WHEELING'S GAS FUEL.

WHERE IT IS FROM; HOW IT COMES.

The Rates Charged for it, the Uses it is put to and other Interesting Details—A Local History of Gas and of the two Companies Furnishing it Here.

OR the Wheeling factories and homes the natural fuel is brought to the city from the vicinity of Hickory, in Washington county, Pa., a village about six miles from Cannonsburg. Two companies are engaged in furnishing the gas, and their combined plants represent an outlay in round numbers of two millions of dollars. The factories, mills and industrial establishments generally have the benefit of competition, a company of mill owners having been formed to furnish their own establishments with the gas fuel. This company is known as the Manufacturers' Gas Company, and its gas is brought to the city limits at the North End through the pipes of the Wheeling Natural Gas Company, which organization sells the gas to the Manufacturers' Company. The Wheeling Company also furnishes gas to Martin's Ferry, Bridgeport, Bellaire and Ætnaville for both manufacturing and domestic purposes, and in all these towns but Bellaire contemplates furnishing it for light also.

The Hickory field is one of the richest gas fields yet discovered and utilized, and in addition to its productiveness and the force with which the gas escapes, the fluid has a peculiar and plainly perceptible odor—a characteristic of the gas of very few localities, and a valuable one, as it makes the presence of gas from a leak apparent to the sense of smell before enough accumulates to be dangerous. The Hickory field extends over an area greater than any other yet drawn upon, its limits not having been definitely fixed by the drill; it affords wells as strong as those of any field, and much stronger than the average, and it has no bad wells; and the two Wheeling companies have not only territory enough, but wells enough and more than enough, to supply all possible demands upon them. Wheeling's supply is practically inexhaustible, even were she compelled to depend forever upon the Hickory field, which she is not.

DANGER REDUCED TO THE MINIMUM.

There is probably not another community anywhere which enjoys the advantage of natural gas fuel where the danger of disastrous explosions is so small, the conveniences so many and the whole piping system so thorough, well laid and secure, as in Wheeling. The two companies who have plants here are composed largely of Pittsburgh capitalists, and most of them have been engaged in the business elsewhere before they came here. They enjoy the advantage of their own and others' experience, and of all that has been said or published on the subject. When Pittsburgh was first piped for gas fuel the business was in its infancy, the appliances crude, the workmen unskilled, the business a venture in which the risk was great and the returns problematical. When the pipes were put down here the markets were flooded with inventions and appliances designed to avert danger and add to the convenience and comfort of using gas for fuel; workmen had acquired skill; the experiment of furnishing gas as a business had proven successful elsewhere; the papers and books teemed with suggestions by scientists and discoveries by practical men, throwing light on the nature and management of the gas. In other cities work was carelessly and cheaply done; here neither pains nor expense was spared to make the piping systems, appliances and accessories as nearly perfect as possible for human ingenuity to make them.

The map of industrial Wheeling and vicinity, on the first page of to-day's INTELLIGENCER, shows the location of each gas company's mains in the streets of the city, where they enter, their arrangements over the river and other particulars of the local system. The radial map on the third page shows the route of the pipelines from the point of supply to the river.

HOW THE PIPES ARE LAID.

It is a known fact that there is no danger of the leakage of gas from the pipes except at the joints. There are two styles of joints. Pipes more than ten inches in diameter are cast, and jointed with a catch in a slot, the joint then being caulked with lead. Pipes ten inches and under are wrought by machinery, and screwed together, the screw threads being coated with a preparation which hardens and renders any accidental, imperceptible fissure impervious to gas. The joints are both good, as safe as can be desired. The gas is brought from Hickory to the city limits by each company through twelve-inch locked and caulked, cast iron pipes. At the city limits ten-inch wrought iron screw-joined pipe is substituted. It will thus be seen that the gas is as secure in the pipes as it could well be made.

But the companies are not satisfied nor would they be allowed here, as in some places, to stop here. Each company provides a system of safety appliances approved by experts and attested by experience. The Manufacturers' company places over each joint within the city a sleeve of iron which fits neatly over the joint. This is caulked at each end, around the main pipe. This practically makes a double pipe, and if the gas escapes from the inner one, the outer one offers just as great obstacle to its escape. Over this sleeve, or short section of pipe, is again placed a box fitted tightly to the main pipe. Out of the apex of this box, which is cone-shaped, a small vent leads, connecting with a small pipe. If after all these safeguards gas should find its way into this outer box, it will seek the most natural outlet, which is by the way of this pipe. The several little pipes, one from each joint, run parrallel with the main pipe, and at every tenth joint is placed on the sidewalk a post through which ten of these little pipes ascend. The ends at the top of the posts are open, not only preventing the accumulation of gas, but ennabling inspectors to test the existence of a leak by simply flashing a torch at the mouths of the pipes. This is done at brief intervals.

THE OTHER COMPANY'S PLAN.

