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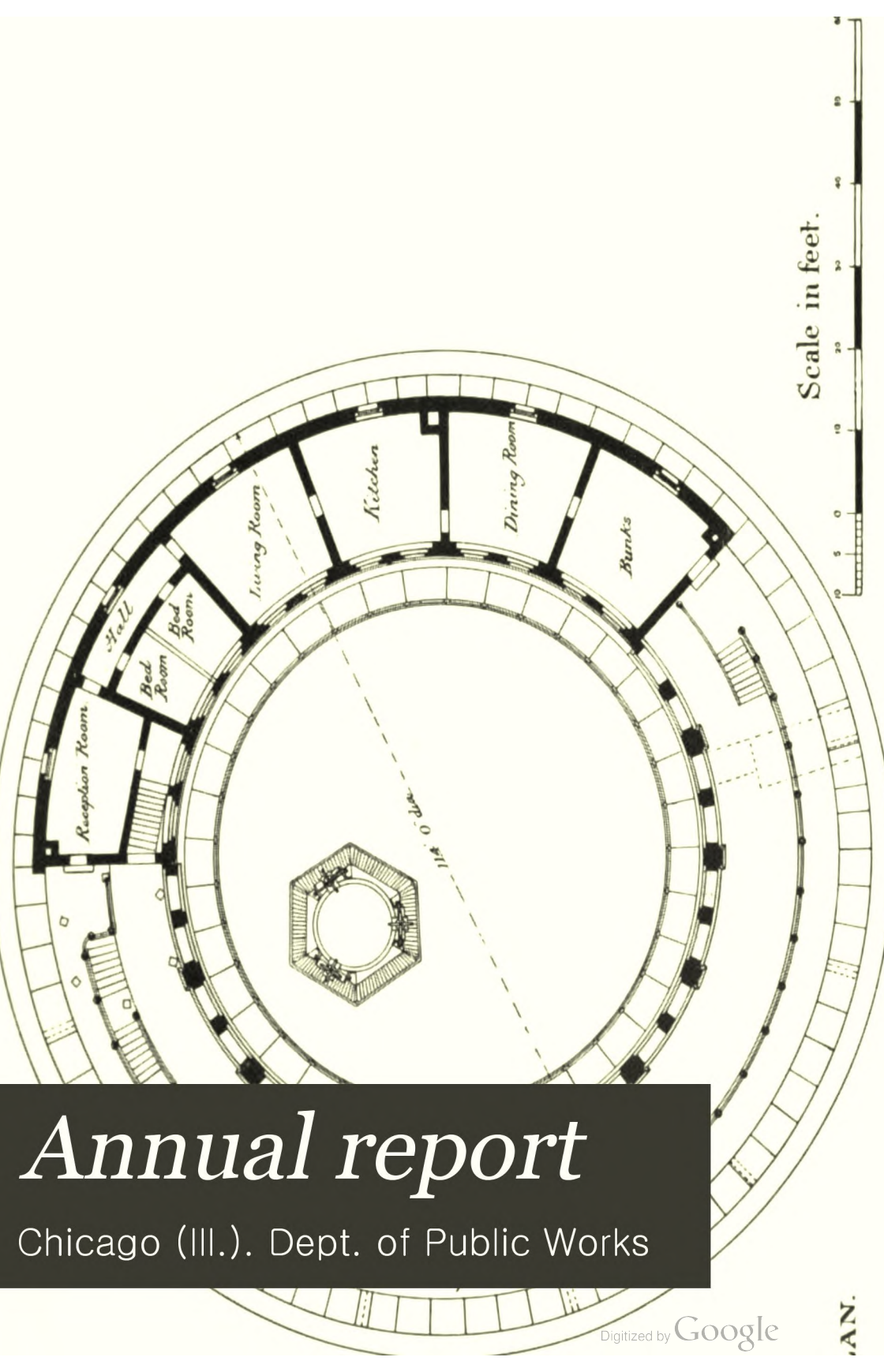
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Annual report

Chicago (Ill.). Dept. of Public Works

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MAYOR'S ANNUAL MESSAGE

AND THE

NINETEENTH ANNUAL REPORT

OF THE

DEPARTMENT OF

PUBLIC WORKS

TO THE

CITY COUNCIL OF THE CITY OF CHICAGO,

FOR THE

Fiscal Year Ending December 31,

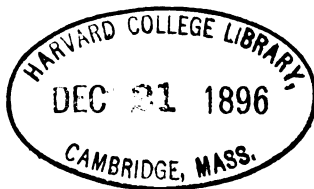
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MESSAGE OF
MAYOR HOPKINS

MAYOR'S ANNUAL MESSAGE.

*To the Honorable the City Council of the
City of Chicago:*

GENTLEMEN—In relinquishing the chief executive office of the city to my successor, it is but meet to give an account of my short stewardship and briefly to review the principal events of Chicago's municipal history during the last fifteen months. What a short period considering the diversity and perplexity of the municipal problems of Chicago! Hampered by an entire insufficiency of financial resources, loaded down with enormous obligations contracted during former years, which necessarily had to be handed over by my predecessors undischarged, while the constant increase in the city's population unavoidably increases the drain upon the city's resources, still further embarrassed by unexpected emergencies, such as the small-pox epidemic and the labor troubles, with the efficiency of the civil service fettered by a total want of civil service laws and ordinances, and the consequent pernicious effect of political influence upon the administration of municipal affairs, the wonder is not that we did not get along any better than we did, but that we managed to get along as well as we did. If, on the whole, the general results of this short period of our city's history should mark a decided advance in the direction of municipal progress; if some important reforms should have been accomplished and

improved methods of carrying on the municipal business should have taken a firm foothold, then I would feel, indeed, that my labors have been to some good purpose and that I could retire to private life with the satisfaction of having been of service to my fellow citizens.

FINANCES.

The unsatisfactory condition of the city's finances is due to three principal causes :

1. To the insufficiency of the city's resources. The enormous growth of our population and of our wealth does not reflect itself in an increased municipal revenue. The taxing system is so utterly wrong in principle and so utterly rotten in its administration that it produces a constant shrinkage rather than a steadily rising increase in revenue.

2. To the absurd condition, by which we have to expend a large part of the city's revenue before its collection. The fiscal year commences on the first day of each year, and the bulk of the taxes are not collected until many months thereafter. In addition to this anomaly, the city has not only no working capital, but an ever increasing load of pressing indebtedness by way of judgments and the like.

3. To the decrease in the revenues of the city from saloon and other licenses, due to the general depression in business.

SYSTEM OF ACCOUNTING.

One of the pledges I made to the people of this city was that I would inaugurate and establish a system of book-keeping that would enable us to present to the public at any time a true condition of the resources and liabilities of the

city. Immediately after my inauguration I secured the services of an expert accountant, and directed him to investigate the system of accounts as kept in each and every department, and to make such changes and improvements in the methods in vogue as would carry out my views and accomplish what I had promised.

The accountant has labored on this line and has perfected the system to such an extent that the general books of the city, kept in the Comptroller's office, were closed December 31st, last, and all balances and overdrafts were closed into the general fund, for the first time in many years, and the books for the new year started with a clean balance sheet. Each and every department is now required to check up monthly with the Comptroller, and no appropriation is permitted to be overdrawn, as was the custom under the old system. Every overdraft can now be detected by the Comptroller the moment any voucher is presented to him for payment in excess of the amount appropriated by the Council for any specific department, thus preventing the necessity for a repetition of the action of the Council (as in January last), directing the Mayor, Comptroller and Finance Committee to adjust all balances as of December 31, 1894, and to make good all overdrafts of previous years, then existing to the extent of over \$770,000.

The accountant has also by my instruction devoted considerable time to the question of Police Court methods of accounting, and after careful consideration of the subject a system was adopted in February last whereby the various clerks and bailiffs of the respective courts were directed to report daily to the Comptroller. That and other precautionary measures taken will insure prompt returns for the disposition of each and every case coming within the jurisdiction of the respective courts. Not only will the city

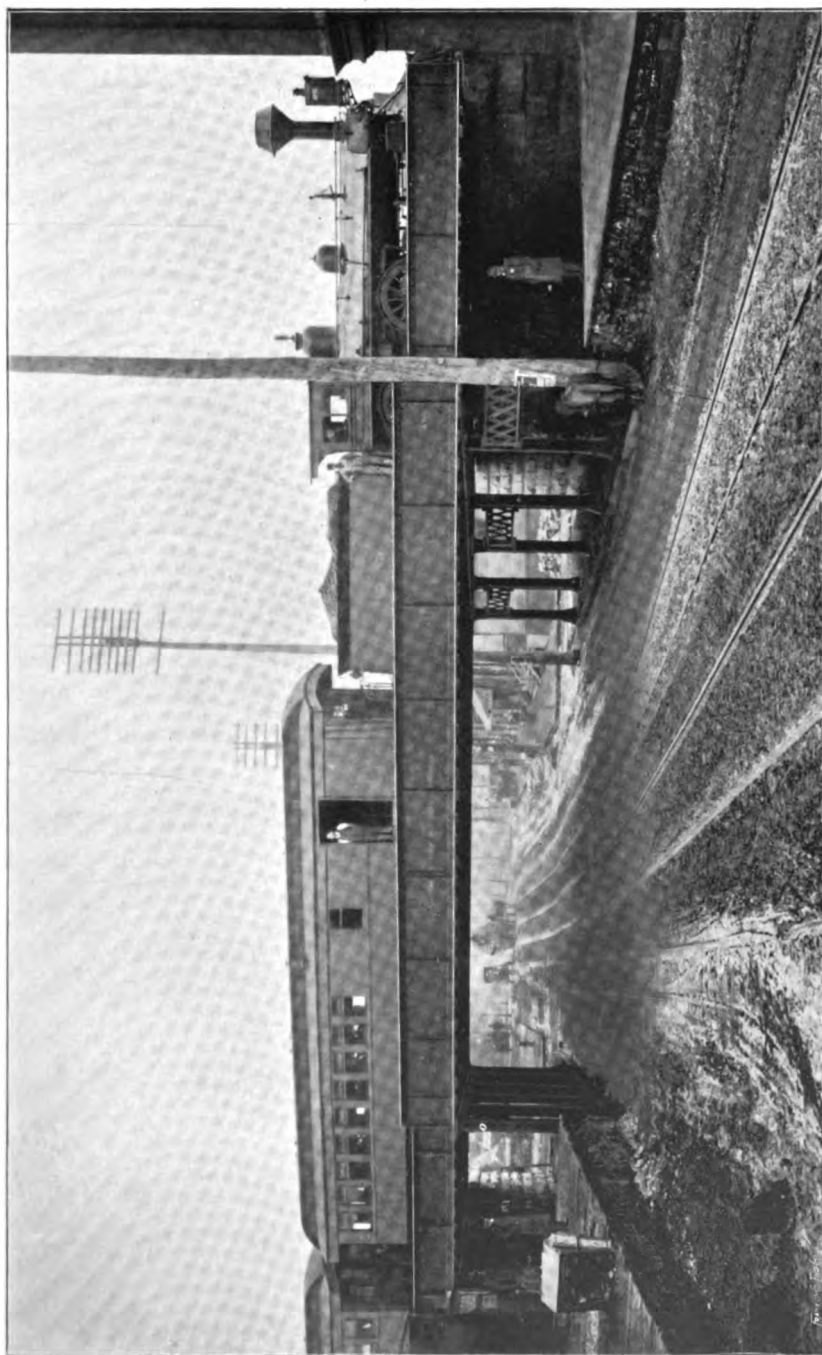
derive additional revenue of many thousands of dollars per annum, but these measures will also eventually do away with the professional "straw bailer."

FRANCHISE LEGISLATION.

I pledged myself to the people that no franchises should be granted to corporations with my concurrence unless an adequate compensation was secured to the people in return for the privileges conferred. To this policy I have adhered with unrelenting persistency and vigor, and in order to carry it into practical effect I frequently took occasion officially to communicate with your Honorable Body. If I exercised the veto power vested in the chief executive officer by the charter of the city in an unprecedented manner, it was solely due to my desire that the principle of compensation for privileges granted should never be overlooked, and I believe that I can truthfully assert that during my term of office not a single corporation secured a franchise without the payment of compensation to the city. The financial benefit thereby derived by the city cannot in advance be accurately determined in dollars and cents, but upon the most conservative computation it is safe to assert that it will amount to many millions of dollars.

TRACK ELEVATION.

Among the most difficult and at the same time most pressing municipal problems with which I was met, was the problem of the abolition of grade crossings. The police reports and the coroner's inquests are a frightful index of the enormity of the evil. I was determined to accomplish some practical results, the reluctance of the railroads to co-operate, due not merely to their disregard of human life and security, but also to the enormous cost of track elevation and the decreased railroad earnings, notwithstanding. With



CHICAGO TRACK ELEVATION—L. S. & M. S. AND C. R. I. & P. RAILWAYS.

ARCHER AVENUE CROSSING.

your co-operation three trunk lines were finally induced to yield, and to-day the great work of track elevation is in actual progress.

THE LABOR TROUBLES.

It can serve no useful purpose at this time and place to investigate the history of the labor troubles of last summer, much less to discuss the propriety of the sending of federal troops to our city. Whenever a diversity of interests and of partisan beliefs enters into the judgment of official conduct, whenever the passions and prejudices of the various elements of the population are brought into play by great public events, when, also, exciting occurrences are distorted and magnified an hundredfold by that morbid sensationalism which seems to be one of the chief characteristics of the last decade of this century, then there can hardly be such a thing as reliable contemporaneous history. I know, however, that, with very few exceptions, the police of Chicago did their full duty, and that order was restored as speedily as the nature of the case made it possible, by the police, and by the state troops called for by me, and placed under my command. The exhaustive report of the General Superintendent of Police contains a detailed statement of the participation of the police, and of the state and federal troops in the quelling of the disturbances of July last, as the facts appear to him. I cannot refrain, however, in corroboration of his report, from pointing to the significant circumstance, that while a great hue and cry was raised at the time as to the enormous damage claimed to have been done to railroad property by the mobs and the consequent legal liability of the city for such damage under the riot act, not a single suit has yet been instituted by the railroads against the city for the recovery thereof.

CIVIL SERVICE REFORM.

At no time during my administration did I have the benefit of either a state law or ordinance placing any department of the city government under civil service rules. The system which I found is the old system of filling public places, in some degree at least, as a reward for partisan services, and this system will prevail, at least, for ninety days more. I have been pledged to divorce the police from politics, but my experience made it plain to me that such a separation could only be made complete and thorough if the police force was placed under the control of a non-partisan Civil Service Board, not as regards the performance of the police business itself, but in the matter of the appointment, promotion and discharge of the officers. The character of the gentlemen selected, together with their well-known convictions on the subject of civil service reform, were in themselves a guarantee in advance that the separation of the Police Department from politics would be carried on in absolute good faith. And this guarantee was fully redeemed by the faithful, impartial and efficient discharge of their trust. The thanks of the entire community are due to Messrs. John W. Ela, John H. Hamline and Harry Rubens, for their labors in behalf of civil service reform, rendered without any hope of reward and with a great sacrifice of their valuable time.

It is a matter of congratulation that the precedent thus established and the demonstration of the practicability of the merit system in municipal affairs, was followed by the passage of the civil service law by the General Assembly and the ratification of that law on the part of the people by an overwhelming majority.

THE DEATH RATE.

A recent official statement fixes the death rate of New York City for 1894 at 21.05 in the thousand of population—the

lowest, it is said, in the history of that city. This rate is based on an estimated population of 1,958,000, now claimed to be 2,001,906.

The Chicago official census of last April, taken during a period of business and industrial depression, when thousands had left the city in search of employment, determined our population to be 1,597,727. The total deaths from all causes during the year were 23,892, and the death rate per thousand was, therefore, 15.24, or less than three-fourths the rate of our only remaining rival for first place among American cities.

Since our population was officially ascertained, and not guessed at, and since no burial or removal of a dead body can take place without a permit from the Department of Health, based on a physician's certificate of the cause of death, it follows that this death rate is as nearly accurate as possible. It is unrivalled by any other city of magnitude in the world.

The natural advantages of Chicago are, of course, the foundation of this salubrity; but these have been developed and improved by liberal expenditures for judicious and far-reaching sanitary undertakings, ordered by yourselves and your predecessors in the City Council.

THE SMOKE NUISANCE.

More progress in the abatement of the smoke nuisance has been made during the past year than in any other twelve months since the Council undertook the suppression of "dense smoke," and the action recently taken gives most encouraging promise of ultimate and complete success in the near future.

The conference between the city authorities and the coal dealers and operators, architects, builders, engineers and large coal consumers, held last January by invitation of the

administration, has resulted in a better understanding among all parties concerned. The interchange of practical experience and technical knowledge, and the discussion of diverse views and interests, brought about by this conference, have removed much of the friction and conflict heretofore existing between those charged with the enforcement of the ordinance and those concerned in the mining, sale and use of bituminous coal.

It has been demonstrated that the low-priced soft coal, to the use of which so large a share of our industrial and manufacturing prosperity is due, may be burned with no offensive smoke production. A committee of practical experts is now at work formulating the principles and conditions of furnace construction and firing necessary to this end, and in due time the Council will be asked for legislation to carry their conclusions into effect.

SMALLPOX.

The outbreak of smallpox in the United States, which had been invited during the previous ten years by an increasing neglect of vaccination, found Chicago sadly unprepared in respect to hospital provision for the isolation and care of the unfortunates afflicted with this repulsive malady.

The only comment which it seems necessary now to make upon the manner in which the Health Department has dealt with what at one time threatened to become a serious and prolonged epidemic is that which the following comparative figures furnish of themselves—premising that the second year of a smallpox outbreak is always looked forward to with dread, as being the most serious and fatal. In the last previous epidemic, when the population of the city was 540,000, there were 1,180 deaths during the first year, 1881; in 1894—the first year of this outbreak—there were 1,033 deaths among

three times the population. During the second years of each, the monthly mortality is as follows: January, 1882, 345 deaths; January, 1895, 54 deaths. February, 1892, 281 deaths; February, 1895, 30 deaths; first fifteen days of March, 1882, 137 deaths; first fifteen days of March, 1895, 16 deaths. The outbreak is substantially at an end; although there will probably be some scattering cases so long as the smallpox contagion remains in other parts of the country.

This result, which the most sanguine dared not anticipate one year ago, is due to the wholesale vaccination enforced by the Department. Nothing approaching it in magnitude was ever attempted before. During the month of May, alone, 586,000 vaccine points were used, and during the year a total of 1,069,500 free vaccinations were performed. When to this total is added the thousands performed by private physicians, the claim of the Commissioner may be conceded, that the present population of Chicago is better protected in a vaccinal way than any other community in the country, and is, consequently, the safest against a smallpox epidemic for some years to come.

This summary suppression of the outbreak has required a large increase of the force of inspectors, vaccinators and disinfectors, and praise is due to those engaged in the work, for the skill, tact and patience with which they discharged their onerous, disagreeable and often dangerous duties. It was the exercise of these qualities which spared the city the disgrace of the riots and scenes of violence and bloodshed which resulted in other places last year from attempts to remove patients to hospitals and to enforce vaccination.

The total expense for this work, the pay of extra inspectors, vaccinators, disinfectors, ambulance men, etc., was \$97,884.42, and that for the maintenance, supplies, etc., of the

two smallpox hospitals, including medical attendance, nursing, burials, construction and equipment, was \$167,094.03.

Since the opening of the Emergency Hospital at Lawn-dale, and the building of the annex at the old establishment, the opposition to removal has almost entirely subsided, and every case has been removed for months, thus greatly aiding in the suppression of the disease.

The antiquated character of the existing municipal hospital—badly suited for its intended use when first built, deficient in ordinary plumbing, bathing and laundry facilities, heated only by stoves, lighted by kerosene lamps, and in its construction deadly dangerous in case of fire—all these defects had been pointed out for years by successive Commissioners of Health. But there was no smallpox to speak of after the great epidemic of 1881-83; there was not a single case in the city from November, 1889, until May, 1892, and only a few scattering cases, readily dealt with, from this latter date until the close of the World's Fair. It is easy to understand how, under the pressure of urgent demands of more obvious importance, the appeals of the Health Department, based on a contingency in the undefined future, were overlooked or neglected by your predecessors. It has, however, been a costly experience.

If there had been a proper isolation hospital, so constructed and equipped as that smallpox patients would have gone thither voluntarily, it is confidently believed that not one-half the number of cases would have occurred that the city had to deal with and to pay the expense of last year. The horror of the "pest house," exaggerated by its descriptions in the daily press and otherwise, led to concealment of cases, and a consequent widespread of the contagion in every quarter of the city. This multiplied and aggravated the difficulties with which the department had to contend and largely swelled the expense account of the city. But this expense account sinks into utter

insignificance when compared with the suffering and loss of life which could have been prevented had there been adequate hospital provision at hand.

Your action in authorizing and providing for the construction of a suitable hospital for the humane and life-saving treatment of a smallpox outbreak, is not only in the interest of true municipal economy, but it is a recognition of the obligation of the ordinance which directs the removal of smallpox patients—not to any hospital, but to a “suitable” hospital.

THE FEE SYSTEM.

In my communication to your Honorable Body of February 5th, 1894, I said :

“The system of allowing public officers to be compensated for their services by fees collected from the public has a tendency to demoralize the public service and to lead to the grossest abuses. This fact has become so universally recognized that the number of federal and state officers drawing fees instead of fixed salaries is constantly reduced. The same reasons which actuated the gradual abolition of the spoils system in the service of the nation and state apply with equal force to the government of municipalities, and the official debauchery growing out of the payment of fees to the Oil Inspector of Chicago has become so notorious that no time should be lost to change the system in this and all similar instances, and in that way make an important step in the direction of municipal reform.”

While the Council promptly adopted an ordinance giving the Oil Inspector a fixed salary in lieu of fees, it failed to act upon my suggestions regarding the other city officers receiving fees instead of fixed salaries. But the argument against the payment of fees to the Oil Inspector applies with equal force

to the Boiler Inspector and the City Sealer, and I trust that in the near future the system of paying fees to municipal officers will be a thing of the past.

IN CONCLUSION.

I desire to express my thanks to the heads of the departments, who so faithfully assisted me in the discharge of my duties, and to the members of the Council for the uniform courtesy which they have shown to me in our official relations.

For my successor I bespeak the respectful consideration to which he is entitled. I hope and trust that his experience and wisdom will enable him to avoid the errors and shortcomings of which I am only too conscious, and that his official acts will be viewed and criticised from the standpoint of patriotic citizenship and not through the dark glasses of the malicious partisan.

Respectfully submitted,

JOHN P. HOPKINS,

Mayor.

Department of Public Works, City of Chicago.

JOHN McCARTHY,
Commissioner.

JOHN A. MOODY,
Deputy Commissioner.

J. W. TWOHIG,
Secretary.

J. J. GRAHAM,
Assistant Secretary.

Heads of Departments.

CITY ENGINEER,	S. G. ARTINGSTALL
SUPERINTENDENT OF SEWERS,	A. W. COOKE
SUPERINTENDENT SPECIAL ASSESSMENTS,	J. S. SHEAHAN
SUPERINTENDENT WATER DEPARTMENT,	W. E. CROSSETTE
SUPERINTENDENT STREET DEPARTMENT,	LOUIS C. LEGNER
SUPERINTENDENT MAP DEPARTMENT,	WM. REISENEGGER
SUPERINTENDENT STREET CLEANING,	JOSEPH SCHOFIELD
DEPARTMENT BOOK-KEEPER,	LOUIS E. GOSSELIN

PAST COMMISSIONERS OF PUBLIC WORKS.

WATER BOARD.

1851-54—Horatio G. Loomis, Alson S. Sherman, John B. Turner, Prest.
1854-56—Jas. H. Woodworth, Pres., John C. Haines, George W. Dole.
1856-58—Orrington Lunt, John C. Haines, George W. Dole, Prest.
1858-60—Orrington Lunt, Noah Sturtevant, George W. Dole, Prest.
1860-61—Orrington Lunt, Prest., Edward Hamilton, Benjamin Carpenter.

SEWERAGE BOARD.

1855-59—James D. Webster, Sylvester Lind, Wm. B. Ogden, Prest.
1859-61—James D. Webster, Prest., Sylvester Lind, Philip Conley.

Water and Sewerage Boards merged May 6, 1861, into

BOARD OF PUBLIC WORKS.

1861-63—John G. Gindele, Frederick Letz, Benjamin Carpenter, Prest.
1863-65—Francis C. Sherman, Mayor, *ex-officio* member of the Board.
1863-67—John G. Gindele, Prest., Frederick Letz, Orrin J. Rose.
1867-69—Wm. H. Carter, John McArthur, Aug. H. Burley, Prest.
1869-71—Wm. H. Carter, John McArthur, Prest., Redmond Prindiville.
1865-69—Wm. Gooding and Roswell B. Mason, members of the Board in matters pertaining to the cleansing of the river.
1869-71—Wm. Gooding and Edward B. Talcott, members of the Board in matters pertaining to the cleansing of the river.
1871-73—Wm. H. Carter, Prest., Jas. K. Thompson, Redmond Prindiville.
1873-76—Louis Wahl, Jas. K. Thompson, Redmond Prindiville, Prest.

Board of Public Works abolished September 18, 1876, and on the same date there was established by the City Council

THE DEPARTMENT OF PUBLIC WORKS.

1876-78—Monroe Heath, Mayor, Acting Commissioner.
January 7 to May 18, 1879, E. S. Chesbrough.
May 19, 1879, to October 18, 1881—Charles S. Waller.
October 19, 1881, to February 4, 1882—Carter H. Harrison, Mayor, Acting Commissioner.
February 4, 1882, to January 31, 1886—DeWitt C. Cregier.
February 1, 1886, to June 28, 1886—Carter H. Harrison, Mayor, Acting Commissioner.
June 28, 1886, to April 11, 1887—W. H. Purdy.
April 12, 1887, to April 15, 1889—George B. Swift.
April 16, 1889, to April 27, 1891—W. H. Purdy.
April 28, 1891, to December 24, 1892—J. Frank Aldrich.
December 24, 1892, to April 25, 1893—E. Louis Kuhns, Acting Commissioner.
April 25, 1893, to November 21, 1894—Hiram J. Jones.
November 21, 1894, to November 28, 1894—John A. Moody, Acting Commissioner.
November 28, 1894, to January 1, 1895—John McCarthy.

REPORT OF THE
Commissioner of Public Works
CITY OF CHICAGO

COMMISSIONER'S REPORT.

OFFICE OF THE COMMISSIONER OF PUBLIC WORKS, }
CITY HALL. }

*To the Honorable, the Mayor and Common Council
of the City of Chicago:*

GENTLEMEN:—I have the honor to present to you the Nineteenth Annual Report of this Department, in which are included in detail the public improvements undertaken and accomplished during the period ending December 31, 1894.

A statement of the wonderful growth of Chicago is a truism which has lost much of its force by repetition, but the cold fact remains for those who are charged with the construction and maintenance of public improvements that, because of this rapid development, the conditions which confront this Department of Public Works are such as are found in no other metropolis on earth. The other great cities of the world have grown by slow accretion; developed so gradually that a moderate levy of money to meet current needs has been found adequate not only for required improvements, but even for adornment. On the contrary, the history of the various sections of Chicago is the history of a series of giant strides in area and population. A year ago, perhaps, they were but stretches of raw prairie. To-day the population of the City, breaking through the old boundaries of improvement, has spread over these desolate tracts and transformed them into populous districts with thousands of homes and accompanying clusters of business structures.

To meet the necessities growing out of the above state of facts, this Department exists; and the facts themselves would seem to be sufficient argument for the allowance of at least absolutely necessary appropriations. In this connection I beg leave to call your attention to but one item:

In 1888 Chicago had an area of thirty-seven square miles, and the appropriation that year per square mile for public improvements was \$52,499.88. In 1894 the appropriation per square mile for the same purpose was only \$10,615.89. Other comparisons equally instructive will be found in a subjoined table.

STREETS.

STREET CONSTRUCTION.

The preservation of streets already improved and the improvement of new thoroughfares is one of the most important subjects coming within the purview of this Department. An exhaustive investigation has been made of the merits of different kinds of pavement and their adaptation to the character of traffic upon the various classes of streets. These may be grouped under the following heads: Purely Business, Medium Business, and Residence streets.

For those devoted exclusively to business, experience thus far has demonstrated that the best kind of pavement is the granite block, and until some substitute is discovered or invented, I would recommend that the purely business streets be paved with that material. These streets are included mainly within the following boundaries: Thirty-ninth street west from Lake Michigan to State street; north on State street to Twenty-second street; west on Twenty-second street to Halsted street; north on Halsted street to Chicago avenue; east on Chicago avenue to the lake.

On the medium business streets—of which fair examples are found in Milwaukee avenue, West Madison street, Ogden and Archer avenues—the material used should be granite blocks or vitrified brick. As to the latter, it may be said that its use in Chicago will be an innovation, but the material has been thoroughly tested in many of the smaller cities of the country and seems to have admirably answered the purpose to which it was devoted. Actual experience in our streets, however, it seems to me, will be the only criterion for us, because of the difference in the conditions pertaining to traffic as between the smaller cities and Chicago. Our loads are much heavier

than in other cities; our grades being so nearly in one plane, teamsters gauge their loads by what their vehicles will carry. The traffic in our residence streets equals that in the busiest streets of a smaller city.

The use of asphalt on residence streets is approved by experience, and within a recent period a large reduction has been made in the cost of this form of pavement. The bids for asphalt paving on concrete foundations are lower to-day than any heretofore received, and so far as I can ascertain the rates are less than those offered to any other city in the country. This good result is largely owing to the firm stand taken by the Mayor in requiring that all ordinances for asphalt paving be so drawn that the material shall not be limited to one source of supply. From this and other causes the old figure of \$3.00 per square yard has been cut down to \$1.61, which is the rate submitted in the latest bids.

In order to protect the interests of the City in securing the best quality of asphalt, brick, granite and other kinds of pavement, I would earnestly recommend the establishment of a laboratory in which these and all other materials used in street construction may be subjected to the proper tests.

I would also suggest that when streets are improved the improvement be made from lot-line to lot-line. The sidewalks should at once be raised to grade, and at least that portion of the sidewalk space lying between the curb and the walk should be filled, and the filling thoroughly compacted. This practice will insure a far greater stability to the curb, and hence to the pavement, than does the present method of construction.

Where curb-stone is used, this also should be laid in a bed of concrete. If this is done, the stone need not be of a depth to exceed twenty-four (24) inches, and on streets having a concrete foundation sixteen (16) to twenty (20) inches in depth will be sufficient. In fact, in the cities of Europe the curb-stone is set directly upon the concrete foundation of the pavement. The actual cost of so placing this curb-stone will not be much greater than the cost of the present curb, the depth of which as specified is three (3) feet.

The present method of setting the curb-stone upon small pieces of rock is but a makeshift, as the very irregular appearance of the curb on most of our streets bears ample testimony.

The essential requisite of a good pavement is a solid, water-tight foundation, without which a pavement built of any material, be it of stone, asphalt, brick or wood, will prove most costly and unsatisfactory.

Permanency in construction means economy in repair, and every means possible should be taken to secure the best foundation. To insure a permanent improvement, the foundation for all our pavements should be laid with concrete or macadam. With such a base a pavement retains its grade, is kept in repair at a minimum expense, and maintains a stability not obtained by any other known foundation.

But none of these results can be obtained without a generous expenditure of money; and, as before stated, the remarkably rapid expansion of the area of Chicago demands a policy of liberality in this direction which is required in no other city of modern times.

Following is a table showing, among other things, the appropriations for Public Works from 1888 to 1894, increase of population and area during the same period, and other matters of interest connected with the work of the Department:

YEAR.	Appropriation.	Expenses.	Square Miles of Territory.	Census.
1888	\$1,942,495 65	\$2,057,422 79	37	802,651
1889	2,317,291 20	2,220,865 30	37	880,000
1890	2,581,445 20	2,492,808 45	100	1,208,669
1891	2,429,644 05	2,929,431 47	180	1,350,000
1892	2,597,148 17	2,508,771 98	180	1,438,010
1893	2,703,175 36	2,845,571 38	186.2	1,500,000
1894	1,979,863 85	2,220,321 43	186.2	1,600,000

YEAR.	Number of Miles of Paved Streets.	Number of Miles of Unimproved Streets.	Cost of Cleaning and Repairing Improved and Unimproved Streets.	Amount of Appropriation per Square Mile of Territory.	Amount of Appropriation per Capita.	Cost per Mile of Cleaning and Repairing Improved and Unimproved Sts.
1888	348	314	\$345,204 69	\$52,499 88	\$2 42	\$521 45
1889	348	314	477,866 65	62,629 49	2 63	721 85
1890	669	1,567	583,468 69	14,341 36	2 13	260 94
1891	774	1,559	803,171 02	13,498 02	1 79	344 26
1892	879	1,493	896,017 02	14,428 60	1 80	377 74
1893	1,007	1,459	999,558 58	14,494 23	1 80	405 33
1894	1,086	1,400	696,627 99	10,615 80	1 23	280 22

It will be observed that the total amount appropriated and expended in 1894—with a city five times larger in area and twice as great in population as in 1888—is virtually the same as in the last named year. During the same period the number of miles of improved streets has increased 300 per cent, and the mileage of the unimproved streets shows an advance of 450 per cent; yet the amount appropriated and expended for maintaining these thoroughfares is only 100 per cent greater than at the beginning of the period.

Again: The appropriation for 1888 allowed three cents per square yard for maintenance, while in 1894 it was cut down to one cent per square yard. In contrast with this, the amount set aside in European cities for maintenance ranges from 8 to 19 cents for wood; 10 to 17 cents for asphalt; 4 to 12 cents for brick and granite, and 12 to 16 cents for macadam. And it must not be forgotten that in the cities of the old world street foundations are of firmly set concrete, and maintenance is concerned mainly with repairs to the wearing surface only. In this City, for the boulevards under the control of the South Park Board, 13 cents per square yard are devoted to the maintenance of avenues upon which only the lightest travel is permitted.

Notwithstanding the vast advance in values of real estate within the last eight years, the assessed valuations have remained practically unchanged, and as the amount of revenue for municipal purposes is a percentage of the assessed valuation, the fund collected for public uses has not at all kept pace with the enormous increase in values.

Nor is this the only cause which has operated to restrict the usefulness of the Department of Public Works. A comparative statement of appropriations for this and other departments will make this point clearer than would volumes of composition. In 1888 the appropriations for three Departments were as follows: Police Department, \$1,436,037; Fire Department, \$967,390.50; Department of Public Works, \$1,942,495.65. In 1890, after annexation, the appropriations were: for Police, \$2,139,676.20; Fire, \$1,355,015.20; for Public Works, \$2,581,455.20. In other words, upon annexation the appropriation for the Police Department was increased about 50 per cent, and the Fire Department over 40 per cent, while the Department of Public Works received an increase of less than 33 per cent with which to meet the vastly enlarged responsibilities thrown upon it by the taking in of new territory. And when 1894 is reached the figures present a still greater disparity. In the year just closed the appropriation for the Police Department reached the enormous sum of \$3,434,511.60. For

the same period the Fire Department received \$1,523,906.58. When the Department of Public Works was considered by your Honorable Body, it was thrown back almost to the appropriation for 1888, receiving but \$1,979,863.85.

These figures show that while the representatives of the people have realized that the public must be protected from the depredations of the criminal class and from the ravages of fire, they have not sufficiently provided for the maintenance of public works. That our thoroughfares are not preserved in the desired condition is certainly due to this cause.

In my remarks upon this subject I hope I shall not be misunderstood. I have only words of commendation for the liberal policy which permits the maintenance of the two departments named in a high state of efficiency, but I do wish to call attention to the needs of their sister Department of Public Works and the manner in which its hands are tied by inadequate appropriations.

NEW STREETS.

During the year 1894, 128 new streets were opened, the total length of which was 23.13 miles. Much of this work was necessarily done in the outlying districts, where new subdivisions have been opened; the balance being done in the older parts of the City in order to afford ready communication and for the advantage of property interests. As this Department is under considerable expense in the matter of opening these streets, as well as throwing up the earth from each side in order to form the roadway, and for the creation of ditches in order to take care of the usual rainfall, as well as providing culverts, crossings, intersections, etc., it is suggested that when streets are opened in the future, the cost of such opening be provided for by special assessment upon the property benefited.

These streets when opened are a direct benefit to the adjacent property, naturally enhancing its value, and there is no reason why such property should not bear the cost of opening and placing them in condition for traffic, instead of throwing the expense upon the City, as at present.

Great care has been taken in the matter of requiring contractors to comply strictly with their contracts before turning over to them their reserves, which has been done only after the most rigid inspection.

PAVING FRAUDS.

At the beginning of this administration it was apparent that numerous frauds had previously been perpetrated in the matter of street paving. A searching investigation was instituted by the present Commissioner of Public Works, with the result that many pavements laid during the preceding period were found short in material and extremely defective in construction.

Under the system in use, contractors are required to guarantee cedar block and macadam pavements for two years, and granite and asphalt five years; the contract clause upon this subject being that at the end of these respective terms they shall restore the pavements to the condition in which they were when originally constructed, ordinary wear excepted. To secure the performance of this obligation, the Department reserves from the contract price six cents per square yard for cedar block and macadam pavements and twenty cents for granite and asphalt.

Upon the discovery of these shortages the contractors were called upon to live up to their contracts. A few admitted their deficiencies and made them good. Others submitted to arbitration, the result of which was in favor of the City in every case submitted. Still others refused to arbitrate or make good their shortages. The amount claimed on account of shortages and defective construction was about \$300,000, against which the City retained \$100,000 in reserves.

After many months of controversy a test case, agreed upon between the City Law Department and the contractors, was heard on demurrer to the Defendant's answer before Judge Smith, of the Circuit Court. The decision was against the City, Judge Smith holding in his opinion as follows:

"I know of no reason why the same rule should not apply to this contract that applies to contracts between individuals. Where a party has accepted the work done under a contract as satisfactory, this is conclusive, unless such acceptance was procured by fraud or imposition on the part of the plaintiff, or accepted on the part of the respondent by mistake."

While the City failed in its effort, because of the above decision of the court, to compel an honest performance of the contracts alluded to—which related only to work done in a previous period—the good result has been attained that since the advent of this administration contractors have been much more careful to live up to their obligations.

STREET REPAIRS.

UNDERGROUND CORPORATIONS.

Formerly, when openings were made in the streets by underground corporations, the custom was to allow such corporations to repair the streets within a few days after their work was done, and frequently before the soil had sufficiently settled. In consequence of this the City was obliged to bear the expense of future repairs in many cases where the cost should have fallen on the underground corporations. Now this work is done by contract at the expense of the corporations, the contractor being required to guarantee his work.

Early in this administration the Department of Public Works took the position that these corporations were responsible for the poor condition of some of our paved streets in which they had made openings subsequent to the laying of the pavements, without properly repairing them, and steps were taken to compel such corporations to repave all streets left by them in defective condition. This course was bitterly opposed by the corporations because of the expense entailed upon them, but they finally complied with the demands of the City and have repaired to date 105,429 square yards of granite pavement. The precedent thus set will, it is hoped, be followed by succeeding administrations.

In this connection I would recommend that the underground corporations be required to furnish, within six months from this time, accurate maps showing the location of all their subterranean wires, pipes, etc., within the City limits.

STREET CLEANING.

In consequence of the importance of this subject from a sanitary point of view, much attention is being given by the municipalities of the country to the matter of street cleaning. Here as in other respects Chicago labors under great disadvantages. In the older cities pavements have kept pace with increase in area and the advance of street mileage. The rapid development of Chicago has rendered impossible the improvement of every thoroughfare in any given locality, and the result is that in many sections beyond the business district the main streets only have been paved, while numerous public ways leading into them have been left unimproved. As a consequence of these conditions, continuous traffic carries the mud and filth of the unimproved streets over and upon improved thoroughfares. For this

reason, if for no other, the cost of keeping the streets of Chicago in a proper condition of cleanliness is largely enhanced; and yet the amount appropriated for this work here is less than in any American city. In connection with the existing necessity in this regard, I crave attention to the totally inadequate amounts appropriated in Chicago as compared with those expended for the same purpose in other large American cities:

Yearly cost of street cleaning per capita in ten cities of the United States, from 1880 to 1890:

Buffalo.....	5 cents.
Chicago	8 "
Newark	16 "
Cleveland	19 "
Brooklyn	20 "
Philadelphia	27 "
St. Louis	28 "
Boston	30 "
Washington	34 "
New York	71 "

Yearly cost of street cleaning per linear mile in the above named cities, from 1880 to 1890:

Buffalo.....	\$ 34 00
Chicago	43 00
Newark	156 00
Cleveland	107 00
Brooklyn	247 00
Philadelphia	246 00
St. Louis.....	119 00
Boston	330 00
Washington	268 00
New York.....	1,870 00

It will be noted that Buffalo is the only city in the above table which received a smaller amount for street cleaning purposes than Chicago; but this is not to be wondered at when it is remembered that the streets of Buffalo are largely paved with asphalt, which is very easily cleaned and at slight expense.

But even the figures above given do not fairly represent the situation in Chicago today, for, since the close of the decade named, the amounts appropriated here for street cleaning have been reduced far below the inadequate appropriations shown in the table.

The facts and reasoning which apply to street repairs and street cleaning in this City will apply with still greater force to the question of the removal of garbage.

UNIMPROVED STREETS.

The original appropriation of \$100,000.00 for unimproved streets was found utterly inadequate to maintain the 1,500 miles of thoroughfare upon which it was to be expended, and the City Council in June granted an additional appropriation of \$100,000.00 for the purpose of cleaning ditches and grading streets. The larger part of this work was done in the outlying districts where improvements are few and where it was urgently needed.

Miles of ditches in localities where no sewers are laid and where no other means of carrying off surplus water and sewerage exists, require cleaning several times during the year, in order to prevent epidemics and to maintain good sanitary conditions in such neighborhoods. During the warm weather these ditches require constant flushing, necessitating the employment of night gangs for that purpose.

Particular attention has been given to the extreme south-western part of the City, where smallpox has recently prevailed, and this locality, so far as its streets and ditches are concerned, is in the best condition possible to withstand any further outbreak of that dread disease.

No complaints are now heard from the southern portion of the City, which for years past has been flooded semi-annually. The great amount of work done there during 1893 and the present year has served to dispose of all surplus water by running it direct to the lake, and the large ditches in that locality are kept in the best of condition, ready at all times for any extra flow of water.

The adoption of the plan providing that no vouchers be paid by the Sewer or Water Bureaus on account of work done until the contractors show a release from the Superintendent of Streets, indicating that thoroughfares in which work has been done have been restored to the proper condition, will tend to make contractors more careful in filling trenches and replacing crossings, which to some extent has heretofore been done by this Department.

SEWERS.

The operations of this Bureau embrace the construction of several lines of sewer, located mainly in the southern districts of the City.

The most important of these is the sewer in Wentworth avenue. The contract for this enterprise was awarded in December, 1893, and the work was commenced in March of the following year. This sewer is ten and one-half miles in length.

The magnitude of the undertaking required its division into three sections, which for convenience are lettered "A," "B" and "C." The first named of these begins at the outfall into the Calumet river, near 130th street, and extends with a diameter of ten and one-half feet along Wentworth avenue, a distance of three and one-half miles, to 103d street, where the internal diameter is reduced to nine feet. Section B, beginning at 103d street, extends north to Ninety-ninth, west to Halsted and north on Halsted to the Summit at Eighty-eighth street, where the diameter is five feet. Section C is a branch from Wentworth avenue at 103d street, extending on the latter street to Charles avenue, thence north to Ninety-fifth, west on Ninety-fifth to Evergreen avenue, north to Ninety-fourth, west to Prospect avenue and north and northwest to Eighty-seventh street, where the internal diameter is two and one-half feet.

Sections B and C are completed, and the one and one-fourth miles on Section A which are still in process of construction will be completed in June, 1895.

During the progress of the work many difficulties were encountered, growing out of the treacherous nature of the soil and the great depth at which portions of the work were done, the excavations ranging from twenty-six to forty-nine feet below the surface.

This improvement, when completed, will furnish ample sewerage facilities for a very important section of the City.

This Bureau has also prepared plans for a system of sanitary and storm-water sewers, with which it is proposed to drain all that part of the City lying between Sixty-seventh street and the Calumet river. The importance of this work and the demand for its execution will be apparent when it is remembered that within the limits of this territory are located the flourishing towns of Pullman, Kensington, Grand Crossing, Roseland, West Pullman and other thriving centers of industry and population.

In the main business district of the City the erection of numerous high buildings has increased the floor space to such a degree that the sewers are scarcely adequate to meet the demands made upon them. This condition of affairs requires the employment of a large force of men and teams and the use of various mechanical devices.

These, however, are but make-shifts, and the attention of your honorable body is solicited to the adoption of some means which will secure permanent relief.

SIDEWALKS.

In submitting estimates for the year 1894, an appropriation of \$100,000.00 was requested for sidewalk repairs and the building of intersections, the Department realizing that no smaller sum would suffice to keep the 3,600 miles of wooden walks within the City limits in any kind of passable condition.

The appropriation bill as passed by your Honorable Body, however, granted us only \$10,000.00, and in order to keep within this amount it was possible to make but slight repairs.

A liberal appropriation for the repair of sidewalks is in accordance with the best system of economical government, as defective sidewalks, which could be cheaply repaired, are frequently the cause of heavy judgments against the City.

While upon this subject, I would recommend that the district in which wooden sidewalks are prohibited be extended ; also, that when fifty per cent of the walks in any of the wards of the City are built of either stone or cement, owners of property within these wards should not be allowed to repair or to construct any plank walks, except on streets where sewers or underground improvements have not yet been completed.

The older cities of the East have practically abolished plank walks, as, for instance, the City of Philadelphia, which has but ten (10) miles, other large cities having but slightly greater quantities, and it would be in keeping with the greatness and the future of this City to inaugurate a much needed reform in this direction.

We have renewed our request for \$100,000.00 for the year 1895, to be expended in repairing sidewalks. Nothing less than this amount will enable us to make even partial repairs upon those which are now in poor condition, and it is earnestly hoped that the same will be granted.

For valuable information in regard to permits for opening streets, house-moving and other matters connected with the Bureau of Streets, reference is urged to the report of the Superintendent.

SPECIAL ASSESSMENTS.

For many years Chicago has groaned under the evils of our special assessment system, but until recently no practical plan was offered to correct these evils.

In response to suggestions made by this Department, at a meeting of the City Council held December 17th, 1894, an order was passed directing the Commissioner of Public Works to furnish information upon which might be formulated action in the direction indicated. In reply, after thorough investigation, I presented the facts to your Honorable Body and recommended the passage of an ordinance which will correct many of the evils of the old system. Among the advantages to be derived from the passage of such an ordinance are the following :

- 1—The abolition of rebates.
- 2—The unjust collection of assessments from property owners—one, two and three years before the improvement is made—would no longer be possible.
- 3—The cost of collecting rebates on delinquent assessments would be saved to the City.
- 4—The amount necessary to redeem property sold for non-payment of assessments would be much less than under the present system.
- 5—Assessments would be much more cheerfully paid by the property owners after the improvement was made than before.
- 6—Property owners would be less inclined to oppose the confirmation of assessments for necessary improvements.

In the opinion of the Corporation Counsel, who was called upon to investigate the subject from a legal standpoint, an ordinance of such a character will be entirely in consonance with the law of the State, and its passage is earnestly recommended.

While this ordinance will be a long step in the right direction, to accomplish all which is desired it will be necessary that the Legislature pass an appropriate statute, and I am informed that that body is now considering the question with reference to action in the immediate future.

WATER SUPPLY.

The importance of an ample supply of wholesome water cannot be overestimated. The following is a statement of the work done in this regard during the period just closed :

LAKE VIEW TUNNEL.

Progress during the year on this much needed improvement was necessarily slow, as the tunnel is being driven throughout its total length in solid limestone. Work was carried on from one shaft without interruption during the year, however, and 2,155 linear feet were constructed. At this rate of progress the tunnel should be completed by October 1, 1895. Arrangements have been made, however, for prosecuting the work at two headings, and if these are carried out—and there seems to be no reason why they should not be—the tunnel will be ready for water by June 15, 1895. The nominal capacity of this tunnel, which has an inside diameter of six feet, is about 72,000,000 gallons every twenty-four hours ; but with the character of engines used at the Lake View pumping station, water in the well cannot be lowered more than three feet, which will limit the capacity of the tunnel to about 44,000,000 gallons. The nominal engine capacity at present is 31,000,000 gallons, being a surplus tunnel capacity of 13,000,000 gallons, which is enough to supply another engine.

SIXTY-EIGHTH STREET TUNNEL.

The recently completed extension of the Sixty-eighth Street tunnel affords several decided advantages in the way of improved water supply to the southern district of the City.

1. It locates an intake two miles from shore, to be used in addition to the one-mile intake.
2. It increases the tunnel capacity by about 50,000,000 gallons.
3. It decreases the liability of a water famine, due to ice-blocked intakes.
4. Purer water is pumped, and the danger of disease from impurities is reduced to a minimum.

Since April, 1892, when the contract for this work was awarded, many serious obstacles have been overcome. The shore end was constructed without great difficulty and by ordinary methods, but

the unstable character of the soil met with a short distance from shore necessitated the location of air locks and a resort to the pneumatic process almost at the outset of the work. The tunnel, from the pumping station to a point about 6,000 feet from shore, has an inside diameter of five feet. The diameter of the remainder is seven feet. A seven-foot spur extends westward to a point opposite the old submerged intake. This, if it be considered best, may be extended to the shore or used as a connection between the two tunnels, in which event all water pumped from this station will be taken from the lake two miles from shore. The nominal capacity of the old tunnel is about 72,000,000 gallons, and of both about 122,000,000 each twenty-four hours. The present nominal pumping capacity of the Sixty-eighth street station is 77,000,000 gallons, leaving a surplus tunnel capacity of 45,000,000 gallons. The intake superstructure was built for temporary use only and should be replaced by a modern structure of stone, concrete and iron. Plans for such a crib have been prepared, and as ice is rapidly cutting away the timbers and endangering the temporary structure, the work should be started as soon as possible. The new tunnel was completed and water was let in last June. The total cost of cribs and tunnel, exclusive of engineering and inspection, was \$377,385.00.

FOUR-MILE CRIB.

December 15, 1894, work on the four-mile crib was completed and the finishing touches were added to one of the greatest engineering enterprises ever undertaken by the City. Nearly five years of constant labor, much of it done under the most adverse circumstances, are well repaid by the vast quantity of pure water which has been added to the City's supply.

This crib rests on lake bottom in nearly forty feet of water, practically four miles from shore and off the very center of the most populous district. For a foundation it has thirteen courses of 12x12 inch timbers securely held together by drift-bolts. Resting upon this are two concentric steel shells, one within the other, and 25 feet apart, the space between being filled with Portland cement concrete. This sub-structure rises five feet above the lake level, where facings of granite and Bedford stone begin, one upon the outer surface, the other upon the surface of the well within, the space between being filled with concrete. This makes a circular wall of solid stone and concrete 24 feet thick on the bottom and 22½ feet thick at water line, forming a structure with an outer diameter at water level of 115 feet

and a well diameter of 70 feet. On the shore side is constructed a landing place for boats. Opening from this platform is the entrance to what is commonly called the "basement" of the commodious house which is built upon the southwest wall of the crib, and which extends about one-third of the way around. To the right of this entrance is a large store room. To the left are closets, toilet rooms, coal bunkers, a boiler room and an engine room, all being large and airy. Above this so-called basement, reached by a flight of ornamental stairs, are the rooms occupied by the crib-keeper in summer and by the extra force of men sent to the crib in winter. At the head of the stairway is a large reception-room; beyond this, two large private bed-rooms; still beyond, a large living-room, a dining-room, a kitchen, and a sleeping-room for the extra help. Each room has a window looking out upon the lake and two looking upon the well. By this arrangement the keeper has a full view of the well from any point inside the house. The portions of the well not covered by the house make splendid promenades at different levels. Upon the east wall stands a light-house of steel, the light being sixty-five feet above the water level. Water enters the well through six portholes located a few feet above the bottom of the lake, too far beneath the surface to be affected by ice or other drift. From the well a 10-foot shaft connects with the tunnel under the lake bottom, through which water is conveyed to the Fourteenth street and Harrison street pumping stations. The crib cost \$429,000.00. The tunnel adds 75,000,000 gallons to the daily water supply of the City.

SOUTH CHICAGO EXTENSION.

No work started during the year has been needed more than the water pipe extension from Seventy-ninth street south, which passes through the very center of the South Chicago district. At present the water supply for this populous and commercially important territory runs through a 16-inch main, laid by the old Village of Hyde Park, from the Sixty-eighth street pumping station. For many years this main has been too small to furnish an adequate supply of water. From the rather sparsely settled district of the days when this main was laid, South Chicago has grown into a populous center, dotted with manufacturing plants and business enterprises, with more inhabitants than are found in most Illinois cities. These great industries make heavy drafts upon the water supply, leaving a very inadequate quantity for domestic purposes, and, as was shown in two recent great fires in the district, practically none for fire protection.

To make matters worse, the South Chicago water pipe system has no other connection with a pumping station, and should anything happen to this 16-inch main, the district would be absolutely without water. The City could find no reasonable answer to the just complaints of the people of this district, and, therefore, late in the year it was determined to extend a 24-inch main through the heart of the South Chicago district. This extension, when completed, will give an ample supply of water for all purposes. It will also give the district a duplicate system, and only the breaking down of both mains—an improbable contingency—can again deprive these people of water. Pipe for this extension is already distributed, and it will be laid as soon as frost leaves the ground in the spring.

NORTHWEST EXTENSION.

For the temporary use of the great northwest district (pending the construction of a land tunnel to a pumping station to be located in the vicinity of Humboldt Park), an extension of the Lake View pumping station system was projected, and the work thereon is progressing satisfactorily. In Montrose boulevard, extending west from the Lake View pumping station, there is a 36-inch main to Western avenue, with a reduced extension to Crawford avenue. During the year a 24-inch main was laid in Western avenue from Montrose boulevard to the North Branch of the river. A tunnel for carrying this pipe under the river is now being constructed, and the main will be continued to North avenue, where a 16-inch pipe will be connected with it and extend in North avenue to Ashland avenue. The plan also contemplates the laying of a 16-inch main in Robey street, from North avenue to Division street. These mains will establish a connection between the systems supplied by the Lake View and Chicago avenue pumping stations and greatly increase the water supply of the district. It is not expected, however, that more than temporary relief can be given. It was realized long ago that pumping stations located on or near the shore of the lake cannot force water with sufficient pressure to send it to the upper stories of flat buildings in the extreme western districts of the City. The necessity of constructing land tunnels to pumping stations in the center of these western districts is evident, and surveys are now being made for such a tunnel, to extend from a point near the Chicago avenue pumping station—where it will connect with a new lake tunnel—to the vicinity of Humboldt Park, where a large pumping station will be erected. No contracts for this enterprise have yet

been let, and if the preliminary work were to be begun to-day the tunnel could not be completed in five years. The necessity for some measure affording temporary relief to the district will be readily seen. The land tunnel scheme also includes a branch running northwest to a pumping station near Garfield Park, from which the southwest territory may be supplied.

WATER OFFICE.

The financial statement of this Bureau for the last period shows a very gratifying increase in collections and a material reduction in expenses, as compared with the immediately preceding term. The increase in collections reaches the handsome figure of \$945,207.05, while the expenses were cut down \$68,606.89.

The ordinance now in force relating to delinquent water-rates is defective in certain particulars, and I would recommend the passage of an ordinance which will cover the collection of frontage rates on all vacant buildings.

With its immense supply of water, Chicago is, perhaps, more wasteful than any other city in the world. In cities where the quantity used is controlled by meters, the per capita consumption is but a small fraction of ours and the revenues are proportionately greater. In this connection I would urge upon your Honorable Body the adoption of a standard meter, and that an effort be made to place our water supply under meter control.

BRIDGE AND VIADUCT WORK.

Chicago has fifty-five public swing bridges and thirty-eight systems of viaducts, which is more than any other city in the world has within its limits. Fifty-five bridge tenders and 125 assistants annually are paid for keeping these bridges in operation, and a force of about 100 workmen is constantly employed in keeping bridges and viaducts in repair.

A feature of the year's work was the construction of an unprecedented amount of new paved floors. Formerly all down town bridges had rough and unsatisfactory plank roadways; they are now paved with oak blocks.

Two disastrous lumber yard fires, one at South Ashland avenue bridge, and the other at Ninety-second street bridge, very nearly destroyed both structures, which however, have been substantially and economically rebuilt by the regular bridge corps.

A wooden bridge and trestle was built across the North Branch at Kedzie avenue, opening a new and very much desired thoroughfare.

Eighteenth street bridge, which for several years has been the source of considerable trouble on account of its slow and difficult operation by hand, was equipped with steam turning machinery (discarded from Lake street), and is now, with fuel-oil-burning apparatus, operating successfully.

SOUTH HALSTED STREET BRIDGE.

In the Halsted street lift bridge, which was opened to traffic in 1894, Chicago has to-day one of the wonders of the mechanical world, for it stands an isolated type among all the bridges of this country. Its inventor found his idea in the passenger elevator in use in all modern buildings, and so successfully has the mechanical principle of the counterpoise been applied that a bridge span weighing 280 tons is lifted vertically 140 feet in 45 seconds, and so smoothly that to those upon it the impression is given that the bridge remains stationary, while the river sinks away from below it. This is accomplished at an expense of only the power necessary to overcome the inertia of the mass moved and the friction of the bearings and machinery, with a small allowance for wind pressure against the 130-foot span and the counterweights.

On either bank, resting upon cut-stone piers supported by pneumatic caissons sunk to solid rock, about thirty feet below City datum, rises a tower 200 feet in height, consisting of two steel main posts, standing vertically to serve as guides for the moving span as well as supports for the upper works, and two inclined rear posts, all being securely connected by girders and by diagonal bracing. Over each of these main columns, securely housed from the weather, are placed two sheaves or wheels, each consisting of a turned steel shaft twelve inches in diameter, a grooved rim to guide the cables and a body of steel plates and angles. Over these eight sheaves pass sixteen pairs of 1½-inch steel wire cables fastened at one end to the corners of the span to be lifted, and at the other to the cast-iron counterweights. These are set in motion by sixteen operating cables, ¾-inch in diameter, eight of which, attached to the span itself, are used in raising the span, and eight attached to the counterweights in lowering it. These operating cables are wound upon four drums in the engine room, which, constructed under the north approach, is fitted

with two steam boilers and two 70 H. P. engines, provided with brakes, so that no movement is possible except by the hand of the engineer.

To prevent jarring when the span comes to rest either at the street grade or at the maximum height, hydraulic buffers—in which, to prevent freezing, light oil instead of water is used—are placed, four of them below the corners of the span when lowered and four above it when it is raised. To provide for variations on account of the temperature, the leaning posts of the towers have at their bases adjustable screws and sockets, by the use of which the position of the guiding posts of the tower may be slightly shifted to meet expansion or contraction of the steel work of the span. To secure a true balance, four iron tanks are placed in the floor system of the span, in which water ballast is used, the pipes and connections being so arranged that the water is easily admitted and discharged, thereby providing for any variation in weight due to rain, snow, or other cause. The span is a steel, pin-connected truss bridge, 130 feet long and fifty-six feet wide, forty of which are used for roadway and eight feet at either side for pedestrian travel. Upon the top is a neat house for the operator.

The advantages of this structure over those of the swing type are plainly apparent. In this form of bridge there is no centre pier dividing the river into two narrow channels, through which navigation is difficult, creating currents and deflecting them toward the shores to wash away the soil and in a measure obstructing drainage. The bridge may be raised to a clear height of 155 feet above water level, which is sufficient to allow the passage in forty-five seconds of any vessel except the most old-fashioned lake craft. In most cases it is necessary to only partially raise it, and there is a corresponding saving of time. This form of bridge can be located and erected entirely within the limits of the street lines, infringing upon and damaging no adjacent private property or docks, and it allows the use of a longer span than the swing type.

This structure gives a clear channel of 118 feet, and when the span is raised to the maximum height a clear headroom of 155 feet. It was opened to traffic March 22, 1894, having cost the City \$242,880.00.

With regard to this type of bridge, it is but proper to say that the question of the cost of maintenance, as compared with other forms of bridge, is not yet determined. This is a question which can be answered only by time and experience.

VAN BUREN STREET BRIDGE.

At Van Buren street a peculiar condition of things exists. A swerving channel at that point and the necessity for two bridges—one for the crossing of the elevated road and the other to accommodate traffic along the line of Van Buren street—prohibit the use of the ordinary swing type of construction. These conditions have contributed to the location at that point of a bridge, which, in general pattern, is like none other on this continent, and in the manner of operation it has no fellow in the world. It is a combination of the bascule—which was the most common type of medieval bridges—and the latest electrical and pneumatic appliances. It is the embodiment of an eleventh century idea brought down to our own times.

The peculiar motion of this structure while in operation, each half of the bridge rolling backward and upward upon segmental girders at the bases, has given it the name of "rolling lift bridge." The moving portion consists of the river span of 115 feet, having the appearance of a low arch, though it does not act as such, there being no bearing at the center, and two arch spans of $30\frac{1}{2}$ feet each. On the respective shore lines are constructed the supporting piers, which are composed of pneumatic caissons filled with concrete, resting upon 50-foot piles and faced from just below the water line with Bedford stone solidly backed with concrete. The operation of opening the bridge divides it into two equal parts, each of which rolls upon a curved girder at its base into a vertical position. The center of motion being at a point about 24 feet from the shore ends of the draw, these ends descend into pockets in the piers as the river portions ascend. When standing in a vertical position the respective parts of the draw have a height above the street line of about 70 feet. Each half is so counterweighted that the power required to move it is only that which is necessary to overcome the rigidity of the structure and the wind resistance. This counterweight is somewhat in excess of that necessary to balance the parts, being sufficient, in case the draw for any reason should fall, to bring it to rest before reaching a horizontal plane, thus preventing accident in case the operating machinery should become disabled. An electric current of 500 volts applied through two 50-horse power motors, located, with other machinery, in a room built in either abutment, is the motive power, which may be operated independently in either section. Each set of machinery is provided with automatic air brakes which set without interference by the operator when the current is shut off, thus retaining the bridge parts in the positions

reached at that instant. Besides these there is a heavy emergency brake under the constant control of the operator. On the center girder of each approach is located an operator's house, to which run all the electric cables and air pipes for controlling one-half of the bridge, the operator having before him all the apparatus for this purpose. The bridge gates and the signals are also operated 'pneumatically. The air for use on both sides of the river is compressed on the west shore, that used on the east side being piped beneath the river and stored in a reservoir. The bridge proper consists of three trusses 21 feet apart, and two 8-foot sidewalks carried on cantilever brackets, making a total width of 58 feet. The outside length of the steel superstructure, approaches included, is 260 feet. The bridge will be opened to traffic in February, 1895. It has cost the City \$169,700.

The advantages of this bridge are particularly those given for the South Halsted street lift bridge. One has been in operation a short time, but it is not yet possible to ascertain which will be the least expensive in maintenance. It is believed, however, the evidence will be in favor of the rolling lift bridge. The Van Buren street structure has one decided advantage over the South Halsted street bridge, in that it has no high towers to be subjected to wind pressure.

EXTENSION OF WATER SYSTEM.

71.96 miles of water pipe, from four to thirty-six inches in diameter, were laid during the year (2.46 miles being exchange), making a total of 1,546.75 miles now laid in the City.

578 new valves were added; total in place..... 11,597

860 new fire hydrants were added; total in place..... 15,771

Total number of fire cisterns..... 93

*14,807 new house service taps were added; making total....233,792

*14,807 new house service pipes were added; making total....233,792

The number of service taps inserted in water mains, including retaps and taps inserted for enlarged service pipes to buildings previously supplied, is..... 15,985

EXTENSION OF SEWERAGE SYSTEM.

There were constructed during the year 66.466 miles of brick and pipe sewers, from nine inches to ten and one-half feet in diameter, making a total of.....1,211.251

* These amounts do not include the water service pipes and taps inserted in the annexed districts previous to annexation, no record having been kept for that purpose.

2,597 new catch-basins were added, making a total of.....	42,068
2,259 manhole chambers were added, making a total of.....	44,755
Old catch-basins were raised to grade, numbering.....	2,809
Old manhole covers raised to grade, numbering.....	2,902
Old catch-basins and manholes repaired, numbering.....	721
Number of catch-basins cleaned.....	14,082
Sewers cleaned to extent of.....	392.157 miles
House-drains laid amounting to.....	50.89 miles

STREET IMPROVEMENTS.

There were 93.42 miles of streets improved during the past year.

There were 377,961 square yards of street pavement repaired.

Total streets in the City.....	2,486.58 miles
Total streets paved in the City.....	1,086.44 miles
New sidewalks constructed.....	166.98 miles
Sidewalks repaired.....	2.90 miles
Total sidewalks in the City.....	4,423.70 miles
Streets cleaned (under contract).....	7,852.33 miles
Number of aprons, culverts, crossings, etc., built.....	4,207
Sidewalk intersections constructed.....	1,167
Number of street lamps (gas).....	36,208
Number of street lamps (oil and gasoline).....	12,052
Number of street lamps (electric).....	1,484
Total number of street lamps in the City.....	49,744
Street lamps repaired.....	13,570
Number of buildings removed.....	1,331

MAPS AND PLATS MADE.

For street improvement assessment	430
For opening, widening and vacating streets and alleys.....	612
For sidewalks	900
For Street Engineer's estimates	519
For lamp posts	1,610
For Law Department	53
For survey maps.....	93
For miscellaneous purposes.....	610
Total	4,827

ASSESSMENTS PREPARED.

For wooden block pavement	99
For miscellaneous street and alley improvement.....	41
For private drains	78
For water service pipes.....	106
For street and alley opening.....	22
For plank sidewalks	166
For stone and cement sidewalks	41
For gas lamps.....	273
For water mains.....	52
For gasoline lamps	1
For sewers	112
For boulevard lamps	35
Total	1,026

MISCELLANEOUS.

SPECIAL IMPROVEMENTS.

Furnishing boilers, West pumping works.
 Furnishing boilers, Washington Heights pumping works.
 Furnishing boilers, four-mile crib.
 Boring for new water tunnel.
 Repairing Bridgeport lock.
 Furnishing boulevard lamps.
 Furnishing brass castings.
 Furnishing cast-iron manhole and catch-basin covers.
 Furnishing cast-iron rings and covers for hydrant chambers.
 Removing dead animals.
 Constructing electric light station at 299 and 301 S. Halsted street.
 Constructing fire engine house at corner Wallace and 121st street.
 Constructing fire engine house at 1224 and 1226 West Fortieth place.
 Constructing fire engine house at 778 and 780 North Robey street.
 Furnishing glass for street lamps.
 Constructing pile outlet Fifty-sixth street sewer.
 Constructing police station at 637 West North avenue.
 Constructing sidewalk at Rosenberg fountain.
 Furnishing special castings for water pipe.
 South Halsted street bridge, constructing pile protection.
 Tug service.
 Van Buren street bridge, superstructure and motors.

CONTRACTS.

Contracts were entered into by the City for public improvements and various classes of material under the immediate supervision of this Department, incurring an expenditure of \$4,259,494.40, as follows :

1 Contract for boilers for lake crib, Washington Heights and West pumping works	\$	5,312	00
2 Contracts for boiler repairs		2,148	00
2 Contracts for boring for water tunnel.....		2,550	00
1 Contract for boulevard lamps		5,758	09
1 Contract for brass castings		7,854	00
1 Contract for Bridgeport lock, repairs		10,000	00
1 Contract for cast-iron water pipe.....		33,594	34
1 Contract for cast-iron rings and covers for hydrant chambers.....		7,517	67
8 Contracts for coal for pumping stations, City Hall, bridges, etc., aggregating.....		334,163	39
2 Contracts for corporation ferrules		5,394	90
148 Contracts for drains, aggregating.....		65,044	65
3 Contracts for dredging Chicago river, aggregating		43,744	88
1 Contract for electric light station.....		27,959	00
3 Contracts for fire engine houses, aggregating		13,933	00
27 Contracts for garbage removal, aggregating.....		339,718	29
1 Contract for glass for street lamps		4,595	14
1 Contract for hydrant and stop-valve castings.....		12,247	58
232 Contracts for improving streets and alleys, aggregating		1,680,611	12
6 Contracts for lumber, aggregating		27,941	22
1 Contract for manhole and catch-basin covers.....		3,000	15
1 Contract for pile outlet, Fifty-sixth street sewer..		4,866	00
1 Contract for police station.....		11,670	00
1 Contract for removing dead animals.....		19,791	66
5 Contracts for re-paving streets, aggregating.....		254,282	02
103 Contracts for sewers, catch-basins, etc.....		937,167	29
1 Contract for street cleaning.....		133,489	61
1 Contract for sidewalk, Rosenberg fountain		139	20
1 Contract for South Halsted street bridge, pile protection		2,450	00

1 Contract for special castings for water pipe.....	\$ 14,961 13
5 Contracts for teaming, aggregating	78,600 34
2 Contracts for tug service, aggregating	3,447 00
1 Contract for Van Buren street bridge, motors	11,150 00
1 Contract for Van Buren street bridge, superstructure.....	73,100 00
117 Contracts for water service pipe, aggregating...	81,292 73
TOTAL.....	\$4,259,494 40

FINANCIAL.

Statement of the sum appropriated by the City Council, together with various amounts from other sources, to be expended in public improvements under the supervision of the Department during the year 1894 :

RECEIPTS.

*From appropriation, 1894.....	\$ 1,979,863 85
From rent of Rookery lot.....	35,000 04
From water revenue, including meter and private work and tapping permits.....	3,157,827 94
From advances to lay water mains.....	60,755 09
From hydrant wrenches.....	685 00
From drain permits and drain layers' licenses.....	41,051 75
From deposits on sundry improvements.....	2,354 97
From special assessment sewer inspection.....	263,938 93
From house-moving permits.....	3,361 00
From deposits for street permits.....	142,283 71
From deposits for sundry improvements, special assessments and other funds.....	473,723 79
From special assessments.....	5,477,750 71
Total.....	\$11,638,596 78

*This includes \$648,450.00, the amount appropriated for the Street and Alley Cleaning Bureau, which in 1893 was not under the supervision of the Commissioner of Public Works.

EXPENDITURES.

*For bridges and viaducts, street cleaning, repairing public buildings and parks, Fullerton avenue and Canal pumping stations, improving street inter-sections, sewers, catch-basins, labor material and salaries	\$ 2,864,376	23
For extension of water pipe system.....	566,058	46
For new lake tunnel.....	10,695	25
For Lake View water tunnel.....	103,867	11
For lake crib—"old".....	18,685	42
For Sixty-eighth street pumping works.....	275,137	18
For new lake tunnel crib.....	47,782	09
For Washington Heights pumping station.....	8,499	45
For Sixty-eighth street tunnel extension.....	131,198	07
For Lake View crib.....	20,387	79
For Lake View pumping works.....	66,477	35
For North pumping works.....	164,392	63
For Norwood Park pumping works.....	1,448	77
For Central pumping works.....	62,271	45
For Fourteenth street pumping works.....	101,465	32
For West pumping works.....	151,252	57
For maintenance of water system, operating pumping works, cost of assessing and collecting water taxes, material on hand, etc.....	\$1,447,712	51
Less amount of operating expenses included in figures above.....	576,651	23
		871,061 28
For water bonds and interest paid.....	412,257	60
For water fund certificates.....	333,000	00
For advances refunded.....	48,899	35
For street improvements, street openings, sidewalks, sewers, private drains, water service pipes and lamp posts.....	5,477,750	71
Amount January 2, 3, 4, 5, 6 and 8, 1894, receipts....	65,202	47
Total.....		\$11,802,166 55

All balances of the Appropriation and Sewer Funds turned into the General Fund.

*This includes \$733,904.20, the expenditure of the Street and Alley Cleaning Bureau, which in 1893 was not under the supervision of the Commissioner of Public Works.

WATER SUPPLY SYSTEM.

This system, as shown by the City Engineer's report, makes the present engine capacity as follows :

Lake View pumping station,	31,500,000 gallons per 24 hours.
North side pumping station,	99,000,000 gallons per 24 hours.
Central pumping station,	36,000,000 gallons per 24 hours.
14th street pumping station,	54,000,000 gallons per 24 hours.
West Side pumping station,	60,000,000 gallons per 24 hours.
68th street pumping station,	77,000,000 gallons per 24 hours.
Total.....	357,500,000 gallons per 24 hours.

