

Building Greatest Sewer in the West to Drain Part of Omaha's Area

AFTER thirty-five years of waiting and sea-sawing between the various city engineers, city councils and contractors of the city of Omaha, the North Omaha main sewer—the largest west of Chicago—is now being built. The construction work being well under way. Three city engineers, a dozen councils and contractors almost without number have been connected with it from time to time, and when final completion of the big sewer is accomplished one of the worst "hoodoos" of the city will have been removed, much to the relief of the city's administrative forces and the various contractors who do the city's work.

Being of mammoth proportions, the construction of the sewer is no small undertaking and the contractor, J. J. Hanighan of Omaha, was given nine months in which to do the work, even though that part of the sewer which he will build for the city is but 3,450 feet in length. The entire length of the sewer will be 4,500 feet, but the Union Pacific Railroad company is constructing 1,050 feet of this, that part which goes through its holdings on the bottom, where the railway shops are located.

Contractor Hanighan began work on August 8, last, and the contract calls for completion by May 1, 1909, the cost to the city to be nearly \$300,000, while the Union Pacific will pay out over \$65,000 for the construction of its part of the sewer.

At its largest point the sewer will be eleven and one-half feet by twenty-two feet, twice as large as any sewer heretofore built in Omaha and larger than any sewer in the Twin Cities, St. Louis, Kansas City, Denver, Seattle, San Francisco or any other city west of Chicago. This large section of the sewer will extend from Eighth street to Eleventh street. The next section above will be somewhat smaller, tapering again further up. The lowest block, only, will be built on the cube order, the other sections to be cylindrical.

The outlet of the sewer is a few rods north of Cass street, on the Missouri river, the sewer from there extending a short distance west to the line of the Union Pacific shop grounds. This section was completed early in the work. Through the shop grounds the sewer will take a westerly course to Ninth street and then south westerly to Eleventh street, about four blocks, where the city again takes up the work.

From Eleventh street the sewer will be laid under the alley between California and Cass streets to Thirteenth street, thence north on Thirteenth street to California street, west on California street to Fourteenth street, north on Fourteenth street to Webster street, west on Webster street to Fifteenth street and north on Fifteenth street to Izard street. At Izard it will connect with the old Izard street sewer, which in the past has vainly endeavored to drain the north section of the city. The old Izard street sewer extends east seven blocks from Fifteenth, where the connection will be made, but this sewer section will be connected with the new main sewer at Thirteenth and California streets by a small sewer, which has also been completed. Some of the main work has also been completed, the contractor having practically finished that part of the sewer up to California street.

Cullen, Pfendel & Co. of Chicago has the contract for building the Union Pacific section of the sewer and these contractors are also progressing well with their work, having completed about 400 feet of the contract for 1,600 feet of sewer. This work must also be completed by May 1 next. Though the length of the Union Pacific section is but a fourth of the whole, the cost will be nearly three-fourths as much as the city's section on account of the amount of bridging which the network of switching tracks in the shop grounds requires. When the excavations were made under the tracks piling had to be driven and bridges built to hold them up and keep the weight from the pipes to be laid underneath.

Some bridging also had to be done under railway tracks in the city's section of the work. Five railroads have tracks on the bottom above the Union Pacific shop grounds—the Illinois Central, the Chicago & Northwestern, the Chicago, Rock Island & Pacific, the Missouri Pacific and the Belt line—and these tracks all had to be sustained by piling. The cylindrical section of the sewer passes under the tracks and the cost of the bridging brings the cost of this section of the sewer up to \$60 a foot. Other sections of the sewer vary in cost from \$25 a foot to \$21 a foot.

The oblong section of the sewer—that built on straight lines—will be of brick and reinforced concrete. The floor and walls will be of brick and the roof of reinforced concrete. Steel "T" beams will



PREPARING CONCRETE FOR THE BIG SEWER.

be placed at intervals of two and one-half feet, the concrete being between. The cylindrical section will be of vitrified paving brick, three and one-half courses thick. The entire Union Pacific section will be of reinforced concrete construction, steel "T" beams and a network of smaller steel rods to be used to give great strength to the structure.

The North Omaha main sewer is a sewer with a history dating back as far as 1873. In that year R. C. Phillips, chief engineer of the District of Columbia, drew plans for it as well as for a complete sewerage system for the city. The plans were drawn at the instigation of former United States Senator Millard, who was then mayor of Omaha. But a portion of the plans were adopted the North Omaha sewer being left out.

Eight years later, in 1881, Andrew Rosewater, the present city engineer, was appointed to the position and he drew another set of plans calculated to drain the north section of the city. These plans were discussed pro and con and finally laid on the shelf and nothing done until 1884. In that year a section of the present Izard street sewer was built, the outlet being in a creek near Fifteenth and Izard streets.