The Natural Gas Company of West Virginia, which has the exclusive right to furnish gas for fuel in Wheeling, except that manufacturers may bring it for their own use, guards its extensive piping system by a different but efficient system of escapes. About each joint on its lines is placed a sleeve, or short section of pipe similar to that used by the other company, except that it is perforated on the top, and this opening connects with a small pipe which runs parallel with the main to the escape posts, placed at convenient distances along the line. When a torch flashed at the orifice of an escape pipe shows gas escaping, a simple device enables the company's employes to determine at which joint the leak exists. At each joint the small escape is fitted with a plunger which rises in a vertical pipe nearly to the surface of the street. By opening these pipes and pushing the plunger down the gas is shut off at the leaky joint, thus locating the flaw.

Under either system the existence of a leak is, it will be readily believed, an extremely rare thing.

Gas furnished to a manufactory is run through a regulator or governor so arranged that by the adjustment of a weight the pressure can be regulated to a nicety from one pound, or even less, to as great as that in the main pipes. In furnishing gas for household consumption, a governor is also placed on the supply pipe which prevents dangerous pressure in the house. In all respects the Wheeling gas systems are the equal of the best plants anywhere. There is no danger of a lack of gas unless the fuel fails in the earth, which is regarded by competent authority as a remote possibility. The two companies now here can by a very slight increase of facilities supply a population of three times the number. So long as there is gas in the earth, Wheeling can rely on an adequate supply.

BRINGING IN A GAS WELL.

An Interesting Process—The Gas Locked in the Earth.

The process, slow at best, tedious and annoying when attended by accidents, of boring a hole down deep into the earth in search of oil or gas, is more or less familiar the world over. The work of finishing a well which proves a heavy gas producer is more novel. By their own records, if they have bored other wells, by others' experience if not, the arrival of the gas can be foreknown several hours by operators. For some time before the drilling is finished the signs of gas increase. When work begins on the morning a gas well is "due in," the well is carefully measured with a tape line. This measuring process finished, the tools are swung and started down the deep hole at a lively clip. Prior to this, a close fitting top piece has been screwed on the outer large casing and the smaller inner casing. Whether the hole is free from water is ascertained by allowing a tester to hang in it all night. This is arranged to fit the hole so tightly that if even a teaspoonful of water exists in the hole it will catch it.

THE GAS INCREASES.

A little gas was escaping from the well generally before the work of drilling in was begun. The drill pounded away on the hard crust, producing apparently little impression. Gradually, however, the cloud of fine dust blown from the hole grew denser, and water thrown down to wet the cable was sent up in a fine mist, which went half way up the derrick. An inexperienced observer would be apt to think there was already something of a gasser, but the officers of the company and the drillers pay no attention, but keep pounding away. In an hour the gas is hissing from the hole; in two hours the rise and fall of the tools is accompanied by a hard, coughing sound, like a towboat puffing with a heavy tow. When the drill is drawn out to screw on another bit the sound becomes a roar, like nothing but the continuous and indescribable rush of the waters at Niagara. Still the well is only approaching the end.

After some further drilling white pebbles and dark fragments of stone ranging from the size of a pea up to a quarter-ounce piece, fly from the hole and fall in a shower on the derrick floor. The roar increases. The drillers now employ a long stick to turn the drill back and forth, instead of the short handle. When the men happen to step near the hole their clothing flutters in the current of gas.

PROTECTING THEIR TYMPANUMS.

Gradually the roar grows louder until it becomes deafening. The spectators move up the hill and the men drilling the well stuff cotton in their ears to deaden the sound. If this precaution were not taken the rush of gas would ruin their ears. Later even this proves not sufficient, and the workmen wrap towels and handkerchiefs over their faces and heads. Even then the roar is painful, and persons 100 yards distant cannot hear conversation unless shouted. A short time finishes the well and the gas pours out so strongly that it is impossible to operate the tools. In some cases the flow of gas upward is so terrific that the immense drills and the tons of tools on top of them are actually buoyed up and almost blown from the well.

The drilling finished, the work of shutting the gas in the well is begun. The gas was formerly allowed to escape, but the possibility of the flow becoming weaker made it a desideratum to economize the fluid. Heavy gassers require much ingenuity to conquer their force. Several systems are in vogue, but the following description gives an idea of the most common: The wells are generally cased down 600 feet with 8½ inch casing. Below this, 6 inch casing runs down 1,400 feet. A heavy elbow pipe is clamped on the inner casing so as to carry off the gas, and a heavy casting is clamped on the outer casing. These two clamps are then screwed down to the beams under the derrick floor. This places the entire weight of the derrick directly on the gas. To prevent the inner casing from bursting the space between it and the outer one is loaded with shot and cement. This makes a wall as solid as the eternal rock itself. A pipe leading into the main pipe line is then connected with the top of the well, and the immense volume of the gas rushes into the pipes, ready for transportation, or it may be cut off by a gate or valve in the pipe.

AN IDEA OF THE PRESSURE.