All these engines draw their water from the lake through tunnels. There are, besides, small pumping stations at Washington Heights and Norwood Park, which draw their water from artesian wells.

TUNNELS.

The tunnel capacity is as follows :

Lake View tunnel,	72,000,000 gallons per 24 hours.
Two-mile tunnels,	150,000,000 gallons per 24 hours.
Four-mile tunnel,	140,000,000 gallons per 24 hours.
68th street tunnel,	122,000,000 gallons per 24 hours.
Total.....	484,000,000 gallons per 24 hours.

There is, besides, one emergency or shore inlet tunnel, opposite the North Side pumping station.

PIPE SYSTEM.

Water pipes were laid during the year as follows:

Four (4) inch	7,376 feet.
Six (6) inch.....	262,943 feet.
Eight (8) inch.....	84,560 feet.
Twelve (12) inch.....	18,010 feet.
Sixteen (16) inch.....	3,059 feet.
Twenty-four (24) inch	4,024 feet.
Total.....	379,972 feet.

The whole being equal to 71.96 miles. Small pipe taken up or abandoned, 2.46 miles; net pipe added to the system during the year, 69.50 miles—making a total of 1,546.75 miles of water mains laid within the City limits.

Fire hydrants placed in position during the year.	860
Net number of hydrants added to the system	834
Total number of fire hydrants now in use	15,771
Stop valves put in place during the year	578
Net number of valves added to the system	560
Total number now in use	11,597

WATER METERS AND HYDRAULIC ELEVATORS.

Number of new meters put in during the year 1894	593
Number of old meters removed	407
Net increase	186
Total number of meters now in use	4,669
Total number of meters repaired	2,449
Number of City meters removed and replaced by new ones	272

The revenue derived from water measured by these meters and hydraulic elevators for the past year amounted to \$1,012,395.56, an increase of \$11,450.11 over the amount collected from the same source last year.

WATER WORKS RECEIPTS AND EXPENDITURES, 1894.

RECEIPTS.

Water rate collections (including delinquents)	\$ 2,963,964	53
Water service cocks (permits and plumbers' licenses)	41,833	88
Water meter labor, etc., for private parties	151,580	88
Rent of Rookery lot	35,000	04
Advances to lay water pipes	60,755	09
Hydrant wrenches	685	00
Old material sold, etc	448	65
Total	\$ 3,254,268	07

EXPENDITURES.

For water pipe extension	\$ 566,058 46
For water works repairs.....	441,085 10
For water service pipe and Tapping Department	57,386 73
For water meters and private work.....	82,313 62
For Norwood Park pumping works	1,448 77
For North pumping works.....	164,392 63
For West pumping works.....	151,252 57
For Central pumping works.....	62,271 45
For South Side (Fourteenth street) pumping works...	101,465 32
For Sixty-eighth street pumping works.....	275,137 18
For Lake View pumping works	66,477 35
For Washington Heights pumping works.....	8,499 45
For new lake tunnel.....	10,695 25
For Lake View tunnel.....	103,867 11
For Sixty-eighth street tunnel extension.....	131,198 07
For lake crib (old)	18,685 42
For north breakwater crib.....	75 00
For Lake View crib.....	20,387 79
For new lake tunnel crib	47,782 09
For Water Works shop.....	2,792 75
For miscellaneous	20,472 14
For Water Fund certificates	333,000 00
For Water Loan interest	187,257 60
For Water Loan bonds	225,000 00
For advances for laying water mains refunded	48,899 35
For salaries and office expenses	262,141 89
For North-West tunnel.....	4,794 05
For amount 1894 receipts, January 2, 3, 4, 5, 6 and 8..	65,202 47
Total.....	\$ 3,460,039 61

Total cost of Water Works of the City to December 31, 1894, is as follows:

Cost up to May 1, 1861, when the works were transferred from the Board of Commissioners to the Board of Public Works..... \$ 1,020,160 21

EXPENDITURES SINCE 1861.

Cost of water pipe, including labor.....	\$12,356,632	42
Cost of North pumping works	929,532	44
Cost of West pumping works	939,866	51
Cost of Sixty-eighth street pumping works.....	283,838	91
Cost of Central pumping works.....	372,227	77
Cost of Washington Heights pumping works	10,246	96
Cost of Lake View pumping works	144,393	37
Cost of South Side (Fourteenth street) pumping works	569,272	84
Cost of new lake tunnel	993,126	29
Cost of Lake View tunnel	512,509	37
Cost of new lake shore inlet extension.....	146,459	04
Cost of north breakwater crib	41,780	11
Cost of lake tunnel crib (old).....	102,744	41
Cost of new lake crib	463,663	29
Cost of Lake View crib	87,951	62
Cost of Sixty-eighth street tunnel extension	470,994	06
Cost of Ashland avenue tunnel	17,453	36
Cost of first lake tunnel.....	464,866	05
Cost of second lake tunnel.....	415,709	36
Cost of lake crib protection.....	149,431	63
Cost of land tunnel to West pumping works	542,912	63
Cost of new land tunnel.....	284,380	04
Cost of lake shore inlet.....	42,871	17
Cost of new lake shore inlet	89,474	17
Cost of Water Works shop.....	25,551	73
Cost of Water Works stock	29,318	00
Cost of water reservoir fence.....	1,702	87
Cost of addition to stables.....	1,019	48
Cost of real estate for sites of pumping works	206,972	35
Cost of works, annexed territory.....	1,160,164	24
Cost of Jefferson street tunnel	15,968	17
Cost of North-West tunnel	1,020	00

Total cost of entire works to December 31, 1894.. \$22,894,214 87

Paid for as follows :

From general taxes.....	\$ 2,713,878	53
From City of Chicago Water Loan bonds, 6 per cent..	132,000	00
From City of Chicago Water Loan bonds, 7 per cent..	1,485,000	00
From City of Chicago Water Loan bonds, 4 per cent..	1,706,500	00
From City of Chicago Water Loan bonds, 3 $\frac{6}{10}$ per cent.	332,000	00

From City of Chicago Water Loan bonds, 3 $\frac{1}{8}$ % per cent.	\$ 333,500 00
From bonds cancelled	1,493,900 00
From Hyde Park Water Loan bonds, 5 per cent	50,000 00
From Hyde Park Water Loan bonds, 7 per cent	331,000 00
From Town of Lake Water Loan bonds, 5 per cent...	120,000 00
From Lake View Water Loan bonds, 4 per cent	50,000 00
From Lake View Water Loan bonds, 5 per cent	23,000 00
From Lake View Water Loan bonds, 7 per cent	75,000 00
From water certificates.....	667,000 00
From Water Fund revenues.....	13,381,436 34

\$22,894,214 87

Total Water Works income to December 31, 1894..... \$35,866,473 22

Total operating expenses and maintenance to December 31, 1894 (including *\$7,595,385.71 interest on bonded debt and bonds cancelled) 22,963,342 06

Difference between income and expense..... \$12,903,131 16

Accounted for as follows :

Paid toward Water Works construction, \$12,991,397 93	
J. W. Lyons, cashier.....	2,000 00
W. A. Prendergast	100 00
Meter Department stock on hand.....	7,004 80
Water Works shop stock on hand	12,494 58
Tapping Department stock on hand...	5,279 77
Water pipe, etc., on hand	105,749 86
Balance to credit of Water Fund January 1, 1895	203,155 95
	\$13,327,182 89

Less amount due depositors for hydrant wrenches \$ 1,971 82

Less amount advanced by private parties to lay water pipe in non-paying districts 422,079 91

424,051 73

\$12,903,131 16

*Total interest on Water Loan bonds and certificates paid in 1894 was \$301,980.50; of this amount \$187,257.60 is included in above figures and \$114,722.90 is charged to Interest Account.

BONDED DEBT OF WATER WORKS.

City of Chicago Water Loan bonds outstanding December 31, 1894, bearing 7 per cent. interest, and maturing as follows:

July 2, 1895	\$1,485,000 00	
	<u> </u>	\$ 1,485,000 00

Bearing 6 per cent. interest and maturing—

July 1, 1897.....	\$ 50,000 00	
July 2, 1898.....	82,000 00	
	<u> </u>	132,000 00

Bearing 3.65 per cent. interest, maturing—

July 1, 1902.....	\$ 332,000 00	
	<u> </u>	332,000 00

Bearing 3½ per cent. interest, maturing—

July 1, 1909.....	\$ 225,000 00	
July 1, 1910.....	108,500 00	
	<u> </u>	333,500 00

Bearing 4 per cent. interest, maturing—

July 1, 1908.....	\$ 150,000 00	
July 1, 1910.....	159,500 00	
July 1, 1912.....	821,000 00	
July 1, 1914.....	576,000 00	
	<u> </u>	1,706,500 00

ANNEXED DISTRICTS.

Town of Lake Water bonds:

5 per cent. bonds, due April 1, 1895....	\$ 15,000 00	
5 per cent. bonds, due April 1, 1896....	15,000 00	
5 per cent. bonds, due April 1, 1897....	15,000 00	
5 per cent. bonds, due April 1, 1898....	15,000 00	
5 per cent. bonds, due April 1, 1899....	15,000 00	
5 per cent. bonds, due April 1, 1900....	15,000 00	
5 per cent. bonds, due April 1, 1901....	15,000 00	
5 per cent. bonds, due April 1, 1902....	15,000 00	
	<u> </u>	120,000 00

Hyde Park Water Bonds :

5 per cent. bonds, due Jan. 1, 1904.....	\$ 50,000 00	
7 per cent. bonds, due Jan. 1, 1895.....	322,000 00	
7 per cent. bonds, due Jan. 1, 1896.....	9,000 00	
		\$ 381,000 00

Lake View Water Bonds :

5 per cent. bonds, due July 1, 1904.....	\$ 23,000 00	
4 per cent. bonds, due July 1, 1907.....	50,000 00	
7 per cent. bonds, due July 1, 1895.....	75,000 00	
		148,000 00

Total bonded debt of Water Works.....		<u>\$ 4,638,000 00</u>
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Total interest paid on Water Loan to January 1, 1895.....		<u>\$ 7,680,198 61</u>
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Floating indebtedness :

Water Loan certificates, maturing as follows :

5 per cent. Water certificates, due December 1, 1894.....	\$333,000 00	
5 per cent. Water certificates, due June 1, 1895	334,000 00	
		\$ 667,000 00

The following table indicates the quantity of water furnished, the total revenue received, and the average amount per million gallons annually, from 1858 to 1894, both years inclusive.

YEAR.	MILLION GALLONS FURNISHED.	REVENUE.	REVENUE PER MILLION GALLONS.
1858.....	1,092	\$102,178 85	\$93 57
1859.....	1,415	122,753 50	86 75
1860.....	1,717	131,162 73	76 39
1861.....	1,767	131,035 10	74 15
1862..... (15 months).....	2,705	188,448 25	69 66
1863.. (9 months).....	2,336	192,246 39	82 29
1864.....	2,523	224,902 57	89 14
1865.....	2,778	253,114 49	91 11
1866.....	3,169	302,017 59	95 30
1867.....	4,232	338,929 28	80 08
1868.....	5,375	420,686 94	78 26
1869.....	6,801	476,968 24	70 13
1870.....	7,945	539,180 19	67 86
1871.....	8,423	445,834 64	52 93
1872.....	10,051	544,465 90	54 17
1873.....	11,723	708,804 32	60 46
1874.....	13,903	705,926 64	50 77
1875..... (9 months).....	10,957	635,996 54	58 04
1876.....	15,346	771,940 38	50 30
1877.....	19,047	908,509 64	47 70
1878.....	19,564	944,190 97	48 26
1879.....	20,558	922,001 26	44 85
1880.....	21,003	865,618 35	41 21
1881.....	23,332	936,922 07	40 16
1882.....	24,151	1,049,576 90	43 46
1883..	26,742	1,142,868 54	42 73
1884.....	29,286	1,204,338 74	41 12
1885.....	33,451	1,339,038 00	40 03
1886.....	35,693	1,374,837 32	38 52
1887.....	37,199	1,490,023 68	40 05
1888.....	38,122	1,557,116 78	40 84
1889.....	40,504	1,621,786 34	40 04
1890.....	55,614	2,202,724 58	39 61
1891.....	63,552	2,364,463 09	37 21
1892.....	71,035	2,738,434 10	38 55
1893.....	86,298	2,949,548 87	34 18
1894	87,074	3,158,492 94	36 27

SEWERAGE.

The sewerage system has been extended in the various divisions of the City during the year, as follows:

Constructed in the West Division	18.955 miles
Constructed in the South Division	36.908 miles
Constructed in the North Division	10.603 miles
Total	66.466 miles
Number of catch-basins built	2,597
Number of manhole chambers built	2,259

The cost of constructing sewers and catch-basins during the year was as follows:

West Division	\$ 125,443.14
South Division	826,818.07
North Division	62,228.65
	<u>\$1,014,489.86</u>

Total number of catch-basins	42,068
Total number of manhole chambers	44,755
Total number of miles of sewer in the City	1,211.251

MAINTENANCE OF SEWERS.

The cost of cleaning and repairing sewers, the cost per mile, and number of miles, also the number of catch-basins and manhole chambers distributed in the three divisions of the City, are as follows:

DIVISION.	MILES OF SEWER.	NUMBER OF CATCH-BASINS.	NUMBER OF MANHOLE CHAMBERS.
West	519.224	18,684	18,493
South	469.827	15,923	17,658
North	222.200	7,461	8,604
Totals	1,211.251	42,068	44,755

The cost of repairing sewers during the year was \$57,784.42, being an average cost of \$47.70 per mile.

The cost of cleaning was \$154,225.45, making the average cost \$127.33 per mile.

The total cost of both repairs and cleaning was \$212,009.87, an average cost of \$175.03 per mile.

Of the 66.466 miles of sewers constructed during the year 19.144 miles are of brick, and 47.322 miles of vitrified pipe.

Of the 1,211.251 miles of sewer constructed 476.448 miles are of brick, and 734.803 miles of vitrified pipe.

TOTAL COST OF SEWERS, ETC.

DIVISIONS.	MILES.	COST.	AVERAGE COST PER MILE.
West	519.224	\$ 6,928,652 70	\$13,344 27
South	469.827	6,632,318 75	14,116 53
North	222.200	2,669,263 16	12,012 88
Totals.....	1,211.251	\$16,230,234 61	\$13,399 56

BONDED SEWER DEBT.

Sewer bonds outstanding December 31, 1894, maturing as follows:

July 1, 1895, bearing 7 per cent. interest.....	\$ 13,000 00
July 1, 1900, bearing 4.5 per cent. interest.....	489,500 00
July 1, 1904, bearing 4 per cent. interest.....	458,000 00
July 1, 1908, bearing 4 per cent. interest.....	387,000 00
July 1, 1912, bearing 4 per cent. interest.....	490,000 00
July 1, 1914, bearing 4 per cent. interest.....	782,500 00
Total Sewerage debt.....	<u>\$2,620,000 00</u>

RIVER IMPROVEMENT BONDS.

Bonds outstanding December 31, 1894, maturing as follows:

July 1, 1895, bearing 7% interest.....	\$1,263,000 00
July 1, 1910, bearing 4% interest....	250,000 00
July 1, 1912, bearing 4% interest.....	249,000 00
July 1, 1913, bearing 4% interest.....	500,000 00
July 1, 1914, bearing 4% interest.....	343,500 00
Total River Improvement debt.....	<u>\$ 2,605,500 00</u>
Grand total outstanding.....	<u>\$ 5,225,500 00</u>
Total interest paid on Sewerage bonds to Jan. 1, 1895.	\$ 5,570,436 00
Total interest paid on River Improvement bonds to Jan. 1, 1895.....	4,781,990 00
Total interest paid on Water Loan bonds to Jan. 1, 1895.	7,680,198 61
Grand total of interest paid to Jan. 1, 1895....	<u>\$18,032,624 61</u>

RIVER AND HARBOR.

Mean water in Lake Michigan during the year was five-tenths of a foot above datum, while the lowest stage recorded was one and eight-tenths of a foot below datum.

During the year the City expended \$34,275.00 for dredging and removing 210,729 cubic yards of material from the Chicago River, 45,589 cubic yards of which was hard-pan, at 37 cents per yard.

The commerce of the City is as follows :

Year 1894....Arrivals,	8,106 vessels..	5,424,171 tons
Year 1894....Clearances,	8,177 vessels..	5,447,273 tons
Totals for the year..	16,283 vessels..	10,871,444 tons

BRIDGES AND VIADUCTS.

The cost of maintaining these structures for the year was as follows :

For general repairs of bridges and viaducts.....	\$154,889 13
Of this amount there was received for labor and material.	9,055 06
Net cost to City for repairs of bridges and viaducts.....	\$145,834 07

CANAL PUMPING WORKS.

The average rate of pumpage for the year has been 49,200 cubic feet per minute, and the total expense for operation and improvements, \$85,129.21.

STREETS.

During the year 1894 streets were improved as follows :

Paved with cedar blocks.....	63.54 miles.
Paved with macadam.....	15.19 miles.
Paved with granite blocks.....	4.58 miles.
Paved with Medina stone.....	0.08 miles.
Paved with brick.....	0.22 miles.
Paved with asphalt.....	8.34 miles.
Curbed and filled.....	1.47 miles.
Total number of miles improved.....	93.42 miles.

DISTRIBUTION OF KINDS OF PAVEMENT.

The following table gives the mileage of each class of pavement in use in the three principal divisions of the City :

DIVISION.	Cedar Block, Miles.	Macadam Miles.	Medina Stone, Miles.	Granite, Miles.	Sheet Asphalt, Miles.	Block Asphalt, Miles.	Brick, Miles.	Burned Clay, Miles.	Found'n, Miles.	Total Miles.
North	152.95	56.43	0.49	0.10	5.03	.....	0.44	.....	1.08	216.52
South.....	191.47	247.62	1.70	19.98	5.44	3.59	0.87	0.23	.....	470.90
West.....	358.26	20.64	0.39	2.82	14.52	.....	.....	.....	.....	396.63
Viaduct Approaches....	2.39	.....	.....	.....	.....	.....	.....	.....	.....	2.39
Totals	705.07	324.69	2.58	22.90	24.99	3.59	1.31	0.23	1.08	1086.44

Repaving and repairs have been made on improved streets in each division of the City, as follows :

North Division..... 71,500 square yards.

South Division..... 165,485 square yards.

West Division..... 140,976 square yards.

*Total 377,961 square yards.

STREET CLEANING.

During the year 7,852.33 miles of streets were cleaned under contract, at a cost of \$133,489.61, being at the rate of \$17.00 per mile. This work was commenced April 2d, and discontinued November 6th. In addition to the sum thus paid out for cleaning streets by machinery under contract, the Department expended \$162,908.31 for removing snow and ice, and for sweeping and cleaning streets and intersections by hand, making a total expenditure for street cleaning of \$296,397.92.

*This does not include the repaving done by private corporations.

SIDEWALKS.

Number of miles of wood, stone and concrete sidewalks built during the year 1894 :

DIVISION.	MATERIAL.			Total Miles.	Sidewalks Repaired, Miles.	Total Work, Miles.
	Wood, Miles.	Stone, Miles.	Concrete, Miles.			
North.....	10.86	1.80	13.25	25.91	1.10	27.01
South.....	32.72	.50	35.82	69.04	.50	69.54
West	52.77	2.50	16.76	72.03	1.30	73.33
Totals.....	96.35	4.80	65.83	166.98	2.90	169.88

Total number of miles of sidewalks under control of the City and the South, West and Lincoln Park Commissioners at the close of the year :

CONTROLLED BY.	MATERIAL.			Total Miles.
	Wood.	Stone.	Concrete.	
City	3,654.85	229.15	438.16	4,322.16
South Park Commissioners.....	.....	15.30	22.10	37.40
West Park Commissioners.....	.....	11.05	46.79	57.84
Lincoln Park Commissioners.....	.....	2.17	4.13	6.30
Total Miles.....	3,654.85	257.67	511.18	4,423.70

STREET LAMPS.

The following table shows the number of street lamps of each kind in use, and the number erected during the year :

DIVISION.	GAS LAMPS.				ELECTRIC LAMPS.			
	No. in City Jan. 1, 1894.	Erected during 1894.	Discontin- ued in 1894.	No. in City Dec. 31, 1894.	No. in City Jan. 1, 1894.	Erected during 1894.	Discontin- ued in 1894.	No. in City Dec. 31, 1894.
North	6,242	451	....	6,693	239	.....	2	237
South	10,968	1,263	284	11,943	568	165	2	726
West	17,248	729	404	17,573	522	1	2	521
Totals	34,458	2,443	688	36,208	1,824	166	6	1,484
DIVISION.	GASOLINE LAMPS.				OIL LAMPS.			
	No. in City Jan. 1, 1894.	Erected during 1894.	Discontin- ued in 1894.	No. in City Dec. 31, 1894.	No. in City Jan. 1, 1894.	Erected during 1894.	Discontin- ued in 1894.	No. in City Dec. 31, 1894.
North.....	1,021	674	862	1,833	.....	.....	.....	.....
South.....	5,015	1,855	1,152	5,918	185	17	11	191
West	4,641	706	37	5,310	44	.....	44	.....
Totals.....	10,677	2,785	1,551	11,861	239	17	55	191

EXPENSE OF LIGHTING.

The following table shows the cost of lighting the City and maintaining lamps during the year ending December 31, 1894, including the cost of extinguishing under schedule adopted by the Council :

Total cost of lighting and maintaining gas lamps....	\$ 719,688 73
For material and lighting oil lamps.....	150,021 98
For gasoline used by City for maintaining lamps.....	107,371 27
For maintaining electric lamps	28,550 58
For lighting electric lamps by contract.....	
Total cost of lighting the City.....	\$1,005,632 56

ELECTRIC LIGHTING.

The following table gives the annual extension of the system from 1887 to December 31, 1894, including the total cost of the same:

YEAR.	Number of Power Houses Erected.	Estimated Capacity of Power Houses in 2,000 Candle Power Lights.	Horse Power of Engines installed.	Number of Arc Lights placed in Operation as a result of Appropriation each Year.	Number of Arc Lights Displacing Gas Lights.	Number of Gas Lights Displaced.	Average Number of Gas Lights Displaced by each Electric Light.	Expended for Electric Light Construction and Maintenance.
1887.....	* 1	† 125	125	105	76	.....	.....	\$ 39,976 25
1888.....	* 1	† 300	300	192	192	826	4 ₁₀	69,414 25
1889.....	† 3	3,000	1,500	372	372	1,452	3 ₁₀	307,856 62
1890.....	1	850	425	260	260	1,343	5 ₁₀	139,630 60
1891.....	.....	.....	.....	64	58	273	4 ₇₀	243,141 05
1892.....	.....	.....	.....	109	88	341	3 ₁₀	139,893 16
1893.....	.....	.....	.....	10	10	40	4	133,168 21
1894.....	1	1,000	1,000	§ 4	.....	.....	.....	186,551 32
Total....	4	3,850	2,300	1,108	1,056	4,275	.....	\$ 1,259,631 46

* Abandoned. † Moved to Plant No. 1. § Decrease.

† Plant No. 6, with capacity for 1,000 2,000 candle-power arc lights and 625 horse power, sold to Metropolitan Elevated R. R. Company.

Total expenditure for construction and maintenance of electric light plants, \$1,259,631.46, including the amount expended for the new plant, which was paid out of the amount received from the Metropolitan Elevated R. R. for the old plant. There are 1,108 2,000-candle power arc lights operated therefrom. There are 376 2,000-candle power arc lights operated under contract.

THE CITY ELECTRIC LIGHT SYSTEM COMPRISES—

Power stations.....	4
125-horse power high-speed engines	9
300-horse power Corliss engine	1
500-horse power vertical, compound, condensing engines ..	2
100-horse power tubular boilers, heaters, pumps, etc	6
125-horse power tubular boilers, heaters, pumps, etc	8
2,000-candle power, double carbon arc lamps	1,273
Incandescent arc lamps.....	6
Lamp posts and hoods	1,112
60-light high-tension dynamos	8
50-light high-tension dynamos	8
35-light high-tension dynamos	8
Miles of electric light cable	185½
Number of feet underground conduit.....	12,580
Number of feet iron pipe laid underground	588,377
Number of manholes	363
Number of handholes	114

NOTE—The City is now using five 125-horse power high-speed engines, seven 125-horse power tubular boilers, heaters, pumps, etc., two 60-light high-tension dynamos, two 60-light low-tension dynamos, six 35-light low tension dynamos, and ten 30-light low tension dynamos already sold as previously noted, during construction work as yet uncompleted on the new electric light power station, at No. 299-301 S. Halsted street.

SUMMARY OF CITY ELECTRICAL INSPECTION.

MOTORS INSPECTED.

YEAR.	NUMBER.	CAPACITY AND HORSE-POWER.
Previous to 1892	668	2,004
1892	504	1,492
1893	601	1,881
1894	568	1,128
Totals.....	2,341	6,505

Inspection of wiring only during 1894141

Isolated plants re-inspected during 1894, as follows :

ARC LAMPS.	INCANDESCENT.	MOTORS.		GENERATORS.	
		Number.	Horse Power.	Number.	Horse Power.
1,043	12,089	4	33	12	2,765

STATEMENT OF YEARLY INSPECTION OF ELECTRIC LIGHT LAMPS
FROM FEBRUARY 14, 1884, TO JANUARY 1, 1895.

YEAR.	NUMBER OF ARC LIGHTS.	NUMBER OF INCANDESCENT.
1884	1,148	1,885
1885	392	7,609
1886	479	5,225
1887	837	5,424
1888	2,369	17,717
1889	2,623	24,906
1890	2,682	39,543
1891	3,974	87,913
1892	5,046	101,668
1893	6,279	150,545
1894	3,604	67,593
Totals.....	29,370	510,088

PARKS.

The cost of maintaining the various parks under the control of this Department during the past year was as follows :

Jefferson Park.....	\$ 159 50
Irving Park.....	88 00
Holstein Park.....	157 75
Congress Park.....	102 75
Oak Park.....	724 38
Lakewood Park.....	103 84
Green Bay Park.....	727 50
Washington Park.....	2,020 67
Shedd's Park.....	1,098 75
Douglas Monument Square.....	1,427 44
Aldine Square.....	1,261 19
Bickerdike Square.....	1,868 15
Gross Park.....	899 25
Eldred Park.....	93 00
Ellis Park.....	1,251 31
East End Park.....	786 04
Total.....	\$12,769 52

BUILDINGS.

The report of the Commissioner of Buildings shows that during the year 9,855 buildings were erected, extending over an aggregate frontage of 232,487 feet, at a cost of nearly \$34,000,000, the same being distributed in the divisions of the City as follows :

DIVISION.	NUMBER BUILDINGS ERECTED.	AGGREGATE FRONTAGE IN FEET.	FRONTAGE IN MILES.	ESTIMATED VALUE.
North Side.....	430	11,383	2.16	\$2,590,500 00
South Side.....	759	18,482	3.50	4,723,220 00
West Side.....	3,393	80,403	15.23	11,974,270 00
Hyde Park.....	1,777	41,923	7.92	6,509,175 00
Town of Lake.....	2,019	44,947	8.51	3,851,555 00
Lake View	1,477	35,449	6.71	4,214,850 00
Totals.....	9,855	232,487	44.03	\$33,863,570 00

COMPARISON WITH NINE PREVIOUS YEARS.

YEAR.	NUMBER BUILDINGS ERECTED.	AGGREGATE FRONTAGE IN FEET.	FRONT- AGE IN MILES.	ESTIMATED VALUE.
1885.....	4,638	108,850	20.62	\$19,624,100 00
1886.....	4,664	112,302	21.27	21,324,400 00
1887.....	4,833	115,506	21.88	19,778,100 00
1888.....	4,958	116,419	22.05	20,860,800 00
1889.....	4,931	119,573	22.65	25,065,500 00
1890.....	11,808	266,284	50.43	47,322,100 00
1891.....	11,805	282,672	53.54	54,201,800 00
1892.....	13,194	327,573	62.04	64,740,800 00
1893.....	8,359	216,893	41.07	28,708,750 00
1894.....	9,855	232,487	44.03	33,863,570 00
Totals	78,845	1,898,559	359.58	\$334,989,920 00

HOUSE MOVING.

Under the supervision of this Department, 1,331 buildings were moved, 1,115 being frame and 216 brick.

The following table gives the number moved in the different sections of the City, the height, and the total frontage :

NORTH SIDE.	SOUTH SIDE.	WEST SIDE.	TOTAL.
263	327	748	1,331
ONE STORY.	TWO STORIES.	THREE STORIES.	
652	600	29	

The total frontage was 26,693 feet, or more than five miles.

CONCLUSION.

The discharge of my official duties has brought me frequently in contact with your Honorable Body, and I desire here to record my warm appreciation of the uniform courtesy which has characterized the intercourse between this Department and the legislative branch of the City government.

To His Honor, Mayor Hopkins, I am deeply grateful for his hearty encouragement and co-operation in the various enterprises which have been undertaken and carried forward since the beginning of the period.

For detailed information in regard to the work done by this Department—to which I have alluded in general terms only—I have the honor to refer you to the reports of Superintendents of Bureaus, to whom I am indebted in no small degree for their faithful and efficient services.

Respectfully,

JOHN MCCARTHY,

Commissioner of Public Works.

REPORT OF THE
Bureau of Engineering
CITY OF CHICAGO

CITY ENGINEER'S REPORT.

HON. JOHN MCCARTHY,

Commissioner of Public Works.

DEAR SIR: In presenting to you a report of work done by this Department for the year 1894, of which you will find detailed statements from the different assistants and foremen hereto attached, I again desire to call your attention to the necessity of improving the water works system of this City.

We have in our pumping stations a number of pumping engines and machinery, some of them over 40 years old. At the time this machinery was built they were good and efficient machines, but they have seen long and faithful service and have outlived their usefulness and are worn out. They are also not of modern type of pumping engines. It costs a great amount to maintain them and keep them in operation. They are not economical and are far behind the age.

With the engines, I may also state that the boilers and their appurtenances are included in the term machinery.

At some of our stations, particularly at Sixty-eighth street and Chicago avenue, we shall at least be under the necessity in the immediate future of putting in new boilers and their proper appurtenances.

I would also state that with one exception the pumping stations of this City are located on the eastern boundary of the City, near the lake shore. The City has grown, not only in population and manufacturing importance within the old City boundaries, but a large area of annexed territory has been added to it, and we are asked to furnish all this territory with an abundant supply of water for domestic, manufacturing and fire protection purposes, which was not contemplated nor anticipated when these stations and the plant within them were designed.

We find it impossible to give anything like efficient service under the present condition of affairs, and would urge upon you the necessity of replacing the antiquated engines and machinery, which are worn out, with others of more modern type, and also that no time

be lost in increasing the water works system of this City with new stations, which should be located, not on the eastern boundary of the City, but nearer to the centre of consumption.

Bids have been received and are under consideration in your Department for new engines to replace the old and worn out ones in the existing stations. We are making surveys, and will present to you during the coming season, plans and estimates for new plants near the centre of consumption, but at the same time I would state that the new pumping plants, with all their appurtenances, could not be in operation earlier than five years from this date.

I would further call your attention to the fact that a number of the bridges, particularly those away from the centre of the City, were built when the traffic over them was comparatively light, some of them over twenty-five years ago. Ordinary traffic has increased immensely since these structures were built. Street cars are now passing over them, and in nearly all cases in the near future electric cars will cross them. Some of them, as will be seen by the detailed statement presented to you, I consider unsafe for the service to which they are now, or in the near future, will be subjected.

These bridges should be replaced by safe structures, and, in some cases, on account of the importance of the street and the traffic over them, with double roadway structures. The old structures cost a great amount of money to maintain and keep safe for public use and travel. In the near future we shall be obliged to abandon some of them as dangerous and not fit for service, and I respectfully ask that such action be taken as is right and proper to replace these worn-out structures without delay.

I may also state that the tunnel supplying the Sixty-eighth street Pumping Station has been completed with a crib two miles from shore. This crib is but a temporary structure and will very shortly have to be replaced by one which will be able to withstand the storms and ice of the south end of Lake Michigan, as the present temporary crib is being rapidly destroyed by the elements.

Allow me to express my thanks for the uniform courtesy and assistance of yourself and all other officers of the City government, and for the cordial and cheerful assistance of all the employes of this and all other departments of the City government.

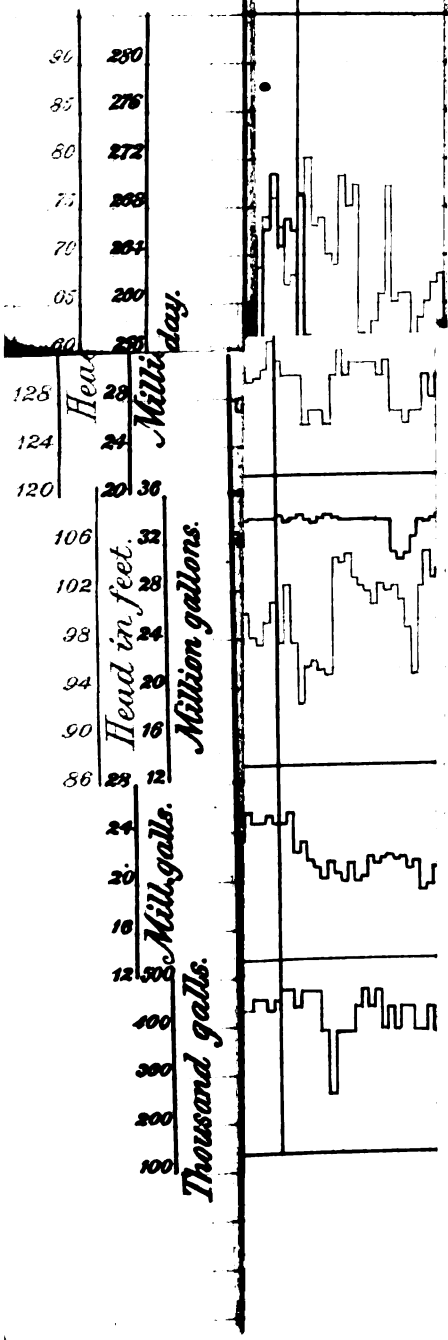
Respectfully submitted,

SAML. G. ARTINGSTALL,

City Engineer.

FOR

SEPTEMBER



MR. SAMUEL G. ARTINGSTALL,
City Engineer.

DEAR SIR:—I have the honor to submit herewith the following annual report on the water supply system (operation and construction) for the fiscal year ending December 31, 1894.

WATER SUPPLY SYSTEM, ETC.

OPERATION.

The daily pumpage of each station, separately and all combined, with the quantities, heads and temperature, is shown on the appended diagram. The monthly and annual pumpages are given in Table "A." Table "B" gives the most important figures relating to quantities and expenses.

During the year 87,073,943,349 gallons of potable water have been pumped into the City mains by all the pumping stations combined, making an average of 238,558,749 gallons for the whole year per day of twenty-four hours. This consumption is at the rate of 145 $\frac{4}{5}$ gallons per capita per day.

TUNNELS AND INTAKES.

The water pumped at the different pumping stations during the year has been drawn through the different lake tunnels, the intakes being the same as described in last year's report, with the exception of the Sixty-eighth street intake, which, after the completion of the tunnel extension, gives another intake, two miles from shore, in addition to the one mile intake.

The tunnels, intakes and cribs are all in good condition. No interruption of the flow has occurred during the year.

TABLE "B." OPERATIONS OF PUMPING STATIONS, CHICAGO, DURING 1894.

	North Side.	West Side.	Fourteenth Street.	Central.
Anthracite Coal, tons.....	13,351.88	1,928,588	1,190,188	1,162,585
Bituminous Coal, tons.....	8,802,188	18,995,188	8,269,188	6,265,188
Fuel Oil, gallons.....				
Price of Anthracite Coal, per ton.....	\$5.57	\$5.35	\$5.35	\$5.35
Price of Bituminous Coal, per ton.....	3.08	2.97	2.80	2.78
Price of Fuel Oil, per 100 gallons.....				
Cost of Anthracite Coal.....	74,325.28	10,318.97	6,317.36	6,217.94
Cost of Bituminous Coal.....	27,118.28	41,568.80	28,175.80	17,432.59
Cost of Fuel Oil.....				
Total Cost of Fuel.....	101,443.51	51,887.25	29,492.66	23,650.58
Salaries.....	49,819.78	40,331.57	43,906.63	29,182.81
Cost of Oil, Stores and Lighting.....	4,804.24	3,839.55	2,988.92	2,662.85
Repairs to Buildings, Pumps, Engines and Boilers.....	1,853.71	9,807.26	20,916.76	7,768.17
Total Expense of Operation and Maintenance.....	157,416.24	105,865.63	97,284.97	63,263.86
All other Expenses combined.....	1,065.43	16,824.70		
Grand Total of Expenses.....	158,481.67	122,690.33	97,284.97	63,263.86
Total Gallons Pumped during the year.....	21,689,012.770	19,276,164.880	16,052,784.584	102,579,749.75
*Per Cent of Pumpage of City as a whole.....	24.9	22.1	18.4	11.8
Greatest Amount Pumped in one day, gallons.....	74,062,100 Feb. 21	65,700,430 Aug. 9	49,456,458 July 26	33,034,643 Oct. 29
Least Amount Pumped in one day, gallons.....	37,050,250 April 15	82,205,000 Dec. 11	31,360,166 Sept. 8	13,669,530 Feb. 27
Average Pumped per day, gallons.....	59,449,350	52,888,806	43,980,232	28,104,041
Average Head against Pumps, in feet.....	110.8	104.86	113.1	108
Cost of Fuel Pumping 1,000,000 gallons, one foot high.....	4 7/8 c.	2 7/8 c.	1 7/8 c.	2 7/8 c.
Total Cost of Pumping 1,000,000 gallons, one foot high.....	6 1/8 c.	5 1/8 c.	5 1/8 c.	5 1/8 c.

*Norwood Park Station not included.

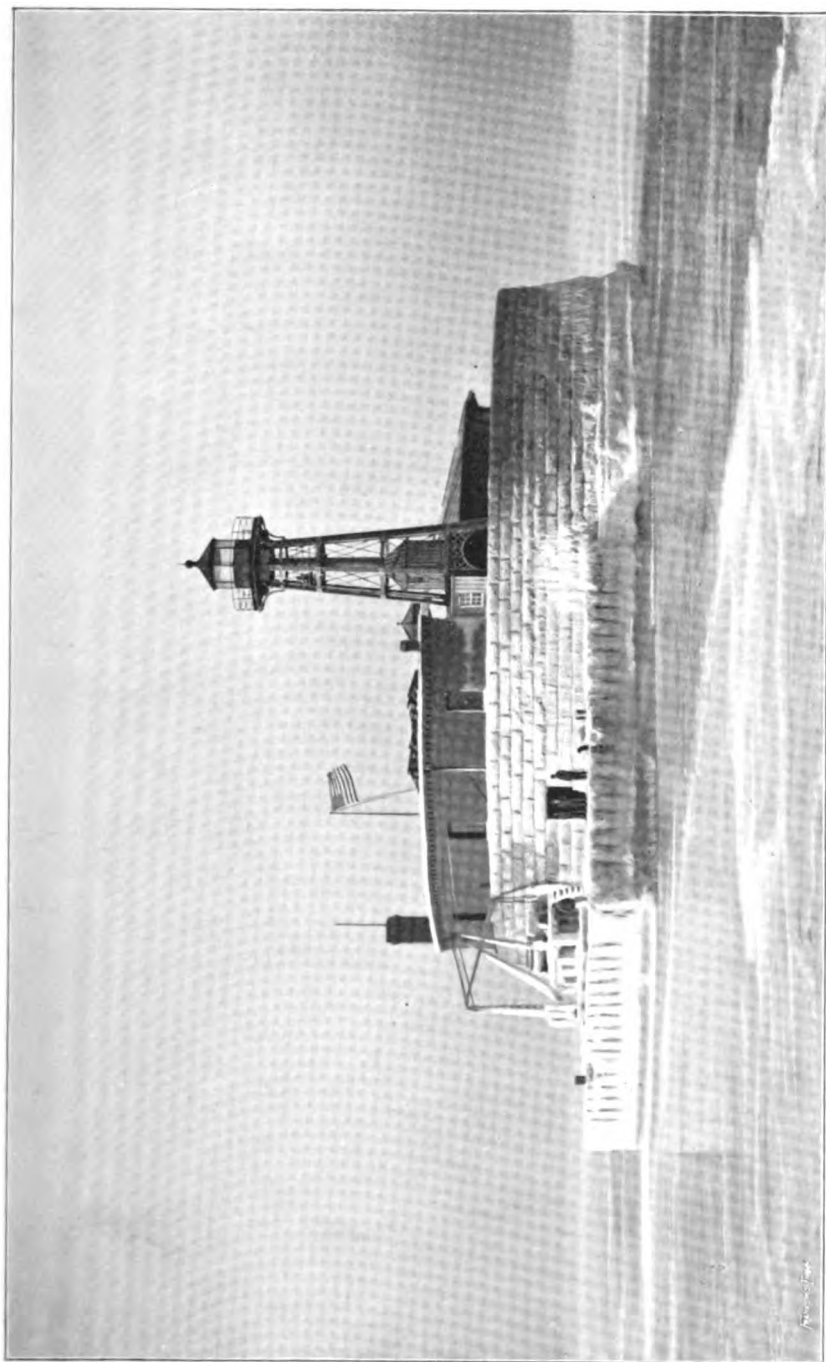
TABLE "B." OPERATIONS OF PUMPING STATIONS, CHICAGO, DURING 1894—CONTINUED.

	Sixty-eighth Street.	Lake View.	Washington Hts.	The City as a whole.
Anthracite Coal, tons		507,125.8	39,125.8	18,169,183.8
Bituminous Coal, tons		6,973,188.8	558,188.8	45,149,188.8
Fuel Oil, gallons				1,909,968
Price of Anthracite Coal, per ton		\$5.75	\$5.84	\$5.52
Price of Bituminous Coal, per ton		3.42	3.47	3.01
Price of Fuel Oil, per 100 gallons				1.49
Cost of Anthracite Coal				
Cost of Bituminous Coal				
Cost of Fuel Oil				
Total Cost of Fuel				
Salaries				
Cost of Oil, Stores and Lighting				
Repairs to Buildings, Pumps, Engines and Boilers				
Total Expense of Operation and Maintenance				
All other Expenses combined				
Grand Total of Expenses				
Total Gallons Pumped during the year				
*Per Cent of Pumpage of City as a whole				
Greatest Amount Pumped in one day, gallons				
Least Amount Pumped in one day, gallons				
Average Pumped per day, gallons				
Average Head against Pumps, in feet				
Cost of Fuel Pumping 1,000,000 gallons, one foot high				
Total Cost of Pumping 1,000,000 gallons, one foot high				

*Norwood Park Station not included.

TABLE "A." MONTHLY PUMPAGE IN GALLONS, 1894.

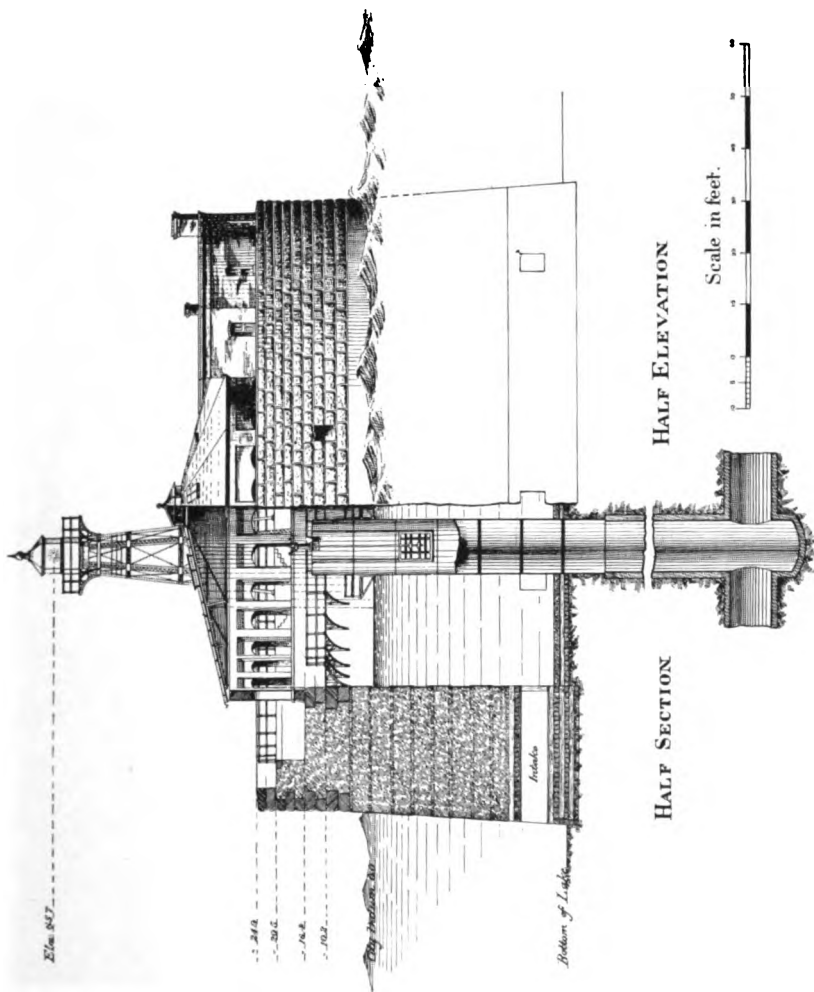
MONTH.	North Pumping Works.	West Pumping Works.	14th Street Pumping Works.	Central Pumping Works.	66th Street Pumping Works.	Lake View Pumping Works.	Washington Heights Pumping Works.	The City as a Whole.
January	1,841,323,540	1,761,512,860	1,834,399,503	598,668,310	1,105,985,708	403,980,000	11,545,120	7,117,335,100
February	1,863,004,305	1,559,707,580	1,262,232,258	447,423,245	1,035,139,868	450,995,104	10,680,920	6,629,183,280
March	1,894,856,110	1,682,134,480	1,360,820,914	504,361,351	1,100,444,194	508,138,968	11,643,500	6,987,404,517
April	1,527,349,090	1,585,471,620	1,321,077,849	857,652,896	861,231,615	483,768,234	10,825,480	6,647,376,784
May	1,691,941,975	1,521,459,300	1,352,414,426	980,187,022	986,185,435	532,820,610	11,687,820	7,076,696,088
June	1,852,608,400	1,588,698,040	1,362,717,905	930,336,723	1,069,736,729	668,583,125	11,591,260	7,484,272,182
July	1,959,588,100	1,671,966,720	1,467,820,338	1,002,200,050	1,207,376,888	750,962,710	12,822,340	8,072,737,596
August	1,911,177,865	1,922,391,680	1,432,174,220	997,373,540	1,242,795,899	708,791,606	12,656,440	8,222,361,270
September	1,770,398,510	1,775,732,260	1,288,548,191	958,995,788	1,076,482,244	600,452,898	11,616,610	7,477,326,531
October	1,892,618,650	1,509,652,440	1,424,631,114	1,003,350,060	1,052,509,782	568,254,913	10,131,980	7,451,168,939
November	1,689,719,845	1,874,758,380	1,221,385,641	976,092,899	1,012,457,471	545,419,982	8,498,320	6,828,332,028
December	1,884,426,360	1,322,679,020	1,229,542,226	1,001,833,601	1,098,291,465	581,134,282	8,766,080	7,066,173,034
Totals	21,699,012,770	19,276,164,880	16,052,784,684	10,257,974,975	12,788,587,308	6,363,273,432	132,470,900	87,060,267,349
Total pumpage Norwood Park Station.....								13,676,000
Grand total City as a whole.....								87,073,943,349

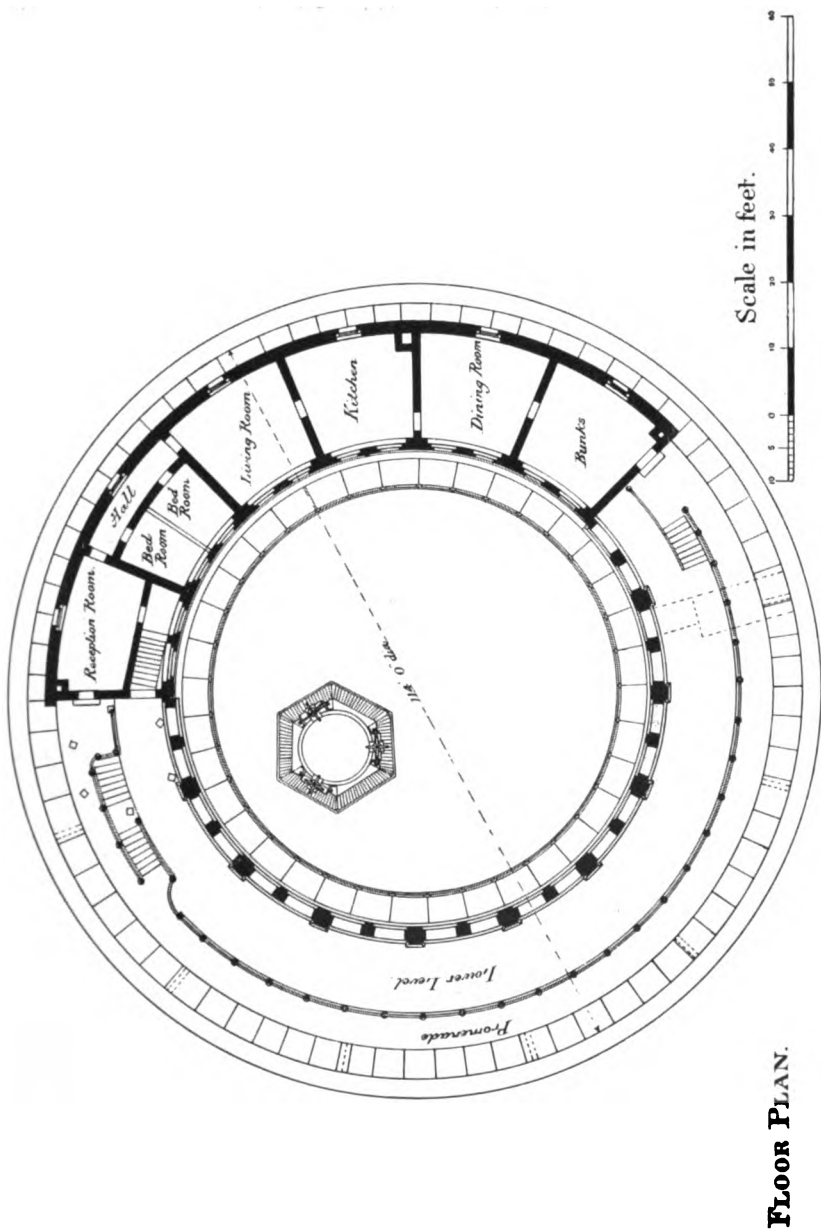


CHICAGO WATER SUPPLY SYSTEM—FOUR-MILE CRIB.

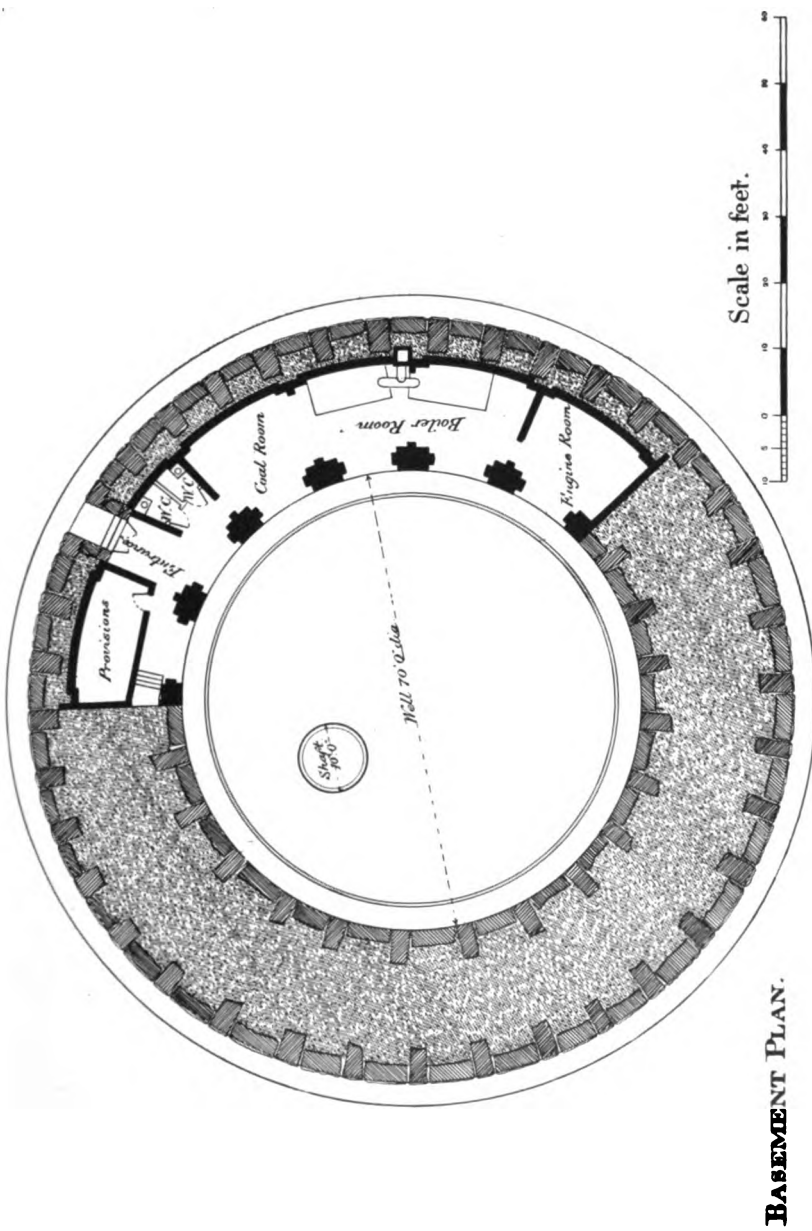
COMMENCED 1887.

COMPLETED 1894.





CHICAGO WATER SUPPLY SYSTEM — FOUR-MILE CRIB.



CHICAGO WATER SUPPLY SYSTEM — FOUR-MILE CRIB.

TWO-MILE CRIB.

The protection breakwater around this crib, which was damaged by storm of May 18, was repaired, the ports thoroughly examined by a diver and placed in good order. A new skylight of American wire glass was put in and the crib otherwise put in first-class condition.

Captain James Donegan is Crib Keeper.

FOUR-MILE CRIB.

The superstructure of this crib, including dwelling, basement, parapet wall, iron roof over well and lighthouse has been completed during the year. The crib has been painted, furnished with boilers and engine, and otherwise finished in a very satisfactory manner.

The crib as finished presents a very fine appearance, and the construction of the crib is such that it is perfectly safe in any storm and presents few or no difficulties in way of ice blockades. The landing crib, which was destroyed by the storms of February 12th and May 18th, has been replaced by a larger and more substantial one.

Captain Charles Johnson is in charge of this crib.

SIXTY-EIGHTH STREET CRIB.

The outer Sixty-eighth street crib has been fixed temporarily to accommodate the Crib Keeper and a few men. An engine and boiler has been placed on the crib.

Joseph Cosgrove is in charge of the crib.

LAKE VIEW CRIB.

The inner Lake View crib, from which the construction of the tunnel eastward is going on, is also used as a temporary intake.

P. Sullivan takes care of the intake.

NORTH PUMPING STATION.

MR. ROBERT NICHOLSON, Engineer in Charge.

The condition of the station is about the same as last year. The "53" and "57" engines are practically useless, and the three marine boilers mentioned in former reports as in bad condition, are in no way improved, and should be replaced by new ones. The remaining engines and boilers are in good condition. It was necessary to shut down the "72" engine for a time in March and April for repairs, and again in November on account of a loose beam center.

The interior of the building needs painting, and the roof over the Gaskill engines is badly in need of repairs.

WEST PUMPING STATION.

MR. W. D. GREEN, Engineer in Charge.

Engine No. 51 was shut down from October 16th to the end of the year on account of the main crank shaft breaking, but notwithstanding this stoppage, the station has slightly increased its total pumpage.

Repairs have been made during the year as follows: The six old boilers of the North Battery are being replaced by new ones, and the mud drums of the South Battery have been repaired. All the boilers have been fitted with Hawley furnaces. A new heater has been put in, connecting the two batteries of boilers with each other and making it possible to use either pair of engines from either the north or the south battery of boilers. Receiving tanks into which all condensation water is led and the water from the hot wells pumped, and from which the feed water for the boilers is taken, were put in at the time of making the other repairs. A dynamo for lighting the station was also put in.

FOURTEENTH STREET PUMPING STATION.

MR. D. W. LANAGAN, Engineer in Charge.

During the year the steam pipes of the station have been thoroughly overhauled; a new header and valves, steam traps, drip pipes and receiving tank were put in. The bottom sheets of all the boilers, which, on account of the rivet seam over the fire, have been constantly needing repairs, were taken out and replaced by new ones extending in one sheet the full length of the boiler.

The boilers were provided with two feed water purifiers, which have been of great benefit in preventing the formation of scale in the boilers.

The engines and boilers are now in good condition.

CENTRAL PUMPING STATION.

MR. PHILIP PETRIE, Engineer in Charge.

The east engine was shut down for repairs from January 7th to March 4th. With this exception both engines were run continuously throughout the year. The repairs made during the year were as follows: The bottom sheets of boilers in the east battery were taken out and replaced by new sheets running the full length of the boiler, and the Murphy furnaces were renewed. The same work is now being done on the west battery.

The east engine was thoroughly overhauled and repaired. A new header and steam connections, traps and drip pipes were put in,

and a receiving tank to take all condensation and the water from the hot wells. When the work on the west battery of boilers, now being done, is completed the station will be in first-class condition.

The west ten feet of the boiler and engine house, the completion of which had been delayed by litigation concerning the west lot line, was completed during the year.

SIXTY-EIGHTH STREET PUMPING STATION.

MR. ROBERT HAWKINS, Engineer in Charge.

The complicated pipe system into which the pumps at this station discharged, was taken up early in the year and a more simple and direct system substituted.

The machinery and boilers in regular use are in good condition.

On two occasions the wooden roof over the engines and boilers at the north end of the station has been set on fire by the electric wires, and only for the prompt action of the Engineer and employes the building with its valuable contents might have been destroyed. This should be prevented in future by extending the fire-proof roof of the south half over the whole building.

LAKE VIEW PUMPING STATION.

MR. JAMES R. PYNE, Engineer in Charge.

The pumpage of this station has been increased about 50 per cent. over 1893, due mainly to the large demand since the extension of the Montrose boulevard mains and the branch south on Crawford avenue.

The repairs made during the year are as follows: The frame of the west Gaskill, which was found to be cracked, was repaired and the bearings were trued up. The work of making necessary changes in the steam pipe system in the boiler room was begun but not completed at the end of the year. The work contemplated and partially completed is as follows: The 8-inch header over the boilers to be replaced by a 12-inch, with new valves, steam traps, drip pipes, receiving tank and two boiler feed pumps.

The breeching on the four west boilers, which was formerly on top of the front end, was changed during the year to the back end, so that the hot gases are now carried over and in contact with the tops of the boilers.

The Worthington engine, which has not been overhauled for several years is badly in need of repairs, and should be provided with a larger condenser and air pump. When this work is done and the repairs already begun are completed, the station will be in good condition.

WASHINGTON HEIGHTS PUMPING STATION.

MR. H. G. KOCH, Engineer in Charge.

The supply of water at this station has been very inadequate during the year, and it is necessary to increase it, either by sinking another well, or furnishing water from some other source. The repairs made during the year are as follows: A new boiler and smokestack has been put in, in place of the old ones in the station at the time of annexation. Steam-heating apparatus has been added, and the exhaust pipes of all the engines have been connected with the feed-water heater. A new engine has been provided for the well pump, and the old one thoroughly repaired. The water tank has been repaired and painted.

NORWOOD PARK PUMPING STATION.

MR. HENRY MILLER, Engineer in Charge.

The supply for this station furnished by the artesian well is entirely inadequate, and some means should be adopted for increasing it. The total quantity of water pumped during the year was 13,676,000 gallons, at a cost for salaries, coal and supplies of \$1,448.77.

The repairs at the different pumping stations have been under the direction of Mr. J. W. Brown.

SHOPS.

The shops adjacent to the North Pumping Station have turned out the following new pipe line fixtures during the year, besides making the usual repairs for the various branches of the water supply system, and doing occasional repair work for some of the other City departments:

213 hydrants, single nozzle, 2½ inch, costing.....	\$ 3,699 59
917 " double " 2½ " "	28,175 66
5 " " 4 " "	162 32
127 stop valves, 4 inch, costing.....	1,687 77
452 " " 6 " "	7,549 68
155 " " 8 " "	3,946 43
30 " " 12 " "	1,212 74
12 " " 16 " "	1,021 87
4 " " 24 " "	583 48

Total cost for labor and material, new fixtures....\$48,039 54

Expenditures on account of repairs for water supply
system and other departments above mentioned..\$28,469 64

CONSTRUCTION.

TUNNELS.

LAKE VIEW TUNNEL.

A history of the construction of this tunnel appears in previous annual reports.

At the close of the year 1893 a temporary crib at the intermediate crib had just been completed, a shaft sunk and 50 lineal feet of tunnel built eastward from the shaft. This tunnel east of the intermediate crib is entirely in rock, and progress, therefore, necessarily slow. The construction of the tunnel had progressed without interruption during the year, 2,155 lineal feet of tunnel having been constructed.

The average per day is about six lineal feet. No attempt has been made during the year to reclaim the 1,250 feet of tunnel running west from the outer crib, and which part is filled with water.

Mr. H. C. Leach was succeeded by Mr. R. B. Wilcox as Engineer in local charge.

OUTER LAKE VIEW CRIB.

The protection breakwater that was placed around this crib in the latter part of 1893 was nearly destroyed by the severe storm of February 12, 1894. This breakwater has, however, been completed during the year, and affords a greatly needed protection to the crib.

Messrs. Shailer & Schniglau were the contractors for this work.

Ed. Slattery is Light-Keeper at the outer crib.

SIXTY-EIGHTH STREET TUNNEL.

This tunnel, the completion of which locates an intake two miles from the shore, in addition to the one-mile intake, was finished during the year. That part of the tunnel remaining to be done at the beginning of the year, was constructed without any serious difficulties. The meetings of the different headings were almost perfect, both as to alignment and as to levels, and reflects credit on the Engineer attending to this work. After the connections had been

made, the tunnel was cleaned out, a telephone cable placed in the tunnel connecting the outer crib with the Sixty-eighth Pumping Station. Water was then let into the tunnel in June.

The number of feet of tunnel constructed during the year is as follows :

By LYDON & DREWS, Contractors, by pneumatic process :

1,217 lineal feet of 7-foot tunnel.

69 lineal feet of 5-foot tunnel.

By SHAILER & SCHNIGLAU, Contractors for the shore end :

388 lineal feet of 5-foot tunnel.

The difficulties presenting themselves and overcome in building this tunnel have been many and serious, and few lake tunnels, if any, under the circumstances, have been brought to such speedy and successful a completion.

A most gratifying point is that no lives have been lost, and it must be said in justice to the contractors, Messrs. Lydon & Drews, who are both experienced tunnel men, that they have left nothing undone that could be done to prosecute the work and protect the lives of the men. Most of the work has been done by the pneumatic process.

SURVEYS.

A careful survey along the lines of the proposed new tunnels, which are to supply the western and northwestern parts of the City with water, was commenced late in the year 1894, and at the same time extensive borings are being made along the proposed tunnel routes.

The records of these surveys will be worked up as quickly as possible, and plans, specifications and other details necessary for asking bids for the construction of the work, will then be presented to you.

Respectfully,

JOHN ERICSON,

Assistant City Engineer.

MAIN SEWERAGE WORKS.

CANAL PUMPING STATION.

MR. J. R. BRUNNICK, Engineer in Charge.

The eight centrifugal pumps at this station have pumped from the Chicago River into the Illinois and Michigan Canal during the year 25,859,243,780 cubic feet of water, or an average per minute of 49,200 cubic feet. The average head pumped against was 5.2 feet.

Repairs are needed to the engines and pumps and to the corrugated iron roofs of the buildings. The woodwork of the station also needs painting.

FULLERTON AVENUE PUMPING STATION.

MR. JAMES MCGOWAN, Engineer in Charge.

This station has pumped into the North Branch of the Chicago River during the year 3,203,256,477 cubic feet of water for the purpose of purifying the stream by increasing the flow towards the main river, the average discharge from the pumps being 13,512 cubic feet per minute.

WATER-PIPE EXTENSION.

Mr. A. J. Kowalski is Superintendent of Water-Pipe Extension, and James Wallace, Assistant Superintendent.

During the year 13,025 feet of pipe, from three to thirty inches in diameter, was either taken up or abandoned, and the smaller pipe was replaced by larger sized pipe.

About eleven miles of pipe, costing \$99,283.26, has been laid at the expense of private parties. Of this amount \$27,965.79 was advanced by contractors for street improvements, who have been required to advance the money to cover the cost of laying water pipe where necessary before going on with the street improvements. The City agrees to refund all money advanced for water pipe, when the annual revenue from it equals ten cents per foot frontage. During the year 166,400 feet of different-sized pipes have been laid under contract by Special Assessment.

Twelve hundred and ten composition, and eleven hundred and sixty-eight brick hydrant and stop-valve basins were built by City men. The repairs to hydrant and valve basins, amounting to nearly as much as the new work, was done by City men.

The total number of valves placed is 578, and total number in use 11,577. Total number of hydrants placed is 860, total number in use 15,771.

One fire cistern was built during the year, located at Bloomingdale road and Ashland avenue.

Water mains have been taken up in the following-named streets and replaced by others of larger size :

Bishop street, from Forty-seventh street to Forty-ninth street.

Cass street, from Delaware place to Ontario street.

Cass street, from 130 feet south of Ohio street to Michigan street.

Dreyer street, from Forty-seventh street to Forty-eighth street.

LaSalle avenue, from Division street to Chicago avenue.

Water mains have been abandoned in the following streets, and larger mains put in :

Indiana street, from Clark street to St. Clair street.

Lake street, from Market street to LaSalle street.

Sixty-eighth street, from Yates avenue 650 feet eastward.

The following named streets were graded down by the Street Department, which rendered it necessary to lower the water mains below the frost line :

Aberdeen street, from 200 feet south of Fifty-first street to Fifty-fourth street.

Armour avenue, from 200 feet south of Fifty-fifth street to Fifty-eighth street.

Cottage Grove avenue, from Sixty-fourth street to 150 feet north of Sixty-seventh street.

Carpenter street, from 200 feet south of Fifty-first street to Fifty-fourth street.

Dearborn street, from 200 feet south of Fifty-fifth street 600 feet southward.

Forty-second street, from Cottage Grove avenue to dead end west of Drexel boulevard.

Halsted street, from Seventieth street to Seventy-ninth street.

Hall street, from Diversey avenue 555 feet northward.

Jeffery avenue, from Seventy-first street to Seventy-second street.

Langley avenue, from 300 feet south of Sixty-seventh street 857 feet southward.

Marianna street, from Diversey place to M. & St. P. Ry.

May street, from 300 feet south of Fifty-first street to Fifty-fourth street.

Rhodes avenue, from Sixty-seventh street to Sixty-eighth street.

Rhodes avenue, from Sixty-eighth street to South Chicago avenue.

Rhodes avenue, from Seventieth street to Seventy-first street.

St. Lawrence avenue, from Seventieth street to Seventy-first street.

School street, from 200 feet east of Herndon street to Ashland avenue.

Twenty-third street, from Kedzie avenue 931 feet westward.

Vernon avenue, from Sixty-ninth street to Seventy-second street.

Vincennes avenue, from Sixty-seventh street to Chicago avenue.

Vincennes avenue, from Clement avenue to Seventy-first street.

WORK IN DETAIL.

The following tables show in detail the work of water-pipe extension:

NORTH DIVISION.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Cass.....	Michigan.....	Ohio.....	712	6
Cass.....	Ontario.....	Chicago avenue.....	1,146	6
Cass.....	Delaware place.....	Chicago avenue.....	856	6
Chestnut.....	Crossing.....	Cass.....	66	6
Chestnut.....	Crossing.....	La Salle avenue.....	82	6
Dayton.....	Eastman.....	Northward.....	155	6
Elm.....	Crossing.....	La Salle avenue.....	83	6
Erie.....	Crossing.....	Cass.....	44	6
Huron.....	Crossing.....	Cass.....	35	6
Indiana.....	State.....	St. Clair.....	1,430	8
Indiana.....	St. Clair.....	Eastward.....	819	6
Indiana.....	Clark.....	State.....	650	8
La Salle avenue.....	Division.....	Chicago avenue.....	2,650	8
Pearson.....	Crossing.....	Cass.....	66	6
Seneca.....	Crossing.....	Indiana.....	50	6
Seneca.....	Crossing.....	Illinois.....	32	6
Superior.....	Crossing.....	Cass.....	90	6
†Ward.....	Webster.....	Clybourn.....	625	6
Total.....			9,541	
Add Branch Pipe for Hydrants.....			24	4
Add Branch Pipe for Hydrants.....			212	6
Total feet laid in North Division.....			9,777	

† Laid by Special Assessment.

SOUTH DIVISION.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Alley, first E. of Clark	Twelfth	Northward	272	4
Alley, first E. of Western av	Crossing	Thirty-fifty court.	70	4
Alley, first E. of Western av	Crossing	Thirty-sixth	28	4
Bross avenue	Oakley avenue	McAlpine	397	6
Calumet avenue	300 ft. N. of Thirty-seventh	Northward	261	6
*Champlain avenue	Thirty-seventh	Northward	240	6
Indiana avenue	300 ft. N. of Thirtieth	Northward	133	4
James avenue	330 ft. E. Laurel avenue	Eastward	160	6
Joseph	Homan avenue	Eastward	300	6
Kedzie avenue	Williams	Thirty-eight	330	8
*Lake	La Salle	Wabash avenue	1,593	16
*Lake	Market	La Salle	1,184	12
Legget	Crossing	Thirty-sixth	70	6
Musprat	965 ft. S. of Springer avenue	Southward	31	6
McAlpine	Bross avenue	Southward	163	6
Oakley avenue	Bross avenue	Thirty-third	360	8
Pitney court	Archer avenue	Northward	348	6
Pitney court	Crossing	Archer avenue	14	6
Thirty-second	Auburn avenue	Westward	162	6
Thirty-third	Robey	Lundy Lane	334	6
Thirty-third court	Paulina	Eastward	393	6
*Thirty-sixth	Albany avenue	Westward	655	6
Ward	Crossing	Thirty-fifth	45	6
Williams	Kedzie avenue	Westward	333	6
Total			5,876	
Add Branch Pipe for Hydrants			84	4
Add Branch Pipe for Hydrants			132	6
Total feet laid in South Division			6,092	

* Laid by deposit.

