THE SCOTCH PHILOSOPHER.

VISITING THOMAS CARLYLE IN HIS STUDY.

The Venerable Thinker Still Full of Vitality and Pluck—But Too Many Americans Try to See Him—He Praises Victor Hugo and Condemns Universal Suffrage as Fraud.

LONDON, April 12.—I have had two interviews during the past week with Thomas Carlyle at his house, 5 Great Cheyne row, Chelsea. From the instant the puffy little river steamer deposited me at Cadogan Pier, and on the soil of the Borough of Chelsea, I felt much as Moses was made to feel before the burning bush—that it was holy ground; but I had the advantage of the great legislator in that I got the sensation, as the Californian pioneers used to get their quietus, "with my boots on." From the archway, where once stood the Chelsea bun-house, the eye ran along the angular red-tiled houses to the old red brick church tower (St. Luke's, I believe), with its quartered clock face, blandly respectable, quaintly reddescent of bygone glories. Between all and the Thames river ran the new Victoria embankment, with a monument to somebody or something dominating a kind of long, narrow public garden, occupied by trim nursery maids and their charges. A few hundred paces, and one turns up into the little street inhabited by Carlyle.

Passing along, without consciously noting anything, some certain trifles were nevertheless graven on my memory as by sudden unconscious photography. I had come to see Thomas Carlyle, to me, on the whole, the most notable genius now speaking the English tongue; and the letters of his name seemed to dance in the pattern of the flagstones below, to supplant above the figures on the dial of St. Luke's, and to be embossed on the back of the metal sailor who, very slightly clothed, was shinning up some part of the monument already mentioned, perhaps with the praiseworthy intention of nailing somebody's colors to somebody's mast. In this same Chelsea lived Turner and Holman Hunt, great painters, and Leigh Hunt, the genial writer. Here somewhere still live, I think, Maclise, the painter, the sweet-singing Rossetti, and Mr. Froude, the historian, the last not only a neighbor of the great philosopher we are about to visit, but his literary executor also. Now I stand before the house that for more than forty years has sheltered Thomas Carlyle. Little to say about it, except that it is the fifth from the river of a neat, plain row of three-story brick houses—neater and pleasanter than its Parisian, and distinguished by a little balcony on the first floor. I pulled the bell in a kind of brown study. Now, to use the bell instead of the knocker is equivalent in London to the mark of the beast, the many-headed beast, the proletariat. The accursed bell recalled me to my senses with its jangle, jangle, jangle—"No account," "No account," "Don't let him in."

DETERMINED TO SEE HIM.

A serving maid appeared and measured me with her eyes, measured me by the bell wire, and found me wanting—"Mr. Carlyle was unwell and could see no one." Then the sailor came upon me mightily in the fury of my despair; the iron of the British knocker had entered into my soul. With the assurance and the firmness of Marshal MacMahon in the Malakoff Redan, or of Grant before Richmond, I asked to see the niece and amanuensis of Mr. Carlyle—I, an utter stranger—muttering to myself, without a blush as the servant disappeared with my card: "On this line if it takes all summer;" "*Je suis et je reste.*"

The three things, says Helps somewhere, that in this world are best rewarded are, "boldness, hardness, and obtuseness." In a few moments I was seated in the study of Mr. Carlyle, the pleasantest of rooms, with its windows opening on the street and on the balcony mentioned above. It was little more than noon, and Miss A. told me that the uncle had not come up from breakfast; that he usually breakfasted later of late with chronic dyspepsia that he might not feel himself on this occasion able to come up at all. But, indeed, only the most ungracious of hero worshippers could have regretted his temporary absence. Now, I was seated in a room with Mr. Carlyle, or of his blood, and not catch something of his genius for conversation. I believe I shall not be accused of taking unfair advantage of the candor and hospitality of my hostess in saying that everything seemed impressed me with the Acadian simplicity and the joy and peace of the philosopher's home. The mellow faces of famous classes looked gravely at us from the bookshelves, filling, with the best of heartiness, the whole side of one side of the room. The opposite side was occupied by the great painting of the young Frederick and his sister Wilhelmina, made familiar to American readers by an engraving in the first volume of "Frederick the Great." From the other walls shone many a beloved form and face among which were Cromwell, again and again repeated, various Hohenzollerns, and John Knox the "Somerville engraving," made famous by the tract bound up with "Early Kings of Norway."

HOAXES AND FORGERIES.