The largest gassers have never been thoroughly tested as to what pressure the gas exerts in the well. It is impossible. The best that has ever been done is to affix a strong gauge and allow the connection to remain one minute. This gives in the best wells about 500 pounds to the square inch.

In loading the casing with shot, a thousand pounds—half a ton—is poured down the hole. In some cases so great was the force of gas escaping from the upper vein, outside the inner casing, that difficulty was experienced in getting the shot down the hole, the flow of gas being so strong it blew the shot into the air. This was overcome by a device suggested by Superintendent Ross, of the Wheeling company. A standing pipe, six feet high, connected with the space between the inner and outer casings is furnished with valves at the top and bottom. The lower valve being closed, the pipe is filled with shot; the upper valve is then closed, and the lower valve being opened, this mass of shot meets with no resistance from the confined gas and falls at once to the bottom of the hole.

At each well is a "boiler house," containing a large iron tank, into which the gas passes from the well. This collects any moisture, which is drawn off at will. The gas then passes through a curved pipe fitted with a safety valve into the branch line which connects at the main valve house with the pipes direct for Wheeling. The safety valves can be regulated to any pressure, and when the desired pressure is exceeded, the gas escapes and blows off through a pipe on the roof. This is covered by an automatic cap which opens when the gas escapes and closes when it stops.

The gas is now practically shut into the wells, except what is used in drilling. This is not used as fuel, but passes into the engine in lieu of steam, the pressure on the pipes being ample to run the engine.

One peculiar thing about the use of gas in the cylinder is that when it escapes in expanded form, it generates intense cold—or, more scientifically speaking, absorbs a great amount of heat—and the waste-pipe is coated thickly with hoar frost, just as the cooling pipes in a brewery are frosted by the chemical cooling process of an ice machine.

THE BIG SHINE.

Illumination to Celebrate the Introduction of Natural Gas—Streets Jammed.

Natural gas was formally introduced into Wheeling with appropriate ceremonies on the night of Monday, August 30, just past. The event had been eagerly awaited, and the people turned out in great numbers to see the dark night lit up for the first time with the precious vapor. Never before had Wheeling seen such a crowd assembled in her streets. On the corner of Fourteenth and Market streets a stand pipe ninety-five feet in height had been erected, and at the base of it a commodious platform in the form of a square, reaching westward on Fourteenth and northward on Market street on the outer edge of the sidewalk, accommodated the speakers, band and distinguished citizens.

Almost simultaneously, at 8 o'clock, the gas was ignited at this corner and from similar stand pipes not quite so high at the corner of Main and Eighth streets, at the Crescent, at Hobbs, Brockunier & Co.'s glass works, and in Bellaire, Bridgeport, Ætnaville and Martin's Ferry. The gas was turned on at that time, and as it escaped from perforations near the top of the pipe, the gas was ignited by balls shot from Roman candles. As the flames sprang up the murky sky reflected the rays, and it seemed as if the whole valley were one glow of fire. The reflection from the different pipes was visible all over town, and the sight viewed from a commanding position on the hill was striking and beautiful.

Long before the gas was turned on at the central stand pipes the people had begun to congregate in thousands on the streets about the locality, and the windows which offered a view of the place were packed with heads.

In addition to the big jet of gas at the mouth of the pipe, three side arms with four jets each, and a round light had been arranged at a convenient height above the platform to illuminate it. The light furnished by this arrangement and the great volume of gas at the top was wonderful. The buildings for half a square in all directions were as brightly lighted as if in the broad sun of noon.

The congregation of people momentarily increased, until by eight o'clock Fourteenth street was a dense jam of human forms for more than a square, the crowd packing the space from wall to wall far beyond Chapline street. On Market the people reached along the sidewalks to Sixteenth street, and above to Twelfth, while the space at the intersection of the two streets was as tightly wedged with people as a box with sardines. It was literally a crush of humanity for six squares. The crowd, as usual, was variously estimated. A conservative guess is 15,000 people.

Besides those on the streets, the various rooms in the Reilly block were packed; the hundreds of windows in Pollock's flour mill were taken advantage of; the Public Library was invaded by hundreds of ladies, not a tenth of whom could get to a window; Germania and Maennerchor halls were occupied, and all the offices, stores and houses for half a square were given over to curious spectators.

A HISTORIC GATHERING.

