cast his eyes upon the piles of heavy cast-iron lying about, which were parts of the forthcoming bridge, that he turned to me and said:

“I don’t believe these heavy castings can be made to stand up and carry themselves, much less carry a train across the Ohio River.”

The Judge, however, lived to believe differently. The bridge remained until recently, though strengthened to carry heavier traffic. We expected to make quite a sum by this first important undertaking, but owing to the inflation of the currency, which occurred before the work was finished, our margin of profit was almost swallowed up. It is an evidence of the fairness of President Edgar Thomson, of the Pennsylvania, that, upon learning the facts of the case, he allowed an extra sum to secure us from loss. The subsequent position of affairs, he said, was not contemplated by either party when the contract was made. A great and a good man was Edgar Thomson, a close bargainer for the Pennsylvania Railroad, but ever mindful of the fact that the spirit of the law was above the letter.

In Linville, Piper, and Schiffler, we had the best talent of that day — Linville an engineer, Piper a hustling, active mechanic, and Schiffler sure and steady. Colonel Piper was an exceptional man. I heard President Thomson of the Pennsylvania once say he would rather have him at a burnt bridge than all the

¹ Thomas L. Jewett, President of the Panhandle.

engineering corps. There was one subject upon which the Colonel displayed great weakness (fortunately for us) and that was the horse. Whenever a business discussion became too warm, and the Colonel showed signs of temper, which was not seldom, it was a sure cure to introduce that subject. Everything else would pass from his mind; he became absorbed in the fascinating topic of horseflesh. If he had overworked himself, and we wished to get him to take a holiday, we sent him to Kentucky to look after a horse or two that one or the other of us was desirous of obtaining, and for the selection of which we would trust no one but himself. But his craze for horses sometimes brought him into serious difficulties. He made his appearance at the office one day with one half of his face as black as mud could make it, his clothes torn, and his hat missing, but still holding the whip in one hand. He explained that he had attempted to drive a fast Kentucky colt; one of the reins had broken and he had lost his "steerage-way," as he expressed it.

He was a grand fellow, "Pipe" as we called him, and when he took a fancy to a person, as he did to me, he was for and with him always. In later days when I removed to New York he transferred his affections to my brother, whom he invariably called Thomas, instead of Tom. High as I stood in his favor, my brother afterwards stood higher. He fairly worshiped him, and anything that Tom said was law and gospel. He was exceedingly jealous of our other establishments, in which he was not directly interested, such as our mills which supplied the Keystone Works with iron. Many a dispute arose between the mill managers and the Colonel as to quality, price, and so forth. On one occasion he came to my brother to complain that a bargain which he had

made for the supply of iron for a year had not been copied correctly. The prices were "net," and nothing had been said about "net" when the bargain was made. He wanted to know just what that word "net" meant.

"Well, Colonel," said my brother, "it means that nothing more is to be added."

"All right, Thomas," said the Colonel, entirely satisfied.

There is much in the way one puts things. "Nothing to be deducted" might have caused a dispute.

He was made furious one day by Bradstreet's volume which gives the standing of business concerns. Never having seen such a book before, he was naturally anxious to see what rating his concern had. When he read that the Keystone Bridge Works were "BC," which meant "Bad Credit," it was with difficulty he was restrained from going to see our lawyers to have a suit brought against the publishers. Tom, however, explained to him that the Keystone Bridge Works were in bad credit because they never borrowed anything, and he was pacified. No debt was one of the Colonel's hobbies. Once, when I was leaving for Europe, when many firms were hard up and some failing around us, he said to me:

"The sheriff can't get us when you are gone if I don't sign any notes, can he?"

"No," I said, "he can't."

"All right, we'll be here when you come back."

Talking of the Colonel reminds me of another unusual character with whom we were brought in contact in these bridge-building days. This was Captain Eads, of St. Louis,¹ an original genius *minus* scientific knowledge to guide his erratic ideas of things mechanical.

¹ Captain James B. Eads, afterward famous for his jetty system in the Mississippi River.

He was seemingly one of those who wished to have everything done upon his own original plans. That a thing had been done in one way before was sufficient to cause its rejection. When his plans for the St. Louis Bridge were presented to us, I handed them to the one man in the United States who knew the subject best — our Mr. Linville. He came to me in great concern, saying:

“The bridge if built upon these plans will not stand up; it will not carry its own weight.”

“Well,” I said, “Captain Eads will come to see you and in talking over matters explain this to him gently, get it into proper shape, lead him into the straight path and say nothing about it to others.”

This was successfully accomplished; but in the construction of the bridge poor Piper was totally unable to comply with the extraordinary requirements of the Captain. At first he was so delighted with having received the largest contract that had yet been let that he was all graciousness to Captain Eads. It was not even “Captain” at first, but “‘Colonel’ Eads, how do you do? Delighted to see you.” By and by matters became a little complicated. We noticed that the greeting became less cordial, but still it was “Good-morning, Captain Eads.” This fell till we were surprised to hear “Pipe” talking of “Mr. Eads.” Before the troubles were over, the “Colonel” had fallen to “Jim Eads,” and to tell the truth, long before the work was out of the shops, “Jim” was now and then preceded by a big “D.” A man may be possessed of great ability, and be a charming, interesting character, as Captain Eads undoubtedly was, and yet not be able to construct the first bridge of five hundred feet span over the Mississippi River,¹ without

¹ The span was 515 feet, and at that time considered the finest metal arch in the world.

availing himself of the scientific knowledge and practical experience of others.

When the work was finished, I had the Colonel with me in St. Louis for some days protecting the bridge against a threatened attempt on the part of others to take possession of it before we obtained full payment. When the Colonel had taken up the planks at both ends, and organized a plan of relieving the men who stood guard, he became homesick and exceedingly anxious to return to Pittsburgh. He had determined to take the night train and I was at a loss to know how to keep him with me until I thought of his one vulnerable point. I told him, during the day, how anxious I was to obtain a pair of horses for my sister. I wished to make her a present of a span, and I had heard that St. Louis was a noted place for them. Had he seen anything superb?

The bait took. He launched forth into a description of several spans of horses he had seen and stables he had visited. I asked him if he could possibly stay over and select the horses. I knew very well that he would wish to see them and drive them many times which would keep him busy. It happened just as I expected. He purchased a splendid pair, but then another difficulty occurred about transporting them to Pittsburgh. He would not trust them by rail and no suitable boat was to leave for several days. Providence was on my side evidently. Nothing on earth would induce that man to leave the city until he saw those horses fairly started and it was an even wager whether he would not insist upon going up on the steamer with them himself. We held the bridge. "Pipe" made a splendid Horatius. He was one of the best men and one of the most valuable partners I ever was favored with, and richly deserved the rewards which he did so much to secure.

The Keystone Bridge Works have always been a source of satisfaction to me. Almost every concern that had undertaken to erect iron bridges in America had failed. Many of the structures themselves had fallen and some of the worst railway disasters in America had been caused in that way. Some of the bridges had given way under wind pressure but nothing has ever happened to a Keystone bridge, and some of them have stood where the wind was not tempered. There has been no luck about it. We used only the best material and enough of it, making our own iron and later our own steel. We were our own severest inspectors, and would build a safe structure or none at all. When asked to build a bridge which we knew to be of insufficient strength or of unscientific design, we resolutely declined. Any piece of work bearing the stamp of the Keystone Bridge Works (and there are few States in the Union where such are not to be found) we were prepared to underwrite. We were as proud of our bridges as Carlyle was of the bridge his father built across the Annan. "An honest brig," as the great son rightly said.

This policy is the true secret of success. Uphill work it will be for a few years until your work is proven, but after that it is smooth sailing. Instead of objecting to inspectors they should be welcomed by all manufacturing establishments. A high standard of excellence is easily maintained, and men are educated in the effort to reach excellence. I have never known a concern to make a decided success that did not do good, honest work, and even in these days of the fiercest competition, when everything would seem to be matter of price, there lies still at the root of great business success the very much more important factor of quality. The effect of attention to quality, upon every man in the service, from the

president of the concern down to the humblest laborer, cannot be overestimated. And bearing on the same question, clean, fine workshops and tools, well-kept yards and surroundings are of much greater importance than is usually supposed.

I was very much pleased to hear a remark, made by one of the prominent bankers who visited the Edgar Thomson Works during a Bankers Convention held at Pittsburgh. He was one of a party of some hundreds of delegates, and after they had passed through the works he said to our manager:

“Somebody appears to belong to these works.”

He put his finger there upon one of the secrets of success. They did belong to somebody. The president of an important manufacturing work once boasted to me that their men had chased away the first inspector who had ventured to appear among them, and that they had never been troubled with another since. This was said as a matter of sincere congratulation, but I thought to myself: “This concern will never stand the strain of competition; it is bound to fail when hard times come.” The result proved the correctness of my belief. The surest foundation of a manufacturing concern is quality. After that, and a long way after, comes cost.

I gave a great deal of personal attention for some years to the affairs of the Keystone Bridge Works, and when important contracts were involved often went myself to meet the parties. On one such occasion in 1868, I visited Dubuque, Iowa, with our engineer, Walter Katte. We were competing for the building of the most important railway bridge that had been built up to that time, a bridge across the wide Mississippi at Dubuque, to span which was considered a great under-

taking. We found the river frozen and crossed it upon a sleigh drawn by four horses.

That visit proved how much success turns upon trifles. We found we were not the lowest bidder. Our chief rival was a bridge-building concern in Chicago to which the board had decided to award the contract. I lingered and talked with some of the directors. They were delightfully ignorant of the merits of cast- and wrought-iron. We had always made the upper cord of the bridge of the latter, while our rivals' was made of cast-iron. This furnished my text. I pictured the result of a steamer striking against the one and against the other. In the case of the wrought-iron cord it would probably only bend; in the case of the cast-iron it would certainly break and down would come the bridge. One of the directors, the well-known Perry Smith, was fortunately able to enforce my argument, by stating to the board that what I said was undoubtedly the case about cast-iron. The other night he had run his buggy in the dark against a lamp-post which was of cast-iron and the lamp-post had broken to pieces. Am I to be censured if I had little difficulty here in recognizing something akin to the hand of Providence, with Perry Smith the manifest agent?

"Ah, gentlemen," I said, "there is the point. A little more money and you could have had the indestructible wrought-iron and your bridge would stand against any steamboat. We never have built and we never will build a cheap bridge. Ours don't fall."

There was a pause; then the president of the bridge company, Mr. Allison, the great Senator, asked if I would excuse them for a few moments. I retired. Soon they recalled me and offered the contract, provided we took the lower price, which was only a few thousand

dollars less. I agreed to the concession. That cast-iron lamp-post so opportunely smashed gave us one of our most profitable contracts and, what is more, obtained for us the reputation of having taken the Dubuque bridge against all competitors. It also laid the foundation for me of a lifelong, unbroken friendship with one of America's best and most valuable public men, Senator Allison.

The moral of that story lies on the surface. If you want a contract, be on the spot when it is let. A smashed lamp-post or something equally unthought of may secure the prize if the bidder be on hand. And if possible stay on hand until you can take the written contract home in your pocket. This we did at Dubuque, although it was suggested we could leave and it would be sent after us to execute. We preferred to remain, being anxious to see more of the charms of Dubuque.

After building the Steubenville Bridge, it became a necessity for the Baltimore and Ohio Railroad Company to build bridges across the Ohio River at Parkersburg and Wheeling, to prevent their great rival, the Pennsylvania Railroad Company, from possessing a decided advantage. The days of ferryboats were then fast passing away. It was in connection with the contracts for these bridges that I had the pleasure of making the acquaintance of a man, then of great position, Mr. Garrett, president of the Baltimore and Ohio.

We were most anxious to secure both bridges and all the approaches to them, but I found Mr. Garrett decidedly of the opinion that we were quite unable to do so much work in the time specified. He wished to build the approaches and the short spans in his own shops, and asked me if we would permit him to use our patents. I replied that we would feel highly honored by the Bal-

timore and Ohio doing so. The stamp of approval of the Baltimore and Ohio Railroad would be worth ten times the patent fees. He could use all, and everything, we had.

There was no doubt as to the favorable impression that made upon the great railway magnate. He was much pleased and, to my utter surprise, took me into his private room and opened up a frank conversation upon matters in general. He touched especially upon his quarrels with the Pennsylvania Railroad people, with Mr. Thomson and Mr. Scott, the president and vice-president, whom he knew to be my special friends. This led me to say that I had passed through Philadelphia on my way to see him and had been asked by Mr. Scott where I was going.

“I told him that I was going to visit you to obtain the contracts for your great bridges over the Ohio River. Mr. Scott said it was not often that I went on a fool’s errand, but that I was certainly on one now; that Mr. Garrett would never think for a moment of giving me his contracts, for every one knew that I was, as a former employee, always friendly to the Pennsylvania Railroad. Well, I said, we shall build Mr. Garrett’s bridges.”

Mr. Garrett promptly replied that when the interests of his company were at stake it was the best always that won. His engineers had reported that our plans were the best and that Scott and Thomson would see that he had only one rule — the interests of his company. Although he very well knew that I was a Pennsylvania Railroad man, yet he felt it his duty to award us the work.

The negotiation was still unsatisfactory to me, because we were to get all the difficult part of the work —

the great spans of which the risk was then considerable — while Mr. Garrett was to build all the small and profitable spans at his own shops upon our plans and patents. I ventured to ask whether he was dividing the work because he honestly believed we could not open his bridges for traffic as soon as his masonry would permit. He admitted he was. I told him that he need not have any fear upon that point.

“Mr. Garrett,” I said, “would you consider my personal bond a good security?”

“Certainly,” he said.

“Well, now,” I replied, “bind me! I know what I am doing. I will take the risk. How much of a bond do you want me to give you that your bridges will be opened for traffic at the specified time if you give us the entire contract, provided you get your masonry ready?”

“Well, I would want a hundred thousand dollars from you, young man.”

“All right,” I said, “prepare your bond. Give us the work. Our firm is not going to let me lose a hundred thousand dollars. You know that.”

“Yes,” he said, “I believe if you are bound for a hundred thousand dollars your company will work day and night and I will get my bridges.”

This was the arrangement which gave us what were then the gigantic contracts of the Baltimore and Ohio Railroad. It is needless to say that I never had to pay that bond. My partners knew much better than Mr. Garrett the conditions of his work. The Ohio River was not to be trifled with, and long before his masonry was ready we had relieved ourselves from all responsibility upon the bond by placing the superstructure on the banks awaiting the completion of the substructure which he was still building.

Mr. Garrett was very proud of his Scottish blood, and Burns having been once touched upon between us we became firm friends. He afterwards took me to his fine mansion in the country. He was one of the few Americans who then lived in the grand style of a country gentleman, with many hundreds of acres of beautiful land, park-like drives, a stud of thoroughbred horses, with cattle, sheep, and dogs, and a home that realized what one had read of the country life of a nobleman in England.

At a later date he had fully determined that his railroad company should engage in the manufacture of steel rails and had applied for the right to use the Bessemer patents. This was a matter of great moment to us. The Baltimore and Ohio Railroad Company was one of our best customers, and we were naturally anxious to prevent the building of steel-rail rolling mills at Cumberland. It would have been a losing enterprise for the Baltimore and Ohio, for I was sure it could buy its steel rails at a much cheaper rate than it could possibly make the small quantity needed for itself. I visited Mr. Garrett to talk the matter over with him. He was then much pleased with the foreign commerce and the lines of steamships which made Baltimore their port. He drove me, accompanied by several of his staff, to the wharves where he was to decide about their extension, and as the foreign goods were being discharged from the steamship side and placed in the railway cars, he turned to me and said:

“Mr. Carnegie, you can now begin to appreciate the magnitude of our vast system and understand why it is necessary that we should make everything for ourselves, even our steel rails. We cannot depend upon private concerns to supply us with any of the princi-

pal articles we consume. We shall be a world to ourselves."

"Well," I said, "Mr. Garrett, it is all very grand, but really your 'vast system' does not overwhelm me. I read your last annual report and saw that you collected last year for transporting the goods of others the sum of fourteen millions of dollars. The firms I control dug the material from the hills, made their own goods, and sold them to a much greater value than that. You are really a very small concern compared with Carnegie Brothers and Company."

My railroad apprenticeship came in there to advantage. We heard no more of the Baltimore and Ohio Railroad Company entering into competition with us. Mr. Garrett and I remained good friends to the end. He even presented me with a Scotch collie dog of his own rearing. That I had been a Pennsylvania Railroad man was drowned in the "wee drap o' Scotch bluid atween us."

CHAPTER X

THE IRON WORKS

THE Keystone Works have always been my pet as being the parent of all the other works. But they had not been long in existence before the advantage of wrought-over cast-iron became manifest. Accordingly, to insure uniform quality, and also to make certain shapes which were not then to be obtained, we determined to embark in the manufacture of iron. My brother and I became interested with Thomas N. Miller, Henry Phipps, and Andrew Kloman in a small iron mill. Miller was the first to embark with Kloman and he brought Phipps in, lending him eight hundred dollars to buy a one-sixth interest, in November, 1861.

I must not fail to record that Mr. Miller was the pioneer of our iron manufacturing projects. We were all indebted to Tom, who still lives (July 20, 1911) and sheds upon us the sweetness and light of a most lovable nature, a friend who grows more precious as the years roll by. He has softened by age, and even his outbursts against theology as antagonistic to true religion are in his fine old age much less alarming. We are all prone to grow philosophic in age, and perhaps this is well. [In re-reading this — July 19, 1912 — in our retreat upon the high moors at Aultnagar, I drop a tear for my bosom friend, dear Tom Miller, who died in Pittsburgh last winter. Mrs. Carnegie and I attended his funeral. Henceforth life lacks something, lacks much — my first partner in early years, my dearest

friend in old age. May I go where he is, wherever that may be.]

Andrew Kloman had a small steel-hammer in Allegheny City. As a superintendent of the Pennsylvania Railroad I had found that he made the best axles. He was a great mechanic — one who had discovered, what was then unknown in Pittsburgh, that whatever was worth doing with machinery was worth doing well. His German mind made him thorough. What he constructed cost enormously, but when once started it did the work it was intended to do from year's end to year's end. In those early days it was a question with axles generally whether they would run any specified time or break. There was no analysis of material, no scientific treatment of it.

How much this German created! He was the first man to introduce the cold saw that cut cold iron the exact lengths. He invented upsetting machines to make bridge links, and also built the first "universal" mill in America. All these were erected at our works. When Captain Eads could not obtain the couplings for the St. Louis Bridge arches (the contractors failing to make them) and matters were at a standstill, Kloman told us that he could make them and why the others had failed. He succeeded in making them. Up to that date they were the largest semicircles that had ever been rolled. Our confidence in Mr. Kloman may be judged from the fact that when he said he could make them we unhesitatingly contracted to furnish them.

I have already spoken of the intimacy between our family and that of the Phippses. In the early days my chief companion was the elder brother, John. Henry was several years my junior, but had not failed to attract my attention as a bright, clever lad. One day he asked

his brother John to lend him a quarter of a dollar. John saw that he had important use for it and handed him the shining quarter without inquiry. Next morning an advertisement appeared in the "Pittsburgh Dispatch":

"A willing boy wishes work."

This was the use the energetic and willing Harry had made of his quarter, probably the first quarter he had ever spent at one time in his life. A response came from the well-known firm of Dilworth and Bidwell. They asked the "willing boy" to call. Harry went and obtained a position as errand boy, and as was then the custom, his first duty every morning was to sweep the office. He went to his parents and obtained their consent, and in this way the young lad launched himself upon the sea of business. There was no holding back a boy like that. It was the old story. He soon became indispensable to his employers, obtained a small interest in a collateral branch of their business; and then, ever on the alert, it was not many years before he attracted the attention of Mr. Miller, who made a small investment for him with Andrew Kloman. That finally resulted in the building of the iron mill in Twenty-Ninth Street. He had been a schoolmate and great crony of my brother Tom. As children they had played together, and throughout life, until my brother's death in 1886, these two formed, as it were, a partnership within a partnership. They invariably held equal interests in the various firms with which they were connected. What one did the other did.

The errand boy is now one of the richest men in the United States and has begun to prove that he knows how to expend his surplus. Years ago he gave beautiful conservatories to the public parks of Allegheny and Pittsburgh. That he specified "that these should be

open upon Sunday” shows that he is a man of his time. This clause in the gift created much excitement. Ministers denounced him from the pulpit and assemblies of the church passed resolutions declaring against the desecration of the Lord’s Day. But the people rose, *en masse*, against this narrow-minded contention and the Council of the city accepted the gift with acclamation. The sound common sense of my partner was well expressed when he said in reply to a remonstrance by ministers:

“It is all very well for you, gentlemen, who work one day in the week and are masters of your time the other six during which you can view the beauties of Nature — all very well for you — but I think it shameful that you should endeavor to shut out from the toiling masses all that is calculated to entertain and instruct them during the only day which you well know they have at their disposal.”

These same ministers have recently been quarreling in their convention at Pittsburgh upon the subject of instrumental music in churches. But while they are debating whether it is right to have organs in churches, intelligent people are opening museums, conservatories, and libraries upon the Sabbath; and unless the pulpit soon learns how to meet the real wants of the people in this life (where alone men’s duties lie) much better than it is doing at present, these rival claimants for popular favor may soon empty their churches.

Unfortunately Kloman and Phipps soon differed with Miller about the business and forced him out. Being convinced that Miller was unfairly treated, I united with him in building new works. These were the Cyclops Mills of 1864. After they were set running it became possible, and therefore advisable, to unite the old and the new works, and the Union Iron Mills were formed

by their consolidation in 1867. I did not believe that Mr. Miller's reluctance to associate again with his former partners, Phipps and Kloman, could not be overcome, because they would not control the Union Works. Mr. Miller, my brother, and I would hold the controlling interest. But Mr. Miller proved obdurate and begged me to buy his interest, which I reluctantly did after all efforts had failed to induce him to let bygones be bygones. He was Irish, and the Irish blood when aroused is uncontrollable. Mr. Miller has since regretted (to me) his refusal of my earnest request, which would have enabled the pioneer of all of us to reap what was only his rightful reward — millionairessdom for himself and his followers.