WEST DIVISION.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Alley, 1st W. of Ashland bld.	Adams	Mathew	226	4
*Alley, 1st W. of Fulton.	Columbia place	Eastward	180	4
Alley, 1st W. of Halsted.	Twenty-second	Johns place	332	4
†Adams	Forty-first	Forty-third	1,380	6
Adams	175 ft. W. of Forty-third	Westward	50	6
†Adams	230 ft. W. of Forty-third	Forty-sixth	1,757	6
†Augusta	California avenue	Eastward	126	8
Augusta	Campbell avenue	Rockwell	686	8
Augusta	Fairfield avenue	Eastward	167	8
*Avers avenue	Indiana	Northward	335	6
Avers avenue	Ohio	Southward	290	6
†Avers avenue	Fourteenth	300 ft. S. of Fifteenth	990	6
Avers avenue	204 ft. S. of Nineteenth	Northward	204	6
*Avers avenue	Twenty-second	Southward	652	6
Avers avenue	Crossing	Twenty-sixth	68	6
Bonney avenue	Sixteenth	Crossing	64	6
Bonney avenue	Sixteenth	Southward	150	6
Central Park bld.	Crossing	Chicago avenue	99	8
Central Park bld.	Mead	Sheridan avenue	332	6
†Central Park bld	Monticello avenue	Central Park avenue	354	6
Central Park avenue	Fulton	Central Park bld	1,240	6
Charlotte	Crawford avenue	Forty-first	660	6
Charlotte	Forty-first	Forty-second	666	6
Charlotte	Crossing	Forty-second	68	6
*Chicago avenue	Monticello avenue	Kedzie avenue	2,975	12
Chicago avenue	Fiftieth	Robinson avenue	1,324	12
†Clifton Park avenue	Twenty-sixth	Twenty-eighth	1,285	6
†Clifton Park avenue	Douglas Park bld	Ogden avenue	2,797	6
Colorado avenue	Crawford avenue	Eastward	300	8
Congress	Forty-third	Westward	318	6
†Cornelia	Campbell avenue	Rockwell	666	6
Cortland	Crossing	Kedzie avenue	82	8
†Crawford avenue	Grand avenue	Thorndyke avenue	537	8
Crawford avenue	Randolph	Washington bld	325	8
Crawford avenue	Crossing	Twenty-sixth	84	8
Crawford avenue	Crossing	Sixteenth	27	8
Crawford avenue	North avenue	Prince avenue	582	6
Cross	Crossing	Van Buren	60	6
†Douglas Pk bld E. & N. side	175 ft. S. of Harrison	Lawndale avenue	4,118	6
†Douglas Pk bld N. side	375 ft. E. of St. Louis avenue	St. Louis avenue	375	6
†Douglas Pk bld N. side	Sawyer avenue	Turner avenue	645	6
†Douglas Pk bld N. side	Sawyer avenue	Albany avenue	1,012	6
†Douglas Pk bld N. side	St. Louis avenue	Lawndale avenue	1,325	6
†Douglas Pk bld S. side	Albany avenue	Troy	331	6
†Douglas Pk bld S. side	Lawndale avenue	Turner avenue	2,346	6
†Douglas Pk bld S. side	Turner avenue	Sawyer avenue	645	6
†Douglas Pk bld W. & S. side	Twelfth	Lawndale avenue	2,342	6
†Douglas Pk bld W. side	Twelfth	Colorado avenue	2,958	6
Drake avenue	Crossing	Chicago avenue	83	6
Drake avenue	Crossing	Ohio	30	6
†Drummond	Augusta	Linwood place	388	6
Drummond	Cortez	Southward	270	6
†Eighteenth	California avenue	Eastward	528	6
Eighteenth	Crossing	Bonney avenue	65	8
Eighteenth	Crossing	Hamlin avenue	76	8

WEST DIVISION—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Ellias court	Crossing	Archer avenue	70	6
Fillmore	Crossing	Central Park avenue	76	6
Forquer	Crossing	Central Park avenue	46	8
†Fourteenth, W	Douglas Park bld	Crawford avenue	1,388	6
†Fourteenth	Forty-third	Forty-fourth	852	8
Francisco avenue	Crossing	Cortez	60	8
Francisco	Polk	Harvard	265	6
Fulton	Forty-seventh	Eastward	456	6
George	Carpenter	Westward	228	6
†Grenshaw	Homan avenue	Spaulding avenue	629	6
Grenshaw	Crossing	Central Park avenue	70	6
Halsted	Lumber	River	202	4
†Hamlin avenue	Douglas Park bld	Sixteenth	1,159	6
Hamlin avenue	Crossing	Twenty-sixth	24	8
Hamlin avenue	150 ft. S. of Sixteenth	45 ft. N. of Sixteenth	195	6
Hamlin avenue	Worth avenue	Prince	568	8
*Hamlin avenue	Warren avenue	Madison	331	6
*Hamlin avenue	Washington bld	Warren avenue	331	6
*Hamlin avenue	Lake	Park avenue	390	6
*Hamlin avenue	Park avenue	Washington avenue	332	6
Hamlin avenue	Crossing	Twenty-sixth	68	6
Harding avenue	Grand avenue	Thorndyke	839	6
Harding avenue	Lake	Southward	230	6
*Harding avenue	Lake	Northward	875	6
Harding avenue	Crossing	Lake	53	6
Harrison	Crossing	Forty-first	60	8
Harrison	Forty-fourth	Westward	335	8
Harrison	Forty-second	Forty-third	639	8
Homan avenue	Carroll avenue	Kinzie	200	8
†Homan avenue	Central Park bld	Kinzie	523	8
Homan avenue	Crossing	Chicago avenue	100	8
*Homan avenue	Fifteenth	Douglas Park bld	385	8
Homan avenue	Ogden avenue	Eighteenth	320	8
Homan avenue	Twenty-second	Northward	335	8
Homan avenue	Twenty-second	Southward	248	8
†Homan avenue	Twenty-fourth	Twenty-fifth	731	8
Homan avenue	Crossing	Kinzie	120	8
Homan avenue	Crossing	Ohio	90	8
*Huron	Forty-ninth	Fiftieth	678	6
Huron	Crossing	Fiftieth	48	6
Huron	Kedzie avenue	Mead	300	6
*Humboldt avenue	Campbell avenue	Rockwell	707	6
†Jackson	Forty-third	Forty-sixth	1,965	8
†Jan Huss avenue	Fourteenth	Sixteenth	1,308	6
*Lake	Albany avenue	Kedzie avenue	666	6
*Lake	Crawford avenue	Forty-first	660	12
*Lake	Homan avenue	Crawford avenue	3,960	12
*Lake	Kedzie avenue	Homan avenue	1,313	12
Lawndale avenue	Colorado avenue	Harrison	420	6
Lawndale avenue	Crossing	Harrison	150	6
Lawndale avenue	Crossing	Ohio	56	6
Leavitt	Thirty-seventh	Northward	313	8
Le Moyne	Crossing	Leavitt	120	6
†Lexington	Douglas Park bld	Springfield avenue	673	6
Lull place	Blucher	Northward	114	6

WEST DIVISION—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Lumber	Crossing	Halsted	45	4
Luther	Rockwell	Washtenaw avenue	650	6
Lydia	Chicago avenue	Augusta	1,280	6
*Martin	Rockwell	Westward	349	6
Marvin	Park avenue	Randolph	356	6
Mead	Huron	Northward	315	6
Mead	Crossing	Chicago avenue	100	6
Mead	Crossing	Ohio	80	6
Medora	Harrison	Southward	545	6
*Millard avenue	Twelfth	Douglas Park bld	834	6
*Millard avenue	Sixteenth	Ogden avenue	1,724	6
Monticello avenue	Crossing	Chicago avenue	60	8
Monticello avenue	Crossing	Ohio	20	8
Moore	Douglas Park bld	Eastward	146	4
†Moore	Western avenue	Washtenaw avenue	1,695	8
Nineteenth	Crossing	Bonney avenue	71	6
Nineteenth	Crossing	Hamlin avenue	72	6
*Nineteenth	Douglas Park bld	Westward	287	6
Ohio	Lawndale avenue	Avers avenue	936	12
Ohio	Mead	Homan avenue	1,020	12
Ohio	Springfield avenue	Harding avenue	312	12
Ohio	St. Louis avenue	Drake avenue	312	12
Ogden avenue	Crossing	Homan avenue	72	6
*Ogden avenue	Millard avenue	Lawndale avenue	375	6
Ogden avenue	Spaulding avenue	Turner avenue	348	6
Ogden avenue	St. Louis avenue	Trumbull avenue	356	6
†Palatine	St. Louis avenue	Eastward	288	6
Parmelee	Washtenaw avenue	Eastward	652	6
Park avenue	Forty-fifth	Westward	100	6
Park avenue	Kedzie avenue	Eastward	269	6
Pleasant place	Crossing	Washington bld	40	6
Phinney avenue	Crossing	Chicago avenue	100	6
Phinney avenue	Crossing	Ohio	90	6
†Polk, W.	Douglas Park bld	Crawford avenue	1,815	6
†Rice place	Twenty-second	Moore	615	6
†Rockwell	Ogden avenue	Southward	370	6
*Ruble	Twenty-first	Northward	108	4
Sawyer avenue	Twenty-seventh	Northward	193	6
St. Louis avenue	Crossing	Chicago avenue	82	8
†St. Louis avenue	Twenty-sixth	Twenty-eighth	1,298	8
Seymour	Grand avenue	Southward	150	8
Scott	Spaulding avenue	Westward	200	6
Sheridan avenue	Central Park bld	Ohio	540	6
Sheridan avenue	Crossing	Chicago avenue	100	6
Sheridan avenue	Crossing	Ohio	85	6
Sheridan avenue	Crossing	Weage avenue	10	6
Sixteenth	Crossing	Bonney avenue	72	8
†Sixteenth	Crawford avenue	Hamlin avenue	1,359	8
Sixteenth	Kedzie avenue	Eastward	225	8
†Sixteenth	Kedzie avenue	Sawyer avenue	271	8
†Sixteenth	Sawyer avenue	Spaulding avenue	271	8
†Sixteenth	Spaulding avenue	Turner avenue	268	8
†Spaulding avenue	Thirteenth	Fifteenth	873	6
Spaulding avenue	Scott	Northward	125	6
*Springfield avenue	Ohio	Huron	556	8

WEST DIVISION—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Springfield avenue.....	Crossing	Twenty-sixth.....	70	6
Superior	Fiftieth	Fifty-first.....	630	6
Superior	Crossing	Fifty-first.....	86	6
Superior	Forty-seventh.....	Westward	184	6
Superior	Forty-eighth.....	Eastward	260	6
Superior	Forty-eighth.....	Westward	320	6
Swift	Crossing	Kedzie avenue	75	6
Taylor	Crossing	Central Park avenue..	46	6
Thirteenth.....	Crossing	Millard avenue.....	70	6
Thirty-first	Fortieth place.....	Westward	305	8
*Thirty-first	Kedzie avenue	Westward	620	8
Thirty-first	Crossing	Kedzie avenue	70	8
Thirty-first	Forty-first, W.....	Forty-first place	330	8
Thirty-fifth	250 ft. W. of Oakley av.	Westward	75	4
†Troy	Crossing	Central Park bld	240	6
†Troy	Central Park bld	Kinzie	523	6
†Troy	Ohio	Central Park bld	593	6
Trumbull avenue	Crossing	Ogden avenue.....	24	6
Trumbull avenue	Crossing	Ohio	66	6
Truro	Kedzie avenue	Albany avenue	605	6
Turner avenue.....	Crossing	Ogden avenue.....	33	6
†Twelfth	Forty-second.....	Forty-third place	1,047	12
Twenty-first	Douglas Park bld	Eastward	228	6
Twenty-third	Homan avenue	Trumbull avenue.....	324	6
Twenty-third	Kedzie avenue	Westward	98	9
Twenty-third	Spaulding avenue	Turner avenue	330	6
Twenty-third	Spaulding avenue	Sawyer avenue	332	6
Twenty-third	St. Louis avenue	Clifton Park avenue	272	6
Twenty-third	Crossing	Troy	70	6
Twenty-fourth	Crossing	Troy	70	6
Twenty-fifth	Troy	Kedzie avenue	291	6
Twenty-sixth	Hamlin avenue.....	Crawford avenue.....	1,366	16
Twenty-seventh	Crossing	Kedzie avenue	75	6
Twenty-eighth	Forty-second, W.....	Forty-second place.....	330	8
Twenty-ninth	Forty-second, W.....	Forty-second place.....	392	6
Twenty-ninth	Crossing	Forty-first place	27	6
*Van Buren.....	Homan avenue	Trumbull avenue.....	245	6
*Van Buren.....	Trumbull avenue.....	Central Park bld	964	6
*Washburne avenue	Lincoln	Robey.....	636	6
Washtenaw avenue	Polk	Northward.....	148	4
Weage avenue	Sheridan avenue	Eastward	440	8
West Fiftieth	Chicago avenue	Southward	60	6
West Fiftieth	Huron	Chicago avenue	628	6
West Fiftieth	Crossing	Washington bld	106	8
West Fifty-first.....	Crossing	Washington bld	106	6
West Fifty-first.....	Chicago avenue	Southward.....	536	6
West Fifty-second	Chicago avenue	Huron	1,000	6
West Forty-first	Congress	Harrison	335	6
West Forty-first	Thirtieth	Thirty-first	635	6
West Forty-first	Thirty-first	Thirty-second	636	6
West Forty-first place	Twenty-ninth	Thirty-first	1,349	6
West Forty-second.....	Crossing	Charlotte, 88 ft. S.....	158	6
West Forty-second.....	Twenty-ninth	Northward	400	6
West Forty-second	Crossing	Washington bld	100	8
West Forty-second place	Twenty-eighth	Twenty-ninth	654	6

WEST DIVISION—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
†West Forty-second place..	Twelfth	Fourteenth	1,363	6
†West Forty-third	Twelfth	Fourteenth	1,363	6
West Forty-third	Crossing	Washington bld.	100	6
†West Forty-third place...	Twelfth	Fourteenth	1,363	6
West Forty-fourth	Crossing	Washington bld.	100	6
West Forty-fourth	Crossing	Jackson	72	8
†West Forty-fourth	Fourteenth	Sixteenth	1,369	8
West Forty-fifth	Crossing	Washington bld.	100	8
West Forty-sixth	Crossing	Washington bld.	100	6
West Forty-seventh	Crossing	Washington bld.	100	6
West Forty-ninth	Crossing	Washington bld.	106	6
Whitehouse	Kedzie avenue	Eastward	74	6
Total			115,081	
Add Branch Pipe for Hydrants			48	4
Add Branch Pipe for Hydrants			2,820	6
Total feet laid in West Division			117,949	

* Laid by Deposit.

† Laid by Special Assessment.

HYDE PARK DISTRICT.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Alley 1st W. of Drexel bld	Forty-ninth	Northward	220	4
*Alley 1st W. of Grand bld	Forty-seventh	Southward	490	4
†Bissell avenue	Seventy-fourth	Seventy-third	642	6
*Champlain avenue	Sixty-sixth	Northward	421	6
Champlain avenue	Sixty-sixth	Sixty-seventh	730	6
Champlain avenue	Seventy-second	Seventy-third	666	6
Cheltenham place	Coles avenue	Seventy-ninth	432	6
Coles avenue	Seventy-third	Northward	426	6
†Dauphin avenue	Eighty-ninth place	Eighty-seventh	1,672	8
†Dauphin avenue	Ninetieth place	Ninety-third	1,779	8
Dobson avenue	Seventy-eighth	Seventy-ninth	670	8
Dobson avenue	Seventy-sixth	355 ft. N. of Seventy-sixth	378	4
Drexel avenue	Crossing	Ninety-second	72	6
Drexel boulevard	Crossing	Forty-seventh	24	6
Drexel avenue	Seventy-seventh	Seventy-eighth	477	6
East End avenue	Eighty-second	Eighty-third	708	6
Eightieth	Crossing	Greenwood avenue	90	6
Eighty-seventh	Commercial avenue	Exchange avenue	276	6
†Eighty-seventh place	Dauphin avenue	South Park avenue	3,558	6
†Eighty-seventh	Dauphin avenue	South Park avenue	3,652	8
†Eighty-eighth place	Cottage Grove avenue	South Park avenue	2,612	6
†Eighty-eighth place	310 ft. W. of Dauphin avenue	Dauphin avenue	323	6
†Eighty-eighth	Dauphin avenue	Cottage Grove avenue	859	6
Eighty-eighth	Crossing	Houston avenue	96	6
†Eighty eighth	St. Lawrence avenue	Cottage Grove avenue	1,408	6
†Eighty-eighth	St. Lawrence avenue	South Park avenue	1,248	6
†Eighty-ninth	Vincennes avenue	Dauphin avenue	2,740	6
†Eighty-ninth place	Vincennes avenue	South Park avenue	684	6
†Eighty-ninth	Vincennes avenue	South Park avenue	610	6
Ellis avenue	Crossing	Ninety-second	72	6
Ellis avenue	Ninety-third	South Chicago avenue	644	6
Evans avenue	Seventy-second	Southward	347	6
Evans avenue	Seventy-second	Alley	424	6
†Fiftieth	Lake avenue	Washington avenue	308	6
†Fiftieth	Madison avenue	Ellis avenue	2,455	6
*Forty second	Indiana avenue	Michigan avenue	380	6
Forty-sixth	Greenwood avenue	Eastward	310	6
Forty-seventh	Drexel boulevard	Eastward	225	12
Forty-seventh	Lake avenue	Eastward	192	6
Forty-eighth	Kenwood avenue	Westward	177	6
Forty-eighth	Ellis avenue	Greenwood avenue	630	6
Forty-eighth	Vincennes avenue	Grand boulevard	626	6
Forty-eighth	Indiana avenue	Michigan avenue	355	6
Forty-ninth	Indiana avenue	Michigan avenue	340	6
Forty-ninth	Wabash avenue	Michigan avenue	346	6
Forty-ninth	Wabash avenue	State	877	6
Fiftieth	Washington avenue	Madison avenue	600	6
Fifty-sixth	Greenwood avenue	Eastward	200	6
Fifty-sixth	Wabash avenue	Westward	175	6
Greenwood avenue	Seventy-ninth	Eightieth	675	6
Greenwood avenue	Crossing	Seventy-ninth	40	8
Grand boulevard	Crossing	Forty-eighth	32	6
Harrison avenue	Crossing	Ninety-second	72	6
Houston avenue	Crossing	Ninety-sixth	85	6
†Juniata avenue	300 ft. S. of Ninety-third	Ninety-fourth	275	8

HYDE PARK DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Langley avenue	Ninety-second	Ninety-second place ..	333	6
Langley avenue	Seventy-first	Seventy-second	650	6
Langley avenue	Sixty-fourth	Sixty fifth	660	6
*Lexington avenue	Sixtieth	Sixty-first	620	6
Lyon avenue	Crossing	Ninety third	33	6
Michigan avenue	150th	107th	1,172	6
Michigan avenue	Crossing	Seventy-first	123	6
†Michigan avenue	Sixty-eighth	Seventy-first	2,025	6
McChesney avenue	Sixty-seventh	Northward	288	6
†Ninetieth place	South Park avenue	Langley avenue	2,199	6
†Ninetieth	South Park avenue	St. Lawrence avenue	1,379	6
†Ninetieth	Langley avenue	Cottage Grove avenue ..	727	6
†Ninetieth	Langley avenue	St. Lawrence avenue	600	6
†Ninety-first	South Park avenue	Dauphin avenue	3,119	8
Ninety-second court	Drexel avenue	Westward	366	6
†Ninety-second place	Cottage Grove avenue ..	St. Lawrence avenue	1,270	6
†Ninety-second	Cottage Grove avenue ..	St. Lawrence avenue	1,270	6
†Ninety-third	Cottage Grove avenue ..	St. Lawrence avenue	1,304	8
Ninety-fifth	Commercial avenue	Houston avenue	500	8
Ninety-sixth	Erie avenue	Ontario avenue	516	6
Nutt avenue	Seventy-first place	Seventy-third	1,315	6
108d	Michigan avenue	Wentworth avenue	2,262	12
108d	Crossing	Michigan avenue	72	12
Park court	Madison avenue	Westward	880	4
†Paxton avenue	Seventy-first	Seventy-second	628	6
Prairie avenue	Sixtieth	Northward	315	6
Seventieth court	St. Lawrence avenue	Eastward	438	6
Seventy-first	Langley avenue	Champlain avenue	340	6
Seventy-second	Cottage Grove avenue ..	Langley avenue	660	6
Seventy-second	Jeffery avenue	Euclid avenue	510	6
Seventy-second	Shell avenue	Ellis avenue	338	6
Seventy-third	Railroad avenue	Coles avenue	495	6
Seventy-third	Adams avenue	Eastward	175	6
†Seventy-fifth	Jeffery avenue	Oglesby Avenue	2,346	8
Seventy-sixth	Coles avenue	Bond avenue	480	6
Seventy-ninth	Greenwood avenue	Dobson avenue	333	8
Shell avenue	Seventy-first	Seventy-second	650	6
*Sixty-fourth	Woodlawn avenue	Greenwood avenue	814	6
Sixty-fifth	Drexel avenue	Maryland avenue	360	6
Sixty-ninth place	South Chicago avenue ..	Cottage Grove avenue ..	896	6
South Chicago avenue	Seventy-third	Woodlawn avenue	1,650	8
State	Sixty-eighth	Sixty-ninth	670	8
Stony Island avenue	518 ft. S. of Fifty-seventh ..	Stony Island avenue	36	12
Superior avenue	225 ft. N. of Ninety-third ..	Ninety-third	258	6
*Washington Park place ..	Forty-ninth	Fiftieth	665	6
Total			74,564	
Add Branch Pipe for Hydrants			192	4
Add Branch Pipe for Hydrants			2,172	6
Total feet laid in Hyde Park District			76,928	

* Laid by Deposit.

† Laid by Special Assessment.

LAKE VIEW DISTRICT.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
†1st Alley E. of E. Ravenswood Park	Balmoral avenue	Claremont avenue	652	6
†1st Alley E. of E. Ravenswood Park	Crossing	Webster avenue	28	6
Ardmore avenue	Evanston avenue	Eastward	205	4
†Ashland avenue	Claremont avenue	Balmoral avenue	652	6
Baxter	Wellington	Belmont avenue	1,260	6
Baxter	School	Belmont avenue	640	6
Baxter	School	Roscoe	630	6
*Belleplaine avenue	Oakley avenue	Claremont avenue	336	6
*Belleplaine avenue	Oakley avenue	Leavitt	629	6
Berteau avenue	Lincoln avenue	Leavitt	617	8
Berteau avenue	Western avenue	Crossing	90	12
Center	Ashland avenue	Westward	547	6
*Charlton	Grand avenue	Northward	295	6
Claremont avenue	Evanston avenue	Eastward	248	6
Claremont avenue	210 S. of Wilson avenue .	Southward	120	6
*Claremont avenue	Belleplaine avenue	Berteau avenue	625	6
Commercial avenue	Crossing	Webster avenue	42	4
*Cosgrove avenue	Lincoln avenue	Western avenue	1,597	6
*Davis	Lawrence avenue	Northward	247	6
*Devon avenue	Kenmore avenue	Sheffield avenue	394	6
†Diversey avenue	Western avenue	River	1,250	8
*E. Ravenswood Park	Grand avenue	Ridge avenue	715	6
*W. Fifty-ninth	Lincoln avenue	Western avenue	827	6
*Fletcher	W. Ravenswood Park . . .	Westward	252	6
Gordon Terrace	484 E. of Halsted	Eastward	72	6
Grace	Crossing	Robey	26	8
†Grace	Lincoln	Robey	618	8
*Hall place	Oakdale avenue	Southward	90	4
Haynes avenue	Crossing	Western avenue	17	6
Irving avenue	Crossing	Belleplaine avenue	38	6
Irving avenue	Berteau avenue	Belleplaine avenue	630	6
*Kenmore avenue	Rosemont avenue	Devon avenue	678	6
*Leavitt	Berteau avenue	Belleplaine avenue	619	8
Leavitt	Wilson avenue	Vilas	274	6
†Leavitt	Waveland avenue	Addison	669	6
Leavitt	Crossing	Berteau avenue	87	8
Leavitt	Montrose boulevard	Cosgrove avenue	620	6
Lyman	Wilson avenue	Southward	314	6
*Marianna avenue	Racine avenue	Diversey place	286	6
*Marianna avenue	Ward avenue	Southport avenue	240	6
†Melrose	Oakley avenue	Western avenue	673	6
Montana	Ashland avenue	Perry	682	6
Montrose boulevard	Western avenue	Westward	56	8
Montrose boulevard	Western avenue	Claremont avenue	194	8
Montrose boulevard	Halsted	Lake Michigan	542	4
*Nelson	W. Ravenswood Park . . .	Wolcott	933	6
*Noble avenue	W. Ravenswood Park . . .	Westward	252	6
Oak place	Crossing	School	41	4
*Oakdale avenue	Halsted	Hall place	256	6
*Oakley avenue	Belleplaine avenue	Berteau avenue	625	6
Oakley avenue	Sunnyside avenue	Northward	406	6
*Oakley avenue	Belleplaine avenue	Southward	300	6
Oakley avenue	Graceland avenue	Northward	325	6
Paulina	Crossing	Webster avenue	42	6
Paulina	Crossing	Belmont avenue	40	6

LAKE VIEW DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Pensacola avenue.....	Lincoln avenue.....	Eastward	174	6
*Perry.....	Crossing	Fletcher	100	6
Pine	Ashland avenue	Wright	740	6
†Rascher	Ashland avenue	E. Ravenswood Park	1,185	6
Ridge avenue	Swift	Southport avenue	618	6
*Robey	Addison	Waveland avenue	623	8
School	Crossing	R. R. right of way	100	4
School	Baxter	Clifton avenue	526	8
School	Clifton avenue	Racine avenue	296	8
School	Clark	Baxter	919	8
†Seeley avenue.....	George	Wellington	632	4
*Sheffield avenue.....	Thorndale avenue	Devon avenue	2,686	6
*Sheffield avenue.....	Thorndale avenue	Northward	244	6
Sheffield avenue	Crossing	Thorndale avenue	66	6
Southport avenue.....	Edgewater place	Southward	150	8
Southport avenue.....	Church road	Edgewater place	268	8
Southport avenue.....	Bryn Mawr avenue	Southward	192	6
Swift	Crossing	Ridge avenue	41	6
Warner avenue.....	Crossing	Leavitt	22	6
Webster avenue	Paulina	Westward	310	6
†Webster avenue	Paulina	Ashland avenue	390	6
†Webster avenue	Paulina	E. Ravenswood Park	610	6
*W. Ravenswood Park	Belmont avenue	Wellington	1,281	6
Webster avenue	E. Ravenswood Park	W. Ravenswood Park	177	6
Western avenue	Irving Park boulevard	Southward	112	8
Western avenue	Graceland avenue	Haynes	274	8
†Western avenue	Belmont avenue	Roscoe	1,300	8
*Western avenue	Montrose boulevard	Irving Park boulevard	2,620	8
Western avenue	Montrose boulevard	Northward	76	8
*Wilson avenue	Leavitt	Lincoln avenue	600	6
Wilson avenue	Leavitt	Robey	1,247	6
*Woodside avenue.....	Cornelia	Addison	473	6
Woodside avenue.....	Crossing	Addison	55	6
Wright	Crossing	Wilson avenue	82	6
†Wright	Balmoral	Claremont avenue	652	6
Wrightwood avenue	Ashland avenue	Paulina	288	8
Total			42,571	
Add Branch Pipe for Hydrants			216	4
Add Branch Pipe for Hydrants			924	6
Total feet laid in Lake View District			43,721	

* Laid by Deposit.

† Laid by Special Assessment.

LAKE DISTRICT.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
1st alley N. of Fifty-fifth .	Crossing	Bishop	41	6
*1st alley N. of Fifty-fifth .	Peoria	Eastward	456	6
1st alley N. of Fifty-fifth .	Crossing	Loomis	70	6
1st alley N. of Fifty-fifth .	Union avenue	Eastward	312	6
*1st alley N. of Fifty-fifth .	Union avenue	Westward	590	6
1st alley N. of Fifty-fifth .	Wallace	Westward	262	6
*1st alley E. of Western av.	Forty-eighth	Forty-ninth	310	6
Aberdeen	Eighty-fifth	Southward	340	6
Aberdeen	Crossing	Fifty-fourth	25	6
Ada	Sixty-first	Northward	192	6
Armour avenue	Fifty-eighth	Extended	24	6
Armour avenue	Southward	Cloud court	41	6
Atlantic	Bristol	Forty-sixth	278	4
Atlantic	Forty-fifth	Bristol	250	4
Atlantic	Graylock avenue	Northward	250	4
Bishop	Forty-seventh	Forty-ninth	1,316	6
Carpenter	Fifty-first	Southward	177	6
Carpenter	Fifty-seventh	Southward	212	6
†Davis	Sixty-third	Sixty-seventh	2,654	6
Dearborn	Crossing	Cloud court	49	6
Desplaines	Crossing	Vincennes road	68	6
Dexter avenue	Union avenue	Eastward	237	4
Dreyer	Forty-seventh	Southward	635	6
Eighty-fifth	Carpenter	Aberdeen	332	6
Eighty-fifth	Morgan	Eastward	335	8
Elizabeth	Fifty-ninth	Northward	220	6
Fiftieth	Lafin	Eastward	197	6
Fifty-second	Crossing	Bishop	70	6
Fifty-third	Crossing	Bishop	70	6
Fifty-third	Crossing	Loomis	70	6
Fifty-fourth	Crossing	Aberdeen	66	6
Fifty-fourth	Crossing	Bishop	66	6
Fifty-fourth	Crossing	Loomis	70	6
Fifty-seventh	Crossing	Dearborn	70	6
*Fifty-seventh	Emerald avenue	Union avenue	265	6
*Fifty-seventh	Halsted	Emerald avenue	260	6
*Fifty-seventh	Tracy avenue	Westward	400	6
Fifty-eighth	Emerald avenue	Halsted	256	8
Fifty-eighth	Stewart avenue	Westward	108	6
*Fifty-ninth	Wood	Westward	3,005	8
Forty-eighth	Crossing	Bishop	72	6
Forty-eighth	Cook	Throop	332	6
†Forty-ninth	Oakley avenue	1st Alley E. of Western avenue .	337	6
Forty-ninth	Crossing	Bishop	72	6
†Goodspeed	Sixty-third	Sixty-seventh	2,636	6
†Hermitage avenue	Fifty-eighth	Southward	315	6
†Hoyne avenue	Sixty-third	Sixty-seventh	2,654	6
La Salle	Sixty-first	Sixty-third	1,141	6
†Lincoln	Sixty-third	Sixty-seventh	2,654	6
Loomis	Crossing	Sixty-first	176	6
Loomis	Sixty-third	Sixty-fourth	666	6
Marshfield avenue	Crossing	Fifty-first	36	6
†Marshfield avenue	Fifty-fourth	Southward	437	6
†Marshfield avenue	Fifty-eighth	Southward	315	6
†Marshfield avenue	Sixty-third	Northward	1,255	6

LAKE DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Marshfield avenue	Crossing	Sixty-third.	80	6
May	Sixty-first.	Southward	160	6
*Morgan	Seventy-third	Southward	336	8
†Oakley avenue	Sixty-third.	Sixty-seventh	2,617	8
*Page	Fifty-third.	Southward	800	6
†Paulina	Fifty-eighth.	Southward	315	6
*Peoria	Fifty-third	Fifty-third court.	331	6
*Peoria	Fifty-fourth	Fifty-fourth court	286	6
Pullman avenue	Forty-third	Forty-seventh	2,639	6
Sangamon	Eighty-fifth.	Northward	400	6
†Seeley avenue	Sixty-third.	Sixty-seventh	2,654	6
Sixty-seventh	Centre avenue.	May	332	6
Sixty-seventh	Morgan	Sangamon	334	6
Vincennes road	Union avenue	Eastward	255	8
†Western avenue	Sixty-third	Sixty-seventh	2,652	8
†Winchester avenue	Sixty-third	Sixty-seventh	2,654	6
Wolcott avenue.	Forty-sixth	Forty-seventh	641	6
†Wood	Fifty-eighth	Southward	312	6
Total			44,995	
Add Branch Pipe for Hydrants.			348	4
Add Branch Pipe for Hydrants.			1,844	6
Total feet laid in Lake District			46,688	

* Laid by Deposit.

† Laid by Special Assessment.

JEFFERSON DISTRICT.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
1st Alley E. of Humboldt boul	Fullerton avenue	Southward	82	6
1st Alley E. of Linden av.	Hammond avenue	Northwest	180	4
Ballou	Medill avenue	Mentmore avenue	332	6
Belden avenue	Hancock avenue	Central Park avenue . . .	371	6
Bettman	Crossing	Milwaukee avenue	38	6
Breman	Perry avenue	Hoffman avenue	306	6
Burchell	Diversey avenue	Southward	295	6
Burchell	Crossing	Diversey avenue	90	6
†Carpenter road	Milwaukee avenue	Carpenter court	658	8
Centre avenue	Elston avenue	California avenue	449	6
Centre avenue	Franklin	Northward	362	6
Central Park avenue	Crossing	Milwaukee avenue	75	8
Chase avenue	North avenue	Northward	417	6
Clifton avenue	Diversey avenue	Conneaut avenue	588	6
Clifton avenue	Crossing	Diversey avenue	90	6
Columbia avenue	Crossing	Milwaukee avenue	65	6
Conneaut avenue	Crossing	Fairview avenue	90	6
Conneaut avenue	Crossing	Forrest avenue	53	6
Connor	Cleveland avenue	Eastward	150	4
Cortland	Crossing	Mead	84	8
Cortland	Crossing	Kimball avenue	60	8
Cortland	Crossing	Tripp avenue	90	8
Crawford avenue	Irving Park boul.	Southward	727	6
Crawford avenue	Crossing	Northward	50	8
Crawford avenue	Crossing	Montrose boul.	150	6
Dickens avenue	Crossing	Kedzie avenue	90	6
Dickens avenue	Crossing	Tripp avenue	90	6
Diversey avenue	Crossing	Kedzie avenue	41	8
Diversey avenue	Crossing	Milwaukee avenue	50	8
†Diversey avenue	Kedzie avenue	Wallace avenue	655	8
†Diversey avenue	Humboldt avenue	Maplewood avenue	3,258	8
Drake avenue	Milwaukee avenue	Wolfram	321	6
Drake avenue	Wolfram	Southward	180	6
Eastman avenue	Milwaukee avenue	Roberts avenue	209	6
*Elston avenue	Roscoe	Warner avenue	2,080	8
Everett	Crawford avenue	Greenwood avenue	355	8
†Evergreen	Kedzie avenue	Northward	386	6
Fairview avenue	Humboldt boul.	Conneaut avenue	338	6
Fuller in avenue	Crossing	1st Alley E. of Humboldt boul .	40	6
Garfield avenue	Ballou	Central Park avenue . . .	842	6
Greenwood avenue	Crossing	Fairview avenue	90	6
Greenwood avenue	Crossing	Forrest avenue	90	6
Greenwood avenue	Everett	Douglas	427	6
Greenwood avenue	Crossing	Maplewood avenue	90	6
Geraldine avenue	Irving Park boul	Northward	1,088	8
Hamlin avenue	Crossing	Milwaukee avenue	60	6
Hammond avenue	Crossing	Diversey avenue	58	6
Hammond avenue	Elston avenue	Martin court	209	6
Hansen court	Crossing	Milwaukee avenue	60	6
Haynes avenue	Western avenue	Westward	627	6
Hollowell	Danforth	Huntington	125	6
Humboldt avenue	Ballou	Central Park avenue . . .	848	6
Humboldt	Diversey avenue	Northward	305	6
Humboldt	Crossing	Diversey avenue	90	6
Irving avenue	Crossing	Linden avenue	23	8

JEFFERSON DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Irving avenue	Crossing	Milwaukee avenue	65	8
Irving Park boul	Crawford avenue	Syracuse	277	12
Irving Park boul	Crossing	Western avenue	100	16
Irving Park boul	Crossing	Western avenue	100	8
†Jefferson avenue	Franklin	Monroe	865	12
Kedzie avenue	Diversey avenue	Northward	410	8
Kedzie avenue	Crossing	Milwaukee avenue	44	8
Laurel avenue	Crossing	Diversey avenue	80	6
Linden avenue	Irving Park avenue	300 ft. N. of Montrose boul	144	6
Martin court	Hammond avenue	Eastward	165	6
†Mead	Fullerton avenue	Milwaukee avenue	1,962	6
Mead	Crossing	Milwaukee avenue	70	6
Medill avenue	Central Park avenue	Ballou	846	6
Mentmore avenue	Kimball avenue	Central Park avenue	1,828	6
†Milwaukee avenue	Norwood avenue	Carpenter road	1,200	8
McLean	West Forty-eighth	Eastward	494	6
Monticello avenue	North avenue	Northward	417	6
Myrtle avenue	Crossing	Diversey avenue	70	8
Oakley avenue	Crossing	Diversey avenue	39	6
Park avenue	Willis	Northward	204	6
Richmond	Crossing	Diversey avenue	90	6
Ridgeway avenue	Armitage avenue	Southward	380	6
Ridgeway avenue	Crossing	Armitage avenue	84	6
Roberts avenue	Eastman avenue	Northwest	893	6
*Roscoe	Elston avenue	California avenue	2,020	8
School	Crossing	Milwaukee avenue	50	6
*Sheridan avenue	Garden avenue	Southward	257	6
Sheridan avenue	Humboldt avenue	Southward	337	6
Syracuse	Irving Park boul	Prescott	627	6
Thomas avenue	Crossing	Diversey avenue	90	8
Thomas avenue	Johnson avenue	Edgewood avenue	200	6
Vernon avenue	1,065 ft. N. of Irving Pk boul	Northward	194	6
Wabansia avenue	Crossing	Central Park avenue	36	8
Wabansia avenue	Crossing	Tripp avenue	90	8
Wallace avenue	Connect	Elston avenue	7	6
Warner avenue	Crossing	Milwaukee avenue	94	8
Washington avenue	Center	Irving Park boul	1,077	6
Washington avenue	Center	Willettto avenue	622	8
Washington avenue	Crossing	Milwaukee avenue	40	6
Wessner avenue	Crossing	Milwaukee avenue	42	6
Western avenue	Montrose boul	Irving Park boul	2,840	24
West Forty-first	Crossing	Milwaukee avenue	65	6
Wolfram	Crossing	Drake avenue	42	6
Total			37,867	
Add Branch Pipe for Hydrants			12	4
Add Branch Pipe for Hydrants			792	6
Total feet laid in Jefferson District			88,671	

* Laid by Deposit.

† Laid by Special Assessment.

CALUMET DISTRICT.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Canal	One hundred & fifteenth	Southward	430	6
†Canal	One hundred & twentieth	One hundred & twenty-third ..	1,980	6
†Charles	One hundred & third	Hough	1,756	6
†Clinton	One hundred & twenty-first ..	One hundred & twenty-third ..	1,376	6
Desplaines	One hundred & fifteenth	One hundred & sixteenth	390	6
Drew	One hundred & seventh	Ridge avenue	622	6
†Emerald avenue	One hundred & eighteenth ..	One hundred & nineteenth	830	6
†Emerald avenue	One hundred & twenty-first ..	One hundred & twenty-third ..	1,375	6
†Fifth avenue	One hundred & nineteenth	One hundred & twenty-third ..	2,543	6
Halsted	One hundred & eighteenth	Crossing	182	6
†Halsted	Wright place	One hundred & eighteenth	318	6
*Laurel avenue	Ninety-second	Southward	1,080	6
†Lowe avenue	Diana	One hundred & nineteenth ..	1,907	6
†Lowe avenue	One hundred & twenty-first ..	One hundred & twenty-third ..	1,370	6
†Maple	Ninety-ninth	One hundred & third	2,927	6
Morgan	300 ft. s. of Eighty-eighth ..	Southward	225	6
*Ninety-fifth	Oak	Eastward	286	8
*Oak	Ninety-fifth	Southward	628	6
†One hundred & fourth pl.	Vincennes avenue	Church	860	6
One hundred & ninth	State	Westward	267	6
One hundred & tenth	Portland avenue	Stewart avenue	240	6
One hundred & twelfth pl.	State	Wentworth avenue	828	6
One hundred & fifteenth ..	Jefferson	Desplaines	324	12
One hundred & sixteenth ..	Desplaines	Union avenue	490	6
One hundred & eighteenth ..	State	Dearborn	330	8
One hundred & nineteenth ..	Clark	Dearborn	338	8
†One hundred & nineteenth ..	Michigan avenue	Dearborn	892	8
†One hundred & nineteenth ..	Portland avenue	Halsted	3,299	8
One hundred & twenty-second ..	Union avenue	Emerald avenue	327	6
Pleasant avenue	Ninety-fifth	Southward	48	6
†Portland avenue	One hundred & twentieth	One hundred & twenty-third ..	1,980	6
Ridge avenue	Drew	Eastward	472	6
Shurtliffe avenue	One hundred & fifteenth	Northward	400	6
Stanwood avenue	State	Clark	718	6
State	One hundred & thirteenth	One hundred & thirteenth place.	334	8
†Union avenue	One hundred & eighteenth	One hundred & nineteenth	705	6
†Union avenue	One hundred & twenty-first	One hundred & twenty-second ..	720	6
†W. of R. R. on Union av.	One hundred & twenty-first	One hundred & twenty-third ..	1,295	6
†Wallace	Diana	One hundred & nineteenth	1,895	6
†Wallace	One hundred & twenty-first	One hundred & twenty-third ..	1,376	6
Wentworth avenue	One hundred & thirteenth	One hundred & thirteenth place	345	8
†Wright place	Emerald avenue	Halsted	329	6
Total			39,137	
Add Branch Pipe for Hydrants			72	4
Add Branch Pipe for Hydrants			948	6
Total feet laid in Calumet District			40,157	

* Laid by Deposit.

† Laid by Special Assessment.

RECAPITULATION OF PIPE LAID DURING 1894, INCLUDING HYDRANT BRANCHES.

DIVISION.	DIAMETER OF PIPE IN INCHES.						Total length of pipe in feet.
	4 inch.	6 inch.	8 inch.	12 inch.	16 inch.	24 inch.	36 inch.
North	24	5,023	4,780	.....	.....	.....	.....
South	587	2,038	690	.....	1,593	1,184	.....
West	1,510	81,157	20,057	18,884	1,866	.....	.....
Hyde Park	1,660	54,308	18,010	2,595	.....	.....	.....
Lake View	1,968	30,884	10,869	90	.....	.....	.....
Lake	1,863	38,569	12,110	.....	.....	.....	.....
Jefferson	292	22,027	12,370	1,142	116	2,840	.....
Calumet	72	38,937	5,824	324	.....	.....	.....
Total in feet	7,876	262,948	84,560	18,010	3,059	4,024	379,972

STOP-VALVES PUT IN DURING THE YEAR.

DIVISION.	SIZE OF VALVES.							TOTAL
	4-in.	6-in.	8-in.	12-in.	16-in.	24-in.	36-in.	
North	1	5	8	.....	.....	.....	.....	14
South	2	8	1	5	6	.....	.....	22
West	2	121	39	15	1	.....	.....	178
Hyde Park.....	3	60	23	8	* 1	.....	.....	95
Lake View.....	6	44	14	.....	.....	.....	.....	64
Lake	5	65	13	.....	.....	.....	.....	83
Jefferson	1	45	23	2	2	1	.....	74
Calumet .....	.....	39	9	.....	.....	.....	.....	48
Totals	20	387	130	30	10	1	.....	578

*Used in remodeling Sixty-eighth Street Pumping-Station outlet.

During the year 1894, in North Division four 4-inch valves were replaced by 6-inch valves, and three 4-inch and two 6-inch valves were replaced by 8-inch valves; in South Division two 4-inch valves were taken out which were not replaced; in Lake District four 3-inch valves were replaced by 6-inch valves. Three 30-inch valves taken out in remodeling discharge-pipe system at Sixty-eighth Street Pumping Station.

TABLE SHOWING NUMBER AND SIZE OF VALVES IN USE IN THE
CITY OF CHICAGO, AT THE CLOSE OF 1894.

DIVISION.	SIZE OF VALVES.												TOTAL	
	3-inch.	4-inch.	6-inch.	8-inch.	10-inch.	12-inch.	14-inch.	16-inch.	18-inch.	20-inch.	24-inch.	30-inch.		36-inch.
North		164	423	291	....	32	...	13	....	....	12	....	3	988
South		156	677	653	....	85	....	25	...	....	29	....	13	1,638
West		580	2,070	1,127	....	261	....	71	....	....	31	....	11	4,151
Hyde Park		93	942	216	20	65	4	45	....	1	15	....	4	1,405
Lake View. 1		253	614	137	....	29	3	4	....	3	5	....	4	1,053
Lake		125	980	286	2	64	14	13	2	....	18	....	2	1,506
Jefferson		* 22	* 376	194	....	53	....	6	....	....	19	....	....	670
Calumet		3	160	63	....	7	....	2	....	....	1	....	....	236
Totals..	1	1,396	6,242	2,967	22	596	21	179	2	4	130	....	37	11,597

* Norwood Park included.

HYDRANTS PLACED IN 1894.

DIVISION.	2½-inch Single.	2½-inch Double.	4-inch Double.	Total.
North	2	16	.....	18
South	7	11	.....	18
West	4	235	.....	239
Hyde Park	16	181	.....	197
Lake View	18	77	.....	95
Lake	29	111	1	141
Jefferson	1	64	2	67
Calumet	6	79	.....	85
Total	83	774	3	860

During the year 1894 there were taken out in North Division five 2½-inch single hydrants; in West Division one 2½-inch single hydrant; in Hyde Park District four 2½-inch single hydrants; in Lake District thirteen 2½-inch single hydrants; in Calumet District two 2½-inch single hydrants; all of which were replaced by 2½-inch double hydrants, also one 2½-inch single hydrant taken out in Hyde Park District which was not replaced.

TOTAL NUMBER OF FIRE HYDRANTS AT THE CLOSE OF 1894.

DIVISION.	2½-inch Single.	2½-inch Double.	4-inch Double.	2½-inch Double, with one 4-inch Single.	TOTAL.
North	417	505	132	...	1,054
South.....	799	1,015	198	.....	2,007
West	1,500	3,726	237	.....	5,463
Hyde Park.....	302	1,570	8	605	2,485
Lake View.....	175	900	.....	1	1,076
Lake	154	656	2	1,594	2,406
Jefferson.....	*97	700	2	.....	799
Calumet	104	322	.....	55	481
Total.....	3,548	9,394	574	2,255	15,771

*Norwood Park included.

TABLE SHOWING AMOUNT OF PIPE IN THE CITY OF CHICAGO
AT THE CLOSE OF 1894.

Diameter of Pipe.	1893.	1894.			
	Amount in use in Feet.	Amount Taken up or Abandoned in Feet.	Amount Laid in Feet.	Grand Total in Feet in use at the close of 1894.	Grand Total in Miles.
48	1,355	.....	.....	1,355	0.1138
36	115,250	.....	.....	115,250	21.1178
30	5,601	250	.....	5,851	1.1110
28	160	.....	.....	160	0.1180
24	246,780	.....	4,024	250,804	47.2111
20	7,931	.....	.....	7,931	1.1111
18	1,000	.....	.....	1,000	0.1188
16	232,811	1,933	3,059	238,887	44.1117
14	22,552	.....	.....	22,552	4.1111
12	457,987	.....	18,010	475,997	90.7120
10	26,860	.....	.....	26,860	5.1180
8	1,579,486	1,181	84,560	1,662,865	314.1111
6	* 4,001,497	2,146	262,943	4,262,294	807.1111
4	* 1,089,740	5,565	7,376	1,091,551	206.1171
3	10,896	1,900	.....	8,996	1.1111
Total in feet.....	7,799,906	13,025	379,972	8,166,853	.....
Total in miles....	1,477.1111	2.1111	71.1111	1,546.1111	1,546.1111

* Includes Norwood Park Pipe.

Amount of wooden pipe in use in Norwood Park, 16,618 feet of 4-inch and 325 feet of 6-inch, not included in above.

BRIDGE AND VIADUCT CONSTRUCTION.

This branch of the service is in charge of Warren R. Roberts, City Bridge Engineer, with Thomas G. Pihlfeldt as first assistant.

For a number of years the appropriations for bridge and viaduct construction have been cut down to a minimum. In consequence, many structures remain in use on which the traffic has far outgrown anything for which they were designed. On the following structures, for which estimates have been made and appropriations requested, the traffic has reached a limit where it is not prudent to postpone renewal:

Van Buren street viaduct over the railroad tracks between Canal street and the river.

Archer avenue bridge over the South Fork.

North Halsted street bridge over the North Branch.

Fullerton avenue bridge over the North Branch.

North avenue bridge over the North Branch.

Division street over the North Branch.

Division street over the canal.

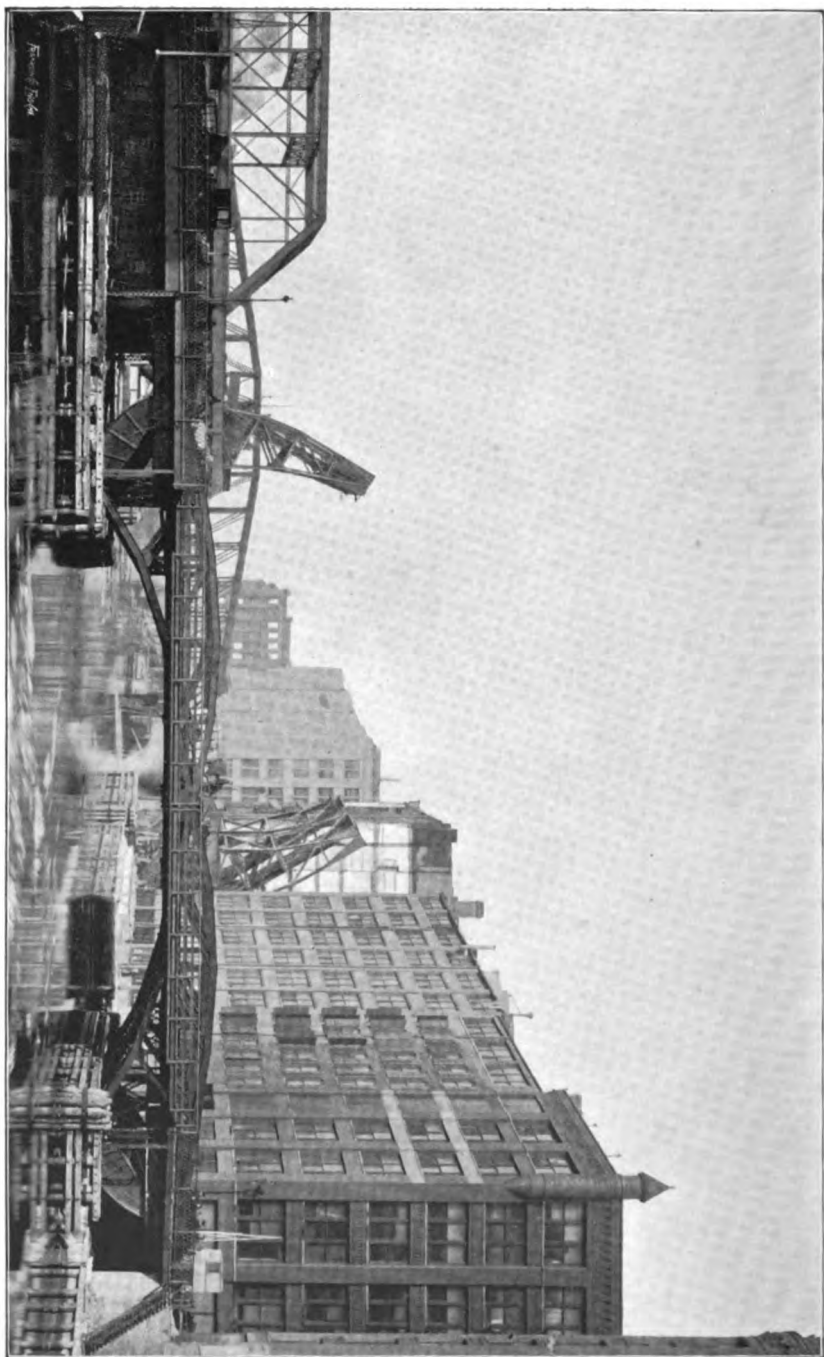
SOUTH HALSTED STREET LIFT BRIDGE.

South Halsted street lift bridge was not entirely completed when the report for 1893 was written. This bridge was officially opened on March 31, 1894, and opened to the public on the following day. During the remaining part of the year the bridge worked very successfully. In operation, this bridge is an expensive one.

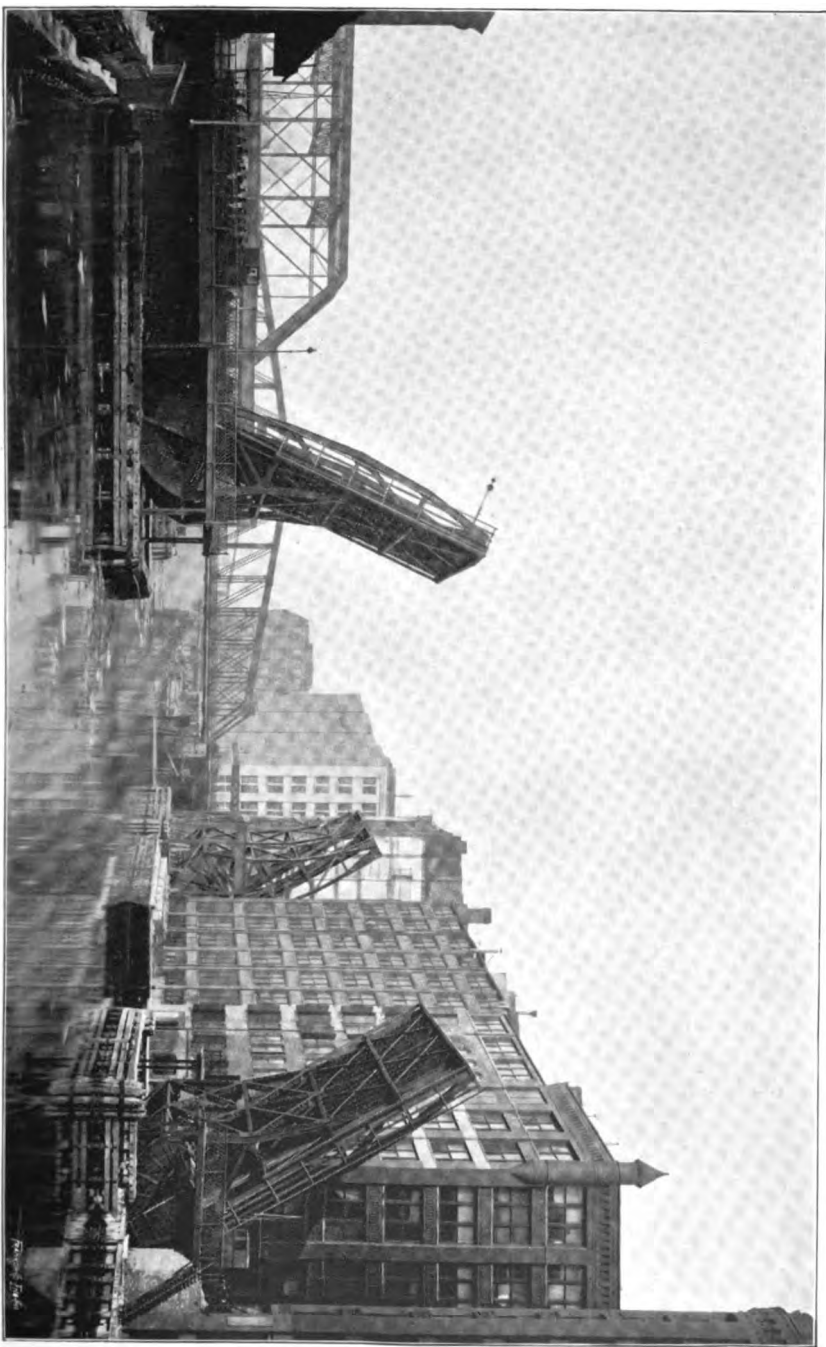
VAN BUREN STREET BRIDGE.

On January 4, 1894, Van Buren street bridge was closed to traffic and the work of removing the old draw span was begun. This work was done by the FitzSimons & Connell Co., contractors for the substructure. The west abutment and west pier were built first. Work on these progressed favorably and they were completed by the middle of June. The foundations for the east abutment pier were more difficult. The work here went on slowly, and was not completed until the first of September.

The contract for the superstructure was let to A. Gottlieb & Co., but Mr. Gottlieb died soon afterward and the work was re-let to Charles L. Strobel. Mr. Strobel sub-let the building of the iron work to the Elmira Bridge Co., of Elmira, N. Y., and the machinery to the Scaife Foundry and Machine Co., of Pittsburg. Both the iron

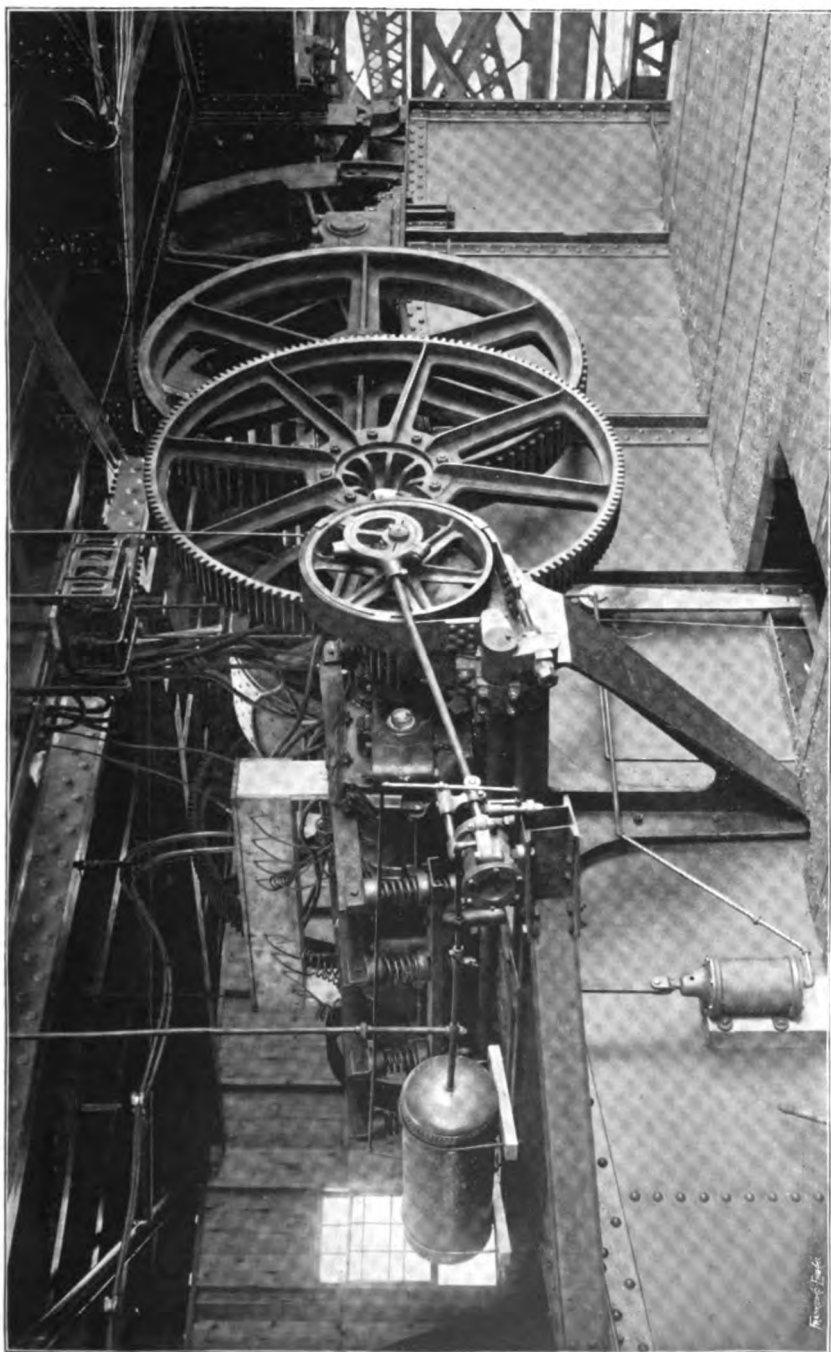


CHICAGO BRIDGE SYSTEM—VAN BUREN STREET BRIDGE.
CLOSED.



CHICAGO BRIDGE SYSTEM—VAN BUREN STREET BRIDGE.

OPEN.



CHICAGO BRIDGE SYSTEM — VAN BUREN STREET BRIDGE.
MOTORS AND MACHINERY.

work and the machinery were of such a character as to make the manufacture difficult, and, therefore, deliveries on all of this work were very slow. The erection was also difficult, and this part of the work progressed slowly. Many parts of the movable portions of the bridge could not be completed until the bridge was lowered and the necessary adjustment made. This all consumed much time and the bridge will not be completed until about the first of February, 1895.

The accompanying photograph of the bridge shows its general design, and its appearance when open and closed. When open it leaves a clear channel of 109 feet. The two roadways are 21 feet each, center to center, of trusses, and each sidewalk is 8 feet, giving a total width of 58 feet.

The bridge is operated by electricity, having two 50-horse power motors on each side of the river. These motors also compress the air that operates the gates, signals and brakes.

This electric equipment was furnished and installed by G. P. Nichols & Bro.

The power for the bridge is brought by cable from the Chicago Edison Co.'s Washington street power house.

Mr. W. R. Kellogg was engineer in charge of the field work throughout the construction. The cost of the bridge was as follows:

Substructure.....	\$79,600
Superstructure.....	73,100
Electric equipment.....	11,150
Engineering and inspection.....	5,850
Total cost.....	\$169,700

BRIDGE AND VIADUCT REPAIRS.

Mr. John O'Brien is Superintendent and Mr. J. R. Roemheld is Engineer of Bridge and Viaduct Repairs.

In addition to the fifty-one swing-bridges and thirty-eight systems of viaducts, we have acquired the care of the South Halsted street lift bridge. Mention will only be made of such structures as have received extensive and permanent repairs.

The renovation of decayed floors has been done on an unusually large scale. Twelve of the larger bridges and eight viaducts have been paved with oak blocks, involving the use of 17,300 square yards of oak blocks and 295,000 feet B. M. 4-inch foundation planks.

Clark street bridge :—The cast-iron turn-table rollers had been worn down so much that the pinion bracket was actually bearing

upon rack. The wheels having all worn down uniformly, it was deemed economical to plane three-eighths of an inch off the entire rack circle, thereby obviating the erection of a new set of rollers.

Wells street bridge:—Pinion bracket showed sign of weakness and was re-enforced by three $\frac{1}{2}$ -inch side braces to web of turn-table drum. Both roadways were repaved with oak blocks on new sub-planking.

Madison street bridge:—Turn-table rollers in this bridge had worn down same as at Clark street bridge, and trouble averted in the same way, i. e., by planing off top of rack circle.

Adams street bridge:—Both roadways were repaved with oak blocks.

Jackson street bridge and viaduct:—The sub-planking of both roadways from one end to the other was so badly rotted, that mere repaving would have been a dead loss, consequently the whole structure was stripped of all wood excepting the sidewalks, replanked and repaved, and is now in first-class condition.

Van Buren street viaduct:—This structure is situated a block south of the Union Passenger station, and at the head of a system of railroad switches, in consequence of which locomotives are constantly passing and repassing this point, and as the clearance between the smoke stacks and iron floor system of viaduct floor is only 6 inches, the floor became very badly corroded, so much so that in some of the stringers (7-inch I beams) the web was entirely eaten away, causing the flanges to collapse and a depression in the roadway. Upon stripping the roadway and exposing the iron, it was found that in addition to the stringers and floor beams being so badly corroded, *the webs of main girders at the line of floor had in some places been eaten through and could be punctured with an ordinary hammer for their entire length.* Nothing whatever remains of bottom laterals. There was no way of re-enforcing these weakened parts without incurring an expense almost equal to the cost of a new structure. As a temporary measure of safety, stirrups were passed under the floor beams and clamped to the upper flange of main girders.

Eighteenth street bridge and viaduct:—Bridge has been equipped with steam-turning plant discarded from Lake street bridge, and fuel oil burning apparatus has been attached to boilers with most economical results. Both roadways were repaved.

The seat stones of west pier, directly under end shoe of 250-foot span, became fractured through three courses. Span was jacked up, stones taken out, and a nest of $\frac{3}{4}$ -inch I beams supplied in place of seat stones.

Canal street bridge:—With new boilers of sufficient capacity in place of the former small ones, besides general overhauling of the structure this bridge works fairly well.

Twenty-second street bridge and approaches:—In order to accommodate the Chicago General Railway Co., so that their motor cars could cross the bridge and approaches (as per ordinance), it was necessary to alter the entire floor system, inasmuch as the existing floor was of insufficient strength, besides being old and decayed. Accordingly, the whole structure, bridge and approaches, was rebuilt from end to end, the street car company paying their just proportion of the cost.

South Halsted street lift bridge:—Besides various mechanical repairs, automatic guard gates were erected, which with this type of bridge can be operated with perfect success.

South Ashland avenue bridge:—During the disastrous lumber yard fire of last summer the entire north approach was destroyed and the woodwork of one end of the bridge was burned away, badly distorting the lower iron chords and lower parts of the posts. This was restored as nearly as could be, and re-enforced by thickening plates, approach rebuilt and new floor put in bridge.

Ninety-second street bridge:—A similar lumber yard fire here destroyed all of the west approach, 300 feet long, and partially burned one end of the bridge, but not so severely as to distort the iron chords. Cars were running over a new approach and bridge floor just one week after the fire.

Lawndale avenue bridge:—A Howe Truss fixed span was built across the west fork of the South Branch of the Chicago river on the line of Lawndale avenue, to give accessibility to site of proposed Hospital for Contagious Diseases. Span is 108 feet long, 18-foot roadway, and two approaches, 48 and 160 feet long respectively. Cost, \$3,658.73, which was paid by the Health Department.

Indiana street bridge:—A new protection was built and fender clumps put around west pier.

Erie street bridge:—West pier became so badly cracked from frequent hard knocks that it had to be rebuilt, from the water line up, which was done without any interruption of street traffic.

North Halsted street bridge (river):—This bridge is a very old and decayed structure, has outlived its usefulness, and a new structure is required to replace it.

Archer avenue bridge:—This bridge is beyond further repair and should be replaced by a new structure.

Weed street bridge:—This “jack-knife” bridge had moved out of line, so that it would not lock when closed. This was adjusted with a few 1¼-inch anchor rods.

North Kedzie avenue bridge:—A new bridge was built here by this Department, with a main span of 90 feet and with two approaches 60 and 200 feet respectively. This opens a new north and south thoroughfare which, judging from the amount of traffic upon it, was a very much needed improvement.

Ashland avenue viaduct was repaved with oak blocks.

Outside of the regular routine of bridge repairs, this Department has been called upon to do work for other departments, as follows:

Canal lock:—The walls of this structure were showing signs of failure, and had closed in at several points. To avert the closing of navigation, walls were drawn back by means of twelve anchor rods, 1¼-inch, run through to faces. Damage to east gates, which had been dislocated by a leak in the floor, was also repaired.

HARBOR.

Mr. Reinhold Dressler is the Engineer in charge of Dredging, Docking and Surveys of Chicago Harbor.

Mr. J. B. Sullivan is Harbor Master, and Mr. Redmond Prindiville is Vessel Dispatcher.

During the year the following dredging was done under contracts and special order from the Commissioner of Public Works:

Sec. 1.....	26,618	cubic yards.....	\$ 2,129 44
“ 2.....	16,230	“ “	1,460 70
“ 3.....	7,980	“ “	798 00
“ 4.....	11,314	“ “	1,244 54
“ 5.....	9,229	“ “	969 05
“ 6.....	45,589	“ “ (hard pan)	16,867 93
“ 7.....	4,112	“ “	781 28
“ 8.....	997	“ “	98 70
“ 9.....	9,867	“ “	986 70
“ 10.....	51,650	“ “	5,681 50
“ 11.....	27,143	“ “	3,257 16
Total	210,729	cubic yards.	\$34.275 00

Of the above 210,729 cubic yards, 45,589 cubic yards on Section 6 was hard pan, and cost 37 cents per yard, leaving a balance of 165,140 cubic yards, which was dredged for the following prices: 26,618 cubic yards for 8c per yard; 16,230 cubic yards for 9c per yard; 997 cubic yards for $9\frac{1}{8}$ c per yard; 17,847 cubic yards for 10c per yard; 9,229 cubic yards for $10\frac{1}{2}$ c per yard; 62,964 cubic yards for 11c per yard; 27,143 cubic yards for 12c per yard, and 4,112 cubic yards for 19c per yard.

Beginning with the year 1894, the contract for removing rock from the channel of the West Fork of the South Branch commenced and progressed as follows:

Commencing on the west line of Western avenue work was started in the north draw of the bridge, and extended 660 feet west through the north draws of the Northern Pacific and Panhandle R. R. bridges, making a channel 40 feet wide, and an average depth of 11.5 feet from datum, continuing southwesterly 482 feet, making a channel 60 feet wide and an average depth of 11.5 feet, making a total lineal cut of 1,142 feet.

The total amount of excavation was $29,109\frac{1}{2}$ cubic yards.

Surveys have been made during the year, and the necessary data collected for the establishment of dock lines and condemnation of land affected thereby from Belmont to Lawrence avenues, on the North Branch of the Chicago River. Nineteen permits were granted the dredging companies to dredge for private parties, and about 76,054 cubic yards were taken out under these permits.

Thirty-nine permits were granted owners and tenants to build, rebuild and repair docks.

The City expended \$1,397.00 for the building and repairs of docks at street ends and other places.

The mean elevation of Lake Michigan for each year from 1889 to 1894 inclusive has been below the lowest mean elevation for any year since records have been kept. In 1893 it reached the lowest level—0.20. The mean for 1894 is 0.50.

The low water level, combined with the insufficiency of the appropriation for dredging the river, affects unfavorably the shipping interests, which demand a steady increase in depth of channel, owing to the very marked tendency to use larger lake craft.

I am indebted to the local officers of the United States Weather Bureau for the data used in compiling the following tables of precipitation and temperature, to Martin J. Russell, Collector of the Port,

for the data on Commerce by Lake during 1894, and to the Illinois and Michigan Canal Commissioners for the data on Commerce by Canal.

The tables show that an annual precipitation of about 36 inches over the basin of the upper lakes, with a constant normal temperature, would keep the lakes at about one level from year to year.

Table showing Maximum, Minimum and Mean Water in Lake Michigan annually, from 1854 to 1894, both inclusive.

Year.	Max.	Min.	Mean.	Year.	Max.	Min.	Mean.
1854.....	.....	.....	1.83	1875.....	3.01	-0.34	1.45
1855.....	3.45	0.15	1.56	1876.....	4.31	0.34	2.56
1856.....	3.56	0.42	1.60	1877.....	3.56	1.04	2.31
1857.....	4.35	0.60	2.42	1878.....	3.14	0.51	2.00
1858.....	4.69	1.33	2.00	1879.....	2.51	-0.49	1.06
1859.....	4.45	1.31	2.98	1880.....	2.81	-0.99	1.16
1860.....	3.53	1.30	2.54	1881.....	3.01	-2.19	1.26
1861.....	4.40	1.20	2.56	1882.....	3.01	-0.99	2.00
1862.....	3.30	0.70	2.50	1883.....	3.81	-0.99	2.10
1863.....	3.30	-0.80	2.10	1884.....	3.31	-0.01	2.24
1864.....	2.80	-0.40	1.57	1885.....	3.71	-0.01	2.48
1865.....	3.66	-1.08	1.30	1886.....	4.41	0.01	2.64
1866.....	2.50	0.00	1.07	1887.....	3.11	0.01	1.96
1867.....	2.60	-0.41	1.49	1888.....	3.01	0.01	1.30
1868.....	2.58	-1.00	1.01	1889.....	2.51	-0.79	0.77
1869.....	2.13	0.41	1.13	1890.....	2.21	-0.99	0.63
1870.....	3.25	-0.30	2.09	1891.....	1.61	-2.39	0.05
1871.....	2.80	-0.40	1.77	1892.....	1.30	-3.60	-0.17
1872.....	1.80	-0.74	0.81	1893.....	1.00	-1.30	-0.20
1873.....	2.73	-0.76	1.40	1894.....	1.80	-1.80	0.50
1874.....	2.80	-0.20	1.67				

Table showing highest, lowest and mean water in Chicago river and Lake Michigan during the year 1894, with comparison of the mean river and lake elevations and highest and lowest annual range:

MONTHS	CHICAGO RIVER AT CHICAGO AV. PIPE YARD.			LAKE MICHIGAN.			MEANS COMPARED.		RIVER OVER LAKE.
	Max.	Min.	Mean.	Max.	Min.	Mean.	River.	Lake.	
	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
January	0.9	-0.2	0.272	0.8	-0.8	-0.245	0.272	-0.245	0.517
February	0.9	-0.6	0.368	1.8	-1.8	0.364	0.368	0.364	0.004
March	0.9	-0.1	0.538	0.7	-0.6	0.264	0.538	0.264	0.274
April	1.4	0.4	0.833	0.8	-0.3	0.400	0.833	0.400	0.433
May	2.10	0.2	1.227	1.8	-0.1	0.751	1.227	0.751	0.476
June	1.9	1.0	1.373	1.1	0.7	0.863	1.373	0.863	0.510
July	2.2	1.0	1.480	1.5	0.6	0.893	1.480	0.893	0.587
August	2.0	0.9	1.374	1.2	0.6	0.639	1.374	0.639	0.635
September	1.8	0.2	1.008	1.1	-0.4	0.506	1.008	0.506	0.502
October	1.3	0.2	0.657	1.2	-0.1	0.312	0.657	0.312	0.345
November	1.4	0.4	0.583	0.9	-1.0	0.373	0.583	0.373	0.210
December	1.0	-0.4	0.233	0.9	-0.9	-0.470	0.233	-0.410	0.703
Mean annual			0.828			0.506	0.828	0.506	0.322

Highest water in the river, May 1st, 2.10 }
 Lowest " " " Feb. 6th, -0.60 } Greatest Range, 2.7

Highest water in the lake, Feb. 12 and May 18, 1.8 }
 Lowest " " " Feb. 22 -1.8 } G. R. 3.6

Table showing Precipitation and Mean Temperature in inches and degrees Fahrenheit over the basin of the upper lakes, and mean water in Lake Michigan in inches by years from 1871 to 1894, both inclusive, with the annual increase or decrease.