On the platform, when the gas lighted up the scene—having been ignited by a Roman candle discharged by Miss Shirley Brockunier, daughter of President C. W. Brockunier, who occupied a position in a window in the Knights of St. George hall—were noticed, in addition to Mayor Grubb, Mr. Brockunier, Mr. Flinn, Mr. Williams, Mr. Whitaker, Mr. O. R. Hubbard and Captain Rawling, the following prominent gentlemen: H. J. Gorley, President of the Select Council; City Engineer E. M. Bigelow, J. M. Guffy, T. H. Given, R. C. Elliott, T. A. Gillespie, Sheldon Riley, of the National Tube Works, Chas. S. Howell, of the Pittsburgh *Leader*, R. L. McCance, Frank Shannon, C. Brackney, and Captain C. W. Bachelor, President of the Natural Gas Company of West Virginia, all of Pittsburgh; Judge R. H. Cochran, of Toledo, Ohio; Col. Thomas O'Brien, Vice President of the West Virginia Company; Prof. I. C. White, the Geologist of the West Virginia University at Morgantown; H. S. White, of Belton; Hon. C. D. Hubbard, Messrs. Thomas E. Lewis, C. R. Behler, J. B. Taney, M. A. Chew, C. B. Hart, C. R. Eaney, Col. Robert White, John Moffat, J. A. Faris, Capt. Grubb, Councilman Harrell, W. F. Peterson, W. H. Hearne, A. C. Egerter, R. G. Barr, Louis Delbrugge, Hullihen Quarrier, Councilman Gilleland, B. Shanley, A. B. Caldwell, John Wagner, M. S. Finley and perhaps as many others of equal prominence.

THE CHEERING CROWD.

About half an hour before the time set for turning on the gas the Opera House band arrived on the scene, and taking up its position in front of the Opera House entrance, entertained the people with some choice, lively music. Several of those in the crowd had come prepared to assist in giving a vent to the enthusiasm of the populace, and between this time and 8 o'clock there was a constant blaze of Roman candles, red fire, sky rockets and other pyrotechnics. Several houses near were illuminated. Had the gas been escaping anywhere there would have been a premature illumination, if not a conflagration. As each rocket rose with a fiery whizz the crowd cheered. It was a scene, an occasion, long to be remembered, never precedented in the history of the city.

At 8 o'clock sharp Superintendent Ross directed an employe of the company to turn the gas on. It was lighted at the jets above the stand, sending a bright glare around, and a shout went up as the first glare from the new fuel was visible. Shortly after one of the fire balls ignited the gas at the top of the stand-pipe, and with a sudden flash the whole sky grew white and the houses stood out for a square as if the sun had sprang out of an eclipse at one dash. A great shout arose. It was a transformation from the gloom of night to the glare of mid-day—a transformation typical of the change which the introduction of the new fuel was about to work in this industrial community.

After President Brockunier, of the Manufacturers' Natural Gas Company, had spoken and while President Flinn, of the Wheeling Natural Gas Company, was speaking the rain began to fall so heavily that some very fine speeches had to be held over for some other occasion.

MR. BROCKUNIER'S REMARKS.

Mr. Brockunier said:

I congratulate you, my fellow citizens, that to-night we realize the fruition of all our hopes. Natural gas, the fuel of the future, is at last a fixed fact in Wheeling, and we are gathered together to rejoice at the successful consummation of our labors.

Five months ago the Wheeling Natural Gas Company was organized. It was undertaken on a strictly business basis, to produce and sell gas to consumers at a rate which would place our city and this vicinity on a footing, so far as cheap and efficient fuel is concerned, with the most favored locality in the country. To-night the gas is here and a new era has dawned for Wheeling if we intelligently apply it to the uses it is so well fitted to serve. So short has been the time, so vast the work accomplished, that it seems as if Aladdin with his lamp had evoked it all by magic.

The introduction of natural gas marks an epoch in the history of our city. The practical and interesting question to us is, how we can be most benefited by it. Without it the future of Wheeling seemed gloomy indeed. She would certainly have lost her glass industries in a year or two, as it would have been impossible to meet the competition of factories located where it was obtainable. Her sheet iron industries would have languished if not have become extinct, and our other manufacturers would have found it difficult to compete with Pittsburgh and other localities in products where cheap fuel gives such decided advantage.

Now we need not fear competition from any quarter, and we can confidently invite capital from abroad to enter upon new enterprises in our midst. We need them. A variety of industries is a source of strength to any community, and we have the locations, are contiguous to the markets of the great West and East, have railroad and river facilities for shipment, have a healthful climate, and now that we have the cheapest and best of all fuels, they cannot bring their business to a better point for economical and successful operation. Let us cordially invite skilled labor and capital, and men of experience and ability to come and take up their abode with us, and let our city enter upon a new era of prosperity and growth such as she has never known. How this can be achieved, if you will permit me to speak of the business with which I am most familiar, is illustrated in the working of the establishment with which I have the honor to be connected.

The South Wheeling Glass Works has made the name of Wheeling a familiar word much beyond the limits of the United States by the excellence of her products; in Cuba, in South America, the distant continent of Australia, in England, and only last week an application from Paris, the seat of the finest artistic products in the world, was made for the sale of these goods manufactured in Wheeling. Twenty years ago in a conversation with one of the largest importers of crockery he said to me it could never be made in the United States to compete with England. Behold! Trenton and East Liverpool with their thirty or forty potteries. Wheeling has one which I gladly testify has made itself a high reputation for quality, workmanship and artistic shapes and decorations. We want more potteries. The superior quality of Wheeling nails has built up that industry to immense proportions. Let us have a variety of manufactures and superior quality.