We were young in manufacturing then and obtained for the Cyclops Mills what was considered at the time an enormous extent of land — seven acres. For some years we offered to lease a portion of the ground to others. It soon became a question whether we could continue the manufacture of iron within so small an area. Mr. Kloman succeeded in making iron beams and for many years our mill was far in advance of any other in that respect. We began at the new mill by making all shapes which were required, and especially such as no other concern would undertake, depending upon an increasing demand in our growing country for things that were only rarely needed at first. What others could not or would not do we would attempt, and this was a rule of our business which was strictly adhered to. Also we would make nothing except of excellent quality. We always accommodated our customers, even although at some expense to ourselves, and in cases of dispute we gave the other party the benefit of the doubt and settled. These were our rules. We had no lawsuits.

As I became acquainted with the manufacture of iron I was greatly surprised to find that the cost of each of the various processes was unknown. Inquiries made of the leading manufacturers of Pittsburgh proved this. It was a lump business, and until stock was taken and the books balanced at the end of the year, the manufacturers were in total ignorance of results. I heard of men who thought their business at the end of the year would show a loss and had found a profit, and *vice-versa*. I felt as if we were moles burrowing in the dark, and this to me was intolerable. I insisted upon such a system of weighing and accounting being introduced throughout our works as would enable us to know what our cost was for each process and especially what each man was doing, who saved material, who wasted it, and who produced the best results.

To arrive at this was a much more difficult task than one would imagine. Every manager in the mills was naturally against the new system. Years were required before an accurate system was obtained, but eventually, by the aid of many clerks and the introduction of weighing scales at various points in the mill, we began to know not only what every department was doing, but what each one of the many men working at the furnaces was doing, and thus to compare one with another. One of the chief sources of success in manufacturing is the introduction and strict maintenance of a perfect system of accounting so that responsibility for money or materials can be brought home to every man. Owners who, in the office, would not trust a clerk with five dollars without having a check upon him, were supplying tons of material daily to men in the mills without exacting an account of their stewardship by weighing what each returned in the finished form.

The Siemens Gas Furnace had been used to some extent in Great Britain for heating steel and iron, but it was supposed to be too expensive. I well remember the criticisms made by older heads among the Pittsburgh manufacturers about the extravagant expenditure we were making upon these new-fangled furnaces. But in the heating of great masses of material, almost half the waste could sometimes be saved by using the new furnaces. The expenditure would have been justified, even if it had been doubled. Yet it was many years before we were followed in this new departure; and in some of those years the margin of profit was so small that the most of it was made up from the savings derived from the adoption of the improved furnaces.

Our strict system of accounting enabled us to detect the great waste possible in heating large masses of iron. This improvement revealed to us a valuable man in a clerk, William Borntraeger, a distant relative of Mr. Kloman, who came from Germany. He surprised us one day by presenting a detailed statement showing results for a period, which seemed incredible. All the needed labor in preparing this statement he had performed at night unasked and unknown to us. The form adapted was uniquely original. Needless to say, William soon became superintendent of the works and later a partner, and the poor German lad died a millionaire. He well deserved his fortune.

It was in 1862 that the great oil wells of Pennsylvania attracted attention. My friend Mr. William Coleman, whose daughter became, at a later date, my sister-in-law, was deeply interested in the discovery, and nothing would do but that I should take a trip with him to the oil regions. It was a most interesting excursion. There had been a rush to the oil fields and the influx was so

great that it was impossible for all to obtain shelter. This, however, to the class of men who flocked thither, was but a slight drawback. A few hours sufficed to knock up a shanty, and it was surprising in how short a time they were able to surround themselves with many of the comforts of life. They were men above the average, men who had saved considerable sums and were able to venture something in the search for fortune.

What surprised me was the good humor which prevailed everywhere. It was a vast picnic, full of amusing incidents. Everybody was in high glee; fortunes were supposedly within reach; everything was booming. On the tops of the derricks floated flags on which strange mottoes were displayed. I remember looking down toward the river and seeing two men working their treadles boring for oil upon the banks of the stream, and inscribed upon their flag was "Hell or China." They were going down, no matter how far.

The adaptability of the American was never better displayed than in this region. Order was soon evolved out of chaos. When we visited the place not long after we were serenaded by a brass band the players of which were made up of the new inhabitants along the creek. It would be safe to wager that a thousand Americans in a new land would organize themselves, establish schools, churches, newspapers, and brass bands — in short, provide themselves with all the appliances of civilization — and go ahead developing their country before an equal number of British would have discovered who among them was the highest in hereditary rank and had the best claims to leadership owing to his grandfather. There is but one rule among Americans — the tools to those who can use them.

To-day Oil Creek is a town of many thousand inhabi-

tants, as is also Titusville at the other end of the creek. The district which began by furnishing a few barrels of oil every season, gathered with blankets from the surface of the creek by the Seneca Indians, has now several towns and refineries, with millions of dollars of capital. In those early days all the arrangements were of the crudest character. When the oil was obtained it was run into flat-bottomed boats which leaked badly. Water ran into the boats and the oil overflowed into the river. The creek was dammed at various places, and upon a stipulated day and hour the dams were opened and upon the flood the oil boats floated to the Allegheny River, and thence to Pittsburgh.

In this way not only the creek, but the Allegheny River, became literally covered with oil. The loss involved in transportation to Pittsburgh was estimated at fully a third of the total quantity, and before the oil boats started it is safe to say that another third was lost by leakage. The oil gathered by the Indians in the early days was bottled in Pittsburgh and sold at high prices as medicine — a dollar for a small vial. It had general reputation as a sure cure for rheumatic tendencies. As it became plentiful and cheap its virtues vanished. What fools we mortals be!

The most celebrated wells were upon the Storey farm. Upon these we obtained an option of purchase for forty thousand dollars. We bought them. Mr. Coleman, ever ready at suggestion, proposed to make a lake of oil by excavating a pool sufficient to hold a hundred thousand barrels (the waste to be made good every day by running streams of oil into it), and to hold it for the not far distant day when, as we then expected, the oil supply would cease. This was promptly acted upon, but after losing many thousands of barrels waiting for the ex-

pected day (which has not yet arrived) we abandoned the reserve. Coleman predicted that when the supply stopped, oil would bring ten dollars a barrel and therefore we would have a million dollars worth in the lake. We did not think then of Nature's storehouse below which still keeps on yielding many thousands of barrels per day without apparent exhaustion.

This forty-thousand-dollar investment proved for us the best of all so far. The revenues from it came at the most opportune time.¹ The building of the new mill in Pittsburgh required not only all the capital we could gather, but the use of our credit, which I consider, looking backward, was remarkably good for young men.

Having become interested in this oil venture, I made several excursions to the district and also, in 1864, to an oil field in Ohio where a great well had been struck which yielded a peculiar quality of oil well fitted for lubricating purposes. My journey thither with Mr. Coleman and Mr. David Ritchie was one of the strangest experiences I ever had. We left the railway line some hundreds of miles from Pittsburgh and plunged through a sparsely inhabited district to the waters of Duck Creek to see the monster well. We bought it before leaving.

It was upon our return that adventures began. The weather had been fine and the roads quite passable during our journey thither, but rain had set in during our stay. We started back in our wagon, but before going far fell into difficulties. The road had become a mass of soft, tenacious mud and our wagon labored fearfully. The rain fell in torrents, and it soon became evident that

¹ The wells on the Storey farm paid in one year a million dollars in cash and dividends, and the farm itself eventually became worth, on a stock basis, five million dollars.

we were in for a night of it. Mr. Coleman lay at full length on one side of the wagon, and Mr. Ritchie on the other, and I, being then very thin, weighing not much more than a hundred pounds, was nicely sandwiched between the two portly gentlemen. Every now and then the wagon proceeded a few feet heaving up and down in the most outrageous manner, and finally sticking fast. In this fashion we passed the night. There was in front a seat across the wagon, under which we got our heads, and in spite of our condition the night was spent in uproarious merriment.

By the next night we succeeded in reaching a country town in the worst possible plight. We saw the little frame church of the town lighted and heard the bell ringing. We had just reached our tavern when a committee appeared stating that they had been waiting for us and that the congregation was assembled. It appears that a noted exhorter had been expected who had no doubt been delayed as we had been. I was taken for the absentee minister and asked how soon I would be ready to accompany them to the meeting-house. I was almost prepared with my companions to carry out the joke (we were in for fun), but I found I was too exhausted with fatigue to attempt it. I had never before come so near occupying a pulpit.

My investments now began to require so much of my personal attention that I resolved to leave the service of the railway company and devote myself exclusively to my own affairs. I had been honored a short time before this decision by being called by President Thomson to Philadelphia. He desired to promote me to the office of assistant general superintendent with headquarters at Altoona under Mr. Lewis. I declined, telling him that I had decided to give up the railroad service altogether,

that I was determined to make a fortune and I saw no means of doing this honestly at any salary the railroad company could afford to give, and I would not do it by indirection. When I lay down at night I was going to get a verdict of approval from the highest of all tribunals, the judge within.

I repeated this in my parting letter to President Thomson, who warmly congratulated me upon it in his letter of reply. I resigned my position March 28, 1865, and received from the men on the railway a gold watch. This and Mr. Thomson's letter I treasure among my most precious mementos.

The following letter was written to the men on the Division:

PENNSYLVANIA RAILROAD COMPANY
SUPERINTENDENT'S OFFICE, PITTSBURGH DIVISION
PITTSBURGH *March 28, 1865*

To the Officers and Employees of the Pittsburgh Division
GENTLEMEN:

I cannot allow my connection with you to cease without some expression of the deep regret felt at parting.

Twelve years of pleasant intercourse have served to inspire feelings of personal regard for those who have so faithfully labored with me in the service of the Company. The coming change is painful only as I reflect that in consequence thereof I am not to be in the future, as in the past, intimately associated with you and with many others in the various departments, who have through business intercourse, become my personal friends. I assure you although the official relations hitherto existing between us must soon close, I can never fail to feel and evince the liveliest interest in the welfare of such as have been identified with the Pittsburgh Division in times past, and who are, I trust, for many years to come to contribute to the success of the Pennsylvania Railroad Company, and share in its justly deserved prosperity.

Thanking you most sincerely for the uniform kindness

shown toward me, for your zealous efforts made at all times to meet my wishes, and asking for my successor similar support at your hands, I bid you all farewell.

Very respectfully

(Signed)

ANDREW CARNEGIE

Thenceforth I never worked for a salary. A man must necessarily occupy a narrow field who is at the beck and call of others. Even if he becomes president of a great corporation he is hardly his own master, unless he holds control of the stock. The ablest presidents are hampered by boards of directors and shareholders, who can know but little of the business. But I am glad to say that among my best friends to-day are those with whom I labored in the service of the Pennsylvania Railroad Company.

In the year 1867, Mr. Phipps, Mr. J. W. Vandevort, and myself revisited Europe, traveling extensively through England and Scotland, and made the tour of the Continent. "Vandy" had become my closest companion. We had both been fired by reading Bayard Taylor's "Views Afoot." It was in the days of the oil excitement and shares were going up like rockets. One Sunday, lying in the grass, I said to "Vandy":

"If you could make three thousand dollars would you spend it in a tour through Europe with me?"

"Would a duck swim or an Irishman eat potatoes?" was his reply.

The sum was soon made in oil stock by the investment of a few hundred dollars which "Vandy" had saved. This was the beginning of our excursion. We asked my partner, Harry Phipps, who was by this time quite a capitalist, to join the party. We visited most of the capitals of Europe, and in all the enthusiasm of youth climbed every spire, slept on mountain-tops, and carried

our luggage in knapsacks upon our backs. We ended our journey upon Vesuvius, where we resolved some day to go around the world.

This visit to Europe proved most instructive. Up to this time I had known nothing of painting or sculpture, but it was not long before I could classify the works of the great painters. One may not at the time justly appreciate the advantage he is receiving from examining the great masterpieces, but upon his return to America he will find himself unconsciously rejecting what before seemed truly beautiful, and judging productions which come before him by a new standard. That which is truly great has so impressed itself upon him that what is false or pretentious proves no longer attractive.

My visit to Europe also gave me my first great treat in music. The Handel Anniversary was then being celebrated at the Crystal Palace in London, and I had never up to that time, nor have I often since, felt the power and majesty of music in such high degree. What I heard at the Crystal Palace and what I subsequently heard on the Continent in the cathedrals, and at the opera, certainly enlarged my appreciation of music. At Rome the Pope's choir and the celebrations in the churches at Christmas and Easter furnished, as it were, a grand climax to the whole.

These visits to Europe were also of great service in a commercial sense. One has to get out of the swirl of the great Republic to form a just estimate of the velocity with which it spins. I felt that a manufacturing concern like ours could scarcely develop fast enough for the wants of the American people, but abroad nothing seemed to be going forward. If we excepted a few of the capitals of Europe, everything on the Continent seemed to be almost at a standstill, while the Republic represented

throughout its entire extent such a scene as there must have been at the Tower of Babel, as pictured in the story-books — hundreds rushing to and fro, each more active than his neighbor, and all engaged in constructing the mighty edifice.

It was Cousin "Dod" (Mr. George Lauder) to whom we were indebted for a new development in our mill operations — the first of its kind in America. He it was who took our Mr. Coleman to Wigan in England and explained the process of washing and coking the dross from coal mines. Mr. Coleman had constantly been telling us how grand it would be to utilize what was then being thrown away at our mines, and was indeed an expense to dispose of. Our Cousin "Dod" was a mechanical engineer, educated under Lord Kelvin at Glasgow University, and as he corroborated all that Mr. Coleman stated, in December, 1871, I undertook to advance the capital to build works along the line of the Pennsylvania Railroad. Contracts for ten years were made with the leading coal companies for their dross and with the railway companies for transportation, and Mr. Lauder, who came to Pittsburgh and superintended the whole operation for years, began the construction of the first coal-washing machinery in America. He made a success of it — he never failed to do that in any mining or mechanical operation he undertook — and he soon cleared the cost of the works. No wonder that at a later date my partners desired to embrace the coke works in our general firm and thus capture not only these, but Lauder also. "Dod" had won his spurs.

The ovens were extended from time to time until we had five hundred of them, washing nearly fifteen hundred tons of coal daily. I confess I never pass these coal ovens at Larimer's Station without feeling that if he who

makes two blades of grass grow where one grew before is a public benefactor and lays the race under obligation, those who produce superior coke from material that has been for all previous years thrown over the bank as worthless, have great cause for self-congratulation. It is fine to make something out of nothing; it is also something to be the first firm to do this upon our continent.

We had another valuable partner in a second cousin of mine, a son of Cousin Morrison of Dunfermline. Walking through the shops one day, the superintendent asked me if I knew I had a relative there who was proving an exceptional mechanic. I replied in the negative and asked that I might speak with him on our way around. We met. I asked his name.

“Morrison,” was the reply, “son of Robert” — my cousin Bob.

“Well, how did you come here?”

“I thought we could better ourselves,” he said.

“Who have you with you?”

“My wife,” was the reply.

“Why did n’t you come first to see your relative who might have been able to introduce you here?”

“Well, I did n’t feel I needed help if I only got a chance.”

There spoke the true Morrison, taught to depend on himself, and independent as Lucifer. Not long afterwards I heard of his promotion to the superintendency of our newly acquired works at Duquesne, and from that position he steadily marched upward. He is to-day a blooming, but still sensible, millionaire. We are all proud of Tom Morrison. [A note received from him yesterday invites Mrs. Carnegie and myself to be his guests during our coming visit of a few days at the annual celebration of the Carnegie Institute.]

I was always advising that our iron works should be extended and new developments made in connection with the manufacture of iron and steel, which I saw was only in its infancy. All apprehension of its future development was dispelled by the action of America with regard to the tariff upon foreign imports. It was clear to my mind that the Civil War had resulted in a fixed determination upon the part of the American people to build a nation within itself, independent of Europe in all things essential to its safety. America had been obliged to import all her steel of every form and most of the iron needed, Britain being the chief seller. The people demanded a home supply and Congress granted the manufacturers a tariff of twenty-eight per cent *ad valorem* on steel rails — the tariff then being equal to about twenty-eight dollars per ton. Rails were selling at about a hundred dollars per ton, and other rates in proportion.

Protection has played a great part in the development of manufacturing in the United States. Previous to the Civil War it was a party question, the South standing for free trade and regarding a tariff as favorable only to the North. The sympathy shown by the British Government for the Confederacy, culminating in the escape of the Alabama and other privateers to prey upon American commerce, aroused hostility against that Government, notwithstanding the majority of her common people favored the United States. The tariff became no longer a party question, but a national policy, approved by both parties. It had become a patriotic duty to develop vital resources. No less than ninety Northern Democrats in Congress, including the Speaker of the House, agreed upon that point.

Capital no longer hesitated to embark in manufac-

turing, confident as it was that the nation would protect it as long as necessary. Years after the war, demands for a reduction of the tariff arose and it was my lot to be drawn into the controversy. It was often charged that bribery of Congressmen by manufacturers was common. So far as I know there was no foundation for this. Certainly the manufacturers never raised any sums beyond those needed to maintain the Iron and Steel Association, a matter of a few thousand dollars per year. They did, however, subscribe freely to a campaign when the issue was Protection *versus* Free Trade.

The duties upon steel were successively reduced, with my cordial support, until the twenty-eight dollars duty on rails became only one fourth or seven dollars per ton. [To-day (1911) the duty is only about one half of that, and even that should go in the next revision.] The effort of President Cleveland to pass a more drastic new tariff was interesting. It cut too deep in many places and its passage would have injured more than one manufacture. I was called to Washington, and tried to modify and, as I believe, improve, the Wilson Bill. ✓ Senator Gorman, Democratic leader of the Senate, Governor Flower of New York, and a number of the ablest Democrats were as sound protectionists in moderation as I was. Several of these were disposed to oppose the Wilson Bill as being unnecessarily severe and certain to cripple some of our domestic industries. Senator Gorman said to me he wished as little as I did to injure any home producer, and he thought his colleagues had confidence in and would be guided by me as to iron and steel rates, provided that large reductions were made and that the Republican Senators would stand unitedly for a bill of that character. I remember his

words, "I can afford to fight the President and beat him, but I can't afford to fight him and be beaten."

Governor Flower shared these views. There was little trouble in getting our party to agree to the large reductions I proposed. The Wilson-Gorman Tariff Bill was adopted. Meeting Senator Gorman later, he explained that he had to give way on cotton ties to secure several Southern Senators. Cotton ties had to be free. So tariff legislation goes.

I was not sufficiently prominent in manufacturing to take part in getting the tariff established immediately after the war, so it happened that my part has always been to favor reduction of duties, opposing extremes — the unreasonable protectionists who consider the higher the duties the better and declaim against any reduction, and the other extremists who denounce all duties and would adopt unrestrained free trade.

We could now (1907) abolish all duties upon steel and iron without injury, essential as these duties were at the beginning. Europe has not much surplus production, so that should prices rise exorbitantly here only a small amount could be drawn from there and this would instantly raise prices in Europe, so that our home manufacturers could not be seriously affected. Free trade would only tend to prevent exorbitant prices here for a time when the demand was excessive. Home iron and steel manufacturers have nothing to fear from free trade. [I recently (1910) stated this in evidence before the Tariff Commission at Washington.]

CHAPTER XI

NEW YORK AS HEADQUARTERS

OUR business continued to expand and required frequent visits on my part to the East, especially to New York, which is as London to Britain — the headquarters of all really important enterprises in America. No large concern could very well get on without being represented there. My brother and Mr. Phipps had full grasp of the business at Pittsburgh. My field appeared to be to direct the general policy of the companies and negotiate the important contracts.

My brother had been so fortunate as to marry Miss Lucy Coleman, daughter of one of our most valued partners and friends. Our family residence at Homewood was given over to him, and I was once more compelled to break old associations and leave Pittsburgh in 1867 to take up my residence in New York. The change was hard enough for me, but much harder for my mother; but she was still in the prime of life and we could be happy anywhere so long as we were together. Still she did feel the leaving of our home very much. We were perfect strangers in New York, and at first took up our quarters in the St. Nicholas Hotel, then in its glory. I opened an office in Broad Street.

For some time the Pittsburgh friends who came to New York were our chief source of happiness, and the Pittsburgh papers seemed necessary to our existence. I made frequent visits there and my mother often accompanied me, so that our connection with the old home was still maintained. But after a time new friend-

ships were formed and new interests awakened and New York began to be called home. When the proprietors of the St. Nicholas opened the Windsor Hotel uptown, we took up our residence there and up to the year 1887 that was our New York home. Mr. Hawk, the proprietor, became one of our valued friends and his nephew and namesake still remains so.

Among the educative influences from which I derived great advantage in New York, none ranks higher than the Nineteenth Century Club organized by Mr. and Mrs. Courtlandt Palmer. The club met at their house once a month for the discussion of various topics and soon attracted many able men and women. It was to Madame Botta I owed my election to membership — a remarkable woman, wife of Professor Botta, whose drawing-room became more of a salon than any in the city, if indeed it were not the only one resembling a salon at that time. I was honored by an invitation one day to dine at the Bottas' and there met for the first time several distinguished people, among them one who became my lifelong friend and wise counselor, Andrew D. White, then president of Cornell University, afterwards Ambassador to Russia and Germany, and our chief delegate to the Hague Conference.

Here in the Nineteenth Century Club was an arena, indeed. Able men and women discussed the leading topics of the day in due form, addressing the audience one after another. The gatherings soon became too large for a private room. The monthly meetings were then held in the American Art Galleries. I remember the first evening I took part as one of the speakers the subject was "The Aristocracy of the Dollar." Colonel Thomas Wentworth Higginson was the first speaker. This was my introduction to a New York audience.

Thereafter I spoke now and then. It was excellent training, for one had to read and study for each appearance.

I had lived long enough in Pittsburgh to acquire the manufacturing, as distinguished from the speculative, spirit. My knowledge of affairs, derived from my position as telegraph operator, had enabled me to know the few Pittsburgh men or firms which then had dealings upon the New York Stock Exchange, and I watched their careers with deep interest. To me their operations seemed simply a species of gambling. I did not then know that the credit of all these men or firms was seriously impaired by the knowledge (which it is almost impossible to conceal) that they were given to speculation. But the firms were then so few that I could have counted them on the fingers of one hand. The Oil and Stock Exchanges in Pittsburgh had not as yet been founded and brokers' offices with wires in connection with the stock exchanges of the East were unnecessary. Pittsburgh was emphatically a manufacturing town.