Mr. Carlyle is unceasingly harassed of late years by dyspepsia and somewhat by visitors. Among these, Americans are not always the most considerate. The name of one was mentioned who has rushed into print with unflattering remarks on the personal appearance of an old and feeble man. Another, in the decorative repair of 5 Cheyne row. The silliest hoaxes are every now and then got up in the shape of forged letters, imitating Mr. Carlyle's style, and astounding himself and his friends by imputing his opinions to everybody and everything on various subjects. Apropos of a late murder in Scotland, as Miss A——— informed me, a letter appeared in a local paper purporting to be written by the author of "Sartor Resartus," and strongly in favor of "the Scotch law of Lynch." Meanwhile, while last year the American press was moved by a clever forgery, declining in very strong language the offer of a degree from an American university. As a matter of course, Carlyle's friends are always found to forward such things to Mr. Carlyle, who pondered seriously on an indignant protest against the obnoxious sentiments therein contained. "There is a pleasure sore in being mad, which none but mad men know." Mr. Carlyle has indeed declined, with the utmost courtesy, many degrees from many universities. He refused in his college days to combine his attention to the usual hard-shell curriculum, and, having left his university without a degree, he proposes to let his name go for what it is worth—the most honorable of academic uncials. He has always held, and still holds, that a good library is in itself the best university extant.

Half an hour passed in such conversation as gives still no sign of the *genius loci*. Having the kind-eyed, stately lady of my hostess to make a succeeding visit more successful, I took leave of her with a sincere expression of the obligations she had laid me under. Passing down the stairs from the study flooded with light, I found she had somewhat lingered to make sure that I was on the last step that I was aware of some one standing before me.

"You have been wanting to see me?"

"Mr. Carlyle!"

"I am Carlyle," Slow, deep, melancholy tones, as of a strong man who had found at last that to be weak is miserable. A gaunt, erect figure, in a long gray greatcoat—what Heine might have described as a "transcendent ulster." A worn face, trenched as if by thunder, and yet with cheeks not faded and eyes not dim—both eyes and cheeks a little bloodshot. Long thick white hair, short beard and clipped moustache still wonderfully streaked with black. Straight level lips, mobile to all passions, to all pity, to pitiless contempt. Eyes gray and quiet under shaggy brows. So lives Thomas Carlyle in my memory, and shall live till—till I attend the funeral with Polonius, where the worms shall make napkins of our shrouds.

A PLEASANT VISIT.

Let us agree to carry over and condense the substance of that first, short conversation, and to mix what passed then with the account of the delightful hour spent two days after with Mr. Carlyle, his spasm of illness being over, it was afternoon. He sat in the study already described, with his back to the window, in his huge green arm-chair, his elbow on the attached reading stand, his head often leaning on his hand in the posture of a well-known and admirable oil portrait of him, of which copies are to be found in New York and even as far west as San Francisco. Leaning against the mantle of the old-fashioned fireplace stood his long clay pipe with green-waxed mouthpiece. Once or twice the blinds needed shifting, as the sun gleamed through the figured window panes, helped over the great green curtain of August, 1871, but in ten days thereafter she was abandoned by her husband, of whose whereabouts she had no knowledge. Since then she has been compelled to support herself. Defendant filed his answer to the libel stating that when in his seventeenth year this present wife being one year younger, "by an unfortunate and hasty act of indiscretion, he married complainant," neither of them having an adequate idea of the solemnity and importance of the relation into which they had entered. The marriage was a secret one, he and she running away to have the ceremony performed. He admitted that he left his wife ten days after the marriage. He states that he now resides in Detroit, Michigan, and that he has not sufficient means, and had less at the time of marriage, to support his wife, and therefore consented to a decree of divorce.

Why Fuchs Killed Simmons.

Alonzo Simmons of Mentor, Ohio, brother of the man who was murdered by Andreas Fuchs in Williamsburgh, has written a letter to a friend in which he says: "I am thankful that I have had the privilege of reading the death-sentence of Fuchs, the fiend in human form. I have often said that I would never look at a man when he was hung, but I must say my present feelings are quite the reverse. O, if I could only have the pleasure of seeing this most cold blooded butcher, Fuchs, hung! Julia, my brother's daughter, wrote me that William had been working the past year at a patent, and that Fuchs had told some of the hands in the shop that he had an interest in the patent, and it was thought that Fuchs murdered him to get his money and get William out of the way, and then get the patent in his own name." The patent spoken of is for an improved safe, which Simmons had made. The police have not been able to learn what has become of over $300 which Simmons had before his death.

THE CITY HORSE MARKETS.

WHERE QUADRUPEDS AND BUYERS ARE SOMETIMES SOLD.

Tattersall's of the Olden Time—An Ancient Horse Dealer What it Costs to Bring Horses to the City How they are Sold.

As long ago as 1829 the principal horse Market of New York was about Washington and Liberty streets. Two noted sale stables were on each street—Wordendyke's and John Patton's in Liberty street, Alex. Campbell's and Henry Vandewater's in Washington. There was also an auction sale stable called "Tattersall's," in Broadway, between Grand and Howard streets. Amos Chamberlain—who keeps a sale stable on Twenty-fourth street—with his father, bought out Wordendyke's place, and subsequently Vandewater's, and is believed to be the oldest horse dealer in New York to-day.