When to-morrow the gas bursts into flame and fire in the factories and forges of our city and our skilled workmen compel it to do their bidding in glass house, in mill and pottery, forging articles of use, or shaping with deft fingers those of beauty and utility, to ornament homes all over the continent, who will not rejoice that our conservative city goes forth to renewed and increased prosperity? Labor, too, shall rejoice, for now, it is to be hoped, it will find a more continuous and remunerative employment than in the past.

Let us all rejoice and gather new hope and inspiration to go forward, keeping step with the progressive spirit of the age in which we live and building wisely and well for the future of our city.

Before taking my seat let me say in your behalf, and my own, words of friendly greeting and congratulation to our guests from Pittsburgh. They have placed their money, their skill and experience in this large enterprise, which we hope—while it benefits this city and vicinity—will also be profitable to themselves. We bid them a cordial welcome. Five months ago the names of William Flinn and Thomas A. Gillespie were known to very few persons in Wheeling. They came to us almost strangers with the straightforward proposition to deliver us natural gas at prices prevailing in Pittsburgh by the first of September. Their terms were eagerly accepted by many on this and the other side of the river. They loitered not an hour, but with consummate ability laid their plans, raised the capital, selected skilled and able lieutenants and with tremendous energy have pushed the work until to-night—before the time agreed upon, we behold the successful fruition of their plans. I most cordially say welcome, William Flinn and Thomas A. Gillespie.

To those connected with the practical workings of the company who have come among us intending permanent citizenship, we also bid a cordial welcome.

To Captain Batchelor and his associate worker, the credit is due that the details of the business have been put into operation and worked to a successful result without friction, without reckless haste or unnecessary waste of time, and that immense obstacles have been satisfactorily overcome without marring the stability and permanent character of the undertaking. No better gas line was ever laid, and to-day the people of Wheeling may rest assured that so far as engineering ability and careful work can insure a permanent supply of this inestimable fuel they are now in a position to realize their most sanguine hopes.

THE ORGANIZATION.

The company was organized on the 19th day of February, 1885, and the charter members are C. W. Batchelor, J. I. Buchanan, James Bishop, Peter Grace, T. J. Vandergrift, J. N. Vance, A. J. Sweeney, John G. Hoffman, sr., and Thomas O'Brien. Leave was granted to increase the capital to $1,000,000 and the purposes for which the charter is granted are "the boring for and transportation of natural gas by pipes or otherwise and selling the same to or supplying it to others for lighting and heating purposes and for boring for carbon oil or petroleum". The stockholders held their first meeting on the 25th of March, 1885, to pass by-laws. The Wheeling ordinance was granted April 17, 1885.

THE COMPANY'S LINES.

The company had already begun to test their territory close to the border line between Pennsylvania and West Virginia, but unavoidable delay from the severe nature of the drilling having ensued they decided to face the difficulty by bringing the gas from the Hickory field, where gas was known to be in ample quantity. Construction was commenced in May, 1886, and since that date more than 42 miles of 12, 10 and 8 inch pipe have been laid, twelve miles of which are on the streets of Wheeling. They have five wells completed and are drilling three more.

It is in some degree pleasant to look back upon difficulties overcome and obstacles necessarily surmounted, and not the least claim the company has on the citizens of Wheeling is that no embarrassment was permitted to interfere with the firm resolve of the company to keep its promise to the citizens of Wheeling. Strikes in pipe mills, labor difficulties and embarrassments of whatever kind seemed only to stimulate the efforts of the energetic officers of the company, and to-day all these difficulties are forgotten in the pleasant feeling of duty performed, obligations redeemed and the congratulation of its numerous friends in Wheeling.

THE WHEELING COMPANY.

A History of the Project from its Inception to this Date.

The inception of the Wheeling Natural Gas Company should be credited to Mr. Thomas A. Gillespie, the Superintendent of the Philadelphia Gas Company of Pittsburgh, Mr J. M. Guffey and Mr. William Flinn. Early in March Mr. Gillespie and Mr. Flinn came here, and after consulting with the manufacturers of this city, and the neighboring towns across the river, entered into a contract to build a line from the Hickory gas district in Washington county to supply the works in this manufacturing district. The first meeting of the parties, now stockholders of the Wheeling Natural Gas Company, was held in the office of J. M. Guffey, in Pittsburgh, March 30, 1886. At that meeting a call was made for a subscription to the capital stock of the company, which was placed at $500,000. Over $750,000 was subscribed and the apportionment had to be cut down to come within the $500,000. The company applied for a charter under the laws of West Virginia, and was formally organized on April 20.

A large amount of preliminary work had to be done, contracts for pipe, materials and labor made and the forces organized. The first car of pipe for the side lines was shipped on May 3d. Some work around the wells was done and connecting lines from well locations to where the main line was to begin were laid.

THE MAIN LINE.