YEAR.	BASIN OF UPPER LAKES.						LAKE MICHIGAN.		
	PRECIPITA- TION.	DIFFERENCE WITH PRECEDING YEAR.		MEAN TEMPER'E	DIFFERENCE WITH PRECEDING YEAR.		LEVELS OF MEAN WATER.	DIFFERENCE WITH PRECEDING YEAR.	
	Inches.	Increase.	Decrease.	Degrees.	Increase.	Decrease.	Inches.	Increase.	Decrease.
1871	28.56	....	....	47.1	....	....	21.24	....	....
1872	29.68	1.12	....	49.9	....	3.2	9.62	....	11.62
1873	31.95	2.27	....	44.2	0.3	....	16.80	7.18	....
1874	29.69	....	2.26	45.8	1.6	....	20.04	3.24	....
1875	33.81	4.12	....	41.9	....	3.9	17.40	....	2.64
1876	39.13	5.32	....	44.7	2.8	....	30.72	13.32	....
1877	36.11	....	3.02	47.2	2.5	....	27.72	....	3.00
1878	37.92	1.81	....	49.3	2.1	....	24.00	....	3.72
1879	35.12	....	2.80	46.6	....	2.7	12.72	....	11.28
1880	36.36	1.24	....	47.0	0.4	....	13.92	1.20	....
1881	43.66	7.30	....	46.6	....	0.4	15.12	1.20	....
1882	37.85	....	5.81	47.0	0.4	....	24.00	8.88	....
1883	34.82	....	3.03	42.4	....	4.6	25.20	1.20	....
1884	37.34	2.52	....	44.5	....	2.1	26.88	1.68	....
1885	33.47	....	3.87	42.1	....	2.4	28.56	1.68	....
1886	30.15	....	3.32	44.4	2.3	....	31.68	3.12	....
1887	27.91	....	2.24	44.3	....	0.1	23.52	....	8.16
1888	29.27	1.36	....	43.1	....	1.2	15.60	....	7.92
1889	28.28	....	0.99	45.8	2.7	....	9.24	....	6.36
1890	34.45	6.17	....	46.1	0.3	....	7.56	....	1.68
1891	29.64	....	4.81	46.7	0.6	....	0.60	....	6.96
1892	34.36	4.72	....	44.7	....	2.0	-2.04	....	2.64
1893	30.00	....	4.36	46.1	1.4	....	-2.35	....	0.31
1894	27.46	....	2.14	49.6	3.5	....	6.00	8.35	....

Means for twenty-four years: Precipitation, 33.21 inches; Temperature, 45.5 degrees.
Levels of Mean Water one foot four and eight-tenths inches.

**STATEMENT SHOWING THE MAXIMUM, MINIMUM AND MEAN
TEMPERATURES AT CHICAGO, ILL., FOR EACH
DAY OF THE YEAR, 1894.**

DATE.	JANUARY.			FEBRUARY			MARCH.			APRIL.			MAY.			JUNE.		
1894.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.
1.....	43	38	35	22	9	16	49	31	40	38	33	36	71	57	64	74	49	63
2.....	46	36	41	33	13	23	43	34	39	39	31	35	50	45	48	83	54	69
3.....	42	35	39	28	20	24	64	35	50	53	38	46	76	45	61	89	53	66
4.....	32	28	30	20	12	16	60	47	54	48	39	44	59	51	55	73	49	61
5.....	32	27	30	35	12	23	66	53	60	44	35	40	69	51	60	45	41	43
6.....	34	18	26	43	26	35	42	34	38	58	35	47	71	55	63	50	40	45
7.....	19	5	12	46	35	40	42	33	38	37	34	36	67	50	58	76	44	60
8.....	32	17	25	35	29	33	34	29	32	42	34	38	69	50	60	83	64	74
9.....	33	30	32	46	33	39	52	33	43	36	31	34	71	59	65	81	63	72
10.....	36	15	26	27	22	25	68	44	56	37	33	35	73	54	64	84	64	74
11.....	30	20	25	26	14	20	50	35	48	40	33	37	61	44	53	89	71	80
12.....	32	18	23	28	22	25	52	37	45	42	33	38	78	53	66	86	73	80
13.....	47	26	37	25	16	40	51	36	44	46	38	42	74	61	68	84	73	79
14.....	48	33	41	30	20	25	40	31	36	51	40	46	84	55	70	86	70	78
15.....	48	40	44	20	11	16	53	34	43	63	40	52	74	57	66	90	75	83
16.....	46	42	44	26	6	16	60	37	49	71	49	60	88	64	76	83	68	76
17.....	60	37	49	39	25	32	74	49	62	66	40	56	85	50	68	79	66	73
18.....	38	32	35	37	18	23	67	59	63	75	50	63	45	35	40	62	53	58
19.....	37	26	32	22	15	19	38	34	36	66	52	59	44	36	40	66	53	60
20.....	55	34	45	10	5	8	60	35	48	47	40	44	41	38	40	84	58	71
21.....	41	33	37	9	-4	3	72	47	59	44	38	41	46	40	43	91	67	79
22.....	23	15	19	20	2	11	54	37	46	43	38	41	51	42	47	93	71	82
23.....	26	17	22	13	6	9	39	32	36	48	38	43	53	45	49	92	72	82
24.....	3	-3	0	15	6	11	38	28	33	49	43	46	60	44	52	87	67	77
25.....	9	-9	0	28	9	18	19	13	16	52	42	47	69	55	62	83	66	75
26.....	20	8	14	40	18	29	23	9	16	63	42	53	79	54	67	79	65	72
27.....	12	2	7	48	33	40	32	16	24	80	51	66	67	41	54	80	69	75
28.....	34	11	23	46	34	40	31	25	28	81	47	64	60	38	49	89	70	80
29.....	32	15	24	.....	.....	.....	31	20	26	65	45	55	50	45	48	92	70	81
30.....	30	9	19	.....	.....	.....	46	25	36	84	56	70	46	39	43	86	68	77
31.....	29	18	24	.....	.....	.....	54	38	46	.....	.....	.....	54	41	48	.....	.....	.....
Means.....	38.8	21.6	27.7	29.2	16.8	23	48.5	33.9	41.2	53.6	40.1	46.9	64	48.2	56.1	80.6	62.2	71.4

DATE.	JULY.			AUGUST.			SEPT.			OCTOBER.			NOV.			DEC.		
1894.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.
1.....	75	63	69	93	69	81	87	64	76	62	47	55	50	39	45	37	35	36
2.....	77	67	72	79	68	74	90	70	80	74	54	64	59	36	48	31	26	29
3.....	82	68	73	62	48	55	79	66	73	55	49	52	50	35	43	31	21	26
4.....	72	61	67	69	53	61	81	67	74	49	40	45	46	39	43	42	21	32
5.....	79	60	70	73	61	67	73	67	70	51	45	48	42	34	38	44	30	37
6.....	70	60	65	86	63	75	72	66	69	58	39	49	39	29	34	48	33	41
7.....	72	54	63	92	66	79	87	68	78	68	52	60	40	30	35	50	41	46
8.....	71	54	63	95	78	84	85	65	75	45	40	43	40	34	37	54	41	48
9.....	78	63	71	71	66	69	85	68	77	51	41	46	34	28	31	36	29	33
10.....	85	67	76	70	64	67	66	58	62	51	39	47	36	27	32	38	31	35
11.....	92	68	80	80	62	71	63	52	58	58	39	49	28	16	22	40	36	38
12.....	93	69	81	77	69	73	66	60	63	56	50	53	28	20	24	39	33	36
13.....	79	65	72	84	67	76	71	60	66	48	41	45	36	25	31	43	32	38
14.....	77	62	70	86	66	76	84	66	77	44	32	38	41	31	36	47	30	39
15.....	84	64	74	64	61	63	68	61	65	56	37	47	60	37	49	54	39	47
16.....	88	69	79	70	61	66	75	57	66	76	46	61	39	28	34	48	32	40
17.....	87	75	81	80	62	71	63	64	66	66	51	59	30	19	25	35	24	30
18.....	90	77	84	75	68	72	63	59	61	75	49	62	36	26	31	35	27	31
19.....	92	73	83	70	66	68	68	60	64	72	57	65	22	10	16	46	30	38
20.....	70	65	68	83	63	73	75	55	66	68	48	58	51	21	36	58	35	44
21.....	68	62	65	67	63	65	75	59	67	71	56	64	34	24	29	55	44	50
22.....	70	64	67	72	63	68	75	61	68	56	53	55	55	32	44	36	32	34
23.....	75	65	70	84	67	76	62	51	57	69	49	59	44	30	37	36	30	33
24.....	96	65	81	79	69	74	57	44	51	52	49	51	40	32	36	39	29	34
25.....	76	67	72	75	67	71	59	45	52	60	45	53	41	31	36	31	24	28
26.....	86	69	78	70	67	69	68	47	58	56	49	53	55	37	46	27	19	23
27.....	98	75	84	82	65	74	77	56	67	53	48	51	42	29	36	14	9	12
28.....	88	70	79	84	67	76	74	60	67	64	48	56	28	13	21	10	3	4
29.....	80	65	73	81	64	73	79	62	71	56	45	51	30	24	27	27	10	19
30.....	89	67	78	70	63	67	58	44	51	47	41	44	38	29	34	20	12	16
31.....	79	67	73	70	65	68	.....	.....	.....	46	36	41	.....	.....	.....	19	10	15
Means	81.0	65.7	73.4	77.2	64.4	70.8	73.7	59.4	66.6	58.6	45.6	52.1	40.5	28.2	34.4	37.6	27.5	32.6

Daily Precipitation at Chicago, Illinois, during 1894, expressed in inches and hundredths.

DATE.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November	December
1.....		.05			.74		Trace					.04
2.....					Trace			Trace		.04	.37	
3.....	.01	Trace		Trace	.20	.01			.40		.06	
4.....	Trace		.04	Trace					2.95	.02		
5.....			.45	.02	.69	Trace			.34	.05		
6.....	Trace		.92		.32				1.53			
7.....			.07						.01	Trace	.13	.01
8.....		.02						Trace	1.25		.17	Trace
9.....		.80		.63	Trace				.65		.04	
10.....		Trace		.77	.22			.19	.19		.01	.41
11.....				.01				.22			Trace	.06
12.....		.79		Trace					Trace	Trace	.25	
13.....		.29					Trace		.18	Trace	.08	
14.....	Trace	.02		Trace			.07	.12	Trace			
15.....	.12	Trace	.45		.28	.03	Trace		.51	Trace		Trace
16.....	.01				Trace	.01						.08
17.....		.02			.04	.37						
18.....		Trace	.07	.48	.46	Trace		.03				
19.....		Trace		.06						.03		
20.....	.64	.14	.07	.02	.02		.53					
21.....	.12		Trace	.02	.33					.29		
22.....	Trace		.05		.02				.27	.05	Trace	Trace
23.....	.38				.02	.31			Trace	.01	Trace	.01
24.....	.21	Trace										.06
25.....			.01		Trace	.46	Trace	.04		.04		.01
26.....	Trace					.17				.17		Trace
27.....				.13	Trace	.27						1.01
28.....			.53	.18			Trace				Trace	
29.....	.06		Trace	.26	.01					.13	Trace	
30.....				.07		.33				.01	.07	Trace
31.....	Trace									Trace		Trace
Total	1.55	2.13	2.66	2.65	3.35	1.96	0.60	0.60	8.28	0.84	1.18	1.66

Annual, 27.46.

TRACE—Indicates precipitation too small to measure.

**PRECIPITATION AT CHICAGO, ILL., FOR EACH MONTH AND YEAR
FROM JANUARY, 1871, TO DECEMBER, 1894, INCLUSIVE.**

YEAR.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
1871.....	4.18	1.45	2.66	3.70	3.90	5.56	2.52	2.01	0.74	.....	3.62	3.44	.....
1872.....	0.68	0.84	3.79	3.03	3.24	3.45	3.09	2.59	6.43	0.65	1.06	0.22	29.07
1873.....	2.56	0.47	0.89	6.22	7.20	1.44	4.04	1.58	3.53	2.43	1.61	4.44	36.41
1874.....	3.47	1.51	2.15	2.67	2.06	3.25	0.58	3.15	3.76	2.55	2.33	0.63	28.63
1875.....	0.96	1.99	1.43	2.32	3.64	5.17	7.18	3.29	4.39	4.32	0.75	2.62	38.06
1876.....	3.22	3.90	4.04	3.07	1.85	5.96	3.11	3.66	3.74	1.20	3.25	0.48	36.48
1877.....	1.91	0.06	5.37	2.42	1.81	6.04	2.98	3.06	2.02	6.51	6.08	2.75	41.01
1878.....	1.31	2.12	4.39	5.57	5.22	3.02	6.09	3.66	1.99	5.17	0.83	2.58	41.95
1879.....	0.54	1.47	2.37	1.93	3.89	3.18	5.58	0.45	1.18	2.72	4.93	2.47	30.71
1880.....	3.53	2.91	2.25	5.20	4.97	3.50	3.07	4.47	2.25	3.19	0.87	1.11	37.33
1881.....	0.87	5.96	2.99	1.84	1.85	5.93	4.31	0.54	4.34	6.89	5.97	2.67	44.18
1882.....	1.55	2.24	3.43	6.72	5.52	5.71	3.43	4.96	0.91	3.40	1.48	1.99	41.34
1883.....	1.74	4.74	0.42	3.72	7.32	5.61	5.53	1.21	1.36	7.36	5.26	1.59	45.86
1884.....	1.39	3.27	5.16	3.05	1.53	2.11	3.71	2.50	2.29	3.59	1.80	4.21	34.61
1885.....	3.18	2.01	0.57	4.00	3.17	5.20	2.44	11.28	2.97	3.87	2.33	3.35	44.37
1886.....	3.56	1.51	1.79	1.29	1.00	0.94	1.53	3.38	6.93	1.42	1.66	1.76	26.77
1887.....	3.13	5.10	0.89	0.46	1.38	1.63	1.05	3.35	4.03	2.03	2.41	3.67	29.13
1888.....	1.56	1.51	2.99	2.13	6.22	1.66	3.93	2.10	0.98	2.95	2.39	1.94	30.86
1889.....	1.64	1.31	1.43	2.35	5.38	2.93	9.56	0.39	2.75	1.82	3.49	1.90	34.95
1890.....	2.98	2.42	2.10	3.23	5.13	3.25	2.57	2.58	1.39	4.20	1.59	1.25	32.69
1891.....	1.99	1.95	2.13	3.14	2.09	2.42	2.47	4.52	0.82	0.36	3.83	1.32	26.54
1892.....	1.99	1.57	2.21	2.17	6.77	10.58	2.23	1.85	1.34	1.54	2.68	1.63	36.56
1893.....	2.08	2.44	1.69	4.16	1.93	3.59	3.08	0.18	1.98	1.75	2.45	2.32	27.65
1894.....	1.55	2.13	2.66	2.65	3.35	1.96	0.60	0.60	8.28	0.84	1.18	1.66	27.46
Sums.....	51.52	54.90	59.80	76.04	90.44	94.09	84.68	67.36	69.90	*70.76	64.85	52.00	*82.61
Means.....	2.15	2.29	2.49	3.17	3.77	3.92	3.53	2.81	2.91*	3.08	2.70	2.17	* 34.90

* 23 years only. Remainder for 24 years.

**COMMERCE BY LAKE AND CANAL—CITY OF CHICAGO, FROM
1871 TO 1894, BY YEARS—WITH POPULATION.**

Year.	VESSELS BY LAKE.			BY ILL. & MICH. CANAL.			POPULATION.
	Total No.	Total Tonnage.	Average Cargo, Ton.	Boats. No.	Tonnage.	Tolls. Dollars.	
1871	24,632	6,178,386	251	186	629,975	\$ 159,050	334,270
1872	25,353	6,077,542	239	173	783,641	165,874	367,396
1873	23,734	6,564,542	239	172	849,533	166,641	380,000
1874	21,547	6,329,711	294	152	712,020	144,831	395,400
1875	21,095	6,279,055	298	142	676,025	107,081	407,000
1876	19,245	6,167,736	320	145	691,943	113,293	420,000
1877	20,517	6,585,415	321	145	605,912	96,913	439,776
1878	20,984	7,239,673	345	140	598,792	84,330	450,000
1879	23,873	7,757,396	325	136	669,559	89,064	475,000
1880	25,520	9,154,351	345	133	751,360	92,296	503,298
1881	26,005	8,762,247	337	133	826,133	85,130	540,000
1882	26,977	9,754,949	362	132	1,011,287	85,947	560,693
1883	23,982	7,793,337	325	132	925,575	77,975	580,000
1884	22,826	7,508,696	330	134	956,721	77,102	630,000
1885	21,542	7,306,222	339	135	827,355	66,800	664,634
1886	22,372	7,877,080	352	130	808,012	62,516	704,000
1887	23,972	8,749,852	365	132	742,074	58,025	760,000
1888	22,095	8,890,658	402	127	751,055	56,028	830,000
1889	21,788	10,267,831	471	114	917,047	65,305	1,100,000
1890	20,133	10,116,051	502	104	742,392	55,111	1,200,000
1891	19,680	10,862,898	522	97	641,156	49,457	1,320,000
1892	21,123	11,780,393	565	95	783,288	54,987	1,450,000
1893	17,044	10,788,029	692	82	503,326	38,326	1,600,000
1894	16,202	10,284,178	635	81	587,266	44,547	1,640,000

CHICAGO.

YEAR.	ARRIVALS.		CLEARANCES.		TOTAL.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
1883	11,203	3,555,586	11,271	3,743,574	22,474	7,299,160
1884	10,513	3,481,957	10,640	3,489,666	21,153	6,971,623
1885	9,846	3,347,647	9,910	3,364,169	19,756	6,711,816
1886	10,180	3,564,309	10,267	3,594,549	20,447	7,140,858
1887	10,828	3,868,465	10,920	3,989,615	21,748	7,856,080
1888	10,158	3,990,921	10,308	4,134,064	20,466	8,124,985
1889	9,552	4,417,415	9,462	4,403,634	19,014	8,821,049
1890	9,188	3,344,502	9,284	4,429,654	18,472	8,774,156
1891	8,956	4,569,526	9,144	4,698,320	18,100	9,267,846
1892	8,907	4,798,241	9,252	4,972,216	18,325	9,770,457
1893	8,011	4,892,580	8,062	4,914,854	16,073	9,807,434
1894	7,318	4,828,685	7,379	4,858,359	14,697	8,687,044

SOUTH CHICAGO.

YEAR.	ARRIVALS.		CLEARANCES.		TOTAL.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
1890	860	707,670	801	684,225	1,661	1,341,895
1891	847	870,188	734	724,864	1,581	1,595,052
1892	1,107	1,089,635	952	920,301	2,052	2,009,936
1893	497	505,626	474	474,969	971	980,595
1894	747	798,236	758	798,898	1,505	1,597,134

TONNAGE OF THE DISTRICT OF CHICAGO, 1894.
VESSELS ENTERED.

PORT OF	COASTING TRADE.		FOREIGN TRADE.						TOTALS.	
	American Vessels.		American Vessels.		Foreign Vessels.		TOTAL.		No.	Tonnage.
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.		
Chicago	7,289	4,317,717	17	7,592	12	3,376	29	10,968	7,318	4,828,685
South Chicago	747	798,236	.....	.....	.....	.....	.....	.....	747	798,236
Michigan City	194	54,339	.....	.....	.....	.....	.....	.....	194	54,339
Totals.....	8,230	5,170,292	17	7,592	12	3,376	29	10,968	8,259	5,181,260

VESSELS CLEARED.

PORT OF	COASTING TRADE.		FOREIGN TRADE.								TOTALS.	
	American Vessels.		American Vessels.		Foreign Vessels.		TOTAL.		No.	Tonnage.		
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.				
Chicago.....	7,240	4,263,744	127	91,239	12	3,376	139	94,615	7,379	4,358,359		
South Chicago.....	746	791,111	12	7,787	.....	.....	12	7,787	758	798,968		
Michigan City.....	192	53,903	.....	.....	.....	.....	..	.....	192	53,903		
Totals.....	8,178	5,108,758	139	99,026	12	3,376	158	102,402	8,329	5,211,160		

S. G. ARTINGSTALL,

City Engineer.

DEAR SIR:—I have the honor to present herewith the annual report of the Architectural Department of this office for the year ending December 31, 1894, showing the number of buildings designed and supervised for the different City departments.

POLICE DEPARTMENT.

Early in January the police station in South Englewood was completed. The building is a two-story frame structure, 89x57 feet, equipped with a steam-heating plant. Cost, \$15,700. Contractors, Tobin & Raycroft.

Steam-heating plant for South Chicago Police Station. Cost, \$2,500. Contractor, Sam'l F. Pope Co.

A two-story and basement police station was erected corner of West North avenue and Oakley avenue. Work was commenced in April and the building completed end of July. Dimensions of the building, 25x115 feet. Cost, \$11,670. Contractors, D. H. Ketelsen & Co.

In addition to above, plans were prepared for a new central police station, to be located corner Harrison street and Pacific avenue, to be four stories high, fire-proof and with all modern conveniences. The estimated cost is \$150,000.

FIRE DEPARTMENT.

Completing the unfinished fire engine house, with hose-tower, 8630 Emerald avenue. Cost, \$2,325. Contractors, D. H. Ketelsen & Co.

Completing the two-story frame truck house, with hose-tower, West Fortieth street. Cost, \$3,035. Contractor, Wm. I. Ryan.

Two-story frame fire engine house and barn, 780 Robey street. Ground was broken in May and the building completed end of June. Cost, \$8,659. Contractors, Busse & Gleason.

Two-story frame fire engine house, with hose-tower, West Pullman. Cost, \$2,574. Contractors, Ohlsen & Ham.

Two-story frame fire engine house, with hose-tower, West Fortieth place. Cost, \$2,700. Contractor, I. Campbell.

CITY TELEGRAPH DEPARTMENT.

Plans and specifications were prepared for an electric light station, South Halsted street and Blue Island avenue. Dimensions of the building, 50 x 220 feet. The walls are of brick, laid on concrete foundation; the steel roof is covered with a grooved tile. The inside of walls is faced with red pressed brick. Work on the building was commenced in October, and the building will be far enough advanced within a week to proceed with the erection of the engines.

The contractors for the building were Busse & Gleason; the cost, \$15,000. Contractor for engine foundation was T. E. Courtney; cost, \$4,160. Contractor for roof was the Kenwood Bridge Company; cost, \$3,599. The steel chimney designed for this station is 165 feet high and 8 feet in diameter. The inside is lined with fire brick. Contractor, H. A. Streeter; cost, \$4,850.

HOUSE OF CORRECTION.

Plans were prepared for a series of solitary cells.

HEALTH DEPARTMENT.

In January, 1894, the first public bath house, located at 192 Mather street, was opened to the public. Dimensions of the building, 25 x 100 feet. The first floor contains the waiting room and the general bath room, consisting of swimming tank, seventeen showers and one tub. The boiler and heater are located in the basement. The second story is occupied by the Superintendent. Contractors for building, Joseph Stamsen & Co.; cost, \$7,825. Contractors for plumbing and heating, The Wells & Newton Co.; cost, \$2,511.47.

Plans and specifications are being prepared for a new Municipal Hospital for contagious diseases, to be erected between Lawndale and Hamlin avenues and Thirty-fourth and Thirty-fifth streets. All buildings will be one story and basement structures, fire-proof and equipped with the most approved system of hygienic plumbing, heating and ventilation. The estimated cost is \$180,000.

Respectfully submitted,

ADOLPH FINKLER,

City Architect.

REPORT OF THE
Bureau of Water Rates
CITY OF CHICAGO

WATER OFFICE REPORT.

JOHN MCCARTHY, Esq.,

Commissioner of Public Works.

SIR: I have the honor to herewith submit the Annual Report of the Water Office for the fiscal year ending December 31, 1894.

COLLECTIONS.

The total gross collections from all sources for the year 1894 were \$3,030,777.57. Deducting \$11,055.50, refunded on account of erroneous assessments, etc., the net revenue of the office was \$3,019,722.07. Of the total collections \$1,012,396.56 was from the meter rates and \$1,928,511.96 from the assessed rates.

The collections for 1893 were \$2,837,827.35, of which \$1,000,946.45 was from the meter rates and \$1,764,574.59 from the assessed rates.

Considering the loss of revenue on account of the closing of the World's Fair, and many important manufacturing institutions which were large consumers of water, the increase in collections of \$192,950.22 over 1893 is highly satisfactory.

The total increase in collections for the two years of my incumbency, viz., 1893-4, over 1891-2, is \$945,207.05.

EXPENSE.

The total expense of the Water Office for the year 1894 was \$287,306.92 as against \$294,968.60 for 1893, a net saving for the year of \$7,661.68.

The total decrease of expense for the years 1893-4 over 1891-2 is \$68,606.89.

The per cent. of expense of the Water Office (mechanical as well as the collection of rates) to amount collected in 1891 was 13 per cent.; in 1892, 13 per cent.; in 1893, 10 per cent., and in 1894 9½ per cent.

INCREASE OF REVENUE.

Adding the increased collection to the decrease in expense, the total increase of revenue for 1894 over 1893 is \$200,611.90, and for the years 1893-4 over 1891-2, \$1,013,813.94. A corresponding increase of revenue for a few years would enable the City to materially decrease the present existing rates.

The above gratifying result, especially the increase in 1894, is very largely attributable to the policy of His Honor, Mayor Hopkins, in adopting the recommendation contained in my last annual report of thoroughly re-inspecting the City. In addition to the regular force of inspectors an extra force was authorized, by reason of which I was enabled to re-inspect and re-assess the Eleventh, Twelfth, Seventeenth, Eighteenth, Twenty-seventh, Thirtieth and Thirty-second Wards. The result was an increase of the assessed rates of \$93,686.89. The expense of this extra force was only \$9,294.72.

UNCOLLECTED TAX.

The amount of uncollected assessed rates at the close of business, December 31, 1894, was \$377,250.35. This amount would have been much smaller, no doubt, but for the stringency of the times, which has made it impossible for many people to pay and take advantage of the discount of 15 per cent.

A very large proportion of this uncollected tax will be paid before the shut-off period (February 1st on the North and South Sides, and March 1st on the West Side), and, afterward, by shutting off considerable more will be collected. (See note below.)

An examination last year disclosed the fact that there is nearly \$100,000 of uncollected taxes standing on the books from year to year, uncollectible for the following reasons:

1st. Where the premises are vacant, and the supply is not needed.

2nd. Where the premises are unconnected with the water main, the charge being simply for frontage.

I again renew the recommendation contained in my last year's report as to the necessity of a new ordinance, which will provide a more efficient mode for enforcing the collection of delinquent rates.

NOTE.—March 1, 1895, the \$377,250.35 was reduced to \$254,388.43.

EXEMPTIONS.

Amount of rebates of assessed rates for the year on account of municipal and public buildings, \$29,501.91; amount rebated on account of charitable, religious and educational institutions, \$24,428.00; total, 53,929.91, as against \$55,398.08 in 1893.

By order of the Council, a meter bill amounting to \$9,926.50, against the West Park system, was also rebated.

There are in addition quite a large number of colleges, seminaries and other semi-public institutions, which are declared to be entitled to free water, where the supply is controlled by meter, the amount of which is not known, as it has not been considered advisable to incur the extra expense of employing men to read such meters monthly, if no revenue is to be derived therefrom.

COUNTY JAIL, ETC.

On June 6, 1890, the Finance Committee of the City Council passed an order agreeing to rebate the water tax, under meter measurement, against the County Jail building after January 1, 1891, on the ground that the County pumped its supply from the City mains, and notification to this effect was served on Henry Hamilton, the then Superintendent of Water. The Committee, however, refused to rebate the tax against the Court House. On October 19, 1891, the same Committee passed an additional order exempting the Court House from water tax after October 1, 1891. In 1892 the meters controlling the supply to these County buildings were removed, and from the dates specified in the respective orders no rates have been collected.

It would appear that the first order exempting the Jail building was passed under a misapprehension, as the County did not then, neither does it now, pump all the water used, for in addition to the 6-inch pipe connected with its pump, there are two 4-inch pipes, one 1½-inch pipe and two ¾-inch pipes, through which the water is forced by City pressure. This being true, and there being a question whether the citizens of Cook County, outside of the City of Chicago, should not pay the same proportion of expense for furnishing water for County purposes that the Chicago citizens have to pay, the question has been referred to the Law Department of the City to determine the legality of the exemption.

In accordance with your instructions, I have caused these two County buildings to be placed under meter control, as follows :

At the Jail and Criminal Court building, one 6-inch Gem, No. 140,875, located on the south side of Illinois street, 110 feet west of Dearborn avenue ; one 4-inch Thomson, No. 21,988, in roadway on north side of Michigan street, 105 feet west of Dearborn avenue ; one 1½-inch Worthington, No. 2,957, on the west side of Dearborn avenue, 84 feet south of Illinois street ; one 3-inch Worthington, No. 030, on south side of Illinois street, 118 feet west of Dearborn avenue.

Meters controlling the supply of the Court House are: One 3-inch Worthington, No. 17,164, inside of Court House building, on the west side of Clark, 120 feet north of Washington street ; one 3-inch Worthington, No. 6,673, inside of Court House building, on the west side of Clark, 120 feet north of Washington street.

The loss to the City from this source alone, to date, is about \$16,000, and is increasing at the rate of \$650 per month. It is entirely conservative to say that the City is exempting each year, in addition to its own buildings, water rates to the amount of \$60,000.

PLUMBERS' LICENSES.

There were 619 licenses issued during the year, netting the City \$15,475.00. This is an increase of 134 in number and \$3,350.00 in revenue over 1893.

SERVICE PIPES.

During the year 6,423 water service pipes were put in. The average cost to the property-holder per water service pipe in 1893 was \$17.29. The average cost of same in 1894 was \$12.65, a net saving to the citizen of \$4.64 per pipe, and a total saving on pipes put in of \$29,802.72. This difference in cost is due to a difference in price of material of \$1.53 per pipe, and the balance, \$3.11, by vigilantly holding the contractor to the exact terms of his contract.

INSPECTION DEPARTMENT.

In addition to the wards re-inspected, previously alluded to, this department made 13,223 special examinations.

METER (MECHANICAL) DEPARTMENT.

In March last, upon order of the Mayor, this department was transferred from the City Engineer's Department and became one of the sub-departments of this office. The change has been very advantageous in simplifying the matter of placing the water supply under meter control, both for the consumer and for the City.

During the year, 300 old City meters were removed and replaced with private meters, and 294 new meters set, making a total of 594 meters set during the year.

December 31, 1893, there were 4,654 meters in actual use. New meters set in 1894, 294; removed permanently for cause, 74, making an increase of 220 for the year, and the total number of meters in use December 31, 1894, 4,878, not including 280 hydraulic elevator indicators.

Sixteen new school houses have been connected with the City mains, six motors for church organs, one police station and two hospitals.

During the year there have been a number of illegal water service pipes discovered. In some cases these pipes were six inches in diameter, and not controlled by meter; in other cases connections were made between the meter and the City main, and re-connected outside of the meter, thus making a run around or by-pass. In every instance the pipe has been cut off and capped or controlled by meter. Estimated bills have been rendered and collected for water consumed during the time these irregular connections were made use of.

During the year there has been \$1,899.27 collected for repairs made on meters prior to 1894, many of them dating back to 1891. This department is more than self-sustaining, showing a net profit for the year, over all expenses, of \$5,598.45.

METER CONTROL.

I am of the opinion that the only equitable and satisfactory way to collect water rates is by meter measurement. This, if universal, would not only increase the revenue, but would reduce to a minimum the great quantity of water wasted, and this is a question of such serious import that immediate steps should be taken to remedy the evil.

Reliable statistics show that in 1893, in 117 cities and towns in the United States and Canada, there were but seventeen where the consumption per day was greater per capita than ours, the average being $191\frac{3}{4}$ gallons, while 100 show a per capita of only $74\frac{1}{2}$ gallons. The per capita in Chicago during the World's Fair year, on a basis of 1,800,000 people, was 131 gallons, which is increased to $145\frac{1}{10}$ gallons in 1894, on a basis of 1,640,000 people. The towns where the least per capita is shown are generally well metered. A notable instance is Providence, R. I., the population of which is 150,000, with 12,000 meters. The per capita is only 60 gallons.

One hundred and forty-five gallons per day in Chicago for every man, woman and child simply means an enormous waste that must be checked in some way or water famines will be common here before additional means for supply can be furnished. Besides checking waste, the revenues of the Department would also be largely increased. I respectfully recommend a radical extension of the meter system during the coming year.

AN OFFICIAL STANDARD.

Experience has demonstrated that there are different grades of meters in the market—good, bad and indifferent. The City should, in my opinion, have an official and exhaustive test made of the different styles under the direction of the City Engineer, or some other expert authority, and adopt as standard those meters filling certain specified requirements.

CONSOLIDATION OF SUB-OFFICES.

In May last the Hyde Park sub-office was removed and consolidated with the general office. Increased collections, a decrease in expense, with a better control of the multitude of detail incidental to the system, make the change in every way satisfactory, and I strongly recommend the same course with the Town of Lake office in the near future.

PULLMAN'S PALACE CAR COMPANY CONTRACT.

The contract hitherto existing between the trustees of the village of Hyde Park and Pullman's Palace Car Company was terminated by notice on the part of the City in January, 1894, and since that time instead of four cents per thousand gallons, the City has collected the regular meter rates up to 5,000,000 gallons per month and six and one-half cents for all in excess of that amount, the special rate being established by the Commissioner of Public Works.

THE POPE DEFALCATION.

In 1888 one Gardner J. Pope, a collector in this office, under the system then in vogue, collected and embezzled something over \$5,000 for water rates. The matter has been referred to the City Law Department, and suit has been instituted against the bondsmen for the recovery of the amount.

SENDING OUT WATER BILLS.

It is the theory of the water ordinance that consumers shall call at the office and secure their own bills. For years, however, the practice had been of undertaking to deliver the bills by means of the shut-off force. This, as a rule, was found to be unsatisfactory, as there was absolutely no means of knowing whether the City employe performed his task or not. In a number of instances it was known positively that he did not, but quietly made away with the bills. Upon my recommendation the Commissioner of Public Works authorized me to send them out under cover of first-class postage, and this has been done wherever there is a free delivery and where the street number is known. This plan, although involving quite an additional expense in the way of postage, has materially induced a more prompt settlement of rates, and by expressions of favor on the part of the taxpayer demonstrated the wisdom of the change.

SYSTEM OF ACCOUNTS.

The system of double entry bookkeeping inaugurated last year has been extended and perfected in many essential particulars by the very diligent and capable head of that department.

As soon after the semi-annual payments as practicable, a balance is taken from the ward books by the window clerks in charge of said books, and the amounts thereon compared with and proven by the ward accounts on the general ledger. Once a week a trial balance is taken from the general ledger, and a statement prepared showing the exact financial condition of the office.

The system to-day is as perfect as that of any private or corporate enterprise of a similar magnitude.

PETTY REBATES.

Formerly when it was found that a taxpayer was entitled to a rebate on account of discontinuing the use of a fixture, or by an erroneous assessment, the claim had to be vouchered in each instance and passed through the bookkeeping department of the Commissioner of Public Works, from there to the Comptroller's office, and in the course of two or three weeks the taxpayer would get his warrant. This has been much simplified by giving him an order signed by the Commissioner of Public Works on the Cashier of this office for the amount. The Cashier accepts the order as cash, and the City Treasurer receives a warrant from the Comptroller for the sum total of such orders each day. The delay to the taxpayer is thus obviated.

COMPARISON OF RATES.

That Chicago is blessed with not only the best but cheapest water supply in the country, is a fact beyond successful contradiction. As an indication of this the following comparison will be of interest. Take for example the ordinary two-story, eight-room house, thirty feet in width, situated on a 50-foot lot, supplied with one closet, one bath tub, one wash hand basin, one kitchen sink, and the use of water during the season for sprinkling the lawn and washing sidewalks and windows. The following are the rates in ten of the principal cities of the United States:

St. Louis	\$27 00
Kansas City	26 50
Pittsburgh.....	26 50
Milwaukee.....	24 25
Boston (sprinkling prohibited unless under meter)	22 00
Brooklyn.....	22 00
Cincinnati.....	20 25
Philadelphia.....	18 00
New York (sprinkling or use of hose prohibited)	13 00
Chicago.....	13 50

In addition to this, but one family is allowed in a house, and no discount is allowed for prompt payment, excepting in the case of Cincinnati, where 10 per cent is given. On the contrary, in New York and several other cities a penalty of from 5 to 10 per cent is added unless the rates are paid promptly.

In Chicago two families are allowed in such a residence, without extra charge, and a discount of 15 per cent is given for prompt payment. All other buildings in like proportion. The meter rates in the cities named are as follows :

Kansas City, per 1,000 gallons	36 cents.
St. Louis, " "	30 "
Omaha, " "	30 "
Milwaukee, " "	20 "
Boston, " "	18 $\frac{2}{3}$ "
Cincinnati, " "	15 "
New York, " "	13 $\frac{1}{4}$ "
Chicago, 10 cents per 1,000 gals. for the first 165,000 gals. used per month, and 8 cents in excess of this amount.	

That Chicago is not only liberal but generous is shown by the fact that in the cities mentioned all churches are assessed and pay a water rate of from \$1.35 to \$100.00 per annum, according to size, and all hospitals and asylums pay dwelling house rates.

In Chicago the above are exempt from water rates.

Further information in detail may be obtained from the annexed statements and tabulated reports of the sub-departments of the office.

ASSESSMENTS AND COLLECTIONS.

The following is a recapitulation of assessments and collections of the Water Office for the year 1894:

DR.

Delinquent assessed rates, January 1, 1894	\$ 309,509 93
Assessments, May 1, 1894	2,227,637 77
Assessor's increase checks	205,337 30
Meter rates	1,012,346 71
Meter, "Mechanical"	26,350 46
Water permits	26,734 64
Plumbers' licenses	15,475 00
Assessor's Miscellaneous	21,108 41
	<u>\$3,844,550 22</u>

CR.

Gross receipts of Water Office	\$3,030,777 57
Less amount refunded	11,055 50
	<u>\$3,019,722 07</u>
Collections (net) from January 1, 1894, to January 1, 1895	\$3,019,722 07
Erroneous assessments, payments on wrong property, duplicate payments and overpayments	9,462 15
Discounts	272,535 33
Assessor's decrease checks for municipal and public buildings	29,501.91
Assessor's decrease checks for religious, charitable and educational institutions	24,428 00
Assessor's decrease checks for overpayments as per affidavits, removals, changes to meter control, and other cases	111,650 41
Balance uncollected assessed rates, January 1, 1895	377,250 35
	<u>\$3,844,550 22</u>

COLLECTIONS OF THE WATER OFFICE FOR 1894.

GROSS.

1894.	Assessor's Miscella- neous.	Permits.	Meter.	Meter Mechanical Dept.	Licenses.	Assessed Rates.	TOTAL.
January	\$ 80 62	\$ 703 45	\$ 96,721 07	\$ 56 30	\$3,625 00	\$ 87,255 76	\$188,442 20
February	78 73	732 10	72,654 12	.....	3,300 00	34,924 26	111,689 31
March	81 91	2,451 25	86,217 09	23 70	2,825 00	35,777 91	127,376 86
April	2,322 28	1,820 80	101,983 25	2,219 86	1,775 00	21,938 61	132,059 80
May	5,175 97	2,930 25	81,180 71	3,470 80	1,750 00	502,258 35	596,766 08
June	2,737 11	2,755 05	64,456 31	3,531 45	650 00	301,666 05	375,795 97
July	2,379 53	2,623 05	81,563 97	2,671 28	525 00	71,632 84	161,395 67
August	2,684 74	3,291 25	83,360 86	3,130 45	400 00	50,765 23	143,632 53
September	1,757 59	2,328 40	82,185 14	2,402 00	400 00	35,866 88	124,940 61
October	940 39	3,006 20	89,525 31	2,096 40	150 00	27,618 13	123,336 43
November	2,738 25	2,420 10	81,164 03	2,924 45	25 00	420,338 25	509,610 08
December	279 62	1,724 95	91,384 70	3,823 17	50 00	338,469 59	435,732 03
TOTALS	\$21,256 74	\$26,786 85	\$1,012,396 56	\$26,350 46	\$15,475 00	\$1,928,511 96	\$3,030,777 57

ASSESSED RATES BY DISTRICTS.

FIRST, SECOND, THIRD, FOURTH, FIFTH AND SEVENTH DISTRICTS.

Assessments for 1894, entered on Ward books, May 1, 1894..... \$1,988,824 20

Amount of increase checks from January 1, 1894, to December 31, 1894, inclu- sive.	Amount of decrease checks from January 1, 1894, to December 31, 1894, inclu- sive.
January.....\$ 5,189 35	January.....\$ 7,407 11
February..... 4,057 60	February..... 5,006 38
March..... 4,769 35	March..... 4,211 81
April..... 5,002 11	April..... 4,077 66
May..... 51,313 09	May..... 23,472 70
June..... 16,109 63	June..... 16,578 96
July..... 17,521 08	July..... 5,861 74
August..... 18,631 79	August..... 6,780 30
September... 19,635 82	September..... 5,647 09
October..... 19,824 17	October..... 47,092 15
November..... 7,366 91	November..... 14,212 55
December..... 6,898 08	December..... 10,615 57
Total.....\$176,318 98	Total.....\$150,964 02

Total increase for 1894.....\$176,318 98

Total decrease for 1894..... 150,964 02

Net increase..... 25,354 96

Total..... \$2,014,179 16

SIXTH DISTRICT—TOWN OF LAKE.

Assessments for 1894, entered on Ward books May 1, 1894..... \$ 238,863 57

Amount of increase checks from January 1, 1894, to December 31, 1894, inclu- sive.	Amount of decrease checks from January 1, 1894, to December 31, 1894, inclu- sive.
January.....\$ 565 44	January.....\$ 1,483 81
February..... 342 81	February..... 278 41
March..... 700 91	March..... 1,816 45
April..... 697 91	April..... 571 75
May..... 5,096 49	May..... 3,012 28
June..... 2,608 02	June..... 1,466 68
July..... 1,132 46	July..... 846 26
August..... 2,776 91	August..... 425 34
September..... 11,449 10	September..... 283 48
October..... 2,637 25	October..... 878 90
November..... 48 75	November..... 2,069 12
December..... 962 27	December..... 1,483 82
Total.....\$29,018 32	Total.....\$14,616 30

Total increase for 1894.....\$29,018 32

Total decrease for 1894..... 14,616 30

Net increase..... 14,402 02

Total..... \$ 253,265 59

MISCELLANEOUS ASSESSMENTS, 1894.

INCREASE.

January	\$ 80 62
February	78 73
March	81 91
April	2,322 28
May	5,175 97
June	2,737 11
July	2,379 53
August	2,684 74
September	1,757 59
October.....	940 89
November	2,738 25
December	279 62
Total.....	<u>\$21,256 74</u>

Total assessment for First, Second, Third, Fourth, Fifth and Seventh Districts, made for the year 1894, with increase and decrease included \$ 2,014,179 16

Total assessment for Sixth District made for the year 1894, with increase and decrease included..... 253,265 59
\$ 2,267,444 75

Miscellaneous assessments made for the year 1894..... 21,256 74
Total \$ 2,288,701 49

Amounts rebated by ordinance and orders of the City Council, included in decrease checks in the foregoing report :

On municipal and public buildings \$ 29,501 91
 On religious, charitable and educational institutions..... 24,428 00
Total \$ 53,929 91

Amount of increase checks for First, Second, Third, Fourth, Fifth and Seventh Districts..... \$ 176,318 98
 Amount of increase checks for Sixth District ... 29,018 32
\$ 205,337 30
 Amount of decrease checks for First, Second, Third, Fourth, Fifth and Seventh Districts..... \$ 150,964 02
 Amount of decrease checks for Sixth District..... 14,616 30
Total \$ 165,580 32
 Less amounts rebated on municipal and public buildings, religious, charitable and educational institutions... 53,929 91
111,650 41
 Net increase for 1894..... \$ 93,686 89

WATER OFFICE—DETAIL OF EXPENSE ACCOUNT FOR 1894.

Railroad transportation.....	\$ 899 02
Street car tickets.....	2,702 39
Postage stamps.....	6,197 56
Gas bills—Town of Lake office.....	77 60
Gas bills—Hyde Park office.....	59 01
Rent—Town of Lake office.....	1,716 63
Rent—Hyde Park office.....	585 00
Stationery—Ward books, water bills, etc.....	4,338 24
Telephone.....	52 08
Tools, tapes, etc.....	176 86
Miscellaneous.....	452 77
Salaries paid by special vouchers.....	10,249 33
Pay rolls.....	259,800 43
Total.....	<u>\$287,306 92</u>

LEAK, WASTE AND SHUT-OFF.

The following table shows the work done by the leak, waste and shut-off force:

1894.	Bills Delivered.	Shut-off notices Delivered.	Shut-off for unpaid tax.	Shut-off for leaks and waste.	Water turned on.	Complaints Investigated.	Hose Reported.	Notices of leaks and waste.
January.....			45	46	19	111	..	58
February.....		2,641	299	53	57	122	.....	61
March.....			588	54	180	124	.....	63
April.....	22,750		816	26	406	128	.....	49
May.....			212	20	237	121	.....	117
June.....			220	26	168	306	462	203
July.....		9,064	423	22	114	232	420	209
August.....		7,896	166	16	102	231	401	179
September.....			153	10	130	156	17	103
October.....	24,325		162	12	272	82	.....	47
November.....			37	8	78	58	.....	39
December.....			42	9	31	65	.....	57
TOTAL ...	* 47,075	19,621	3,163	302	1,794	1,736	1,300	1,185

* These bills were delivered in districts where there is no free delivery, and where the address (street number) is not known.

WORK OF WATER INSPECTORS.

The following is the report of the work done by Water Inspectors for the year 1894:

BUILDINGS EXAMINED.

1894.	One-Story.	Two-Story.	Three-Story.	Four-Story.	Five-Story.	Six-Story.	Special Examinations.	Total per Month.
January	1,664	5,886	1,528	214	20	.....	588	9,895
February	702	3,911	1,429	204	95	2	447	6,790
March	532	4,008	1,964	1,202	35	6	544	8,291
April	325	3,672	1,025	486	24	1	1,128	6,611
May ..	1,053	4,043	1,350	403	11	.....	2,598	9,458
June	1,316	5,553	1,243	357	18	4	2,013	10,499
July	2,651	6,630	904	223	5	.....	1,196	11,609
August	2,967	6,558	1,164	166	8	.....	1,160	12,023
September	412	4,704	809	118	4	.....	755	6,797
October	1,450	4,487	625	524	.....	2	496	7,584
November	345	4,715	733	285	5	1	1,389	7,423
December .....	.....	.....	.....	.....	.....	.....	964	964
TOTAL	13,417	54,117	12,774	4,127	220	16	13,223	97,894

METER DEPARTMENT.

(MECHANICAL.)

Complete Financial Report of the Meter Department (Mechanical) for the year ending December 31, 1894, including the period prior to the consolidation with this office, viz., January, February and March, 1894, when it was a part of the City Engineer's Department.

RECEIPTS.

Sale of small meters.....	\$25,650.57	
Meter repairs.....	10,161.54	
Deposits for meters, 2-inch and over.....	29,859.10	
		<u>\$65,671.21</u>

DISBURSEMENTS.

Expense, salaries, etc.....	\$18,088.17	
Refunds.....	1,336.65	
Paid City Engineer for valves, labor, etc., on City mains for large meters.....	10,118.35	
Expense of repairs at North shops.....	8,500.00	
Stock account.....	22,029.59	
		<u>60,072.76</u>

Net profit to the City \$ 5,598.45

Total stock on hand as per inventory, including horse and buggy \$ 7,004.70
 Amount due and uncollected for repairs in 1894..... 868.85

METER DEPARTMENT (MECHANICAL).—REPORT OF METER SERVICE FOR YEAR 1894.

SIZE OF METERS.	$\frac{1}{8}$ -inch	$\frac{1}{4}$ -inch	1-inch	1½ in.	2-inch	3-inch	4-inch	6-inch	10-inch	Totals
Meters in service December 31, 1893.....	312	391	1,122	971	939	560	153	32	2	4,482
New Meters added during 1894.....	30	33	221	99	110	67	17	7	.....	594
New Meters added during 1894, furnished by private parties.....	.....	1	3	1	3	.....	1	1	.....	10
Total.....	342	425	1,346	1,071	1,052	627	171	40	2	5,076
City Meters removed during 1894.....	28	13	132	45	32	50	1	.....	.....	301
Private Meters removed during 1894.....	11	11	29	18	18	13	5	1	.....	106
Meters in service December 31, 1894.....	303	401	1,185	1,008	1,002	564	165	39	2	4,669
Meters owned by City.....	2	2	7	2	2	5	.....	1	.....	21
Meters owned by private parties.....	301	399	1,178	1,006	1,000	559	165	38	2	4,648
Meters in stock December 31, 1893.....	8	10	20	16	11	7	2	.....	.....	69
Meters purchased from manufacturers.....	.....	44	64	41	66	18	22	8	.....	258
City Meters removed, repaired and in stock.....	3	11	133	45	30	50	1	.....	.....	272
Meters purchased from private parties.....	.....	9	8	7	12	1	1	1	.....	39
Total.....	6	74	214	109	119	76	26	9	.....	683
Meters placed during 1894.....	30	34	224	100	113	67	18	8	.....	594
Meters in stock December 31, 1894.....	6	13	16	11	6	5	2	.....	.....	59
Meters removed to works, repaired and replaced.....	23	18	47	31	19	19	6	1	2	161
Meters repaired.....	230	244	427	337	328	285	77	26	34	1,988
Hydraulic elevators now in use in City.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	280

WATER SERVICE PIPES LET AND PUT IN BY CONTRACT DURING YEAR ENDING DECEMBER 31, 1894,
SHOWING THE NUMBER OF PIPES AND THE TOTAL AMOUNT OF CONTRACT
AND AMOUNT FOR TAPS AND ASSESSOR'S COST.

STREET.	FROM	TO	Number of Pipes.	Assessor's Cost.	Taps.	Amount of Contract.
Aberdeen.....	Fifty-seventh.	Fifty ninth.	82	\$ 48 17	\$ 112 00	\$ 426 24
Adams.....	West Fortieth.	West Forty-sixth.	260	391 05	910 00	3,952 00
Addison avenue.....	Lincoln avenue	Ashland avenue	18	19 52	45 50	185 12
Albany avenue.....	Ogden avenue	West Nineteenth.	35	52 53	122 50	379 05
Atlantic.....	Forty-seventh	Garfield boulevard	46	69 00	161 00	544 84
Atlantic.....	Thirty-ninth	Root.	24	36 18	84 00	277 92
Armour avenue.....	Garfield boulevard	Southern terminus	15	22 50	52 50	168 45
*Avers avenue.....	Kinzie	Chicago avenue.	53	79 89	185 50	760 66
Baxter.....	Wellington avenue	Roscoe	24	36 00	84 00	293 04
Burling.....	Wrightwood avenue	418 feet south	6	9 00	21 00	83 52
Canalport avenue.....	Twenty-second	South Halsted	9	18 56	31 50	157 59
Carpenter.....	Fifty-fifth	Fifty-ninth.	71	106 71	249 50	858 39
Clement avenue.....	South Park avenue	Seventieth.	67	100 16	284 50	723 86
Clifton Park avenue.....	Ogden avenue	Douglas avenue.	100	150 00	350 00	1,892 00
Cologne.....	Fuller.	Quarry	18	27 04	63 00	239 04
Cottage Grove avenue.....	Fifty-ninth	Seventy first.	156	235 36	546 00	2,887 56
Crawford avenue.....	Kinzie	Madison	67	100 89	234 50	848 89
Dexter avenue.....	Union avenue.	Stewart avenue	11	16 50	38 50	141 02
Dickson.....	Wabansia avenue	Bloomingtonale Road	5	7 50	17 50	63 40
Diversey avenue.....	Chicago river.	Kedzie avenue.	190	286 14	665 00	3,304 10
Both sides of Douglas bld.	Colorado avenue.	Albany avenue	512	798 00	1,792 00	4,876 76
Dreyer.....	Forty-seventh	Fifty-first	34	51 28	119 00	398 48
Duncan Park.....	Wallace	Stewart avenue.	18	19 51	45 50	164 71
Edwards avenue.....	Eighty-second	Eighty-third	44	66 86	154 00	567 16
Ellis avenue.....	Forty-third	Forty-sixth.	40	60 00	140 00	508 00
Ellis avenue.....	Fifty-sixth	Fifty-ninth.	88	133 08	308 00	1,303 28
Ems.....	Leavitt	Western avenue.	20	30 00	70 00	258 00
Erie avenue.....	Ninety first	South Chicago avenue	21	31 56	73 50	304 71
Fifty-seventh.....	Wentworth avenue	Halsted.	31	46 75	103 50	349 99
Fifty-eighth.....	Stewart avenue	Halsted.....	47	70 50	164 50	537 70
Fifty-fourth.....	Halsted.	Centre avenue.	7	10 56	24 50	80 06
Forty-seventh.....	Halsted.	State	6	9 30	21 00	96 30

Forty-sixth	Drexel avenue	Woodland avenue	20	80 18	70 00	315 60
Fourteenth	Wood	Irving place	85	52 50	122 50	457 45
Flournoy	Crawford avenue	Douglas boulevard	78	110 12	255 50	890 88
Francisco	Division	Chicago avenue	70	105 00	245 00	889 40
Giddings	Robey	Leavitt	30	45 18	105 00	398 10
Greshaw	Kedzie avenue	Spaulding avenue	19	28 61	66 50	254 08
Greshaw	Spaulding avenue	Homan avenue	88	49 68	115 50	887 43
Greshaw	Crawford avenue	Douglas boulevard	78	117 32	278 00	811 20
Greshaw	Ogden avenue	Sixteenth	65	97 60	227 50	759 20
Hamlin avenue	Twenty-sixth	Twenty-seventh	44	66 16	154 00	518 76
Hamlin avenue	Twelfth	Sixteenth	102	153 97	857 00	1,272 86
Howard avenue	North avenue	Humboldt	189	284 49	861 50	2,285 87
Hoyne avenue	Archer avenue	Thirty-eighth	43	64 50	150 50	535 89
Hoyne avenue	Roscoe	Cornelia	12	18 00	42 00	143 80
Indiana avenue	Fifty-first	Fifty-fifth	83	125 17	280 50	1,880 29
Indiana	St. Clair	Eastern terminus	16	66 12	154 00	503 12
Iowa	Lincoln avenue	Hoyne avenue	16	24 00	56 00	188 16
Jackson avenue	Fifty-third	Fifty fourth	82	48 16	112 00	386 88
Jackson	West Fortieth	West Forty-sixth	287	356 09	829 50	2,638 07
Janot	Robey	Leavitt	16	24 00	56 00	188 16
Jan Hus avenue	Kinzie	Chicago avenue	56	84 48	186 00	674 24
Justine	Forty-ninth	Fifty-third	18	27 04	68 00	195 84
Kedzie avenue	Twenty-sixth	Chicago River	163	245 50	570 50	2,074 99
Kinney	Seventy-first	Seventy-third	75	112 55	263 50	790 50
Laurel avenue	Fullerton avenue	Diversey avenue	26	39 08	91 00	306 54
Lawrence avenue	Leavitt	Wright	24	36 12	84 00	279 12
Leland avenue	Robey	Leavitt	12	18 00	42 00	164 53
Leavitt	Clybourn avenue	Belmont avenue	21	31 53	78 50	259 77
Lexington avenue	Francisco	Kedzie avenue	58	87 02	208 00	718 04
Lexington avenue	Garfield boulevard	West Fortieth	68	102 56	288 00	798 33
Lexington avenue	Sixtieth	West first	24	36 12	84 00	344 56
Lincoln avenue	Montrose boulevard	St. Joe	149	223 50	521 50	2,157 50
Linden avenue	Humboldt boulevard	Diversey avenue	41	61 76	143 50	489 54
Marianna	Southport avenue	Lincoln avenue	4	6 00	14 00	51 88
Matteson	Wallace	U. S. Y. R. R.	12	18 00	42 00	178 52
May	Fifty-fifth	Fifty-ninth	97	145 71	339 50	1,078 79
Millard avenue	Twelfth	Douglas boulevard	50	75 25	175 00	619 00
Montana	Ashland avenue	Perry	15	22 50	52 50	185 25
Mozart	Armitage avenue	Palmer avenue	7	10 50	24 50	88 05
Newport avenue	Clark	Racine avenue	17	25 50	59 50	203 66
Ninety-first	Cottage Grove avenue	South Park avenue	202	304 28	707 00	2,579 54
Ninety-third	Harbor	Commercial avenue	29	43 61	101 50	452 68

WATER SERVICE PIPES LET AND PUT IN BY CONTRACT DURING YEAR—CONTINUED.

STREET	FROM	TO	Number of Pipes.	Assessor's Cost.	Taps.	Amount of Contract
Ohio.....	Homan avenue.....	Harding avenue.....	34	\$ 51 02	\$ 119 00	\$ 576 64
Palmer avenue.....	California avenue.....	Humboldt boulevard.....	10	15 04	35 00	125 80
Park avenue.....	Everett avenue.....	Centre avenue.....	35	52 50	122 50	480 20
Parmelee.....	Hoyne avenue.....	Western avenue.....	37	55 50	129 50	514 67
Peoria.....	Fifty-ninth.....	Sixty-third.....	56	84 48	196 00	652 96
Peterson.....	Robey.....	Hoyne avenue.....	9	13 53	31 50	142 47
Polk.....	Crawford avenue.....	Douglas Bould.....	86	129 88	301 00	1,080 28
Rebecca.....	Rockwell.....	Western avenue.....	39	58 59	136 50	567 06
Rhodes avenue.....	Sixty-seventh.....	Keefe avenue.....	15	22 60	52 50	185 10
*Rockwell.....	Chicago avenue.....	Division.....	6	9 00	31 00	51 90
Sacramento avenue.....	Division.....	Augusta.....	14	21 00	49 00	154 00
School.....	Gross avenue.....	Robey.....	12	18 05	43 00	137 04
School.....	Lincoln avenue.....	Clark.....	14	21 05	49 00	167 05
School.....	Thirty-ninth.....	Root.....	47	70 53	164 50	587 97
Seminary avenue.....	Belmont avenue.....	Roscoe.....	9	13 50	31 50	119 34
Seminary avenue.....	Roscoe.....	Newport avenue.....	5	7 54	17 50	62 05
Spakespeare avenue.....	California avenue.....	Humboldt boulevard.....	35	52 54	123 50	417 90
Sheridan avenue.....	Bloomingtondale Road.....	Armitage avenue.....	13	19 03	45 50	248 04
Seventieth.....	Ill. Cent. R. R.....	Stony Island avenue.....	17	25 60	59 50	174 76
Sixtieth.....	Princeton avenue.....	Wentworth avenue.....	9	18 55	31 50	87 75
Southport avenue.....	144 ³ / ₈ feet N. of Ernst.....	Devon avenue.....	14	21 00	49 00	238 80
Spaulding avenue.....	Ogden avenue.....	West Twelfth.....	181	196 78	458 50	1,496 02
Summerdale avenue.....	E. Ravenswood Park.....	Clark.....	28	34 55	80 50	263 89
Swann.....	Stewart avenue.....	C. R. I. P. R'y.....	43	64 56	150 50	483 75
Thirty-third court.....	Ashland avenue.....	Wood.....	59	88 59	206 50	668 47
Thirty-third.....	Archer avenue.....	Oakley.....	4	6 00	14 00	1,990 44
Thirty-sixth.....	Western avenue.....	Kezie avenue.....	171	257 64	598 50	1,992 48
Twenty-fifth.....	Western avenue.....	Oakley avenue.....	16	24 00	56 00	352 98
Thomas.....	Kezie avenue.....	California avenue.....	29	43 61	101 50	352 98
Tracey avenue.....	Wood.....	Hoyne avenue.....	16	24 08	56 00	164 48
Tripp avenue.....	Forty-third.....	Forty-fifth.....	48	72 24	168 00	571 20
Troy.....	North avenue.....	Humboldt avenue.....	175	262 70	612 50	2,112 25
Troy.....	Kinzie.....	Chicago avenue.....	119	179 88	416 50	1,667 88
Troy.....	Twenty-second.....	Twenty-sixth.....	69	108 82	241 50	799 02
Union avenue.....	Seventy-first.....	Seventy-third.....	49	78 67	171 50	550 65
Van Buren.....	Kezie avenue.....	Central Park avenue.....	80	120 27	280 00	1,011 20
Vincennes avenue.....	Clement avenue.....	Seventy-third.....	168	238 18	553 00	1,769 60

Ward.....	Clybourn avenue.....	Fullerton avenue.....	26	39 00	91 00	368 94
Ward.....	Thirty-fifth.....	Thirty sixth.....	32	48 02	112 00	374 42
Washburn avenue.....	Lincoln avenue.....	Robey.....	40	60 00	140 00	450 40
Waveland avenue.....	Clark.....	Evanston avenue.....	67	100 50	234 50	1,092 10
Webster avenue.....	Evanston avenue.....	Southport avenue.....	45	67 75	157 50	505 35
Western avenue.....	Belmont avenue.....	Roscoe.....	33	49 77	115 50	484 28
*Wilcox avenue.....	West Fortieth.....	West Forty-sixth.....	251	377 59	878 50	8,887 99
Winter ..	Sixtieth.....	Gunn ..	6	9 12	21 00	67 36
Yorktown ..	Thirty-fifth.....	I. & M. Canal.....	20	30 10	70 00	312 20
TOTALS.....			6,783	\$10,124 17	\$23,665 50	\$85,993 27
*Three streets let in 1893 and work done in 1894			310	\$ 466 48	\$ 1,085 00	\$ 4,700 55
One hundred and thirteen streets let in 1894 and finished.....			5,980	8,648 19	19,880 00	78,278 31
Four streets let in 1894 and partly finished.....			743	1,114 50	2,600 50	8,019 41
Total work done under contracts let in 1894.....			6,423	\$ 9,657 69	\$32,480 50	\$81,293 72

Average cost per pipe under contract let in 1893.....\$17.39 ⁷³/₁₀₀

Average cost per pipe under contract let in 1894..... 12 65 ¹⁶/₁₀₀

Average saving per pipe in 1894 over 1893..... 4 63 ⁵⁷/₁₀₀

Being a saving to property holders of \$29,802. 72

LIST OF STREETS ORDERED FOR IMPROVEMENT, WITH ESTIMATED NUMBER AND COST OF WATER SERVICE PIPES, RETURNED TO SUPERINTENDENT OF SPECIAL ASSESSMENT DEPARTMENT FROM JANUARY 1, 1894, TO DECEMBER, 31, 1894.

STREET	FROM	TO	Number of Pipes.	Amount.
West Adams.....	West Fortieth.....	West Forty-sixth....	272	\$ 4,352 00
Augusta.....	Robey.....	California avenue...	225	5,355 00
Atlantic.....	Thirty-ninth.....	Root.....	47	752 00
Avenue A.....	106th.....	114th.....	848	5,568 00
Byron.....	Robey.....	C. & N.-W. R'y....	45	945 00
Better.....	May.....	Sholto.....	11	187 00
Brost avenue.....	Southport avenue...	Evanston avenue....	71	1,136 00
Balmoral avenue...	E. Ravenswood P'k.	Ashland avenue....	44	704 00
Bryn Mawr avenue.	Clark.....	Evanston avenue....	96	1,536 00
Butler.....	121st.....	123rd.....	94	1,504 00
Champlain avenue..	Sixtieth.....	Sixty-first.....	30	480 00
Claremont avenue..	E. Ravenswood P'k.	Ashland avenue....	76	1,216 00
Centre.....	Clark.....	Southport avenue...	52	832 00
South Canal.....	119th.....	123rd.....	162	2,592 00
Commercial avenue.	Paulina.....	Terra Cotta place...	15	240 00
West Congress.....	West Fortieth.....	West Forty-sixth....	188	3,008 00
Carroll avenue.....	950 feet West of Kedzie Ave	Homan avenue.....	11	176 00
Congress.....	Homan avenue.....	Central Park avenue	46	736 00
Dreyer.....	Forty-seventh.....	Fifty-first.....	44	924 00
Duncan Park ave..	Wallace.....	Stewart avenue....	23	368 00
Diversey avenue....	Milwaukee avenue..	Kedzie avenue.....	84	1,344 00
Diversey avenue....	Milwaukee avenue..	Crawford avenue....	252	4,036 00
Ellis avenue.....	Forty-third.....	Forty-sixth.....	46	1,150 00
Eighty-ninth.....	So. Chicago avenue..	I. C. R. R.....	16	288 00
Emerald avenue....	118th.....	119th.....	29	464 00
Emerald avenue....	121st.....	123rd.....	94	1,504 00
Ellis avenue.....	Seventy-first.....	South Chicago ave..	51	816 00
Evanston avenue..	Montrose boulevard.	North Fifty-ninth...	343	6,860 00
Forty-eighth.....	Halsted.....	Ashland avenue....	62	1,302 00
Faye.....	Lincoln avenue....	C. & N.-W. R'y....	46	966 00
Fiftieth.....	Cottage Grove ave..	St. Lawrence avenue	35	700 00
Forty-first.....	Halsted.....	Stewart avenue....	25	400 00
Forty-seventh.....	Halsted.....	State.....	18	288 00
Flournoy.....	Crawford avenue....	Douglas boulevard..	78	1,248 00
Francisco.....	West Division.....	West Chicago avenue	76	1,216 00
Fifty-eighth.....	Stewart avenue....	Halsted.....	54	864 00
Forty-ninth.....	Wallace.....	Halsted.....	20	320 00
Forty-eighth.....	Wallace.....	U. S. Y. R. R.....	38	528 00
Fifty-first.....	Wood.....	Lincoln avenue....	22	352 00
North Fifty-ninth	Clark.....	Robey.....	36	576 00
Fifth avenue.....	119th.....	123rd.....	178	2,848 00
Francis.....	Charlton.....	Southport avenue...	34	544 00
Flournoy.....	Kedzie avenue....	Central Park avenue.	169	2,704 00
Gladys avenue....	West Fortieth.....	West Forty-sixth....	198	3,148 00
Greenwood avenue.	Everett avenue....	Centre.....	76	1,292 00
Herndon.....	Belmont avenue....	Roscoe.....	29	464 00
Harvard.....	Crawford avenue....	Douglas boulevard..	88	1,408 00
Humboldt avenue..	Western avenue....	California avenue....	79	1,264 00
Homan avenue....	Central Park avenue.	Chicago avenue....	125	2,125 00
Homan avenue....	Twenty-second.....	Twenty-third.....	30	480 00
Halsted.....	Montrose boulevard.	Windett avenue.....	96	1,536 00
Hamlin avenue....	Douglas Park bld...	West Sixteenth.....	76	1,216 00

LIST OF STREETS ORDERED FOR IMPROVEMENT—CONTINUED.

STREET	FROM	TO	Number of Pipes.	Amount.
Indiana	St. Clair	Eastern terminus ...	129	\$ 2,838 00
Irving avenue	Everett avenue	Centre	183	2,128 00
Irving Park bld ..	Lincoln avenue	Jefferson	1,084	20,680 00
Jackson	West Fortieth	West Forty-sixth	257	5,397 00
Justine	Forty-ninth	Fifty-third	29	464 00
Jeffery avenue	Seventy-first	Seventy-third	59	944 00
Kedzie avenue	Milwaukee avenue	Belmont avenue	209	3,344 00
Laurel avenue	Fullerton avenue	Diversey avenue	33	693 00
Lexington	Francisco	Kedzie avenue	66	1,386 00
Leavitt	Archer avenue	Bross	49	1,029 00
Langley avenue	Sixty-third	Sixth-ninth	206	3,296 00
Linden avenue	Humboldt boulevard	Diversey avenue	43	688 00
Lincoln avenue	Montrose boulevard	St. Joe	382	6,112 00
Logan	Wallace	U. S. Y. R. R.	30	480 00
Lowe avenue	Diana	123rd	235	3,760 00
Lexington avenue	Kedzie avenue	Central Park avenue	172	2,752 00
Millard avenue	Twelfth	Douglas Park bld. ...	56	896 00
Montrose boulevard	Robey	Lincoln avenue	23	368 00
Mead	Fullerton avenue	Logan avenue	68	1,088 00
119th	Michigan avenue	Halsted	293	4,688 00
Peoria	Fifty-ninth	Sixty-third	76	1,596 00
Polk	Crawford avenue	Douglas boulevard	88	1,408 00
Park avenue	Everett	Centre	140	2,240 00
Peoria	Sixty-seventh	Sixty-ninth	40	620 00
Portland avenue	119th	123rd	177	2,832 00
Parnell avenue	121st	123rd	94	1,504 00
Parnell avenue	119th	120th	26	476 00
Palmer avenue	Webster avenue	North Fifty-ninth	23	414 00
Rebecca	Rockwell	P. H. R. R.	21	336 00
Rhodes avenue	Seventieth	Seventy-third	126	2,016 00
Rascher avenue	E. Ravenswood P'k. ...	Ashland avenue	50	800 00
Robey	Roscoe	Sulzer	296	5,328 00
Sherman	Root	Forty third	43	903 00
Swann	Stewart avenue	C., R. I. & P. R'y. ...	48	960 00
State	Sixty-eighth	Seventy-first	130	3,250 00
Sheridan	Bloomington road	Armitage avenue	74	1,554 00
School	Lincoln avenue	Clark	20	420 00
Sixty-ninth	Cottage Grove ave	South Chicago ave. ...	28	448 00
Seventieth court	Cottage Grove ave	South Chicago ave. ...	33	528 00
South Park avenue	Sixtieth	Seventy-first	447	8,046 00
School	Thirty-ninth	Root	51	816 00
St. Lawrence avenue	Sixty-third	Seventy-third	353	6,354 00
Selwyn avenue	Everett avenue	Centre	139	2,224 00
St. Charles avenue	Everett avenue	Centre	133	2,128 00
Sheldon avenue	Irving Park bld	Everett	39	624 00
Swift	Francis	Ridge road	28	443 00
Seventy-second	Yates avenue	Bond avenue	42	672 00
Seventy-third	Stony Island avenue	I. C. R. R.	104	1,768 00
Seventy-first	Stony Island avenue	I. C. R. R.	74	1,184 00
Seventy-second	Stony Island avenue	I. C. R. R.	86	1,376 00
Seventy-second pl. ...	Stony Island avenue	I. C. R. R.	86	1,376 00
Sangamon	Sixty-seventh	Sixty-ninth	28	448 00
St. Louis avenue	Ogden avenue	Twenty-sixth	211	3,376 00
South Canal	119th	123rd	162	2,592 00
West Twenty-first	P. H. R. R.	Boulevard	66	1,518 00
Thirty-second	Halsted	Laurel	27	567 00
Thomas	Wood	Hoyne avenue	21	441 00

LIST OF STREETS ORDERED FOR IMPROVEMENT—CONTINUED.