I was surprised to find how very different was the state of affairs in New York. There were few even of the business men who had not their ventures in Wall Street to a greater or less extent. I was besieged with inquiries from all quarters in regard to the various railway enterprises with which I was connected. Offers were made to me by persons who were willing to furnish capital for investment and allow me to manage it — the supposition being that from the inside view which I was enabled to obtain I could invest for them successfully. Invitations were extended to me to join parties who intended quietly to buy up the control of certain properties. In fact the whole speculative field was laid out before me in its most seductive guise.

All these allurements I declined. The most notable

offer of this kind I ever received was one morning in the Windsor Hotel soon after my removal to New York. Jay Gould, then in the height of his career, approached me and said he had heard of me and he would purchase control of the Pennsylvania Railroad Company and give me one half of all profits if I would agree to devote myself to its management. I thanked him and said that, although Mr. Scott and I had parted company in business matters, I would never raise my hand against him. Subsequently Mr. Scott told me he had heard I had been selected by New York interests to succeed him. I do not know how he had learned this, as I had never mentioned it. I was able to reassure him by saying that the only railroad company I would be president of would be one I owned.

Strange what changes the whirligig of time brings in. It was my part one morning in 1900, some thirty years afterwards, to tell the son of Mr. Gould of his father's offer and to say to him:

“Your father offered me control of the great Pennsylvania system. Now I offer his son in return the control of an international line from ocean to ocean.”

The son and I agreed upon the first step — that was the bringing of his Wabash line to Pittsburgh. This was successfully done under a contract given the Wabash of one third of the traffic of our steel company. We were about to take up the eastern extension from Pittsburgh to the Atlantic when Mr. Morgan approached me in March, 1901, through Mr. Schwab, and asked if I really wished to retire from business. I answered in the affirmative and that put an end to our railway operations.

(I have never bought or sold a share of stock speculatively in my life,) except one small lot of Pennsylvania

Railroad shares that I bought early in life for investment and for which I did not pay at the time because bankers offered to carry it for me at a low rate. (I have adhered to the rule never to purchase what I did not pay for, and never to sell what I did not own.) In those early days, however, I had several interests that were taken over in the course of business. They included some stocks and securities that were quoted on the New York Stock Exchange, and I found that when I opened my paper in the morning I was tempted to look first at the quotations of the stock market. As I had determined to sell all my interests in every outside concern and concentrate my attention upon our manufacturing concerns in Pittsburgh, I further resolved not even to own any stock that was bought and sold upon any stock exchange. With the exception of trifling amounts which came to me in various ways I have adhered strictly to this rule.)

Such a course should commend itself to every man in the manufacturing business and to all professional men. For the manufacturing man especially the rule would seem all-important. His mind must be kept calm and free if he is to decide wisely the problems which are continually coming before him. Nothing tells in the long run like good judgment, and no sound judgment can remain with the man whose mind is disturbed by the mercurial changes of the Stock Exchange. It places him under an influence akin to intoxication. What is not, he sees, and what he sees, is not. He cannot judge of relative values or get the true perspective of things. The molehill seems to him a mountain and the mountain a molehill, and he jumps at conclusions which he should arrive at by reason. His mind is upon the stock quotations and not upon the points that require calm thought.

Speculation is a parasite feeding upon values, creating none.

My first important enterprise after settling in New York was undertaking to build a bridge across the Mississippi at Keokuk.¹ Mr. Thomson, president of the Pennsylvania Railroad, and I contracted for the whole structure, foundation, masonry, and superstructure, taking bonds and stocks in payment. The undertaking was a splendid success in every respect, except financially. A panic threw the connecting railways into bankruptcy. They were unable to pay the stipulated sums. Rival systems built a bridge across the Mississippi at Burlington and a railway down the west side of the Mississippi to Keokuk. The handsome profits which we saw in prospect were never realized. Mr. Thomson and myself, however, escaped loss, although there was little margin left.

The superstructure for this bridge was built at our Keystone Works in Pittsburgh. The undertaking required me to visit Keokuk occasionally, and there I made the acquaintance of clever and delightful people, among them General and Mrs. Reid, and Mr. and Mrs. Leighton. Visiting Keokuk with some English friends at a later date, the impression they received of society in the Far West, on what to them seemed the very outskirts of civilization, was surprising. A reception given to us one evening by General Reid brought together an assembly creditable to any town in Britain. More than one of the guests had distinguished himself during the war and had risen to prominence in the national councils.

The reputation obtained in the building of the Keokuk bridge led to my being applied to by those who were in charge of the scheme for bridging the Mississippi at

¹ It was an iron bridge 2300 feet in length with a 380-foot span.

St. Louis, to which I have already referred. This was connected with my first large financial transaction. One day in 1869 the gentleman in charge of the enterprise, Mr. Macpherson (he was very Scotch), called at my New York office and said they were trying to raise capital to build the bridge. He wished to know if I could not enlist some of the Eastern railroad companies in the scheme. After careful examination of the project I made the contract for the construction of the bridge on behalf of the Keystone Bridge Works. I also obtained an option upon four million dollars of first mortgage bonds of the bridge company and set out for London in March, 1869, to negotiate their sale.

During the voyage I prepared a prospectus which I had printed upon my arrival in London, and, having upon my previous visit made the acquaintance of Junius S. Morgan, the great banker, I called upon him one morning and opened negotiations. I left with him a copy of the prospectus, and upon calling next day was delighted to find that Mr. Morgan viewed the matter favorably. I sold him part of the bonds with the option to take the remainder; but when his lawyers were called in for advice a score of changes were required in the wording of the bonds. Mr. Morgan said to me that as I was going to Scotland I had better go now; I could write the parties in St. Louis and ascertain whether they would agree to the changes proposed. It would be time enough, he said, to close the matter upon my return three weeks hence.

But I had no idea of allowing the fish to play so long, and informed him that I would have a telegram in the morning agreeing to all the changes. The Atlantic cable had been open for some time, but it is doubtful if it had yet carried so long a private cable as I sent that day.

It was an easy matter to number the lines of the bond and then going carefully over them to state what changes, omissions, or additions were required in each line. I showed Mr. Morgan the message before sending it and he said:

“Well, young man, if you succeed in that you deserve a red mark.”

When I entered the office next morning, I found on the desk that had been appropriated to my use in Mr. Morgan's private office the colored envelope which contained the answer. There it was: “Board meeting last night; changes all approved.” “Now, Mr. Morgan,” I said, “we can proceed, assuming that the bond is as your lawyers desire.” The papers were soon closed.

While I was in the office Mr. Sampson, the financial editor of “The Times,” came in. I had an interview with him, well knowing that a few words from him would go far in lifting the price of the bonds on the Exchange. American securities had recently been fiercely attacked, owing to the proceedings of Fisk and Gould in connection with the Erie Railway Company, and their control of the judges in New York, who seemed to do their bidding. I knew this would be handed out as an objection, and therefore I met it at once. I called Mr. Sampson's attention to the fact that the charter of the St. Louis Bridge Company was from the National Government. In case of necessity appeal lay directly to the Supreme Court of the United States, a body vying with their own high tribunals. He said he would be delighted to give prominence to this commendable feature. I described the bridge as a toll-gate on the continental highway and this appeared to please him. It was all plain and easy sailing, and when he left the office, Mr. Morgan clapped me on the shoulder and said:

“Thank you, young man; you have raised the price of those bonds five per cent this morning.”

“All right, Mr. Morgan,” I replied; “now show me how I can raise them five per cent more for you.”

The issue was a great success, and the money for the St. Louis Bridge was obtained. I had a considerable margin of profit upon the negotiation. This was my first financial negotiation with the bankers of Europe. Mr. Pullman told me a few days later that Mr. Morgan at a dinner party had told the telegraphic incident and predicted, “That young man will be heard from.”

After closing with Mr. Morgan, I visited my native town, Dunfermline, and at that time made the town a gift of public baths. It is notable largely because it was the first considerable gift I had ever made. Long before that I had, at my Uncle Lauder’s suggestion, sent a subscription to the fund for the Wallace Monument on Stirling Heights overlooking Bannockburn. It was not much, but I was then in the telegraph office and it was considerable out of a revenue of thirty dollars per month with family expenses staring us in the face. Mother did not grudge it; on the contrary, she was a very proud woman that her son’s name was seen on the list of contributors, and her son felt he was really beginning to be something of a man. Years afterward my mother and I visited Stirling, and there unveiled, in the Wallace Tower, a bust of Sir Walter Scott, which she had presented to the monument committee. We had then made great progress, at least financially, since the early subscription. But distribution had not yet begun.¹

¹ The ambitions of Mr. Carnegie at this time (1868) are set forth in the following memorandum made by him. It has only recently come to light:

St. Nicholas Hotel, New York, December, 1868

Thirty-three and an income of \$50,000 per annum! By this time two

So far with me it had been the age of accumulation.

While visiting the Continent of Europe in 1867 and deeply interested in what I saw, it must not be thought that my mind was not upon affairs at home. Frequent letters kept me advised of business matters. The question of railway communication with the Pacific had been brought to the front by the Civil War, and Congress had passed an act to encourage the construction of a line. The first sod had just been cut at Omaha and it was intended that the line should ultimately be pushed through to San Francisco. One day while in Rome it struck me that this might be done much sooner than was then anticipated. The nation, having made up its mind that its territory must be bound together, might be trusted to see that no time was lost in accomplishing it. I wrote my friend Mr. Scott, suggesting that we should obtain the contract to place sleeping-cars upon the great California line. His reply contained these words:

“Well, young man, you do take time by the forelock.”

years I can so arrange all my business as to secure at least \$50,000 per annum. Beyond this never earn — make no effort to increase fortune, but spend the surplus each year for benevolent purposes. Cast aside business forever, except for others.

Settle in Oxford and get a thorough education, making the acquaintance of literary men — this will take three years' active work — pay especial attention to speaking in public. Settle then in London and purchase a controlling interest in some newspaper or live review and give the general management of it attention, taking a part in public matters, especially those connected with education and improvement of the poorer classes.

Man must have an idol — the amassing of wealth is one of the worst species of idolatry — no idol more debasing than the worship of money. Whatever I engage in I must push inordinately; therefore should I be careful to choose that life which will be the most elevating in its character. To continue much longer overwhelmed by business cares and with most of my thoughts wholly upon the way to make more money in the shortest time, must degrade me beyond hope of permanent recovery. I will resign business at thirty-five, but during the ensuing two years I wish to spend the afternoons in receiving instruction and in reading systematically.

Nevertheless, upon my return to America, I pursued the idea. The sleeping-car business, in which I was interested, had gone on increasing so rapidly that it was impossible to obtain cars enough to supply the demand. This very fact led to the forming of the present Pullman Company. The Central Transportation Company was simply unable to cover the territory with sufficient rapidity, and Mr. Pullman beginning at the greatest of all railway centers in the world — Chicago — soon rivaled the parent concern. He had also seen that the Pacific Railroad would be the great sleeping-car line of the world, and I found him working for what I had started after. He was, indeed, a lion in the path. Again, one may learn, from an incident which I had from Mr. Pullman himself, by what trifles important matters are sometimes determined.

The president of the Union Pacific Railway was passing through Chicago. Mr. Pullman called upon him and was shown into his room. Lying upon the table was a telegram addressed to Mr. Scott, saying, "Your proposition for sleeping-cars is accepted." Mr. Pullman read this involuntarily and before he had time to refrain. He could not help seeing it where it lay. When President Durrant entered the room he explained this to him and said:

"I trust you will not decide this matter until I have made a proposition to you."

Mr. Durrant promised to wait. A meeting of the board of directors of the Union Pacific Company was held soon after this in New York. Mr. Pullman and myself were in attendance, both striving to obtain the prize which neither he nor I undervalued. One evening we began to mount the broad staircase in the St. Nicholas Hotel at the same time. We had met before,

but were not well acquainted. I said, however, as we walked up the stairs:

“Good-evening, Mr. Pullman! Here we are together, and are we not making a nice couple of fools of ourselves?” He was not disposed to admit anything and said:

“What do you mean?”

I explained the situation to him. We were destroying by our rival propositions the very advantages we desired to obtain.

“Well,” he said, “what do you propose to do about it?”

“Unite,” I said. “Make a joint proposition to the Union Pacific, your party and mine, and organize a company.”

“What would you call it?” he asked.

“The Pullman Palace Car Company,” I replied.

This suited him exactly; and it suited me equally well.

“Come into my room and talk it over,” said the great sleeping-car man.

I did so, and the result was that we obtained the contract jointly. Our company was subsequently merged in the general Pullman Company and we took stock in that company for our Pacific interests. Until compelled to sell my shares during the subsequent financial panic of 1873 to protect our iron and steel interests, I was, I believe, the largest shareholder in the Pullman Company.

This man Pullman and his career are so thoroughly American that a few words about him will not be out of place. Mr. Pullman was at first a working carpenter, but when Chicago had to be elevated he took a contract on his own account to move or elevate houses for a stipu-

lated sum. Of course he was successful, and from this small beginning he became one of the principal and best-known contractors in that line. If a great hotel was to be raised ten feet without disturbing its hundreds of guests or interfering in any way with its business, Mr. Pullman was the man. He was one of those rare characters who can see the drift of things, and was always to be found, so to speak, swimming in the main current where movement was the fastest. He soon saw, as I did, that the sleeping-car was a positive necessity upon the American continent. He began to construct a few cars at Chicago and to obtain contracts upon the lines centering there.

The Eastern concern was in no condition to cope with that of an extraordinary man like Mr. Pullman. I soon recognized this, and although the original patents were with the Eastern company and Mr. Woodruff himself, the original patentee, was a large shareholder, and although we might have obtained damages for infringement of patent after some years of litigation, yet the time lost before this could be done would have been sufficient to make Pullman's the great company of the country. I therefore earnestly advocated that we should unite with Mr. Pullman, as I had united with him before in the Union Pacific contract. As the personal relations between Mr. Pullman and some members of the Eastern company were unsatisfactory, it was deemed best that I should undertake the negotiations, being upon friendly footing with both parties. We soon agreed that the Pullman Company should absorb our company, the Central Transportation Company, and by this means Mr. Pullman, instead of being confined to the West, obtained control of the rights on the great Pennsylvania trunk line to the Atlantic seaboard. This placed his company beyond all possible rivals. Mr. Pull-

man was one of the ablest men of affairs I have ever known, and I am indebted to him, among other things, for one story which carried a moral.

Mr. Pullman, like every other man, had his difficulties and disappointments, and did not hit the mark every time. No one does. Indeed, I do not know any one but himself who could have surmounted the difficulties surrounding the business of running sleeping-cars in a satisfactory manner and still retained some rights which the railway companies were bound to respect. Railway companies should, of course, operate their own sleeping-cars. On one occasion when we were comparing notes he told me that he always found comfort in this story. An old man in a Western county having suffered from all the ills that flesh is heir to, and a great many more than it usually encounters, and being commiserated by his neighbors, replied:

“Yes, my friends, all that you say is true. I have had a long, long life full of troubles, but there is one curious fact about them — nine tenths of them never happened.”

True indeed; most of the troubles of humanity are imaginary and should be laughed out of court. It is folly to cross a bridge until you come to it, or to bid the Devil good-morning until you meet him — perfect folly. All is well until the stroke falls, and even then nine times out of ten it is not so bad as anticipated. A wise man is the confirmed optimist.

Success in these various negotiations had brought me into some notice in New York, and my next large operation was in connection with the Union Pacific Railway in 1871. One of its directors came to me saying that they must raise in some way a sum of six hundred thousand dollars (equal to many millions to-day) to carry them

through a crisis; and some friends who knew me and were on the executive committee of that road had suggested that I might be able to obtain the money and at the same time get for the Pennsylvania Railroad Company virtual control of that important Western line. I believe Mr. Pullman came with the director, or perhaps it was Mr. Pullman himself who first came to me on the subject.

I took up the matter, and it occurred to me that if the directors of the Union Pacific Railway would be willing to elect to its board of directors a few such men as the Pennsylvania Railroad would nominate, the traffic to be thus obtained for the Pennsylvania would justify that company in helping the Union Pacific. I went to Philadelphia and laid the subject before President Thomson. I suggested that if the Pennsylvania Railroad Company would trust me with securities upon which the Union Pacific could borrow money in New York, we could control the Union Pacific in the interests of the Pennsylvania. Among many marks of Mr. Thomson's confidence this was up to that time the greatest. He was much more conservative when handling the money of the railroad company than his own, but the prize offered was too great to be missed. Even if the six hundred thousand dollars had been lost, it would not have been a losing investment for his company, and there was little danger of this because we were ready to hand over to him the securities which we obtained in return for the loan to the Union Pacific.

My interview with Mr. Thomson took place at his house in Philadelphia, and as I rose to go he laid his hand upon my shoulder, saying:

"Remember, Andy, I look to you in this matter. It is you I trust, and I depend on your holding all the securi-

ties you obtain and seeing that the Pennsylvania Railroad is never in a position where it can lose a dollar.”

I accepted the responsibility, and the result was a triumphant success. The Union Pacific Company was exceedingly anxious that Mr. Thomson himself should take the presidency, but this he said was out of the question. He nominated Mr. Thomas A. Scott, vice-president of the Pennsylvania Railroad, for the position. Mr. Scott, Mr. Pullman, and myself were accordingly elected directors of the Union Pacific Railway Company in 1871.

The securities obtained for the loan consisted of three millions of the shares of the Union Pacific, which were locked in my safe, with the option of taking them at a price. As was to be expected, the accession of the Pennsylvania Railroad party rendered the stock of the Union Pacific infinitely more valuable. The shares advanced enormously. At this time I undertook to negotiate bonds in London for a bridge to cross the Missouri at Omaha, and while I was absent upon this business Mr. Scott decided to sell our Union Pacific shares. I had left instructions with my secretary that Mr. Scott, as one of the partners in the venture, should have access to the vault, as it might be necessary in my absence that the securities should be within reach of some one; but the idea that these should be sold, or that our party should lose the splendid position we had acquired in connection with the Union Pacific, never entered my brain.

I returned to find that, instead of being a trusted colleague of the Union Pacific directors, I was regarded as having used them for speculative purposes. No quartet of men ever had a finer opportunity for identifying themselves with a great work than we had; and

never was an opportunity more recklessly thrown away. Mr. Pullman was ignorant of the matter and as indignant as myself, and I believe that he at once re-invested his profits in the shares of the Union Pacific. I felt that much as I wished to do this and to repudiate what had been done, it would be unbecoming and perhaps ungrateful in me to separate myself so distinctly from my first of friends, Mr. Scott.

At the first opportunity we were ignominiously but deservedly expelled from the Union Pacific board. It was a bitter dose for a young man to swallow. And the transaction marked my first serious difference with a man who up to that time had the greatest influence with me, the kind and affectionate employer of my boyhood, Thomas A. Scott. Mr. Thomson regretted the matter, but, as he said, having paid no attention to it and having left the whole control of it in the hands of Mr. Scott and myself, he presumed that I had thought best to sell out. For a time I feared I had lost a valued friend in Levi P. Morton, of Morton, Bliss & Co., who was interested in Union Pacific, but at last he found out that I was innocent.

The negotiations concerning two and a half millions of bonds for the construction of the Omaha Bridge were successful, and as these bonds had been purchased by persons connected with the Union Pacific before I had anything to do with the company, it was for them and not for the Union Pacific Company that the negotiations were conducted. This was not explained to me by the director who talked with me before I left for London. Unfortunately, when I returned to New York I found that the entire proceeds of the bonds, including my profit, had been appropriated by the parties to pay their own debts, and I was thus beaten out of a hand-

some sum, and had to credit to profit and loss my expenses and time. I had never before been cheated and found it out so positively and so clearly. I saw that I was still young and had a good deal to learn. Many men can be trusted, but a few need watching.

CHAPTER XII

BUSINESS NEGOTIATIONS

COMPLETE success attended a negotiation which I conducted about this time for Colonel William Phillips, president of the Allegheny Valley Railway at Pittsburgh. One day the Colonel entered my New York office and told me that he needed money badly, but that he could get no house in America to entertain the idea of purchasing five millions of bonds of his company although they were to be guaranteed by the Pennsylvania Railroad Company. The old gentleman felt sure that he was being driven from pillar to post by the bankers because they had agreed among themselves to purchase the bonds only upon their own terms. He asked ninety cents on the dollar for them, but this the bankers considered preposterously high. Those were the days when Western railway bonds were often sold to the bankers at eighty cents on the dollar.

Colonel Phillips said he had come to see whether I could not suggest some way out of his difficulty. He had pressing need for two hundred and fifty thousand dollars, and this Mr. Thomson, of the Pennsylvania Railroad, could not give him. The Allegheny bonds were seven per cents, but they were payable, not in gold, but in currency, in America. They were therefore wholly unsuited for the foreign market. But I knew that the Pennsylvania Railroad Company had a large amount of Philadelphia and Erie Railroad six per cent gold bonds in its treasury. It would be a most desirable exchange on its part, I thought, to give these bonds

for the seven per cent Allegheny bonds which bore its guarantee.

I telegraphed Mr. Thomson, asking if the Pennsylvania Railroad Company would take two hundred and fifty thousand dollars at interest and lend it to the Allegheny Railway Company. Mr. Thomson replied, "Certainly." Colonel Phillips was happy. He agreed, in consideration of my services, to give me a sixty-days option to take his five millions of bonds at the desired ninety cents on the dollar. I laid the matter before Mr. Thomson and suggested an exchange, which that company was only too glad to make, as it saved one per cent interest on the bonds. I sailed at once for London with the control of five millions of first mortgage Philadelphia and Erie Bonds, guaranteed by the Pennsylvania Railroad Company — a magnificent security for which I wanted a high price. And here comes in one of the greatest of the hits and misses of my financial life.

I wrote the Barings from Queenstown that I had for sale a security which even their house might unhesitatingly consider. On my arrival in London I found at the hotel a note from them requesting me to call. I did so the next morning, and before I had left their banking house I had closed an agreement by which they were to bring out this loan, and that until they sold the bonds at par, less their two and a half per cent commission, they would advance the Pennsylvania Railroad Company four millions of dollars at five per cent interest. The sale left me a clear profit of more than half a million dollars.