The officers of the company certainly had great confidence in their own judgment as to where paying gas wells could be found, when they thus laid their pipes in the ground before a single well was sunk, and the correctness of that judgment has been amply verified by the result. Not one of the wells sunk by them has been other than a paying well.

The first car of pipe for the main line, from the station at Elbert's farm, which will be known as Station A,—for the officers of the company modestly discountenance any effort to fasten their personality on the country by adopting such names as "Flinn City," "Gillespieville" or "Williamsport"—was shipped on May 21. From that date until August 18, when the last car for the main line was shipped, there was received over 300 car loads of pipe. Credit for the wonderful rapidity with which this pipe was made and shipped along the line is due to the National Tube Works Company, of McKeesport, who made all the pipe used in the main line, tested it to 750 pounds to the square inch, and not a length had to be rejected after it was in the trench. Of the line itself, it may be said that the first ten miles it is ten-inch screw and socket joint, and the balance of the line, twenty-three miles in length, is known as the "Converse lock-joint pipe," so named from the genial assistant general manager of the Tube Works, under whose patent the joint is manufactured.

A LARGE FORCE EMPLOYED.

The first well was begun May 3 and completed June 28. It is 2,158 feet deep and shows a pressure of 580 pounds.

The last length on the main line was laid and the sections coupled up at 9 o'clock on the morning of August 27, and at 4:40 P. M. the gas was passed through the whole line from the station at Hickory to the Ohio river.

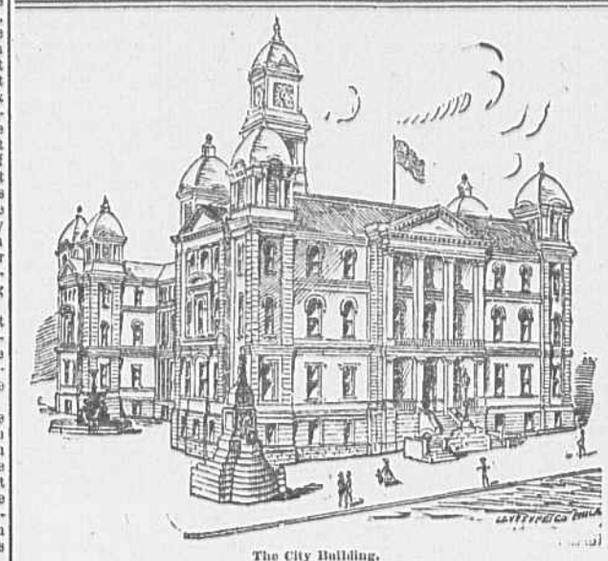
During the progress of the work there has been employed an average of about 700 men, and the rolls show that nearly 2,000 men have been employed for longer or shorter periods.

The total length of the various lines is about 210,000 feet.

The company have ready to turn into its lines five completed wells in the Hickory District and three more going down, which will be completed in the month of September. It has about 1,000 acres under lease in Mt. Pleasant township, Washington county, Pa., where its wells are located.

The company's interests are essentially in this State, as it has under lease over 400,000 acres in West Virginia on which it is now drilling six wells, located with reference to gas and oil.

If the gas and oil bearing sand rock follows down through this State and is as rich in these fluids as in the sister State, the possibilities of the company's future have no limit except in the imagination. West Virginia territory may produce such results as will leave Col. Sellers' eyewater in the shade.



The City Building.

Wheeling Ahead on Rates.

A copy of the rates paid for gas by domestic consumers at Jamestown, N. Y., has fallen into the INTELLIGENCER'S hands. For one cooking stove through the year Jamestown people pay $42. The price here is $14. Heating stoves there are charged the same as cooking stoves for the months used. Here the first heating stove costs $11 90. On an average the Jamestown rates are over 300 percent higher than in Wheeling. The line by which that city gets its gas is about the same length as the West Virginia Company's here, but the pipe is much smaller and the cost of the plant not nearly so high. So that making due allowance for the cheaper coal here, Wheeling is at a great advantage as to rates.

A Pointer for Molders.

A correspondent of the *American Machinist* writes: "I was making at one time some castings with a very steep joint; I used to get lake sand, wet it and sleek it up. One day a tramp came along and stood looking at me. Said he, why don't you get some rags for that job and use them in the place of that sand. I got some rags, wet them and put them on, and they beat all the parting sand and paper I ever tried."

AS OTHERS SEE US.

WHEELING ON THE BOUND.

Her Great Natural Advantages—What the New Fuel is Going to do for Her—Present Manufacturing Importance and the Reasonable Certainty of the Future.

"Cold Short" in The Age of Steel.