When the cattle market was moved up to the vicinity of the old "Bull's Head" tavern, a natural succession of events drew the horse market to that neighborhood also. Drovers used to bring their cattle here from Ohio and other Western States, over land, driving them by slow stages, and themselves riding on horseback. Upon arriving here, they expected to turn into money both cattle and horses, and that this process of conversion might be easy and speedy, they established regular horse sale stables in close proximity to the point where they were called by their legitimate business. Buyers speedily came to know that this was the place to find young, hardy horses, such as the experienced drover might be expected to furnish himself with, both for service and as a safe investment for speculation. The established down-town dealers were not slow to perceive chances for acting as middle men in disposing of the drovers' horses, and perhaps also saw possible advantages, in the association of the well-reputed drovers' stock, to help them in disposing of less salable animals. So in 1845 we find the horsemen's principal headquarters in Twenty-fourth street, where nearly two whole blocks on both sides of the street are occupied by their establishments. Mr. Amos Chamberlain was the first to establish himself in the original "Bull's Head" stables.

Since the old system of driving cattle to the New York market has passed into disuse—transportation by rail being the now universally accepted means—the horse business has fallen almost entirely into the hands of the regular dealers and their agents. Few outsiders bring horses here, and still fewer do so more than once. Each of the principal dealers has his own buyers, who travel about the country through the horse-producing districts, procuring animals whenever and wherever they can. This is sometimes very slow and expensive work. A man may ride about for two, three, or even four weeks before he can succeed in purchasing, at prices which he deems the market will warrant him in paying, a car load of sixteen horses that he may consider worth bringing to this market. Of course, the longer he is at it the greater the expense to be averaged upon each horse in the lot, for the first ones bought have to be fed and cared for, and travelled from place to place until the last are found. So calculation of the cost of bringing horses to New York involves certain very indefinite and uncertain elements outside mere railroad transportation and the original cost of the beasts in the country. For instance, two dealers received each a car load of horses one day last spring, the same came from Illinois, and the cost on them—over their several prices—averaged $10.50 per head. The other lot came from Indiana, and the average on them was $12.27.

BRED IN THE WEST AND SOLD IN THE EAST.

No horses are raised for sale in the vicinity of New York; and, indeed, for a hundred miles from this city farmers do not breed to come here and buy horses than to breed them for their own use. From all directions outside that limit, however, they flock in here by thousands. A great many come from Illinois, where—especially in the middle and northern part of the State, a good deal of attention has been given in late years to breeding from the Norman stock. Good serviceable horses come also from Iowa, Indiana, Ohio, Pennsylvania, West Virginia, Michigan, Lower Canada, and the more northerly and western part of New York. The finest and most stylish heavy coach horses come from New York State, as a rule, and lighter but very stylish and hand-some animals from Michigan and West Virginia. We say stylish both of the latter, and it may be said that only such animals come from certain places and nowhere else. Good horses, and poor ones, too, come from all over the land, but, in a general way, the expectation is that they will develop as they go further. The cheap "French Canuck" horses, which used to be brought here in considerable numbers from Canada, are no longer in much demand; nor are the mustangs, specimens of which enduring but diminished broncos, have been driven in droves from the wilds of Nebraska, with a cloud of contusions and an atmosphere blue with profanity in their wake. New York wants large horses, and of such animals as are readily salable here, prices range, in the country, from $100 to $150 for good common work horses, $175 to $250 for heavy work horses, $250 to $600 for stage and driving horses. The higher figures here are already largely dependant upon color, style, and action, and are just touching on the higher ground where the trotters and specially fancy horses begin to range from a few hundred into the thousands. Those costly animals never get into Twenty-fourth street except by accident, and if they do, their stay there is not short, as they soon pass into the hands of another class of horse dealers, who make a business specialty of breeding, developing, and dealing in phenomenal brutes.

The greater part of the horses that are brought here are destined to work on the street railroads and omnibus lines, a service in which they only last, on an average, five years. The leading dealers who make their principal business the supply of this demand are Messrs. Oakley & Smith, J. Mehrtach, Isaac Dolman, and John Henry Witten. It must not be understood that they confine themselves to this class of horses, large stables may be found all the time animals too valuable for street car tugging, as well as some perhaps not fit even for that. Other dealers, too, furnish horses to the street car and omnibus companies, but those named are mentioned as the principal ones, having good horses pass through the hands of each every year.

There are reasons why it is almost impossible to arrive at even an approximate estimate of the number of horses required to supply this market annually. Also the principal dealers are exceedingly reticent and unwilling to tell anything about their business which they can avoid telling. It is hard to believe that men who have been many years in a business can know so very little of the laws of supply and demand as governing it as the horse dealers of Twenty-fourth street profess to know of their trade. Ask one of the venerable deceivers, and he will tell you, with a bland and candid smile, that he hasn't really the faintest notion whether the street-car lines use up 1,000 or 10,000 horses a year; he never even thought about it. Well, perhaps he hasn't.

A FAIRY STORY.

Then another reason is that it is almost impossible to know how often the same horse passes through the Twenty-fourth street market. There is an old German fairy story about a wondrous mill in which wrinkled old women were ground up and brought out again fresh and young. The Twenty-fourth street market is a good deal that sort of a mill for horses. But the fairies' mill was superior, in that its products remained young and fair ever thereafter.