The papers were ordered to be drawn up, but as I was leaving Mr. Russell Sturgis said they had just heard that Mr. Baring himself was coming up to town in the morning. They had arranged to hold a "court,"

and as it would be fitting to lay the transaction before him as a matter of courtesy they would postpone the signing of the papers until the morrow. If I would call at two o'clock the transaction would be closed.

Never shall I forget the oppressed feeling which overcame me as I stepped out and proceeded to the telegraph office to wire President Thomson. Something told me that I ought not to do so. I would wait till to-morrow when I had the contract in my pocket. I walked from the banking house to the Langham Hotel — four long miles. When I reached there I found a messenger waiting breathless to hand me a sealed note from the Barings. Bismarck had locked up a hundred millions in Magdeburg. The financial world was panic-stricken, and the Barings begged to say that under the circumstances they could not propose to Mr. Baring to go on with the matter. There was as much chance that I should be struck by lightning on my way home as that an arrangement agreed to by the Barings should be broken. And yet it was. It was too great a blow to produce anything like irritation or indignation. I was meek enough to be quite resigned, and merely congratulated myself that I had not telegraphed Mr. Thomson.

I decided not to return to the Barings, and although J. S. Morgan & Co. had been bringing out a great many American securities I subsequently sold the bonds to them at a reduced price as compared with that agreed to by the Barings. I thought it best not to go to Morgan & Co. at first, because I had understood from Colonel Phillips that the bonds had been unsuccessfully offered by him to their house in America and I supposed that the Morgans in London might consider themselves connected with the negotiations through their

house in New York. But in all subsequent negotiations I made it a rule to give the first offer to Junius S. Morgan, who seldom permitted me to leave his banking house without taking what I had to offer. If he could not buy for his own house, he placed me in communication with a friendly house that did, he taking an interest in the issue. It is a great satisfaction to reflect that I never negotiated a security which did not to the end command a premium. Of course in this case I made a mistake in not returning to the Barings, giving them time and letting the panic subside, which it soon did. When one party to a bargain becomes excited, the other should keep cool and patient.

As an incident of my financial operations I remember saying to Mr. Morgan one day:

“Mr. Morgan, I will give you an idea and help you to carry it forward if you will give me one quarter of all the money you make by acting upon it.”

He laughingly said: “That seems fair, and as I have the option to act upon it, or not, certainly we ought to be willing to pay you a quarter of the profit.”

I called attention to the fact that the Allegheny Valley Railway bonds which I had exchanged for the Philadelphia and Erie bonds bore the guarantee of the Pennsylvania Railroad Company, and that that great company was always in need of money for essential extensions. A price might be offered for these bonds which might tempt the company to sell them, and that at the moment there appeared to be such a demand for American securities that no doubt they could be floated. I would write a prospectus which I thought would float the bonds. After examining the matter with his usual care he decided that he would act upon my suggestion.

Mr. Thomson was then in Paris and I ran over there to see him. Knowing that the Pennsylvania Railroad had need for money I told him that I had recommended these securities to Mr. Morgan and if he would give me a price for them I would see if I could not sell them. He named a price which was then very high, but less than the price which these bonds have since reached. Mr. Morgan purchased part of them with the right to buy others, and in this way the whole nine or ten millions of Allegheny bonds were marketed and the Pennsylvania Railroad Company placed in funds.

The sale of the bonds had not gone very far when the panic of 1873 was upon us. One of the sources of revenue which I then had was Mr. Pierpont Morgan. He said to me one day:

“My father has cabled to ask whether you wish to sell out your interest in that idea you gave him.”

I said: “Yes, I do. In these days I will sell anything for money.”

“Well,” he said, “what would you take?”

I said I believed that a statement recently rendered to me showed that there were already fifty thousand dollars to my credit, and I would take sixty thousand. Next morning when I called Mr. Morgan handed me checks for seventy thousand dollars.

“Mr. Carnegie,” he said, “you were mistaken. You sold out for ten thousand dollars less than the statement showed to your credit. It now shows not fifty but sixty thousand to your credit, and the additional ten makes seventy.”

The payments were in two checks, one for sixty thousand dollars and the other for the additional ten thousand. I handed him back the ten-thousand-dollar check, saying:

“Well, that is something worthy of you. Will you please accept these ten thousand with my best wishes?”

“No, thank you,” he said, “I cannot do that.”

Such acts, showing a nice sense of honorable understanding as against mere legal rights, are not so uncommon in business as the uninitiated might believe. And, after that, it is not to be wondered at if I determined that so far as lay in my power neither Morgan, father or son, nor their house, should suffer through me. They had in me henceforth a firm friend.

A great business is seldom if ever built up, except on lines of the strictest integrity. A reputation for “cuteness” and sharp dealing is fatal in great affairs. Not the letter of the law, but the spirit, must be the rule. The standard of commercial morality is now very high. A mistake made by any one in favor of the firm is corrected as promptly as if the error were in favor of the other party. It is essential to permanent success that a house should obtain a reputation for being governed by what is fair rather than what is merely legal. A rule which we adopted and adhered to has given greater returns than one would believe possible, namely: always give the other party the benefit of the doubt. This, of course, does not apply to the speculative class. An entirely different atmosphere pervades that world. Men are only gamblers there. Stock gambling and honorable business are incompatible. In recent years it must be admitted that the old-fashioned “banker,” like Junius S. Morgan of London, has become rare.

Soon after being deposed as president of the Union Pacific, Mr. Scott¹ resolved upon the construction of

¹ Colonel Thomas A. Scott left the Union Pacific in 1872. The same year he became president of the Texas Pacific, and in 1874 president of the Pennsylvania.

the Texas Pacific Railway. He telegraphed me one day in New York to meet him at Philadelphia without fail. I met him there with several other friends, among them Mr. J. N. McCullough, vice-president of the Pennsylvania Railroad Company at Pittsburgh. A large loan for the Texas Pacific had fallen due in London and its renewal was agreed to by Morgan & Co., provided I would join the other parties to the loan. I declined. I was then asked whether I would bring them all to ruin by refusing to stand by my friends. It was one of the most trying moments of my whole life. Yet I was not tempted for a moment to entertain the idea of involving myself. The question of what was my duty came first and prevented that. All my capital was in manufacturing and every dollar of it was required. I was the capitalist (then a modest one, indeed) of our concern. All depended upon me. My brother with his wife and family, Mr. Phipps and his family, Mr. Kloman and his family, all rose up before me and claimed protection.

I told Mr. Scott that I had done my best to prevent him from beginning to construct a great railway before he had secured the necessary capital. I had insisted that thousands of miles of railway lines could not be constructed by means of temporary loans. Besides, I had paid two hundred and fifty thousand dollars cash for an interest in it, which he told me upon my return from Europe he had reserved for me, although I had never approved the scheme. But nothing in the world would ever induce me to be guilty of endorsing the paper of that construction company or of any other concern than our own firm.

I knew that it would be impossible for me to pay the Morgan loan in sixty days, or even to pay my propor-

tion of it. Besides, it was not that loan by itself, but the half-dozen other loans that would be required thereafter that had to be considered. This marked another step in the total business separation which had to come between Mr. Scott and myself. It gave more pain than all the financial trials to which I had been subjected up to that time.

It was not long after this meeting that the disaster came and the country was startled by the failure of those whom it had regarded as its strongest men. I fear Mr. Scott's premature death ¹ can measurably be attributed to the humiliation which he had to bear. He was a sensitive rather than a proud man, and his seemingly impending failure cut him to the quick. Mr. McManus and Mr. Baird, partners in the enterprise, also soon passed away. These two men were manufacturers like myself and in no position to engage in railway construction.

The business man has no rock more dangerous to encounter in his career than this very one of endorsing commercial paper. It can easily be avoided if he asks himself two questions: Have I surplus means for all possible requirements which will enable me to pay without inconvenience the utmost sum for which I am liable under this endorsement? Secondly: Am I willing to lose this sum for the friend for whom I endorse? If these two questions can be answered in the affirmative he may be permitted to oblige his friend, but not otherwise, if he be a wise man. And if he can answer the first question in the affirmative it will be well for him to consider whether it would not be better then and there to pay the entire sum for which his name is asked. I am sure it would be. A man's means are a trust to be

¹ Died May 21, 1881.

sacredly held for his own creditors as long as he has debts and obligations.

Notwithstanding my refusal to endorse the Morgan renewal, I was invited to accompany the parties to New York next morning in their special car for the purpose of consultation. This I was only too glad to do. Anthony Drexel was also called in to accompany us. During the journey Mr. McCullough remarked that he had been looking around the car and had made up his mind that there was only one sensible man in it; the rest had all been "fools." Here was "Andy" who had paid for his shares and did not owe a dollar or have any responsibility in the matter, and that was the position they all ought to have been in.

Mr. Drexel said he would like me to explain how I had been able to steer clear of these unfortunate troubles. I answered: by strict adherence to what I believed to be my duty never to put my name to anything which I knew I could not pay at maturity; or, to recall the familiar saying of a Western friend, never to go in where you could n't wade. This water was altogether too deep for me.

Regard for this rule has kept not only myself but my partners out of trouble. Indeed, we had gone so far in our partnership agreement as to prevent ourselves from endorsing or committing ourselves in any way beyond trifling sums, except for the firm. This I also gave as a reason why I could not endorse.

During the period which these events cover I had made repeated journeys to Europe to negotiate various securities, and in all I sold some thirty millions of dollars worth. This was at a time when the Atlantic cable had not yet made New York a part of London financially considered, and when London bankers would lend their

balances to Paris, Vienna, or Berlin for a shadow of difference in the rate of interest rather than to the United States at a higher rate. The Republic was considered less safe than the Continent by these good people. My brother and Mr. Phipps conducted the iron business so successfully that I could leave for weeks at a time without anxiety. There was danger lest I should drift away from the manufacturing to the financial and banking business. My successes abroad brought me tempting opportunities, but my preference was always for manufacturing. I wished to make something tangible and sell it and I continued to invest my profits in extending the works at Pittsburgh.

The small shops put up originally for the Keystone Bridge Company had been leased for other purposes and ten acres of ground had been secured in Lawrenceville on which new and extensive shops were erected. Repeated additions to the Union Iron Mills had made them the leading mills in the United States for all sorts of structural shapes. Business was promising and all the surplus earnings I was making in other fields were required to expand the iron business. I had become interested, with my friends of the Pennsylvania Railroad Company, in building some railways in the Western States, but gradually withdrew from all such enterprises and made up my mind to go entirely contrary to the adage not to put all one's eggs in one basket. I determined that the proper policy was "to put all good eggs in one basket and then watch that basket."

I believe the true road to preëminent success in any line is to make yourself master in that line. I have no faith in the policy of scattering one's resources, and in my experience I have rarely if ever met a man who achieved preëminence in money-making — certainly

never one in manufacturing — who was interested in many concerns. The men who have succeeded are men who have chosen one line and stuck to it. It is surprising how few men appreciate the enormous dividends derivable from investment in their own business. There is scarcely a manufacturer in the world who has not in his works some machinery that should be thrown out and replaced by improved appliances; or who does not for the want of additional machinery or new methods lose more than sufficient to pay the largest dividend obtainable by investment beyond his own domain. And yet most business men whom I have known invest in bank shares and in far-away enterprises, while the true gold mine lies right in their own factories.

I have tried always to hold fast to this important fact. It has been with me a cardinal doctrine that I could manage my own capital better than any other person, much better than any board of directors. The losses men encounter during a business life which seriously embarrass them are rarely in their own business, but in enterprises of which the investor is not master. My advice to young men would be not only to concentrate their whole time and attention on the one business in life in which they engage, but to put every dollar of their capital into it. If there be any business that will not bear extension, the true policy is to invest the surplus in first-class securities which will yield a moderate but certain revenue if some other growing business cannot be found. As for myself my decision was taken early. I would concentrate upon the manufacture of iron and steel and be master in that.

My visits to Britain gave me excellent opportunities to renew and make acquaintance with those prominent in the iron and steel business — Bessemer in the front,

Sir Lothian Bell, Sir Bernard Samuelson, Sir Windsor Richards, Edward Martin, Bingley, Evans, and the whole host of captains in that industry. My election to the council, and finally to the presidency of the British Iron and Steel Institute soon followed, I being the first president who was not a British subject. That honor was highly appreciated, although at first declined, because I feared that I could not give sufficient time to its duties, owing to my residence in America.

As we had been compelled to engage in the manufacture of wrought-iron in order to make bridges and other structures, so now we thought it desirable to manufacture our own pig iron. And this led to the erection of the Lucy Furnace in the year 1870 — a venture which would have been postponed had we fully appreciated its magnitude. We heard from time to time the ominous predictions made by our older brethren in the manufacturing business with regard to the rapid growth and extension of our young concern, but we were not deterred. We thought we had sufficient capital and credit to justify the building of one blast furnace.

The estimates made of its cost, however, did not cover more than half the expenditure. It was an experiment with us. Mr. Kloman knew nothing about blast-furnace operations. But even without exact knowledge no serious blunder was made. The yield of the Lucy Furnace (named after my bright sister-in-law) exceeded our most sanguine expectations and the then unprecedented output of a hundred tons per day was made from one blast furnace, for one week — an output that the world had never heard of before. We held the record and many visitors came to marvel at the marvel.

It was not, however, all smooth sailing with our iron business. Years of panic came at intervals. We had

passed safely through the fall in values following the war, when iron from nine cents per pound dropped to three. Many failures occurred and our financial manager had his time fully occupied in providing funds to meet emergencies. Among many wrecks our firm stood with credit unimpaired. But the manufacture of pig iron gave us more anxiety than any other department of our business so far. The greatest service rendered us in this branch of manufacturing was by Mr. Whitwell, of the celebrated Whitwell Brothers of England, whose blast-furnace stoves were so generally used. Mr. Whitwell was one of the best-known of the visitors who came to marvel at the Lucy Furnace, and I laid the difficulty we then were experiencing before him. He said immediately:

“That comes from the angle of the bell being wrong.”

He explained how it should be changed. Our Mr. Kloman was slow to believe this, but I urged that a small glass-model furnace and two bells be made, one as the Lucy was and the other as Mr. Whitwell advised it should be. This was done, and upon my next visit experiments were made with each, the result being just as Mr. Whitwell had foretold. Our bell distributed the large pieces to the sides of the furnace, leaving the center a dense mass through which the blast could only partially penetrate. The Whitwell bell threw the pieces to the center leaving the circumference dense. This made all the difference in the world. The Lucy's troubles were over.

What a kind, big, broad man was Mr. Whitwell, with no narrow jealousy, no withholding his knowledge! We had in some departments learned new things and were able to be of service to his firm in return. At all events, after that everything we had was open to the Whitwells.

[To-day, as I write, I rejoice that one of the two still is with us and that our friendship is still warm. He was my predecessor in the presidency of the British Iron and Steel Institute.]

CHAPTER XIII

THE AGE OF STEEL

LOOKING back to-day it seems incredible that only forty years ago (1870) chemistry in the United States was an almost unknown agent in connection with the manufacture of pig iron. It was the agency, above all others, most needful in the manufacture of iron and steel. The blast-furnace manager of that day was usually a rude bully, generally a foreigner, who in addition to his other acquirements was able to knock down a man now and then as a lesson to the other unruly spirits under him. He was supposed to diagnose the condition of the furnace by instinct, to possess some almost supernatural power of divination, like his congener in the country districts who was reputed to be able to locate an oil well or water supply by means of a hazel rod. He was a veritable quack doctor who applied whatever remedies occurred to him for the troubles of his patient.

The Lucy Furnace was out of one trouble and into another, owing to the great variety of ores, limestone, and coke which were then supplied with little or no regard to their component parts. This state of affairs became intolerable to us. We finally decided to dispense with the rule-of-thumb-and-intuition manager, and to place a young man in charge of the furnace. We had a young shipping clerk, Henry M. Curry, who had distinguished himself, and it was resolved to make him manager.

Mr. Phipps had the Lucy Furnace under his special charge. His daily visits to it saved us from failure there. Not that the furnace was not doing as well as other fur-

naces in the West as to money-making, but being so much larger than other furnaces its variations entailed much more serious results. I am afraid my partner had something to answer for in his Sunday morning visits to the Lucy Furnace when his good father and sister left the house for more devotional duties. But even if he had gone with them his real earnest prayer could not but have had reference at times to the precarious condition of the Lucy Furnace then absorbing his thoughts.

The next step taken was to find a chemist as Mr. Curry's assistant and guide. We found the man in a learned German, Dr. Fricke, and great secrets did the doctor open up to us. Iron stone from mines that had a high reputation was now found to contain ten, fifteen, and even twenty per cent less iron than it had been credited with. Mines that hitherto had a poor reputation we found to be now yielding superior ore. The good was bad and the bad was good, and everything was topsy-turvy. Nine tenths of all the uncertainties of pig-iron making were dispelled under the burning sun of chemical knowledge.

At a most critical period when it was necessary for the credit of the firm that the blast furnace should make its best product, it had been stopped because an exceedingly rich and pure ore had been substituted for an inferior ore — an ore which did not yield more than two thirds of the quantity of iron of the other. The furnace had met with disaster because too much lime had been used to flux this exceptionally pure ironstone. The very superiority of the materials had involved us in serious losses.

What fools we had been! But then there was this consolation: we were not as great fools as our competitors. It was years after we had taken chemistry to guide us

that it was said by the proprietors of some other furnaces that they could not afford to employ a chemist. Had they known the truth then, they would have known that they could not afford to be without one. Looking back it seems pardonable to record that we were the first to employ a chemist at blast furnaces — something our competitors pronounced extravagant.

The Lucy Furnace became the most profitable branch of our business, because we had almost the entire monopoly of scientific management. Having discovered the secret, it was not long (1872) before we decided to erect an additional furnace. This was done with great economy as compared with our first experiment. [The mines which had no reputation and the products of which many firms would not permit to be used in their blast furnaces found a purchaser in us. Those mines which were able to obtain an enormous price for their products, owing to a reputation for quality, we quietly ignored.] A curious illustration of this was the celebrated Pilot Knob mine in Missouri. Its product was, so to speak, under a cloud. A small portion of it only could be used, it was said, without obstructing the furnace. Chemistry told us that it was low in phosphorus, but very high in silicon. There was no better ore and scarcely any as rich, if it were properly fluxed. We therefore bought heavily of this and received the thanks of the proprietors for rendering their property valuable.

It is hardly believable that for several years we were able to dispose of the highly phosphoric cinder from the puddling furnaces at a higher price than we had to pay for the pure cinder from the heating furnaces of our competitors — a cinder which was richer in iron than the puddled cinder and much freer from phosphorus. Upon some occasion a blast furnace had attempted to smelt

the flue cinder, and from its greater purity the furnace did not work well with a mixture intended for an impurer article; hence for years it was thrown over the banks of the river at Pittsburgh by our competitors as worthless. In some cases we were even able to exchange a poor article for a good one and obtain a bonus.

But it is still more unbelievable that a prejudice, equally unfounded, existed against putting into the blast furnaces the roll-scale from the mills which was pure oxide of iron. This reminds me of my dear friend and fellow-Dunfermline townsman, Mr. Chisholm, of Cleveland. We had many pranks together. One day, when I was visiting his works at Cleveland, I saw men wheeling this valuable roll-scale into the yard. I asked Mr. Chisholm where they were going with it, and he said:

“To throw it over the bank. Our managers have always complained that they had bad luck when they attempted to remelt it in the blast furnace.”

I said nothing, but upon my return to Pittsburgh I set about having a joke at his expense. We had then a young man in our service named Du Puy, whose father was known as the inventor of a direct process in iron-making with which he was then experimenting in Pittsburgh. I recommended our people to send Du Puy to Cleveland to contract for all the roll-scale of my friend's establishment. He did so, buying it for fifty cents per ton and having it shipped to him direct. This continued for some time. I expected always to hear of the joke being discovered. The premature death of Mr. Chisholm occurred before I could apprise him of it. His successors soon, however, followed our example.

I had not failed to notice the growth of the Bessemer process. If this proved successful I knew that iron was

destined to give place to steel; that the Iron Age would pass away and the Steel Age take its place. My friend, John A. Wright, president of the Freedom Iron Works at Lewiston, Pennsylvania, had visited England purposely to investigate the new process. He was one of our best and most experienced manufacturers, and his decision was so strongly in its favor that he induced his company to erect Bessemer works. He was quite right, but just a little in advance of his time. The capital required was greater than he estimated. More than this, it was not to be expected that a process which was even then in somewhat of an experimental stage in Britain could be transplanted to the new country and operated successfully from the start. The experiment was certain to be long and costly, and for this my friend had not made sufficient allowance.

At a later date, when the process had become established in England, capitalists began to erect the present Pennsylvania Steel Works at Harrisburg. These also had to pass through an experimental stage and at a critical moment would probably have been wrecked but for the timely assistance of the Pennsylvania Railroad Company. It required a broad and able man like President Thomson, of the Pennsylvania Railroad, to recommend to his board of directors that so large a sum as six hundred thousand dollars should be advanced to a manufacturing concern on his road, that steel rails might be secured for the line. The result fully justified his action.

The question of a substitute for iron rails upon the Pennsylvania Railroad and other leading lines had become a very serious one. Upon certain curves at Pittsburgh, on the road connecting the Pennsylvania with the Fort Wayne, I had seen new iron rails placed every

six weeks or two months. Before the Bessemer process was known I had called President Thomson's attention to the efforts of Mr. Dodds in England, who had carbonized the heads of iron rails with good results. I went to England and obtained control of the Dodds patents and recommended President Thomson to appropriate twenty thousand dollars for experiments at Pittsburgh, which he did. We built a furnace on our grounds at the upper mill and treated several hundred tons of rails for the Pennsylvania Railroad Company and with remarkably good results as compared with iron rails. These were the first hard-headed rails used in America. We placed them on some of the sharpest curves and their superior service far more than compensated for the advance made by Mr. Thomson. Had the Bessemer process not been successfully developed, I verily believe that we should ultimately have been able to improve the Dodds process sufficiently to make its adoption general. But there was nothing to be compared with the solid steel article which the Bessemer process produced.