STREET	FROM	TO	Number of Pipes.	Amount.
Troy	West Twenty-second	West Twenty-sixth..	82	\$ 1,722 00
Tracy	Forty-third	Forty-fifth	48	768 00
Thirty-fifth court...	Oakley avenue	Boulevard	14	224 00
Trumbull avenue...	Douglas Park bld...	Twenty-sixth	358	5,628 00
Trumbull avenue...	Ohio	Central Park bid ...	28	448 00
Union avenue.....	Fifty-ninth	Sixty-first	40	6,410 00
Van Buren.....	Kedzie avenue.....	Central Park avenue.	105	2,205 00
Vincennes avenue ..	Clement avenue.	Seventy-third	164	2,624 00
Vincennes avenue	Sixty-third	South Chicago ave..	195	3,120 00
Vernon avenue.....	Irving Park bld.	Everett avenue.....	79	1,164 00
Vernon avenue.....	Sixty-ninth.....	Seventy-third	160	2,560 00
Victor	Evanston avenue.....	Swift	29	464 00
West Van Buren ...	West Fortieth	West Forty-sixth....	222	3,556 00
Wabash avenue	Sixty-seventh	Seventy-third.....	273	5,460 00
Ward	Thirty-fifth ..	Thirty-sixth	43	672 00
Washington avenue.	Everett avenue	Centre	171	2,736 00
Wright	West Fifty-ninth....	Claremont avenue...	71	1,136 00
Webster avenue.....	Clark	Robey	44	724 00
Wilton	Grace	Bryon	26	416 00
Wilson	Leavitt	Robey	19	323 00
Wallace	Diana	123rd	285	3,760 00
Wolcott	Webster avenue	North Fifth-ninth...	31	558 00
One hundred and thirty-one streets.....			14,060	\$250,162.00

REPORT OF PERMIT DEPARTMENT.

SCREW FERRULES INSERTED DURING YEAR 1894.

MONTHS.	$\frac{3}{8}$ -inch Ferrules Inserted.	$\frac{3}{4}$ -inch Ferrules Inserted.	1-inch Ferrules Inserted.	Grand Total of Screw Ferrules Inserted.
January... ..	81	144	8	228
February... ..	90	100	4	194
March... ..	255	314	5	574
April... ..	258	296	3	557
May... ..	317	436	10	763
June... ..	325	446	9	780
July... ..	219	330	16	565
August... ..	244	416	18	678
September... ..	189	268	8	565
October... ..	260	679	18	952
November... ..	199	883	15	1,047
December... ..	228	467	9	704
TOTAL... ..	2,665	4,829	118	7,607

DRIVEN FERRULES INSERTED DURING YEAR 1894.

MONTHS.	$\frac{3}{4}$ -inch Ferrules Inserted.	$\frac{1}{2}$ -inch Ferrules Inserted.	1-inch Ferrules Inserted.	Grand Total of Driven Ferrules Inserted.
January.....	11	150	...	161
February.....	27	191	.....	218
March.....	65	107	.....	172
April.....	43	57	.....	100
May.....	13	847	.....	860
June.....	22	1,162	.....	1,184
July.....	23	1,217	.....	1,240
August.....	188	962	.....	1,100
September.....	40	783	.....	823
October.....	327	886	1	1,214
November.....	82	699	3	784
December.....	10	411	.....	421
TOTAL.....	801	7,472	4	8,277

SUMMARY OF FERRULES INSERTED.

	$\frac{3}{4}$ -inch.	$\frac{1}{2}$ -inch.	1-inch.	Grand Total.
Screw ferrules.....	2,665	4,829	113	7,607
Driven ferrules.....	801	7,472	4	8,277
GRAND TOTAL.....	3,466	12,301	117	15,884

The number of applications made at this office for ferrules to water service pipes during the past year (exclusive of City contracts and retaps) were as follows :

Inserted in old part of City	1,903
Inserted in Lake View	919
Inserted in Hyde Park	1,102
Inserted in Town of Lake	934
Inserted in Calumet	351
Inserted in Cicero	157
Inserted in Jefferson	452
GRAND TOTAL	5,818

PERMITS.

Permits were issued during the year 1894 as follows :

For tapping water mains for pipes to inside of curb line for future use...	8,951
For tapping water for enlarged service pipes to house previously supplied.	845
For tapping water mains for service pipes to houses not previously supplied	4,872
For connections to service pipes inside of curb line	930
For six-inch cast-iron pipes to be used as service pipes	7
For four-inch cast-iron pipes to be used as service pipes	45
For two-inch cast-iron pipes to be used as service pipes	120
For miscellaneous or special permits	840
GRAND TOTAL	16,610

RECEIPTS AND EARNINGS.

Amount received for inserted ferrules (of all sizes) as per cash book...	\$26,726 85
Amount to be credited to water fund for 6,733 $\frac{3}{4}$ -inch ferrules, inserted for street improvements service and deducted from contractors' bills, at \$3.50 each	23,565 50
Amount received for 619 plumbers' licenses, at \$25.00 each	15,475 00

For re-taps inserted in replaced street mains and for miscellaneous use, as follows :

737 $\frac{3}{8}$ -inch ferrules, at \$3.00 each	\$ 2,211 00
409 $\frac{3}{4}$ -inch ferrules, at \$3.50 each	1,431 50
16 1-inch ferrules, at \$5.40 each	86 40
Total receipts and earnings	\$69,496 25

EXPENDITURES.

Plumbers' bills paid for lengthening out service pipes on sundry streets	\$ 345 25
Salaries paid Permit Clerk and Assistants	6,022 52
Salaries paid Plumbing Inspectors	9,338 22
Salary paid Tap Inspector	750 00
Salaries paid Tappers	13,135 57
Paid for use of Horses and Wagons for Tappers	12,161 70
Paid for hired day labor	6,128 00
Cost of Permit Clerk's books, blanks, etc	72 50
Cost of miscellaneous material for use of Tappers	1,044 01
Cost of repairs made on tapping machines and for grinding drills at North Side Water Works Shops	321 33

Cost of screw drills used upon tapping machines, as follows :

80 $\frac{3}{8}$ -inch screw drills, at \$4.05 each	\$ 324 00
154 $\frac{1}{2}$ -inch screw drills, at \$1.95 each	762 30
20 1-inch screw drills, at \$5.85 each	117 00

Cost of drills used up on smooth bore tapping machines, as follows :

31 $\frac{3}{8}$ -inch, 146 $\frac{1}{2}$ -inch and 4 1-inch, at \$1.60 each	\$ 289 60
Cost of oil for tapping machines	2 50
Cost of 2,665 $\frac{3}{8}$ -inch screw ferrules inserted, at 35 cents each	932 75
Cost of 4,829 $\frac{1}{2}$ -inch screw ferrules inserted, at 43 cents each	2,076 47
Cost of 113 1-inch screw ferrules inserted, at 57 cents each	64 41
Cost of 801 $\frac{3}{8}$ -inch drive ferrules inserted, at 35 cents each	280 35
Cost of 7,472 $\frac{1}{2}$ -inch drive ferrules inserted, at 42½ cents each	3,175 80
Cost of 4 1-inch drive ferrules inserted, at \$1.30 each	5 20

Cost of extra couplings used, as follows :

64 $\frac{3}{8}$ -inch screw tap couplings, at 15½ cents each	9 92
176 $\frac{1}{2}$ -inch screw tap couplings, at 18 cents each	31 68
45 $\frac{3}{4}$ -inch drive tap couplings, at 12½ cents each	5 63

Cost of plugs used, as follows :

7 $\frac{1}{2}$ -inch short shank plugs, at 15 cents each	1 05
64 $\frac{1}{2}$ -inch long shank plugs, at 17 cents each	10 88
31 $\frac{3}{8}$ -inch short shank plugs, at 18 cents each	5 58
243 $\frac{3}{8}$ -inch long shank plugs, at 25 cents each	60 75
13 $\frac{1}{2}$ -inch short shank plugs, at 25 cents each	3 25
302 $\frac{3}{4}$ -inch long shank plugs, at 33 cents each	99 66
9 1-inch short shank plugs, at 35 cents each	3 15
164 1-inch long shank plugs, at 45 cents each	73 80

Total expenditures	<u>\$57,654 83</u>
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Total receipts and earnings	\$69,496 25
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Total expenditures	<u>57,654 83</u>
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Net gain	<u>\$11,841 42</u>
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INVENTORY OF PROPERTY.

WATER PERMIT DEPARTMENT, DECEMBER 31, 1894.

	$\frac{3}{4}$ -inch Screw Ferrules.	$\frac{1}{2}$ -inch Screw Ferrules.	1-inch Screw Ferrules.
On hand December 31, 1893.....	1,695	4,255	536
Purchased during 1894.....	5,098	3,014	.....
TOTAL	6,788	7,269	536
Used during 1894.....	2,665	4,829	113
On hand December 31, 1894.....	4,123	2,440	423

	$\frac{3}{4}$ -inch Drive Ferrules.	$\frac{1}{2}$ -inch Drive Ferrules.	1-inch Drive Ferrules.
On hand December 31, 1893.....	1,842	5,499	450
Purchased during 1894.....	.....	6,684	.....
TOTAL	1,842	12,183	450
Used during 1894.....	801	7,472	4
On hand December 31, 1894.....	1,041	4,711	446

SUMMARY OF FERRULES ON HAND.

	$\frac{3}{4}$ -inch Ferrules.	$\frac{1}{2}$ -inch Ferrules.	1-inch Ferrules.	Grand Total.
Screw ferrules on hand Dec. 31, 1894. . .	4,123	2,440	423	6,986
Drive ferrules on hand Dec. 31, 1894. . .	1,041	4,711	446	6,198
TOTAL	5,164	7,151	869	13,184

EXTRA COUPLINGS FOR SCREW AND DRIVE FERRULES.

	$\frac{3}{8}$ -inch Screw Couplings.	$\frac{3}{8}$ -inch Screw Couplings.	1-inch Screw Couplings.	$\frac{3}{8}$ -inch Drive Couplings.	$\frac{3}{8}$ -inch Drive Couplings.
On hand December 31, 1893.....	751	497	74	110	375
Used during the year 1894.....	64	176	.....	.....	45
On hand December 31, 1894.....	687	321	74	110	330

DRILLS.

	$\frac{1}{2}$ -inch Screw Drills.	$\frac{3}{8}$ -inch Screw Drills.	$\frac{3}{8}$ -inch Screw Drills.	1-inch Screw Drills.	$\frac{3}{8}$ -inch Drive Drills.	$\frac{3}{8}$ -inch Drive Drills.	1-inch Drive Drills.
On hand December 31, 1893.....	2	101	82	31	59	127	6
Purchased during 1894.....	0	60	158	6	0	96	0
Total.....	2	161	240	37	59	223	6
Used during 1894.....	0	80	154	20	31	146	4
On hand December 31, 1894.....	2	81	86	17	28	77	2

BRASS PLUGS.

	$\frac{1}{2}$ -inch Short Shank Plugs.	$\frac{1}{2}$ -inch Long Shank Plugs.	$\frac{3}{8}$ -inch Short Shank Plugs.	$\frac{3}{8}$ -inch Long Shank Plugs.	$\frac{3}{8}$ -inch Short Shank Plugs.	$\frac{3}{8}$ -inch Long Shank Plugs.	1-inch Short Shank Plugs.	1-inch Long Shank Plugs.
On hand December, 31, 1893.....	72	125	161	329	49	339	74	394
Used during 1894.....	7	64	31	243	13	302	9	164
On hand December 31, 1894.....	65	61	130	86	36	37	65	230

We had on hand December 31, 1894, machines for inserting screw and drive ferrules, as follows :

Number of machines for drive ferrules.....	16
Number of machines for screw ferrules.....	17
Total.....	33

There was in stock December 31, 1894, property of this Department, as follows :

Total value of ferrules on hand.....	\$ 5,279 77
Total value of tools and fittings on hand	4,657 18
Grand total.....	\$ 9,936 95

I desire to express my appreciation of the many courtesies extended by yourself and subordinates, and of the satisfactory and diligent manner in which the employes of this Department have performed their duties. Particularly do I wish to acknowledge the loyal co-operation and intelligent assistance of the heads of the various sub-departments.

Respectfully submitted,

W. E. CROSSETTE,

Sup't of Water.

REPORT OF THE

Bureau of Maps

CITY OF CHICAGO

MAP DEPARTMENT.

HON. JOHN McCARTHY,

Commissioner of Public Works.

DEAR SIR:—I have the honor to submit to you the annual report of the Map Department for the year 1894.

The work performed by the Department during the year was as follows :

Plats prepared for—

Lamp post ordinances.....	846
Lamp post orders	514
Lamp post assessments	250
Street improvement assessments.....	430
Street and alley opening assessments	49
Street and alley opening ordinances	563
Street Engineer estimates	519
Surveys.....	93
Sidewalk assessments.....	900
Water pipe assessments.....	174
Law Department.....	53
Miscellaneous purposes	436
Total	4,827

Two hundred and one new subdivisions of real estate within the City limits, and recorded documents pertaining to same, have been entered upon the several sets of atlases in charge of this office.

A new atlas showing the twelfth extension of the City limits, viz: Rogers Park and West Ridge, and a full house-numbering system for the same, has been completed.

In accordance with ordinances passed by the City Council, house numbers have been changed on the following avenues :

Ridge avenue, from Evanston avenue to Devon avenue.

Grand avenue, from Western avenue to City limits.

Forrest avenue, from Peterson avenue to Devon avenue.

In conformity with notices issued by the Commissioner of Public Works, corrections in house numbering have been made, and 27,000 house number certificates issued during the year.

An elaborate alphabetical order of all streets, avenues, courts and places in the City was compiled for the Council Committee on Street Nomenclature.

One thousand four hundred and thirty-three streets were found to bear duplicate names, and 143 streets have been located without any names.

AREA OF THE CITY.

	Sq. Miles.
After sixth annexation, April 29, 1889.....	43.812
Part of Cicero, E. ½ Sec. 4 and 9—39—13, July 15, 1889..	1.000
City of Lake View, July 15, 1889	10.408
Town of Jefferson (exc. Secs. 25, 35 and 36), July 15, 1889.	29.530
Town of Lake, July 15, 1889.....	36.000
Village of Hyde Park, July 15, 1889.....	49.132
Village of Gano, April 1, 1890.....	1.773
South Englewood, May 12, 1890	2.899
Village of Washington Heights, Nov. 4, 1890.....	2.810
Village of West Roseland, Nov. 4, 1890.....	1.793
Village of Fernwood, April 7, 1891.....	0.981
Village of West Ridge, April 19, 1893	2.125
Village of Rogers Park, April 19, 1893	1.750
Village of Norwood Park, Nov. 16, 1893	2.125

Total area of the City of Chicago..... 186.138

Distance from north line to south line of the City, 26 miles.

Distance from east line to west line, 14 miles.

Respectfully submitted,

WM. REISENEGGER,

Superintendent of Map Department.

REPORT OF THE

Bureau of Sewers

CITY OF CHICAGO

BUREAU OF SEWERS

HON. JOHN McCARTHY,

Commissioner of Public Works.

DEAR SIR:—I have the honor to submit the nineteenth annual report of the Bureau of Sewers, for the year ending December 31, 1894, and for a full description of the extent of the system your attention is invited to the following tabular statement, viz :

For building sewers and catch-basins.....	\$1,014,489 86
For cleaning sewers and catch-basins.....	154,225 45
For repairing sewers and catch-basins.....	57,784 42
For adjusting to grade manholes and catch-basins on streets being improved	72,964 61
For house drains.....	56,990 38
For appropriated salaries.....	28,196 54
For office expenses	373 92
For pumping stations.....	45,558 00
Total	1,430,583 18

**NEW SEWERS AND CATCH-BASINS BUILT DURING THE YEAR 1894
AND COST OF SAME.**

Length in Feet.	Size.	Average Cut.	Average Price per Foot.	Cost.
8,885	9 inches	7.5	\$0.88	\$ 3,188 05
151,187	12 "	8.3	.99	150,056 22
94,409	15 "	9.8	1.32	124,900 94
300	18 "	10.5	2.02	604 05
25,994	2 foot.	10.	1.87	48,518 38
8,714	2½ "	11.4	3.13	27,312 13
7,691	3 "	10.5	3.47	26,690 97
2,836	3½ "	14.2	4.88	13,852 04
4,827	4 "	12.7	5.35	23,163 06
2,859	4½ "	14.	5.72	16,360 74
14,504	5 "	12.6	6.74	97,713 63
6,650	5½ "	13.8	7.35	48,919 07
5,225	6 "	14.9	8.07	42,170 63
5,267	6½ "	16.2	10.35	54,510 89
6,661	7 "	17.2	11.49	76,556 65
5,200	10 "	26.5	21.53	111,955 33
5,285	10½ "	30.	28.01	148,022 08
350,944				\$1,014,489 86

The above figures include cost of Catch-basins, etc.

**TOTAL NUMBER OF MANHOLES AND CATCH-BASINS IN PLACE
DECEMBER 31, 1894, IN THE CITY LIMITS.**

DIVISIONS.	Constructed During the Year.			Total Built During 1894.	Total Built Previous to 1894.	Total in Place December 31, 1894.
	South.	West.	North.			
Catch-basins ..	1,549	637	411	2,597	39,471	42,068
Manholes.	1,137	706	416	2,259	42,496	44,755

SIZE AND LENGTH OF SEWERS CONSTRUCTED IN THE DIFFERENT WARDS IN THE
CITY DURING THE YEAR 1894.

WARDS.	9-inch.	12-inch.	15-inch.	18-inch.	2-foot.	2½-foot.	3-foot.	3½-foot.	4-foot.	4½-foot.	5-foot.	5½-foot.	6-foot.	6½-foot.	7-foot.	10-foot.	10½-foot.	TOTAL.
4th		235																235
6th		2,488	751															3,239
7th		759																759
8th		395																395
10th		13,652	2,007		3,342													19,001
12th	1,249	2,859	3,496															7,604
13th	860	5,633	2,106															8,599
14th		7,476	4,268		1,025													12,769
15th		2,318	1,413		810													4,541
24th					300													300
25th	1,726	6,328	2,133		770													10,967
26th		21,283	17,157		8,237	677	2,643											44,727
27th		7,562	16,815		665													25,042
28th		11,238	10,653		120													22,011
29th		5,645	4,643		3,005													13,293
30th		25,368	8,053		4,287													37,688
31st		3,728	1,987			1,039	4,696	2,173	3,750	2,859	14,504	2,650	5,225	8,942	4,005			50,558
32d		1,674	850															2,524
33d		4,150	3,983		2,587	685	652	663	577									13,227
34th		28,396	14,114	300	5,866	6,333						4,000						73,475
	3,636	151,187	94,409	300	25,994	8,714	7,691	2,836	4,327	2,859	14,504	6,650	5,225	5,297	6,661	5,200	5,225	850,944

TOTAL COST FOR THE CONSTRUCTION OF SEWERS AND CATCH-BASINS, AND MAINTAINING SAME, FROM THE ESTABLISHMENT OF THE SEWERAGE SYSTEM IN 1855 TO JANUARY 1, 1895.

Year.	Lineal feet of Sewers Built.	No. of Catch-Basins Built.	No. of Man-holes Built.	No. of House Drains Put In.	Cost of Cleaning Sewers and Catch-Basins.	Street Intersections and Repairs of Sewers.	Cost of Construction.
Previous to 1861.	283,586	1,174	2,102	2,194	\$ 5,619 48	No costs found on reports.	\$ 665,188 46
1861.	2,826	18	33	243	1,715 60	\$ 2,951 76	3,617 31
1862.	15,676	72	66	365	4,897 24	3,024 07	57,036 42
1863.	39,605	192	204	536	5,065 40	2,058 11	169,527 38
1864.	25,021	189	183	512	9,417 81	4,597 63	87,221 48
1865.	29,948	223	168	1,288	13,818 07	7,493 56	137,643 02
1866.	48,127	327	271	3,732	28,445 16	7,773 65	225,564 53
1867.	89,681	418	555	3,703	26,540 81	9,581 42	416,730 51
1868.	47,841	480	293	3,261	26,954 06	11,287 08	197,152 92
1869.	139,705	771	928	3,979	26,015 68	7,527 16	654,141 26
1870.	78,166	626	468	5,187	21,464 30	10,954 74	258,664 70
1871.	50,716	277	357	3,093	17,415 46	42,557 72	153,295 36
1872.	47,342	245	341	1,435	21,484 16	16,975 40	173,255 76
1873.	146,702	897	1,015	4,691	31,229 27	29,781 97	450,222 90
1874.	222,322	1,054	1,474	6,292	36,884 57	21,996 72	587,507 38
1875.	120,971	958	789	3,365	32,098 23	28,107 40	342,932 89
1876.	15,248	155	75	1,172	29,345 41	19,808 29	79,545 28
1877.	64,666	363	431	1,822	35,763 33	16,959 44	291,829 63
1878.	88,031	492	603	1,544	25,704 37	19,259 49	37,264 97
1879.	145,381	820	1,043	2,953	29,283 67	10,649 69	130,840 50
1880.	79,128	271	554	4,196	25,561 48	25,068 11	92,544 08
1881.	132,076	548	917	4,810	34,512 15	30,967 89	452,310 06
1882.	98,515	792	725	5,677	33,969 35	26,618 05	224,450 16
1883.	75,364	835	497	5,963	34,749 74	25,140 81	232,084 33
1884.	101,547	751	654	5,957	43,678 03	37,893 29	258,020 91
1885.	118,647	796	854	6,325	46,532 18	45,333 02	203,188 03
1886.	108,193	734	723	7,441	51,110 46	50,707 64	177,647 24
1887.	90,584	756	605	8,100	50,264 65	43,789 60	186,496 98
1888.	104,903	816	674	8,152	52,422 41	53,782 97	228,567 57
1889.	171,023	1,351	1,190	4,303	61,503 01	63,459 25	350,234 54
Annexed Districts } previous to 1890, }	993,573	6,102	8,620	No. of house drains and cost of maintenance not known.	{	{	2,614,224 75
1890.	379,203	2,986	2,604	9,279	107,873 34	83,888 08	826,718 67
1891.	546,918	3,979	3,736	11,312	123,620 44	95,906 75	1,532,990 44
1892.	549,258	3,866	3,714	12,562	142,720 52	70,747 83	1,290,017 98
Norwood and Rogers Park } annexed previous to 1893, }	96,697	326	231	No. of house drains and cost of construction not known.	{	{	172,846 30
1893.	708,176	4,811	4,825	14,198	132,633 51	114,702 78	1,606,720 09
1894.	350,944	2,597	2,259	8,928	154,225 45	130,749 03	1,014,489 86
Totals	*6,401,310	42,063	44,781	168,570	\$1,524,538 80	\$1,171,595 40	\$16,385,434 65

*Of this amount, 5,897 feet have been taken up and replaced by sewers of larger size, leaving in place January 1, 1895, 6,395,413 feet, or 1,211.251 miles.

†Of this number, 26 manholes have been abandoned, leaving in place January 1, 1895, 44,755.

Of the above 1,211.251 miles, 476.488 miles are of brick construction and 734.803 miles are of vitrified pipe.

Length and Interior Diameter of Sewers in Place December 31, 1894, in the Different Wards of the City.

WARDS.	10½ Feet.	10 Feet.	9 Feet.	8½ Feet.	8 Feet.	7½ Feet.	7 Feet.	6½ Feet.	6 Feet.	5½ Feet.	5 Feet.	4¾ Feet.	4 Feet.	3¾ Feet.
1st.....											247	.....	1,926	.....
2d.....									1,480	.....	4,255	.....	670	.....
3d.....									704	.....	1,058	.....	670	.....
4th.....									1,680	.....	1,360	1,261	1,061	.....
5th.....								2,132	3,112	.....	8,018	2,600	4,180	.....
6th.....						667	.....	.....	.....	.....	5,750	3,532	4,975	.....
7th.....												280	5,040	.....
8th.....												3,955	4,000	.....
9th.....		1,625	.....	.....	.....	.....	.....	.....	.....	2,651	.....	3,675	4,925	.....
10th.....		11,636	.....	.....	5,161	.....	1,462	1,380	8,308	1,463	3,380	6,114	12,856	.....
11th.....												18,440	9,541	.....
12th.....							1,983	.....	1,582	2,656	.....	4,075	10,260	.....
13th.....											2,800	1,995	11,950	.....
14th.....					1,320	3,972	2,702	.....	518	1,370	11,194	7,030	5,217	.....
15th.....		5,865	.....	.....	3,952	6,630	2,125	.....	7,359	3,994	6,823	.....	2,399	.....
16th.....									1,494	.....	5,210	.....	5,275	.....
17th.....									1,296	.....	6,817	.....	6,755	.....
18th.....											10,775	6,940	4,011	.....
19th.....											9,305	10,130	9,390	.....
20th.....												2,220	3,000	.....
21st.....												2,843	2,510	.....
22d.....												655	660	.....
23d.....									753	.....	2,765	.....	3,157	.....
24th.....									3,301	.....	5,588	.....	2,591	.....
25th.....										2,150	5,537	1,335	7,591	885
26th.....											2,855	2,615	.....	.....
27th.....									6,660	2,362	11,555	2,648	11,965	.....
28th.....							6,507	2,660	9,743	5,113	3,530	5,880	4,566	.....
29th.....							1,984	.....	4,730	.....	1,458	1,350	2,336	.....
30th.....						667	5,290	.....	.....	.....	7,070	2,650	6,380	.....
31st.....			5,300	.....	5,339	.....	4,010	3,965	2,635	2,654	2,984	7,812	9,440	.....
32d.....							4,005	3,942	6,552	3,975	15,847	4,116	5,104	.....
33d.....											1,950	2,200	19,017	.....
34th.....		5,200	.....	.....	.....	.....	.....	3,986	9,410	1,488	1,676	2,358	3,970	.....
Totals...	5,285	5,200	27,475	5,300	18,441	11,936	32,724	19,340	77,583	38,290	143,426	3,933	118,019	190,412
														885

Length and Interior Diameter of Sewers in Place December 31, 1894, in the Different Wards of the City—Continued.

WARDS.	3½ Feet.	3¼ Feet.	3 Feet.	2¾ Feet.	2½ Feet.	2¼ Feet.	2 Feet.	22 Inch.	20 Inch.	18 Inch.	15 Inch.	12 Inch.	9 Inch.	6 Inch.	TOTALS.
1st			12,937	.....	17,033	6,077	15,210	.....	.....	.....	1,870	66,572	.....	.....	121,262
2d.			3,648	.....	15,280	382	25,369	.....	.....	.....	1,320	42,821	.....	.....	96,110
3d			668	.....	14,692	.....	22,750	.....	.....	.....	5,904	37,861	.....	.....	86,265
4th.			5,057	.....	24,784	.....	28,117	.....	.....	.....	10,462	43,481	1,889	.....	124,946
5th.			6,966	.....	7,020	.....	34,157	.....	.....	.....	16,249	50,315	.....	.....	121,415
6th.			10,446	.....	24,670	.....	54,127	.....	.....	.....	35,476	69,697	.....	.....	230,290
7th.			4,137	.....	3,683	.....	21,572	.....	.....	.....	3,686	32,167	.....	.....	79,273
8th.			1,893	.....	2,545	.....	20,085	.....	.....	.....	4,403	36,601	.....	.....	75,775
9th.			4,214	.....	971	.....	13,013	.....	.....	.....	18,726	40,987	.....	.....	94,884
10th.			12,128	.....	15,818	.....	47,149	.....	.....	.....	109,734	152,888	.....	.....	401,232
11th.			758	.....	2,225	.....	34,093	.....	.....	.....	3,925	45,789	.....	.....	115,770
12th.			14,090	.....	10,725	.....	81,637	.....	.....	.....	80,018	137,307	1,249	.....	366,677
13th.			9,851	.....	7,555	.....	37,730	.....	.....	.....	52,723	89,817	860	.....	230,359
14th.			4,604	.....	8,329	.....	51,178	.....	.....	.....	56,875	103,231	116	.....	265,263
15th.			5,444	.....	16,776	.....	60,583	.....	.....	.....	113,286	114,873	.....	.....	352,065
16th.			2,265	.....	382	.....	16,778	.....	.....	.....	9,371	29,371	.....	.....	70,046
17th.			4,815	.....	.....	.....	35,074	.....	.....	.....	650	21,493	.....	.....	83,340
18th.							32,845	.....	.....	.....	.....	31,599	.....	.....	79,160
19th.			1,023	.....	.....	.....	36,055	.....	.....	.....	1,014	42,641	.....	.....	109,558
20th.			3,168	.....	7,333	.....	23,619	.....	.....	.....	13,860	38,898	.....	.....	99,787
21st.			515	.....	12,010	.....	16,900	.....	.....	.....	1,275	46,847	.....	.....	90,768
22d.			2,179	.....	7,525	.....	22,499	.....	.....	.....	789	35,182	.....	.....	73,780
23d.			1,962	.....	3,841	.....	25,833	.....	.....	.....	1,726	38,146	.....	.....	76,001
24th.			4,521	.....	1,441	.....	43,623	.....	.....	.....	3,607	36,071	.....	.....	103,978
25th.			11,580	1,985	15,074	4,817	30,157	.....	2,604	19,748	81,989	163,803	47,475	.....	398,858
26th.			12,508	.....	9,857	.....	31,043	.....	.....	.....	83,013	133,480	2,520	.....	321,471
27th.			3,314	.....	4,560	.....	22,560	.....	.....	.....	106,122	35,938	.....	.....	215,162
28th.			11,572	.....	18,864	.....	25,048	.....	3,100	.....	58,939	124,234	.....	.....	266,720
29th.			7,023	.....	6,342	.....	8,704	.....	1,300	12,392	36,220	29,486	.....	.....	137,867
30th.			6,639	.....	12,117	.....	41,965	.....	.....	.....	118,840	133,033	1,913	.....	390,779
31st.			7,096	.....	17,520	.....	19,848	261	330	13,205	73,106	77,099	33,061	16,270	307,499
32d.			4,726	.....	5,377	.....	112,118	.....	530	4,119	57,128	80,400	129	.....	296,889
33d.			4,896	.....	5,642	.....	16,585	.....	.....	658	27,528	23,917	.....	.....	106,580
34th.			3,559	.....	24,147	4,771	72,847	.....	.....	6,917	76,992	137,342	31,766	769	405,584
Totals	102,149	3,338	189,102	1,985	324,138	15,947	1,180,871	261	9,479	141,096	1,272,399	2,318,157	121,203	17,039	6,395,413

SEWERS CONSTRUCTED DURING THE YEAR 1894 IN THE
WEST DIVISION.

STREET	FROM	TO	Diam. in feet	Length in feet
Alley E. of Campbell av	Lake	North	$\frac{1}{2}$	428
Alley S. of Fulton and	W. of Campbell avenue .....	.....	$\frac{1}{2}$	432
Augusta	Crawford avenue	Avers avenue	2	1,025
Avers avenue	Augusta	Division	1	1,385
Avers avenue	Twenty-second	C., B. & Q. R. R.	1	652
Avondale avenue	Wallace	Hudson	2	810
Avondale avenue	Hudson	Garden	$1\frac{1}{2}$	610
Carroll avenue	St. Louis avenue	West	1	450
Central Park avenue	Armitage avenue	McLean avenue	$1\frac{1}{2}$	366
N. L. Central Park bld.	Homan avenue	Trumbull avenue	$1\frac{1}{2}$	323
N. L. Central Park bld.	St. Louis avenue	Trumbull avenue	1	347
N. L. Central Park bld.	Albany avenue	Kedzie avenue	1	619
S. S. Central Park bld.	Albany avenue	Troy	$1\frac{1}{2}$	332
S. S. Central Park bld.	Troy	Kedzie avenue	1	300
Centre	Selwyn	E. & W	1	420
Chase court	Coulter	South	1	345
Cleveland avenue	North avenue	Prince avenue	$1\frac{1}{2}$	721
Cleveland avenue	Prince avenue	Hirsch avenue	1	532
S. S. Colorado avenue ..	Crawford avenue	East	1	345
Cornelia	Robey	Hoyne avenue	1	620
Cornelia	Rockwell	Western avenue	1	1,311
Courtland	Hamlin avenue	Central Park avenue ..	1	1,309
Crawford avenue	North avenue	Armitage avenue	$1\frac{1}{2}$	2,510
Crawford avenue	North avenue	Prince avenue	$1\frac{1}{2}$	604
Crawford avenue	Prince avenue	Alley N. of Grand ave.	1	614
Crawford avenue	Division	Doe	$1\frac{1}{2}$	656
Crawford avenue	Doe	Grand avenue	1	628
Crawford avenue	Diversey	Carroll avenue	2	665
Crawford avenue	Carroll avenue	North	$1\frac{1}{2}$	665
Crawford avenue	665 ft. N. of Carroll ave	802 ft. N. of Carroll ave	$1\frac{1}{2}$	137
Dickens avenue	Kimball avenue	Sheridan avenue	1	450
E. S. Douglas Park bld.	Twelfth	North	$1\frac{1}{2}$	415
E. S. Douglas Park bld.	415 ft. N. of Twelfth ..	N. of Harrison	1	2,433
W. S. Douglas Park bld.	Twelfth	Fourteenth	1	1,264
Across Douglas Park bld	Opposite Fourteenth ..	East and West	$1\frac{1}{2}$	111
Across Douglas Park bld	Opposite Howard	East and West	$1\frac{1}{2}$	213
Across Douglas Park bld	Opposite Lexington ..	East and West	$1\frac{1}{2}$	213
Edbrook place	Perry avenue	East	1	412
Flournoy	Central Park avenue ..	Lawndale avenue	$1\frac{1}{2}$	665
Forquer	Central Park avenue ..	Lawndale avenue	$1\frac{1}{2}$	664
Forest avenue	Diversey	Elston road	1	632
Fortieth place	Sixteenth	Fifteenth	$1\frac{1}{2}$	659
Fortieth place	Fifteenth	Fourteenth	1	678
Fortieth place	Fourteenth	Thirteenth	$1\frac{1}{2}$	664
Fortieth place	Thirteenth	Alley North	1	488
Fortieth place	North avenue	Prince avenue	$1\frac{1}{2}$	605
Fortieth place	Prince avenue	Grand avenue	1	515
Forty-first	Fifteenth	Fourteenth	1	670
Forty-first	Sixteenth	Fifteenth	$1\frac{1}{2}$	659
Forty-first	Randolph	North avenue	1	228
Forty-first	North avenue	Prince avenue	$1\frac{1}{2}$	605
Forty-first	Prince avenue	Hirsch avenue	1	637
Forty-second place	Thirteenth	Alley North	1	486
Forty-second place	Fourteenth	Thirteenth	$1\frac{1}{2}$	672

WEST DIVISION—CONTINUED.

STREET	FROM	TO	Diam. in feet	Length in feet
Forty-third	Thirteenth	Alley North	1	504
Forty-third	Fourteenth	Thirteenth	1½	662
Forty-third	North avenue	Prince avenue	1½	708
Forty-third	Prince avenue	Hirsch avenue	1	586
Forty-third place	Thirteenth	Alley North	1	504
Forty-third place	Fourteenth	Thirteenth	1½	663
Forty-fourth	Thirteenth	Alley North	1	510
Forty-fourth	Fourteenth	Thirteenth	1½	663
Forty-fourth	North avenue	Prince avenue	1½	770
Forty-fourth	Prince avenue	Hirsch avenue	1	532
Garden avenue	California avenue	Francisco	1	695
Goodwin avenue	St. Louis avenue	Homan avenue	1	633
Goodwin avenue	St. Louis avenue	Central Park avenue	1½	662
Grand avenue	Crawford avenue	Cleveland avenue	1	2,660
Hamlin avenue	Armitage avenue	McLean avenue	1½	366
Hamlin avenue	Armitage avenue	Bloomington road	1½	1,290
Hamlin avenue	Madison	Lake	½	1,249
Hammond avenue	Diversey	Evergreen	1½	665
Hammond avenue	Evergreen	Logan	1	418
Harding avenue	Augusta	Glenview avenue	1½	665
Harding avenue	Glenview avenue	Alley N. of Chicago ave	1	490
Harding avenue	Lake	Kinzie	1	910
Henry	Talman	East	1	165
Homan avenue	Belmont avenue	Avondale avenue	1½	1,100
Humboldt avenue	Kimball avenue	Palmer avenue	1	1,132
Humboldt avenue	Western avenue	Seymour	1	637
Humboldt avenue	Rockwell	Seymour	1	675
Huron	Washtenaw avenue	Rockwell	1	640
Indiana	Crawford avenue	Harding avenue	1	301
Indiana	Springfield avenue	Avers avenue	1	338
Indiana	Ridgeway avenue	Alley E. of Lawndale	1	501
Iowa	Rockwell	Seymour	1	676
Keeney avenue	North avenue	Grand avenue	1½	555
Keeney avenue	Grand avenue	Hirsch avenue	1	686
Kimbark avenue	Armitage avenue	Humboldt avenue	1½	1,335
Lawndale avenue	Armitage avenue	Bloomington road	1½	1,250
Lexington	Central Park avenue	Lawndale avenue	1½	663
McAuley avenue	North avenue	Grand avenue	1½	739
McAuley avenue	Grand avenue	Hirsch avenue	1	502
McLean avenue	Kimball avenue	Hamlin avenue	1	2,674
Mead	Armitage avenue	Fullerton avenue	1½	2,670
Melrose	Homan avenue	West	1	574
North avenue	Grand avenue	West Forty-fourth	2	120
Ohio	Crawford avenue	Harding avenue	1	280
Polk	Central Park avenue	Lawndale avenue	1½	663
Ridgway avenue	Armitage avenue	Bloomington road	1½	1,246
Ridgway avenue	Ohio	Kinzie	1½	1,290
Rockwell	Augusta	Iowa	1½	665
Rubell	Twenty-first	North	1	185
Sacramento avenue	Twenty-sixth to 357 ft.	N. of N. line of 25th	1	930
Sawyer avenue	Twenty-second	Twenty-sixth	1	2,612
School	Homan avenue	West	1	573
Seymour	Augusta	Iowa	1½	666
Seymour	Augusta	Humboldt avenue	1½	347
Sheridan avenue	Armitage avenue	Bloomington road	1½	1,270
Sheridan avenue	Armitage avenue	Fullerton avenue	1½	2,670

WEST DIVISION—CONTINUED.

STREET	FROM	TO	Diam. in feet	Length in feet
Spaulding avenue	Twenty-second	Twenty-sixth	1	2,618
Springfield avenue	Augusta	Glenview avenue	1½	665
Springfield avenue	Glenview avenue	Alley N. of Chicago ave	1	490
Twenty-first	Fisk	May	1	395
Twenty-first	Jefferson	Alley E. of Union	1	624
Twenty-third	Kedzie avenue	Spaulding avenue	2	629
Twenty-third	Spaulding avenue	Turner avenue	1½	332
Twenty-third	Turner avenue	West	1	157
Twenty-fourth	Kedzie avenue	Turner avenue	2	991
Twenty-fifth	Kedzie avenue	Turner avenue	2	991
Twenty-fifth court	California avenue	Francisco	2	637
Twenty-fifth court	Francisco	552 ft. West	1	585
Thirty-first	Kedzie avenue	Spaulding avenue	1½	633
Tripp avenue	North avenue	Prince avenue	1½	707
Tripp avenue	Prince avenue	Hirsch avenue	1	534
Troy	Central Park avenue ..	Kinzie	1	520
Turner avenue	Twenty-second	Twenty-sixth	1	2,614
Washburn avenue	Robey	Lincoln	1	592
Washtenaw avenue	Grand avenue	Huron	1½	156
Washtenaw avenue	Huron	Superior	1	339
Total				98,333

**SEWERS CONSTRUCTED DURING THE YEAR 1894 IN THE
SOUTH DIVISION.**

STREET	FROM	TO	Diam. in feet	Length in feet
Alley E. of LaSalle....	124th	Alley 125 ft. S. of 123rd	1	491
Alley 125 ft. S. of 123d.	Alley E. of La Salle ..	Alley W. of State....	1	636
Alley N. of Fifty-fifth..	Halsted	Union avenue	1	615
Alley N. of Garfield bld.	Lafin	Loomis	1	580
Alley W. of Grand bld.	Forty-third	Forty-fourth	1	635
Aberdeen	Fifty seventh	Fifty-ninth	1	1,267
Aberdeen	Sixty-fifth	Sixty-sixth	1½	662
Aberdeen	Sixty-sixth	Sixty-seventh	1	669
Adams avenue	Sixty-ninth	Sixty-eighth	1	635
Adams avenue	Seventy-third	Seventy-fourth	1½	665
Adams avenue	Seventy-fourth	Seventy-fifth	1	653
Ashland avenue	Sixty-fifth	Seventy-first	6½	3,942
Ashland avenue	Seventy-first	Seventy-fifth	6	2,575
Ashland avenue	Seventy-fifth	Seventy-ninth	5	2,730
Ashland avenue	Seventy-ninth	Eighty-third	4	2,650
Ashland avenue	Eighty-third	Eighty-seventh	3	2,650
Bond avenue	Seventy-third	Seventy-fourth	1½	788
Bond avenue	Seventy-fourth	Seventy-fifth	1	777
Bronson	Center avenue	Lafin	1	1,950
Brooks avenue	Seventy-third	Seventy fourth	1½	665
Brooks avenue	Seventy fourth	Seventy-fifth	1	648
Canal	121st	123rd	1	1,278
Carpenter	Fifty-sixth	Fifty-seventh	1	610
Carpenter	Sixty-fifth	Sixty-sixth	1½	665
Carpenter	Sixty-seventh	Sixty-sixth	1	670
Charles avenue	Ninety-ninth	Ninety-fifth	4½	2,859
Charles avenue	103d	Ninety-ninth	5	2,725
Clinton	121st	123rd	1	1,278
Concord	Halsted	Union	1	600
Concord	Halsted	Peoria	1½	610
Concord	Peoria	Alley E. of Morgan...	1	490
Cook	Fifty-ninth	Sixtieth	1	606
Desplaines	121st	123rd	1	1,277
Dexter avenue	Wright	East	1	150
Dreyer	Forty-ninth	Fifty-first	1	1,250
Dreyer	Fifty-first	Fifty-second	1½	662
Dreyer	Fifty-second	Fifty-fourth	1	1,340
Dreyer	Fifty-fourth	Alley N. of Fifty-fifth.	1½	520
Dreyer	Fifty-ninth	Alley N. of Sixty-first.	1	1,180
Emerald avenue	119th	118th	2	710
Emerald avenue	121st	123rd	1	1,276
Everts avenue	Forty-seventh	Forty-eighth	1½	675
Everts avenue	Forty-eighth	Forty-ninth	1	650
Everts avenue	Fifty-ninth	Alley N. of Sixty-first.	1	1,170
Ewing avenue	848 ft. N. of Ninety-fifth ..	North	1½	543
Ewing avenue	Ninety-fifth	North	2	848
Ewing avenue	Ninety-sixth	Ninety-fifth	1½	645
Ewing avenue	Ninety-eighth	Ninety-sixth	1	1,334
Ewing avenue	Ninety-ninth	Ninety-eighth	1½	702
Ewing avenue	100th	Ninety-ninth	2	701
Ewing avenue	100th	101st	2	693
Ewing avenue	101st	102nd	2	715
Fourth avenue	Ninety-fifth	Ninety-sixth	1½	590
Fourth avenue	Ninety-sixth	Ninety-seventh	1	658

SOUTH DIVISION—CONTINUED.

STREET	FROM	TO	Diam. in feet	Length in feet
Fifth avenue	121st	123rd	1	1,278
Forty-third	Robey	Wood	2	1,345
Forty-fifth	Lincoln	Wood	1	665
Forty-sixth	Greenwood avenue	West	1	500
Forty-sixth	Lincoln	Wood	1	675
Forty-seventh	Cottage Grove avenue	Alley W. of Drexel bld.	1½	365
Forty-seventh	Paulina	Page	2	325
Forty-seventh	Page	Wood	1	340
Forty-seventh	Robey	Wood	2	1,335
Forty-eighth	Goodspeed	West	1	155
Forty-eighth	Vincennes avenue	Alley E. of Grand ave.	1½	485
Forty-eighth	Wood	Paulina	1	670
Forty-eighth	Robey	Lincoln	1	665
Fiftieth	Ellis avenue	Greenwood avenue	1	539
Fifty-first	Hoyne avenue	Leavitt	1½	633
Fifty-first	Hoyne avenue	Goodspeed	2	1,654
Fifty-first	Goodspeed	Wood	1	340
Fifty-third	Ashland avenue	Wood	2	1,285
Fifty-fourth	Ashland avenue	Wood	2	1,288
Farwell avenue	Sixty-fifth	Sixty-third	2	1,354
Farwell avenue	Sixty-seventh	Sixty-fifth	2½	1,331
Goodspeed	Forty-third	Forty-fourth	1½	640
Goodspeed	Forty-fourth	Forty-sixth	1	1,335
Goodspeed	Forty-eighth	Forty-sixth	1½	1,328
Goodspeed	Forty-eighth	Forty-ninth	1	650
Halsted	Ninety-fifth	Eighty-eighth	5	4,701
Halsted	Ninety-ninth	Ninety-fifth	5½	2,660
Hermitage avenue	Fifty-eighth	South	1	280
Indiana avenue	Sixty-third	Sixty-second	1	761
Jefferson avenue	Sixty-ninth	Sixty-eighth	1	660
Jefferson avenue	121st	123rd	1	1,270
Kinney avenue	Sixty-ninth	Seventieth	1½	665
Kinney avenue	Seventieth	Seventy-first	1	666
Lafin	Fiftieth	Alley N. of Fifty-first	1	507
Lafin	Fiftieth	Bronson	1	329
Lafin	Bronson	G. T. R. R.	1	200
Lafin	Fifty-first	Fifty-second	1	640
Lafin	Fifty-third	Fifty-second	1½	660
Lincoln	Forty-sixth	Forty-eighth	1½	1,335
Lincoln	Forty-eighth	Forty-ninth	1	665
Lowe avenue	119th	Tell	1½	1,075
Lowe avenue	Tell	Diana	1	790
Lowe avenue	121st	123rd	1	1,315
Madison avenue	Seventy-third	Seventy-second	1½	681
Madison avenue	Seventy-third	Seventy-fourth	1½	665
Madison avenue	Seventy-fourth	Seventy-fifth	1	631
Marshfield avenue	Fifty-eighth	South	1	280
May	Forty-eighth	Forty-ninth	1½	660
May	Forty-ninth	Fiftieth	1	673
May	Fiftieth	Fifty-first	1½	625
May	Alley S. Garfield bld.	Fifty-ninth	1	2,167
{ Michigan avenue	Bracket	North	1	1,107
{ Bracket	Hartwell	Michigan avenue		
{ Hartwell	Sixty-seventh	Bracket		
Michigan avenue	Sixty-seventh	Bracket	1	871
Morgan	Sixty-fifth	Sixty-sixth	1½	660

SOUTH DIVISION—CONTINUED.

STREET	FROM	TO	Diam. in feet	Length in feet
Morgan	Sixty-sixth	Sixty-seventh	1	668
Morgan	Seventy-first	Seventy-third	1	1,331
McChesney avenue	Sixty-fifth	Sixty-third	2	1,348
McChesney avenue	Sixty-seventh	Sixty-fifth	2½	1,330
Ninety-fifth and Evergreen av	Ninety-fifth	Ninety-fourth	4	1,100
Ninety-ninth	Wentworth avenue	Stewart avenue	6½	1,325
Ninety-ninth	Stewart avenue	Halsted	6	2,650
Nutt avenue	Seventy-third	Seventy-first	1½	1,009
Nutt avenue	Seventy-third	Seventy-fourth	1½	665
Nutt avenue	Seventy-fourth	Seventy-fifth	1	650
100th	Calumet river	East	4	577
100th	Third avenue	West	3½	663
100th	Third avenue	Ewing avenue	8	652
100th	Ewing avenue	Seventh avenue	2½	665
100th	Seventh avenue	Eighth avenue	2	340
103rd	Wentworth avenue	Halsted	5½	4,000
103rd	Halsted	Charles avenue	5	4,348
119th	Wentworth avenue	Fifth avenue	1½	300
119th	Fifth avenue	Canal	2½	1,677
119th	Canal	Emerald avenue	2	1,650
119th	Emerald avenue	R. R.	1½	210
122nd	Halsted	Canal	1½	2,340
122nd	Wentworth avenue	Alley W. of Shields av	1½	830
124th	Wentworth avenue	Alley E. of La Salle	1½	496
Page	Forty-seventh	Forty-sixth	1½	660
Paulina	Fifty-eighth	South	1	280
Paulina	Fifty-ninth	Alley N. of Sixty-first	1	1,170
Poplar avenue	Twenty-ninth	North	1	875
Poplar avenue	Archer avenue	South	1½	420
Portland avenue	121st	123rd	1	1,278
Prairie avenue	Sixty-first	South of Sixtieth	1	513
Prairie avenue	Sixty-third	Sixty-first	1½	1,327
Prairie avenue	Sixty-fourth	Sixty-third	2	664
Prairie avenue	Sixty-seventh	Sixty-fourth	2½	1,995
Prospect avenue	Hopkinson avenue	Eighty-seventh	2½	1,039
Prospect avenue	Ninety-first	Hopkinson avenue	8	2,046
Prospect avenue	Ninety-fourth	Ninety-first	3½	2,173
Rhodes avenue	Seventy-third	Seventy-first	1	1,320
Rhodes avenue	Seventy-third	Seventy-fourth	1	665
Robey	Sixty-third	Sixty-fifth	7	1,367
Sixty-third	Prairie avenue	State	1½	1,701
Sixty-fifth	Robey	Ashland avenue	7	2,638
Sixty-fifth court	Honore	East	1	390
Sixty-ninth court	South Chicago avenue	Alley W. of Cottage Grove av	1	665
Seventy-first place	Nutt avenue	Madison avenue	1	644
Seventy-second	Nutt avenue	East of Madison av	1	982
Seventy-second place	Nutt avenue	Jefferson avenue	1	1,841
Seventy second place	Nutt avenue	West 155 feet	1	155
Seventy-fourth	Rhodes avenue	East	1	151
Seventy-fourth	Nutt avenue	Noble court	1	301
Seventy-fifth	Nutt avenue	Noble court	1	433
Sherman	Forty-third	Forty-second	1	435
St. Lawrence avenue	Sixty-fifth	Sixty-third	2	140
Thirty-second	Auburn	Illinois avenue	1	391
Thirty-third	Robey	Vermont avenue	1½	331
Thirty-third	Vermont avenue	C. & A. R. R.	1	180

SOUTH DIVISION—CONTINUED.

STREET	FROM	TO	Diam. in feet	Length in feet
Thirty-sixth	Pearson	Kedzie avenue	1½	601
Thirty-seventh	Stewart avenue	Shields avenue	1	235
Thirty-seventh	Laurel	Gage	1	400
Thirty-eighth court	Ashland avenue	Paulina	1	597
Throop	Fiftieth court	Alley N. of Fifty-first	1	515
Tracey avenue	Forty-seventh	South	1½	520
Tracey avenue	520 ft. S. Forty-seventh	South	1½	395
Union avenue	119th	118th	1½	710
Union avenue	122nd	123rd	1	663
Wabash av. and Bracket	Sixty-seventh	Northern terminus	1	990
Wallace	119th	Tell	1½	1,075
Wallace	Tell	Diana	1	790
Wentworth avenue	103rd	Ninety-ninth	7	2,656
Wentworth avenue	121st	113th	10	5,200
Wentworth avenue	Calumet river	North	10½	585
Wentworth avenue	Calumet river	Blue Island road	10½	950
Wentworth avenue	Blue Island road	121st	10½	3,800
Winchester	Forty-seventh	Forty-sixth	1	670
Winchester	Forty-seventh	Forty-eighth	1½	675
Winchester	Forty-eighth	Forty-ninth	1	655
Wood	Forty-third	Forty-fourth	1½	660
Wood	Forty-sixth	Forty-fourth	1	1,335
Wood	Forty-sixth	Forty-eighth	1½	1,328
Wood	Forty-ninth	Forty-eighth	1	655
Wood	Fifty-ninth	Alley N. of Sixty-first	1	1,170
Total				194,231

**SEWERS CONSTRUCTED DURING THE YEAR 1894 IN THE
NORTH DIVISION.**

STREET	FROM	TO	Diam. in feet	Length in feet
Alley bet. Maple & Southport avs.	North avenue	Pratt avenue	$\frac{1}{2}$	698
Alley bet. Maple & Southport avs.	North avenue	Pratt avenue	$\frac{1}{2}$	692
Alley E. of Clark	Montrose boulevard	North	1	431
Alley bet. Clark & C. & N. W. Ry	Twohey avenue	Jackson avenue	$\frac{1}{2}$	336
Ashland avenue	Webster avenue	North	$1\frac{1}{2}$	652
Ashland avenue	North avenue	Summerdale avenue	1	1,341
Ashland avenue	Claremont avenue	Summerdale avenue	$1\frac{1}{2}$	999
Balmoral avenue	E. Ravenswood Park	Wright avenue	$1\frac{1}{2}$	625
Balmoral avenue	Wright avenue	Ashland avenue	1	496
Balmoral avenue	Robey	E. of Palmer	$1\frac{1}{2}$	548
Balmoral avenue	W. Ravenswood Park	E. of Palmer	1	652
Brice avenue	Pratt avenue	Morse avenue	1	806
Centre	E. Ravenswood Park	600 ft. East	$1\frac{1}{2}$	628
Centre	600 ft. East	Ashland avenue	1	497
Claremont avenue	E. Ravenswood Park	Wright avenue	$1\frac{1}{2}$	626
Claremont avenue	Wright avenue	Ashland avenue	1	500
Cornelia	Gross avenue	Wolcott	1	575
Cornelia	Robey	Wolcott	$1\frac{1}{2}$	657
Crescent place	Halsted	Evanston avenue	1	619
Eddy	Gross avenue	Wolcott	1	574
Eddy	Robey	Wolcott	$1\frac{1}{2}$	656
Evanston avenue	Pratt avenue	Farwell avenue	1	409
Evanston avenue	Farwell avenue	Morse avenue	$1\frac{1}{2}$	459
North Fifty-ninth	E. Ravenswood Park	Wright avenue	$1\frac{1}{2}$	617
North Fifty-ninth	Wright avenue	Ashland avenue	1	490
North Fifty-ninth	Robey	E. of Palmer	$1\frac{1}{2}$	540
North Fifty-ninth	W. Ravenswood Park	E. of Palmer	1	680
North Fifty-ninth	Lincoln avenue	Western avenue	$1\frac{1}{2}$	844
Farwell avenue	Lake Michigan	Evanston avenue	2	770
Farwell avenue	Evanston avenue	Brice avenue	$1\frac{1}{2}$	995
Farwell avenue	Brice avenue	Southport avenue	1	188
Fay	Pratt avenue	West	1	636
Fletcher	Ravenswood	200 ft. West	1	254
Fletcher	Wood	Eastern terminus	1	825
Forrest avenue	147 ft. N. of Webber av	Fischer avenue	$1\frac{1}{2}$	268
Forrest avenue	Fischer avenue	Devon avenue	1	435
Herndon	Byron	Grace avenue	1	571
Huck	Lawrence avenue	Grant place	$1\frac{1}{2}$	655
Huck	Grant place	Clay avenue	1	665
Indiana	710 ft. E. of Seneca	1010 ft. E. of Seneca	2	300
Kings place	Blucher	Sault	1	359
Lawrence avenue	Garfield avenue	W. of Wright avenue	2	661
Lawrence avenue	W. of Wright avenue	Leavitt	$1\frac{1}{2}$	324
Lincoln avenue	Foster avenue	Bowmanville road	$1\frac{1}{2}$	165
Lincoln avenue	Ashland avenue	Southport avenue	1	1,892
Meadow Lane	150 ft. N. of Webber av	Fischer avenue	$1\frac{1}{2}$	263
Meadow Lane	Fischer avenue	Devon avenue	1	435
Montrose boulevard	Clark	East	$1\frac{1}{2}$	126
Montrose boulevard	E. of Halsted	Lake Michigan	1	160
Morse avenue	Evanston avenue	Lake Michigan	1	569
Morse avenue	Evanston avenue	Webber avenue	$1\frac{1}{2}$	553
Morse avenue	Webber avenue	Southport avenue	1	553
Nelson	Robey	W. Ravenswood Park	$1\frac{1}{2}$	1,064
Nelson	Western avenue	Alley W. of Oakley av.	1	485

NORTH DIVISION—CONTINUED.

STREET	FROM	TO	Diam. in feet	Length in feet
Noble avenue	Ravenswood	200 ft. West	1½	252
North avenue	E. Ravenswood Park ..	Wright avenue	1½	618
North avenue	Wright avenue	Ashland avenue	1	502
Oakdale avenue	Hall	Haisted	1	180
Palmer	Webster avenue	Washington avenue ..	1½	518
Palmer	N. of Fifty-ninth	Washington avenue ..	1	468
Paulina	Belmont avenue	Fletcher	1½	383
Perry	Berteau avenue	North 270 ft.	1	270
Pine	E. Ravenswood Park ..	Wright avenue	1½	625
Pine	Wright avenue	Ashland avenue	1	665
Pine	Robey	E. of Palmer	1½	550
Pine	W. Ravenswood Park ..	E. of Palmer	1	681
W. Ravenswood Park ..	Wellington	Alley S. of Belmont av.	1	1,137
Rascher avenue	E. Ravenswood Park ..	Wright avenue	1½	628
Rascher avenue	Wright avenue	Ashland avenue	1	495
Robey	Clybourn avenue	George	2	615
Robey	Webster avenue	Balmoral avenue	3	2,843
St. Elmo	Robey	Wolcott	1½	656
St. Elmo	Gross	Wolcott	1	574
Stella	Grace	Waveland avenue	1	528
Summerdale avenue ..	E. Ravenswood Park ..	Ashland avenue	2	1,291
Summerdale avenue ..	W. Ravenswood Park ..	E. of Palmer	1	647
Summerdale avenue ..	Robey	E. of Palmer	1½	551
Walnut	E. Ravenswood Park ..	Wright avenue	1½	623
Walnut	Wright avenue	Ashland avenue	1	664
Walnut	Robey	E. of Palmer	1½	549
Walnut	W. Ravenswood Park ..	E. of Palmer	1	647
Wolcott	Webster avenue	Washington avenue ..	1½	525
Wolcott	N. of Fifty-ninth	Washington avenue ..	1	470
Webber avenue	Pratt avenue	North avenue	1	807
Wellington	Ashland avenue	Paulina	1½	632
Wellington	Paulina	Wood	1	665
Western avenue	Belmont avenue	School	2½	677
Western avenue	School	Roscoe	2	670
Wilton	Grace	Byron	1	472
Wolcott	Melrose avenue	School	1	333
Wright avenue	Walnut	Claremont avenue	1	1,330
Total				55,984

**WING SEWERS CONSTRUCTED DURING THE YEAR 1894 IN
THE WEST DIVISION.**

STREET	FROM	TO	Diam. in feet	Length in feet
Twenty-eighth	Manhole in Kedzie av.	West	1½	52
Thirty-first	Manhole in Kedzie av.	East and West	1½	88
Turner av.	Manhole in 26th	South	1	38
Sawyer av.	Manhole in 26th	South	1	41
Twenty-eighth	Manhole in Kedzie av.	East	1½	40
Twenty-ninth	Manhole in Kedzie av.	East	1½	37
Sacramento av.	Manhole in 26th	North	1	48
Troy	Manhole in 26th	South	1	56
Spaulding av.	Manhole in 26th	South	1	38
Huron	Manhole in Avers av.	East and West	1	98
Springfield av.	Manhole in Flournoy ..	South	1	43
Wabansia av.	Manhole in Kimball av	East	1	38
N. S. Bloomingdale rd.	Manhole in Kimball av	East	1	38
Courtland	Manhole in Kimball av	East	1	38
S. S. Bloomingdale road	Manhole in Hancock ..	East and West	1	78
N. S. Bloomingdale road	Manhole in Hancock ..	West	1	38
N. S. Bloomingdale road	Manhole in Hancock ..	East	1	38
Central Park av.	Manhole in Milwaukee av.	South	1	40
Snow	Manhole in Elston av.	West	1½	40
Evergreen court.	Manhole in Elston av.	West	1½	40
Hoffman court.	Manhole in Elston av.	North	1½	58
Laurel av.	Manhole in Elston av.	North	1	43
Hamlin av.	Manhole in Milwaukee av.	West	1	40
Maplewood av.	Manhole in Elston av.	South	1	40
Franklin av.	Manhole in Elston av.	West	1	78
Hansen court.	Manhole in Milwaukee av.	West	1	40
Goodwin	Manhole in Homan av.	West	1	36
Flournoy	Manhole in Albany av.	West	1	38
Sacramento av.	Manhole in 25th	North and South	1	72
Francisco av.	Manhole in 25th	North	1	40
Boulevard place.	Manhole in 25th	North	1	38
Trumbull av.	Manhole in 26th	South	2	44
St. Louis av.	Manhole in 26th	South	1	44
Clifton Park av.	Manhole in 26th	South	1	44
Hamlin av.	Manhole in 26th	South	1½	52
Cornelia av.	Manhole in Washtenaw av.	East	1	42
Central Park av.	Manhole in 26th	South	2	50
Total				1,751

**WING SEWERS CONSTRUCTED DURING THE YEAR 1894 IN
THE SOUTH DIVISION.**

STREET	FROM	TO	Diam. in feet	Length in feet
Ward	Manhole in Thirty-sixth	South	1	86
Thirty-sixth	Manhole in Ashland av	West	1	45
Bronson	Manhole in Loomis . .	West	1	86
Fifty-eighth	Manhole in Center av.	West	2	40
Paulina	Manhole in Fifty-first	North and South	1½	80
Page	Manhole in Fifty-first	South	1½	40
Page	Manhole in Fifty-first	North	1	40
Bronson	Manhole in Loomis . .	East	1	86
Fifty-first	Manhole in Centre st.	East	1½	86
Atlantic	Manhole in 39th	South	1	40
Fifty-fourth	Manhole in May	East and West	1	72
Fifty-second	Manhole in Morgan . . .	East and West	1	72
Fifty-fourth	Manhole in Carpenter.	East and West	1	72
Total				645

MANHOLES AND CATCH-BASINS RAISED TO GRADE ON STREETS BEING IMPROVED, WITH COST OF SAME, DURING THE YEAR 1894, AS FOLLOWS:

No.	DESCRIPTION OF WORK DONE.	Cement.	Brick.	Iron Covers.	Wood Covers.	Straight Pipe.	Curved Pipe.	Slants.	Junctions.	Traps.	Bottoms.	Boxes.	Cost.		TOTAL COST.
													Material.	Labor and Teaming.	
2,902	Manholes raised to grade.....	4,383	1,383,200	324	820	5,653	180	6	4	16	16	8,708	\$23,553 60	\$49,411 11	\$72,964 71
2,909	Catch-basins raised to grade.....														

AMOUNT EXPENDED FOR REPAIRS OF SEWERS, MANHOLES AND CATCH-BASINS, ALSO MANHOLE AND CATCH-BASIN COVERS, DURING THE YEAR 1894, AS FOLLOWS:

No.	DESCRIPTION OF WORK DONE.	Cement.	Brick.	Iron Covers.	Wood Covers.	Straight Pipe.	Curved Pipe.	Junctions.	Traps.	Bottoms.	COST.		
											Material.	Labor and Teaming.	
348	Manholes repaired.....	378	288,205	257	376	1,751	298	13	36	145	\$18,600 54	\$39,188 98	\$57,784 42
378	Catch-basins repaired.....												
2,640	Feet of 9-in. drains repaired.....	288	8,950										
988	Feet of 12-in. sewer repaired.....	180	3,700			926	47	24					
683	Feet of 16-in. sewer repaired.....	151	8,680			253	34	19					
471	Feet of 18-in. sewer repaired.....	183	39,050			297	10						
92	Feet of 24-in. sewer repaired.....	27	32,000			12							
46	Feet of 6-ft. sewer repaired.....	20	12,700										
Manhole and Catch-Basin Covers repaired.....													

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METHOD.	South Division.			West Division.			North Division.			Total.		Average Cost per 100 feet.
	Feet Cleaned.	Cost.		Feet Cleaned.	Cost.		Feet Cleaned.	Cost.		Feet Cleaned.	Cost.	
Flushing.....	531,561	\$7,973 41		238,225	\$3,133 85		358,940	\$4,953 37		1,129,726	\$16,040 63	\$1 42
Iron Scraper... ..	291,534	20,900 44		59,870	8,178 25		167,291	14,378 37		518,695	43,547 06	8 39
Wood Scraper.....	84,829	4,996 42		238,830	8,924 37		108,510	6,130 81		422,169	20,051 60	4 75
Total.....	907,924	\$38,960 27		527,925	\$20,236 47		634,741	\$25,462 55		2,070,590	\$79,659 29	
Opening Inlets to Catch basins, attending complaints, etc.....												
Total.....											5,716 35	
.....												\$85,375 64
												Average Cost per Basin.
Catch-basins Cleaned ...	No. of.	Cost.		No. of.	Cost.		No. of.	Cost.		No. of.	Cost.	\$4 44
	5,907	\$24,809 40		3,898	\$19,100 20		4,277	\$18,433 87		14,012	\$62,948 47	
Cost of Cleaning Sewers and Catch-basins												\$147,719 11
Miscellaneous Bills for Repairs of Tools, Supplies, etc.....												6,506 84
Total Cost of Cleaning Sewers and Catch-basins.....												\$154,225 45

**RECEIPTS IN HOUSE DRAIN DEPARTMENT DURING
THE YEAR 1894.**

DIVISION.	PERMITS ISSUED.					Receipts.
	6-inch.	9-inch.	12-inch.	Total.	Junctions.	
West.....	2,044	21	5	2,070	39	\$ 10,590 00
North	1,990	23	.....	2,018	27	10,297 50
South	3,491	36	3	3,530	82	18,057 50
Totals.....	7,525	85	8	7,618	148	\$ 38,945 00
Receipts from licenses.....						2,095 00
Receipts from special assessments, etc.....						59,083 55
Miscellaneous receipts						4 75
Total receipts						\$100,078 30

**NUMBER OF DRAINS PUT IN PLACE DURING THE YEAR 1894
UNDER SPECIAL ASSESSMENT.**

DIVISIONS.	Total number of drains.	Total length of drains.	Total cost.	Average cost per drain.	Average length drain in feet.	Average cost per foot in cents
West	5,087	155,267	\$ 41,082 17	\$ 8 06	30.52	26.42
North	1,008	26,609	7,276 05	7 25	26.53	27.84
South	2,838	86,856	16,736 43	5 89	30.60	19.28
Total.....	8,928	268,732	\$ 65,044 65	\$ 7 28	30.10	24.20

Making a total of 50.89 miles of six-inch drains laid by contract and paid for by special assessments.

The methods employed since the organization of the Department of Sewers to clean main sewers and catch-basins are both expensive and unsatisfactory. Owing to the high buildings which have been built during recent years in the First Ward, thereby increasing the floor space beyond all anticipation when the sewers were originally designed in this locality, constant complaints are made of their incapacity to meet the increased duty required of them. To overcome the difficulties which now exist on this account large flushing

tanks, with a capacity of 200 gallons of water, are continually engaged to keep the sewers cleaned. To operate these moving tanks, six horses and four men are required, which entails a heavy expense on the cleaning fund. To curtail this item of expense to minimum it is contemplated to insert into the manholes a pipe with a gasket attachment to fit the twelve and fifteen inch pipe sewers, with a nozzle specially designed to give the water a circular motion as it passes into the sewers. The pipe will be fed with a hose attachment to the street hydrant. In case the pressure of water is not sufficient to meet the requirements, it is proposed to use a pump to increase the head. This method will save much expense and at the same time give more efficient service.

Another item of heavy expense to which the Department is subjected is the method in cleaning street catch-basins.

In order to keep them clean and prevent obstructions it is necessary to employ a large force of men and teams constantly to dispose of the deposit, which finds its way into them from the pavements. For the purpose of removing the deposit in a more economical manner, it is proposed to use a portable engine with a pump to lift the deposit from the basins into the dump wagons, instead of by hand. A saving of 40 per cent. will be realized if the former method is adopted; at the same time more thorough work will be accomplished.

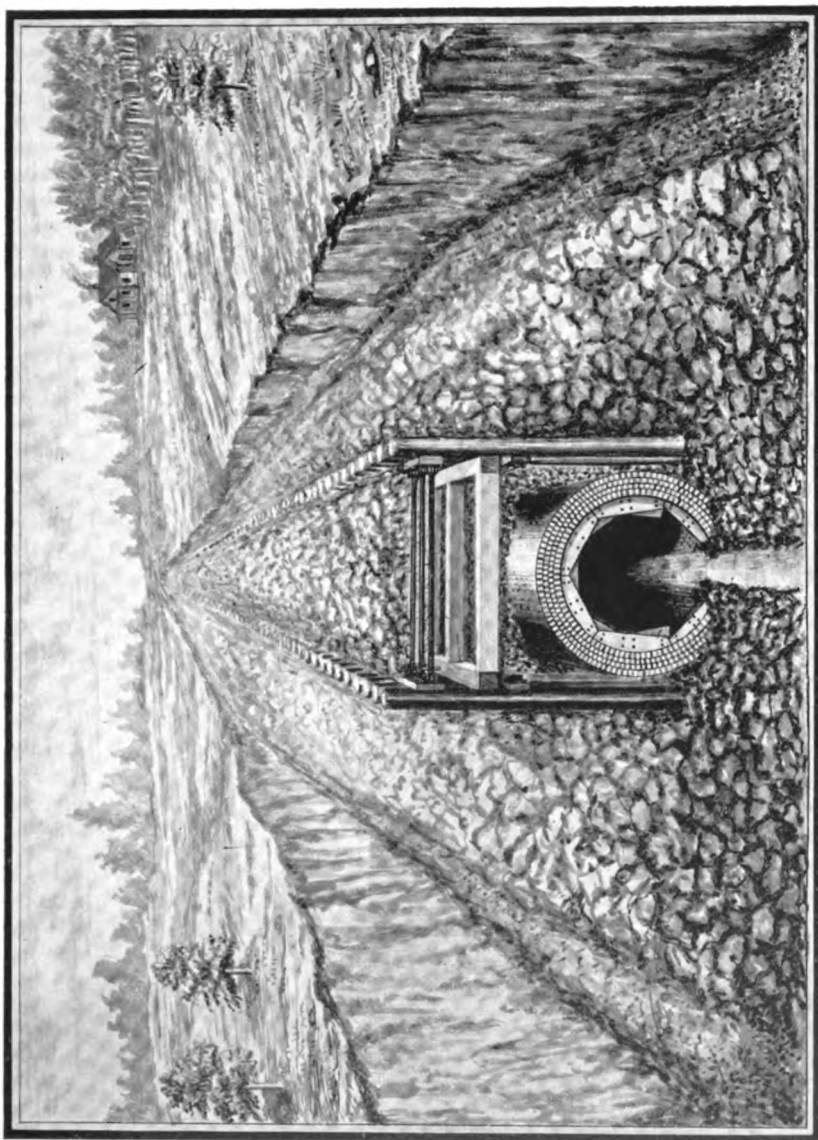
This Bureau of the Department of Public Works has designed and prepared plans for a completed system of sanitary and storm-water sewers to drain all of that part of the City south of Sixty-seventh street to the Calumet River, extending from the City limits on the west to Lake Michigan on the east, embracing a territory covering 53.50 square miles. Within these limits are the thriving towns of Pullman, Grand Crossing, Kensington, Roseland, West Pullman, Fernwood and East Washington Heights. Previous to annexation none of these towns were provided with a sewerage system, with the single exception of Pullman, save a few temporary wooden box and tile drains; but on account of the rapid growth and increase of the population the temporary expedients having proved inadequate, the citizens have demanded the construction of a plan which will serve as a basis for a sewerage system to meet the requirements for all time of this important district of the metropolis. For the purpose of sewerage, the territory just described has been divided into six main drainage districts, the sewers in two of which, Seventieth and Seventy-third streets, are completed and in operation. The work remaining to be done is divided into four districts, designated as the Eighty-third street, the Ninety-fifth street, the Indiana avenue and Wentworth avenue districts.

The Eighty-third street drainage district embraces the territory between Seventy-fifth street and Eighty-seventh street, from Halsted street to Lake Michigan. This is a low level system, with a pumping station located at the corner of Eighty-third street and Mackinaw avenue, with an outlet into Lake Michigan. Proceedings are now pending in the County Court for the confirmation of the special assessment to cover the cost of the improvement.

Ninety-fifth street district covers the territory from Halsted street to Anthony avenue on the east, between Eighty-seventh street and Ninety-seventh street, with an outlet into the Calumet River. This is also a low level system with a pumping station located on Ninety-fifth street near the river. The Indiana avenue district extends from Ninety-fifth street on the north to the Calumet River at 130th street, and from State street on the west to the Illinois Central Railway on the east, with a trunk sewer running along the center line of Indiana avenue, which will take house-drainage only as far as 117th street, where the pumps will be located. From this point to the outlet will be by gravity. The storm-water north of 117th street will be collected in lateral sewers extending from the western limits of the district eastward to the Calumet Lake.