As foreseen before it was built, the sewer was not large enough to take off all the storm water of the section, and in 1891 the city contracted to build the now famous (or infamous) double barreled sewer known as the Izard street sewer.

City Engineer Rosewater was then stationed in Washington, D. C., but happened to be in Omaha when the council decided to construct the double sewer. He went before the council in the capacity of a private individual, with the best wishes of the city uppermost, and told that body that the double contraption would never do and that a mistake would be made if it was built. The council thought that a double sewer would carry off a double amount of sewerage, but this the engineer showed would not be the case on account of the extra friction. Nevertheless, the sewer was ordered built and the contract let to Hugh Murphy.

Mr. Rosewater then told the contractor to be on his guard while doing the work for if a heavy storm came the rain would split the pipes. Mr. Murphy took the advice given and filed with the council a protest to protect himself. The protest was refused. Luckily for the contractor, though, he completed his work and the sewer was accepted before a storm came.

Less than one month after this, however, a terrific storm came and the rain fell in torrents. The double barreled sewer was split in a number of places, manholes were lifted up throughout almost its entire length, and as far west as Twenty-fourth and Cumling streets the

storm damage was repaired and new sections replaced those which were split, but year after year following the same thing happened, though the damage in later years was not so great.

In 1892 one year after the double Izard sewer was built, Mayor Bemis appointed Andrew Rosewater city engineer again and the city voted sewer bonds in the sum of \$100,000. The new city engineer then began investigating as to the best method of relieving the congested sewerage condition.

After looking over the ground thoroughly he built two sewers with a fall to the north, the outlet being in a creek which flows through Miller park, the sewerage volume making the creek quite a respectable stream. Even with the building of these two north sewers the Izard sewer was still found to be too small and something else had to be done.

The old sewer was too low and the grade too flat to make the enlarging and extending of it advisable, so in 1904 the city engineer drew plans for the building of a new sewer to extend from Fifteenth and Izard streets in a southeasterly direction through the Union Pacific grounds to the river, a route similar to that now being taken by the big main. These plans were gone over thoroughly and finally accepted, with some alterations, by the council and approved by the railway officials.

Before the Union Pacific approved them, however, several heated conferences were held by the officials of the road and the engineer with the council. Prior to the drawing of the last set of plans the Union Pacific wished the council to close a number of streets and alleys on the bottom so that it could enlarge its shops. Mr. Rosewater entered emphatic objections to this, holding that the city should not make the concessions asked for unless the Union Pacific would agree to give the right-of-way through its holdings for the sewer and in addition to pay for the construction of that part of the section which would pass through its holdings.

Honorable Burt was then president of the road and he threatened to move the shops from Omaha to Grand Island if the council would not close the streets and alleys, declaring that he would never agree to a contract binding the company to pay for the building of that part of the sewer which would pass through the shop grounds.

This declaration did not disconnect the city engineer and he called the president's attention to the fact that practically all of the land on the bottom to which the Union Pacific holds title was secured on the basis of an understanding and contract that in the event the shops were ever moved from Omaha the title to the land would revert to the city.

"If you want to move your shops to Grand Island and give the city a property valued at over \$2,000,000, why go ahead and move," said Mr. Rosewater.

President Burt said no more about moving the shops and in a few days he signed the contract under which the road is now building its section of the sewer.

Following this the plans were changed somewhat so as to keep the sewer on higher ground, the final adoption of the plans being in 1908.

In 1907, under resolution of the city council, the city engineer advertised for bids for the construction of the North Omaha main sewer. The lowest bid was made by James Jensen of Omaha for \$123,500. City Engineer Rosewater believed the bid to be far too high and advised the council to reject it and readvertise. Despite this advice the council accepted the bid and voted to award the contract. This then went to the mayor for his approval and the city engineer wrote that official advising him to veto the proposition, as the price bid was excessive. Nothing being heard from the mayor, the engineer wrote him again on the day of the next meeting of the council and authorized him to deduct from the engineer's salary the full cost of readvertising for bids if the city failed to save at least \$5,000 by such a move. This second letter resulted in the veto of the contract by Mayor Dahlman. When it came up in meeting of the council that evening the members of that body failed to pass the contract over the executive.

Members of the council then declared that they would never favor the building of the sewer, but in the spring of this year owners of property in the northern part of the city called upon the council and demanded relief, showing great loss of property resulting from the inadequate system in their section. The council could not withstand these demands and authorized the readvertising of bids for the construction of the sewer. These bids were opened on July 6 last and the proposal of J. J. Hanighan, the lowest, was for considerably less than \$27,000, or \$23,500 less than the bid made by the lowest bidder six months previous, and he was awarded the contract.