"What do you do," asked the writer of one of the oldest millers on Twenty-fourth street, "when you get hold of a horse that is forty-seven years old, all wheezy, and spavined and glanded, and got the pole evil and the epizootic and the bots and all the other things horses have, to make him look young and fresh and sound and gentle in the eyes of the unwary buyer?"

"Young man," responded the ancient one, with a cunning wink, "I ain't agoin' to let you nor anybody else into the secrets of the business. What I know I know. But," he went on to affirm, "there isn't one-eighth of the fixing up of horses that people believe there is, and lots that we do to a horse is for the horse's good; yet if people that didn't understand it were to come in and see us a doing it, they'd think we were fixing him up to cheat somebody. You know how it is with ladies' dresses, they're shot mouth. His teeth don't come together on his food, slip over it, and he can't chew good."

"One of the results of very old age?"

"Well, yes, sometimes, may be; but some horses are long in this world naturally. Now it does that horse good to cut his teeth off so that he can clench them together on his food."

"Besides removing the grooves which are the evidences of age?"

"Naturally the teeth ain't exactly the same as they were before they were cut, but as I was saying, there are cases where a horse that is thin and dining away because he can't chew his food properly, will fat up and do well after we've filed down his sharp grinders and cut his teeth. A good deal though in the secret of getting a horse into good condition is in studying the sort of food that agrees with him best."

It must not be supposed that when a horse is sold to a street railroad company that is the end of him, so far as the dealer is concerned. He is pretty sure to come back sooner or later in a more or less damaged condition, to be fixed up anew and sent out to some other field of usefulness. A horse never becomes absolutely valueless. Even when he is only worth a dollar somebody will come along who will give that dollar for him to speculate on his hide. But often horses are slow of sale. A street car or stage line may take a dozen on twenty-four hours' trial and return five of them. Then those five are bunched in with another dozen going to some other line. Probably three or four of them come back again. If so they are sent off somewhere else, and in course of time are all disposed of. But before that is effected the cost of keeping them, added to their original cost, has raised their actual value to the dealer so that they cannot be sold at a profit. Hence, on a very considerable number of horses there is an inevitable loss, which the actual profit on others leaves but an insufficient margin to cover.

WHERE PROFITS ARE POSSIBLY SMALL.

In the simple, straight business of buying horses in the country and re-selling them in the town, at present prices at all events, there is exceedingly small profit, and the dealers are probably telling the truth when they aver that in this line they have not made a dollar this year. But there is still a pretty margin of profit in other directions. Horses are brought from the stage and street railroad companies, and when put in marketable condition are sold at figures generally which make up for whatever loss may have been upon them in their first sale. Then, too, private buyers generally have to pay considerably better prices than the close system of the corporations allows. A good turn is made, too, on transactions in nice carriage horses. The companies buy their necessary working stock in the spring, and resell to the dealers, at large reductions, in the fall, rather than go to the expense, trouble, and risk of wintering their horses in idleness; and the dealers easily manage to put the most of them off to their customers in presentable plight, and find purchasers for them profitably. Still another way of "turning the honest penny" is said to be not unknown in the horse market in the sale of horses on commission. A man has a horse which he wishes sold on commission. The dealer is really sorry for him, "the market is so very dull," and perhaps advises him to keep the beast two or three months in hopes of an improvement in prices, especially offering said horse meanwhile in the seller seems to be eager to get rid of his property. Of course the reply is "never mind, sell at once, and do the best you can," and the order is obeyed. The seller gets say $250, less commission, which may range all the way from 1 to 10 to twenty-five per cent., and the horse goes—to another dealer. The next day perhaps a bona-fide customer comes along and gives $400 for that same horse, which makes $75 clear profit for the dealer who before sold him for $250, and $75 for the said seller, who helped to "make the turn." This ingenious transaction will probably meet with a chorus of denials all along Twenty-fourth street, or at least such assurances as, "our house never did anything of the sort. Some small and tricky chaps may have done something of the kind, but if so we never heard of it," will be offered freely; but the fact remains nevertheless. "Go up there green to buy a horse, and you don't stand any more chance than a fat baby among a lot of hungry cannibals," said an old circusman, who is well up to their "tricks and manners."

A TRADER'S ARTICLE OF FAITH.

The universal shopkeeper's assumption, that a customer never knows what he really does want, is nowhere more an article of faith than in the horse market. The writer had a sample of this while collating a few notes on the business the other day, a gentleman, accompanied by his groom, was in one of the largest stables seeking to buy a match team. The salesman was a stout, earnest looking man, with a dark complexion and strong foreign accent. Before them were two horses, nearly alike in color but one of which was a fine, stylish, high-stepping fellow, and the other a hard looking, ill-bred, ill-fitted, ill-tempered brute. The groom brought the weight of his judgment as an expert to sustain his employer's weakening resistance, the small horse was returned to his stall and another was trotted out in his place. The second animal was a fine, lacking of a match in color as the first had been in size, but this had no sooner been commented upon than the voluble salesman broke forth:

"Ah! you forget that hees coat ees looosing. Ven he comes to shed out he will be yoost dot same shape. Zhake, moof him ofer in de light more—dot way. I gif you my vord, sare, ven dot horse shall shed oudt dem two horses will look like dhey was cofered mit shkins made for von piece of silk. Dhere vas not a more byoooutiful match in all Net York."