Wheeling is going to have natural gas certain sure—abandoned holes are being reopened and the bowels of the earth are to be prodded indefinitely until she gives forth the coveted fuel. The opinion gains ground that it exists anywhere in the proximity of small streams, in valleys of sudden and sharp declivities in these mountainous regions if one drills deep enough after it; the belief is also being strengthened that there is very little known about it, and that its area is but vaguely defined. Meantime investments are being made with the nearly certain experience to be reaped, as that quaintly expressed by the rustic, "that he had invested $5,000 in one of the blamed holes, and he had the hole yet." Pittsburgh is squirming under prospective competition in the advantages derived from the possession of the great element, and they are preparing to do less blustering. With the advent of natural gas Wheeling will be on equal footing with Pittsburgh, so far as facilities are concerned, and her people should prove equal to the opportunity. They have the grit, mental, physical and financial.

Pittsburgh and Wheeling are sisters in commercial possibilities and Probabilities; a consonance of ways and means, and their proximity will prevent hostile rivalry; the more powerful and advanced sister has nothing but words and actions of encouragement and good cheer for the smaller and weaker one. In coke Wheeling is likely to have a very great advantage, discounting the Connellsville coke merits, which have been so advantageous to Pittsburgh.

Wheeling is preparing to utilize natural gas fuel; the formation of companies with plethoric capital, and their struggles to gain advantages, are already in progress. Wheeling, not being so pulsant, either in fact or presumption, as Pittsburgh, ought to present more than ordinary favorable inducements to those seeking locations, with the view of participating in the advantages derivable from this fuel and reaping some of the profits. Available sites in the neighborhood abound; the situations, with regard to facilities for transportation, are equal to those of any sister city, both by river and rail; taxation is very moderate. The city debt is a mere bagatelle in a population approximating 40,000—about $629,236; her credit is good; the country proximate as productive as any in the land; living is cheap with a splendid market; the people are genial, courteous and clever; the women are proverbially graceful and beautiful, and the business men are enterprising, honest and affable, and, as I remarked in my last letter, rather conservative, but natural gas is a great modernizer. The climate is equable, neither of the extremes of heat or cold prevail, and the death rate is among the lowest in the country. As an iron and steel and glass producing centre it is inferior to Pittsburgh in diversity and number only; in several specialties it has forged ahead. Wheeling has one of the two largest steel and iron concerns in the Ohio Valley, the Riverside. And should the natural gas fail in supply, and coal gas fuel be the only profitable alternative, Wheeling has coal enough in her environs to supply two Pittsburghs.

Wheeling should come forward under all these advantageous factors, which are making Pittsburgh a synonym for progress; she has all but natural gas, and that she will have in the near future. Then she will have been given the five talents; what answer will she be prepared to give when called on to account for them? There has been a still hunt for months past by agents of large eastern and western establishments for available sites to which they could remove their works that they might secure the use of this natural gas. Wheeling's chance is coming. She possesses, as I have remarked before, the same geographical advantages as Pittsburgh, with this superiority; she is one hundred miles lower down the river, which in seasons of low water should give her temporary advantages. Then there need be no crowding; available sites are nearly as thick as leaves in Vallambrosa. But procrastination is an obsolete quantity in these days of progress when nature is supplying man with potent agencies ready prepared for use; when business transactions and manufacturing accomplishments crowd upon each other so closely that what is theoretic or problematical today is developed or disproven and accepted or rejected to-morrow and part of history the day after. Hesitating, cautious old fogyism has no part in the drama now being enacted, but alert, resolute, nervy, audacious, if it better expresses it, spirits, are the select and successful actors. Wheeling cannot assume to be a rival of Pittsburgh. She will do well if she proves herself a successful and not too aspiring imitator.

In the Gogebic range, in northern Wisconsin and Michigan, there is enough high-grade Bessemer ore to furnish a supply for fifty years to come. Wheeling capital and enterprise are largely interested in the Gogebic range, and it is being rapidly developed by them with direct reference to the requirements of the Wheeling market.

The Economite community, a religious organization, which owns a very large and valuable tract of land on the Ohio river between Pittsburgh and Wheeling, and whose teachings heretofore have been decidedly averse to modern progress, have awakened to the vast possibilities of natural gas, and they are inviting manufacturers to take long leases of sites on their lands. So the idea I advanced some weeks ago that the upper Ohio Valley from Wheeling to Pittsburgh would by the exercise of enlightened progressive enterprise become one great continuous manufacturing center is materializing. Wheeling has the bit between her teeth, too; she is not going to be left. She has plenty of superb sites, the best and cheapest coal in this country, three energetic, wide-awake pipe lines, with more to come, systems of transportation the peers of any in the land, and an abundance of freshly aroused, vigorous, self-reliant enterprise and progressive spirit. Give her a little time; she has the chance, and her place, in the near future, will be up among the foremost, acknowledging no equal but her more mature, stronger equipped sister, Pittsburgh.

Pittsburgh is not booming in the ordinary acceptation of the term, she is but realizing the results of well-timed and well-applied enterprise. She bids fair to double her present population and resources during the next five years; and Wheeling will prove no laggard; she has entered the lists, thrown down her gauntlet, and history has never yet had occasion to record her a recreant. I have been exploiting and formulating the unequaled advantages and claims of this city, not idly or hypothetically, but because they are in material existence, just as I have been publishing them. They have only been waiting an opportunity to be developed and utilized, and that opportunity is at hand.