The contract for the construction of the Wentworth avenue sewer was awarded in December, 1893, and work was commenced the following March. Owing to the magnitude of the work, and in order to facilitate its early completion, it was divided into three sections, namely: "A," "B" and "C." Section "A" begins at the outfall into the Calumet River near 130th street, with a diameter of ten and one-half feet, extending from this point north along the center line of Wentworth avenue to 103rd street, at which point the internal diameter is nine feet, being a total distance of three and one-half miles. Section "B" begins at 103rd street, thence north along Wentworth avenue to Ninety-ninth street, thence west on Ninety-ninth street to Halsted street, and north on Halsted street to Eighty-eighth street, where the diameter is five feet and the summit is reached. Section "C" is a branch which leaves the main on Wentworth avenue at 103rd street, extending westward on the latter street to Charles avenue, thence northward on Charles avenue to Ninety-fifth street, west on Ninety-fifth street to Evergreen avenue, thence north to Ninety-fourth street, west to Prospect avenue, north and northwest to Eighty-seventh street. The diameter at this summit is two and one-half feet.

Sections "B" and "C" are completed; one and one-fourth miles remains to be finished of Section "A," which will be completed by



SECTION OF 10.5-FT. SEWER ON WENTWORTH AVENUE, AT 13RD STREET.

the first of June, this year. The total length of the three sections as described is ten and one-half miles. During the construction of the completed portion of Section "A," extending from the out-fall to 114th street, owing to the extreme depth of the excavation, which varies from twenty-six to forty-nine feet, and the treacherous nature of the ground in many places, special methods had to be adopted to carry out and secure the masonry. Many springs and wet sand-pockets were encountered, which necessitated driving a row of piles along the sides of the trench and firmly braced to each other. Much of the material met with was soft swelling blue clay, and it was found that as the excavation deepened the sides exerted an enormous pressure on the piles, tending to crush them together. So great was this pressure in places that the braces were broken. A portion of the sewer through the deepest cuts has been in place for six months, and a recent inspection of the masonry proves that the extra expense incurred of piling the trench was the only proper method which could be adopted to permanently secure the work for all time, as the results have proved entirely satisfactory.

During the year 1894 many sub-systems have been completed in different divisions of the City, giving much needed relief to the localities served, which are described in the tabular statement.

Last May I was appointed Superintendent of the Bureau of Sewers, to fill the vacancy created on account of the death of Mr. O. H. Cheney, who held the position during the past thirteen years.

Under Mr. Cheney's able supervision, 800 miles of main sewers were added to the City System. Owing to his death the City lost the services of a faithful official, and the employes of this Bureau a kind and sympathetic friend.

In regard to the manner in which all of the employes of this Bureau have performed their various duties, I cannot speak too favorably. All have been faithful to the important work committed to their care.

Very respectfully yours,

A. W. COOKE,
Superintendent of Bureau of Sewers.

REPORT OF THE

Bureau of Streets

CITY OF CHICAGO

DEPARTMENT OF STREETS.

HON. JOHN MCCARTHY,

Commissioner of Public Works.

DEAR SIR: I have the honor to submit herewith the Nineteenth Annual Report of the Bureau of Streets, for the year ending December 31, 1894.

A statement of all work accomplished during the past year by our various departments is presented in detail; a summary of all moneys expended, and a general review of such information pertaining to this Department in its relations to the public, as will be of value and interest; also a detailed statement of Street Railway extensions and other work done by them, and a statement showing the miles of fences, number of crossing gates, and lights in use by the various railroads.

Particular attention is called to the new system inaugurated in this Department during the year, in reference to the repaving of granite streets by the corporations found to be responsible for their displacement; likewise the refusal of this Department to pay the reserve dues on numerous streets not built in accordance with the specifications, but which had been accepted by previous administrations; also the extreme care taken during the past year to enforce specifications on new work, and the low prices which have prevailed for the same.

FINANCIAL STATEMENT.

Amount paid contractors for street improvements by special assessments.....	\$2,394,496 74
For sidewalks built by the Bureau under special assessments	57,061 72
For re-paving and repairing improved streets....	254,282 02
For grading, ditching, building and maintenance of aprons, culverts, crossings, etc., on unimproved streets	200,408 63
For sidewalk intersections.....	\$2,594 38
For sidewalk general repairs	7,864 42
	10,458 80
For City parks.....	12,769 52
For new and repaired street lamps.....	61,879 50
GRAND TOTAL	<u>\$2,991,356 93</u>

STREET AND ALLEY IMPROVEMENT.

In connection with this Department I beg leave to say, that in addition to attending to the work under actual construction, there has been prepared during the year 317 estimates for new work and 38 surveys for street and alley openings, aggregating 152.7 miles.

During the year 17 lettings have been prepared, and contracts advertised and awarded for the improvement of 120 streets and 88 alleys, aggregating 51.83 lineal miles of pavement.

The low prices for material and labor which have prevailed during the year, and the vigorous policy pursued by the administration toward the so-called "paving trusts," have caused sharp competition among bidders.

Unprecedented low prices for improvements have prevailed, and, as a result, thousands of dollars have been saved and rebated to property owners.

The following table shows the average price paid for the different kinds of pavement laid during the years 1893 and 1894:

KINDS OF PAVEMENT.	AVERAGE PRICE PAID PER SQUARE YARD.		Percentage in Favor of 1894.
	1893.	1894.	
Cedar block	\$1.12	\$0.79	29%
Macadam.....	.90	.70	22%
Asphalt.....	2.80	1.82	35%
Granite	3.00	2.84	5%

Of the 93.42 miles of streets and alleys improved during the year, 65.5 per cent. were paved with cedar blocks, and 15.2 per cent. with macadam.

In those outlying districts where large quantities of fill are required, and where present property values are not high, macadam will still be useful as a preliminary improvement, and, if properly laid, will in the future serve as a fair foundation for a good permanent pavement.

I would respectfully recommend that pavements of cedar blocks and macadam be in the future excluded from that portion of the City lying between Lake Michigan and a line running west along Sixty-seventh street, from Lake Michigan to State street, north on State

to Twenty-second street, west on Twenty-second street to Western avenue, north on Western avenue to Chicago avenue, east on Chicago avenue to the river, thence north along the river to Graceland avenue and thence east along Graceland avenue to the lake. There are other districts in the City, notably in the vicinity of the parks and boulevards of the West Side, where cedar block and macadam pavements should not be built. Most of the property included within these limits is quite valuable and well able to pay for a good permanent improvement.

Nothing but brick, asphalt or granite should be allowed within these limits; and within that portion of the City included between Lake Michigan on the east, Twenty-second street on the south, Halsted street on the west, and Chicago avenue on the north, except, perhaps, part of that portion lying east of Wells street and north of the river, granite only should be the material used.

On our medium business streets, such as Milwaukee avenue, Ogden avenue, Archer avenue, West Madison street, etc., brick or granite only should be the material used.

The average price paid for fill during the year has been 25 cents per cubic yard. At this the cost per property foot for filling the sidewalk space would vary from 15 cents to 60 cents, depending upon the depth of the fill, being an average of $37\frac{1}{2}$ cents per property foot throughout the City. This is far below what it would cost the property owner to do his own filling, as the usual price paid for doing such work is \$1.00 per load, of perhaps one and one-half cubic yards.

On all streets requiring two feet and upwards of fill to insure a firm foundation, the filling should be put in the street at least six (6) months previous to the laying of the pavement. This will give the earth time to be more thoroughly compacted, by traffic and through the action of the elements.

Too great a stress cannot be laid upon this most important item in the construction of a pavement—the thorough compacting of the sub-grade.

On those streets where the granitoid curb and gutter is built, the concrete foundation of the pavement should extend under the curb and gutter. The curb and gutter will then be made part of the foundation, and will insure a permanency and stability of this part of the construction that is not now obtained. This will cause but a slight increase in expense to the property over that of the present method of constructing the same upon a bed of cinders.

The following tables show the progress in street and alley improvements, and the character of pavement laid on each :

STREETS IMPROVED IN THE NORTH

STREET	FROM	TO	Commenced
Ashland avenue	Lawrence avenue	Webster avenue	June 27, 1894
Addison	Lincoln avenue	Ashland avenue	June 14, 1894
Bosworth avenue	Roscoe	Grace	July 16, 1894
Burling	Wrightwood avenue	418 ft. south	July 17, 1894
Baxter	Wellington	Roscoe	June 8, 1894
Connors	Sedgwick	Cleveland avenue	Aug. 9, 1894
Clybourn avenue	Fullerton avenue	Ashland avenue	July 21, 1894
Cass	Michigan	Rush	Nov. 28, 1894
Cornelia	Wood	Southport avenue	Sept. 15, 1893
Chicago avenue	Clark	State	Oct. 5, 1894
Chicago avenue	State	Pine	Oct. 3, 1894
Franklin	Kinzie	Chicago avenue	Sept. 11, 1894
Giddings	Robey	Leavitt	June 21, 1894
Hall	Diversey avenue	Oakdale avenue	June 8, 1894
Hoyne avenue	Roscoe	Cornelia	June 20, 1894
Institute place	Wells	Eastern terminus	May 28, 1894
Indiana	Clark	St. Clair	Oct. 18, 1894
Indiana	St. Clair	Eastern terminus	Sept. 1, 1894
Illinois	St. Clair	650 ft. East	Sept. 25, 1894
Leavitt	Belmont avenue	Clybourn avenue	Oct. 1, 1894
Leland avenue	Robey	Leavitt	Aug. 2, 1894
Marianna	Lincoln avenue	Southport avenue	Feb. 15, 1894
Montana	Ashland avenue	Perry	Aug. 6, 1894
Montana	Racine avenue	Surrey court	May 1, 1894
Morse avenue	Southport avenue	Lake Michigan	April 8, 1893
Nelson	Racine avenue	Southport avenue	Aug. 1, 1894
Newport avenue	Clark	Racine avenue	June 26, 1894
Oak place	Belmont avenue	School	Sept. 24, 1894
Oakdale avenue	Sheffield avenue	Herndon	June 1, 1894
Poe	Osgood	Maud avenue	May 1, 1894
Perry	Fullerton avenue	Montana	July 20, 1894
Perry	Belmont avenue	Wellington	Sept. 30, 1893
Starr	Sedgwick	North Park avenue	Sept. 1, 1894
School	Gross Park avenue	Robey	June 2, 1894
School	Lincoln	Clark	June 2, 1894
Seminary avenue	Belmont avenue	Roscoe	May 1, 1894
Seminary avenue	Roscoe	Newport avenue	June 1, 1894
Seminary avenue	Center	Maud avenue	May 1, 1894
Surrey court	Fullerton avenue	Dunning	May 1, 1894
Stone	Scott	Goethe	Aug. 2, 1894
Ward	Fullerton avenue	Clybourn avenue	Aug. 3, 1894

DIVISION WITH CEDAR BLOCKS.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet
Aug. 11, 1894	Cedar	R. F. Conway	6,988.02	1,655.06
Sept. 28, 1894	"	O. Vider	7,361.77	1,880.83
July 21, 1894	"	W. F. Hair	9,612.05	2,544.87
July 19, 1894	"	O. Vider	1,505.22	451.57
July 17, 1894	"	J. B. Smith & Co.	10,606.15	2,511.98
Aug. 24, 1894	"	Sackley & Peterson	896.87	544.47
July 24, 1894	"	O. Vider	901.88	882.84
Dec. 10, 1894	"	R. F. Conway	11,951.28	3,137.80
June 15, 1894	"	Sackley & Peterson	9,718.57	2,540.09
Nov. 3, 1894	"	Sackley & Peterson	4,161.59	749.09
Oct. 31, 1894	"	H. Rath	6,687.78	1,208.79
Sept. 24, 1894	"	Sackley & Peterson	12,286.84	2,764.43
Aug. 6, 1894	"	O. Vider	4,755.04	1,337.36
July 6, 1894	"	A. J. McBean & Co.	3,325.70	997.71
Aug. 7, 1894	"	R. F. Conway	2,608.53	617.81
June 30, 1894	"	Talbot Paving Co.	957.46	226.77
Dec. 10, 1894	"	R. F. Conway	8,982.57	2,304.27
Sept. 29, 1894	"	Talbot Paving Co.	5,204.63	1,877.70
Oct. 13, 1894	"	H. Rath	3,158.07	674.46
Oct. 10, 1894	"	J. B. Smith & Co.	5,753.00	1,362.55
Aug. 13, 1894	"	J. B. Smith & Co.	4,900.10	1,378.15
July 6, 1894	"	A. J. McBean & Co.	7,012.49	1,757.64
Aug. 20, 1894	"	J. F. Talbot	2,602.32	617.40
July 19, 1894	"	Sackley & Peterson	1,889.27	531.56
Nov. 12, 1894	"	J. B. Smith & Co.	8,222.48	1,850.80
Aug. 6, 1894	"	Netterstrom & Bairstow ..	5,221.65	1,236.71
Aug. 3, 1894	"	J. B. Smith & Co.	4,809.91	1,311.79
Oct. 2, 1894	"	Sackley & Peterson	2,192.02	616.51
July 31, 1894	"	R. F. Conway	8,086.42	1,908.36
July 19, 1894	"	Sackley & Peterson	1,229.66	465.00
July 21, 1894	"	O. Vider	1,502.80	355.78
June 15, 1894	"	A. J. McBean & Co.	4,795.60	1,269.42
Oct. 19, 1894	"	R. F. Conway	1,533.32	460.00
Aug. 4, 1894	"	R. F. Conway	5,631.59	1,333.75
Aug. 4, 1894	Curbed	P. Farrell .....	.....	4,268.00
July 1, 1894	Cedar	R. F. Conway	5,184.79	1,196.20
July 6, 1894	"	Talbot Paving Co.	1,118.92	265.00
July 19, 1894	"	Sackley & Peterson	2,188.68	641.60
July 19, 1894	"	Sackley & Peterson	1,785.12	617.98
Aug. 9, 1894	"	A. J. McBean & Co.	1,202.45	287.82
Unfinished ...	Curbed	Sackley & Peterson .....	.....	1,719.00

Total lineal feet cedar block pavement in alleys.....15,298.17 or 2.90 miles.

Total lineal feet cedar block pavement in streets46,839.87 " 8.87 "

Total lineal feet unimproved streets curbed and filled ... 5,982.00 " 1.18 "

Total.....68,120.04 or 12.90 miles.

STREETS IN THE NORTH DIVISION PAVED WITH

STREET	FROM	TO	Commenced
Commercial avenue . . .	Addison	Cornelia . . . . .	.....
*Faye	Lincoln avenue	West Ravenswood Park . . . . .	.....
*Glenlake avenue	Alley W. of Sheffield avenue	Lake Michigan . . . . .	.....
Lawrence avenue	Sheffield avenue	Lake Michigan	April 18, 1893
La Salle avenue	Division	Clark	Aug. 22, 1894
La Salle avenue	Division	Chicago avenue	Oct. 6, 1894
Montrose boulevard . . .	Halsted	Lake Michigan	July 8, 1894
*Paulina	Addison	Cornelia . . . . .	.....
*Rosemont avenue	Kenmore avenue	Lake Michigan . . . . .	.....
*Sheffield avenue	Thorndale avenue	Devon avenue . . . . .	.....
Southport avenue	144 ft. N. of Ernst avenue	Northern terminus	Sept. 29, 1894
*Thorndale avenue	Alley W. of Sheffield avenue	Lake Michigan	Jan. 4, 1894
Waveland avenue	Clark	Evanston avenue . . . . .	.....
*Woodside avenue	Addison avenue	Cornelia . . . . .	.....

* Private Contract.

VITRIFIED BRICK, MACADAM AND SHEET ASPHALT.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet
.....	Curbed	J. J. Palmer.....	.....	591.00
.....	Macadam	Dolese & Shepard	3,366.67	1,010.00
.....	“	Dolese & Shepard	1,086.67	326.00
Sept. 20, 1894	Curbed	Netterstrom & Bairstow .....	.....	1,200.00
Nov. 2, 1894	Asphalt.	Bermudez Asphalt Paving Co.	14,718.57	3,679.64
Dec. 15, 1894	“	Trinidad Asphalt Refin'g Co.	11,527.44	2,881.86
Sept. 11, 1894	Macadam	Netterstrom & Bairstow.....	2,170.22	514.00
.....	Brick	J. J. Palmer.....	2,034.00	591.00
.....	Macadam	Dolese & Shepard	1,243.33	373.00
.....	“	Dolese & Shepard	13,333.33	3,000.00
Dec. 21, 1894	“	Graham & Byrne	1,854.82	439.80
Nov. 3, 1894	“	Dolese & Shepard.....	923.33	277.00
.....	“	J. A. Lyman	8,780.30	2,469.46
.....	Brick.....	J. J. Palmer	2,034.00	591.00

Total lineal feet brick pavement in streets 6,561.50 or 1.24 miles.

Total lineal feet macadam pavement in streets..... 8,408.76 “ 1.60 “

Total lineal feet sheet asphalt pavement in streets..... 1,182.00 “ 0.22 “

Total lineal feet unimproved streets curbed and filled..... 1,791.00 “ 0.34 “

Total.....17,943.26 or 3.40 miles.

ALLEYS IMPROVED IN THE NORTH

ALLEY	FROM	TO	Commenced
Alley	Belden to Racine avs.	Fullerton to Clifton avs. .	Feb. 8, 1894
Alley	Cleveland av. to Mohawk. .	North av. to Eugenie . . .	Feb. 8, 1894
Alley	Eugenie to Menominee. . .	Cleveland av. to Hull. . .	Feb. 8, 1894
Alley	Garfield to Webster avs. .	Sedgwick to Clark. . . .	Feb. 8, 1894
Alley (E. E. N. & S.).	Webster av. to Grove . . .	Orchard to Larrabee . . .	Feb. 8, 1894
Alley (N. & S.). . . .	Webster av. to Grove . . .	Orchard to Larrabee . . .	Aug. 10, 1893
Alley	Garfield av. to Grove . . .	Orchard to Larrabee . . .	Oct. 1, 1894
Alley	Hill av. to Wendell. . . .	Market to Sedgwick . . .	July 18, 1894
Alley	Orchard to Larrabee	Kemper pl. to Belden av. .	June 5, 1894
Alley (E. & W.). . . .	Halsted to Dayton.	North av. to Willow . . .	June 27, 1894
Alley	Belden to Fullerton avs. .	Clifton to Seminary avs. .	June 6, 1894
Alley	Pearson to Chicago av. . .	Franklin to Market. . . .	Aug. 13, 1894
Alley	Superior to Huron	Dearborn av. to Clark. . .	July 2, 1894
Alley	Division to Scott	Astor to Stone	July 2, 1894
Alley	Sedgwick to Hammond . . .	Wisconsin to Menominee . .	June 20, 1894
Alley	Southport av. to High. . . .	Fullerton to Belden avs. .	July 18, 1894
Alley	Franklin to Sedgwick	North av. to Starr	Aug. 1, 1894
Alley	Wrightwood av. to Deming ct. .	Clark to Hampden ct. . . .	Oct. 5, 1894
Alley	State to Rush	Walton to Delaware pl. . .	Nov. 1, 1894
Alley	Rush to Pine.	Superior to Huron	Oct. 24, 1894
Alley	Sedgwick to Lane pl.	Center to Garfield av. . . .	Oct. 6, 1893
Alley	Sedgwick to Beethoven pl. .	Center to Clybourn av. . .	Nov. 23, 1893
Alley	La Salle to Clark	Chestnut to Chicago av. . .	Nov. 10, 1893
Alley	La Salle to Wells.	Elm to Division	Nov. 10, 1893
Alley	La Salle to Wells.	Hill to Wendell	Nov. 10, 1893
Alley	La Salle to Wells.	Oak to Whitney.	Nov. 10, 1893
Alley	La Salle to Wells.	Chestnut to Institute pl. .	Nov. 10, 1893
Alley	Milton av. to Townsend. .	Elm to Hobbie.	Mar. 14, 1893
Alley	Wells to Franklin.	Indiana to Illinois	Feb. 27, 1893
Alley	Garfield av. to Center. . .	Clifton to Racine avs. . . .	Dec. 1, 1892
Alley	Garfield to Webster avs. . .	Clifton to Racine avs. . . .	Dec. 1, 1892
Alley	Huron to Erie.	Franklin to Market	Oct. 24, 1893
Alley known as Geary place.	Rush to Pine.	Delaware pl. to Chestnut. .	Sept. 1, 1894

DIVISION WITH CEDAR BLOCKS.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet	TOWN
June 18, 1894	Cedar.....	Sackley & Peterson	1,266.58	740.21	North
June 29, 1894	"	Talbot Paving Co.	867.19	721.88	"
Aug. 9, 1894	"	White & Valentine.....	622.20	602.18	"
June 13, 1894	"	Sackley & Peterson.....	1,454.51	781.46	"
June 18, 1894	"	Sackley & Peterson	1,226.23	626.62	"
July 19, 1894	"	J. B. Smith & Co	420.75	280.50	"
Oct. 15, 1894	"	O. Vider	1,171.21	754.16	"
Aug. 18, 1894	"	J. V. McAdam.....	590.70	443.00	"
July 16, 1894	"	J. V. McAdam.....	1,240.87	734.48	"
Aug. 11, 1894	"	White & Valentine.....	282.87	268.00	"
July 16, 1894	"	R. F. Wilson & Co.....	1,006.56	596.00	"
Aug. 22, 1894	"	H. Rath	362.89	840.21	"
July 6, 1894	"	R. F. Wilson & Co.....	472.46	389.54	"
July 6, 1894	"	R. F. Wilson & Co.....	519.10	269.00	"
July 9, 1894	"	J. B. Smith & Co	1,193.31	722.65	"
July 19, 1894	"	J. B. Smith & Co	1,377.50	725.00	"
Aug. 7, 1894	"	O. Vider	885.13	559.12	"
Oct. 11, 1894	"	J. B. Smith & Co	437.65	255.77	Lake View
Nov. 3, 1894	"	J. B. Smith & Co	425.53	287.48	North
Oct. 31, 1894	"	A. J. McBean & Co	434.96	247.76	"
June 18, 1894	"	Netterstrom & Bairstow.	915.78	722.95	"
May 18, 1894	"	O. Vider	145.46	113.00	"
May 12, 1894	"	Talbot Paving Co.	182.88	178.90	"
May 8, 1894	"	Talbot Paving Co.	451.41	399.86	"
May 11, 1894	"	Talbot Paving Co.	263.94	226.29	"
May 9, 1894	"	Talbot Paving Co.	226.94	219.62	"
May 9, 1894	"	Talbot Paving Co.	491.42	320.00	"
May 12, 1894	"	Talbot Paving Co.	637.66	365.54	"
May 19, 1894	"	Talbot Paving Co.	260.17	173.45	"
April 25, 1894	"	J. V. McAdam.	1,142.05	714.70	"
April 27, 1894	"	J. V. McAdam.....	1,203.65	712.69	"
Aug. 25, 1894	"	Wm. Forrestal.....	625.16	325.23	"
Sept. 24, 1894	"	Sackley & Peterson	483.61	231.52	"

STREETS PAVED IN THE SOUTH

STREET	FROM	TO	Commenced
Armour avenue.....	Fifty-fifth.....	Fifty-eighth.....	Aug. 19, 1894
Aberdeen.....	Fifty-fifth.....	Fifty-ninth.....	Aug. 6, 1894
Bissell.....	Thirty-ninth.....	Forty-third.....	Dec. 1, 1893
Bishop.....	Forty-seventh.....	Forty-ninth.....	July 12, 1894
Bishop.....	Fifty-first.....	Fifty-fifth.....	July 18, 1894
Cedar.....	Wentworth avenue.....	Stewart avenue.....	April 1, 1894
Centre avenue.....	Forty-seventh.....	Fifty-first.....	Oct. 1, 1893
Centre avenue.....	Fifty-seventh.....	Sixty-third.....	Oct. 1, 1893
Dexter avenue.....	Union avenue.....	Stewart avenue.....	June 1, 1894
Dearborn.....	Fifty-fifth.....	Fifty-eighth.....	May 8, 1894
Duncan Park.....	Wallace.....	Stewart avenue.....	
Erie avenue.....	Ninety-first.....	South Chicago avenue.....	Aug. 15, 1893
Fifty-first.....	Ashland avenue.....	Wood.....	Oct. 1, 1893
Fifty-seventh.....	State.....	Halsted.....	May 4, 1894
Forty-second.....	State.....	Indiana avenue.....	July 20, 1894
Houston avenue.....	Eighty-seventh.....	Ninety-third.....	Aug. 5, 1894
Inglehart place.....	Twenty-seventh.....	Northern terminus.....	Oct. 3, 1893
*Inglehart place.....	Twenty-seventh.....	Northern terminus.....	Oct. 3, 1893
Indiana avenue.....	Twelfth.....	Thirteenth.....	Sept. 12, 1894
Indiana avenue.....	Sixteenth.....	300 ft. N. of Fourteenth.....	April 7, 1894
Lime.....	Archer avenue.....	Twenty-seventh.....	Sept. 26, 1893
Marshfield avenue.....	Thirty-fourth.....	Thirty-seventh.....	Jan. 7, 1894
Morgan.....	Fifty-seventh.....	Sixty-third.....	Oct. 1, 1893
Sixty-third.....	Wentworth avenue.....	C., R. I. & P. Ry.....	May 9, 1894
Sixty-third.....	Cottage Grove avenue.....	State.....	Jan. 1, 1894
System of streets, Morgan, Carpenter, Aberdeen, South Park avenue.....		Fifty-fourth, Fifty-fourth court.....	
*Twenty-fifth.....		350 feet east.....	
Thirty-second.....	Ullman.....	Benson.....	June 1, 1894
Thirty-third.....	Halsted.....	Laurel.....	Jan. 16, 1894
Thirty-fourth.....	Halsted.....	Union.....	Jan. 6, 1894
Thirty-fourth court.....	Laurel.....	Ullman.....	Oct. 3, 1893
Thirty-fifth.....	South Park avenue.....	Cottage Grove avenue.....	Nov. 28, 1893
Thirty-fifth.....	Cottage Grove avenue.....	Lake avenue.....	Sept. 27, 1894
Thirty-sixth.....	Western avenue.....	Kedzie avenue.....	Dec. 1, 1893
Thirty-sixth.....	Halsted.....	Butler.....	July 10, 1894
Thirty-eighth.....	Halsted.....	Laurel.....	Nov. 28, 1893

* Private Contract.

DIVISION WITH CEDAR BLOCKS.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet
Oct. 1, 1894	Cedar.....	P. Farrell	7,900.00	2,000.00
Aug. 24, 1894	"	P. Farrell	10,050.00	2,640.00
June 26, 1894	"	R. F. Conway.....	10,350.00	1,320.00
Sept. 13, 1894	"	P. Farrell.....	5,570.00	1,320.00
Unfinished ...	Curbed and filled.	P. Farrell .....	.....	.....
May 19, 1894	Cedar	A. J. McBean & Co.....	5,880.00	1,320.00
May 21, 1894	"	P. Farrell	11,240.00	2,640.00
Aug. 1, 1894	"	P. Farrell	17,020.00	3,960.00
July 31, 1894	"	R. F. Conway.....	6,230.00	1,550.00
Aug. 9, 1894	"	Sackley & Peterson	8,200.00	2,000.00
.....	Curbed and filled.	P. Farrell .....	.....	.....
July 14, 1894	Cedar	O. Vider.....	8,109.00	1,921.00
Oct. 31, 1894	"	R. F. Conway.....	6,830.00	1,320.00
Sept. 8, 1894	"	Sackley & Peterson	20,040.00	5,280.00
Aug. 9, 1894	"	J. B. Smith & Co.	4,149.78	1,098.60
Dec. 18, 1894	"	R. F. Wilson & Co.....	21,615.00	4,053.00
June 9, 1894	"	R. F. Conway.....	1,307.27	367.68
June 9, 1894	"	R. F. Conway.....	264.73	366.50
Dec. 18, 1894	"	H. Rath	1,747.00	582.33
May 22, 1894	"	A. J. McBean & Co.....	7,129.50	1,688.50
June 12, 1894	"	R. F. Wilson.....	3,203.90	758.81
May 14, 1894	"	John V. McAdam.....	8,236.05	1,950.60
Aug. 7, 1894	"	P. Farrell.....	16,400.00	3,960.00
June 12, 1894	"	Garden City P. & P. Co....	1,130.00	400.00
July 16, 1894	"	J. B. Smith & Co.....	26,808.00	5,488.00
Unfinished ...	"	P. Farrell.....	44,500.00	10,560.00
.....	"	A. J. McBean & Co.....	783.90	350.00
Sept. 12, 1894	"	P. Farrell.....	5,606.63	1,328.00
Aug. 16, 1894	"	P. Farrell	5,263.95	1,246.72
Aug. 17, 1894	"	Garden City P. & P. Co....	2,337.39	553.59
July 14, 1894	"	R. F. Conway.....	5,355.02	1,168.30
June 20, 1894	"	Garden City P. & P. Co....	6,812.19	1,804.00
Oct. 11, 1894	"	H. Rath	2,723.78	704.40
Sept. 4, 1894	"	A. J. McBean & Co.....	22,800.00	5,280.00
Sept. 17, 1894	"	P. Farrell.....	7,021.67	1,663.00
June 25, 1894	"	A. J. McBean & Co.....	5,663.38	1,341.80

STREETS AND ALLEYS PAVED IN THE SOUTH DIVISION

STREET	FROM	TO	Commenced
Alley	Congress to Harrison...	Wabash to Michigan avs.	Aug. 15, 1894
Adams	State	River	June 22, 1894
Atlantic	Fifty-fifth	Fifty-eighth	May 6, 1893
Baltimore avenue...	Commercial avenue	Eighty-seventh	Dec. 18, 1893
Bond avenue.....	Eighty-first.....	Illinois avenue.....	Feb. 1, 1894
Butler	121st	123d	Sept. 29, 1894
Custom House place...	Jackson	Polk	Sept. 15, 1894
*Calumet avenue	Thirty-seventh.....	883 feet north .....	.....
*Cregier avenue.....	Seventy-first.....	Seventy-second .....	.....
Canal	119th	121st	Sept. 27, 1894
Dearborn	Adams	River	Sept. 13, 1894
Emerald avenue.....	Fifth-sixth	Fifty-ninth	Oct. 1, 1893
Eighty-seventh.....	South Park avenue	I. C. R. R.....	June 11, 1894
Ellis avenue.....	Fifty-sixth	Fifty-ninth	Aug. 1, 1894
Emerald avenue.....	121st	123d	Sept. 27, 1894
Fifth avenue	Madison	River	May 14, 1894
Fourteenth	Clark	Wabash avenue.....	July 12, 1894
Forty-second place	Vincennes avenue.....	St. Lawrence avenue	July 1, 1894
*Forty-sixth	Ellis avenue	Greenwood avenue .....	.....
Forty-eighth	State	Indiana avenue	June 1, 1894
Fiftieth court	Cottage Grove avenue	St. Lawrence avenue	June 19, 1893
Fiftieth	Drexel boulevard.....	Lake avenue	Aug. 10, 1894
*Fifty-fourth court.....	Union avenue	Halsted .....	.....
*Fifty-fourth.....	Union avenue	Halsted .....	.....
Green	Fifty-ninth	Sixty-third	Nov. 1, 1893
*Green	Fifty-fifth	Fifty-sixth .....	.....
Grand avenue.....	Sixty-ninth	Seventieth	March 6, 1894
Harrison	State	Michigan avenue	May 14, 1894
High avenue.....	106th	114th	Oct. 13, 1894
Harrison	State	C. R. I. & P. Ry.....	May 31, 1894
Jackson	Michigan avenue	Fifth avenue	Aug. 14, 1894
Jackson avenue	Fifty-third	Fifty-fourth	May 18, 1894
Jeffrey avenue	Seventy-first.....	Seventy-third	Sept. 5, 1894
Kinney avenue.....	Seventy-first.....	Seventy-third	Sept. 4, 1894
La Salle.....	Lake	Randolph	July 1, 1894
La Salle.....	Madison	Monroe	June 7, 1894
La Salle.....	Intersection of Quincy.....	.....	Sept. 25, 1894
Loomis	Forty-seventh	Fifty-fifth	Nov. 1, 1893
Lexington avenue	Sixtieth	Sixty-first	July 25, 1894
Lowe avenue	119th	121st	Sept. 27, 1894
*Luella avenue	Seventy-second	Seventy-third .....	.....
May	Fifty-fifth	Fifty-ninth	May 31, 1894
119th	Wentworth avenue	Halsted	Oct. 3, 1894
Pacific avenue.....	Van Buren	Harrison	Oct. 15, 1894
Polk	State	Fifth avenue	July 20, 1894
Plymouth place	Jackson	Fourteenth	Aug. 10, 1894
Peoria	Fifty-ninth	Sixty-third	July 12, 1893
Parnell avenue	119th	120th	Sept. 27, 1894
Parnell avenue	121st	123d	Sept. 27, 1894
Rosenmerkle	Wright	Wallace .....	.....
Sixtieth	Wentworth avenue.....	Princeton avenue.....	June 13, 1894
State	Jackson	River	Sept. 17, 1894
*Sixty-third	Stewart avenue	Wentworth avenue .....	.....
Sixty-fourth	Union avenue	Halsted	Nov. 1, 1893
Sixty-fourth	Woodlawn avenue.....	Greenwood avenue.....	Aug. 20, 1894
Sixty-eighth	Wright	Wallace	May 1, 1894
Seventieth.....	Stony Island avenue.....	I. C. R. R.....	May 16, 1894

WITH GRANITE, MACADAM AND SHEET ASPHALT.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet
Aug. 27, 1894	Granite	James Conlan	418.88	221.80
Aug. 1, 1894	"	Gaffney & Long	5,662.13	2,683.00
May 16, 1894	Macadam	R. E. Brownell		
April 23, 1894	"	Steude Teaming Co.	3,676.00	1,888.00
Oct. 18, 1894	"	Dolese & Shepard	4,692.00	2,346.00
Unfinished	"	Netterstrom & Bairstow ..	4,314.00	1,294.00
Dec. 24, 1894	Granite	Econ. Gas Co.	4,000.00	1,986.00
.....	Macadam	Kissack & Muir	2,496.00	832.00
.....	"	Dolese & Shepard	2,140.00	602.00
Unfinished	"	Netterstrom & Bairstow ..	4,314.00	1,294.00
Oct. 13, 1894	Granite	Gaffney & Long	7,582.88	1,692.44
June 1894	Macadam	J. O'Laughlin		
Sept. 27, 1894	"	Steude Teaming Co.	7,619.00	3,810.00
Oct. 6, 1894	"	Netterstrom & Bairstow ..	7,476.00	1,779.00
Unfinished	"	Netterstrom & Bairstow ..	4,314.00	1,294.00
June 28, 1894	Granite	Dillon & Conlan	5,768.20	1,880.00
July 31, 1894	"	R. F. Conway	2,300.00	970.00
Aug. 20, 1894	Macadam	Steude Teaming Co.	2,221.60	588.07
.....	"	Dolese & Shepard	1,860.00	523.00
July 24, 1894	"	Gayhan & Byrne	4,527.00	1,000.72
July 7, 1894	Asphalt	Western Paving & S. Co. ...	4,342.00	1,308.00
Nov. 12, 1894	Macadam	Dolese & Shepard	13,809.00	3,655.00
.....	"	Dolese & Shepard	2,460.00	647.00
.....	"	Dolese & Shepard	2,500.00	662.00
July 24, 1894	"	Kimbell, Cobb Stone Co. ...	8,800.00	2,640.00
.....	"	Gahan & Byrne	1,660.00	500.00
June 1, 1894	"	M. J. LaBounty	2,027.00	610.00
June 10, 1894	Granite	Econ. Gas Co.	2,668.57	788.89
Unfinished	Macadam	H. Heinsen	10,718.00	5,359.00
Oct. 16, 1894	Granite	Sackley & Peterson	3,132.80	1,074.18
Aug. 31, 1894	"	Gaffney & Long	7,256.37	2,203.00
Aug. 3, 1894	Macadam	Steude Teaming Co.	2,246.00	598.00
Unfinished	"	M. Steude	4,370.00	1,230.00
Oct. 24, 1894	"	Kimbell, Cobb Stone Co. ...	4,370.00	1,229.00
July 20, 1894	Granite	Econ. Gas Co.	1,635.00	380.00
July 31, 1894	"	Gaffney & Long	1,787.22	397.60
Oct. 1, 1894	"	Gaffney & Long	413.35	80.00
June 30, 1894	Macadam	Gahan & Byrne	22,760.00	5,392.00
Sept. 17, 1894	"	Steude Teaming Co.	2,471.00	654.00
Unfinished	"	Netterstrom & Bairstow ..	4,314.00	1,294.00
.....	"	Dolese & Shepard	2,133.00	600.00
Dec. 18, 1894	"	Dolese & Shepard	7,960.00	2,390.00
Unfinished	"	Kimbell, Cobb Stone Co. ...	11,991.00	4,150.00
Oct. 25, 1894	Granite	Dillon & Conlan	1,300.00	794.48
Aug. 10, 1894	"	Econ. Gas Co.	1,400.00	1,303.00
Sept. 15, 1894	"	Econ. Gas Co.	5,200.00	3,000.00
Oct. 31, 1894	Macadam	Dolese & Shepard	8,730.00	2,640.00
Unfinished	"	Netterstrom & Bairstow ..	2,157.00	647.00
Unfinished	"	Netterstrom & Bairstow ..	4,314.00	1,294.00
.....	"	O. Vider		
Sept. 29, 1894	"	R. E. Brownell	1,210.00	636.00
Dec. 4, 1894	Granite	Gaffney & Long	18,632.82	3,262.00
.....	Macadam	Kimbell, Cobb Stone Co. ...	3,800.00	1,320.00
May 26, 1894	"	Kimbell, Cobb Stone Co. ...		
Oct. 30, 1894	"	Steude Teaming Co.	2,147.00	745.00
May 31, 1894	"	Kimbell, Cobb Stone Co. ...	1,700.00	515.00
Sept. 10, 1894	"	J. O'Laughlin	8,037.00	1,003.00

STREETS AND ALLEYS PAVED IN THE SOUTH

STREET	FROM	TO	Commenced
Seventieth	Wentworth avenue.....	C. R. I. & P. Ry	June 19, 1894
Seventieth	Perry avenue	Vincennes avenue.....	Aug. 14, 1894
Seventy-third	Bond avenue	Lake Michigan .....	.....
Seventy-fifth.....	Vincennes avenue.....	Stewart avenue	Oct. 1, 1893
Sherman	Fifty-sixth.....	Fifty-ninth	Dec. 1, 1893
Twelfth	State	Dearborn .....	.....
Tracy avenue	Fifty-fifth	Fifty-seventh	June 20, 1894
Union avenue	Fifty-sixth.....	Fifty-ninth.....	Oct. 1, 1893
Van Buren.....	Wabash avenue.....	Michigan avenue	Nov. 23, 1893
Vincennes avenue	Thirty-fifth	Thirty-ninth.....	Aug. 20, 1894
Washington	Wabash avenue.....	Michigan avenue.....	May 1, 1893
Webster avenue	Seventy-third	Seventy-fifth	Oct. 1, 1893
*Washington Park pl ..	Forty-ninth	Fiftieth .....	.....
Wallace	119th	121st	Sept. 27, 1894

* Private Contract.

DIVISION WITH GRANITE, ETC.—CONTINUED.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet
Aug. 4, 1894	Macadam	Kimbell, Cobb Stone Co	2,600.00	780.00
Oct. 11, 1894	“	Geo. Rockfeller	1,070.00	250.00
.....	“	Dolese & Shepard	824.00	218.00
May 1, 1894	“	Kimbell, Cobb Stone Co ....	.....	.....
June 1, 1894	“	M. J. LaBounty .....	.....	.....
.....	Medina	Dillon & Conlan	1,690.00	450.00
Sept. 29, 1894	Macadam	R. E. Brownell	4,850.00	1,150.00
June 1, 1894	“	J. O'Laughlin	7,370.00	2,040.00
June 25, 1894	Granite	Gaffney & Long	1,609.94	381.30
Sept. 25, 1894	Macadam	Dolese & Shepard	10,203.00	2,782.64
Aug. 14, 1894	Granite	James Conlan	1,447.55	366.00
June 1, 1894	Macadam	Geo. Rockfeller .....	.....	.....
.....	Asphalt	Barber Asphalt Co	2,103.00	631.00
Unfinished	Macadam	Netterstrom & Bairstow	4,314.00	1,294.00

Total lineal feet of asphalt pavement in streets..... 1,984.00 or 0.37 miles
 Total lineal feet of granite pavement in streets 23,186.82 “ 4.39 “
 Total lineal feet of granite pavement in alleys 221.80 “ 0.04 “
 Total lineal feet of medina pavement in streets 450.00 “ 0.08 “
 Total lineal feet of macadam pavement in streets..... 66,394.71 “ 12.58 “

Totals..... 92,187.33 or 17.46 miles

ALLEYS PAVED IN THE SOUTH

ALLEY	FROM	TO	Commenced
Alley	Seventeenth to Eighteenth	State to Dearborn	Feb. 8, 1894
Alley	Eighteenth to Nineteenth.	State to Dearborn	Feb. 8, 1894
Alley	Archer av to Twentieth ..	State to Dearborn	Oct. 1, 1894
Alley	Twenty-first to Twenty-second ...	State to Wabash av.....	May 24, 1894
Alley	Twenty-second to Twenty-third ...	Cottage Grove to Prairie av.....	Sept. 29, 1894
Alley	Twenty-fourth to Twenty-fifth....	Cottage Grove to Prairie av.....	May 29, 1894
Alley	Twenty-fifth to Twenty-sixth....	State to Wabash av.....	Aug. 27, 1894
Alley	Twenty-fifth to Twenty-sixth....	Calumet to Cottage Grove av.....	Mar. 14, 1893
Alley	Twenty-seventh to Twenty-ninth ..	Armour to LaSalle.....	Aug. 1, 1894
Alley	Twenty-eighth to Twenty-ninth...	State to Wabash av.....	June 6, 1894
Alley	Twenty-ninth to 200 feet north...	Vernon to South Park av.	Sept. 15, 1893
Alley	Twenty-ninth to Thirtieth	Dearborn to Armour av ..	July 19, 1894
Alley	Twenty-ninth to Thirtieth	Armour av. to LaSalle...	July 19, 1894
Alley	Thirtieth to Thirty-first...	Dearborn to Armour av...	Aug. 27, 1894
Alley	Thirty-sixth to Thirty-seventh....	Vincennes av. to Ellis Park	Oct. 1, 1894
Alley	Fortieth to Fifty-first....	State to Wabash av.....	Mar. 3, 1894
Alley	Forty-first to Bowen av...	Langley to St. Lawrence av	Oct. 2, 1893
Alley	Forty-first to Forty-second	Grand bld. to Calumet av.	Oct. 3, 1894
Alley	Forty-second to Forty-third	Langley to Evans av.....	Sept. 1, 1894
Alley	Forty-third to Forty-fourth	Berkeley to Greenwood av.	Sept. 14, 1894
Alley	Forty-third to Forty-fourth	Calumet av. to Grand bld.	Nov. 20, 1893
Alley	Forty-third to Gordon ..	Wallace to Williams	Nov. 24, 1893
Alley	Fifty-first to Fifty-second.	Union av. to Sherman....	Nov. 27, 1893

DIVISION WITH CEDAR BLOCKS.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet
July 11, 1894	Cedar	P. Farrell	1,211.82	368.40
July 6, 1894	"	White & Valentine	1,217.68	365.80
Oct. 19, 1894	"	R. F. Conway	418.06	195.66
June 21, 1894	"	Garden City P. & P. Co	1,290.46	582.40
Oct. 4, 1894	"	White & Valentine	449.13	276.90
June 26, 1894	"	J. B. Smith & Co.	1,828.72	703.40
Sept. 12, 1894	"	Sackley & Peterson	1,483.79	601.50
July 20, 1894	"	G. A. Thatcher & Co	656.70	487.00
Aug. 13, 1894	"	H. Rath	1,723.77	1,599.30
July 11, 1894	"	R. F. Conway	602.62	324.00
Sept. 15, 1894	"	O. Vider	388.70	190.50
Aug. 14, 1894	"	R. F. Wilson & Co.	988.68	808.92
Aug. 14, 1894	"	R. F. Wilson & Co	1,611.26	1,611.26
Sept. 14, 1894	"	Garden City P. & P. Co....	500.80	888.20
Oct. 18, 1894	"	A. J. McBean & Co	468.85	496.40
June 9, 1894	"	P. Farrell	13,841.00	6,556.00
June 4, 1894	"	G. A. Thatcher & Co	750.52	591.03
Oct. 16, 1894	"	Garden City P. & P. Co	997.22	590.48
Sept. 22, 1894	"	White & Valentine	980.92	590.40
Sept. 26, 1894	"	J. V. McAdam	1,154.00	1,080.00
Dec. 17, 1894	"	P. Farrell	1,084.00	610.00
Aug. 17, 1894	"	White & Valentine	650.00	450.00
June 1, 1894	"	R. F. Conway	868.00	600.00

Total lineal feet of cedar block pavement in alleys..... 20,012.08 or 3.79 miles

Total lineal feet of cedar block pavement in streets..... 73,979.31 " 14.01 "

Totals..... 93,991.34 or 17.80 miles

STREETS PAVED IN THE WEST

STREET	FROM	TO	Commenced
Albany avenue	Twelfth	Harrison	May 12, 1894
Adams	Canal	Halsted	Oct. 1, 1894
Ann	Washington boulevard	Lake	May 1, 1894
Ballou	North avenue	Armitage avenue	Jan. 3, 1894
Clarkson avenue	Bloomingdale road	Palmer place	Mar. 23, 1893
Cypress	Ogden avenue	Kendall	Nov. 23, 1893
Canalport avenue	Halsted	Twenty-second	Aug. 23, 1894
Centre avenue	Blue Island avenue	Twenty-second	Sept. 10, 1894
Central Park avenue	North avenue	Armitage avenue	Jan. 3, 1894
Curtis	Madison	Lake	May 22, 1894
Chicago avenue	California avenue	Crawford avenue	Aug. 3, 1894
Dudley	Armitage avenue	Henry	Oct. 3, 1893
Diversey avenue	North Branch Chicago River	Kedzie avenue	July 10, 1894
Ellen	Lincoln	Western terminus	Aug. 22, 1894
Elston avenue	Snow	Belmont avenue	June 15, 1894
Ferdinand	Wood	Lincoln	Aug. 2, 1894
Forest avenue	Fullerton avenue	Elston avenue	Jan. 4, 1894
Fairview avenue	Fullerton avenue	Diversey avenue	Jan. 22, 1894
Fisk	Twentieth	Twenty-first	April 16, 1894
Forty-second	Ogden avenue	C. B. & Q. R. R.	July 29, 1894
Grenshaw	Kedzie avenue	Spaulding avenue	July 15, 1893
Grenshaw	Spaulding avenue	Homan avenue	Aug. 5, 1894
Hancock	North avenue	Armitage avenue	Jan. 3, 1894
Homer	Western avenue	Washtenaw avenue	Aug. 15, 1894
Homan avenue	Twelfth	Twenty-second	Nov. 17, 1893
Iowa	Robey	Hoyne avenue	Oct. 3, 1893
Kinzie	Jefferson	May	Oct. 24, 1893
Kedzie avenue	North avenue	Palmer place	July 28, 1894
Kimbell avenue	North avenue	Armitage avenue	Nov. 20, 1893
Kedzie avenue	Twenty-second	Twenty-sixth	Feb. 27, 1893
Kedzie avenue	Twenty-sixth	Thirty-first	April 17, 1893
Lubeck	Robey	Western avenue	April 13, 1893
Leavitt	North avenue	Wabansia avenue	Nov. 14, 1894
Laughton	Hoyne avenue	California avenue	April 13, 1894
Lexington avenue	Francisco	Kedzie avenue	May 2, 1894
Madison	Fortieth	Forty-sixth	July 23, 1894
May	Washington boulevard	Lake	May 10, 1894
Morgan	Lake	Van Buren	May 1, 1894
Mitchell avenue	North avenue	Bloomingdale road	Feb. 27, 1893
Mead	North avenue	Armitage avenue	Jan. 3, 1894
Maplewood avenue	Fullerton avenue	Diversey avenue	July 2, 1894
Mather	Clinton	Jefferson	Oct. 26, 1894
Mathews	Ogden avenue	Wood	Nov. 10, 1893
Milwaukee avenue	Kedzie avenue	Crawford avenue	June 13, 1894
Milwaukee avenue	Crawford avenue	Irving Park boulevard	Oct. 19, 1894
Nineteenth	Turner avenue	Homan avenue	June 28, 1894
Pratt	Sangamon	Green	June 26, 1894
Ruble	Canalport avenue	Twenty-first	Nov. 20, 1893
Spaulding avenue	Twelfth	Douglas boulevard	June 10, 1894
Throop	Twenty-first	Twenty-second	Sept. 10, 1894
Twenty-first	Panhandle R. R.	Douglas boulevard	June 20, 1894
Twenty-second	Centre avenue	Ashland avenue	April 9, 1894
Twenty-fifth	California avenue	Kedzie avenue	Dec. 26, 1893
Twenty-first	Jefferson	Union	Aug. 24, 1894
Twenty-first	Johnson	Centre avenue	Sept. 17, 1894
Twenty-second	Canalport avenue	Centre avenue	July 11, 1893
Twenty-sixth	Sacramento avenue	Lawndale avenue	April 6, 1894

DIVISION WITH CEDAR BLOCKS.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet
June 10, 1894	Cedar	R. F. Conway.....	10,155.00	2,399.00
Nov. 28, 1894	"	Talbot Paving Co.....	5,028.08	1,745.00
June 4, 1894	"	Garden City P. & P. Co.....	2,878.96	761.20
June 15, 1894	"	R. F. Conway.....	9,005.00	2,701.50
May 25, 1894	"	Sackley & Peterson	10,065.00	2,888.80
June 7, 1894	"	Sackley & Peterson	768.18	212.00
Sept. 5, 1894	"	Garden City P. & P. Co.....	6,171.62	1,303.00
Oct. 24, 1894	"	John V. McAdam.....	10,457.52	3,452.00
June 18, 1894	"	R. F. Conway.....	9,286.24	2,785.68
June 5, 1894	"	Garden City P. & P. Co.....	5,111.65	1,210.00
Unfinished ...	"	R. F. Conway.....	.....	.....
July 7, 1894	"	J. B. Smith & Co.....	2,616.00	619.30
Aug. 1, 1894	"	Sackley & Peterson	25,335.00	6,630.40
Aug. 23, 1894	"	O. Vider.....	404.80	121.40
July 7, 1894	"	W. F. Hair	16,824.00	6,882.50
Aug. 3, 1894	"	Sackley & Peterson	1,320.00	601.50
June 19, 1894	"	Sackley & Peterson	12,638.00	2,993.20
May 26, 1894	"	John V. McAdam.....	9,656.00	2,366.00
May 15, 1894	"	P. Farrell.....	1,959.29	440.00
Nov. 7, 1894	"	H. Rath	2,202.00	579.00
July 12, 1894	"	Sackley & Peterson	2,095.00	608.00
Oct. 10, 1894	"	R. F. Conway.....	2,115.00	599.00
June 21, 1894	"	O. Vider.....	9,135.00	2,740.50
Aug. 21, 1894	"	P. Farrell.....	6,129.00	1,888.70
July 9, 1894	"	John V. McAdam.....	21,555.00	4,877.00
June 7, 1894	"	J. B. Smith	2,632.98	600.00
Dec. 10, 1894	"	W. Forrestal	7,023.30	3,086.00
Oct. 31, 1894	"	O. Vider.....	22,614.00	3,914.00
May 26, 1894	"	O. Vider.....	8,872.00	2,661.60
Unfinished ...	"	P. Farrell.....	.....	.....
Unfinished ...	"	John V. McAdam.....	.....	.....
May 29, 1894	"	R. F. Conway.....	9,927.00	2,481.70
Nov. 16, 1894	"	A. J. McBean & Co.....	2,801.00	663.40
June 8, 1894	"	R. F. Conway.....	18,488.00	4,379.00
July 22, 1894	"	R. F. Conway.....	6,490.00	1,947.00
Oct. 13, 1894	"	P. Farrell.....	29,605.00	4,163.00
May 23, 1894	"	Garden City P. & P. Co. ..	3,387.91	802.00
July 19, 1894	"	P. Farrell.....	11,991.44	2,840.00
June 21, 1894	"	O. Vider.....	4,310.00	1,293.00
May 15, 1894	"	R. F. Conway.....	9,076.00	2,722.70
July 12, 1894	"	Sackley & Peterson	9,663.00	2,289.00
Nov. 10, 1894	"	Talbot Paving Co.....	1,195.53	362.00
May 12, 1894	"	A. J. McBean & Co.....	1,543.00	450.00
July 15, 1894	"	A. J. McBean & Co.....	18,608.00	7,351.80
Unfinished ...	"	O. Vider.....	8,000.00	2,640.00
July 30, 1894	"	Sackley & Peterson	1,172.90	266.00
Oct. 27, 1894	"	Sackley & Peterson	2,440.82	578.00
July 3, 1894	"	P. Farrell.....	1,647.76	556.00
July 24, 1894	"	R. F. Conway.....	5,113.00	1,211.00
Sept. 16, 1894	"	J. B. Smith & Co.....	2,747.45	608.00
Unfinished ...	"	R. F. Conway.....	.....	.....
April 18, 1894	"	R. F. Conway.....	10,296.00	2,680.00
Dec. 17, 1894	"	J. V. McAdam	10,048.00	3,014.00
Oct. 20, 1894	"	P. Farrell.....	2,983.16	730.00
Oct. 30, 1894	"	P. Farrell.....	8,539.39	2,082.00
June 7, 1894	"	A. J. McBean & Co.....	5,172.63	1,352.00
Sept. 4, 1894	"	A. J. McBean & Co.....	23,257.00	5,602.00

STREETS PAVED IN THE WEST DIVISION

STREET	FROM	TO	Commenced
Twenty-sixth.....	Hamlin avenue	Crawford avenue.....	June 10, 1894
Troy	Twenty-second	Twenty-sixth	June 5, 1894
Utica	Twelfth.....	Fillmore	April 20, 1894
Van Buren.....	Kedzie avenue.....	Central Park avenue....	June 16, 1894
Washburn avenue . . .	Lincoln	Robey	July 6, 1894
Washtenaw avenue . . .	Chicago avenue....	Division.....	July 5, 1894
Waldo place	Desplaines	Halsted	May 1, 1894

WITH CEDAR BLOCKS—CONTINUED.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet
July 30, 1894	Cedar	R. F. Conway	5,918.00	1,402.00
Aug. 29, 1894	"	J. V. McAdam	10,806.00	2,559.00
May 30, 1894	"	Sackley & Peterson	1,996.00	599.00
Aug. 12, 1894	"	Garden City P. & P. Co.	11,116.00	2,683.00
Aug. 28, 1894	"	Sackley & Peterson	2,404.00	601.00
July 20, 1894	"	J. B. Smith	9,151.19	2,745.36
July 7, 1894	"	P. Farrell	2,323.51	743.30

Total lineal feet of cedar pavement in streets..... 125,457.54 or 23.76 miles.

Total lineal feet of cedar pavement in alleys..... 53,891.80 " 10.21 "

Total..... 179,349.34 or 33.97 miles.

STREETS IN THE WEST DIVISION PAVED

STREET	FROM	TO	Commenced
Adams	Fortieth	Forty-sixth	May 15, 1894
Albany avenue	Twenty-second	Twenty-sixth	Nov. 26, 1893
Albany avenue	Twelfth	Douglas boulevard	June 24, 1894
Canal	Van Buren	Harrison	Sept. 15, 1894
Bonney	Ogden avenue	Sixteenth	July 16, 1894
Flournoy	Douglas boulevard	Crawford avenue	Sept. 6, 1894
Grenshaw	Douglas boulevard	Crawford avenue	Aug. 3, 1894
Homan avenue	Colorado avenue	Harrison	July 5, 1893
Hamlin	Ogden avenue	Sixteenth	July 30, 1894
Hamlin	Ogden avenue	Twenty-sixth	July 19, 1894
Jackson	Fortieth	Forty-fifth place	Oct. 16, 1894
Lexington avenue	Douglas boulevard	Crawford avenue	Sept. 6, 1894
Monroe	Fortieth	Forty-sixth	May 10, 1894
Millard avenue	Twelfth	Douglas boulevard	Aug. 6, 1894
Ohio	Kedzie avenue	Avers	Sept. 29, 1894
System {	Avers avenue	Kinzie	Aug. 1, 1894
	Springfield avenue ..	Kinzie	
	Ohio	Avers avenue	
	Springfield avenue ..	Springfield avenue ..	
Spaulding avenue	Twenty-second	Twenty-fourth	June 21, 1894
Tripp avenue	North avenue	Humboldt avenue	July 1, 1894
Turner avenue	Twenty-second	Twenty-fourth	July 5, 1894
Trumbull avenue	Douglas boulevard	Twenty-sixth	Aug. 3, 1894
Warren	Leavitt	Pollock	Nov. 1, 1894
Wilcox avenue	Fortieth	Forty-sixth	May 10, 1894

WITH ASPHALT, GRANITE AND MACADAM.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet
Unfinished	Asphalt.....	Bermudez A. P. Co.....		
June 23, 1894	Macadam	J. O'Connell	11,150.00	2,641.00
Aug. 24, 1894	Asphalt.....	Standard Paving Co	8,641.00	1,214.00
Oct. 10, 1894	Granite	Sackley & Peterson.....	4,515.82	811.00
Nov. 26, 1894	Asphalt.....	Bermudez A. P. Co.....	7,916.00	2,105.00
Dec. 8, 1894	"	Trinidad A. R. Co.....	4,178.00	1,393.00
Unfinished	"	Bermudez A. P. Co		
July 10, 1894	"	Standard Paving Co	4,802.00	1,171.00
Oct. 1, 1894	"	Western P. & S. Co.....	6,748.00	2,025.00
Unfinished	Macadam	J. O'Laughlin.....		
Dec. 19, 1894	Asphalt.....	Western P. & S. Co.....	15,772.00	4,056.00
Nov. 28, 1894	"	Trinidad A. R. Co.....	4,124.00	1,375.00
Aug. 16, 1894	"	Western Paving & S. Co	12,661.00	4,221.00
Nov. 27, 1894	"	Standard Paving Co.....	4,325.00	1,241.00
Unfinished	"	Barber Asphalt P. Co		
Sept. 7, 1894	"	Barber Asphalt P. Co	16,134.30	6,050.00
Sept. 24, 1894	Macadam	J. O'Connell	5,598.00	1,326.00
July 10, 1894	Asphalt.....	Barber A. P. Co.....	12,246.00	4,082.00
Sept. 24, 1894	Macadam	J. O'Connell	5,662.00	1,341.00
Unfinished	Asphalt.....	Bermudez A. P. Co		
Nov. 20, 1894	"	Barber A. P. Co.....	11,615.77	2,409.00
Aug. 18, 1894	"	Western Paving & S. Co.....	12,562.00	4,187.00

Total lineal feet of macadam pavement in streets..... 5,308 or 1.01 miles.

Total lineal feet of asphalt pavement in streets..... 85,529 " 6 73 "

Total lineal feet of granite pavement in streets..... 811 " 0.15 "

Total..... 41,648 or 7.89 miles.

ALLEYS IMPROVED IN THE WEST

ALLEY	FROM	TO	Commenced
Alley	Blanch	Fleetwood to Elston av.	July 11, 1893
Alley	Halsted to Desplaines	Harrison to Congress	Oct. 6, 1893
Alley	Vernon Park to Harrison	Lytle to Centre av.	Feb. 8, 1894
Alley	Loomis to Throop	Adams to Jackson	Oct. 14, 1893
Alley	Adams to Jackson	Western to Oakley av.	July 11, 1893
Alley	Hermitage av. to Wood	Van Buren to Congress	May 24, 1894
Alley	Canal to Clinton	Taylor to Forquer	May 18, 1894
Alley	Congress to Harrison	Halsted to Green	May 16, 1894
Alley	Adams to Wilcox av.	Oakley to Western av.	May 5, 1893
Alley	Congress to Van Buren	Peoria to Green	May 24, 1894
Alley	Bunker to Twelfth	Canal to Clinton	Nov. 20, 1893
Alley	Canal to Clinton	Bunker to DeKoven	Nov. 20, 1893
Alley	1st west of Halsted	Nineteenth to Twentieth	Nov. 10, 1893
Alley	Polk to Taylor	Marshfield av. to Ashland bld.	June 19, 1894
Alley	Monroe to Madison	Desplaines to Halsted	May 4, 1894
Alley	Jefferson to Clinton	Wilson to Maxwell	June 6, 1894
Alley	Canal to Clinton	Judd to Wilson	Feb. 8, 1894
Alley	Johnson to Brown	Taylor to Twelfth	June 6, 1894
Alley	Harrison to Gurley	Morgan to Gold	June 15, 1894
Alley	Congress to Van Buren	Morgan to Sangamon	May 16, 1894
Alley	Throop to Loomis	Adams to Jackson	Oct. 14, 1893
Alley	Harrison to Congress	Peoria to Sangamon	May 16, 1894
Alley	Congress to Van Buren	Green to Halsted	Nov. 20, 1893
Alley	Polk to Gurley	Aberdeen to Sholto	Nov. 20, 1893
Alley	Polk to Harrison	Jefferson to Law av.	Jan. 6, 1894
Alley	Gurley to Polk	Morgan to Miller	June 6, 1894
Alley	Polk to Gurley	May to Centre av.	June 11, 1894
Alley	Harrison to Gurley	Miller to Morgan	June 11, 1894
Alley	Aberdeen to Centre av.	Adams to Jackson	June 1, 1894
Alley	West of Blue Island av.	Eleventh to Twelfth	July 12, 1894
Alley	Wood to Paulina	Madison to Ogden pl.	July 10, 1894
Alley	Taylor to Forquer	Jefferson to Desplaines	Nov. 10, 1893
Alley	Jefferson to Clinton	Twelfth to Bunker	Nov. 10, 1893
Alley	Taylor to DeKoven	Jefferson to Clinton	Nov. 10, 1893
Alley	Liberty to Maxwell	Union to Halsted	July 17, 1894
Alley	Harrison to Gurley	Blue Island av. to Silver	Nov. 23, 1893
Alley	Halsted to Union	Evans ct. to Eighteenth	July 18, 1894
Alley	Morgan to Brown	Taylor to Twelfth	July 23, 1894
Alley	Halsted to Johnson	Eighteenth to Nineteenth	July 18, 1894
Alley	Halsted to Desplaines	Taylor to DeKoven	Aug. 4, 1894
Alley	Vernon Park place to Macalister pl.	Centre av. to Lytle	Nov. 24, 1893
Alley	Aberdeen to Centre av.	Van Buren to Tilden av.	July 16, 1894
Alley	Harrison to Gurley	Aberdeen to May	Sept. 14, 1894
Alley	Leavitt to Oakley av.	Harrison to Flournoy	Aug. 30, 1894
Alley	1st west of Morgan	Congress to Harrison	Nov. 10, 1893
Alley	Centre av. to Lytle	Gilpin pl. to Polk	Nov. 23, 1893
Alley	Western to Campbell av.	Monroe to Madison	Feb. 8, 1894
Alley	Western to Campbell av.	Congress to Harrison	April 24, 1894
Alley	Western to Campbell av.	Adams to Jackson	Oct. 12, 1893
Alley	Western av. to Stanley terrace	Van Buren to Owasco	Nov. 10, 1893
Alley	Campbell av. to Union pl.	Harrison to Congress	Oct. 9, 1894
Alley	Campbell av. to Cicero ct.	Jackson to Van Buren	Feb. 8, 1894
Alley	Rockwell to Washtenaw	Jackson to Owasco	July 11, 1893
Alley	Rockwell to California av.	Wilcox av. to Adams	July 31, 1894
Alley	Washtenaw to California av.	Jackson to Owasco	Mar. 10, 1893
Alley	Washtenaw to California av.	Polk to Lexington av.	Mar. 10, 1893
Alley	Washtenaw to California av.	Owasco to Van Buren	Nov. 10, 1893

DIVISION WITH CEDAR BLOCKS.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet
July 2, 1894	Cedar	J. B. Smith & Co.	1,128.00	552.90
May 24, 1894	"	J. B. Smith & Co.	1,370.46	824.00
June 7, 1894	"	Sackley & Peterson	898.00	350.00
July 15, 1894	"	"	1,035.35	600.00
April 27, 1894	"	J. B. Smith & Co.	1,230.90	587.00
June 20, 1894	"	D. S. McBean	1,074.46	642.00
June 20, 1894	"	G. A. Thatcher & Co	254.43	229.00
June 19, 1894	"	G. A. Thatcher & Co	621.20	363.00
May 3, 1894	"	R. F. Wilson & Co.	721.46	399.00
June 21, 1894	"	G. A. Thatcher & Co	619.02	363.00
June 14, 1894	"	P. Farrell	1,019.27	575.00
June 19, 1894	"	P. Farrell	882.34	576.00
June 13, 1894	"	Talbot Paving Co.	1,180.68	442.00
July 21, 1894	"	J. V. McAdam	1,440.94	794.00
Aug. 7, 1894	"	White & Valentine	434.67	360.00
Nov. 29, 1894	"	White & Valentine	445.38	334.00
June 29, 1894	"	White & Valentine	580.17	434.00
June 29, 1894	"	J. V. McAdam	1,470.12	863.00
June 25, 1894	"	G. A. Thatcher & Co	633.40	408.00
June 29, 1894	"	G. A. Thatcher & Co	881.16	512.00
July 5, 1894	"	R. F. Conway	1,136.45	623.00
June 7, 1894	"	G. A. Thatcher & Co	593.97	327.00
June 6, 1894	"	P. Farrell	633.70	363.00
June 17, 1894	"	P. Farrell	853.13	342.00
July 10, 1894	"	P. Farrell	969.32	796.00
July 11, 1894	"	J. V. McAdam	600.00	223.00
June 22, 1894	"	G. A. Thatcher & Co	310.08	398.00
June 22, 1894	"	G. A. Thatcher & Co	656.79	408.00
June 8, 1894	"	G. A. Thatcher & Co	490.40	396.00
July 18, 1894	"	J. V. McAdam	699.86	462.00
July 19, 1894	"	J. V. McAdam	1,024.28	623.00
June 24, 1894	"	Talbot Paving Co.	562.82	360.00
July 11, 1894	"	Talbot Paving Co.	891.93	614.00
May 23, 1894	"	Talbot Paving Co.	570.29	358.00
July 20, 1894	"	H. Rath	115.29	87.00
Aug. 7, 1894	"	A. J. McBean	1,546.94	794.00
Aug. 27, 1894	"	G. A. Thatcher & Co	1,000.07	576.00
Aug. 17, 1894	"	H. Rath	1,499.64	895.00
Aug. 27, 1894	"	G. A. Thatcher & Co	1,592.05	589.00
Sept. 17, 1894	"	R. F. Wilson	1,288.42	827.00
Oct. 3, 1894	"	Netterstrom & Bairstow	974.39	500.00
Oct. 6, 1894	"	P. Farrell	600.00	600.00
Oct. 9, 1894	"	P. Farrell	810.59	658.00
Oct. 5, 1894	"	H. Rath	1,186.83	597.00
Mar. 29, 1894	"	Talbot Paving Co.	511.00	330.00
May 1, 1894	"	Gaffney & Long	240.00	100.00
May 29, 1894	"	Sackley & Peterson	1,414.00	725.00
May 16, 1894	"	Garden City P. & P. Co.	1,150.00	613.00
June 7, 1894	"	P. Farrell	1,319.00	729.00
July 23, 1894	"	Talbot Paving Co.	532.00	435.00
Oct. 24, 1894	"	A. J. McBean & Co.	715.01	544.00
July 6, 1894	"	White & Valentine	621.00	466.00
June 26, 1894	"	Geo. A. Thatcher & Co.	1,136.00	835.00
Oct. 8, 1894	"	R. F. Conway	2,351.00	1,411.00
April 29, 1894	"	J. V. McAdam	796.00	597.00
Oct. 25, 1894	"	Garden City P. & P. Co.	1,219.00	732.00
May 31, 1894	"	Talbot Paving Co.	726.00	594.00

ALLEYS IMPROVED IN THE WEST

ALLEY	FROM	TO	Commenced
Alley	California to Stephens av.	Jackson to Van Buren . . .	Nov. 20, 1893
Alley	Francisco to Stephens . .	Monroe to Wilcox av . . .	Mar. 8, 1894
Alley	Francisco to California av.	Jackson to Adams	Nov. 20, 1893
Alley	Francisco to California av.	Wilcox av. to Adams	Oct. 2, 1893
Alley	Francisco to Sacramento .	Wilcox av. to Adams	Nov. 20, 1893
Alley	Francisco to Sacramento .	Adams to Jackson	Nov. 20, 1893
Alley	Francisco to Sacramento .	Van Buren to Congress . .	Aug. 25, 1894
Alley	Francisco to Sacramento .	Polk to Lexington av . . .	Oct. 2, 1893
Alley	Sacramento	Monroe to Colorado av . .	May 26, 1894
Alley	Whipple to Albany av . .	Jackson to Colorado av . .	July 20, 1893
Alley	Troy to Kedzie	Jackson to Colorado av . .	June 11, 1893
Alley	Kedzie to Spaulding av . .	Monroe to Adams	Dec. 23, 1893
Alley	Kedzie to Spaulding av . .	Jackson to Colorado av . .	Nov. 10, 1893
Alley	Spaulding to Homan av . .	Scott to Van Buren	Mar. 18, 1893
Alley	St. Louis to Central Park av.	Monroe to Adams	May 11, 1894
Alley	St. Louis to Central Park av.	Colorado av. to Jackson . .	Nov. 10, 1893
Alley	Lake to Fulton	Western to Artesian av . .	Nov. 20, 1893
Alley	Robey to Hoyne av	Fulton to Walnut	Nov. 20, 1893
Alley	Leavitt to Oakley av . . .	Fulton to Walnut	Nov. 20, 1893
Alley	Irving to Oakley av	Fulton to Kinzie	Nov. 20, 1893
Alley	Lake to Fulton	Campbell to Maplewood av	Nov. 20, 1893
Alley	Lake to Walnut	Robey to Hoyne av	Nov. 10, 1893
Alley	Hoyne av. to Leavitt . . .	Superior to Chicago av . .	Nov. 10, 1893
Alley	Carpenter to Curtis	Austin av. to Indiana . . .	Mar. 14, 1893
Alley	Robey to Hoyne av	Potomac to Evergreen av .	Mar. 14, 1893
Alley	Lake to Fulton	Artesian to Campbell av . .	July 15, 1893
Alley	Sacramento to Albany av .	Warren av. to Washington bld.	Feb. 8, 1894
Alley	Lincoln to Robey	Superior to Chicago av . .	May 16, 1894
Alley	Hoyne av. to Leavitt . . .	Emerson av. to Ohio	Feb. 8, 1894
Alley	May to Center av	Erie to Ohio	June 9, 1893
Alley	Ashland av. to Rumsey . .	Chicago av. to Clarinda . .	July 7, 1894
Alley	Peoria to Sangamon	Austin av. to Indiana . . .	June 6, 1894
Alley	1st Alley west of Milwaukee av	Mantene court to Paulina .	June 11, 1894
Alley	Arbor pl. to Carroll av . .	Ada to Sheldon	June 11, 1894
Alley	Arbor pl. to Carroll av . .	Union Park place to St. John's place	July 5, 1894
Alley	Clarinda to Cornelia	Holt to Ashland av	Aug. 7, 1894
Alley	Falls to California av . . .	Lake to Park av	July 20, 1893
Alley	Francisco to Sacramento .	Lake to Walnut	Oct. 2, 1894
Alley	Jane to Emily	Samuel to Wood	Aug. 28, 1894
Alley	Lincoln to Robey	Erie to Huron	Sept. 10, 1894
Alley	Ashland av. to Paulina . .	Park av. to Lake	Sept. 5, 1894
Alley	Huron to Chicago av	Ayers court to Keith	Dec. 14, 1892
Alley	Division to Jane	Ashland av. to Rumsey . .	Nov. 11, 1892

DIVISION WITH CEDAR BLOCKS—CONTINUED.