Whether his eloquence prevailed or not the reporter did not wait to see.

PHENOMENAL INDIANS.

A Cherokee Brave Aged 120 Years—A Squaw Aged 110—An Indian Inventor.

TO THE EDITOR OF THE SUN—*Sir:* I recently saw in your paper a statement taken from a Georgia journal that "Chee Squlen, an Indian, and Nakih, his wife, residing in Graham county, are aged respectively 175 and 130 years." You and your readers no doubt regard the Georgia journal as romantically inclined; and, indeed, its statement is a little embellished. But the facts in the case are sufficiently interesting to deserve an accurate statement.

The Graham county referred to is in North Carolina, where reside a portion of the Eastern Band of Cherokees, and here, amid the mountains on which he has gazed since infancy lives old Chee-squi-ah, well known to all the country round. He stoops with age, but his eye is bright, his intellect unimpaired, his manner vivacious, and himself able to walk four miles in a day. He had a brother in the revolutionary army, where his brethren of the Cherokee Nation did such good service that the State of North Carolina granted them in perpetuity an immense tract of land. Chee-squi-ah, arrived at man's estate, had just completed his preparations for leaving home to join the army, when news arrived of the signing of the treaty of peace. He remembers all these occurrences, and many prominent facts of the war distinctly.

From these data his age is computed as accurately, perhaps, as that of any aged Indian can be. Ninety-three years ago he was a man grown. He calls himself 120 years old. Probably he is not far from 120. He alone of all the "Eastern Band," wears the Indian dress. Nakih, not his wife, but his neighbor, was at the time referred to a young girl, perhaps 10 years old. She is set down as 110 or upwards. She is very feeble, bent nearly double, and exceedingly deaf. These facts can be substantiated by many citizens of Western North Carolina.

While my pen is on paper, let me tell you about Sa-lo-la, or Squirrel, a neighbor of Chee squi-ah. He is about 40 years of age. He never was in a well-appointed blacksmith shop in his life, or in any manufactory of iron implements. He has a few blacksmith's tools, mostly of his own manufacture. Lately he has made an acquisition of an old broken file, which he can use by turning it bottom up. Previously a smooth rock did anvil duty. With these tools he makes a well-shaped and tempered clasp-knife, with buckhorn handle, roughly finished, but a better knife for service than you can buy for a dollar.

He has made a steel mill resembling an enlarged coffee mill, the whole thing about two feet square and high. Having constructed a water wheel with oak split floats bound to the arms with hickory withes for power, he grinds from 7 to 10 bushels of corn or wheat per day. He is also a gun maker. He has made several guns—both smooth bore and rifled. The whole process is his own invention, and so is the simple but efficient rifling apparatus. One of his rifles stands up like a telescope, and he uses it as a walking stick. He showed me a few weeks ago a breechloader which he had made. The chamber, about four inches in length, is ground conically at the forward end, and fits into the barrel like a steam valve into its seat. It does not leak fire, and like all his guns, shoots close and true.

Surely such self-taught genius in a semi-savage, speaking no English, and penned up all his life amid those great mountains, deserves honorable mention.

JACKSON.

WASHINGTON, D. C., April 28, 1876.

ONE OF BLAINE'S FRIENDS.

The Emergency in Washington Which Called Mr. F. B. Hayes to Europe.

Washington Correspondence of Boston Herald.

A Boston gentleman here says that on Thursday last Mr. F. B. Hayes made business appointments in Boston which indicated that he had no intention of leaving for Europe, and that there is no doubt whatever that he went away to escape the threatened investigation by a committee of Congress of the sale to him by Mr. Blaine of a lot of Little Rock and Fort Smith railroad bonds. The transaction has been common report among many gentlemen in public life ever since it occurred.

Mr. Hayes came here to procure important legislation on behalf of the Atlantic and Pacific Railroad, of which he was then President. His bill was in charge of the late James Buffinton, of Fall River, who was acquainted with the fact that Mr. Hayes found it convenient to take from Mr. Blaine on his own account, or on account of his friends, a large quantity of Little Rock and Fort Smith bonds. This transaction was not with the Atlantic and Pacific Railroad as a company, but was with Mr. Hayes personally, and does not appear upon the books of the company. But Congress will hardly go into that matter.

It will be observed that Mr. Blaine, in his statement, does not deny that there was a transaction conducted by him with Messrs. Morton, Bliss & Co., in which Arkansas bonds were sold to that firm, nor do the bankers deny that they had such a transaction with somebody who was represented by Mr. Blaine.

Blaine in a Melancholy Mood.

From the Boston Herald.