Our friends of the Cambria Iron Company at Johnstown, near Pittsburgh — the principal manufacturers of rails in America — decided to erect a Bessemer plant. In England I had seen it demonstrated, at least to my satisfaction, that the process could be made a grand success without undue expenditure of capital or great risk. Mr. William Coleman, who was ever alive to new methods, arrived at the same conclusion. It was agreed we should enter upon the manufacture of steel rails at Pittsburgh. He became a partner and also my dear friend Mr. David McCandless, who had so kindly offered aid to my mother at my father's death. The latter was not forgotten. Mr. John Scott and Mr. David A. Stewart, and others joined me; Mr. Edgar Thomson

and Mr. Thomas A. Scott, president and vice-president of the Pennsylvania Railroad, also became stockholders, anxious to encourage the development of steel. The steel-rail company was organized January 1, 1873.

The question of location was the first to engage our serious attention. I could not reconcile myself to any location that was proposed, and finally went to Pittsburgh to consult with my partners about it. The subject was constantly in my mind and in bed Sunday morning the site suddenly appeared to me. I rose and called to my brother:

“Tom, you and Mr. Coleman are right about the location; right at Braddock’s, between the Pennsylvania, the Baltimore and Ohio, and the river, is the best situation in America; and let’s call the works after our dear friend Edgar Thomson. Let us go over to Mr. Coleman’s and drive out to Braddock’s.”

We did so that day, and the next morning Mr. Coleman was at work trying to secure the property. Mr. McKinney, the owner, had a high idea of the value of his farm. What we had expected to purchase for five or six hundred dollars an acre cost us two thousand. But since then we have been compelled to add to our original purchase at a cost of five thousand dollars per acre.

There, on the very field of Braddock’s defeat, we began the erection of our steel-rail mills. In excavating for the foundations many relics of the battle were found — bayonets, swords, and the like. It was there that the then provost of Dunfermline, Sir Arthur Halkett, and his son were slain. How did they come to be there will very naturally be asked. It must not be forgotten that, in those days, the provosts of the cities of Britain were members of the aristocracy — the great men of the district who condescended to enjoy the honor of the po-

sition without performing the duties. No one in trade was considered good enough for the provostship. We have remnants of this aristocratic notion throughout Britain to-day. There is scarcely any life assurance or railway company, or in some cases manufacturing company but must have at its head, to enjoy the honors of the presidency, some titled person totally ignorant of the duties of the position. So it was that Sir Arthur Halkett, as a gentleman, was Provost of Dunfermline, but by calling he followed the profession of arms and was killed on this spot. It was a coincidence that what had been the field of death to two native-born citizens of Dunfermline should be turned into an industrial hive by two others.

Another curious fact has recently been discovered. Mr. John Morley's address, in 1904 on Founder's Day at the Carnegie Institute, Pittsburgh, referred to the capture of Fort Duquesne by General Forbes and his writing Prime Minister Pitt that he had rechristened it "Pittsburgh" for him. This General Forbes was then Laird of Pittencrieff and was born in the Glen which I purchased in 1902 and presented to Dunfermline for a public park. So that two Dunfermline men have been Lairds of Pittencrieff whose chief work was in Pittsburgh. One named Pittsburgh and the other labored for its development.

In naming the steel mills as we did the desire was to honor my friend Edgar Thomson, but when I asked permission to use his name his reply was significant. He said that as far as American steel rails were concerned, he did not feel that he wished to connect his name with them, for they had proved to be far from creditable. Uncertainty was, of course, inseparable from the experimental stage; but, when I assured him that it was

now possible to make steel rails in America as good in every particular as the foreign article, and that we intended to obtain for our rails the reputation enjoyed by the Keystone bridges and the Kloman axles, he consented.

He was very anxious to have us purchase land upon the Pennsylvania Railroad, as his first thought was always for that company. This would have given the Pennsylvania a monopoly of our traffic. When he visited Pittsburgh a few months later and Mr. Robert Pitcairn, my successor as superintendent of the Pittsburgh Division of the Pennsylvania, pointed out to him the situation of the new works at Braddock's Station, which gave us not only a connection with his own line, but also with the rival Baltimore and Ohio line, and with a rival in one respect greater than either — the Ohio River — he said, with a twinkle of his eye to Robert, as Robert told me:

“Andy should have located his works a few miles farther east.” But Mr. Thomson knew the good and sufficient reasons which determined the selection of the unrivaled site.

The works were well advanced when the financial panic of September, 1873, came upon us. I then entered upon the most anxious period of my business life. All was going well when one morning in our summer cottage, in the Allegheny Mountains at Cresson, a telegram came announcing the failure of Jay Cooke & Co. Almost every hour after brought news of some fresh disaster. House after house failed. The question every morning was which would go next. Every failure depleted the resources of other concerns. Loss after loss ensued, until a total paralysis of business set in. Every weak spot was discovered and houses that otherwise would have been

strong were borne down largely because our country lacked a proper banking system.

We had not much reason to be anxious about our debts. Not what we had to pay of our own debts could give us much trouble, but rather what we might have to pay for our debtors. It was not our bills payable but our bills receivable which required attention, for we soon had to begin meeting both. Even our own banks had to beg us not to draw upon our balances. One incident will shed some light upon the currency situation. One of our pay-days was approaching. One hundred thousand dollars in small notes were absolutely necessary, and to obtain these we paid a premium of twenty-four hundred dollars in New York and had them expressed to Pittsburgh. It was impossible to borrow money, even upon the best collaterals; but by selling securities, which I had in reserve, considerable sums were realized — the company undertaking to replace them later.

It happened that some of the railway companies whose lines centered in Pittsburgh owed us large sums for material furnished — the Fort Wayne road being the largest debtor. I remember calling upon Mr. Thaw, the vice-president of the Fort Wayne, and telling him we must have our money. He replied:

“You ought to have your money, but we are not paying anything these days that is not protestable.”

“Very good,” I said, “your freight bills are in that category and we shall follow your excellent example. Now I am going to order that we do not pay you one dollar for freight.”

“Well, if you do that,” he said, “we will stop your freight.”

I said we would risk that. The railway company could not proceed to that extremity. And as a matter of fact

we ran for some time without paying the freight bills. It was simply impossible for the manufacturers of Pittsburgh to pay their accruing liabilities when their customers stopped payment. The banks were forced to renew maturing paper. They behaved splendidly to us, as they always have done, and we steered safely through. But in a critical period like this there was one thought uppermost with me, to gather more capital and keep it in our business so that come what would we should never again be called upon to endure such nights and days of racking anxiety.

Speaking for myself in this great crisis, I was at first the most excited and anxious of the partners. I could scarcely control myself. But when I finally saw the strength of our financial position I became philosophically cool and found myself quite prepared, if necessary, to enter the directors' rooms of the various banks with which we dealt, and lay our entire position before their boards. I felt that this could result in nothing discreditable to us. No one interested in our business had lived extravagantly. Our manner of life had been the very reverse of this. No money had been withdrawn from the business to build costly homes, and, above all, not one of us had made speculative ventures upon the stock exchange, or invested in any other enterprises than those connected with the main business. Neither had we exchanged endorsements with others. Besides this we could show a prosperous business that was making money every year.

I was thus enabled to laugh away the fears of my partners, but none of them rejoiced more than I did that the necessity for opening our lips to anybody about our finances did not arise. Mr. Coleman, good friend and true, with plentiful means and splendid credit, did not

fail to volunteer to give us his endorsements. In this we stood alone; William Coleman's name, a tower of strength, was for us only. How the grand old man comes before me as I write. His patriotism knew no bounds. Once when visiting his mills, stopped for the Fourth of July, as they always were, he found a corps of men at work repairing the boilers. He called the manager to him and asked what this meant. He ordered all work suspended.

"Work on the Fourth of July!" he exclaimed, "when there's plenty of Sundays for repairs!" He was furious.

When the cyclone of 1873 struck us we at once began to reef sail in every quarter. Very reluctantly did we decide that the construction of the new steel works must cease for a time. Several prominent persons, who had invested in them, became unable to meet their payments and I was compelled to take over their interests, repaying the full cost to all. In that way control of the company came into my hands.

The first outburst of the storm had affected the financial world connected with the Stock Exchange. It was some time before it reached the commercial and manufacturing world. But the situation grew worse and worse and finally led to the crash which involved my friends in the Texas Pacific enterprise, of which I have already spoken. This was to me the severest blow of all. People could, with difficulty, believe that occupying such intimate relations as I did with the Texas group, I could by any possibility have kept myself clear of their financial obligations.

Mr. Schoenberger, president of the Exchange Bank at Pittsburgh, with which we conducted a large business, was in New York when the news reached him of the embarrassment of Mr. Scott and Mr. Thomson. He

hastened to Pittsburgh, and at a meeting of his board next morning said it was simply impossible that I was not involved with them. He suggested that the bank should refuse to discount more of our bills receivable. He was alarmed to find that the amount of these bearing our endorsement and under discount, was so large. Prompt action on my part was necessary to prevent serious trouble. I took the first train for Pittsburgh, and was able to announce there to all concerned that, although I was a shareholder in the Texas enterprise, my interest was paid for. My name was not upon one dollar of their paper or of any other outstanding paper. I stood clear and clean without a financial obligation or property which I did not own and which was not fully paid for. My only obligations were those connected with our business; and I was prepared to pledge for it every dollar I owned, and to endorse every obligation the firm had outstanding.

Up to this time I had the reputation in business of being a bold, fearless, and perhaps a somewhat reckless young man. Our operations had been extensive, our growth rapid and, although still young, I had been handling millions. My own career was thought by the elderly ones of Pittsburgh to have been rather more brilliant than substantial. I know of an experienced one who declared that if "Andrew Carnegie's brains did not carry him through his luck would." But I think nothing could be farther from the truth than the estimate thus suggested. I am sure that any competent judge would be surprised to find how little I ever risked for myself or my partners. When I did big things, some large corporation like the Pennsylvania Railroad Company was behind me and the responsible party. My supply of Scotch caution never has been small; but I was appar-

ently something of a dare-devil now and then to the manufacturing fathers of Pittsburgh. They were old and I was young, which made all the difference.

The fright which Pittsburgh financial institutions had with regard to myself and our enterprises rapidly gave place to perhaps somewhat unreasoning confidence. Our credit became unassailable, and thereafter in times of financial pressure the offerings of money to us increased rather than diminished, just as the deposits of the old Bank of Pittsburgh were never so great as when the deposits in other banks ran low. It was the only bank in America which redeemed its circulation in gold, disdaining to take refuge under the law and pay its obligations in greenbacks. It had few notes, and I doubt not the decision paid as an advertisement.

In addition to the embarrassment of my friends Mr. Scott, Mr. Thomson, and others, there came upon us later an even severer trial in the discovery that our partner, Mr. Andrew Kloman, had been led by a party of speculative people into the Escanaba Iron Company. He was assured that the concern was to be made a stock company, but before this was done his colleagues had succeeded in creating an enormous amount of liabilities — about seven hundred thousand dollars. There was nothing but bankruptcy as a means of reinstating Mr. Kloman.

This gave us more of a shock than all that had preceded, because Mr. Kloman, being a partner, had no right to invest in another iron company, or in any other company involving personal debt, without informing his partners. There is one imperative rule for men in business — no secrets from partners. Disregard of this rule involved not only Mr. Kloman himself, but our company, in peril, coming, as it did, atop of the difficul-

ties of my Texas Pacific friends with whom I had been intimately associated. The question for a time was whether there was anything really sound. Where could we find bedrock upon which we could stand?

Had Mr. Kloman been a business man it would have been impossible ever to allow him to be a partner with us again after this discovery. He was not such, however, but the ablest of practical mechanics with some business ability. Mr. Kloman's ambition had been to be in the office, where he was worse than useless, rather than in the mill devising and running new machinery, where he was without a peer. We had some difficulty in placing him in his proper position and keeping him there, which may have led him to seek an outlet elsewhere. He was perhaps flattered by men who were well known in the community; and in this case he was led by persons who knew how to reach him by extolling his wonderful business abilities in addition to his mechanical genius — abilities which his own partners, as already suggested, but faintly recognized.

After Mr. Kloman had passed through the bankruptcy court and was again free, we offered him a ten per cent interest in our business, charging for it only the actual capital invested, with nothing whatever for good-will. This we were to carry for him until the profits paid for it. We were to charge interest only on the cost, and he was to assume no responsibility. The offer was accompanied by the condition that he should not enter into any other business or endorse for others, but give his whole time and attention to the mechanical and not the business management of the mills. Could he have been persuaded to accept this, he would have been a multimillionaire; but his pride, and more particularly that of his family, perhaps, would not permit this. He

would go into business on his own account, and, notwithstanding the most urgent appeals on my part, and that of my colleagues, he persisted in the determination to start a new rival concern with his sons as business managers. The result was failure and premature death.

How foolish we are not to recognize what we are best fitted for and can perform, not only with ease but with pleasure, as masters of the craft. More than one able man I have known has persisted in blundering in an office when he had great talent for the mill, and has worn himself out, oppressed with cares and anxieties, his life a continual round of misery, and the result at last failure. I never regretted parting with any man so much as Mr. Kloman. His was a good heart, a great mechanical brain, and had he been left to himself I believe he would have been glad to remain with us. Offers of capital from others — offers which failed when needed — turned his head, and the great mechanic soon proved the poor man of affairs.¹

¹ Long after the circumstances here recited, Mr. Isidor Straus called upon Mr. Henry Phipps and asked him if two statements which had been publicly made about Mr. Carnegie and his partners in the steel company were true. Mr. Phipps replied they were not. Then said Mr. Straus:

“Mr. Phipps, you owe it to yourself and also to Mr. Carnegie to say so publicly.”

This Mr. Phipps did in the *New York Herald*, January 30, 1904, in the following handsome manner and without Mr. Carnegie's knowledge:

Question: “In a recent publication mention was made of Mr. Carnegie's not having treated Mr. Miller, Mr. Kloman, and yourself properly during your early partnership, and at its termination. Can you tell me anything about this?”

Answer: “Mr. Miller has already spoken for himself in this matter, and I can say that the treatment received from Mr. Carnegie during our partnership, so far as I was concerned, was always fair and liberal.

“My association with Mr. Kloman in business goes back forty-three years. Everything in connection with Mr. Carnegie's partnership with Mr. Kloman was of a pleasant nature.

“At a much more recent date, when the firm of Carnegie, Kloman and Company was formed, the partners were Andrew Carnegie, Thomas M.

Carnegie, Andrew Kloman, and myself. The Carnegies held the controlling interest.

"After the partnership agreement was signed, Mr. Kloman said to me that the Carnegies, owning the larger interest, might be too enterprising in making improvements, which might lead us into serious trouble; and he thought that they should consent to an article in the partnership agreement requiring the consent of three partners to make effective any vote for improvements. I told him that we could not exact what he asked, as their larger interest assured them control, but I would speak to them. When the subject was broached, Mr. Carnegie promptly said that if he could not carry Mr. Kloman or myself with his brother in any improvements he would not wish them made. Other matters were arranged by courtesy during our partnership in the same manner."

Question: "What you have told me suggests the question, why did Mr. Kloman leave the firm?"

Answer: "During the great depression which followed the panic of 1873, Mr. Kloman, through an unfortunate partnership in the Escanaba Furnace Company, lost his means, and his interest in our firm had to be disposed of. We bought it at book value at a time when manufacturing properties were selling at ruinous prices, often as low as one third or one half their cost.

"After the settlement had been made with the creditors of the Escanaba Company, Mr. Kloman was offered an interest by Mr. Carnegie of \$100,000 in our firm, to be paid only from future profits. This Mr. Kloman declined, as he did not feel like taking an interest which formerly had been much larger. Mr. Carnegie gave him \$40,000 from the firm to make a new start. This amount was invested in a rival concern, which soon closed.

"I knew of no disagreement during this early period with Mr. Carnegie, and their relations continued pleasant as long as Mr. Kloman lived. Harmony always marked their intercourse, and they had the kindest feeling one for the other."

CHAPTER XIV

PARTNERS, BOOKS, AND TRAVEL

WHEN Mr. Kloman had severed his connection with us there was no hesitation in placing William Borntraeger in charge of the mills. It has always been with especial pleasure that I have pointed to the career of William. He came direct from Germany — a young man who could not speak English, but being distantly connected with Mr. Kloman was employed in the mills, at first in a minor capacity. He promptly learned English and became a shipping clerk at six dollars per week. He had not a particle of mechanical knowledge, and yet such was his unflagging zeal and industry for the interests of his employer that he soon became marked for being everywhere about the mill, knowing everything, and attending to everything.

William was a character. He never got over his German idioms and his inverted English made his remarks very effective. Under his superintendence the Union Iron Mills became a most profitable branch of our business. He had overworked himself after a few years' application and we decided to give him a trip to Europe. He came to New York by way of Washington. When he called upon me in New York he expressed himself as more anxious to return to Pittsburgh than to revisit Germany. In ascending the Washington Monument he had seen the Carnegie beams in the stairway and also at other points in public buildings, and as he expressed it:

“It yust make me so broud dat I want to go right back and see dat everyting is going right at de mill.”

Early hours in the morning and late in the dark hours

at night William was in the mills. His life was there. He was among the first of the young men we admitted to partnership, and the poor German lad at his death was in receipt of an income, as I remember, of about \$50,000 a year, every cent of which was deserved. Stories about him are many. At a dinner of our partners to celebrate the year's business, short speeches were in order from every one. William summed up his speech thus:

"What we haf to do, shentlemens, is to get brices up and costs down and efery man *stand on his own bottom.*" There was loud, prolonged, and repeated laughter.

Captain Evans ("Fighting Bob") was at one time government inspector at our mills. He was a severe one. William was sorely troubled at times and finally offended the Captain, who complained of his behavior. We tried to get William to realize the importance of pleasing a government official. William's reply was:

"But he gomes in and smokes my cigars" (bold Captain! William reveled in one-cent Wheeling tobies) "and then he goes and contems my iron. What does you tinks of a man like dat? But I apologize and dreat him right to-morrow."

The Captain was assured William had agreed to make due amends, but he laughingly told us afterward that William's apology was:

"Vell, Captain, I hope you vas all right dis morning. I haf noting against you, Captain," holding out his hand, which the Captain finally took and all was well.

William once sold to our neighbor, the pioneer steel-maker of Pittsburgh, James Park, a large lot of old rails which we could not use. Mr. Park found them of a very bad quality. He made claims for damages and William was told that he must go with Mr. Phipps to meet Mr. Park and settle. Mr. Phipps went into Mr. Park's office,

while William took a look around the works in search of the condemned material, which was nowhere to be seen. Well did William know where to look. He finally entered the office, and before Mr. Park had time to say a word William began:

“Mr. Park, I vas glad to hear dat de old rails what I sell you don’t suit for steel. I will buy dem all from you back, five dollars ton profit for you.” Well did William know that they had all been used. Mr. Park was nonplussed, and the affair ended. William had triumphed.

Upon one of my visits to Pittsburgh William told me he had something “particular” he wished to tell me — something he could n’t tell any one else. This was upon his return from the trip to Germany. There he had been asked to visit for a few days a former schoolfellow, who had risen to be a professor:

“Well, Mr. Carnegie, his sister who kept his house was very kind to me, and ven I got to Hamburg I tought I sent her yust a little present. She write me a letter, then I write her a letter. She write me and I write her, and den I ask her would she marry me. She was very educated, but she write yes. Den I ask her to come to New York, and I meet her dere, but, Mr. Carnegie, dem people don’t know noting about business and de mills. Her bruder write me dey want me to go dere again and marry her in Chairmany, and I can go away not again from de mills. I tought I yust ask you about it.”

“Of course you can go again. Quite right, William, you should go. I think the better of her people for feeling so. You go over at once and bring her home. I’ll arrange it.” Then, when parting, I said: “William, I suppose your sweetheart is a beautiful, tall, ‘peaches-and-cream’ kind of German young lady.”

“Vell, Mr. Carnegie, she is a lectle stout. If *I had the*

rolling of her I give her yust one more pass." All William's illustrations were founded on mill practice. [I find myself bursting into fits of laughter this morning (June, 1912) as I re-read this story. But I did this also when reading that "Every man must stand on his own bottom."]

Mr. Phipps had been head of the commercial department of the mills, but when our business was enlarged, he was required for the steel business. Another young man, William L. Abbott, took his place. Mr. Abbott's history is somewhat akin to Borntraeger's. He came to us as a clerk upon a small salary and was soon assigned to the front in charge of the business of the iron mills. He was no less successful than was William. He became a partner with an interest equal to William's, and finally was promoted to the presidency of the company.

Mr. Curry had distinguished himself by this time in his management of the Lucy Furnaces, and he took his place among the partners, sharing equally with the others. There is no way of making a business successful that can vie with the policy of promoting those who render exceptional service. We finally converted the firm of Carnegie, McCandless & Co. into the Edgar Thomson Steel Company, and included my brother and Mr. Phipps, both of whom had declined at first to go into the steel business with their too enterprising senior. But when I showed them the earnings for the first year and told them if they did not get into steel they would find themselves in the wrong boat, they both reconsidered and came with us. It was fortunate for them as for us.

My experience has been that no partnership of new men gathered promiscuously from various fields can prove a good working organization as at first consti-

tuted. Changes are required. Our Edgar Thomson Steel Company was no exception to this rule. Even before we began to make rails, Mr. Coleman became dissatisfied with the management of a railway official who had come to us with a great and deserved reputation for method and ability. I had, therefore, to take over Mr. Coleman's interest. It was not long, however, before we found that his judgment was correct. The new man had been a railway auditor, and was excellent in accounts, but it was unjust to expect him, or any other office man, to be able to step into manufacturing and be successful from the start. He had neither the knowledge nor the training for this new work. This does not mean that he was not a splendid auditor. It was our own blunder in expecting the impossible.

The mills were at last about ready to begin ¹ and an organization the auditor proposed was laid before me for approval. I found he had divided the works into two departments and had given control of one to Mr. Stevenson, a Scotsman who afterwards made a fine record as a manufacturer, and control of the other to a Mr. Jones. Nothing, I am certain, ever affected the success of the steel company more than the decision which I gave upon that proposal. Upon no account could two men be in the same works with equal authority. An army with two commanders-in-chief, a ship with two captains, could not fare more disastrously than a manufacturing concern with two men in command upon the same ground, even though in two different departments. I said:

“This will not do. I do not know Mr. Stevenson, nor do I know Mr. Jones, but one or the other must be made captain and he alone must report to you.”