Finished	Nature of Improvement	CONTRACTOR	Square Yards	Lineal Feet
June 6, 1894	Cedar	P. Farrell	1,194.00	714.00
June 6, 1894	"	P. Farrell	990.00	563.00
June 6, 1894	"	P. Farrell	1,301.00	711.00
May 21, 1894	"	G. A. Thatcher	1,375.00	761.00
June 6, 1894	"	P. Farrell	1,088.00	604.00
June 6, 1894	"	P. Farrell	1,006.00	604.00
Oct. 5, 1894	"	R. F. Conway	1,205.00	604.00
Unfinished	"	G. A. Thatcher & Co .....	.....	.....
June 19, 1894	"	G. A. Thatcher & Co	124.00	75.00
June 14, 1894	"	R. F. Conway	1,390.00	867.00
July 18, 1894	"	G. A. Thatcher & Co	852.00	511.00
May 21, 1894	"	O. Vider	999.00	600.00
June 22, 1894	"	Talbot Paving Co.	394.00	236.00
June 30, 1894	"	R. F. Conway	670.00	548.00
July 22, 1894	"	R. F. Conway	1,503.00	712.00
June 6, 1894	"	Talbot Paving Co.	1,538.00	729.00
Dec. 4, 1894	"	P. Farrell	1,343.19	806.00
June 4, 1894	"	P. Farrell	1,131.30	600.00
June 5, 1894	"	P. Farrell	1,211.76	728.10
June 8, 1894	"	P. Farrell	1,180.18	661.00
Dec. 2, 1894	"	P. Farrell	1,322.13	798.00
June 3, 1894	"	Talbot Paving Co.	1,131.44	599.00
June 18, 1894	"	Talbot Paving Co.	1,156.55	603.00
Aug. 10, 1894	"	Talbot Paving Co.	633.70	317.80
July 3, 1894	"	Talbot Paving Co.	223.18	133.70
Sept. 1, 1894	"	Sackley & Peterson	1,305.76	823.00
May 25, 1894	"	Sackley & Peterson	1,080.62	608.00
May 23, 1894	"	Sackley & Peterson	1,044.52	602.00
July 10, 1894	"	White & Valentine	636.50	602.00
May 25, 1894	"	G. A. Thatcher & Co	1,417.95	788.50
July 7, 1894	"	White & Valentine	299.50	275.00
July 14, 1894	"	J. V. McAdam	605.97	320.00
July 17, 1894	"	R. F. Wilson	315.83	233.00
July 7, 1894	"	R. F. Wilson	439.83	247.50
July 10, 1894	"	R. F. Wilson	557.00	375.50
Aug. 7, 1894	"	White & Valentine	99.75	93.50
July 7, 1894	"	R. F. Conway	1,785.60	1,071.00
Oct. 5, 1894	"	R. F. Conway	2,028.19	600.00
Aug. 28, 1894	"	Sackley & Peterson	660.80	401.70
Sept. 12, 1894	"	Garden City P. & P. Co.	1,275.19	598.60
Sept. 7, 1894	"	J. B. Smith	508.87	323.00
Aug. 30, 1894	"	W. F. Hair	1,013.42	810.00
April 18, 1894	"	J. V. McAdam	417.36	313.00

SUMMARY OF STREETS IMPROVED DURING 1894.

PAVEMENT.	NORTH DIVISION, Including Lake View and Rogers Park.				SOUTH DIVISION, Including Lake and Hyde Park.				WEST DIVISION, Including Cicero and Jefferson.				TOTALS.				
	Square Yards.	Lineal Feet.	Miles		Square Yards.	Lineal Feet.	Miles		Square Yards.	Lineal Feet.	Miles		Square Yards.	Lineal Feet.	Miles	Alleys Miles	Streets Miles
Cedar Block	211,714.57	63,138.04	11.77		351,841.80	93,991.34	17.80		567,965.75	179,349.84	33.97		1,131,512.12	335,478.72	63.54	16.90	46.64
Asphalt	26,246.01	6,561.50	1.24		6,445.00	1,934.00	0.37		116,325.07	33,529.00	6.73		149,016.06	44,024.50	8.34	.....	8.84
Granite . . . . .	.....	.....	.....		72,215.21	32,408.62	4.43		4,511.82	811.00	0.15		76,781.03	24,219.62	4.58	0.04	4.54
Medina Stone . . . . .	.....	.....	.....		1,690.00	459.00	0.08		.....	.....	.....		1,690.00	450.00	0.08	.....	0.08
Macadam	32,758.67	8,408.76	0.60		217,564.60	66,394.71	12.58		22,410.00	5,308.00	1.01		278,733.27	80,111.47	15.19	..	15.19
Brick	4,068.00	1,182.00	0.23		.....	.....	.....		.....	.....	.....		4,068.00	1,182.00	0.22	.....	0.22
Totals	274,167.26	78,290.30	14.53		649,756.61	186,178.67	35.26		711,206.64	220,997.34	41.86		1,635,750.50	435,466.31	91.96	16.94	75.01
Curbed and Filled . . . . .	.....	7,773.00	1.47		.....	.....	.....		.....	.....	.....		.....	7,773.00	1.47	.....	1.47
Grand Totals	274,167.26	86,063.30	16.30		649,756.61	186,178.67	35.26		711,206.64	220,997.34	41.86		1,635,750.50	493,239.31	93.42	16.94	76.48

DISTRIBUTION OF KINDS OF PAVEMENT.

The following table gives the mileage of each class of pavement in use in the principal divisions of the City, December, 31, 1894:

DIVISION.	Cedar Block.	Macadam	Medina Stone.	Granite.	Sheet Asphalt.	Block Asphalt.	Brick.	Burnt Clay.	Foundation.	Totals.
North	152.95	56.43	0.49	0.10	5.03	.....	0.44	.....	1.08	216.52
South	191.47	247.62	1.70	19.98	5.44	3.59	0.87	0.23	.....	470.90
West	358.26	20.64	0.39	2.82	14.52	.....	.....	.....	.....	396.63
Viaduct approaches....	2.39	.....	.....	.....	.....	.....	.....	.....	.....	2.39
TOTALS.....	705.07	324.69	2.58	22.90	24.99	3.59	1.31	0.23	1.08	1,086.44

RECAPITULATION OF STREETS BY TOWNSHIPS, SHOWING IMPROVED AND UNIMPROVED STREETS,
AT THE CLOSE OF THE YEAR 1894.

TOWNSHIP.	Total Streets— Miles.	Cedar Block.	Macadam.	Medina Stone.	Granite.	Sheet Asphalt.	Block Asphalt.	Brick.	Burnt Clay.	"Foundation."	Improved Streets— Miles.	Unimproved Streets— Miles.	Repaved in 1894—Miles.
Calumet.....	149.13	.....	4.91	.....	.....	.....	.....	.....	.....	.....	4.91	144.22	.....
Hyde Park.....	574.53	21.25	164.28	.....	.....	2.69	.....	0.67	.....	.....	188.89	385.64	.....
Jefferson.....	289.80	25.95	.....	.....	.....	0.77	.....	.....	.....	.....	26.72	263.08	.....
Lake.....	386.42	51.28	69.12	.....	.....	.....	.....	.....	0.33	.....	120.63	265.79	.....
Lake View.....	146.37	58.63	51.34	.....	.....	.....	.....	0.44	.....	.....	105.31	41.06	.....
North Town.....	169.47	96.74	1.07	0.49	0.10	4.72	.....	.....	.....	.....	103.12	66.35	3.28
Norwood Park.....	26.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26.50	.....
Rogers Park and West Ridge.....	35.00	2.68	4.02	.....	.....	0.31	.....	.....	.....	1.08	8.09	26.91	.....
South Town.....	229.74	113.94	9.31	1.70	19.98	2.75	3.59	0.20	.....	.....	156.47	73.27	5.86
West Town.....	479.63	383.31	20.64	0.89	2.82	13.75	.....	.....	.....	.....	369.91	109.71	3.43
Viaduct Approaches.....	2.39	2.39	.....	.....	.....	.....	.....	.....	.....	.....	2.39	.....	.....
Totals.....	2,498.97	705.07	824.69	2.58	22.90	24.99	8.59	1.31	0.23	1.08	1,036.44	1,402.53	12.56

TABLE SHOWING TOTAL MILES OF IMPROVED STREETS, WITH
THE PERCENTAGE OF EACH CLASS OF PAVEMENT.

PAVEMENT.	Miles.	Percentage.
Cedar Block	705.07	64.90
Macadam	824.69	29.89
Medina Stone	2.58	0.24
Granite Block	22.90	2.11
Sheet Asphalt.....	24.99	2.29
Asphalt Block.....	3.59	0.33
Brick	1.31	0.12
Burnt Clay.....	0.23	0.02
"Foundation"	1.08	0.10
Totals	1,086.44	100.00

The total number of miles of pavement laid in streets and alleys each year, from the introduction of street paving in 1855 to the present date, is given in the following review. From 1835 to 1844 the work on streets consisted of grading only. From 1844 to 1855 improvements were made by planking, after which the more substantial forms of paving came into use :

YEAR.	MILES.	YEAR.	MILES.	YEAR.	MILES.		
					Alleys.	Streets.	Totals.
1855	1.72	1868	5.46	1881	0.13	24.39	24.52
1856	0.26	1869	18.32	1882	0.58	24.37	24.95
1857	2.62	1870	19.96	1883	1.96	20.53	22.49
1858	7.20	1871	25.63	1884	1.60	32.92	34.52
1859	5.70	1872	1.82	1885	1.16	36.90	38.06
1860	.....	1873	10.19	1886	1.51	42.15	43.66
1861	0.69	1874	9.07	1887	2.60	34.15	36.75
1862	2.57	1875	11.49	1888	2.19	52.14	54.33
1863	2.00	1876	10.50	1889	3.78	103.90	*146.54 107.68
1864	2.40	1877	12.29	1890	8.50	91.22	99.72
1865	2.03	1878	11.01	1891	12.86	104.73	117.59
1866	8.87	1879	6.83	1892	14.26	93.71	107.97
1867	11.37	1880	16.84	1893	31.36	106.10	*6.91 137.46
				1894	16.94	75.01	91.95
Totals.....					99.43	842.22	1,301.94

*The mileage in heavy type opposite the years 1889 and 1893 gives the total amount of paved streets prior to those years in the annexed territories of Hyde Park, Lake and Lake View, and of Rogers Park and West Ridge, respectively.

Of this amount 215.50 miles have been repaved during the same period, which reduces the actual amount of paved streets and alleys within the corporate limits on January 1, 1895, to 1,086.44 miles (streets, 987.01 ; alleys, 99.43), to which may be added 1,042.53 miles of unimproved streets, making a total of 2,488.97 miles of streets in Chicago at this date, less 2.39 of viaduct approaches, making a grand total of 2,486.58 miles.

REPAVING.

The compilation of a complete record of all openings made in the streets for several years past and not properly repaved was a difficult matter to arrange, but it was finally completed, and on presentation of this absolute proof to the various underground corporations they were forced to acknowledge their responsibility, and make the necessary repairs. As the result of this course—

State street, from Jackson to the river;
Adams street, from State street to the river;
Fifth avenue, from Madison street to the river;
Jackson street, from Michigan avenue to the river;
Dearborn street, from Jackson street to the river;
La Salle street, from Lake street to Randolph street;
Harrison street, from State street to Michigan avenue;
Polk street, from State street to Fifth avenue;
Plymouth place, from Jackson street to Fourteenth street;
Custom House place, from Jackson street to Polk street;
Pacific avenue, from Van Buren street to Harrison street;
Fourteenth street, from Clark street to Wabash avenue;
Harrison street, from State street to the C., R. I. & P. Ry.—

were repaved from curb to curb and placed in first-class condition, without a dollar of expense to the property owners, and there is every probability that a larger amount of work will be done in the same manner during the year 1895.

The Chicago Telephone Company, Chicago Edison Company, Economic Gas Company, Equitable Gas Company, Chicago Gas Light & Coke Company, Postal Telegraph Company, Consumers Gas Company, City Press Association, West Division Street Railway, North Division Street Railway and the Chicago City Railway Company, collectively paid for all of the above improvements, each company paying for its proportionate share, according to the amount of pavement displaced by it. Thus the recklessness of the various corporations in opening the pavement of the City has in a measure been abated, by the adoption and adherence to the foregoing plan of Commissioner John McCarthy, as they are now more particular about making openings than formerly, and exercise greater care in replacing them.

The following table shows in detail the amount of re-paving done by the Division foremen in repairing improved streets, the replacing of pavements where openings were made by the gas companies, Water and Sewer Departments, and on account of street permits and general repairs :

FOR WHAT PURPOSE.	NORTH DIV.	SOUTH DIV.	WEST DIV.	TOTAL.
	Square Yds.	Square Yds.	Square Yds.	Square Yds.
General Repairs.....	22,578	29,533	46,378	98,489
Water Department.....	510	224	947	1,681
Sewer Department.....	796	140	285	1,221
Street Permits.....	15,981	51,695	23,893	91,569
TOTALS.....	39,865	81,592	71,502	192,959
Amount of repaving done by contractors on street repairs for the City.... }	31,635	83,893	69,474	185,002
GRAND TOTAL.....	71,500	165,485	140,976	377,961

Total number of square yards.....377,961

Re-paving done by contractors for gas companies and the Bureau of Light, not included in the above.

LUMBER.

The following table shows in detail the amount of lumber used by the division foremen in the construction and repair of aprons, culverts, crossings, etc., and also for sidewalk intersections and general repairs :

FOR WHAT USED.	NORTH DIVISION.		SOUTH DIVISION.		WEST DIVISION.	
	No.	LUMBER.	No.	LUMBER.	No.	LUMBER.
		Sq. Feet.		Sq. Feet.		Sq. Feet.
Aprons	347	24,671	279	20,632	378	43,096
Crossings	461	37,464	407	32,941	432	38,456
Culverts	178	31,305	729	103,513	369	59,367
Drain boxes.....	47	4,694	48	5,510	39	4,705
Steps and Railings....	26	1,427	17	1,210	49	3,900
Sidewalk intersections..	40	5,178	90	17,672	2,271	35,170
Sidewalk, general repairs		66,670	.....	129,230	.....	179,457
Totals.....	.....	171,409	.....	310,708	.....	364,151

RECAPITULATION.

North Division.....	171,409 feet of lumber.
South Division.....	310,708 feet of lumber.
West Division.....	364,161 feet of lumber.
Grand total	846,268 feet of lumber.

Total number of aprons built and repaired.....	1,004
Total number of crossings built and repaired	1,300
Total number of culverts built and repaired.....	1,276
Total number of drain boxes built and repaired.....	134
Total number of steps and railings built and repaired	92
Total number of sidewalks and intersections built and repaired.....	401

UNIMPROVED STREETS.

Miles of ditches in localities where no sewers are laid and where no other means of carrying off surplus water and sewerage exists, require cleaning several times during the year, in order to prevent epidemics and maintain good health in those neighborhoods, and during the warm and sultry weather require constant flushing, necessitating the employment of night-gangs for that purpose.

Particular attention has been given to the extreme southwest part of our City where small-pox has recently prevailed, and this locality as far as its streets and ditches are concerned is in the best condition possible to withstand any further outbreak of that dread disease.

No complaints are now heard from the southern portion of the City, which for years past has been flooded semi-annually, as the great amount of work done there during 1893 and the present year have served to dispose of all surplus water by running it direct to the lake, and the large ditches in that locality are kept in the best of condition and ready at all times for any extra flow of water.

The adoption of the plan of the late Superintendent of Streets, John McCarthy, requiring that no vouchers be paid by the Sewer or Water Departments on account of any work done for their various departments until the contractors show our acceptance of the streets being left in good condition, will be of considerable help to this Department, and will tend to make those contractors more careful in filling trenches and replacing crossings, which to some extent this Department has hitherto been obliged to attend to.

The total length of all streets graded and ditched was eight hundred and thirty-three (833) miles.

SIDEWALKS.

During the year 1894 there were constructed by the City 96.35 miles of plank sidewalks, 4.80 miles of stone walk, 65.83 miles of concrete walk, and 4.66 miles of concrete walk were constructed by the various Park Boards, being a total of 171.64 miles.

There were 945 ordinances for the construction of sidewalks passed by the City Council during the year, on which 16,509 notices to property owners were sent.

There were 374 estimates for plank sidewalks and 142 estimates for stone and cement walks prepared for the honorable City Council during the year.

Four thousand six hundred and twenty-one complaints were registered and reported on for the year, on which 90 per cent. of the property owners complied with the notices issued from this Department.

The following tables show in detail the amount of sidewalk constructed during the year, and the total mileage now under control of the City and the various Park Boards :

NUMBER OF MILES OF WOOD, STONE AND CONCRETE SIDEWALKS
BUILT DURING THE YEAR 1894.

DIVISION.	Wood, Miles.	Stone, Miles.	Concrete, Miles.	Total Miles.	Sidewalks Repaired.	Total Work.
North	10.86	1.80	18.25	25.91	1.10	27.01
South	32.72	.50	35.82	69.04	.50	69.54
West	52.77	2.50	16.76	72.03	1.80	73.83
Totals	96.35	4.80	65.83	166.98	2.90	169.88

**TOTAL NUMBER OF MILES OF SIDEWALKS UNDER THE CONTROL
OF THE CITY AND THE SOUTH, WEST AND LINCOLN PARK
COMMISSIONERS AT THE CLOSE OF THE YEAR.**

UNDER CONTROL OF	MATERIAL.			TOTAL MILES.
	Wood, Miles.	Stone, Miles.	Concrete, Miles.	
City	3,654.85	229.15	438.16	4,322.16
South Park Commissioners		15.30	22.10	37.40
West Park Commissioners		11.05	46.79	57.84
Lincoln Park Commissioners		2.17	4.13	6.80
Totals.	3,654.85	257.67	511.18	4,423.70

Wooden sidewalks are a constant source of danger, and necessarily involve great expense upon the City for their maintenance, and owing to the comparatively short period for which they last, require frequent renewal, and hence cost more in the end than safer, more durable and better appearing walks.

Again, in certain localities, wooden walks are frequently torn up and carried off for firewood, and in the outlying districts during the summer time, owing to the incipient fires which are started in sundry ways, they are oftentimes consumed in large quantities.

As these properties are largely vacant, with no one immediately at hand to protect the walks, it is a great hardship upon the owners whose walks are so destroyed, but there appears no way to avoid this, unless the walks are constructed of some incombustible material.

Wooden walks are prohibited in the three (3) following districts:

SOUTH DIVISION :

Van Buren street to the river ;
Lake Michigan to the river.

NORTH DIVISION :

Division street to the river ;
Lake Michigan to Wells street.

WEST DIVISION :

The river to Halsted street ;
Van Buren street to Lake street.

Though the City is growing and extending every year, and reforms are being yearly accomplished in other particulars, it is several years since any extension of the above districts has been

made, and it is in the interest of public economy, as well as greatest safety, convenience of the public and appearance of our City, that these districts be extended.

No sidewalks are permitted to be either built or repaired, unless a permit has been first obtained from this Department. No charges are made for these permits, as the only point involved is the keeping of a complete record of all walks constructed.

Complaints are often made about a cement walk, lately constructed, being in poor condition, and it is invariably found that these walks were built by private contract, and the City exercises no inspection over their construction, hence unreliable contractors appear to have taken advantage of that fact, and the consequence is that the walks will not last as long as an ordinary plank walk would.

Proper inspection is now furnished over walks of this description upon application to this Department, a fee of \$1.50 being charged for the same. This insures the work being done in a proper manner, and protects the property owners against imposition. It is suggested that no contractor for cement walks be given a water or street obstruction permit, until he has filed a bond with this Department that all walks built by him shall be kept in proper condition for a term of not less than five (5) years.

PERMITS FOR OPENING STREETS.

Two thousand four hundred (2,400) permits were issued to sundry persons to open improved streets, a cash deposit being made in each instance, to cover the cost of replacing the pavement in a satisfactory condition, and ensuring the removal of all surplus material from the street.

One thousand one hundred (1,100) permits were issued to sundry corporations to open improved streets, under general deposit, the entire work being subject to inspection by this Department, which inspection is paid for by the company doing the work, as well as the cost of replacing the pavement.

Seven thousand (7,000) permits were issued for openings made on unimproved streets, on which no deposit was required, as the City incurs no expense on account of these openings, except the keeping of a complete record of them. Those permits are, however, only granted to licensed contractors, or upon the filing a bond, to protect the City in the event of any accident occurring on account of such openings.

One thousand two hundred and twenty-four (1,224) permits were issued for the use of streets, for the purpose of depositing material for buildings in course of construction, a uniform deposit being made in each instance, subject to a charge of \$3.00 per month for each 25 foot frontage occupied, the balance being rebated to depositors when the street is clear of all material and debris. A bond is also filed with these permits, to protect the City against all damage suits, due to the negligence of the contractor or owner while the street is so used.

The rapidly increasing business of this Department, and its importance to the City both from a financial standpoint and the fact of a complete record of all openings made, which enables us to have the proper repairs made by the parties responsible for disturbing it, as well as a means of defense in numerous damage suits against the City, is being gradually recognized, and the penalty for displacing the pavement, and opening or using any street without a permit being first obtained, should be rigidly enforced, as it is only in this way that our records can be kept in perfect condition, and the public interests protected.

Two hundred and twenty-four (224) miscellaneous permits were issued to sundry persons for various matters, making the total number of permits issued eleven thousand nine hundred and forty-eight (11,948).

The following statement shows in detail the amount of deposits, the cost of repairs, cost of inspection, and general averages of each kind of permits:

OPENING STREETS.

Amount of deposits made.....	\$47,741 00
Amount retained for cost of repaving.....	14,766 61
Amount rebated to depositors.....	24,299 39
Amount retained on unsettled permits.....	8,675 00
Average amount of each deposit.....	19 48
Average amount retained for costs.....	6 15

CORPORATION PERMITS.

Amount of deposits made.....	\$46,985 50
Amount of repaving charges.....	25,999 97
Amount rebated to depositors.....	16,081 69
Amount retained on unsettled permits.....	4,903 84
Amount paid by corporations for inspection.....	27,196 07

USE OF STREETS.

Amount of cash deposits.....	\$42,095 00
Amount retained for use of streets.....	7,190 55
Amount rebated to depositors.....	27,954 45
Amount retained on unsettled permits.....	6,950 00
Average amount of cash deposits.....	34 39
Average amount retained for use of streets.....	5 87

HOUSE MOVING.

One thousand three hundred and thirty-one (1,331) permits to move buildings were granted, of which one thousand one hundred and fifteen (1,115) were frame buildings, two hundred and sixteen (216) were brick, the total frontage of which is twenty-six thousand six hundred and ninety-three (26,693) feet. Of this number, seven hundred and forty-one (741) were in the West Division, two hundred and sixty-three (263) in the North Division and three hundred and twenty-seven (327) in the South Division. Six hundred and fifty-two (652) were one (1) story, six hundred (600) were two (2) stories and seventy-nine (79) were three (3) stories. The total cash receipts were three thousand two hundred and ninety-one dollars (\$3,291).

There are numerous instances when after a permit has been obtained from this Department, and the building has been moved on the street opposite the lot on which it is to be placed, some of the property owners rush down to this Department and make vigorous objections (for various reasons) to its being moved in. As the permit has been obtained in proper manner with the approval of the majority of the frontage owners, we are unable to interfere in the matter, and I would suggest that the building ordinance be amended to compel the house-mover to place a sign on the lot on which the building is to be moved to, immediately after obtaining the permit, notifying the public what kind of a house was to be moved in, and about when. This would give ample warning to the dissatisfied property owners and prevent the building being moved if everything was not as represented, and if any signatures had been forged there would be ample time in which to discover it.

Again, complaints are made about a building remaining too long on the street, thereby obstructing traffic and causing great inconvenience to the frontage owners along the route.

The length of time allowed to move a building is limited to two (2) weeks, but house-movers for various reasons do not keep within the time specified, and as no penalty is named in the ordinance, I suggest that it be amended so as to enable us to assess a penalty of three dollars (\$3.00) per day for every day over and above the two (2) weeks specified in the permit. Our suggestion of last year that, as the streets are being continually damaged by house-movers, the fee be raised to \$20 instead of \$5 as at present, is renewed, as the present fee is not sufficient to cover the cost of repairs necessary on account of driving stakes and otherwise damaging the pavement; and, in addition, the salaries of house-moving clerk and inspector are paid from the fees received, and as the number of buildings being moved are each year growing less, on account of the erection of

elevated roads, etc., the fees are barely sufficient to pay the salaries which, under the ordinance, must be paid from fees received from house-moving permits.

During the year 1894 some of the house-movers took the position that they were not responsible for damage done to the various electric wires they were forced to cross, claiming that the various electric and street railway companies must remove their wires upon proper notification. Several conflicts have arisen out of this difference of opinion and threats and efforts to cut wires at the imminent risk of life and interference with the Police and Fire Alarm systems have been made on numerous occasions, and the question is apparently as far from settlement as ever, as the electric and street railway companies claim that any expense they may go to cutting wires and restoring same in order to allow the building to pass them, should be paid by the house-mover, and I would suggest that some legislation be enacted to decide the above question.

Owing to pending legislation in the Honorable City Council last year pertaining to house-movers' licenses, no licenses were issued to house-movers last year, the City being content to accept a bond of \$5,000 to guarantee them against all damage suits, which may be brought against it on account of the negligence of the house-mover while occupying the street. As the licenses should be issued in January of each year, it is important that this subject receive prompt attention as the question might arise in law by what right the City issued a permit when the house-mover had no license.

While the ordinary huckster pays a license of from ten (10) to twenty-five (25) dollars per annum for a license to dispose of his wares, the house-mover who occupies the street for weeks at a time, to the discomfort and dissatisfaction of the people along the route, to the interference of traffic and the general damage of pavements, is required to pay only a license of fifty (50) cents per annum. The small cost of the license and the low permit fees are such as to permit anyone to embark in the business, regardless of the fact that he is qualified to undertake the dangerous business of moving buildings, and it is important that more care should be exercised in the licensing of house-movers, as upon it depends in a measure the preservation of our fire limits and the removal of the fear that choice localities may be marred by moving in unsightly buildings.

The total frontage of all buildings moved during the year amounts to twenty-six thousand six hundred and ninety-three (26,693) lineal feet, or a solid line of houses five miles in length.

The following table shows in detail the number and character of the buildings moved, frontage occupied and the monthly receipts from permits :

HOUSE-MOVING.

MONTHS. 1894.	Number Permits.	MATERIAL.		STORIES HIGH.			DIVISION.			FRONTAGE.	FEES.		Cash Receipts.
		Frame.	Brick.	One	Two	Three	West.	North.	South.	Lineal feet.	\$1.00	\$5.00	
January.....	53	43	10	28	24	1	26	9	18	1,080	24	29	\$ 169 00
February.....	97	84	13	40	50	7	50	18	29	2,038	69	28	209 00
March.....	207	182	25	147	52	8	108	40	59	4,140	143	64	463 00
April.....	185	159	26	88	92	5	117	16	52	3,180	126	59	421 00
May.....	180	146	34	80	70	30	103	47	30	3,600	105	75	480 00
June.....	145	108	37	60	79	6	94	19	32	2,900	94	51	349 00
July.....	89	82	7	36	48	5	52	20	17	1,880	50	39	245 00
August.....	85	68	17	33	50	2	45	24	16	1,785	57	28	197 00
September.....	103	87	16	52	45	6	58	21	24	2,163	64	30	259 00
October.....	92	70	16	46	42	4	48	24	20	1,932	59	33	234 00
November.....	59	52	7	27	28	4	23	17	19	1,389	31	28	171 00
December.....	36	28	8	15	20	1	17	8	11	756	19	17	104 00
TOTALS.....	1,331	1,115	216	652	600	79	741	263	827	26,693	841	490	\$3,291 00

CITY LAMP DEPARTMENT.

During the year 1894, there were erected six thousand six hundred and sixty-five (6,665) new and repaired gas lamps, and two thousand two hundred and ninety-four (2,294) gasoline lamps, which together with the number of lamps previously erected gives a grand total of forty-nine thousand three hundred and sixty-two (49,362) lamps in service December 31, 1894, which includes gas, gasoline, kerosene and electric lamps.

There were also erected ten thousand five hundred and forty-five (10,545) street signs of various kinds during the year, and the net expenses of the Department for all kinds of work amounted to forty-nine thousand one hundred and eighty dollars and eighty-nine cents (\$49,180.89).

The following statement shows in detail the amount of work done, the sums paid the different gas companies, and a summary of all work and expenses for the year.

GAS LAMPS ERECTED.

	Number
New gas lamps placed on posts for Special Assessment Department, during the year 1894, and for which credit will be made to the Street Lamp Fund	1,935
New gas lamps placed on posts to replace worn out lamps.....	2,676
Repaired gas lamps placed on posts.....	2,054
Total number of new and repaired gas lamps erected during 1894.	6,665

GASOLINE LAMPS ERECTED.

New gasoline lamps erected, and iron and wood posts erected for same..	950
New gasoline lamps placed on posts to replace worn out lamps.....	486
Repaired gasoline lamps placed on posts.....	858
Total number of new and repaired gasoline lamps erected during 1894	2,294

STREET SIGNS OF ALL KINDS.

Blue glass, 3 x 16, street name signs set in gas and gasoline street corner lamps	7,401
Blue glass, 3½ x 11¾, street name signs set in Miner lamps	403
Blue glass, 4 x 18, street name signs set in electric lamps.....	160
Opal glass, 4 x 18, strips put up for backing to electric lamp signs	160
Sign frames for Stewart boulevard lamps.....	48
Wood signs placed on posts in districts where there are no street lamps at street intersections.....	2,373
Total signs of all kinds put up during 1894.....	10,545

Wood posts, 4 x 4, erected for wood signs during 1894.....	1,150
Total cost of lamps of all kinds erected for Special Assessment Department	\$ 9,314 50
Total cost of new and repaired gas lamps of all kinds.....	26,582 51

AMOUNT PAID THE DIFFERENT GAS COMPANIES FOR
REPAIRS ON LAMP POSTS AND SERVICE PIPES
DURING 1894:

Peoples Gas Light & Coke Company.....	\$5,260 24
Chicago Gas Light & Coke Company.....	3,203 20
Lake Gas Company.....	583 97
Hyde Park Gas Company.....	635 23
Suburban Gas Company.....	564 93
Calumet Gas Company.....	133 75
Consumers Gas Company.....	8 85
	\$10,390 17
Total cost of new and repaired gasoline lamps erected, to- gether with cost of work done by this Department in connection with and incidental to the operation of gasoline lighting.....	10,074 51
Total cost of signs of all kinds put up during 1894.....	2,133 70
Grand total of cost of material and labor of all kinds used in the manufacture and repair of street lamps, lamp posts and lamp service pipes, also parts incidental to gasoline operation, as well as the manufacture of street name signs, during the year 1894.....	\$ 58,495 39
Total expenditures during the year 1894.....	58,495 39
Deduct cost of work done on orders from the Special Assess- ment Department, and for which payment will be made to the lamp fund.....	9,314 50
Net cost of repairs of all kinds done by the Street Lamp Department during the year 1894.....	\$49,180 89

Following is the number of gas, gasoline and kerosene lamps, lamp posts and lamp service pipes, repairs and street name signs, which are taken care of by this Department, also number of electric lamps on which street name signs are erected, repaired and cleaned by this Department:

Gas Lamps	36,208
Gasoline lamps	11,861
Kerosene lamps	191
Electric lamps.....	1,102

Total number of lamps of all kinds, in service December 31st, 1894.. 49,362

The appropriation for the erection, repairing and lighting of gasoline lamps is included in the appropriation for the Gas Inspector's Department, but our Department has, during the past year, furnished the City lamp lighters, under the supervision of the Gas Inspector, with the necessary implements for repairing and lighting the same.

Our total expenditures in this direction, as shown in the foregoing statement, amount to ten thousand and seventy-four dollars and fifty-one cents (\$10,074.51), and I would suggest that the appropriation for the repairs and furnishing of supplies for lighting gasoline lamps be included in the appropriation for this Department, as the work is forced upon us and no recompense is received from the Gas Inspector's Department for it.

Under the present system, the inspectors of the Gas Inspector's Department look after the repairs done by the gas companies on City lamps, but the bills for the same are paid out of the appropriation of this Department.

I would suggest that in future three (3) inspectors be appointed, under the jurisdiction of this Department, to take care of and attend to all City lamps, and who would report immediately upon all broken or leaking service, etc. This would place the responsibility where it properly belongs, and would tend to have the work done much more promptly than at the present time.

Great credit is due the Superintendent of this Department for his economical management during the year, and particular attention is called to the fact that the total amount paid the various gas companies for the repairs of lamp posts and service pipes during the year amounted to only ten thousand three hundred and ninety dollars and seventeen cents (\$10,390.17) in contrast with former years when the expenditure has varied from seventeen thousand to thirty-five thousand dollars (\$17,000.00 to \$35,000.00).

Gas companies have in the past, when a street was about to be improved, taken occasion to go in and make all repairs or alterations which may be necessary on lamp posts or service pipes and use it as a pretext for the City to foot the bills. I am pleased to state that this matter has been corrected during the past year and the gas companies forced to bear all charges on work of this description which formerly has been paid for by the City.

RAILROAD GATES AND FENCES.

The following table shows the amount of work done up to date by the various railroad companies, in compliance with the Council order of March 26th, 1890, for the erection of fences, gates and lights for the greater safety of the public :

NAME.	Fences Constructed—Miles.					Total Miles.	Gates in Operat'n	Kind of Light in Use.
	Wall.	Board.	Picket.	Metal.	Wire.			
Chicago & North-Western		6.50	11.80	2.50	32.90	53.70	116	Gas.
Illinois Central	10.28	.20	.15	1.00	19.10	30.73	32	Electric.
Chicago, Rock Island & Pacific		.05	7.52		8.87	16.44	43	Electric.
Chicago, Milwaukee & St. Paul					13.69	13.69	48	Gas.
Chicago & Northern Pacific		.34		2.75	6.50	9.59	28	Oil.
Pennsylvania Railroad Co.		.08	10.72	1.00	2.02	13.82	47	Electric.
Lake Shore & Michigan Southern		4.69	5.55		2.42	12.66	43	Electric.
Chicago, Burlington & Quincy			2.50		5.30	7.80	32	Gas.
New York, Chicago & St. Louis			4.18		6.77	10.95		Oil.
Baltimore & Ohio		.60			5.91	6.51	22	Electric.
Pittsburg, Cincinnati & St. Louis	.31	.16	3.01	.63	12.42	16.53	102	Oil.
Atchison, Topeka & Santa Fe		.41			5.78	6.19	23	Oil.
Chicago & Grand Trunk					3.60	3.60	7	Oil.
Chicago & Western Indiana			1.11		32.81	33.92	48	Electric.
Wabash					7.50	7.50		Electric.
Chicago & Alton	.11		.08		3.48	3.67	32	Oil.
Union Stock Yards & Transit Co.							15	Electric.
Totals	10.70	13.03	46.62	7.88	169.09	247.30	638	

STREET RAILWAYS.

During the year the different companies have laid pavements on the portions of the streets occupied by their tracks as follows :

PAVEMENT.

CORPORATIONS.	Granite Block, Square Yards.	Cobble Stone, Square Yards.	Cedar Block, Square Yards.	Macadam, Square Yards.	Brick, Square Yards.	Total Square Yards.
Chicago City Railway Co.	65,657	.....	2,630	.....	11,320	79,607
West Chicago Street Railroad Co. .	14,040	.....	24,921	.....	744	89,705
North Chicago Street Railroad Co .	.....	30,663	68,988	.....	.....	99,651
Calumet Electric Railway Co. ....	.....	.....	.....	15,929	... ..	15,929
Cicero & Proviso Electric Co. ....	.....	.....	15,993	.....	.....	15,993
Chicago and N. Shore Street Ry. Co. ....	.....	.....	34,900	5,700	.....	40,600
South Chicago City Railway Co. ....	.....	.....	1,515	12,000	1,100	14,615
Chicago General Street Ry. ....	.....	.....	10,018	.....	.....	10,018
Chicago Electric Transit Co. ....	.....	212	40,412	.....	.....	40,624
Total.....	79,697	30,875	199,372	33,629	13,164	356,737

Street railway extensions were made by the different companies as follows :

CHICAGO CITY RAILWAY COMPANY.

STREET.	FROM	TO	Lineal Feet.	REMARKS.
Wallace	Thirty-ninth	Root	3,274	Electric.
Total			3,274	.62 miles.

During the year there were changed from horse to electrical power 47.29 miles of single track.

WEST CHICAGO STREET RAILROAD COMPANY.

STREET.	FROM	TO	Lineal Feet.	REMARKS.
Van Buren street } Tunnel..... }	Franklin	Clinton.....	3,085	Cable.
Curves, crossings, connections, etc.....		.....	3,275	Electric.
Total.....			6,310	1.19 miles.

During the year there were changed from horse to electrical power 2.22 miles of single track.

NORTH CHICAGO STREET RAILROAD COMPANY.

STREET.	FROM	TO	Lineal Feet.	REMARKS.
Southport	Clybourn	Clark	28,464	Electric.
Fullerton	Lincoln	Milwaukee	18,592	Electric.
Total... ..			45,056	8.53 miles.

During the year there were changed from horse to electrical power 14.07 miles of single track.

CHICAGO GENERAL STREET RAILWAY COMPANY.

STREET.	FROM	TO	Lineal Feet.	REMARKS.
Twenty-second.....	Jefferson	River Bridge.....	1,209	Electric.
Twenty-second.....	Lawndale	West Fortieth.....	2,075	Electric.
Lawndale	Twenty-sixth	Twenty-eighth	2,883	Electric.
Homan.....	Twenty-second ...	Twenty-fifth	3,659	Electric.
Twenty-fifth	Homan	Lawndale	3,717	Electric.
Twenty-fifth	Kedzie	California	5,090	Electric.
Kedzie	Twenty-second ...	Thirty-first	9,662	Electric.
Rockwell	Twenty-second ...	Twenty-sixth	2,608	Electric.
Total			30,903	5.85 miles.

CICERO AND PROVISIO STREET RAILWAY COMPANY.

STREET.	FROM	TO	Lineal Feet.	REMARKS.
Forty-eighth	Lake.....	Chicago	5,280	Electric.
Chicago	Forty-eighth	Fifty-second	6,157	Electric.
Total.....			11,437	2.16 miles.

CHICAGO ELECTRIC TRANSIT COMPANY.

STREET.	FROM	TO	Lineal Feet.	REMARKS.
Elston	Milwaukee	Montrose blvd.....	53,750	Electric.
Total.....			53,750	10.18 miles.

NORTH CHICAGO ELECTRIC RAILWAY COMPANY.

STREET.	FROM	TO	Lineal Feet.	REMARKS.
Milwaukee.. .. .	Logan Square.	Lawrence.	42,504	Electric.
Total.			42,504	8.05 miles.

SOUTH CHICAGO CITY RAILWAY COMPANY.

STREET.	FROM	TO	Lineal Feet.	REMARKS.
Seventy-fifth	Stony Island.	Railroad.	14,000	Electric.
Total.			14,000	2.65 miles.

LAKE STREET ELEVATED RAILROAD COMPANY.

STREET.	FROM	TO	Lineal Feet.	REMARKS.
Lake.	Forty-fourth	Fifty-second	10,560	Single track.
Total.			10,560	2 miles.

METROPOLITAN WEST SIDE ELEVATED RAILROAD COMPANY.

	Lineal Feet.	REMARKS.
Northwestern Branch	23,020	Single track.
Total.	23,020	4.36 miles.

**NUMBER OF MILES OF HORSE, CABLE, ELECTRIC AND ELEVATED
RAILWAYS IN SERVICE DECEMBER 31, 1894.**

CORPORATIONS.	Cable.	Horse.	Electric.	Elevated.	Total.
Chicago City Railway Co	34.77	80.60	46.25	.....	161.62
West Chicago Street Railroad Co	28 90	139.48	11.96	.....	180.34
North Chicago Street Railroad Co.....	17.00	47.00	21.75	.....	85.75
Calumet Electric Street Railway Co.....	.....	.....	48.55	.....	48.55
Cicero & Proviso Electric Co.....	.....	.....	7.16	.....	7.16
Chicago North Shore Street Railway.....	.....	.....	18.15	.....	18.15
South Chicago City Railway Co.....	.....	.....	34.60	.....	34.60
Chicago & S. S. Rapid Transit Co.....	.....	.....	.....	8.56	8.56
Lake Street Elevated Railroad Co.....	.....	.....	.....	6.40	6.40
Chicago General Street Railway Co.....	.....	.....	15.87	.....	15.87
Chicago Electric Transit Co.....	.....	.....	5.90	.....	5.90
North Chicago Electric Railway Co. ....	.....	.....	8.05	.....	8.05
Total	80.67	267.08	218.24	14.96	580.95

In conclusion, I beg to acknowledge the uniform courtesies extended by the Police Department to this Bureau during the past year, as their favorable assistance has been of great benefit to us in enforcing ordinances pertaining to this Department.

I take this opportunity of expressing to you my appreciation of the consideration paid me by yourself in the discharge of my duties in this Department, and to thank the various officials and employes of the sub-departments of this Bureau for their faithfulness and efficiency in discharging the duties of their various positions.

Respectfully submitted,

LOUIS C. LEGNER,

Superintendent of Streets.

REPORT OF THE
BUREAU OF
Street and Alley Cleaning
CITY OF CHICAGO

BUREAU OF STREET AND ALLEY CLEANING

JOHN McCARTHY, Esq.,

Commissioner of Public Works.

DEAR SIR: Herewith I have the honor to submit the Annual Report of the Bureau of Street and Alley Cleaning for the year 1894.

Before presenting the statement in detail of the receipts and expenditures of this Bureau for said year, I may be permitted to more particularly call attention to the operation of the Bureau, as well as to offer some suggestions as to its future. Notwithstanding some opinions heretofore expressed to the contrary, the necessity of this Bureau is generally appreciated by all conservative citizens and taxpayers. The importance of its organization cannot be underestimated. Public convenience and the health of the inhabitants demanded its institution—demanded that special, vigorous attention be directed principally—

- 1st. To a systematic cleaning of our streets.
- 2d. To the regular removal and disposition of garbage, ashes and other refuse.
- 3d. To the prompt removal and disposition of dead animals of every nature.

With the limited appropriation for 1894, which was about \$400,000.00 less than the year 1893, the results accomplished in 1894 compare more than favorably with 1893, and merit commendation.

STREET CLEANING.

Nine thousand seven hundred ninety-six and sixty-three hundredths miles of improved streets and alleys were swept and cleaned during the year, at a total cost of \$296,397.92.

Seven thousand eight hundred fifty-two and thirty-three hundredths miles thereof were done under contract, at \$17.00 per mile; the remainder, consisting of 740 miles of macadam and 1,204 miles of block pavements, being cleaned by the Bureau independent of contract.

The expenditures in this connection exceeded the appropriation therefor by about \$46,000.00, such excess being attributable to the excessively dry season, which necessitated an unusually large number of miles to be swept by the contractor, together with the removal of the large snow storms of January and February and the cleaning of the heavy dirt incident to spring-time. However, the total cost was about \$108,000.00 less than the cost for a like service in 1893.

REMOVAL OF GARBAGE, ASHES, ETC.

The total expenditures for the removal of garbage, ashes, etc., amounted to \$339,918.29, \$4,918.29 in excess of the appropriation for that service.

For the first three months this work was done by the Bureau by daily service, while for the other nine months it was done under contract.

These substances were deposited generally in brickyard clay-holes located in sparsely settled districts, where disinfectants were liberally used, thereby effectually destroying all offensiveness possible to generate therefrom.

These dumps, besides being a convenience, only requiring a haul of about three and one-half miles on an average, were a source of revenue, the City deriving about \$8,000.00 therefrom, almost sufficient for their maintenance.

The removal and disposition of garbage seems to be a most perplexing problem—one which commands the consideration of every citizen interested in the preservation of health. Those opposed to this dumping of garbage, etc., in low and excavated places, strenuously advocate, as a substitute therefor, a crematory process, alleging that the latter will be less liable to generate disease and be less prejudicial to the comfort of the inhabitants. While there certainly is considerable force in this contention, still, the present system of receptacles for garbage, ashes, etc., on our streets and alleys, makes the crematory process impracticable, and it will

remain so until the law requiring garbage and ashes to be kept separate is strictly adhered to. During the past year this Bureau has made vigilant efforts to enforce a strict compliance with said law, and has prosecuted many persons for violations thereof. However, after a thorough investigation, this Bureau determined that the only way to have ashes and other refuse not intermixed with garbage was to remove all receptacles for the same located on streets and alleys, and compel to be provided, as substitutes therefor, two metal receptacles—one for garbage and one for ashes and other refuse, to be kept within the premises within convenient reach of the scavenger, who would call every day or two for the same.

This system will make each and every tenant a guardian of his own health, causing him to carefully place these matters in their respective receptacles.

To maintain this system for a population of two million people, confined within an area of about 186 square miles, would require a very liberal appropriation. The appropriation of 1894, amounting to about \$28,000.00 per month, would be entirely inadequate to insure this service, and unless a more liberal appropriation is awarded this contemplated service will have to be abandoned.

During the year 12,347 dead animals were removed and disposed of by the Union Rendering Co., of which 5,870 were horses, 146 cows, and 6,331 smaller animals. Only \$15,000.00 was appropriated for this service, but early in the year it was ascertained that said service could not be had for said amount, \$37,500.00 being the total sum expended therefor.

Statement in detail is as follows :

APPROPRIATION AND OTHER RECEIPTS.

Office salaries	\$ 14,450.00	
Removal of ashes, garbage, etc.	335,000.00	
Street cleaning	250,000.00	
Removal of dead animals.....	15,000.00	
Salaries of ward foremen.....	34,000.00	
Total	\$ 648,450.00	
Receipts from dumps, deposited in general fund	7,960.05	
		\$ 656,410.05

DISBURSEMENTS.

Office salaries	\$ 15,741.94
Ward foremen	31,972.30
Removal of dead animals	37,500.00

STREET CLEANING.

By J. H. Burke, contractor	\$133,489.61	
By the Bureau, independent of contract	162,908.31	296,397.92
Maintenance of Dumps		12,573.75

REMOVAL OF GARBAGE AND ASHES, ETC.

First	\$23,647.58
Second	14,052.20
Third	14,695.40
Fourth	19,662.94
Fifth	8,524.48
Sixth	5,184.50
Seventh	9,024.96
Eighth	5,642.96
Ninth	7,305.24
Tenth	5,164.80
Eleventh	15,962.06
Twelfth	16,191.20
Thirteenth	12,425.50
Fourteenth	7,492.50
Fifteenth	3,790.00
Sixteenth	10,510.00
Seventeenth	7,740.88
Eighteenth	12,299.48
Nineteenth	14,411.76
Twentieth	4,594.50
Twenty-first	8,722.50
Twenty-second	8,418.78
Carried forward.	\$235,464.22

Brought forward	\$235,464.22		
Twenty-third	9,736.12		
Twenty-fourth	15,934.88		
Twenty-fifth	7,851.28		
Twenty-sixth	5,377.50		
Twenty-seventh	2,127.50		
Twenty-eighth	1,485.00		
Twenty-ninth	9,239.00		
Thirtieth	10,515.00		
Thirty-first	6,586.44		
Thirty-second	21,905.29		
Thirty-third	4,209.00		
Thirty-fourth	9,287.06		
		\$ 339,718.29	
			\$ 733,904.20
Deficit			\$ 77,494.15

JOSEPH SCHOFIELD,

Sup't Street and Alley Cleaning.

REPORT OF THE

Bureau of Special Assessments

CITY OF CHICAGO

BUREAU OF SPECIAL ASSESSMENTS.

HON. JOHN MCCARTHY,
Commissioner of Public Works.

DEAR SIR :—I submit herewith, in tabular form, a statement of special assessments made in this department during the year 1894, with a summary of the estimated cost of the same ; also the amount of special assessments made each year during the past thirty-four years.

Respectfully,

J. S. SHEAHAN,
Sup't of Special Assessments.

WOODEN BLOCK PAVEMENT.

No. of Warr't.	IMPROVEMENT.	NAME OF STREET.	FROM	TO	AMOUNT.
18943	C. G. and P.	Leavitt.	Clybourn avenue.	Belmont avenue.	\$ 11,249 27
19010	C. G. and P.	Ellen.	Lincoln.	Western terminus.	1,190 80
19020	C. F. and P.	Canalport avenue.	Twenty second.	Halsted.	7,855 65
19021	C. F. and P.	Kedzie avenue.	Palmer place.	North avenue.	46,639 25
19026	C. G. and P.	Herndon.	Roscoe.	Belmont avenue.	10,397 04
19045	C. G. and P.	Thirty-sixth.	Butler.	Halsted.	16,199 75
19050	C. F. and P.	West Twenty-first.	Pan Handle R. R.	Douglas Park boulevard.	26,196 20
19052	C. G. and P.	Illinois.	St. Clair.	1,500 ft. East.	18,544 00
19056	C. G. and P.	Lake.	Homan avenue.	Crawford avenue.	25,393 85
19057	C. G. and P.	Indiana avenue.	Thirteenth.	Twelfth.	4,280 24
19059	C. F. and P.	West Twenty-first.	Union.	Jefferson.	5,965 86
19071	C. F. and P.	Augusta.	Western avenue.	Seymour.	6,074 88
19072	C. G. and P.	Starr.	Sedgwick.	North Park avenue.	8,380 17
19077	C. F. and P.	Winter.	Forty-seventh.	Garfield boulevard.	8,919 75
19085	C. G. and P.	Thirty-sixth.	State.	Armour avenue.	4,517 44
19086	C. G. and P.	Iowa.	Lincoln.	Robey.	4,356 24
19085	C. F. and P.	Avers avenue.	Kinzie.	Chicago avenue, etc.	8,805 05
19100	C. F. and P.	Bishop.	Fifty-first.	Fifty-fifth.	22,984 06
19101	C. F. and P.	Wilson avenue.	Robey.	Leavitt.	10,458 91
19102	C. F. and P.	Houston avenue.	Eighty-seventh.	Ninety-third.	82,804 47
19103	C. F. and P.	Geary.	Delaware place.	Chestnut.	787 13
19106	C. G. and P.	Paulina.	Addison.	Lincoln avenue.	10,247 35
19117	C. F. and P.	Aberdeen.	Fifty-fifth.	Fifty-ninth.	19,465 97
19147	C. F. and P.	Hoyle avenue.	Archer avenue.	Thirty-seventh.	7,980 84
19163	C. G. and P.	Commercial.	Addison.	Lincoln avenue.	4,666 69
19168	C. F. and P.	Carpenter.	Fifty-fifth.	Fifty-ninth.	19,718 81
19197	C. F. and P.	Thirty-second.	Halsted.	Auburn.	5,861 23
19198	C. G. and P.	Balmoral avenue.	North Clark.	Ashland avenue.	3,860 28
19199	C. G. and P.	Chicago avenue.	North State.	Pine.	10,188 38
19200	C. G. and P.	Thirty-fifth.	Cottage Grove avenue.	Lake avenue.	5,280 75
19201	C. F. and P.	Lincoln.	Canal.	Thirty-eighth.	17,742 16
19239	C. G. and P.	Adams.	Ninety-first.	Halsted.	6,714 21
19243	C. F. and P.	Erie avenue.	Blue Island avenue.	South Chicago avenue.	719 95
19251	G. and P.	Centre avenue.	Ashtland avenue.	Twenty-second.	10,865 52
19253	Paving.	Fifty-first.	North Clark.	Wood.	2,181 48
19254	C. G. and P.	Chicago avenue.		North State.	6,851 94

19255	C. G. and P.	Rebecca	Rockwell	415 ft. East	8,991 70
19257	C. F. and P.	May	Carpenter	Aberdeen, etc.	188,896 40
19261	C. F. and P.	Union avenue	Sixty-third	Sixty-seventh	688 40
19268	C. G. and P.	Leavitt	North avenue	Wabansia avenue	5,197 00
19298	C. G. and P.	Cass	Michigan	Rush	21,409 45
19391	C. F. and P.	Western avenue	Belmont avenue	Koscoe boulevard	18,808 95
19393	C. G. and P.	Indiana	Clark	St. Clair	15,832 32
19397	C. F. and P.	May	Twentieth	Twenty-second	6,220 94
19379	C. F. and P.	Milwaukee avenue	Crawford avenue	Irving Park boulevard	87,108 84
19388	C. G. and P.	Lincoln avenue	Montrose boulevard	Bowmanville road	59,998 87
19389	C. F. and P.	Albany avenue	West Madison	West Lake	357 74
19408	C. G. and P.	Morgan	Fulton	Carroll avenue	8,269 04
19439	C. F. and P.	Seymour	North avenue	Armitage avenue	841 87
19448	C. F. and P.	Lafin	West Fourteenth	West Sixteenth	844 80
19444	C. F. G. and P.	Morse avenue	Lake Michigan	Ridge avenue	1,456 25
19466	C. F. and P.	Carroll avenue	950 ft. west of Kedzie avenue	Homan avenue	2,832 60
19467	C. F. and P.	Albert	West Eighteenth	West Nineteenth	5,038 78
19490	C. F. and P.	James avenue	Laurel	Eastern terminus	4,453 14
19491	C. F. and P.	Attica	Laurel	Auburn	5,108 72
19507	C. F. and P.	Oakley avenue	West Twelfth	West Fourteenth	446 00
19545	C. G. and P.	Langley avenue	Sixty-third	Sixty-seventh	19,570 10
19548	C. G. and P.	Huron	Wells	State	9,917 84
19577	C. F. and P.	Wallace avenue	Humboldt boulevard	Belmont avenue	27,840 05
19585	C. F. and P.	South Park avenue	Sixty-third	Sixty-seventh	17,022 05
19587	C. F. and P.	Sherman	Sixty-seventh	Sixty-ninth, etc.	18,447 75
19740	C. F. and P.	Wabansia avenue	Western avenue	Kedzie avenue	27,801 26
19742	C. G. and P.	Thirty-second	Westworth avenue	Portland avenue	8,541 83
19757	C. F. and P.	Greenwood avenue	Oakley avenue	Western avenue	4,524 26
19781	C. G. and P.	Ninety-third	Harbor avenue	South Chicago avenue	25,167 75
19861	C. F. and P.	Green	Sixty-sixth	Sixty-seventh	8,644 78
Total					\$ 917,897 69

ASPHALT PAVEMENT.

No. of Warr't.	IMPROVEMENT.	NAME OF STREET.	FROM	TO	AMOUNT.
19053	C. G. and F. P.	Millard avenue	West Twelfth	Douglas park boulevard	\$ 15,829 40
19141	C. F. and P.	Grenshaw	Douglas boulevard	Crawford avenue	4,215 60

ASPHALT PAVEMENT—CONTINUED.

No. of Warr't.	IMPROVEMENT.	NAME OF STREET.	FROM	TO	AMOUNT.
19152	C. F. G. and P.	Flournoy.....	Douglas boulevard	Crawford avenue	\$ 13,425 70
19155	C. F. G. and P.	Lexington.....	Douglas boulevard	Crawford avenue	19,508 70
19284	C. F. and P.	Fairfield avenue.....	Sixteenth	Twenty-second	34,945 60
19285	C. G. and P.	St. Louis avenue.....	Ogden avenue	Twenty-sixth	45,813 70
19266	C. G. and P.	West Ohio.....	Kedzie avenue	Avers avenue	49,951 80
19327	C. G. and P.	LaSalle avenue.....	Chicago avenue	Division	32,656 80
19330	C. G. and P.	LaSalle avenue.....	North Clark	Division	48,658 16
19335	G. and P.	Harrison.....	Paulina	Western avenue	37,517 48
19382	C. G. and P.	Hamlin avenue.....	Sixteenth	Ogden avenue	22,403 65
19432	C. G. and P.	West Polk.....	Douglas boulevard	Crawford avenue	15,073 70
19776	C. G. and P.	Fillmore.....	Douglas boulevard	Crawford avenue	18,829 72
19948	G. and P.	Lake Park avenue.....	Thirty-first	Thirty-third	7,086 59
Total.....					\$ 340,616 10

MACADAMIZED PAVEMENTS.

No. of Warr't.	IMPROVEMENT.	NAME OF STREET.	FROM	TO	AMOUNT.
18944	C. G. and M.	Fifty-third.....	I. C. R. R.	Lake Michigan.....	\$ 5,987 47
19037	C. F. and M.	Sixtieth.....	Wentworth avenue	Princeton avenue	2,807 57
19059	C. G. and M.	Hamlin avenue.....	Ogden avenue	West Twenty-sixth	12,394 57
19068	C. F. and M.	Esplanade avenue.....	Eighty-seventh	Ninety-first	20,439 15
19202	C. G. and M.	Jeffrey avenue.....	Seventy-first	Seventy-third	5,081 89
19267	C. G. and M.	119th.....	Wentworth avenue	Halsted	15,802 30
19326	C. G. and M.	118th.....	Etc.	Halsted	92,366 56
19384	G. and M.	High avenue.....	108th	114th	11,157 93
19393	C. F. and M.	Rosenmeyer.....	Wallace	Wright	8,373 59
19430	C. G. and M.	Bryn Mawr avenue.....	Clark	Evanson avenue	13,630 25
19436	C. G. and M.	South Park avenue.....	Fifty-first	Fifty-fifth	290 00
19437	C. G. and M.	Robertson avenue.....	Grace avenue	I. C. R. R.	1,719 95
19496	C. F. and M.	Champlain avenue.....	Fiftieth court	Fifty-first	1,867 09

GRANITE BLOCK PAVEMENT.

No. of War'nt.	IMPROVEMENT.	NAME OF STREET.	FROM	TO	AMOUNT.
19487	C. F. and M.	Champlain avenue.	Fiftieth	Fiftieth court.	2,314 49
19488	F. and M.	Eighty-ninth.	South Chicago avenue.	Erie avenue.	9,128 65
19591	C. G. and M.	Fifty-fifth.	I. C. Subway	Cornell avenue.	1,808 87
19610	Macadam	Honore	Sixty seventh.	Sixty ninth.	1,743 62
19613	C. G. and M.	Fifty-fourth.	Drexel avenue	Woodlawn avenue.	7,849 96
19741	C. G. and M.	100th.	Ewing avenue.	Avenue L	7,763 86
Total					\$ 216,114 67

No. of War'nt.	IMPROVEMENT.	NAME OF STREET.	FROM	TO	AMOUNT.
19150	C. G. and P.	Canal	Van Buren	Harrison	\$ 16,894 77
19889	G. and P.	Fourth avenue	Jackson	Harrison	2,088 03
Total					\$ 18,972 80

BRICK PAVEMENT.

No. of War'nt.	IMPROVEMENT.	NAME OF STREET.	FROM	TO	AMOUNT.
19336	C. G. and P.	Fifty-third.	Lake avenue	Woodlawn avenue.	\$ 38,575 78
19573	C. F. and P.	Hamlin avenue	West Chicago avenue.	C. & N. W. R'y	38,530 90
19594	C. G. and P.	Dearborn avenue	Michigan	Ohio	13,082 28
Total					\$ 85,188 96

ALLEYS — WOODEN BLOCK PAVEMENT.

No. of Warr't.	IMPROVEMENT.	FROM	BETWEEN	AMOUNT.
19007	C. F. and P.	North avenue to Keenan	Ashland avenue and Paulina	\$ 2,772 12
19018	C. G. and P.	Twenty-ninth to Thirtieth	Armour avenue and La Salle	2,532 63
19019	C. G. and P.	Twenty-seventh to Twenty-ninth	Armour avenue and La Salle	2,506 33
19074	C. G. and P.	North to Lincoln	Elk Grove and Girard	3,314 48
19075	C. F. and P.	Kedzie avenue to Homan avenue	Walnut and Fulton	4,829 56
19076	C. G. and P.	Leavitt to Oakley avenue	Park avenue and Washington boulevard	1,675 10
19099	C. G. and P.	Archer avenue to Twentieth	State and Dearborn	1,033 11
19104	C. G. and P.	Twenty-second to Twenty-third	Cottage Grove avenue and Prairie avenue	791 54
19242	C. G. and P.	Harrison to Gurley	May and Aberdeen	1,427 24
19243	C. G. and P.	Thirty-sixth to Thirty-seventh	Vincennes avenue and Ellis Park	978 71
19324	C. G. and P.	Alleys block 12, Canal T. Sub., Sec. 3, Town 39	N., R. 14 E.	656 33
19348	C. G. and P.	Thirtieth to Thirty-first	Cottage Grove avenue and Groveland avenue	1,450 54
19349	C. G. and P.	Huron to Superior	Rush and Pine	627 94
19381	C. G. and P.	West Twelfth to Maxwell	Brown and Morgan	1,710 18
19401	C. G. and P.	Centre avenue to Lytle	Arthington and Taylor	1,654 30
19404	C. G. and P.	Alleys block 43, School Section addn. to Chicago	Chicago	1,275 17
19405	C. G. and P.	Jefferson to Desplaines	DeKoven and Bunker	922 72
19406	C. G. and P.	North ½ block 25, School Section addn.		347 61
19407	C. G. and P.	Block 36, Carpenter's addn. to Chicago		1,080 42
19408	C. G. and P.	Union to Halsted	Twenty-first and Lisle	1,589 00
19409	C. G. and P.	Union to Jefferson	West Fourteenth and Liberty	1,431 95
19410	C. G. and P.	Southernmost E. & W. block 48, Original To	wn addn.	564 03
19503	C. G. and P.	Block 33, Wolcott's addn. to block 50, Kinzie's	addn.	75 00
19549	C. G. and P.	E. Smith's subn., block 42, Canal T. Subn.,	Sec. 27, T. 39 N., R. 14 E.	565 13
19614	C. G. and P.	Alley west of Franklin	Wendell and Oak	564 30
19738	C. G. and P.	North ½ block 14, Assr's Divn., Canal T. Sub.	Sec. 17, T. 39 N., R. 14 E.	589 61
19739	C. G. and P.	Webster avenue to Osgood	Fairfield avenue and Seminary avenue	2,198 65
19756	C. G. and P.	Lincoln avenue to Webster avenue	Park avenue and West Lake	2,238 06
19834	C. G. and P.	Oakley avenue to Western avenue	Runsey and Paulina	1,721 45
19858	C. G. and P.	Clarinda to Cornelia	Wentworth avenue and Fifth avenue	928 66
19859	C. F. and P.	Swift place to Whitehouse	Poe	1,552 26
19860	C. F. and P.	Maud avenue to Sheffield avenue	Wentworth avenue and Fifth avenue	637 00
19862	C. G. and P.	Thirty-first to Thirty-second	Wentworth avenue and Fifth avenue	1,543 72
Total				\$ 47,784 85

ALLEYS — CONCRETE, GRANITE AND ASPHALT PAVEMENT.

No. of Warr't.	IMPROVEMENT.	FROM	BETWEEN	AMOUNT.
19283	*G. and P.	First E. of State running S. from Eighteenth.		\$ 307 51
19899	†G. and P.	First S. of Madison.	Fifth avenue E. 181 $\frac{1}{2}$ ft.	575 95
19400	‡C. G. and P.	Thirty-first to Thirty-second.	Prairie avenue and N. and S. alley west.	594 95
	Total.			\$ 1,878 41

* Concrete. † Granite. ‡ Asphalt.

GAS LAMP POSTS.

No. of Warr't.	No. of Posts.	NAME OF STREET.	FROM	TO	AMOUNT.
19846	13	Linden avenue.	Fullerton avenue.	Humboldt boulevard.	\$ 402 57
19017	13	Cheltenham place.	Bond avenue.	Railroad avenue.	373 00
19090	10	Forty-first.	Grand boulevard.	St. Lawrence avenue.	44 53
19284	7	Emerald avenue.	Fifty-eighth.	Fifty-ninth.	224 00
19285	7	Emerald avenue.	Fifty-sixth.	Fifty-seventh.	224 00
19286	5	Emerald avenue.	Fifty-fifth.	Fifty-sixth.	160 00
19287	5	Emerald avenue.	Fifty-ninth.	South.	160 00
19288	5	Buffalo avenue.	Ninetieth.	Ninety-first.	160 00
19299	2	Werder.	Rockwell.	California avenue.	287 00
19300	7	Fifty-eighth.	Stewart avenue.	Wright.	217 00
18801	14	Sixty-ninth.	Madison avenue.	Stony Island avenue.	448 00
19303	7	Greshaw.	Kedzie avenue.	Spaulding avenue.	224 00
19304	14	Evergreen avenue.	Rockwell.	California avenue.	448 00
18804	12	Rockwell.	Division.	Augusta.	384 00
19305	14	Sherman.	Sixty-ninth.	Seventy-first.	448 00
19306	2	Eighty-second.	Edwards avenue.	Commercial avenue.	69 00
19307	7	Langley avenue.	Sixty-sixth.	Sixty-seventh.	224 00
19308	3	Eighty-fourth.	Superior avenue.	Buffalo avenue.	101 00
19309	4	Eighty-first.	Bond avenue.	Ontario avenue.	180 00
19310	2	Eighty-third.	Bond avenue.	Lake avenue.	69 00
18811	6	Ford avenue.	Seventy-eighth.	Seventy-ninth.	192 00
19312	6	Eric avenue.	Ninety-fifth.	Ninety-sixth.	192 00
19313	13	Lafin.	Forty-seventh.	Forty-ninth.	416 00
19314	8	Ninety-third.	Commercial avenue.	Houston avenue.	101 00

GAS LAMP POSTS—CONTINUED.

No. of Warr't.	No. of Posts.	NAME OF STREET.	FROM	TO	AMOUNT.
19815	3	Eighty-seventh	Commercial avenue.	Houston avenue	\$ 101 00
19816	4	Eighty-ninth	Exchange avenue	Commercial avenue.	180 00
19817	2	South Chicago avenue.	Exchange avenue	Ninety-second.	69 00
19818	6	Harbor avenue	Mackinaw avenue.	The Strand.	192 00
19819	7	Maryland avenue	Sixty-third	Sixty-fourth	224 00
19820	21	Hoyne avenue.	Belmont avenue	Clybourn avenue.	667 00
19888	7	Evans avenue	Sixty sixth	Sixty-seventh.	224 00
19844	7	Emerald avenue	Fifty seventh.	Fifty-eighth	224 00
19845	9	Dearborn	Sixtieth	Sixty-first	268 00
19402	4	E. Ravenswood park	Lawrence avenue	North avenue.	129 72
19413	7	Houghton avenue.	Addison avenue.	Waveland avenue.	324 00
19414	6	Hoyne avenue	Roscoe avenue.	Cornelia	192 00
19415	8	Greshaw	Spaulding avenue.	Homan avenue.	256 00
19416	12	Oakdale avenue	Seminary avenue.	Herndon.	384 00
19417	16	Belle Plaine avenue	Lincoln avenue	C. & N.-W. R'y	512 00
19418	15	Cuyler avenue	Lincoln avenue	C. & N.-W. R'y	480 00
19419	8	Seventy-first	Madison avenue.	Jefferson avenue	100 98
19420	2	Seminary avenue	Roscoe	Newport avenue	69 00
19421	15	Spaulding avenue.	West Twelfth	Douglas Park boulevard.	480 00
19422	3	Thirtieth.	Groveland avenue.	Cottage Grove avenue	110 98
19423	49	Tripp	North avenue.	Humboldt avenue.	1,596 00
19424	13	Lakeside avenue.	Sheridan avenue.	Lake Michigan	439 00
19425	5	Cornelia	Ashland avenue.	Southport avenue.	160 00
19426	6	Erie avenue.	Ninety-third	South Chicago avenue	192 00
19427	2	Duncan	Seventy-ninth	Eightieth	69 00
19447	19	Sixty-third	Centre avenue.	Sangamon	569 00
19448	3	Fifty-sixth	East End avenue.	Everett avenue	98 00
19449	6	Sixty-fifth	State	Grove place	186 00
19450	16	Indiana avenue.	Thirty-ninth	Forty-sixth.	495 80
19451	8	Rowen avenue.	Grand boulevard	Drexel boulevard	246 14
19452	14	Wabash avenue.	Thirty-ninth	Forty-third	488 84
19453	10	State	Langley avenue.	Forty-sixth	310 00
19454	19	Forty-second	Forty-sixth.	State	587 64
19455	15	State	Forty-sixth.	Fifty-fourth	465 00
19457	13	Harvard avenue	Sixty-third.	Sixty-seventh	371 96
19458	27	Carpenter	Fifty-ninth.	Sixty-third	587 00

19459	4	Seventieth	Webster	C. R. I. & P. Ry.	180 00
19460	7	Cedar	Princeton avenue.	Stewart avenue	224 00
19461	11	Fifty-eighth	Wallace	Halsted	362 00
19462	8	Seventy-third	Madison avenue.	Adams avenue.	100 98
19468	11	Lexington avenue.	Sixty-first.	Sixty-third	352 00
19469	6	Montana	Perry	Ashland avenue.	192 00
19470	4 & conn.	Albany avenue	Flournoy	Harvard	198 00
19477	4	Seventy-eighth	Lake avenue.	Bond avenue	180 50
19478	5	Buffalo avenue	Ninety-first	Ninety-second	160 00
19479	5	Francisco	Fillmore	Twelfth	160 00
19480	18	Seventy-seventh	Lake avenue	So. Chicago R. R.	416 00
19481	6	Eightieth	Commercial avenue.	Houston avenue	192 00
19482	13 & 2 conn.	Fairfield avenue	Chicago avenue.	Augusta	456 00
19484	5	Starr	Sedgwick	North Park avenue	160 00
19484	11	Lowe avenue.	Thirty-third	Thirty-fifth.	352 00
19485	11	Albany avenue.	Kinzie	Chicago avenue.	1,049 16
19486	35	Nebraska avenue	Armitage avenue	Palmer square	341 00
19516	11	Mitchell avenue	North avenue.	Bloomingtondale road.	465 00
19517	15	Hamburg	Breslau	Western avenue.	51 00
19518	8 & conn.	Breslau	Hamburg	Ems	155 00
19519	5	Norman avenue.	North avenue.	Bloomingtondale road	465 00
19520	15	Dudley	Armitage avenue.	Hervey	160 00
19521	5	Stave	Cornelia	Armitage avenue.	352 00
19522	11	Iowa	North Hoyne avenue.	Robey	170 00
19523	5	Wilmot avenue	North Hoyne avenue.	Robey	192 00
19524	6	Maplewood avenue.	Fullerton avenue.	Diversey avenue	806 00
19525	26	Cedar	School.	Wentworth avenue.	170 00
19526	5	Spaulding avenue	Twenty-second	Twenty-fourth	480 00
19527	15	Turner avenue	Twenty-second.	Twenty-fourth	480 00
19528	15	Town court	Southern terminus	North avenue	180 00
19529	4	Waubun avenue	Barry avenue.	Wellington avenue.	69 00
19530	2	Cornelia	Racine avenue.	C. E. & L. S. R. R.	180 00
19531	4	Butler	Thirty-fifth	Thirty-seventh.	288 00
19532	9	Parnell avenue	Thirty-seventh.	Thirty-ninth	416 00
19533	18	W. Eighteenth	St. Louis avenue	Trumbull avenue.	101 00
19534	3	Hamlin avenue	Sixteenth	Ogden avenue	775 00
19535	5	Sawyer avenue	Twenty-second	Twenty-fourth.	490 00
19536	15	W. Seventeenth.	Rockwell.	Washienaw avenue.	192 00
19537	6	Cornelia	Milwaukee avenue	Point	256 00
19538	8	Bingham	Armitage avenue.	Cornelia	416 00
19539	13	St. Louis avenue	Twenty-second	Ogden avenue	490 00
19540	15	Lexington.	Kedzie avenue.	Francisco	667 00

GAS LAMP POSTS—CONTINUED.