WASHINGTON, D. C., April 27.—Mr. Blaine is greatly disappointed, as he has reason to be, with the result in Massachusetts, where he had expected a generous and effective support. I am able to state on excellent authority that Collector Simmons had assured Mr. Blaine that the State would be carried for him, which was the principal foundation of the ex-Speaker's hopes. Mr. Simmons seems not to have been able to deliver the old Commonwealth as per agreement.

Heavy Frauds on the Cuban Revenue.

HAVANA, April 29.—Heavy frauds on the revenue by smuggling at Cardenas have been discovered. A cargo of lard and opium was entered at the Custom House as coal, by which the Government was cheated out of $50,000. The Collector, Cashier, and Appraiser at Cardenas have been imprisoned on the charge of complicity in the affair. The Collector of this port has gone to Cardenas to investigate matters.

AN IMPORTANT INDUSTRY.

HOW AMERICAN STEEL IS AT PRESENT MANUFACTURED.

From a Steamship Shaft to a Knife Blade—The Standard of Our Steel Elevated—Where the Great Works Are Situated.

Stated broadly, there are two kinds of steel known to the arts, namely, crucible steel and that made by one process or another directly from the ore, or pig metal. Although of the same family, they possess diametrically opposite qualities in some points, and it is the object of this article to tell the general reader where the difference lies.

Iron is the base of all steel of whatever sort, the only element added to it being carbon, in one form or another, and in quantity according to the kind required for any given purpose. The subtlety of the variation between iron and steel, or the boundary line between them, is so vague that it is often difficult for an expert to tell where one or the other begins. Wrought-iron bars melted and cast in ingots, though no appreciable quantity of carbon be added at the melting, will show a steely fracture when rolled into bars again; and puddled steel, or that made by the pneumatic process, from which all carbon has first been eliminated and then restored in certain proportions, looks like steel, acts like steel, approaches it in tensile strength and general behavior under stress, but is utterly devoid of tempering or cutting qualities, and that high tensile strength which distinguishes cast crucible steel.

It is not difficult to tell what amount of carbon is present in any given sample by chemical analysis, but it is difficult—some say impossible—to tell one class of steel from another by inspection of a fracture. Crucible steel is that made in crucibles or pots, generally holding sixty-five pounds. There are two ways of making it. The older one is to take pure wrought-iron bars, pack them in an iron box surrounded with common charcoal in powder, and subject them to a red heat for several hours at a time. These are then taken out, and either broken into small pieces and remelted in crucibles, or piled into a fagot and welded together in a mass under the hammer.

THE CRUCIBLE PROCESS.

The other way, and that generally in use at the present time, is to take wrought iron and cut it into convenient lengths, melt it up in crucibles holding sixty-five pounds, and carbonize it by the addition of pure carbon for whatever grade of steel is required; whether it be for tools, for machinery, or for steels requiring greater strength and tenacity. This process has the advantage of greater rapidity and cheapness, as but one melting is required to produce an ingot. It is also more uniform in its results, as but a small quantity of steel is made at a time, and all of it is more thoroughly carbonized than in the cemented steel, as the last described process is called. Frequently in cemented steel there will be many uneven or imperfectly carbonized bars in the lot, and these must be rejected; all of it has to be broken up and graded and more or less loss results from this cause, while the proportion of badly melted or irregular ingots made by the modern process is very small. After the steel is melted in the crucibles (it requires about three hours to run one melting) the pots are lifted out and the contents poured into cast-iron moulds, varying in size for the purpose required of them. Generally they weigh about eighty pounds, and are about three and a half inches square by twenty inches long. They are now crude steel pigs or ingots, resembling pig iron, and must be subsequently hammered or rolled to produce bars or rods. The ingots are reheated in a furnace and carried directly to the rolls, which squeeze them into shapes. In this condition it is sold from the mill to tool makers or other manufacturers.

Bessemer or other steel produced directly from the ore, or pig, has the advantage of economic production, in that it dispenses with the step of wrought iron, or being made into bars, which is essential in the crucible process; and employs pig metal of certain brands just as it comes from the original smelters. The excess of carbon present in cast iron, which renders it brittle, is eliminated in the Bessemer process, which consists of blowing air through the melted cast iron, burning out all the carbon, and afterward recarbonizing it to a certain percentage. The result is a homogeneous metal possessing great ductility and a higher tensile strength than wrought iron.

AN INVALUABLE COMBINATION.

But it is not a true steel, since it possesses in only a slight degree the characteristics of that metal in its best estate. It possesses ductile and wrought iron equal it in tensile strength and uniformity of texture. It is invaluable for heavy works and large operations demanding practical uniformity, such as steel rails or shafts for ocean steamers. It could not be of easy more than wrought iron to make, and is invaluable in its sphere. Without it, steel rails for railroads would be impossible; and if it were used for no other purpose, the discovery of it would be one of the great discoveries of the century. It is used chiefly for this purpose, but it also enters into the arts for various other uses; wagon tires, axles, locomotive tires, and parts of machines are largely made of it. Here its employment is in the form of castings; for which it has as yet rendered it susceptible of temper. Hardened it may be, but it cannot be tempered; and between hardening and tempering there is a great difference. In the first instance, the metal is left in its condition of density throughout; in the second, the hardness is graded through all degrees, from extreme brittleness down to toughness, with but an approach to hardness. This feature renders it valuable for tools, as compared with any carbonized iron or alloy; all direct steels possibly known going from a hard to a soft grade when subjected to the process of tempering.