The mouth of the big main sewer now being constructed will be ten feet below the head, a fall of two and one-half feet being maintained throughout about half of it and a fall of three and one-half feet throughout the remainder. Its capacity will be 70,000,000 gallons every twenty-four hours. Eight small sewers now built will empty into the North Omaha main. These are the Chicago sewer, two feet four inches; the California sewer, three feet six inches; the Izard sewer, eight feet five inches; and five smaller sewers. The contemplated Burt street sewer, which is planned to

extend west through the hill on Twenty-fourth street to Thirty-fifth or Fortieth streets, will also empty into the big main now being constructed. The North Omaha main sewer is intended to drain practically three-fourths of that part of Omaha lying north of Cumling street.

The first sewer construction on Izard street was in 1884, when an eight and one-half-foot sewer was built for a short distance on that street, the piping taking the place of a small creek which ran through that section of Omaha before the growing city compelled its displacement.

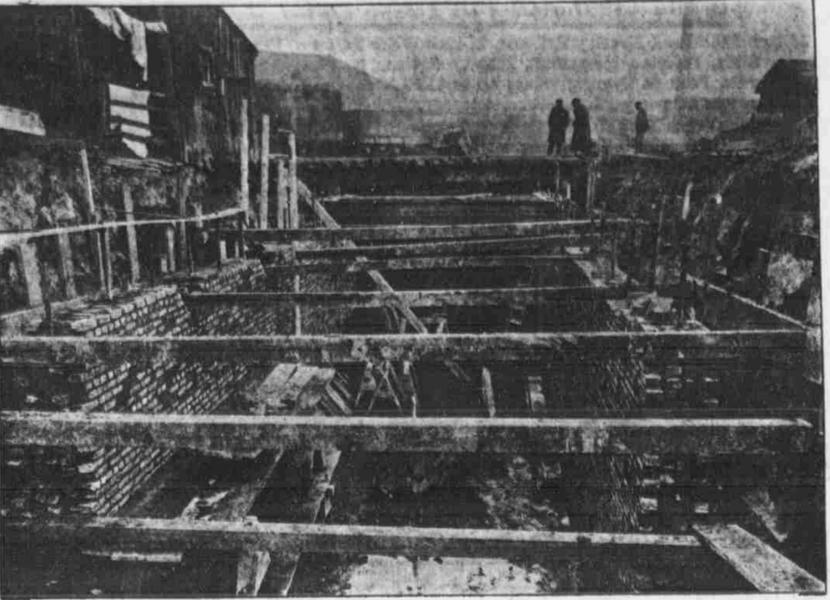
When the sewer was built a ravine adjacent to the creek was filled and the four story brick building of the Woodman Oil works was built on this filled ground. Shortly after the completion of the short sewer and the erection of the building, a terrific storm broke early one morning and flooded the entire north section of the city. The water rushed down in torrents where the old creek used to be and not stopping for the four story brick building, it went on to the river. It was not until the water had subsided that the city was again able to enter the city.

First thing in the morning when the extent of the storm damage was known, the Board of City Commissioners and the city council were both called together for an extraordinary session. The commissioners had previously decided to abandon a bridge across the creek, but they resolved that: "Whereas, it is impossible to put a bushel in a peck measure," or in other words, to put a creek into a sewer pipe, they would not tear down the bridge. The council talked all forenoon about the advisability of abandoning the whole North Omaha sewer project, and Mr. Woodman threatened to bring suit against the city for damages to his building.

The council took no definite action and Mr. Rosewater, who was then city engineer, started out to make a thorough investigation, for, as he says, as he looks back now to that day, when he was a young man practically starting out in his career, he was somewhat nervous. For if the damage done by the storm had been his fault it is quite probable that he would not now be city engineer of the city of Omaha.

But be that as it may, the city engineer made a thorough investigation and proved to his own satisfaction as well as to the satisfaction of the city council that he was not at fault.

The city engineer began at the Woodman Oil works and traced the swath of the storm up to Fortieth and Farnam streets, where the old county road was in the early days. The land was low and a high grade had been built for the road.



EXCAVATION FOR THE GREAT IZARD STREET SEWER.

This grade formed a pond on the west which held about 5,000,000 gallons of water. When the storm struck that early morning the grade gave away and the torrent of water weighing about 40,000,000 pounds was let loose from the hill, 150 feet above the oil works and came down like a Johnstown slide, going through the four story building like a battering ram, carrying with it wooden paving blocks and debris of all sorts.