There is not a scintilla of difference between Pittsburgh's present and prospective advantages and those which Wheeling is developing and will have in full fruition by the first of September next.

There is a very stable foundation to build on in Wheeling; in fact there are but very few as solidly substantial cities as Wheeling. With natural gas she will make as splendid an exhibit as Pittsburgh. While it may not run so high up in the figures, taking the conditions into consideration, I believe the comparison will be favorable to Wheeling. She has more room for expansion within reasonable limits if it is properly utilized, and there are features connected with her condition, financial and otherwise, which should have strong weight in influencing the investment of capital and the location of enterprise. So far as metropolitan improvements, advantages, possibilities and certainties of progress are concerned, she can show as attractive and veracious an exhibit any of them. She has been backward, but there have been factors and incidents in her career which have compelled her to be cautious and to make haste slowly. She is now well rid of these restraining influences and too well taught by experience to be bamboozled by specious tricksters again. She is modest and not given to balooning, but the stuff, the honest, simon pure grit is there, and her course henceforward will be upward and onward; all the more certain because it will be without flimsy presumption or hypothetical claims to distinctively pre-eminent advantages. There is so much froth and bluster given off in the pretentious vaporings of our American cities, that until investigation confirms the verity of these wonderful latter day city booms, they are received with contemptuous incredulity. Pittsburgh has demonstrated that she is entitled to more than she ever claimed. Wheeling is unobtrusively but confidently presenting her claimes, satisfied that honest merit will always attract the attention of sagacious investigation and win in the long run.

Wheeling is on her mettle, her blood is up, and I can promise, as a veracious chronicler, to report some nervy, progressive movements shortly. These people, if a shade procrastinating, are spontaneous, and they will, stimulated by the accomplishments of Pittsburgh, show that they are emulous also.

It does not require any large measure of prescience to assert, that before many months, Wheeling will have additional railroad facilities of great value, which will give her the use of three additional trunk lines, nor does it need any extraordinary horse sense to anticipate that as soon as the city is thoroughly in possession of natural gas equipments and supply that capital will come to investigate and to invest, despite all the quibbles and forebodings of pessimists. Nature has furnished an extraordinary potent element; foreign enterprise is furnishing the supply, and home enterprise will, in proper season, manifest its appreciation of this great endowment and its ability to properly utilize all possibilities accruing.

I have been writing lately in a laudatory strain about this part of the Ohio Valley. I was not attempting to boom it, but merely assisting nature, which is most substantially booming it. Pittsburgh does not need any perfunctory booming from any one. She is an accomplished fact, the centre of the manufacturing industry of this country; her course from this time on is fixed and certain—but a few years and she will be supreme. With but two years' practical use of natural gas Pittsburgh has made not only wonderful progress but that progress has been substantial and of a permanent character. When full development has been made of all the uses, possibilities and advantages of this great fuel, and it is controlled by legitimate competition sufficiently diffused to prevent monopolistic extortions, Pittsburgh and Wheeling will forge ahead of all rivalry as iron, steel and glass producing centers.

And this desirable condition will come about, for whilst this gas in paying quantities is confined to this region it is not by any means local, but is found at different and not contiguous districts, in a pretty extensive territory, geographically tributary, however, to Pittsburgh and Wheeling. Pittsburgh, according to reliable census figures, has increased in population 91,000 since 1880, and I venture the prediction that 1888 will show an increase of 10,000 for Wheeling; for her spirit is aroused, she is girding up her loins and buckling on her armor, and when these mountaineers, whether Pennsylvanians or Virginians, get their mettle up, the loads have to come or the togs break. Nor are they selfish; they possess unprecedented and unequaled advantages, and magnanimously they invite their competitors in the iron and steel trade elsewhere to come to this promised land and share in these advantages.

Wheeling, through her Chamber of Commerce, is about to enumerate and classify these advantages and publish them, and at the same time extend a regular old-time hospitable invitation to all who "labor and are heavy burdened" with disadvantages and equalities as to facilities, to come to her and find relief. She has acres upon acres of splendid factory sites, unlimited water supply, cheap taxation, genial, liberal citizens and facilities for transportion unexcelled on this continent.

The Reymann Brewery.

A NATURAL GAS CHRISTMAS.

A Wheeling Lady Revisits the Scenes of her Youth and Telleth of Them.

WHEELING, December 25, 1890.

MY DEAR MARY JANE:—I am sure you will envy me when you know I am back in the old home spending Christmas Day. But "the old home isn't as it used to be." I can scarcely believe that this is smoky old Wheeling. I see the change, but I cannot realize it. You know how it used to be when the mills were "running full"—the atmosphere so dense with smoke that you couldn't see through it and couldn't tell what the sun might be doing on the other side.

Well, there is more business than there ever was, more mills, more