¹ The steel-rail mills were ready and rails were rolled in 1874.

The decision fell upon Mr. Jones and in this way we obtained "The Captain," who afterward made his name famous wherever the manufacture of Bessemer steel is known.

The Captain was then quite young, spare and active, bearing traces of his Welsh descent even in his stature, for he was quite short. He came to us as a two-dollar-a-day mechanic from the neighboring works at Johnstown. We soon saw that he was a character. Every movement told it. He had volunteered as a private during the Civil War and carried himself so finely that he became captain of a company which was never known to flinch. Much of the success of the Edgar Thomson Works belongs to this man.

In later years he declined an interest in the firm which would have made him a millionaire. I told him one day that some of the young men who had been given an interest were now making much more than he was and we had voted to make him a partner. This entailed no financial responsibility, as we always provided that the cost of the interest given was payable only out of profits.

"No," he said, "I don't want to have my thoughts running on business. I have enough trouble looking after these works. Just give me a h—l of a salary if you think I'm worth it."

"All right, Captain, the salary of the President of the United States is yours."

"That's the talk," said the little Welshman.¹

¹ The story is told that when Mr. Carnegie was selecting his younger partners he one day sent for a young Scotsman, Alexander R. Peacock, and asked him rather abruptly:

"Peacock, what would you give to be made a millionaire?"

"A liberal discount for cash, sir," was the answer.

He was a partner owning a two per cent interest when the Carnegie Steel Company was merged into the United States Steel Corporation.

Our competitors in steel were at first disposed to ignore us. Knowing the difficulties they had in starting their own steel works, they could not believe we would be ready to deliver rails for another year and declined to recognize us as competitors. The price of steel rails when we began was about seventy dollars per ton. We sent our agent through the country with instructions to take orders at the best prices he could obtain; and before our competitors knew it, we had obtained a large number — quite sufficient to justify us in making a start.

So perfect was the machinery, so admirable the plans, so skillful were the men selected by Captain Jones, and so great a manager was he himself, that our success was phenomenal. I think I place a unique statement on record when I say that the result of the first month's operations left a margin of profit of \$11,000. It is also remarkable that so perfect was our system of accounts that we knew the exact amount of the profit. We had learned from experience in our iron works what exact accounting meant. There is nothing more profitable than clerks to check up each transfer of material from one department to another in process of manufacture.

The new venture in steel having started off so promisingly, I began to think of taking a holiday, and my long-cherished purpose of going around the world came to the front. Mr. J. W. Vandevort ("Vandy") and I accordingly set out in the autumn of 1878. I took with me several pads suitable for penciling and began to make a few notes day by day, not with any intention of publishing a book; but thinking, perhaps, I might print a few copies of my notes for private circulation. The sensation which one has when he first sees his remarks in the form of a printed book is great. When the package

came from the printers I re-read the book trying to decide whether it was worth while to send copies to my friends. I came to the conclusion that upon the whole it was best to do so and await the verdict.

The writer of a book designed for his friends has no reason to anticipate an unkind reception, but there is always some danger of its being damned with faint praise. The responses in my case, however, exceeded expectations, and were of such a character as to satisfy me that the writers really had enjoyed the book, or meant at least a part of what they said about it. Every author is prone to believe sweet words. Among the first that came were in a letter from Anthony Drexel, Philadelphia's great banker, complaining that I had robbed him of several hours of sleep. Having begun the book he could not lay it down and retired at two o'clock in the morning after finishing. Several similar letters were received. I remember Mr. Huntington, president of the Central Pacific Railway, meeting me one morning and saying he was going to pay me a great compliment.

"What is it?" I asked.

"Oh, I read your book from end to end."

"Well," I said, "that is not such a great compliment. Others of our mutual friends have done that."

"Oh, yes, but probably none of your friends are like me. I have not read a book for years except my ledger and I did not intend to read yours, but when I began it I could not lay it down. My ledger is the only book I have gone through for five years."

I was not disposed to credit all that my friends said, but others who had obtained the book from them were pleased with it and I lived for some months under intoxicating, but I trust not perilously pernicious, flattery. Several editions of the book were printed to meet

the request for copies. Some notices of it and extracts got into the papers, and finally Charles Scribner's Sons asked to publish it for the market. So "Round the World"¹ came before the public and I was at last "an author."

A new horizon was opened up to me by this voyage. It quite changed my intellectual outlook. Spencer and Darwin were then high in the zenith, and I had become deeply interested in their work. I began to view the various phases of human life from the standpoint of the evolutionist. In China I read Confucius; in India, Buddha and the sacred books of the Hindoos; among the Parsees, in Bombay, I studied Zoroaster. The result of my journey was to bring a certain mental peace. Where there had been chaos there was now order. My mind was at rest. I had a philosophy at last. The words of Christ "The Kingdom of Heaven is within you," had a new meaning for me. Not in the past or in the future, but now and here is Heaven within us. All our duties lie in this world and in the present, and trying impatiently to peer into that which lies beyond is as vain as fruitless.

All the remnants of theology in which I had been born and bred, all the impressions that Swedenborg had made upon me, now ceased to influence me or to occupy my thoughts. I found that no nation had all the truth in the revelation it regards as divine, and no tribe is so low as to be left without some truth; that every people has had its great teacher; Buddha for one; Confucius for another; Zoroaster for a third; Christ for a fourth. The teachings of all these I found ethically akin so that I could say with Matthew Arnold, one I was so proud to call friend:

¹ *Round the World*, by Andrew Carnegie. New York and London, 1884.

“Children of men! the unseen Power, whose eye
For ever doth accompany mankind
Hath looked on no religion scornfully
That men did ever find.

Which has not taught weak wills how much they can?
Which has not fall'n in the dry heart like rain?
Which has not cried to sunk, self-weary man,
Thou must be born again.”

“The Light of Asia,” by Edwin Arnold, came out at this time and gave me greater delight than any similar poetical work I had recently read. I had just been in India and the book took me there again. My appreciation of it reached the author's ears and later having made his acquaintance in London, he presented me with the original manuscript of the book. It is one of my most precious treasures. Every person who can, even at a sacrifice, make the voyage around the world should do so. All other travel compared to it seems incomplete, gives us merely vague impressions of parts of the whole. When the circle has been completed, you feel on your return that you have seen (of course only in the mass) all there is to be seen. The parts fit into one symmetrical whole and you see humanity wherever it is placed working out a destiny tending to one definite end.

The world traveler who gives careful study to the bibles of the various religions of the East will be well repaid. The conclusion reached will be that the inhabitants of each country consider their own religion the best of all. They rejoice that their lot has been cast where it is, and are disposed to pity the less fortunate condemned to live beyond their sacred limits. The masses of all nations are usually happy, each mass certain that:

“East or West
Home is best.”

Two illustrations of this from our "Round the World" trip may be noted:

Visiting the tapioca workers in the woods near Singapore, we found them busily engaged, the children running about stark naked, the parents clothed in the usual loose rags. Our party attracted great attention. We asked our guide to tell the people that we came from a country where the water in such a pond as that before us would become solid at this season of the year and we could walk upon it and that sometimes it would be so hard horses and wagons crossed wide rivers on the ice. They wondered and asked why we did n't come and live among them. They really were very happy.

Again:

On the way to the North Cape we visited a reindeer camp of the Laplanders. A sailor from the ship was deputed to go with the party. I walked homeward with him, and as we approached the fiord looking down and over to the opposite shore we saw a few straggling huts and one two-story house under construction. What is that new building for? we asked.

"That is to be the home of a man born in Tromso who has made a great deal of money and has now come back to spend his days there. He is very rich."

"You told me you had travelled all over the world. You have seen London, New York, Calcutta, Melbourne, and other places. If you made a fortune like that man what place would you make your home in old age?" His eye glistened as he said:

"Ah, there's no place like Tromso." This is in the arctic circle, six months of night, but he had been born in Tromso. Home, sweet, sweet home!

Among the conditions of life or the laws of nature, some of which seem to us faulty, some apparently unjust and merciless, there are many that amaze us by their beauty and sweetness. Love of home, regardless of its character or location, certainly is one of these. And what a pleasure it is to find that, instead of the

Supreme Being confining revelation to one race or nation, every race has the message best adapted for it in its present stage of development. The Unknown Power has neglected none.

CHAPTER XV

COACHING TRIP AND MARRIAGE

THE Freedom of my native town (Dunfermline) was conferred upon me July 12, 1877, the first Freedom and the greatest honor I ever received. I was overwhelmed. Only two signatures upon the roll came between mine and Sir Walter Scott's, who had been made a Burgess. My parents had seen him one day sketching Dunfermline Abbey and often told me about his appearance. My speech in reply to the Freedom was the subject of much concern. I spoke to my Uncle Bailie Morrison, telling him I just felt like saying so and so, as this really was in my heart. He was an orator himself and he spoke words of wisdom to me then.

“Just say that, Andra; nothing like saying just what you really feel.”

It was a lesson in public speaking which I took to heart. There is one rule I might suggest for youthful orators. When you stand up before an audience reflect that there are before you only men and women. You should speak to them as you speak to other men and women in daily intercourse. If you are not trying to be something different from yourself, there is no more occasion for embarrassment than if you were talking in your office to a party of your own people — none whatever. It is trying to be other than one's self that unmans one. Be your own natural self and go ahead. I once asked Colonel Ingersoll, the most effective public speaker I ever heard, to what he attributed his power. “Avoid elocutionists like snakes,” he said, “and be yourself.”

I spoke again at Dunfermline, July 27, 1881, when my mother laid the foundation stone there of the first free library building I ever gave. My father was one of five weavers who founded the earliest library in the town by opening their own books to their neighbors. Dunfermline named the building I gave "Carnegie Library." The architect asked for my coat of arms. I informed him I had none, but suggested that above the door there might be carved a rising sun shedding its rays with the motto: "Let there be light." This he adopted.

We had come up to Dunfermline with a coaching party. When walking through England in the year 1867 with George Lauder and Harry Phipps I had formed the idea of coaching from Brighton to Inverness with a party of my dearest friends. The time had come for the long-promised trip, and in the spring of 1881 we sailed from New York, a party of eleven, to enjoy one of the happiest excursions of my life. It was one of the holidays from business that kept me young and happy — worth all the medicine in the world.

All the notes I made of the coaching trip were a few lines a day in twopenny pass-books bought before we started. As with "Round the World," I thought that I might some day write a magazine article, or give some account of my excursion for those who accompanied me; but one wintry day I decided that it was scarcely worth while to go down to the New York office, three miles distant, and the question was how I should occupy the spare time. I thought of the coaching trip, and decided to write a few lines just to see how I should get on. The narrative flowed freely, and before the day was over I had written between three and four thousand words. I took up the pleasing task every stormy day

when it was unnecessary for me to visit the office, and in exactly twenty sittings I had finished a book. I handed the notes to Scribner's people and asked them to print a few hundred copies for private circulation. The volume pleased my friends, as "Round the World" had done. Mr. Champlin one day told me that Mr. Scribner had read the book and would like very much to publish it for general circulation upon his own account, subject to a royalty.

The vain author is easily persuaded that what he has done is meritorious, and I consented. [Every year this still nets me a small sum in royalties. And thirty years have gone by, 1912.] The letters I received upon the publication ¹ of it were so numerous and some so gushing that my people saved them and they are now bound together in scrapbook form, to which additions are made from time to time. The number of invalids who have been pleased to write me, stating that the book had brightened their lives, has been gratifying. Its reception in Britain was cordial; the "Spectator" gave it a favorable review. But any merit that the book has comes, I am sure, from the total absence of effort on my part to make an impression. I wrote for my friends; and what one does easily, one does well. I reveled in the writing of the book, as I had in the journey itself.

The year 1886 ended in deep gloom for me. My life as a happy careless young man, with every want looked after, was over. I was left alone in the world. My mother and brother passed away in November, within a few days of each other, while I lay in bed under a severe attack of typhoid fever, unable to move and, perhaps

¹ Published privately in 1882 under the title *Our Coaching Trip, Brighton to Inverness*. Published by the Scribners in 1883 under the title of *An American Four-in-Hand in Britain*.

fortunately, unable to feel the full weight of the catastrophe, being myself face to face with death.

I was the first stricken, upon returning from a visit in the East to our cottage at Cresson Springs on top of the Alleghanies where my mother and I spent our happy summers. I had been quite unwell for a day or two before leaving New York. A physician being summoned, my trouble was pronounced typhoid fever. Professor Dennis was called from New York and he corroborated the diagnosis. An attendant physician and trained nurse were provided at once. Soon after my mother broke down and my brother in Pittsburgh also was reported ill.

I was despaired of, I was so low, and then my whole nature seemed to change. I became reconciled, indulged in pleasing meditations, was without the slightest pain. My mother's and brother's serious condition had not been revealed to me, and when I was informed that both had left me forever it seemed only natural that I should follow them. We had never been separated; why should we be now? But it was decreed otherwise.

I recovered slowly and the future began to occupy my thoughts. There was only one ray of hope and comfort in it. Toward that my thoughts always turned. For several years I had known Miss Louise Whitfield. Her mother permitted her to ride with me in the Central Park. We were both very fond of riding. Other young ladies were on my list. I had fine horses and often rode in the Park and around New York with one or the other of the circle. In the end the others all faded into ordinary beings. Miss Whitfield remained alone as the perfect one beyond any I had met. Finally I began to find and admit to myself that she stood the supreme test I had applied to several fair ones in my time. She alone did so

of all I had ever known. I could recommend young men to apply this test before offering themselves. If they can honestly believe the following lines, as I did, then all is well:

“Full many a lady
 I’ve eyed with best regard: for several virtues
 Have I liked several women, never any
 With so full soul, but some defect in her
 Did quarrel with the noblest grace she owed,
 And put it to the foil; but you, O you,
 So perfect and so peerless are created
 Of every creature’s best.”¹

In my soul I could echo those very words. To-day, after twenty years of life with her, if I could find stronger words I could truthfully use them.

My advances met with indifferent success. She was not without other and younger admirers. My wealth and future plans were against me. I was rich and had everything and she felt she could be of little use or benefit to me. Her ideal was to be the real helpmeet of a young, struggling man to whom she could and would be indispensable, as her mother had been to her father. The care of her own family had largely fallen upon her after her father’s death when she was twenty-one. She was now twenty-eight; her views of life were formed. At times she seemed more favorable and we corresponded. Once, however, she returned my letters saying she felt she must put aside all thought of accepting me.

Professor and Mrs. Dennis took me from Cresson to their own home in New York, as soon as I could be removed, and I lay there some time under the former’s personal supervision. Miss Whitfield called to see me, for I had written her the first words from Cresson I was

¹ Ferdinand to Miranda in *The Tempest*.

able to write. She saw now that I needed her. I was left alone in the world. Now she could be in every sense the "helpmeet." Both her heart and head were now willing and the day was fixed. We were married in New York April 22, 1887, and sailed for our honeymoon which was passed on the Isle of Wight.

Her delight was intense in finding the wild flowers. She had read of Wandering Willie, Heartsease, Forget-me-nots, the Primrose, Wild Thyme, and the whole list of homely names that had been to her only names till now. Everything charmed her. Uncle Lauder and one of my cousins came down from Scotland and visited us, and then we soon followed to the residence at Kilgraston they had selected for us in which to spend the summer. Scotland captured her. There was no doubt about that. Her girlish reading had been of Scotland — Scott's novels and "Scottish Chiefs" being her favorites. She soon became more Scotch than I. All this was fulfilling my fondest dreams.

We spent some days in Dunfermline and enjoyed them much. The haunts and incidents of my boyhood were visited and recited to her by all and sundry. She got nothing but flattering accounts of her husband which gave me a good start with her.

I was presented with the Freedom of Edinburgh as we passed northward — Lord Rosebery making the speech. The crowd in Edinburgh was great. I addressed the working-men in the largest hall and received a present from them as did Mrs. Carnegie also — a brooch she values highly. She heard and saw the pipers in all their glory and begged there should be one at our home — a piper to walk around and waken us in the morning and also to play us in to dinner. American as she is to the core, and Connecticut Puritan at that, she declared

that if condemned to live upon a lonely island and allowed to choose only one musical instrument, it would be the pipes. The piper was secured quickly enough. One called and presented credentials from Cluny McPherson. We engaged him and were preceded by him playing the pipes as we entered our Kilgraston house.

We enjoyed Kilgraston, although Mrs. Carnegie still longed for a wilder and more Highland home. Matthew Arnold visited us, as did Mr. and Mrs. Blaine, Senator and Mrs. Eugene Hale, and many friends.¹ Mrs. Carnegie would have my relatives up from Dunfermline, especially the older uncles and aunties. She charmed every one. They expressed their surprise to me that she ever married me, but I told them I was equally surprised. The match had evidently been predestined.

We took our piper with us when we returned to New York, and also our housekeeper and some of the servants. Mrs. Nicoll remains with us still and is now, after twenty years' faithful service, as a member of the family. George Irvine, our butler, came to us a year later and is also as one of us. Maggie Anderson, one of the

¹ John Hay, writing to his friend Henry Adams under date of London, August 25, 1887, has the following to say about the party at Kilgraston: "After that we went to Andy Carnegie in Perthshire, who is keeping his honeymoon, having just married a pretty girl. . . . The house is thronged with visitors — sixteen when we came away — we merely stayed three days: the others were there for a fortnight. Among them were your friends Blaine and Hale of Maine. Carnegie likes it so well he is going to do it every summer and is looking at all the great estates in the County with a view of renting or purchasing. We went with him one day to Dupplin Castle, where I saw the most beautiful trees I ever beheld in my wandering life. The old Earl of — is miserably poor — not able to buy a bottle of seltzer — with an estate worth millions in the hands of his creditors, and sure to be sold one of these days to some enterprising Yankee or British Buttonmaker. I wish you or Carnegie would buy it. I would visit you frequently." (Thayer, *Life and Letters of John Hay*, vol. II, p. 74.)

servants, is the same. They are devoted people, of high character and true loyalty.¹

The next year we were offered and took Cluny Castle. Our piper was just the man to tell us all about it. He had been born and bred there and perhaps influenced our selection of that residence where we spent several summers.

On March 30, 1897, there came to us our daughter. As I first gazed upon her Mrs. Carnegie said,

“Her name is Margaret after your mother. Now one request I have to make.”

“What is it, Lou?”

“We must get a summer home since this little one has been given us. We cannot rent one and be obliged to go in and go out at a certain date. It should be our home.”

“Yes,” I agreed.

“I make only one condition.”

“What is that?” I asked.

“It must be in the Highlands of Scotland.”

“Bless you,” was my reply. “That suits me. You know I have to keep out of the sun’s rays, and where can we do that so surely as among the heather? I’ll be a committee of one to inquire and report.”

Skibo Castle was the result.

It is now twenty years since Mrs. Carnegie entered and changed my life, a few months after the passing of my mother and only brother left me alone in the world. My life has been made so happy by her that I cannot imagine myself living without her guardianship. I thought I knew her when she stood Ferdinand’s test,² but it was only the surface of her qualities I had seen

¹ “No man is a true gentleman who does not inspire the affection and devotion of his servants.” (*Problems of To-day*, by Andrew Carnegie. New York, 1908, p. 59.)

² The reference is to the quotation from *The Tempest* on page 214.

and felt. Of their purity, holiness, wisdom, I had not sounded the depth. In every emergency of our active, changing, and in later years somewhat public life, in all her relations with others, including my family and her own, she has proved the diplomat and peace-maker. Peace and good-will attend her footsteps wherever her blessed influence extends. In the rare instances demanding heroic action it is she who first realizes this and plays the part.

The Peace-Maker has never had a quarrel in all her life, not even with a schoolmate, and there does not live a soul upon the earth who has met her who has the slightest cause to complain of neglect. Not that she does not welcome the best and gently avoid the undesirable — none is more fastidious than she — but neither rank, wealth, nor social position affects her one iota. She is incapable of acting or speaking rudely; all is in perfect good taste. Still, she never lowers the standard. Her intimates are only of the best. She is always thinking how she can do good to those around her — planning for this one and that in case of need and making such judicious arrangements or presents as surprise those coöperating with her.

I cannot imagine myself going through these twenty years without her. Nor can I endure the thought of living after her. In the course of nature I have not that to meet; but then the thought of what will be cast upon her, a woman left alone with so much requiring attention and needing a man to decide, gives me intense pain and I sometimes wish I had this to endure for her. But then she will have our blessed daughter in her life and perhaps that will keep her patient. Besides, Margaret needs her more than she does her father.

Why, oh, why, are we compelled to leave the heaven

we have found on earth and go we know not where! For
I can say with Jessica:

“It is very meet
The Lord Bassanio live an upright life;
For, having such a blessing in his lady,
He finds the joys of heaven here on earth.”

CHAPTER XVI

MILLS AND THE MEN

THE one vital lesson in iron and steel that I learned in Britain was the necessity for owning raw materials and finishing the completed article ready for its purpose. Having solved the steel-rail problem at the Edgar Thomson Works, we soon proceeded to the next step. The difficulties and uncertainties of obtaining regular supplies of pig iron compelled us to begin the erection of blast furnaces. Three of these were built, one, however, being a reconstructed blast furnace purchased from the Escanaba Iron Company, with which Mr. Klotman had been connected. As is usual in such cases, the furnace cost us as much as a new one, and it never was as good. There is nothing so unsatisfactory as purchases of inferior plants.

But although this purchase was a mistake, directly considered, it proved, at a subsequent date, a source of great profit because it gave us a furnace small enough for the manufacture of spiegel and, at a later date, of ferro-manganese. We were the second firm in the United States to manufacture our own spiegel, and the first, and for years the only, firm in America that made ferro-manganese. We had been dependent upon foreigners for a supply of this indispensable article, paying as high as eighty dollars a ton for it. The manager of our blast furnaces, Mr. Julian Kennedy, is entitled to the credit of suggesting that with the ores within reach we could make ferro-manganese in our small furnace. The experiment was worth trying and the result was a great success. We were able to supply the entire American de-

mand and prices fell from eighty to fifty dollars per ton as a consequence.