In the above-described processes are comprised the method of making cast steel, as practised to-day in various parts of the country. From the mill it goes east, west, north, and, a little of it, south; this chiefly for railway uses, for there are no steel consumers of any moment except railroads south of Washington. All the steel made in this country for this grade of manufacture are north of Mason and Dixon's line. Steel is sold almost wholly by commercial travellers. Wholly, we may say, for direct negotiation with the heads of houses is the result, in most cases, of their interviews.

Within the past few years the standard of American steel has been greatly elevated; so much so that in all staple lines, such as cutlery, pitchforks, gun, file, hoe, rake, axe, and agricultural implements, it is now in demand. But one cutlery concern in this country is using foreign steel, the great bulk of all the table cutlery being made from American ores, converted into steel and rolled into shape in American mills. This is true of all wire rods for drawing into merchantable sizes and shapes. American hay forks have no superior in the world for durability and adaptation to their purpose, and it was recently noted in an English trade journal that the growing trade in English markets of American made axes, hatchets, and hoes has seriously interfered with their own orders.

THE LOSSES.

All reputable steel houses fully warrant their goods to be as represented, up to standard and uniform in quality—"replace or refund" is the password—but a simple replacement of steel that proves bad is oftentimes of little moment. In a table knife, worth to the manufacturer say twelve cents, there is about two cents' worth of stock. If the last process develops faults in the steel and not in the workmanship, who is to stand the loss? Mere replacing bad stock with good goes but a bit the way to remedy the matter. When it is known, too, that the steel maker is at the mercy of men who work by the piece, whose sole object is to get their work out as quick as possible, and pass inspection, it will be seen that from the time the stock leaves the mill until it reaches the warehouse as finished goods, it is subjected to very many contingencies. Notwithstanding all these, the losses from bad stock with standard makers are very trifling of late years. The American steel maker has learned by costly failure; he has profited by the mistakes of others who have stepped down and out after sinking vast amounts of capital.

There is no royal road to fortune in the manufacture of steel. Success is only attained by good management and experience. Steel is lower in price in this country now than it has ever been before, yet better in quality, and notwithstanding the unsettled condition of trade is still made in large quantities. It is one of the most active and important of our industries, demanding millions of capital and employing thousands upon thousands of skilled workmen and laborers. The city of Pittsburgh, Pa., is the seat of the largest steel works in the country, but there are several in Jersey City, Philadelphia, Newark, and at other points. A visit to one of them would amply repay those curious in such matters.

Wake Up the Baptists.

From Scribner's Monthly.

Solo. Sin's rooster's crowed, Ole Mahster's riz,
De sleepin' time is pas';
Wake up dem lazy Bamboozels.

Chorus. Day's mightily in de grass, grass,
Day's mightily in de grass.

Old Mahster's blowed de mornin' horn,
He's blowed a powerful glass';
O Baptis', come, come, hoe de corn,
You's mightily in de grass, &c.

De Meth'dis' team's done hitched; O fool
De day s-a-breakin' fas';
Gee up dat lean ole Baptis' mule,
Dey's mightily in de grass, &c.

De workmen's few an' mons'rous slow,
De cotton's sheddin' fas';
Whoop, look, jes' look at de Baptis' row,
His's mightily in de grass, &c.

De jaybird squeal to de mockin' bird "Stop!
Do gimme none o' you' sass;
Better sing one song for de Baptis' crop,
Day's mightily in de grass," &c.

An' de ole crow croak: "Don' work, no, no;"
But de fil'-lars say "Yass, yass,
An' I spec' you mighty glad, you debbilish crow,
Dat de Baptiseis's in de grass," &c.

Lord, thunder us up to de ploughin' match,
Lord, peerten de hoein' fas',
Yes, Lord, hab mussy on ole Baptis' patch.
Day's mightily in de grass, grass,
Day's mightily in de grass.

AGRICULTURE BY STEAM.

Some Novel Experiments in Forcing the Growth of Vegetables.

A New Jersey agriculturist is secretly experimenting upon the growth of vegetables by means of steam pipes under ground, and has produced potato plants fifteen inches high in a fortnight. The potatoes are, however, small in comparison to the plant, and he proposes renewed attempts, with a view of establishing a proper equilibrium. The use of steam pipes in forcing plants has been in practice many years. The novelty lies in the gentleman's peculiar application of the system. He intends, also, soon to try the effect of electricity.