Mr. Woodman was president of the board of public works at that time and as the company was negligent in not providing for the carrying away of an influx of water when it built its structure across the old ravine, and not the city, the threatened damage suit never materialized.

One other sewer aside from the North Omaha main has been completed during the current year and two others are now in course of construction. That which has been completed is what is known as the Bedford Place sewer, extending from Thirty-fourth and Pinkney streets southwesterly to Bedford avenue. This cost approximately \$10,000.

The sewers now being built are the concrete storm water sewer on Forty-seventh street and the extension to the Jones street sewer. Offerman Bros. of South Omaha are building the former which will extend from Hamilton street to Military avenue, a distance of ten blocks. This is a four foot sewer and will cost \$12,000. The other sewer will be 3,600 feet long and will cost

about \$6,000. It will vary in dimensions from four feet two inches to eight feet in diameter and is being built by R. L. Kenny of Omaha. It will extend from Sixteenth and Pacific street four blocks west to Twentieth street thence south to Center street and thence west to Twenty-first street and Lincoln avenue. Both the Forty-seventh street sewer and the extension to the Jones street sewer are to be done by May 1, 1909. The forty-seventh street sewer is being built of concrete while the other is of brick construction.

With the completion of these sewers, Omaha will have a sewerage system of over 180 miles, the total cost being considerably in excess of \$2,500,000.

WHERE THE RAILROAD TRACKS CROSS THE SEWER.

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Short Tales Gleaned from the Story Teller's Pack

Beneath Notice.
THE captain of a certain yacht had evinced an anxiety touching a mishap to the craft that had at once attracted the attention of a fair passenger on board.

"What's the trouble, captain?" ask she.
"The fact is, ma'am," was the response, "our rudder's broken."
"Oh, I shouldn't worry about that," said the lady. "Being under the water nearly all the time, no one will notice that it's gone."—Harpers' Weekly.

A Foolish Observation.
W. H. Singer, the Pittsburg millionaire, who, on his golden wedding anniversary, distributed \$100,000 among his four children, imputes a part of his success to plain, straightforward and frank dealing.

"Time and money alike are lost," said Mr. Singer recently, "by the observance of useless form and ceremony. Think of Dr. Jobson!"

"Dr. Jobson, you understand, was a famous specialist. He had a rule—that expedient business—that each patient must devote himself of his garments in an outer room before entering the private office for examination. Jobson grew very testy if this rule were disregarded."

"A man one day entered the doctor's office, fully clad.
"I don't know what you mean, sir," said Jobson, angrily. "All must remove their clothing before coming in here to me. That is my rule, and I'll request you to observe it."

"With a hasty apology the man withdrew. He returned in a few minutes with nothing on. Dr. Jobson smiled.

"And now, sir, what can I do for you?" he said, graciously.

"I have called," said the naked man, "about that bill of Taylor Sulz's. It is a long time overdue, Doctor."—Minneapolis Journal.

Wit on the Bench.
The late Mr. Justice Day did not often joke, but when he did his wit was undoubted. An undertaker was defendant in a slander case, and in evidence said he left his card on the plaintiff. In cross-examination he produced his trade card, with a telegraphic address. Mr. Justice asked him what he wanted a telegraphic address for. "Oh," said the judge, interposing, "I suppose it is for the benefit of people who want to be buried in a hurry."—London Globe.

His Dedicatory.
A certain Chicago merchant died, leaving to his only son the conduct of an ex-

tensive business, and great doubt was expressed in some quarters whether the young man possessed the ability to carry out the father's policies.

"Well," said one kindly disposed friend, "for my part, I think Henry is very bright and capable. I'm sure he will succeed."

"Perhaps you're right," said another friend. "Henry is undoubtedly a clever fellow; but take it from me, old man, he hasn't got the head to fill his father's shoes."—Harpers' Weekly.

The Groundhog Senator.
Charles E. Wells, who has been called the groundhog senator of West Virginia, because he once introduced a bill advocating the changing of groundhog day from February 2 to July 4, was staying over night at the Grand hotel of a budding West Virginia village not long ago.

He was awakened in the morning by heavy pounding on his door, and the voice of the old man night clerk saying: "Five o'clock! Better get up or you'll miss your train."

Mr. Wells didn't intend to catch a morning train and hadn't given any instructions that he should be called at the unearthly hour of 5 o'clock, so he paid no attention to the old man's early morning greeting and was asleep again almost immediately.

In about fifteen minutes he was again awakened by the pounding on his door and heard the voice of the old man saying apologetically, "Don't get up; I rapped on the wrong door."