While testing the ores of Virginia we found that these were being quietly purchased by Europeans for ferromanganese, the owners of the mine being led to believe that they were used for other purposes. Our Mr. Phipps at once set about purchasing that mine. He obtained an option from the owners, who had neither capital nor skill to work it efficiently. A high price was paid to them for their interests, and (with one of them, Mr. Davis, a very able young man) we became the owners, but not until a thorough investigation of the mine had proved that there was enough of manganese ore in sight to repay us. All this was done with speed; not a day was lost when the discovery was made. And here lies the great advantage of a partnership over a corporation. The president of the latter would have had to consult a board of directors and wait several weeks and perhaps months for their decision. By that time the mine would probably have become the property of others.

We continued to develop our blast-furnace plant, every new one being a great improvement upon the preceding, until at last we thought we had arrived at a standard furnace. Minor improvements would no doubt be made, but so far as we could see we had a perfect plant and our capacity was then fifty thousand tons per month of pig iron.

The blast-furnace department was no sooner added than another step was seen to be essential to our independence and success. The supply of superior coke was a fixed quantity — the Connellsville field being defined. We found that we could not get on without a supply of the fuel essential to the smelting of pig iron; and a very thorough investigation of the question led us

to the conclusion that the Frick Coke Company had not only the best coal and coke property, but that it had in Mr. Frick himself a man with a positive genius for its management. He had proved his ability by starting as a poor railway clerk and succeeding. In 1882 we purchased one half of the stock of this company, and by subsequent purchases from other holders we became owners of the great bulk of the shares.

There now remained to be acquired only the supply of iron stone. If we could obtain this we should be in the position occupied by only two or three of the European concerns. We thought at one time we had succeeded in discovering in Pennsylvania this last remaining link in the chain. We were misled, however, in our investment in the Tyrone region, and lost considerable sums as the result of our attempts to mine and use the ores of that section. They promised well at the edges of the mines, where the action of the weather for ages had washed away impurities and enriched the ore, but when we penetrated a small distance they proved too "lean" to work.

Our chemist, Mr. Prousser, was then sent to a Pennsylvania furnace among the hills which we had leased, with instructions to analyze all the materials brought to him from the district, and to encourage people to bring him specimens of minerals. A striking example of the awe inspired by the chemist in those days was that only with great difficulty could he obtain a man or a boy to assist him in the laboratory. He was suspected of illicit intercourse with the Powers of Evil when he undertook to tell by his suspicious-looking apparatus what a stone contained. I believe that at last we had to send him a man from our office at Pittsburgh.

One day he sent us a report of analyses of ore re-

markable for the absence of phosphorus. It was really an ore suitable for making Bessemer steel. Such a discovery attracted our attention at once. The owner of the property was Moses Thompson, a rich farmer, proprietor of seven thousand acres of the most beautiful agricultural land in Center County, Pennsylvania. An appointment was made to meet him upon the ground from which the ore had been obtained. We found the mine had been worked for a charcoal blast furnace fifty or sixty years before, but it had not borne a good reputation then, the reason no doubt being that its product was so much purer than other ores that the same amount of flux used caused trouble in smelting. It was so good it was good for nothing in those days of old.

We finally obtained the right to take the mine over at any time within six months, and we therefore began the work of examination, which every purchaser of mineral property should make most carefully. We ran lines across the hillside fifty feet apart, with cross-lines at distances of a hundred feet apart, and at each point of intersection we put a shaft down through the ore. I believe there were eighty such shafts in all and the ore was analyzed at every few feet of depth, so that before we paid over the hundred thousand dollars asked we knew exactly what there was of ore. The result hoped for was more than realized. Through the ability of my cousin and partner, Mr. Lauder, the cost of mining and washing was reduced to a low figure, and the Scotia ore made good all the losses we had incurred in the other mines, paid for itself, and left a profit besides. In this case, at least, we snatched victory from the jaws of defeat. We trod upon sure ground with the chemist as our guide. It will be seen that we were determined to get raw materials and were active in the pursuit.

We had lost and won, but the escapes in business affairs are sometimes very narrow. Driving with Mr. Phipps from the mills one day we passed the National Trust Company office on Penn Street, Pittsburgh. I noticed the large gilt letters across the window, "Stockholders individually liable." That very morning in looking over a statement of our affairs I had noticed twenty shares "National Trust Company" on the list of assets. I said to Harry:

"If this is the concern we own shares in, won't you please sell them before you return to the office this afternoon?"

He saw no need for haste. It would be done in good time.

"No, Harry, oblige me by doing it instantly."

He did so and had it transferred. Fortunate, indeed, was this, for in a short time the bank failed with an enormous deficit. My cousin, Mr. Morris, was among the ruined shareholders. Many others met the same fate. Times were panicky, and had we been individually liable for all the debts of the National Trust Company our credit would inevitably have been seriously imperiled. It was a narrow escape. And with only twenty shares (two thousand dollars' worth of stock), taken to oblige friends who wished our name on their list of shareholders! The lesson was not lost. The sound rule in business is that you may give money freely when you have a surplus, but your name never — neither as endorser nor as member of a corporation with individual liability. A trifling investment of a few thousand dollars, a mere trifle—yes, but a trifle possessed of deadly explosive power.

The rapid substitution of steel for iron in the immediate future had become obvious to us. Even in our

Keystone Bridge Works, steel was being used more and more in place of iron. King Iron was about to be deposed by the new King Steel, and we were becoming more and more dependent upon it. We had about concluded in 1886 to build alongside of the Edgar Thomson Mills new works for the manufacture of miscellaneous shapes of steel when it was suggested to us that the five or six leading manufacturers of Pittsburgh, who had combined to build steel mills at Homestead, were willing to sell their mills to us.

These works had been built originally by a syndicate of manufacturers, with the view of obtaining the necessary supplies of steel which they required in their various concerns, but the steel-rail business, being then in one of its booms, they had been tempted to change plans and construct a steel-rail mill. They had been able to make rails as long as prices remained high, but, as the mills had not been specially designed for this purpose, they were without the indispensable blast furnaces for the supply of pig iron, and had no coke lands for the supply of fuel. They were in no condition to compete with us.

It was advantageous for us to purchase these works. I felt there was only one way we could deal with their owners, and that was to propose a consolidation with Carnegie Brothers & Co. We offered to do so on equal terms, every dollar they had invested to rank against our dollars. Upon this basis the negotiation was promptly concluded. We, however, gave to all parties the option to take cash, and most fortunately for us, all elected to do so except Mr. George Singer, who continued with us to his and our entire satisfaction. Mr. Singer told us afterwards that his associates had been greatly exercised as to how they could meet the proposition I was

to lay before them. They were much afraid of being overreached but when I proposed equality all around, dollar for dollar, they were speechless.

This purchase led to the reconstruction of all our firms. The new firm of Carnegie, Phipps & Co. was organized in 1886 to run the Homestead Mills. The firm of Wilson, Walker & Co. was embraced in the firm of Carnegie, Phipps & Co., Mr. Walker being elected chairman. My brother was chairman of Carnegie Brothers & Co. and at the head of all. A further extension of our business was the establishing of the Hartman Steel Works at Beaver Falls, designed to work into a hundred various forms the product of the Homestead Mills. So now we made almost everything in steel from a wire nail up to a twenty-inch steel girder, and it was then not thought probable that we should enter into any new field.

It may be interesting here to note the progress of our works during the decade 1888 to 1897. In 1888 we had twenty millions of dollars invested; in 1897 more than double or over forty-five millions. The 600,000 tons of pig iron we made per annum in 1888 was trebled; we made nearly 2,000,000. Our product of iron and steel was in 1888, say, 2000 tons per day; it grew to exceed 6000 tons. Our coke works then embraced about 5000 ovens; they were trebled in number, and our capacity, then 6000 tons, became 18,000 tons per day. Our Frick Coke Company in 1897 had 42,000 acres of coal land, more than two thirds of the true Connellsville vein. Ten years hence increased production may be found to have been equally rapid. It may be accepted as an axiom that a manufacturing concern in a growing country like ours begins to decay when it stops extending.

To make a ton of steel one and a half tons of iron

stone has to be mined, transported by rail a hundred miles to the Lakes, carried by boat hundreds of miles, transferred to cars, transported by rail one hundred and fifty miles to Pittsburgh; one and a half tons of coal must be mined and manufactured into coke and carried fifty-odd miles by rail; and one ton of limestone mined and carried one hundred and fifty miles to Pittsburgh. How then could steel be manufactured and sold without loss at three pounds for two cents? This, I confess, seemed to me incredible, and little less than miraculous, but it was so.

America is soon to change from being the dearest steel manufacturing country to the cheapest. Already the shipyards of Belfast are our customers. This is but the beginning. Under present conditions America can produce steel as cheaply as any other land, notwithstanding its higher-priced labor. There is no labor so cheap as the dearest in the mechanical field, provided it is free, contented, zealous, and reaping reward as it renders service. And here America leads.

One great advantage which America will have in competing in the markets of the world is that her manufacturers will have the best home market. Upon this they can depend for a return upon capital, and the surplus product can be exported with advantage, even when the prices received for it do not more than cover actual cost, provided the exports be charged with their proportion of all expenses. The nation that has the best home market, especially if products are standardized, as ours are, can soon outsell the foreign producer. The phrase I used in Britain in this connection was: "The Law of the Surplus." It afterward came into general use in commercial discussions.

CHAPTER XVII

THE HOMESTEAD STRIKE

WHILE upon the subject of our manufacturing interests, I may record that on July 1, 1892, during my absence in the Highlands of Scotland, there occurred the one really serious quarrel with our workmen in our whole history. For twenty-six years I had been actively in charge of the relations between ourselves and our men, and it was the pride of my life to think how delightfully satisfactory these had been and were. I hope I fully deserved what my chief partner, Mr. Phipps, said in his letter to the "New York Herald," January 30, 1904, in reply to one who had declared I had remained abroad during the Homestead strike, instead of flying back to support my partners. It was to the effect that "I was always disposed to yield to the demands of the men, however unreasonable"; hence one or two of my partners did not wish me to return.¹ Taking no account of the reward that comes from feel-

¹ The full statement of Mr. Phipps is as follows:

Question: "It was stated that Mr. Carnegie acted in a cowardly manner in not returning to America from Scotland and being present when the strike was in progress at Homestead."

Answer: "When Mr. Carnegie heard of the trouble at Homestead he immediately wired that he would take the first ship for America, but his partners begged him not to appear, as they were of the opinion that the welfare of the Company required that he should not be in this country at the time. They knew of his extreme disposition to always grant the demands of labor, however unreasonable."

"I have never known of any one interested in the business to make any complaint about Mr. Carnegie's absence at that time, but all the partners rejoiced that they were permitted to manage the affair in their own way." (Henry Phipps in the *New York Herald*, January 30, 1904.)

ing that you and your employees are friends and judging only from economical results, (I believe that higher wages to men who respect their employers and are happy and contented are a good investment, yielding, indeed, big dividends.)

The manufacture of steel was revolutionized by the Bessemer open-hearth and basic inventions. The machinery hitherto employed had become obsolete, and our firm, recognizing this, spent several millions at Homestead reconstructing and enlarging the works. The new machinery made about sixty per cent more steel than the old. Two hundred and eighteen tonnage men (that is, men who were paid by the ton of steel produced) were working under a three years' contract, part of the last year being with the new machinery. Thus their earnings had increased almost sixty per cent before the end of the contract.

The firm offered to divide this sixty per cent with them in the new scale to be made thereafter. That is to say, the earnings of the men would have been thirty per cent greater than under the old scale and the other thirty per cent would have gone to the firm to recompense it for its outlay. The work of the men would not have been much harder than it had been hitherto, as the improved machinery did the work. This was not only fair and liberal, it was generous, and under ordinary circumstances would have been accepted by the men with thanks. But the firm was then engaged in making armor for the United States Government, which we had declined twice to manufacture and which was urgently needed. It had also the contract to furnish material for the Chicago Exhibition. Some of the leaders of the men, knowing these conditions, insisted upon demanding the whole sixty per cent, thinking the firm

would be compelled to give it. The firm could not agree, nor should it have agreed to such an attempt as this to take it by the throat and say, "Stand and deliver." It very rightly declined. Had I been at home nothing would have induced me to yield to this unfair attempt to extort.

Up to this point all had been right enough. The policy I had pursued in cases of difference with our men was that of patiently waiting, reasoning with them, and showing them that their demands were unfair; but never attempting to employ new men in their places — never. The superintendent of Homestead, however, was assured by the three thousand men who were not concerned in the dispute that they could run the works, and were anxious to rid themselves of the two hundred and eighteen men who had banded themselves into a union and into which they had hitherto refused to admit those in other departments — only the "heaters" and "rollers" of steel being eligible.

My partners were misled by this superintendent, who was himself misled. He had not had great experience in such affairs, having recently been promoted from a subordinate position. The unjust demands of the few union men, and the opinion of the three thousand non-union men that they were unjust, very naturally led him into thinking there would be no trouble and that the workmen would do as they had promised. There were many men among the three thousand who could take, and wished to take, the places of the two hundred and eighteen — at least so it was reported to me.

It is easy to look back and say that the vital step of opening the works should never have been taken. All the firm had to do was to say to the men: "There is a labor dispute here and you must settle it between your-

selves. The firm has made you a most liberal offer. The works will run when the dispute is adjusted, and not till then. Meanwhile your places remain open to you." Or, it might have been well if the superintendent had said to the three thousand men, "All right, if you will come and run the works without protection," thus throwing upon them the responsibility of protecting themselves — three thousand men as against two hundred and eighteen. Instead of this it was thought advisable (as an additional precaution by the state officials, I understand) to have the sheriff with guards to protect the thousands against the hundreds. The leaders of the latter were violent and aggressive men; they had guns and pistols, and, as was soon proved, were able to intimidate the thousands.

I quote what I once laid down in writing as our rule: "My idea is that the Company should be known as determined to let the men at any works stop work; that it will confer freely with them and wait patiently until they decide to return to work, never thinking of trying new men — never." The best men as men, and the best workmen, are not walking the streets looking for work. Only the inferior class as a rule is idle. The kind of men we desired are rarely allowed to lose their jobs, even in dull times. It is impossible to get new men to run successfully the complicated machinery of a modern steel plant. The attempt to put in new men converted the thousands of old men who desired to work, into lukewarm supporters of our policy, for workmen can always be relied upon to resent the employment of new men. Who can blame them?

If I had been at home, however, I might have been persuaded to open the works, as the superintendent desired, to test whether our old men would go to work as

they had promised. But it should be noted that the works were not opened at first by my partners for new men. On the contrary, it was, as I was informed upon my return, at the wish of the thousands of our old men that they were opened. This is a vital point. My partners were in no way blamable for making the trial so recommended by the superintendent. Our rule never to employ new men, but to wait for the old to return, had not been violated so far. In regard to the second opening of the works, after the strikers had shot the sheriff's officers, it is also easy to look back and say, "How much better had the works been closed until the old men voted to return"; but the Governor of Pennsylvania, with eight thousand troops, had meanwhile taken charge of the situation.

I was traveling in the Highlands of Scotland when the trouble arose, and did not hear of it until two days after. Nothing I have ever had to meet in all my life, before or since, wounded me so deeply. No pangs remain of any wound received in my business career save that of Homestead. It was so unnecessary. The men were outrageously wrong. The strikers, with the new machinery, would have made from four to nine dollars a day under the new scale — thirty per cent more than they were making with the old machinery. While in Scotland I received the following cable from the officers of the union of our workmen:

"Kind master, tell us what you wish us to do and we shall do it for you."

This was most touching, but, alas, too late. The mischief was done, the works were in the hands of the Governor; it was too late.

I received, while abroad, numerous kind messages from friends conversant with the circumstances, who

imagined my unhappiness. The following from Mr. Gladstone was greatly appreciated:

MY DEAR MR. CARNEGIE,

My wife has long ago offered her thanks, with my own, for your most kind congratulations. But I do not forget that you have been suffering yourself from anxieties, and have been exposed to imputations in connection with your gallant efforts to direct rich men into a course of action more enlightened than that which they usually follow. I wish I could relieve you from these imputations of journalists, too often rash, conceited or censorious, rancorous, ill-natured. I wish to do the little, the very little, that is in my power, which is simply to say how sure I am that no one who knows you will be prompted by the unfortunate occurrences across the water (of which manifestly we cannot know the exact merits) to qualify in the slightest degree either his confidence in your generous views or his admiration of the good and great work you have already done.

Wealth is at present like a monster threatening to swallow up the moral life of man; you by precept and by example have been teaching him to disgorge. I for one thank you.

Believe me

Very faithfully yours

(Signed) W. E. GLADSTONE

I insert this as giving proof, if proof were needed, of Mr. Gladstone's large, sympathetic nature, alive and sensitive to everything transpiring of a nature to arouse sympathy — Neapolitans, Greeks, and Bulgarians one day, or a stricken friend the next.

The general public, of course, did not know that I was in Scotland and knew nothing of the initial trouble at Homestead. Workmen had been killed at the Carnegie Works, of which I was the controlling owner. That was sufficient to make my name a by-word for years. But at last some satisfaction came. Senator Hanna was

president of the National Civic Federation, a body composed of capitalists and workmen which exerted a benign influence over both employers and employed, and the Honorable Oscar Straus, who was then vice-president, invited me to dine at his house and meet the officials of the Federation. Before the date appointed Mark Hanna, its president, my lifelong friend and former agent at Cleveland, had suddenly passed away. I attended the dinner. At its close Mr. Straus arose and said that the question of a successor to Mr. Hanna had been considered, and he had to report that every labor organization heard from had favored me for the position. There were present several of the labor leaders who, one after another, arose and corroborated Mr. Straus.

I do not remember so complete a surprise and, I shall confess, one so grateful to me. That I deserved well from labor I felt. I knew myself to be warmly sympathetic with the working-man, and also that I had the regard of our own workmen; but throughout the country it was naturally the reverse, owing to the Homestead riot. The Carnegie Works meant to the public Mr. Carnegie's war upon labor's just earnings.

I arose to explain to the officials at the Straus dinner that I could not possibly accept the great honor, because I had to escape the heat of summer and the head of the Federation must be on hand at all seasons ready to grapple with an outbreak, should one occur. My embarrassment was great, but I managed to let all understand that this was felt to be the most welcome tribute I could have received — a balm to the hurt mind. I closed by saying that if elected to my lamented friend's place upon the Executive Committee I should esteem it an honor to serve. To this position I was elected by unanimous vote. I was thus relieved from the feeling that I

was considered responsible by labor generally, for the Homestead riot and the killing of workmen.

I owe this vindication to Mr. Oscar Straus, who had read my articles and speeches of early days upon labor questions, and who had quoted these frequently to workmen. The two labor leaders of the Amalgamated Union, White and Schaeffer from Pittsburgh, who were at this dinner, were also able and anxious to enlighten their fellow-workmen members of the Board as to my record with labor, and did not fail to do so.

A mass meeting of the workmen and their wives was afterwards held in the Library Hall at Pittsburgh to greet me, and I addressed them from both my head and my heart. The one sentence I remember, and always shall, was to the effect that capital, labor, and employer were a three-legged stool, none before or after the others, all equally indispensable. Then came the cordial hand-shaking and all was well. Having thus rejoined hands and hearts with our employees and their wives, I felt that a great weight had been effectually lifted, but I had had a terrible experience although thousands of miles from the scene.

An incident flowing from the Homestead trouble is told by my friend, Professor John C. Van Dyke, of Rutgers College.

In the spring of 1900, I went up from Guaymas, on the Gulf of California, to the ranch of a friend at La Noria Verde, thinking to have a week's shooting in the mountains of Sonora. The ranch was far enough removed from civilization, and I had expected meeting there only a few Mexicans and many Yaqui Indians, but much to my surprise I found an English-speaking man, who proved to be an American. I did not have long to wait in order to find out what brought him there, for he was very lonesome and disposed to talk. His name was McLuckie, and up to 1892 he had been a skilled

mechanic in the employ of the Carnegie Steel Works at Homestead. He was what was called a "top hand," received large wages, was married, and at that time had a home and considerable property. In addition, he had been honored by his fellow-townsmen and had been made burgomaster of Homestead.

When the strike of 1892 came McLuckie naturally sided with the strikers, and in his capacity as burgomaster gave the order to arrest the Pinkerton detectives who had come to Homestead by steamer to protect the works and preserve order. He believed he was fully justified in doing this. As he explained it to me, the detectives were an armed force invading his bailiwick, and he had a right to arrest and disarm them. The order led to bloodshed, and the conflict was begun in real earnest.

The story of the strike is, of course, well known to all. The strikers were finally defeated. As for McLuckie, he was indicted for murder, riot, treason, and I know not what other offenses. He was compelled to flee from the State, was wounded, starved, pursued by the officers of the law, and obliged to go into hiding until the storm blew over. Then he found that he was blacklisted by all the steel men in the United States and could not get employment anywhere. His money was gone, and, as a final blow, his wife died and his home was broken up. After many vicissitudes he resolved to go to Mexico, and at the time I met him he was trying to get employment in the mines about fifteen miles from La Noria Verde. But he was too good a mechanic for the Mexicans, who required in mining the cheapest kind of unskilled peon labor. He could get nothing to do and had no money. He was literally down to his last copper. Naturally, as he told the story of his misfortunes, I felt very sorry for him, especially as he was a most intelligent person and did no unnecessary whining about his troubles.

I do not think I told him at the time that I knew Mr. Carnegie and had been with him at Cluny in Scotland shortly after the Homestead strike, nor that I knew from Mr. Carnegie the other side of the story. But McLuckie was rather careful not to blame Mr. Carnegie, saying to me several times that if "Andy" had been there the trouble would never have

arisen. He seemed to think "the boys" could get on very well with "Andy" but not so well with some of his partners.

I was at the ranch for a week and saw a good deal of McLuckie in the evenings. When I left there, I went directly to Tucson, Arizona, and from there I had occasion to write to Mr. Carnegie, and in the letter I told him about meeting with McLuckie. I added that I felt very sorry for the man and thought he had been treated rather badly. Mr. Carnegie answered at once, and on the margin of the letter wrote in lead pencil: "Give McLuckie all the money he wants, but don't mention my name." I wrote to McLuckie immediately, offering him what money he needed, mentioning no sum, but giving him to understand that it would be sufficient to put him on his feet again. He declined it. He said he would fight it out and make his own way, which was the right-enough American spirit. I could not help but admire it in him.