The first known trials in this country upon the growth of vegetation by electricity were made in March, 1841, by Mr. R. L. Pell, a wealthy land proprietor on the Hudson river, near Hyde Park, whose Newtown pippins have long been noted in the New York market. His orchards now comprehend 20,000 apple trees, all of the above description. He was also the first in this country to raise fish from the egg. Prof. Morse gave him instructions regarding the application of electricity to his purposes, and he departed for Hyde Park. Mr. Pell first gave attention to growth in wood, which he placed, to the depth of a foot, in a box three feet square. He planted in a row a potato, some wheat, rye, oats, and barley kernels, and a Maderia vine, and suspended over them, to the height of an inch, a copper wire an inch thick. This wire was soldered at one end to a piece of copper plate about two inches square and an eighth of an inch thick, and at the other to a similarly sized piece of zinc. These formed the positive and negative batteries, but neither quite touched the soil. The weather being cold, the box was placed in a covered hot-bed, and the batteries were constantly stimulated by an electric machine. The sand under the wire was in a highly electrified state, and within a fortnight the plants pushing from the seed reached a height of fifteen inches.

Another process was by placing sand in pots, of one, two, or three quarts, with a copper plate at the top and a zinc plate at the bottom. A hole was made in the former to allow the stems of the plant, and one in the latter to permit the escape of the water with which the sand was occasionally moistened. A wire was carried outside of the pots from the copper to a hole in the side, an inch from the bottom, where it communicated with the zinc inside. The object of not allowing the wire to extend to the bottom of the pot was to prevent its coming in contact with the water. No necessity existed for a wire within the pot. The sand completed the electric circuit, begun by the wire outside, and, without the use of a machine, the grain grew with rapidity equal to that in the box.

Another experiment was without the use of electric batteries. A number of wheat kernels were placed on a sheet of window glass, fourteen inches square. A thin layer of straw was placed on them, and on this transverely other layers, to the height of three inches. Over these and the glass cords were wound to keep them in place. The apparatus was set on the soil of a covered hot-bed, and the straw was kept constantly moist. Decomposition set in within a day or two, and the seeds began to germinate. In five days from the covering, young plants began to show themselves above the straw, and in three weeks more, a height of fourteen inches was reached. The roots spread wide on the glass, and rose into the straw, and by turning the glass over, their complex windings and interlacings could be seen. The seeds found in the straw furnished nutritive properties which they themselves contained and required for development.

In the following June Mr. Pell placed in the open air a row of young tomato plants. At one end was a sheet of copper an eighth of an inch thick, fourteen inches wide, and four feet long. It was embedded two feet in the ground in an erect position, leaving two feet in the air. A zinc plate of the same size was similarly treated at the other end. A wire was laid from the top of one, forty feet, to the top of the other, being raised sufficiently by poles to enable horses to plough under it. No wire was laid under the ground, as the earth completed the circuit. An abundance of manure was applied, and the plants matured and bore small, ripe tomatoes, an inch in diameter, in a week. These were followed by three other weekly crops of the same sized fruit within a month. It was not necessary to limit the width of the tract to forty feet. The copper and zinc sheets could as well have been placed a mile apart. The earth would equally well have formed a circuit.

GOLD MINING NEAR RHINEBECK.

An Old Excitement Revived—A Yield that Does Not Pay for the Labor.

The existence of gold in the hills around Rhinebeck has long been known, but it has been thought that mining there would not pay. The first white possessors of the land, which they received under a patent granted by Queen Anne to Henry Beekman, reserved the right to work the gold veins. In 1868 or 1869, Dr. Freleigh, then a physician of Rhinebeck at that time, but now of this city, satisfied himself that there was valuable treasure about eight miles east of the village. The land was owned by Mr. Daniel Murch, and an agreement was made by which Dr. Freleigh was to have the refusal of the farm for a year. No sooner was the bargain completed than the physician made known to his wealthy friends in New York the great mineral richness of the property. Mr. Edward Freleigh, the doctor's son, who was familiar with minerals, prospected among the hills, and picked up specimens of a kind of brown quartz. After this there were frequent dining and champagne parties at the doctor's residence on the Hudson, and the result was the sale to New York men of the farm for $100,000. Dr. Freleigh received Mr. Daniel Murch $25,000 and both retired from the business.

After the disposal of the farm the gold excitement died out, and nothing was done in mining. The first practical explorations of the gold fields were made in the last spring, when time J. B. Lichtenstein of New York purchased of N. W. H. Judson of Rhinebeck the farm adjoining that of Daniel Murch. Since that time Mr. Lichtenstein has had seven or eight men prospecting and digging for gold. A shaft was sunk into the hill about thirty feet, and recently a tunnel was started in the direction of the most promising leads. The machinery used is of the crudest kind, being a band-working crusher, a small furnace, and a few imperfect tools. The most productive vein so far has yielded but more than $25 a ton, and the mine cannot be made to pay at less than $35 a ton.

A Washington Belle Married.

From the Cincinnati Gazette.

WASHINGTON, April 25.—There is to be a wedding at Rock Creek Church on Wednesday evening, the participants being Miss Emily W