Preferred Them Soft.
Mrs. Sembrich, at one of the dinners in New York that the unwelcome news of her approaching retirement elicited, vivaciously related stories of the stage.

"Know," said Mrs. Sembrich, "that you have in America a tragedian who plays Hamlet behind a screen, selling five grocers after each performance, the fruit and vegetables that have missed their mark."

"This tragedian must be amusing, I regret that I've never seen him. I have, though, in Texas, seen Callo. Callo sings in falsetto the tenor role of Puccini's Tosca."

"The public, especially in the 'star' song, makes a target of poor Callo, and the afternoon I heard him sing, the creature was pretty badly bruised."

so stiff and stinky; and its awfully odd, but I was just about to remark, when that turnip struck me, that I preferred turnips to eggs—only would it be asking too much of you to boll them first?"—St. Louis Globe-Democrat.

Unfortunate Paraphrase.
General Sheridan used to take delight in telling the following:

"A young man seated at dinner one time said to his wife:
"Eileen, if you are good at guessing, here is a conundrum for you. If the devil should lose his tail, where would he go to get another one?"

"After some time spent in guessing she gave it up.
"Well," said he, "where they retail spirits."
"Eager to get it off, she hastened to a lady friend with:
"Oh, Marian, I have such a nice conundrum; Joe just told me of it. I know you can't guess it. If the devil should lose his tail, where would he get another one?"

"Her friend Marian, having given it up, she said:
"Marian couldn't see the point of the joke."—Philadelphia Ledger.

Priest Resists Gravity.
The Rev. Philip Shredanovich of the Greek Orthodox church of Butler, Pa., claims that he has perfected an invention by which he hopes to conquer the laws of gravity, which will make it possible for man to navigate the air without fear of falling back to earth.

What will make the contrivance particularly interesting is the fact that, according to the inventor, it can be made to circumnavigate the world in a day by sailing in the direction of the rotation of the earth.

The project, in answer to his critics, said yesterday, "Wait until you know the secrets and you will not scoff. Small men are not able to see higher than their noses anyway."

A Political Exigency.
The old saw says that "politics makes strange bedfellows," and it is likewise a fact that the professional politician is frequently moved by the "exigencies of the case" to acts that will not stand close scrutiny. Not alone is this so in the present day, but it was so "in the days of the fathers."

When Hannibal Hamlin first began his political career he was once at a caucus in Hampden, the only attendant besides himself being a citizen of very tall stature and ponderous build. Mr. Hamlin had some resolutions to pass which began by representing that they were presented by

a "large and respectable" gathering of voters, and he proceeded to read and "vote" them on to the records of the caucus.

"Hold on," cried the other man. "We can't pass that for it ain't true."
"What isn't true?" demanded the wily Hamlin.

"It ain't a large and respectable caucus," objected the other member of the assembly. "There's only two of us."

"That's all right, brother; that's all right," assured Hamlin. "It goes as read. Just you keep still. This is a large and respectable caucus, all right. You're large and I am respectable."

And the resolution "passed" without further demur.—New York World.

The Emperor's Orderly.
Frenchieun of every rank and class dearly love titles. The manager of a Paris insurance company was decorated with the Legion of Honor a few days ago, and the clerks in the employ of the company presented him with a piece of plate to which their visiting cards were attached.

On looking over these he was a good deal puzzled and amused by the visiting card of the office "boy," an old soldier from the Invalides, who was employed to open the office doors from nine till four. Under the man's name was the title, "The Emperor's Orderly." He sent for the old soldier, who stamped in and saluted.

"Of what emperor are you the orderly, and how?" he asked. The old invalid drew himself up to attention.

"I am the orderly of the emperor," he said. "Napoleon, le Petit Corporal."
"But he is dead. He has been dead some time," answered the puzzled manager.

"I dust his tomb for him," growled the old soldier.—London Express.

Helping the Doubting.
Bog Fitzsimmons, in the course of one of the lessons in physical culture that he has been giving to the police of Plainview, N. J., paused and said:
"I don't take much stock in feints and tricks. I like best, open, straightforward work, both in boxing and wrestling. With tricks, as a rule, one only gives one's self away. It is like the case of a beggar."
"A beggar, you must know, sat on a cold and windy corner with a sign on his breast, 'Deaf and Dumb.'"
"Two men passed, and one, a kind-hearted chap, stopped, looked at the beggar, and said:
"I'm glad to give this man something, but how am I to know that he is deaf and dumb?"
"Read the sign, sir," the beggar whispered caustically.—Rochester Herald.

Speaker of the Nebraska House



CHARLES M. POOL OF JOHNSON COUNTY.