As I remember now, I spoke about him later to a friend, Mr. J. A. Naugle, the general manager of the Sonora Railway. At any rate, McLuckie got a job with the railway at driving wells, and made a great success of it. A year later, or perhaps it was in the autumn of the same year, I again met him at Guaymas, where he was superintending some repairs on his machinery at the railway shops. He was much changed for the better, seemed happy, and to add to his contentment, had taken unto himself a Mexican wife. And now that his sky was cleared, I was anxious to tell him the truth about my offer that he might not think unjustly of those who had been compelled to fight him. So before I left him, I said,

"McLuckie, I want you to know now that the money I offered you was not mine. That was Andrew Carnegie's money. It was his offer, made through me."

McLuckie was fairly stunned, and all he could say was:

"Well, that was damned white of Andy, was n't it?"

I would rather risk that verdict of McLuckie's as a passport to Paradise than all the theological dogmas invented by man. I knew McLuckie well as a good fellow. It was said his property in Homestead was worth thirty thousand dollars. He was under arrest for the shooting

of the police officers because he was the burgomaster, and also the chairman of the Men's Committee of Homestead. He had to fly, leaving all behind him.

After this story got into print, the following skit appeared in the newspapers because I had declared I'd rather have McLuckie's few words on my tombstone than any other inscription, for it indicated I had been kind to one of our workmen:

"JUST BY THE WAY"

SANDY ON ANDY

Oh! hae ye heard what Andy's spiered to hae upo' his tomb,
When a' his gowd is gie'n awa an' Death has sealed his doom!
Nae Scriptur' line wi' tribute fine that dealers aye keep handy,
But juist this irreleegious screed — "That's damned white of
Andy!"

The gude Scot laughs at epitaphs that are but meant to flatter,
But never ane was sae profane, an' that's nae laughin' matter.
Yet, gin he gies his siller all awa, mon, he's a dandy,
An' we'll admit his right to it, for "That's damned white of Andy!"

There's not to be a "big, big D," an' then a dash thereafter,
For Andy would na spoil the word by trying to make it safter;
He's not the lad to juggle terms, or soothing speech to bandy.
A blunt, straightforward mon is he — an' "That's damned white of
Andy!"

Sae when he's deid, we'll gie good heed, an' write it as he askit;
We'll carve it on his headstone an' we'll stamp it on his casket:
"Wha dees rich, dees disgraced," says he, an' sure's my name is
Sandy,

'T wull be nae rich man that he'll dee — an' "That's damned white
of Andy!"¹

¹ Mr. Carnegie was very fond of this story because, being human, he was fond of applause and, being a Robert Burns radical, he preferred the applause of Labor to that of Rank. That one of his men thought he had acted "white" pleased him beyond measure. He stopped short with that tribute

and never asked, never knew, why or how the story happened to be told. Perhaps this is the time and place to tell the story of the story.

Sometime in 1901 over a dinner table in New York, I heard a statement regarding Mr. Carnegie that he never gave anything without the requirement that his name be attached to the gift. The remark came from a prominent man who should have known he was talking nonsense. It rather angered me. I denied the statement, saying that I, personally, had given away money for Mr. Carnegie that only he and I knew about, and that he had given many thousands in this way through others. By way of illustration I told the story about McLuckie. A Pittsburgh man at the table carried the story back to Pittsburgh, told it there, and it finally got into the newspapers. Of course the argument of the story, namely, that Mr. Carnegie sometimes gave without publicity, was lost sight of and only the refrain, "It was damned white of Andy," remained. Mr. Carnegie never knew that there was an argument. He liked the refrain. Some years afterward at Skibo (1906), when he was writing this Autobiography, he asked me if I would not write out the story for him. I did so. I am now glad of the chance to write an explanatory note about it. . . . *John C. Van Dyke.*

CHAPTER XVIII

PROBLEMS OF LABOR

I SHOULD like to record here some of the labor disputes I have had to deal with, as these may point a moral to both capital and labor.

The workers at the blast furnaces in our steel-rail works once sent in a "round-robin" stating that unless the firm gave them an advance of wages by Monday afternoon at four o'clock they would leave the furnaces. Now, the scale upon which these men had agreed to work did not lapse until the end of the year, several months off. I felt if men would break an agreement there was no use in making a second agreement with them, but nevertheless I took the night train from New York and was at the works early in the morning.

I asked the superintendent to call together the three committees which governed the works — not only the blast-furnace committee that was alone involved, but the mill and the converting works committees as well. They appeared and, of course, were received by me with great courtesy, not because it was good policy to be courteous, but because I have always enjoyed meeting our men. I am bound to say that the more I know of working-men the higher I rate their virtues. But it is with them as Barrie says with women: "Dootless the Lord made a' things weel, but he left some mighty queer kinks in women." They have their prejudices and "red rags," which have to be respected, for the main root of trouble is ignorance, not hostility. The committee sat in a semicircle before me, all with their hats off, of

course, as mine was also; and really there was the appearance of a model assembly.

Addressing the chairman of the mill committee, I said:

“Mr. Mackay” (he was an old gentleman and wore spectacles), “have we an agreement with you covering the remainder of the year?”

Taking the spectacles off slowly, and holding them in his hand, he said:

“Yes, sir, you have, Mr. Carnegie, and you have n’t got enough money to make us break it either.”

“There spoke the true American workman,” I said. “I am proud of you.”

“Mr. Johnson” (who was chairman of the rail converters’ committee), “have we a similar agreement with you?”

Mr. Johnson was a small, spare man; he spoke very deliberately:

“Mr. Carnegie, when an agreement is presented to me to sign, I read it carefully, and if it don’t suit me, I don’t sign it, and if it does suit me, I do sign it, and when I sign it I keep it.”

“There again speaks the self-respecting American workman,” I said.

Turning now to the chairman of the blast-furnaces committee, an Irishman named Kelly, I addressed the same question to him:

“Mr. Kelly, have we an agreement with you covering the remainder of this year?”

Mr. Kelly answered that he could n’t say exactly. There was a paper sent round and he signed it, but did n’t read it over carefully, and did n’t understand just what was in it. At this moment our superintendent, Captain Jones, excellent manager, but impulsive, exclaimed abruptly:

“Now, Mr. Kelly, you know I read that over twice and discussed it with you!”

“Order, order, Captain! Mr. Kelly is entitled to give his explanation. I sign many a paper that I do not read — documents our lawyers and partners present to me to sign. Mr. Kelly states that he signed this document under such circumstances and his statement must be received. But, Mr. Kelly, I have always found that the best way is to carry out the provisions of the agreement one signs carelessly and resolve to be more careful next time. Would it not be better for you to continue four months longer under this agreement, and then, when you sign the next one, see that you understand it?”

There was no answer to this, and I arose and said:

“Gentlemen of the Blast-Furnace Committee, you have threatened our firm that you will break your agreement and that you will leave these blast furnaces (which means disaster) unless you get a favorable answer to your threat by four o’clock to-day. It is not yet three, but your answer is ready. You may leave the blast furnaces. The grass will grow around them before we yield to your threat. The worst day that labor has ever seen in this world is that day in which it dishonors itself by breaking its agreement. You have your answer.”

The committee filed out slowly and there was silence among the partners. A stranger who was coming in on business met the committee in the passage and he reported:

“As I came in, a man wearing spectacles pushed up alongside of an Irishman he called Kelly, and he said: ‘You fellows might just as well understand it now as later. There’s to be no d——d monkeying round these works.’”

That meant business. Later we heard from one of our

clerks what took place at the furnaces. Kelly and his committee marched down to them. Of course, the men were waiting and watching for the committee and a crowd had gathered. When the furnaces were reached, Kelly called out to them:

“Get to work, you spalpeens, what are you doing here? Begorra, the little boss just hit from the shoulder. He won’t fight, but he says he has sat down, and begorra, we all know he’ll be a skeleton afore he rises. Get to work, ye spalpeens.”

The Irish and Scotch-Irish are queer, but the easiest and best fellows to get on with, if you only know how. That man Kelly was my stanch friend and admirer ever afterward, and he was before that one of our most violent men. My experience is that you can always rely upon the great body of working-men to do what is right, provided they have not taken up a position and promised their leaders to stand by them. But their loyalty to their leaders even when mistaken, is something to make us proud of them. Anything can be done with men who have this feeling of loyalty within them. They only need to be treated fairly.

The way a strike was once broken at our steel-rail mills is interesting. Here again, I am sorry to say, one hundred and thirty-four men in one department had bound themselves under secret oath to demand increased wages at the end of the year, several months away. The new year proved very unfavorable for business, and other iron and steel manufacturers throughout the country had effected reductions in wages. Nevertheless, these men, having secretly sworn months previously that they would not work unless they got increased wages, thought themselves bound to insist upon their demands. We could not advance wages when our

competitors were reducing them, and the works were stopped in consequence. Every department of the works was brought to a stand by these strikers. The blast furnaces were abandoned a day or two before the time agreed upon, and we were greatly troubled in consequence.

I went to Pittsburgh and was surprised to find the furnaces had been banked, contrary to agreement. I was to meet the men in the morning upon arrival at Pittsburgh, but a message was sent to me from the works stating that the men had "left the furnaces and would meet me to-morrow." Here was a nice reception! My reply was:

"No they won't. Tell them I shall not be here to-morrow. Anybody can stop work; the trick is to start it again. Some fine day these men will want the works started and will be looking around for somebody who can start them, and I will tell them then just what I do now: that the works will never start except upon a sliding scale based upon the prices we get for our products. That scale will last three years and it will not be submitted by the men. They have submitted many scales to us. It is our turn now, and we are going to submit a scale to them.

"Now," I said to my partners, "I am going back to New York in the afternoon. Nothing more is to be done."

A short time after my message was received by the men they asked if they could come in and see me that afternoon before I left.

I answered: "Certainly!"

They came in and I said to them:

"Gentlemen, your chairman here, Mr. Bennett, assured you that I would make my appearance and settle with you in some way or other, as I always have settled.

That is true. And he told you that I would not fight, which is also true. He is a true prophet. But he told you something else in which he was slightly mistaken. He said I *could* not fight. Gentlemen," looking Mr. Bennett straight in the eye and closing and raising my fist, "he forgot that I was Scotch. But I will tell you something; I will never fight you. I know better than to fight labor. I will not fight, but I can beat any committee that was ever made at sitting down, and I have sat down. These works will never start until the men vote by a two-thirds majority to start them, and then, as I told you this morning, they will start on our sliding scale. I have nothing more to say."

They retired. It was about two weeks afterwards that one of the house servants came to my library in New York with a card, and I found upon it the names of two of our workmen, and also the name of a reverend gentleman. The men said they were from the works at Pittsburgh and would like to see me.

"Ask if either of these gentlemen belongs to the blast-furnace workers who banked the furnaces contrary to agreement."

The man returned and said "No." I replied: "In that case go down and tell them that I shall be pleased to have them come up."

Of course they were received with genuine warmth and cordiality and we sat and talked about New York, for some time, this being their first visit.

"Mr. Carnegie, we really came to talk about the trouble at the works," the minister said at last.

"Oh, indeed!" I answered. "Have the men voted?"

"No," he said.

My rejoinder was:

"You will have to excuse me from entering upon that

subject; I said I never would discuss it until they voted by a two-thirds majority to start the mills. Gentlemen, you have never seen New York. Let me take you out and show you Fifth Avenue and the Park, and we shall come back here to lunch at half-past one."

This we did, talking about everything except the one thing that they wished to talk about. We had a good time, and I know they enjoyed their lunch. There is one great difference between the American working-man and the foreigner. The American is a man; he sits down at lunch with people as if he were (as he generally is) a gentleman born. It is splendid.

They returned to Pittsburgh, not another word having been said about the works. But the men soon voted (there were very few votes against starting) and I went again to Pittsburgh. I laid before the committee the scale under which they were to work. It was a sliding scale based on the price of the product. Such a scale really makes capital and labor partners, sharing prosperous and disastrous times together. Of course it has a minimum, so that the men are always sure of living wages. As the men had seen these scales, it was unnecessary to go over them. The chairman said:

"Mr. Carnegie, we will agree to everything. And now," he said hesitatingly, "we have one favor to ask of you, and we hope you will not refuse it."

"Well, gentlemen, if it be reasonable I shall surely grant it."

"Well, it is this: That you permit the officers of the union to sign these papers for the men."

"Why, certainly, gentlemen! With the greatest pleasure! And then I have a small favor to ask of you, which I hope you will not refuse, as I have granted yours. Just to please me, after the officers have signed, let

every workman sign also for himself. You see, Mr. Bennett, this scale lasts for three years, and some man, or body of men, might dispute whether your president of the union had authority to bind them for so long, but if we have his signature also, there cannot be any misunderstanding."

There was a pause; then one man at his side whispered to Mr. Bennett (but I heard him perfectly):

"By golly, the jig's up!"

So it was, but it was not by direct attack, but by a flank movement. Had I not allowed the union officers to sign, they would have had a grievance and an excuse for war. As it was, having allowed them to do so, how could they refuse so simple a request as mine, that each free and independent American citizen should also sign for himself. My recollection is that as a matter of fact the officers of the union never signed, but they may have done so. Why should they, if every man's signature was required? Besides this, the workmen, knowing that the union could do nothing for them when the scale was adopted, neglected to pay dues and the union was deserted. We never heard of it again. [That was in 1889, now twenty-seven years ago. The scale has never been changed. The men would not change it if they could; it works for their benefit, as I told them it would.]

Of all my services rendered to labor the introduction of the sliding scale is chief. It is the solution of the capital and labor problem, because it really makes them partners — alike in prosperity and adversity. There was a yearly scale in operation in the Pittsburgh district in the early years, but it is not a good plan because men and employers at once begin preparing for a struggle which is almost certain to come. It is far better for both employers and employed to set no date for an

agreed-upon scale to end. It should be subject to six months' or a year's notice on either side, and in that way might and probably would run on for years.

To show upon what trifles a contest between capital and labor may turn, let me tell of two instances which were amicably settled by mere incidents of seemingly little consequence. Once when I went out to meet a men's committee, which had in our opinion made unfair demands, I was informed that they were influenced by a man who secretly owned a drinking saloon, although working in the mills. He was a great bully. The sober, quiet workmen were afraid of him, and the drinking men were his debtors. He was the real instigator of the movement.

We met in the usual friendly fashion. I was glad to see the men, many of whom I had long known and could call by name. When we sat down at the table the leader's seat was at one end and mine at the other. We therefore faced each other. After I had laid our proposition before the meeting, I saw the leader pick up his hat from the floor and slowly put it on his head, intimating that he was about to depart. Here was my chance.

"Sir, you are in the presence of gentlemen! Please be so good as to take your hat off or leave the room!"

My eyes were kept full upon him. There was a silence that could be felt. The great bully hesitated, but I knew whatever he did, he was beaten. If he left it was because he had treated the meeting discourteously by keeping his hat on, he was no gentleman; if he remained and took off his hat, he had been crushed by the rebuke. I did n't care which course he took. He had only two and either of them was fatal. He had delivered himself into my hands. He very slowly took off the hat and put it on the floor. Not a word did he speak thereafter in that

conference. I was told afterward that he had to leave the place. The men rejoiced in the episode and a settlement was harmoniously effected.

When the three years' scale was proposed to the men, a committee of sixteen was chosen by them to confer with us. Little progress was made at first, and I announced my engagements compelled me to return the next day to New York. Inquiry was made as to whether we would meet a committee of thirty-two, as the men wished others added to the committee — a sure sign of division in their ranks. Of course we agreed. The committee came from the works to meet me at the office in Pittsburgh. The proceedings were opened by one of our best men, Billy Edwards (I remember him well; he rose to high position afterwards), who thought that the total offered was fair, but that the scale was not equable. Some departments were all right, others were not fairly dealt with. Most of the men were naturally of this opinion, but when they came to indicate the underpaid, there was a difference, as was to be expected. No two men in the different departments could agree. Billy began:

“Mr. Carnegie, we agree that the total sum per ton to be paid is fair, but we think it is not properly distributed among us. Now, Mr. Carnegie, you take my job —”

“Order, order!” I cried. “None of that, Billy. Mr. Carnegie ‘takes no man’s job.’ Taking another’s job is an unpardonable offense among high-classed workmen.”

There was loud laughter, followed by applause, and then more laughter. I laughed with them. We had scored on Billy. Of course the dispute was soon settled. It is not solely, often it is not chiefly, a matter of dollars with workmen. Appreciation, kind treatment, a fair

deal — these are often the potent forces with the American workmen.

Employers can do so many desirable things for their men at little cost. At one meeting when I asked what we could do for them, I remember this same Billy Edwards rose and said that most of the men had to run in debt to the storekeepers because they were paid monthly. Well I remember his words:

“I have a good woman for wife who manages well. We go into Pittsburgh every fourth Saturday afternoon and buy our supplies wholesale for the next month and save one third. Not many of your men can do this. Shopkeepers here charge so much. And another thing, they charge very high for coal. If you paid your men every two weeks, instead of monthly, it would be as good for the careful men as a raise in wages of ten per cent or more.”

“Mr. Edwards, that shall be done,” I replied.

It involved increased labor and a few more clerks, but that was a small matter. The remark about high prices charged set me to thinking why the men could not open a coöperative store. This was also arranged — the firm agreeing to pay the rent of the building, but insisting that the men themselves take the stock and manage it. Out of that came the Braddock's Coöperative Society, a valuable institution for many reasons, not the least of them that it taught the men that business had its difficulties.

The coal trouble was cured effectively by our agreeing that the company sell all its men coal at the net cost price to us (about half of what had been charged by coal dealers, so I was told) and arranging to deliver it at the men's houses — the buyer paying only actual cost of cartage.

There was another matter. We found that the men's savings caused them anxiety, for little faith have the prudent, saving men in banks and, unfortunately, our Government at that time did not follow the British in having post-office deposit banks. We offered to take the actual savings of each workman, up to two thousand dollars, and pay six per cent interest upon them, to encourage thrift. Their money was kept separate from the business, in a trust fund, and lent to such as wished to build homes for themselves. I consider this one of the best things that can be done for the saving workman.

It was such concessions as these that proved the most profitable investments ever made by the company, even from an economical standpoint. It pays to go beyond the letter of the bond with your men. Two of my partners, as Mr. Phipps has put it, "knew my extreme disposition to always grant the demands of labor, however unreasonable," but looking back upon my failing in this respect, I wish it had been greater — much greater. No expenditure returned such dividends as the friendship of our workmen.

We soon had a body of workmen, I truly believe, wholly unequaled — the best workmen and the best men ever drawn together. Quarrels and strikes became things of the past. Had the Homestead men been our own old men, instead of men we had to pick up, it is scarcely possible that the trouble there in 1892 could have arisen. The scale at the steel-rail mills, introduced in 1889, has been running up to the present time (1914), and I think there never has been a labor grievance at the works since. The men, as I have already stated, dissolved their old union because there was no use paying dues to a union when the men themselves had a three years' contract. Although their labor union is dissolved

another and a better one has taken its place — a cordial union between the employers and their men, the best union of all for both parties.

It is for the interest of the employer that his men shall make good earnings and have steady work. The sliding scale enables the company to meet the market; and sometimes to take orders and keep the works running, which is the main thing for the working-men. High wages are well enough, but they are not to be compared with steady employment. The Edgar Thomson Mills are, in my opinion, the ideal works in respect to the relations of capital and labor. I am told the men in our day, and even to this day (1914) prefer two to three turns, but three turns are sure to come. Labor's hours are to be shortened as we progress. Eight hours will be the rule — eight for work, eight for sleep, and eight for rest and recreation.

There have been many incidents in my business life proving that labor troubles are not solely founded upon wages. I believe the best preventive of quarrels to be recognition of, and sincere interest in, the men, satisfying them that you really care for them and that you rejoice in their success. This I can sincerely say — that I always enjoyed my conferences with our workmen, which were not always in regard to wages, and that the better I knew the men the more I liked them. They have usually two virtues to the employer's one, and they are certainly more generous to each other.

Labor is usually helpless against capital. The employer, perhaps, decides to shut up the shops; he ceases to make profits for a short time. There is no change in his habits, food, clothing, pleasures — no agonizing fear of want. Contrast this with his workman whose lessening means of subsistence torment him. He has few com-

forts, scarcely the necessities for his wife and children in health, and for the sick little ones no proper treatment. It is not capital we need to guard, but helpless labor. If I returned to business to-morrow, fear of labor troubles would not enter my mind, but tenderness for poor and sometimes misguided though well-meaning laborers would fill my heart and soften it; and thereby soften theirs.

Upon my return to Pittsburgh in 1892, after the Homestead trouble, I went to the works and met many of the old men who had not been concerned in the riot. They expressed the opinion that if I had been at home the strike would never have happened. I told them that the company had offered generous terms and beyond its offer I should not have gone; that before their cable reached me in Scotland, the Governor of the State had appeared on the scene with troops and wished the law vindicated; that the question had then passed out of my partners' hands. I added:

“You were badly advised. My partners' offer should have been accepted. It was very generous. I don't know that I would have offered so much.”

To this one of the rollers said to me:

“Oh, Mr. Carnegie, it was n't a question of dollars. The boys would have let you kick 'em, but they would n't let that other man stroke their hair.”

So much does sentiment count for in the practical affairs of life, even with the laboring classes. This is not generally believed by those who do not know them, but I am certain that disputes about wages do not account for one half the disagreements between capital and labor. There is lack of due appreciation and of kind treatment of employees upon the part of the employers.

Suits had been entered against many of the strikers,

but upon my return these were promptly dismissed. All the old men who remained, and had not been guilty of violence, were taken back. I had cabled from Scotland urging that Mr. Schwab be sent back to Homestead. He had been only recently promoted to the Edgar Thomson Works. He went back, and "Charlie," as he was affectionately called, soon restored order, peace, and harmony. Had he remained at the Homestead Works, in all probability no serious trouble would have arisen. "Charlie" liked his workmen and they liked him; but there still remained at Homestead an unsatisfactory element in the men who had previously been discarded from our various works for good reasons and had found employment at the new works before we purchased them.