No. of War nt.	No. of Posts.	NAME OF STREET.	FROM	TO	AMOUNT.
19542	5	Lyman avenue	Sunnyside avenue	Wilson avenue	\$ 160 00
19543	11	Paulina	Clybourn avenue	Wrightwood avenue	852 00
19546	27	Aberdeen	Fifty-ninth	Sixty-third	887 00
19567	15	Jamot	Leavitt	Robey	480 00
19568	14	Thirty-eighth	Laurel	Halsted	448 00
19569	16	Seventieth	Linden avenue	Stony Island avenue	512 00
19570	15	Horton avenue	Sixtieth	Sixty-second	480 00
19580	19	Seventy-first	Nutt avenue	Stony Island avenue	608 00
19595	13	Superior avenue	Eighty-seventh	Eighty-ninth	416 00
19598	9	Seventy-second	Nutt avenue	Jefferson avenue	274 80
19605	7	Ninety-fifth	Commercial avenue	Eric avenue	158 19
19606	19	Thirty-eighth	Halsted	Stewart avenue	561 64
19608	7	Fifty-eighth	Wright	Wallace	188 80
19615	14	Twenty-eighth	Stewart avenue	Halsted	484 00
19616	21	Crawford avenue	West Lake	Madison	636 66
19618	9	Seventy-first	Yates avenue	Bond avenue	279 00
19621	20	State	Fifty-fourth	Sixty-third	680 00
19622	45	Hoffman avenue	Diversey avenue	Milwaukee avenue	1,850 00
19623	20	Sangamon	Sixtieth	Sixty-third	620 00
19624	4	Diller	Kinzie	Austin avenue	128 00
19626	7	Boulevard place	Grand boulevard	Vincennes avenue	217 00
19627	8	Sacramento avenue	Sacramento square	Kinzie	101 00
19628	26	Bosworth avenue	Grace avenue	Roscoe	808 00
19629	4	Seventieth court	C. R. I. P. Ry	Webster avenue	180 00
19630	8	Central park avenue	West Ohio	Central Park boulevard	266 00
19631	84	Forrest avenue	Fullerton avenue	Elston road	1,064 00
19632	4 and 25 cross.	Mead	North avenue	Armitage avenue	572 00
19633	27	Fairview avenue	Fullerton avenue	Diversey avenue	887 00
19634	7	Washtenaw avenue	West Taylor	Lexington avenue	224 00
19636	4	Forty-seventh court	Cottage Grove avenue	Eastern terminus	128 00
19637	11	W. Superior	Leavitt	Western avenue	841 00
19638	7	Leavitt	North avenue	Wabansia avenue	217 00
19639	10	Loughton	Hoynes avenue	Oakley avenue	317 00
19640	7	Forty-sixth	Wentworth avenue	Princeton	217 00
19641	18 & 20 cross.	Cortland	Central Park avenue	Kadzie avenue	441 00
19642	28	Trumbull	West Sixteenth	Twenty-second	868 00

19648	18	Colorado	West Fortieth	Garfield boulevard	576 00
19644	10	Avers avenue	Ogden avenue	W. Nineteenth	890 00
19645	28 & 2 ^{chs.}	Central Park avenue	North avenue	Armitage avenue	545 00
19646	26	Washtenaw avenue	Chicago avenue	Division	808 00
19647	4	Powell Park	Powell Park	Western avenue	180 00
19648	15	Barclay	Augusta	Division	490 00
19649	2 & 27 ^{chs.}	Ballou	North avenue	Armitage avenue	528 00
19650	2 & 18 ^{chs.}	Laurel avenue	Diversey	Humboldt boulevard	390 00
19651	14	Lincoln avenue	Diversey	Humboldt boulevard	448 00
19652	18	Mospratt	Thirty-first	South	576 00
19653	12	Ward	Diversey	Wrightwood avenue	884 00
19654	5	Armour avenue	Twenty-fifth	Twenty-sixth	160 00
19655	13	Parnell avenue	Thirty-third	Thirty-fifth	884 00
19656	58	Southport avenue	Graceland	Belmont avenue	1,788 00
19657	14	Giddings	Leavitt	Robey	448 00
19658	41	Woodside avenue	School	Graceland avenue	1,371 00
19659	23	Reynolds avenue	Seventy-ninth	Eighty-second	721 00
19660	9	Marianna	Racine avenue	Southport avenue	288 00
19661	19	Homan avenue	Fifteenth	Ogden avenue	608 00
19662	29	Eighteenth	Western avenue	California avenue	899 00
19664	2	Thirty-second	Dearborn	Railroad	69 00
19665	14	Sunnyside avenue	Leavitt	Robey	448 00
19666	13	Western avenue	Belmont avenue	River	516 00
19667	3	Thirty-third	LaSalle	Alley West of Wentworth avenue	69 00
19668	3	Twenty-third	South Park avenue	Railroad	69 00
19669	18	Seminary avenue	Belmont avenue	Roscoe	416 00
19670	4	Argyle	Evanson avenue	Winthrop avenue	130 00
19671	24	Melrose	Ashland avenue	Racine avenue	748 00
19672	19	Eighty-third	Commercial avenue	Superior avenue	608 00
19673	6	Seventy-ninth	Duncan avenue	Ford avenue	193 00
19674	1 & 28 ^{chs.}	Homan avenue	North avenue	Armitage avenue	518 00
19675	7	W. Sixteenth	Kedzie avenue	Albany avenue	224 00
19676	8	Point	Cornelia	Henry court	256 00
19677	31	Wabansia avenue	Central Park avenue	Kedzie avenue	667 00
19678	38	Sherman	Fifty-fifth	Fifty-ninth	868 00
19679	6	Rosenmerkel	Wright	P. Ft. W. & C. Ry	192 00
19680	7	Sangamon	Fifty-ninth	Sixtieth	284 00
19681	27	Peoria	Fifty-ninth	Sixty-third	887 00
19682	6	Sixty-fifth	Champlain avenue	Cottage Grove avenue	192 00
19683	14	Green	Fifty-ninth	Sixty-first	449 00
19684	3	Sixty-fourth	Greenwood avenue	Lexington avenue	101 00
19685	8	Drexel avenue	Sixtieth	Sixty-first	266 00

GAS LAMP POSTS—CONTINUED.

No. of Ward.	No. of Posts.	NAME OF STREET.	FROM	TO	AMOUNT.
19686	12	Nelson	Southport avenue	Racine avenue.	\$ 384 00
19687	83	Commercial	Graceland avenue	Cornelia	992 00
19688	2	Sixtieth	Dearborn	Alley west of Dearborn.	69 00
19689	2	Prairie avenue	Fullerton avenue.	Montana	69 00
19690	14	Noble avenue	Ashland avenue.	Wood	448 00
19691	9	Palmer avenue	California avenue	Palmer	288 00
19692	9	Dickens avenue	California avenue	Humboldt Park boulevard.	288 00
19693	16	Trumbull avenue	Douglas Park boulevard	West Sixteenth	512 00
19694	10 conn.	Shakespeare avenue	California avenue.	Humboldt Park boulevard.	170 00
19695	7	Wright	Seventh-fifth	Seventh second.	224 00
19696	17	Sixty-seventh	Honore	State	544 00
19697	25	W. Twenty-fifth	California avenue	Kedzie avenue.	721 00
19698	4	Rebecca	Rockwell	Eastern terminus.	180 00
19699	6	Jefferson avenue	Seventieth	Seventy-first	192 00
19701	13	Racine avenue	Lawrence avenue	Sulzer avenue.	884 00
19702	7	Fifty-ninth	L. S. M. S. Ry.	State	224 00
19703	3	Cornelia	Wilton avenue.	Rokeby	101 00
19704	5	Burling	Wrightwood avenue.	500 feet south	160 00
19705	7	Madison avenue	Sixty-eighth	Sixty-ninth	224 00
19706	6	Sixty-third	Halsted	Union avenue	192 00
19707	2	Sixty-sixth	Ferry avenue.	Lafayette avenue.	69 00
19708	6	Harvard	Seventy-third	Seventy-fourth	192 00
19709	12	Forty-eighth	Paulina	Wallace	884 00
19710	7	Fifty-first	Sixtieth	Ashland avenue	224 00
19711	6	Ellis avenue	Sixty-first	Sixty-first	192 00
19712	17	Lexington avenue	Douglas Park boulevard	West Fortieth	544 00
19713	17	Flournoy	Douglas Park boulevard	West Fortieth	544 00
19714	4	Seventy-sixth place	Coles avenue.	Railroad avenue	180 00
19718	10	Addison	Seventy-sixth place	Lincoln avenue	820 00
19764	5	Waubun avenue	Oakdale avenue.	Surf	55 80
19765	82	St. Louis avenue	Twelfth	Eighteenth	1,054 00
19769	15	Seventy-fifth	Lake avenue	Railroad avenue.	480 00
19770	29	Francisco	Division	Chicago avenue.	899 00
19771	7	Champaign avenue	Sixty-sixth	Sixty-seventh	224 00
19772	15	Montrose boulevard	Robey	Leavitt	480 00
19786	43	Western avenue	Fullerton avenue.	North Branch Chicago River.	1,290 00

19787	6	Sixtieth.....	Union avenue.....	Halsted.....	186 00
19788	13	Drexel avenue.....	Fifty-third.....	Fifty-fifth.....	408 00
19789	13	Seminary avenue.....	Wellington avenue.....	Balmoral avenue.....	873 00
19790	13	Faye.....	East Ravenswood Park.....	Lincoln avenue.....	873 00
19791	5	W. Ohio.....	Drake avenue.....	Central Park avenue.....	170 00
19792	8	Albany avenue.....	Twenty-second.....	Twenty-sixth.....	898 00
19793	8	Edson avenue.....	Diversey.....	Lincoln avenue.....	256 00
19794	14	Seventy-fifth.....	Bissell avenue.....	Railroad avenue.....	448 00
19795	84	Seventy-second.....	Stony Island avenue.....	Ellington avenue.....	1,053 00
19797	1	N. E. Corner.....	Kedzie avenue.....	Van Buren.....	37 00
19798	4	Abbott court.....	Diversey.....	Northern terminus.....	180 00
19799	6	Oak place.....	School.....	Belmont avenue.....	192 00
19800	6	Wolftram.....	Southport avenue.....	Herndon.....	192 00
19801	16	Fiftieth court.....	Forrestville avenue.....	Cottage Grove avenue.....	512 00
19802	15	W. Fortieth.....	Jackson.....	Harrison.....	480 00
19803	16	Parmelee.....	Western avenue.....	Hoyle avenue.....	512 00
19805	11	Bond avenue.....	Seventy-ninth.....	Eighty-first.....	852 00
19806	25	Lakeview avenue.....	Diversey avenue.....	St. James place.....	404 70
19808	5	Chester.....	Clybourn avenue.....	West.....	160 00
19810	63	Roscoe.....	Robey.....	Sheffield avenue.....	1,953 00
19811	19	Seventy-first.....	Stony Island avenue.....	Euclid avenue.....	608 00
19812	63	Perry.....	Graceland avenue.....	Wellington.....	1,953 00
19813	37	Atlantic.....	Fifty-first.....	Fifty-fifth.....	887 00
19814	1	Sixty-first.....	State.....	Dearborn.....	37 00
19815	13	Ontario avenue.....	Eighty-first.....	Eighty-third.....	884 00
19816	7	Seventy-first.....	Euclid avenue.....	Jeffrey avenue.....	224 00
19817	24	Waveland avenue.....	Clark.....	Evanston avenue.....	740 00
19818	14	Chestnut.....	Wallace.....	Halsted.....	448 00
19809	3	Hough place.....	Archer avenue.....	River.....	101 00
19828	13	Hamlin avenue.....	Madison.....	Lake.....	280 40
19829	37	Sixteenth.....	Throop.....	Wood.....	887 00
19830	17	Warren avenue.....	Wood.....	Lincoln.....	544 00
19831	13	Exchange avenue.....	100th.....	102d.....	416 00
19833	13	Coles avenue.....	Seventy-fifth.....	Seventy-seventh.....	884 00
19838	26	Humboldt avenue.....	Western avenue.....	California avenue.....	806 00
19853	33	Graceland avenue.....	East Ravenswood.....	North Clark.....	1,023 00
19853	4	Fifty-sixth.....	Fernwood avenue.....	Livingston avenue.....	180 00
19866	3	Forty-sixth.....	Indiana avenue.....	Prairie avenue.....	101 00
19867	20	Carpenter.....	Fifty-first.....	Fifty-fourth.....	640 00
19013	8	Fifty-ninth.....	Princeton avenue.....	C. R. I. & P. Ry.....	256 00
19914	27	Ashland avenue.....	North Fifty-ninth.....	Lawrence avenue.....	887 00
19915	14	School.....	Robey.....	C. & N. W. Ry.....	448 00

GAS LAMP POSTS—CONTINUED.

No. of War'nt.	No. of Posts.	NAME OF STREET.	FROM	TO	AMOUNT.
19916	8	Sixty-first place	Madison avenue	Washington avenue	\$ 101 00
19921	14	Garfield avenue	Lawrence avenue	Clay	448 00
19922	9	Fifty-first	Paulina	Wood	288 00
19980	10	Sixteenth	Canal	Lumber	289 83
		Total			\$ 103,488 42

BOULEVARD LAMP POSTS.

No. of War'nt.	No. of Posts.	NAME OF STREET.	FROM	TO	AMOUNT.
19445	15	Stony Island avenue	Sixty-first	Sixty-third	\$ 600 00
19446	3	Forty-ninth	Greenwood avenue	Woodlawn avenue	98 00
19456	3	Forty-fourth	Calumet avenue	Grand boulevard	125 00
19485	5	Carlin avenue	Seventy-sixth	Seventy-seventh	165 00
19547	4	Vernon avenue	Forty-third	300 feet south	184 00
19571	6	Wharton avenue	Fifty-third	Fifty-fifth	216 00
19607	14	Fifty-eighth	Wallace	Stewart avenue	263 30
19609	12	Kenwood terrace	Euclid avenue	Wellington avenue	480 00
19617	25	Stony Island avenue	Fifty-sixth	Fifty-ninth	475 80
19619	7	Forty-eighth	Kimbark avenue	Madison avenue	271 00
19830	15	Ogden avenue	Rockwell	Western avenue	600 00
19885	2	Powell avenue	Milwaukee avenue	Powell Park	72 00
19868	4	Seventy-fourth	Bissell avenue	Mattison	184 00
19700	5	Seventy-second	Perry avenue	State	180 00
19715	14	Emerald avenue	Seventy-first	Seventy-third	490 00
19716	6	Mattison	Union avenue	Wallace	310 00
19717	5	Forty-eighth	Grand boulevard	Vincennes avenue	160 00
19719	6	Forrestville avenue	Forty-eighth	Forty-ninth	210 00
19730	6	St. Lawrence avenue	Forty-sixth	Forty-seventh	310 00
19777	49	West Monroe	Fortieth	West Forty-sixth	1,568 00
19785	17	Powell avenue	Milwaukee avenue	Fullerton avenue	680 00
19786	23	Perry	Milwaukee avenue	Fullerton avenue	892 00
19804	6	St. Lawrence avenue	Forty-seventh	Forty-eighth	316 00

19807	13	Evanston avenue.....	Argyle.....	North Fifty-ninth.....	377 00
19819	48	Kedzie avenue.....	North avenue.....	Palmer square.....	1,586 00
19830	7	Sixty-second.....	Stewart avenue.....	Princeton avenue.....	231 00
19837	49	Wilcox avenue.....	Fortieth street.....	Forty-sixth.....	1,568 00
19850	14	Union avenue.....	Seventy-first.....	Seventy-third.....	463 00
19854	11	Seventy-sixth.....	Sangamon.....	Halsted.....	896 00
19855	12	Emerald avenue.....	Sixty-ninth.....	Seventy-first.....	432 00
19856	5	Lexington avenue.....	Fifty-fourth.....	Fifty-fifth.....	180 00
19867	14	Seventy-third.....	Ellington avenue.....	Euclid avenue.....	490 00
19913	15	Stony Island avenue.....	Sixty-third.....	Jackson Park terrace.....	334 00
19923	15	Fiftieth.....	Woodlawn avenue.....	Drexel boulevard.....	535 00
19924	4	Fiftieth.....	Madison avenue.....	Lake avenue.....	143 00
		Total.....			\$ 15,112 10

GASOLINE LAMP POSTS.

No. of War'nt.	No. of Posts.	NAME OF STREET.	FROM	TO	AMOUNT.
19625	28	Dickey.....	Central Park avenue.....	Kedzie avenue.....	\$ 478 00
		Total ..			\$ 478 00

PLANK SIDEWALK.

No. of War'nt.	SIDE OF STREET.	NAME OF STREET.	FROM	TO	AMOUNT.
18949	Both	West Fortieth. . .	Kinzie.....	Chicago avenue.....	\$ 1,149 60
18950	Both	Delaware avenue.....	C., B. & Q. R. R.....	West Twenty-sixth.....	703 60
18951	Both	Twenty-fourth.....	State.....	Armour avenue.....	256 00
18952	Both	Twenty-third.....	Armour avenue.....	Wabash avenue.....	181 20
18953	East.	Spaulding avenue.....	Madison.....	Harrison.....	695 96
18954	West	Murray.....	Ninety-ninth.....	100th.....	353 00
18955	Both	Harding avenue.....	Kinzie.....	Chicago avenue.....	580 80
18956	East.	Winchester avenue.....	Polk.....	Harrison.....	213 80

PLANK SIDEWALK—CONTINUED.

No. of Warrant.	SIDE OF STREET	NAME OF STREET.	FROM	TO	AMOUNT.
18957	Both	Sacramento avenue.	West Kinzie	West Ohio	\$ 140 40
18958	West.	Fairmount avenue	West Forty-sixth	Ogden avenue	180 80
18959	South	Van Buren	Morgan	Sangamon	100 80
18960	East.	E. Ravenswood Park	Webster avenue	Balmoral avenue	495 20
18961	Both	Wright	Webster avenue	Balmoral avenue	671 60
18962	Both	Walnut	E. Ravenswood Park	North Clark	897 20
18963	South	Balmoral avenue	E. Ravenswood Park	North Clark	294 00
18964	North	Thirly-fourth	Ashland avenue	North Clark	145 20
18965	Both	Basil avenue	North avenue	Paulina	280 80
18966	Both	Webster avenue.	Seventy-fourth	Bloomingtondale road	180 00
18967	Both	Fiftieth	Hart avenue	Seventy-fifth	882 80
18968	North	Centre avenue	Park avenue	Blanchard avenue	67 20
18969	South	Grand avenue.	C. M. & St. P. Ry.	Kedzie avenue	117 60
18970	North	Murray	101st	Armitage avenue	180 40
19023	West	Hunting avenue.	Everett	103d	90 80
19024	West	Williams	Homan avenue	C. & N. W. Ry.	875 20
19025	Both	Superior avenue.	Eighty-seventh	Hamlin avenue	1,245 60
19035	Both	S. W. corner Jackson avenue	and Fifty-fifth	Ninety-second	818 60
19036	Both	Western avenue.	Thirty-ninth		59 00
19063	West	Washington avenue	Lincoln	Forty-third	806 40
19064	Both	Western avenue	Chicago avenue	Robey	492 80
19065	Both	Armour avenue	Forty-seventh.	North avenue	669 20
19066	Both	Eighty-sixth	Buffalo avenue.	Garfield boulevard	747 20
19067	North	Duncan avenue	Seventy-seventh.	Green Bay avenue.	148 80
19068	West	Ashland avenue	Forty-seventh.	Paulina	77 60
19069	Both	Edgar	North avenue	Sixty-third	5,576 81
19106	Both	Seventieth	Vincennes avenue	Clybourn place	814 80
19167	Both	Indiana	Paulina	State	190 00
19171	Both	Francisco	Madison	Western avenue	950 00
19172	Both	Winchester avenue	Forty-ninth.	Kinzie	600 00
19173	East.	Sixty-seventh	Leavitt	Fifty-first	280 00
19174	North	Sixty-sixth.	Leavitt	Western avenue.	880 00
19175	Both	Sixty-fourth	Leavitt	Western avenue.	460 00
19176	Both	Fiftieth	Blanchard avenue	Western avenue.	540 00
19177	Both	Hickory	Main	Western avenue.	360 00
19178	Both			Cologne	200 00

19179	Both	Sixty-fifth	Western avenue.	Leavitt.	680 00
19180	Both	Curtis avenue	106th	110th	800 00
19181	West	Blanchard	Smith	C. & A. R. R.	180 00
19182	Both	Dreyer avenue	Fifty-third	Fifty-fifth	400 00
19183	South	Forty-seventh	Halsted	Paulina	980 00
19184	West	McCauley avenue	Wabansia avenue.	North avenue	60 00
19185	Both	Main	Archer avenue	River	480 00
19186	North	Thirty-ninth	Halsted	Stewart avenue	780 00
19187	Both	Thirty-fourth	Halsted	Laurel	170 00
19188	Both	Fifty-eighth court	Eberhart	Central Park avenue.	210 00
19189	Both	St. John's place.	Lake	Arbor place.	200 00
19190	South	Seventeenth	Canal	Alley east of Canal	80 00
19203	North	Ninety-ninth	Bell avenue	C. R. I. & P. Ry.	810 00
19204	Both	Sixty-sixth	Woodlawn avenue	Lexington avenue	485 00
19205	East	Lexington avenue	Sixty-sixth	Sixty-seventh	280 00
19206	Both	Paulina	Forty-ninth	Fiftieth	390 00
19207	Both	Hastings	Lincoln	Robey	373 00
19208	East	Western avenue.	Sixty-third	Sixty-seventh	960 00
19209	Both	Vail	Sixty-third	Sixty-seventh	1,240 00
19210	Both	Davis	Sixty-third	Sixty-seventh	1,780 00
19211	Both	Mather	Halsted	Desplaines	160 00
19213	Both	Oakley avenue	Sixty-third	Sixty-seventh	1,060 00
19216	West	Columbia avenue.	Armitage avenue	Humboldt avenue	400 00
19214	Both	Thirty-sixth	Halsted	Laurel	185 00
19216	Both	Indiana avenue	Sixty-second	Sixty-third	286 00
19217	West	State	Fifty-sixth	Fifty-eighth	668 00
19218	South	Courtland	Tripp avenue	Keeney avenue	120 00
19219	Both	Benzo	Elston avenue.	Lester avenue.	186 00
19220	Both	Roscoe	Sheffield avenue	Perry	1,040 00
19231	South	Fifty-fourth place	Lake avenue.	Jefferson avenue	85 00
19229	West	Indiana avenue	Sixty-ninth	Seventy-first	120 00
19228	East	Calumet avenue.	P., Ft. W. & C. Ry.	Sixty-eighth	240 00
19230	Both	Western avenue.	Madison	Harrison	1,470 00
19230	North	106th	College	Highland avenue.	185 00
19231	West	Fortieth	Sixteenth	Eighteenth	100 00
19232	Both	Polk	California avenue	Sacramento avenue.	210 00
19244	Both	Eighty-ninth	The Strand	B. & O. R. R.	698 00
19245	Both	Western avenue.	Roscoe	Addison	284 80
19246	East	Oak	Ninety-fifth.	Ninety-ninth	774 40
19256	Both	Twenty-sixth	Sacramento avenue.	Western avenue	400 00
19239	Both	Clifton avenue.	Diversey avenue	Humboldt boulevard	659 50
19333	Both	Division.	Ashland avenue	California avenue	5,814 40

PLANK SIDEWALK—CONTINUED.

No. of Warrant.	SIDE OF STREET.	NAME OF STREET.	FROM	TO	AMOUNT.
19869	Both	Thirty-second.	Robey	Wood	\$ 364 00
19871	Both	Logan	Hickory	C. & A. R. R.	78 40
19872	West	Wood	Sixty-third.	Sixty-seventh	94 40
19894	North	West Circle avenue.	(in Norwood Park)		94 57
19395	West	Alton avenue	Locust	Blair	266 17
19396	South	Elm	Block 19	Norwood Park	68 00
19397	North	State	Western avenue.	West line lot 16, blk. 1, Burham's add	87 20
19506	Both	West Randolph	West Fortieth.	West Fifty-second.	980 54
19509	Both	West Lake.	West Fortieth	West Fifty-second.	156 90
19510	Both	West Fifty-first	Madison	Kinzie	648 00
19511	Both	West Fifty-ninth	Madison	Kinzie	604 53
19512	Both	West Forty-ninth	Madison	Kinzie	1,190 62
19523	Both	Fifty-first.	Ashland avenue.	Wallace.	1,799 24
19563	Both	Ewing avenue	100th	106th	639 80
19564	Both	Ridgeway avenue	Chicago avenue	Augusta	945 60
19565	Both	Fifty-third.	Halsted	Wallace.	887 96
19566	North.	Grand avenue	Chicago avenue.	Crawford avenue.	2,088 83
19581	South.	Railroad avenue.	Kedzie avenue	Crawford avenue.	108 80
19594	Both	Prairie avenue	Fifty-ninth	Sixty-first	927 60
19599	Both	Indiana avenue	Sixty-seventh	Sixty-ninth	527 94
19601	Both	Sixty-fifth court	Wright	Honore	400 00
19602	Both	Halsted	Wrightwood avenue	Evansston avenue.	2,849 60
19603	Both	West Fourteenth	Leavitt	Lincoln	1,899 20
19722	South	Jackson	Forty-sixth	Forty-eighth.	298 20
19723	Both	Park avenue	Montrose boulevard	Elston avenue	572 10
19724	Both	Forty-third	Jackson	Gladys avenue.	75 00
19725	South	Prescott	St. Charles	C. & N.-W. Ry.	105 92
19726	North	Thirty-ninth	Archer avenue.	Front avenue	180 40
19727	East.	Clinton	Ninety-first.	Ninety-second	192 00
19744	South.	Elm	Fox	Chestnut	160 00
19745	North	Peck court	West Circle avenue	Western avenue.	100 80
19746	North	East Vine	Evergreen avenue	Circle avenue	155 16
19747	East.	East Vine	Myrtle avenue	Circle avenue	82 60
19748	South.	Wells avenue	Norwood avenue.	Milton avenue	124 25
19749	East.	Park place.	Diversey	Woodward	187 80
19750	Both	Grace.	Ashland avenue	Clark	890 20

19751	Both	Southport avenue	Graceland avenue	Otto	883 56
19752	Both	Bonney avenue	Twenty-sixth	Twenty-ninth	1,831 20
19753	East	State	Thirty-ninth	Fifty-fifth	2,166 00
19759	Both	Rice	Rockwell	Washenaw avenue	839 10
19760	Both	Cologne	Main	Fuller	1,701 00
19764	Both	Ashland avenue	Forty-seventh	Sixty-third	590 00
19831	Both	Blanchard avenue	Thirty-fifth	Thirty-ninth	890 24
19832	North	Twelfth	Albany avenue	Hull avenue	879 20
19835	South	120th	Emerald avenue	South Canal	488 20
19836	South	West Twelfth	Douglas Park boulevard	West Fortieth	538 00
19845	North	Seventy-ninth	Bond avenue	Chellenham Beach	802 75
19846	East	Paulina	Madison	Indiana	145 20
19847	Both	Belle Plaine avenue	Ashland avenue	East Ravenswood Park	577 50
19848	Both	Lincoln avenue	Berteau avenue	Montrose boulevard	944 80
19849	West	Elston avenue	Bradley	Sloan	110 40
19851	Both	Winchester avenue	Sixty-third	Sixty-seventh	887 60
19857	Both	Edison avenue	Lincoln avenue	Diversey avenue	173 60
19863	Both	Oakley avenue	Austin avenue	Chicago avenue	666 90
19864	Both	Lawndale avenue	Chicago avenue	Augusta	684 60
19865	East	Clark	Newport avenue	Graceland avenue	873 40
19866	Both	Nebraska	Bloomingtondale road	Armitage avenue	309 60
19874	Both	Ninety-second	Ewing avenue	B. P. & C. R. R.	558 00
19875	Both	Seventy-eighth	Greenwood avenue	Cottage Grove avenue	682 20
19876	North	Sixty-eighth	Alley W. of Evans avenue	Cottage Grove avenue	91 20
19877	Both	Hoyle avenue	Sixty-third	Sixty-seventh	308 10
19878	Both	Werder	Rockwell	California avenue	889 70
19879	Both	Webster avenue	West Ravenswood	Western avenue	1,885 70
19880	East	Western avenue	Lawrence avenue	Webster avenue	190 50
19881	South	Ontario	Fifty-second	Lydiard	86 10
19882	West	Elston avenue	Sloan	North avenue	266 35
19883	Both	Bloomingtondale road	Lincoln	C. & N. W. Ry.	417 60
19884	North	Lake	Sacramento avenue	Francisco	215 20
19910	West	Elizabeth	Seventy-ninth	Eightieth	317 00
19911	Both	Exchange place	South Chicago avenue	Anthony avenue	188 40
19918	North	Humboldt avenue	Columbia avenue	C. & N. W. Ry.	461 73
19919	Both	Thirty-eighth	Hart	Kedzie avenue	571 20
19920	Both	Congress	Forty-sixth	Forty-eighth	620 00
19932	Both	Low avenue	Twenty-sixth	Thirty-ninth	197 00
19933	Both	Thomas avenue	Humboldt boulevard	Milwaukee avenue	162 90
19934	East	Kimball	Fullerton avenue	Humboldt	185 00
19935	West	Ward	Thirty-fifth	Thirty-sixth	57 80
19936	Both	Sixty-third	Halsted	Centre avenue	688 80

PLANK SIDEWALK—CONTINUED.

No. of War'nt.	SIDE OF STREET.	NAME OF STREET.	FROM	TO	AMOUNT.
19987	Both	Western avenue.....	Harrison	Twelfth.....	\$ 440 30
19986	Both	Lexington avenue.....	California avenue.....	Kedzie avenue.....	495 36
	Total				\$ 90,147 97

CEMENT SIDEWALK.

No. of War'nt.	SIDE OF STREET.	NAME OF STREET.	FROM	TO	AMOUNT.
18947	West	Albany avenue	West Twelfth.....	Douglas Park boulevard.....	\$ 1,558 50
18948	South	Thirty-seventh	Grand boulevard	Vincennes avenue	195 00
19011	Both	Dearborn	Fifty-third	Fifty-fifth	8,191 40
19029	Both	St. Lawrence avenue	Forty-first	Forty-second	490 80
19080	East	Ashland avenue	Fulton	West Lake	487 70
19081	Both	Adams	Western avenue	Rockwell	1,885 90
19082	Both	DeKalb	Polk	Leavitt	587 90
19083	Both	Montrose boulevard	Alexander avenue	Halsted	1,891 50
19084	Both	Congress	Loomis	Ashland avenue	200 80
19169	East	Kimberk avenue	100 ft. S. of Fifty-fifth	Fifty-seventh	1,700 00
19170	South	Sixtieth	Cottage Grove avenue	Lexington avenue	1,000 00
19247	Both	Sixty-sixth	Illinois Central R. R.	Woodlawn avenue	924 00
19248	Both	Sawyer avenue	Ogden avenue	Sixteenth	1,118 00
19249	Both	Buckingham place	Halsted	Evanston avenue	412 30
19325	System	Portland avenue	Fifth avenue	Emerald avenue, etc.	54,108 85
19561	Both	Rheta	Addison avenue	Cornelia	1,637 50
19566	Both	Wabash avenue	Twelfth	Twenty-second	7,980 00
19754	Both	Thirty-fifth	South Park avenue	Cottage Grove avenue	585 20
19755	Both	Stone	Scott	Banks	1,815 20
19760	North	Adams	Throop	Paulina	473 50
19766	Both	Princeton avenue	Fifty-fifth	Sixty third	1,610 50
19775	West	Halsted	Marquette terrace	Buena avenue	816 80
19823	Both	Twenty-fourth	State	South Park avenue	2,018 20
19824	South	Adams	Throop	Paulina	896 20

19873	Both	Cedar	Wentworth avenue	Stewart avenue	249 20
19878	Both	Stewart avenue	South Normal parkway	Seventy-first	2,407 50
19891	Both	South Park avenue	Thirty-third	Thirty-fifth	410 80
19892	Both	Wabash avenue	Fortieth	Forty-first	145 60
19898	Both	Champaign avenue	Forty-third	Forty-fourth	429 00
19894	North	Thirty-ninth	Ellis avenue	Lake avenue	147 00
19895	Both	Vincennes avenue	Sixtieth	Sixty-first	711 10
19899	Both	Thirty-fourth	Rhodes avenue	South Park avenue	115 20
19930	Both	Sixty-eighth	Wallace	Halsted	2,607 80
19931	Both	Fifty-fifth	Cornell avenue	Ill. Cent. R. R.	618 20
19933	Both	Forty second	State	Michigan avenue	1,207 50
19934	Both	Madison avenue	Sixtieth	Sixty-third	2,736 50
Total					\$ 97,087 65

STONE SIDEWALKS.

No. of War'nt.	SIDE OF STREET.	NAME OF STREET.	FROM	TO	AMOUNT.
19028	Both	Wabash avenue	Thirty-fifth	Thirty-ninth	\$ 5,888 50
19431	Both	Washington	Canal	Clinton	1,625 00
19515	Both	Randolph	Chicago river	Halsted	95,821 00
19598	Both	Curtis	Madison	Lake	8,225 80
19753	South	Germania place	Clark	La Salle avenue	428 00
Total					\$ 46,473 10

OPENING AND STRAIGHTENING.

No. of War'nt.	IMPROVEMENT.	NAME OF STREET.	FROM	TO	AMOUNT.
19013	Opening	Alley	Thirty-fifth to Thirty-seventh	Calumet and South Park aves.	\$ 8,609 50
19184	Opening	Humboldt avenue	Kimball	Ballou	2,631 04
19140	Opening	Seventy-fourth	Wright	Wallace	3,063 55
19142	Opening	Ninety-fifth	Across the C. & W. I. R. R., P.	F. W. & C. and L. S. & M. S.	1,438 50
19151	Opening	West Forty-seventh	Jackson	Harrison	9,244 00

OPENING AND STRAIGHTENING—CONTINUED.

No. of Warr't.	IMPROVEMENT.	NAME OF STREET.	FROM	TO	AMOUNT.
19328	Opening	Seventy-sixth	Yates avenue	French avenue	\$ 8,938 58
19387	Opening	Armour avenue	Fifty-eighth	Fifty-ninth	14,771 55
19428	Opening	Wellington	Wood	Hoyle avenue	18,865 06
19429	Opening	Alley	Forty-fifth to Forty-fifth court.	Dearborn and Armour avenue	8,810 00
19434	Opening	Eighty-first	Wentworth avenue	State	4,507 14
19485	Opening	Alley	Block 4, Second Plat of Wood	lawn	5,015 00
19497	Straightening	St. Lawrence avenue	Forty-second	Forty-eighth	884 00
19498	Opening	Bissell avenue	Seventy-second	Seventy-third	4,285 00
19499	Opening	Kedzie avenue	Montrose boulevard	North Fifty-ninth	8,870 00
19500	Opening	Webster avenue	North Clark	Southport avenue	8,012 00
19501	Opening	North Fiftyth	West Forty-eighth	West Fifty-second	5,492 50
19576	Opening	Hoyle avenue	Thirty-seventh	Thirty-ninth	8,848 00
19593	Opening	Touhy avenue	Between Sections 25 and 36, T.	41 N., R. 13 E.	7,275 76
19783	Opening	Yates avenue	Seventy-fifth	Seventy-ninth	14,694 95
19788	Opening	Alley	Oakwood boulevard to Fortieth	Langley and Cottage Grove aves	5,176 50
19852	Opening	Union avenue	120th	122d	1,430 00
19857	Opening	Robey	Belmont avenue	Clybourn avenue	18,742 00
	Total				\$ 147,313 68

SEWERS.

No. of Warr't.	IMPROVEMENT.	NAME OF STREET.	FROM	TO	AMOUNT.
19045	V. T. P.	Thirty-third	Robey	C. & A. R. R.	\$ 1,267 00
19023	V. T. P.	Adams avenue	Seventy-third	Seventy-fifth	8,212 80
19041	V. T. P.	Morgan	Seventy-first	Seventy-third	2,804 19
19043	B. and V. T. P.	Crawford avenue	Diversey	665 ft. North Carroll avenue	8,889 88
19048	V. T. P.	System	West Fourteenth, etc.		1,498 40
19044	V. T. P.	Poplar avenue	Archer avenue	Twenty-ninth	2,681 60
19046	V. T. P.	Superior	Ninety-second	Ninety-third	2,087 76
19047	V. T. P.	Crawford avenue	North avenue	Armitage avenue	5,847 27
19046		System	Hamlin avenue, etc		10,684 93

19049	V. T. P.	Cromwell.....	Fullerton avenue.....	Milwaukee avenue.....	2,415 00
19051	V. T. P.	Sixty-fifth court.....	Honore.....	100 ft. W. of Wright.....	749 89
19054	V. T. P.	Sewer Pumping Works, Drain.....	age Dist., Sixty-third.....	Bishop.....	8,004 99
19055	V. T. P.	Seventy-third.....	Morgan.....	Sixty-fifth.....	49 50
19058	V. T. P.	Robey, etc.....	South Branch River.....	.....	1,644 96
19078	V. T. P.	System.....	Farwell avenue, etc.....	.....	18,672 40
19092	V. T. P.	System.....	Augusta, etc.....	.....	9,063 80
19138	V. T. P.	System.....	183d, etc.....	.....	27,814 40
19148	V. T. P.	System.....	Southport avenue, etc.....	.....	2,869 13
19158	V. T. P.	Alley.....	Campbell to Artesian avenues.....	Fulton and Lake.....	885 62
19164	V. T. P.	System.....	119th, etc.....	.....	28,319 50
19191	V. T. P.	Paulina.....	Belmont avenue.....	Fletcher avenue, etc.....	2,694 22
19192	V. T. P.	Centre avenue.....	Sixty-third.....	Seventieth.....	8,157 52
19225	V. T. P.	West Twenty-first.....	Jefferson.....	Alley E. of Union, etc.....	1,065 38
19226	V. T. P.	Sangamon.....	Seventy-first.....	Seventy-fourth.....	3,400 46
19237	V. T. P.	Alley S. of Fulton.....	Campbell avenue.....	Alley W. of Campbell avenue.....	341 62
19238	V. T. P.	Peoria.....	Sixty-sixth.....	Sixty-seventh.....	1,188 98
19240	V. T. P.	Thirty-seventh court.....	Stewart avenue.....	Shields avenue.....	351 64
19269	V. T. P.	Forty eighth.....	Vincennes avenue.....	Alley E. of Grand bld.....	1,041 50
19270	V. T. P.	Wilton avenue.....	Grace avenue.....	Byron.....	708 80
19289	V. T. P.	Alley.....	West of Grand boulevard.....	Forty-third to Forty-fourth.....	931 27
19290	V. T. P.	Escanaba avenue.....	Eighty-ninth.....	Ninety-first.....	2,166 50
19322	V. T. P.	Thirty-second.....	Auburn.....	Illinois avenue.....	576 44
19339	V. T. P.	Foster.....	Lincoln avenue.....	542 ft. west.....	1,422 17
19340	V. T. P.	Dayton.....	Blackhawk.....	Eastman.....	882 76
19341	V. T. P.	Carroll avenue.....	St. Louis avenue.....	455 ft. west.....	700 80
19342	V. T. P.	School.....	Robey.....	Alley E. of Hoyne avenue.....	774 62
19343	V. T. P.	School.....	Leavitt.....	Alley W. of Hoyne avenue.....	819 24
19346	V. T. P.	Thirty-eighth.....	Ashland avenue.....	Paulina.....	807 30
19347	V. T. P.	Elston avenue.....	Ashland avenue.....	Wood.....	2,726 08
19350	V. T. P.	West Huron.....	Lawndale avenue.....	Crawford avenue.....	3,677 10
19370	V. T. P.	West Fifteenth.....	Robey.....	Lincoln.....	1,812 97
19374	V. T. P.	Forty-seventh.....	Paulina.....	Wood, etc.....	2,467 87
19375	V. T. P.	Rhine.....	Milwaukee avenue.....	Myrtle avenue.....	1,120 97
19376	V. T. P.	West Twentieth.....	Rockwell.....	546 ft. east.....	980 09
19377	V. T. P.	Bonaparte.....	Lake.....	Arch, etc.....	596 24
19378	V. T. P.	May.....	Sixty-seventh.....	Sixty-ninth.....	2,024 57
19380	B. and V. T. P.	Graceland ave—Irrving Park bld.....	Chicago River.....	Leavitt.....	7,885 98
19385	V. T. P.	Sacramento avenue.....	863 ft. N. of W. Twenty-fifth.....	Twenty-sixth.....	1,519 50
19386	B. and V. T. P.	Twenty-fifth court.....	California avenue.....	559 W. of Francisco.....	2,365 25
19391	V. T. P.	System.....	Hamlin, etc.....	.....	725 00
19441	V. T. P.	Wolcott.....	Melrose.....	School.....	578 71

SEWERS—CONTINUED.

No. of Warr't.	IMPROVEMENT.	NAME OF STREET.	FROM	TO	AMOUNT.
19463	V. T. P.	Trumbull avenue.	West Ohio.	Alley North Central Park bld.	\$ 573 63
19464	V. T. P.	Troy	West Ohio.	Alley North Central Park bld.	553 80
19465	V. T. P.	Troy	Central Park boulevard	West Kinzie.	715 88
19488	V. T. P.	Flournoy	Albany avenue	Central Park avenue.	6,296 71
19489	V. T. P.	Ford	Wallace	376 ft. E. of Wright.	1,676 82
19492	V. T. P.	LaSalle	Sixty-first	450 ft. S. of Sixty-second.	1,579 00
19498	V. T. P.	Alley W. of Grand boulevard.	Forty-fifth	Forty-sixth	1,050 88
19502	V. T. P.	Grand avenue.	Augusta.	Division	8,905 17
19514	V. T. P.	System	North avenue, etc		1,563 10
19574	Brick	103d.	Charles	Hyland avenue.	26,092 45
19575	V. T. P.	System	Ogden avenue, etc		2,689 80
19578	V. T. P.	West Twentieth.	Western avenue.	516 ft. west.	801 67
19583	V. T. P.	West Eighteenth.	Western avenue.	Railroad avenue	983 07
19588	B. and V. T. P.	State	Sixty-eighth.	Seventy-Fifth	13,577 23
19589	V. T. P.	Cregier avenue.	Seventieth.	Northern terminus.	1,405 65
19600	V. T. P.	Columbia avenue.	North avenue.	Armitage avenue.	5,111 44
19721	V. T. P.	Ninety third	Houston avenue.	Ontario avenue.	1,421 10
19761	V. T. P.	Avers avenue	West Division.	North avenue.	4,570 85
19762	V. T. P.	Hamlin avenue.	West Division.	North avenue.	4,942 88
19763	V. T. P.	Aberdeen	Sixty-seventh	Sixty-ninth	2,165 16
19768	V. T. P.	System	Robey, etc		1,276 63
19148	V. T. P.	Alley	N. of Fairfield boulevard.	Lafin to Loomis	684 00
19158	V. T. P.	Concord	Union avenue.	Alley E. of Morgan.	3,122 68
19159	V. T. P.	Aberdeen.	Sixty-fifth	Sixty-seventh.	2,029 10
19160	V. T. P.	Morgan	Sixty-fifth	Sixty-seventh.	2,335 60
19161	V. T. P.	Kinney avenue.	Seventy-first.	Northern terminus.	2,866 43
19163	V. T. P.	Bronson.	Centre avenue.	Lafin	3,265 00
19164	V. T. P.	Nelson	Western avenue.	Alley W. of Oakley avenue.	682 45
19166	V. T. P.	Escanaba avenue	Eighty-seventh	Eighty-ninth	2,610 50
19504	V. T. P.	System	Wentworth avenue, etc		23,459 50
19778	V. T. P.	Forty-sixth	Wentworth avenue.	Stewart avenue.	2,678 66
19779	V. T. P.	System	North Shore avenue.		15,709 80
19835	V. T. P.	Elias	Archer avenue.	Lyman	1,815 64
19836	V. T. P.	Leavitt.	Thirty-third	Bross avenue	1,199 08
19837	V. T. P.	Sacramento avenue.	West Twenty-second.	West Twenty-Third.	1,255 59
19838	V. T. P.	Trumbull avenue.	West Twenty-sixth.	West Twenty-seventh.	987 42

19839	V. T. P.	Wall	308 ft. S. of Springer.....	127 ft. N. of Thirty-fourth ct..	1,814 89
19840	V. T. P.	Seventh avenue.....	Ninety-seventh.....	100th	4,711 00
19841	V. T. P.	Green.....	Sixty-sixth	Sixty-seventh.....	1,204 87
19842	V. T. P.	Springfield avenue.....	West Division	North avenue	4,692 48
19843	V. T. P.	West Thirty-first.....	Kedzie avenue	Spaulding avenue.....	1,096 37
19844	V. T. P.	Thirty-eighth court.....	Halsted	Laurel	2,163 00
19869	V. T. P.	Holstein Park.....	Hamburg.....	Ems	618 31
19870	V. T. P.	Thirty-third	Paulina	E. 379 ft.	600 23
19871	V. T. P.	Cornelia	Halsted	Sheffield avenue.....	2,250 38
19896	V. T. P.	Holstein Park.....	Hamburg	Ems	616 45
19897	V. T. P.	Sixty-seventh.....	Madison avenue.....	Alley W. of Stony Island ave.	4,170 18
19898	V. T. P.	Park avenue	Kedzie avenue	202 ft. east	413 29
19899	V. T. P.	Washington	Albany avenue.....	399 ft. west	637 95
19900	V. T. P.	Harding avenue.....	North avenue.....	Grand avenue.....	2,881 37
19901	V. T. P.	Wood	Grand Trunk Ry.....	Fifty-second	2,860 37
19902	V. T. P.	Winchester avenue	Fifty-first	Grand T. Junction Ry.....	2,105 13
19903	V. T. P.	Goodspeed	Fifty-first.....	Grand T. Junction Ry.....	2,105 13
19904	V. T. P.	Lincoln	Fifty-first.....	Grand T. Junction Ry.....	2,105 13
19905	V. T. P.	Alley	Michigan and Indiana aves.	Thirty-ninth to Fortieth.....	685 90
19906	V. T. P.	Richardson avenue	Sixty-fourth	446 ft. south.....	697 76
19907	V. T. P.	Green	Seventy-second	Seventy-third	1,310 89
19908	V. T. P.	Robey	Webster avenue.....	Lawrence avenue.....	3,226 10
19909	V. T. P.	Graylock avenue.....	Princeton avenue.....	Shields avenue.....	3,028 20
19946	V. T. P.	Buena avenue.....	Halsted	400 ft. east.....	746 12
19949	V. T. P.	Receiving Well and Pumping	Works	Seventy-third	43,896 60
Total.....					\$ 415,814 12

WATER SERVICE.

No. of War'nt.	NAME OF STREET.	FROM	TO	AMOUNT.
19003	Forty-eighth	Halsted	Ashland avenue	\$ 1,895 00
19004	Ellis avenue	Forty-third	Forty-sixth	1,219 00
19005	Dreyer	Forty-seventh	Fifty-first	990 00
19006	Faye	Lincoln avenue	C. & N.-W. Ry	1,035 00
19008	Thirty-sixth	Western avenue	Kedzie avenue	8,776 50
19009	Sixty-seventh	South Park avenue	Stony Island avenue	4,440 50
19013	Douglas boulevard	Colorado avenue	Albany avenue	11,571 00
19014	Cook	Fifty-fifth	Sixty-third	5,540 25
19015	Seventieth	Wentworth avenue	Halsted	661 00
19016	May	Fifty-fifth	Fifty-ninth	2,865 50
19027	Swan (Forty sixth court)	Stewart avenue	C. R. I. & P. Ry	1,082 00
19038	Ingleside avenue	Fifty-first	Fifty-fifth	3,736 50
19040	Thirty-ninth	Ashland avenue	Boulevard	5,913 75
19061	Lexington	Francisco	Kedzie avenue	1,485 00
19082	Jackson	West Fortieth	West Forty sixth	5,654 00
19069	Forty-third	Ashland avenue	Goodspeed	1,182 50
19070	West Huron	Leavitt	Western avenue	131 41
19089	Forty-first	Grand boulevard	St. Lawrence avenue	144 00
19096	Van Buren	Kedzie avenue	Central Park avenue	2,310 00
19097	Hoyne avenue	Roscoe	Cornelia	805 50
19107	Elk Grove avenue	Armitage avenue	Webster avenue	585 00
19108	Better	May	Sholto	203 50
19109	Laurel avenue	Fullerton avenue	Diversey	743 50
19110	Thomas	Wood	Hoyne avenue	472 50
19111	Peoria	Fifty-ninth	Sixty-third	1,710 00
19112	Fifty-eighth	Wentworth avenue	Stewart avenue	405 00
19113	Ems	Leavitt	Western avenue	517 50
19114	Mattison	Wallace	U. S. Y. R. R.	360 00
19135	Sheridan	Bloomingtondale road	Armitage avenue	1,665 00
19136	Indiana	St. Clair	Eastern terminus	2,967 00
19137	School	Lincoln avenue	Clark	450 00
19188	Troy	West Twenty-second	West Twenty-sixth	1,845 00
19189	Leavitt	Archer avenue	Bross	1,102 50
19156	Fiftieth	Cottage Grove avenue	St. Lawrence avenue	753 50
19193	Forty-seventh	Halsted	State	815 00
19194	Forty-first	Halsted	Stewart avenue	437 50

19185	Duncan Park.....	Wallace.....	Stewart avenue.....	402 50
19239	Vincennes avenue.....	Clement avenue.....	Seventy-third.....	2,788 00
19241	Augusta.....	Robey.....	California avenue.....	5,610 00
19260	Sixty-third.....	Stony Island avenue.....	Cottage Grove avenue.....	1,709 40
19271	Francisco	West Division.....	West Chicago avenue.....	1,880 00
19272	Linden avenue.....	Humboldt boulevard.....	Diversey.....	752 50
19273	Justine.....	Forty-ninth.....	Fifty-third.....	507 50
19274	Tracey.....	Forty-third.....	Forty-fifth.....	840 00
19275	Flournoy.....	Crawford avenue.....	Douglas boulevard.....	1,365 00
19278	Polk.....	Thirty-fifth.....	Thirty-sixth.....	785 00
19279	.....	Crawford avenue.....	Douglas boulevard.....	1,540 00
19280	Brost avenue.....	Southport avenue.....	Evanson avenue.....	1,243 50
19281	Atlantic.....	Thirty-ninth.....	Root.....	822 50
19282	West Twenty-first.....	P. H. R. R.....	Boulevard.....	1,617 00
19282	Adams.....	West Fortieth.....	West Forty-sixth.....	4,624 00
19288	Lincoln avenue.....	Montrose boulevard.....	St. Joe.....	6,494 00
19295	Thirty-second.....	Laurel.....	Halsted.....	607 50
19331	Millard avenue.....	West Twelfth.....	Douglas Park boulevard.....	980 00
19352	Herndon.....	Belmont avenue.....	Roscoe.....	507 50
19353	Fifty eighth.....	Stewart avenue.....	Halsted.....	945 00
19354	Washington avenue.....	Everett avenue.....	Center.....	2,907 00
19355	Thirty-fifth.....	Oakley avenue.....	Boulevard.....	245 00
19356	School.....	Thirty-ninth.....	Root.....	892 50
19357	Park avenue.....	Everett avenue.....	Centre.....	2,880 00
19358	Vincennes avenue.....	Sixty-third.....	South Chicago avenue.....	3,315 00
19359	Wabash avenue.....	Sixty-seventh.....	Seventy-third.....	5,783 00
19390	School.....	Evanson avenue.....	Halsted.....	1,056 00
19398	Irving avenue.....	Everett.....	Centre.....	2,327 00
19411	St. Charles avenue.....	Everett.....	Centre.....	2,261 00
19412	Langley avenue.....	Sixty-third.....	Sixty-ninth.....	3,502 00
19433	State.....	Sixty-eighth.....	Seventy-first.....	3,880 00
19438	Champlain avenue.....	Archer avenue.....	Thirty-seventh.....	311 85
19505	West North avenue.....	Kedzie avenue.....	Tinkham avenue.....	1,748 00
19513	Centre avenue.....	Fifty-seventh.....	Sixty-third.....	1,882 50
19550	Humboldt avenue.....	Western avenue.....	California avenue.....	385 00
19551	Fifty-first.....	Wood.....	Lincoln.....	525 00
19552	Logan.....	Wallace.....	U. S. V. R. R.....	875 00
19553	Rascher avenue.....	East Ravenswood Park.....	Ashland avenue.....	770 00
19564	Balmoral avenue.....	East Ravenswood Park.....	Ashland avenue.....	770 00
19555	Wright.....	North Fifty-ninth.....	Claremont avenue.....	1,242 50
19558	Forty-ninth.....	Wallace.....	Halsted.....	350 00
19557	Eighty-ninth.....	South Chicago avenue.....	South Chicago Branch I. C. R. R.....	312 00

WATER SERVICE—CONTINUED.

No. of W'r't.	NAME OF STREET.	FROM	TO	AMOUNT.
19558	Sheldon avenue.....	Irving Park boulevard.....	Everett.....	\$ 682 50
19559	Forty-eighth.....	Wallace.....	U. S. Y. R. R.....	577 50
19579	Trumbull avenue.....	Douglas Park boulevard.....	Twenty-sixth.....	6,084 00
19582	St. Lawrence avenue.....	Sixty-third.....	Seventy-third.....	6,688 00
19596	Champaign avenue.....	Sixtieth.....	Sixty-first.....	525 00
19604	Sherman.....	Root.....	Forty-third.....	675 00
19611	Gladys avenue.....	West Fortieth.....	West Forty-sixth.....	8,366 00
19729	Bryn Mawr avenue.....	Clark.....	Evanston avenue.....	1,680 00
19780	Wilton.....	Grace.....	Byron.....	455 00
19781	Victor.....	Evanston avenue.....	Swift.....	507 50
19782	Swift.....	Francis.....	Ridge road.....	455 00
19788	Wilson.....	Leavitt.....	Robey.....	351 50
19784	Centre.....	Clark.....	Southport avenue.....	910 00
19785	Webster avenue.....	Clark.....	Robey.....	770 00
19786	Union avenue.....	Fifty-ninth.....	Sixty-first.....	700 00
19787	Homan avenue.....	Twenty-second.....	Twenty-third.....	525 00
19767	South Park avenue.....	Sixtieth.....	Seventy-first.....	2,992 00
19773	Everett.....	Everett.....	Centre.....	2,848 00
19774	Diversey avenue.....	Milwaukee avenue.....	Kedzie avenue.....	1,291 00
19885	Peoria.....	Sixty-seventh.....	Sixty-ninth.....	700 00
19888	Ellis avenue.....	Seventy-first.....	South Chicago avenue.....	892 50
19889	Commercial.....	Paulina.....	Terra Cotta place.....	262 50
19890	Montrose boulevard.....	Robey.....	Lincoln.....	402 50
19925	Sangamon.....	Sixty-seventh.....	Sixty-ninth.....	490 00
19926	Seventy-second.....	Stony Island avenue.....	Illinois Central R. R.....	1,505 00
19927	Seventy-first.....	Stony Island avenue.....	Illinois Central R. R.....	1,295 00
19951	Robey.....	Roscoe.....	Montrose boulevard.....	5,605 00
19956	Seventy-second.....	Stony Island avenue.....	Illinois Central R. R.....	1,540 00
	Total.....			\$ 189,927 66

DRAINS.

No. of Ward nt.	NAME OF STREET.	FROM	TO	AMOUNT.
18971	Commercial	Graceland avenue.	Berteau avenue.	\$ 1,287 00
18972	Leavitt	Clybourn avenue.	Belmont avenue	565 50
18973	Vernon avenue	Irving Park boulevard	Everett	590 00
18974	Sheldon avenue.	Irving Park boulevard.	Everett	609 00
18975	St. Charles avenue	Centre	Everett	1,160 00
18976	Forty-eighth	Lincoln avenue	C. & N.-W. Ry	925 00
18977	Greenwood avenue.	Morgan	Wood	1,470 00
18978	Augusta	Everett	Centre	1,805 00
18979	Sixty-fifth	Robey	California avenue.	4,080 00
18980	Leavitt	Langley	Champlain avenue.	185 00
18981	Commercial	Archer avenue.	Bross	1,666 00
18982	Eighty-ninth	Paulina	Terra Cotta place	174 00
18983	Selwyn avenue	South Chicago avenue.	I. C. R. R.	264 00
18984	Park avenue.	Centre	Everett	1,078 00
18985	Washington avenue.	Centre	Everett	1,293 50
18986	Irving avenue	Centre	Everett	986 00
18987	Fair avenue	Sixty-eighth	Seventy-first	1,424 50
18988	School	Lincoln avenue	Clark	351 50
18989	Elk Grove avenue.	Armitage avenue.	Webster avenue or Asylum place	511 50
18991	Laurel avenue.	Humboldt boulevard	Diversey	610 50
18992	Kosciusko avenue	Robey	Leavitt	279 50
18993	Seventy-second	Cottage Grove avenue.	South Park avenue.	870 00
18994	Hamburg	Robey	Western avenue	759 00
18995	Logan	Wallace	Union Stock Yards.	1,015 00
18996	Swan	Stewart avenue	C. R. I. & P. Ry	675 00
18997	Atlantic	Thirty-ninth	Root.	507 50
18998	Ward	Thirty-fifth	Thirty-sixth	586 50
18999	Union avenue	Fifty-ninth	Sixty-first	542 50
19000	Thirty-second	Halsted	Laurel	516 00
19001	Linden avenue.	Diversey	Humboldt boulevard.	775 50
19002	South Park avenue.	Sixtieth	Seventy-first.	7,676 00
19078	Duncan	Stewart avenue	Wright	173 88
19079	Wabash avenue.	Sixty-seventh	Seventy-third.	5,260 23
19080	Rhodes avenue	Seventieth	Seventy third.	2,378 81
19087	Francisco	Division	Chicago avenue.	991 86

DRAINS—CONTINUED.

No. of Ward.	NAME OF STREET.	FROM	TO	AMOUNT.
19091	Forty-first	Grand boulevard	St. Lawrence	\$ 180 00
19094	Cottage Grove avenue	Fifty-ninth	Seventy-first	5,304 50
19098	West Twenty-sixth	Sacramento avenue	Lawndale avenue	1,470 00
19115	Forty-first (Fairmount avenue)	Twenty-sixth	Twenty-eighth	741 00
19116	West Forty-second	Ogden avenue	C., B. & Q. R. R.	682 50
19144	Baltimore avenue	Eighty-seventh	Commercial avenue	1,943 00
19145	South Chicago avenue	South Park avenue	Stony Island avenue	18,847 25
19146	Racine avenue	Addison avenue	Grace avenue	1,194 00
19149	Webster avenue	Evanston avenue	Southport avenue	420 00
19157	May	Fifty-fifth	Fifty-ninth	2,280 00
19165	Trumbull avenue	Douglas Park boulevard	C., B. & Q. R. R.	8,280 00
19196	Wallace avenue	Conneaut avenue	Humboldt boulevard	180 00
19215	Springfield avenue	Chicago avenue	275 ft. S. of Ohio	1,837 00
19262	Forty-first	Halsted	Stewart avenue	449 50
19263	Lunt avenue	Southport avenue	Lake Michigan	869 50
19276	Ada	Fifty-ninth	Sixtieth	294 50
19277	Clark	Addison	Racine avenue	1,443 00
19283	Spaulding avenue	Twenty-second	Twenty-fourth	600 00
19291	Fifty-fourth	Lexington avenue	Woodlawn avenue	173 00
19294	Lincoln avenue	Montrose boulevard	Bowmanville road	4,498 00
19373	Bishop	Fifty-first	Fifty-fifth	914 50
19393	Fifty eighth	Stewart avenue	Halsted	1,198 50
19440	North avenue	Kedzie avenue	Tinkham avenue	244 20
19506	Morse avenue	Southport avenue	Lake Michigan	740 00
19544	Sherman	Thirty-ninth	Forty-third	1,798 00
19560	Glady's avenue	West Forty-fifth	West Forty-fifth place	145 75
19597	Champlain avenue	Sixtieth	Sixty-first	356 50
19728	Turner avenue	Twenty-fourth	100 feet north	63 00
19743	Nutt avenue	Seventy-first	Seventy-third	898 50
19250	Cologne	Quarry	Main	478 50
19868	Centre avenue	Sixty-third	Sixty-ninth	4,048 00
19917	Ninety-third	Commercial avenue	Harbor avenue	914 50
19928	Montrose boulevard	Robey	Lincoln avenue	700 00
19988	Homan avenue	Twenty-second	Twenty-third	558 00
19989	Green	Sixty-sixth	Sixty-ninth	1,869 50
19940	May	Sixty-eighth	Sixty-ninth	728 50

19941	North Fifty-ninth	Clark	Robey	1,856 00
19942	Fifty-first	Wood	Leavitt	2,908 00
19943	Escanaba avenue	Eighty-seventh	Ninety-first	8,160 00
19944	Seventy-second place	Illinois Central R. R.	Stony Island avenue	1,926 00
19945	Seventy-first	Illinois Central R. R.	Stony Island avenue	1,818 00
19947	Congress	West Fortieth	West Forty-sixth	8,686 00
Total				\$ 114,881 48

WATER MAINS.

No. of Ward.	NAME OF STREET.	FROM	TO	AMOUNT.
18942	Diversey avenue	Humboldt avenue	Maplewood avenue	\$ 1,008 90
19060	West Jackson boulevard	West Forty-third	West Forty-sixth	1,647 75
19081	Bishop	Fifty-ninth	Sixty-third	1,752 00
19082	Bishop	Fifty-eighth	Fifty-ninth	878 50
19083	Seeley avenue	Sixty-third	Sixty-seventh	2,218 50
19084	Cooper	Sixty-third	Sixty-seventh	2,213 50
19118	Emerald avenue	118th	125 ft. S. of 119th	460 00
19119	Emerald avenue	121st	128d	1,169 00
19120	Lowie avenue	Diana	119th	1,415 00
19121	Lowie avenue	121st	128d	988 00
19122	Wallace	121st	128d	1,172 00
19123	E. of P. C. C. & St. L. R. R. and Union avenue	121st	129d	210 25
19124	W. of P. C. C. & St. L. R. R. and Union avenue	121st	128d	782 00
19125	Union avenue	118th	119th	477 00
19126	Wallace	119th	Diana	1,292 50
19127	119th	Portland avenue	Halsted	2,179 50
19128	119th	Michigan avenue	Dearborn	804 50
19129	Clinton	121st	128d	1,174 00
19130	South Canal	120th	128d	1,750 00
19181	Portland avenue	120th	128d	1,787 50
19193	Fifth avenue	119th	128d	2,232 00
19233	West Fourteenth	West Forty-third	West Forty-fourth	268 00
19234	West Forty-fourth	West Fourteenth	West Sixteenth	1,076 25
19235	West Forty-third place	West Twelfth	West Fourteenth	981 00
19236	West Twelfth	West Forty-second	West Forty-third place	598 00
19237	West Forty-third	West Twelfth	West Fourteenth	1,007 00

WATER MAINS—CONTINUED.

No. of Warr't.	NAME OF STREET.	FROM	TO	AMOUNT.
19238	West Forty-second place.....	West Twelfth.....	West Fourteenth.....	\$ 1,048 00
19258	Milwaukee avenue.....	Norwood avenue.....	Carpenter road.....	771 00
19259	Carpenter road.....	Milwaukee avenue.....	Carpenter court.....	415 50
19296	West Adams.....	175 W. of West Forty-third.....	West Forty-sixth.....	1,628 00
19297	Thirty-second.....	Auburn.....	Illinois avenue.....	267 50
19298	Ashland avenue.....	Fifty-ninth.....	Sixty-third.....	2,162 00
19360	Trumbull avenue.....	320 ft. S. of West Twenty-second.....	West Twenty-third.....	239 00
19361	Wilton avenue.....	Grace.....	Byron.....	285 00
19362	Harding avenue.....	West Fourteenth.....	West Sixteenth.....	982 00
19363	Lutz avenue.....	Western avenue.....	850 ft. west.....	649 00
19364	Berteau avenue.....	Western avenue.....	850 ft. west.....	629 50
19365	Cosgrove avenue.....	Western avenue.....	850 ft. west.....	649 00
19366	Aubert avenue.....	Western avenue.....	850 ft. west.....	649 00
19367	Diversey avenue.....	Kedzie avenue.....	Milwaukee avenue.....	871 50
19368	Western avenue.....	Montrose boulevard.....	Berteau avenue.....	1,128 50
19442	Trumbull avenue.....	140 ft. W. of West Twenty-third.....	West Twenty-fifth.....	1,040 25
19471	Claremont avenue.....	Alley E. of East Ravenswood Park.....	Ashland avenue.....	712 00
19472	Graceland avenue.....	Irving avenue.....	North Branch Chicago River.....	2,005 00
19473	Western avenue.....	Graceland avenue.....	Roscoe.....	3,485 00
19474	Carlin avenue.....	Seventy-ninth.....	Eighty-first.....	1,070 25
19475	Seventy-ninth.....	Duncan avenue.....	Carlin avenue.....	285 50
19476	Wendell avenue.....	Seventy-ninth.....	Eighty-first.....	1,059 25
19494	Grace.....	Lincoln avenue.....	West Ravenswood.....	407 50
19572	North Fifty-ninth.....	1,575 ft. W. of Lincoln avenue.....	Central Park avenue.....	4,190 25
19590	Alley E. of East Ravenswood ave.....	North Fifty-ninth.....	Walnut.....	297 50
19612	Wright.....	North Fifty-ninth.....	Walnut.....	320 00
	Total.....			\$ 57,439 15

**TOTAL ASSESSMENTS FOR YEAR ENDING
DECEMBER 31, 1894.**

RECAPITULATION.

STREET PAVEMENTS.

66 Cedar block	\$ 917,897 69	
14 Sheet asphalt	340,616 10	
19 Macadam	216,114 67	
2 Granite block	18,872 80	
3 Vitrified brick.....	85,188 36	
		\$ 1,578,689 62

ALLEY PAVEMENTS.

33 Cedar block	\$ 47,784 85	
1 Sheet asphalt	594 95	
1 Concrete	207 51	
1 Granite block	575 95	
		49,163 26

LAMP POSTS.

11 Connections.....	}	\$ 102,433 42	
262 Gas			
35 Boulevard.....		15,112 10	
1 Gasoline		476 00	
			118,021 52

SIDEWALKS.

166 Plank	\$ 90,147 97	
36 Cement	97,087 65	
5 Stone	46,478 10	
		233,713 72

OPENING AND STRAIGHTENING.

22 Streets and Alleys	147,213 63
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SEWERS AND WATER.

112 Sewers	415,314 12
106 Water service pipes	189,927 66
78 Private drains	114,331 48
52 Mains	57,439 15
<u>1,026</u>	<u><u>\$2,903,814 16</u></u>

TOTAL ASSESSMENTS FOR YEAR ENDING DECEMBER 31, 1894.

SUMMARY.

STREETS.

Total Assessment for Wooden Block Pavement :

North Division.....	\$ 136,871 41	
South Division.....	304,480 48	
West Division	476,545 80	
		\$ 917,897 69

Total Assessment for Sheet Asphalt Pavement :

North Division.....	\$ 76,314 96	
South Division.....	7,086 59	
West Division	257,214 55	
		340,616 10

Total Assessment for Macadamized Pavement :

North Division.....	\$ 13,520 25	
South Division.....	190,199 85	
West Division	12,394 57	
		216,114 67

Total Assessment for Granite Block Pavement :

North Division.....		
South Division.....	\$ 2,038 03	
West Division	16,834 77	
		18,872 80

Total Assessment for Brick Pavement :

North Division.....	\$ 13,082 28	
South Division.....	38,575 78	
West Division	33,530 30	
		85,188 36

ALLEYS.

Total Assessment for Wooden Block Pavement :

North Division.....	\$ 6,340 95	
South Division.....	13,518 00	
West Division	27,925 90	
		47,784 85

Total Assessment for Sheet Asphalt Pavement:		
South Division.....		\$ 594 95
Total Assessment for Concrete Pavement:		
South Division.....		207 51
Total Assessment for Granite Pavement:		
South Division.....		575 95

LAMP POSTS.

Total Assessment for Gas Lamp Posts:		
North Division	\$ 24,204 22	
South Division.....	35,650 78	
West Division	42,578 42	
		102,433 42
Total Assessment for Boulevard Lamp Posts:		
North Division	\$ 377 00	
South Division.....	9,171 10	
West Division	5,564 00	
		15,112 10
Total Assessment for Gasoline Lamp Posts:		
West Division.....		476 00

SIDEWALKS.

Total Assessment for Plank Sidewalks:		
North Division.....	\$ 11,310 76	
South Division.....	42,422 24	
West Division	36,414 97	
		90,147 97
Total Assessment for Cement Sidewalks:		
North Division.....	\$ 3,671 80	
South Division.....	85,431 85	
West Division	7,984 00	
		97,087 65
Total Assessment for Stone Sidewalks:		
North Division.....	\$ 423 00	
South Division.....	5,883 50	
West Division	40,171 60	
		46,478 10
Total Assessment for Opening and Straightening:		
North Division.....	\$ 35,230 80	
South Division.....	97,246 33	
West Division	14,736 50	
		147,213 63

Total Assessment for Sewers :

North Division.....	\$	44,880	21	
South Division.....		255,670	31	
West Division		114,763	60	
				<u>\$ 415,314 12</u>

Total Assessment for Water Service Pipes :

North Division.....	\$	26,623	00	
South Division.....		96,412	90	
West Division		66,891	76	
				<u>189,927 66</u>

Total Assessment for Private Drains :

North Division.....	\$	14,961	50	
South Division.....		73,942	67	
West Division		25,427	31	
				<u>114,331 48</u>

Total Assessment for Water Mains :

North Division.....	\$	5,155	50	
South Division.....		28,619	75	
West Division		23,663	90	
				<u>57,439 15</u>

TOTAL	\$	2,903,814	16	
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LIST OF ASSESSMENTS FOR EACH YEAR SINCE 1861.

For the year ending April 1, 1862.....	\$ 42,635 49
For the year ending April 1, 1863.....	46,493 67
For the year ending April 1, 1864.....	389,169 31
For the year ending April 1, 1865.....	103,576 35
For the year ending April 1, 1866.....	802,574 56
For the year ending April 1, 1867.....	317,206 18
For the year ending April 1, 1868.....	1,354,436 48
For the year ending April 1, 1869.....	2,395,683 03
For the year ending April 1, 1870.....	2,836,852 43
For the year ending April 1, 1871.....	2,359,835 89
For the year ending April 1, 1872.....	62,222 25
For the year ending April 1, 1873.....	.....
For the year ending April 1, 1874.....	749,460 27
For the year ending April 1, 1875.....	723,254 42
For the nine months ending December 31, 1875.....	60,585 72
For the year ending December 31, 1876.....	1,516,081 07
For the year ending December 31, 1877.....	124,498 48
For the year ending December 31, 1878.....	284,900 45
For the year ending December 31, 1879.....	588,963 44
For the year ending December 31, 1880.....	980,895 50
For the year ending December 31, 1881.....	1,227,169 71
For the year ending December 31, 1882.....	1,395,372 98
For the year ending December 31, 1883.....	2,232,757 04
For the year ending December 31, 1884.....	2,857,905 28
For the year ending December 31, 1885.....	2,889,544 80
For the year ending December 31, 1886.....	3,307,567 99
For the year ending December 31, 1887.....	3,160,474 67
For the year ending December 31, 1888.....	3,655,956 78
For the year ending December 31, 1889.....	4,220,869 93
For the year ending December 31, 1890.....	6,987,155 48
For the year ending December 31, 1891.....	8,790,448 29
For the year ending December 31, 1892.....	14,505,701 79
For the year ending December 31, 1893.....	6,001,445 65
For the year ending December 31, 1894.....	2,903 814 16
Total for thirty-four years.....	\$79,875,504 59

Book-keeper's Statement

BOOK-KEEPER'S STATEMENT.

HON. JOHN McCARTHY,

Commissioner of Public Works.

DEAR SIR:—I herewith respectfully submit statement in detail of the Receipts and Expenditures of your Department for the year 1894.

WATER FUND.

RECEIPTS.

Amount collected during the year for current water rents assessed.....	\$1,951,036 72
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Amount collected during the year for current water rents, meter measurements.....	1,012,396 56
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Acc't Water Service Cocks.

Amount received for taps and permits, also plumbers' licenses	42,335 18
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Acc't Meters and Private Work.

Amount received for labor and material used in laying and repairing water supply pipes for elevators and general supply of water, also for changing location of hydrants and stop cocks and repairing meters.....	119,661 46
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Carried forward.....	<u>\$3,125,429 92</u>
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Brought forward....	\$3,125,429 92
<i>Acc't West Pump. Works.</i>	
Amount received for scrap iron, empty barrels, etc...	27 92
<i>Acc't Central Pump. Works.</i>	
Amount received for scrap iron, refund on pay roll, etc.....	21 67
<i>Acc't North Pump. Works.</i>	
Amount received for refund on gas bill, coal, etc.....	321 50
<i>Acc't Water Pipe and Special Castings.</i>	
Amount received for scrap iron, pipe and castings...	2,252 34
<i>Acc't Hydrant Wrenches.</i>	
Amount received as de- posit for loan of hydrant wrenches.....	685 00
<i>Acc't Water Pipe Extension.</i>	
Special assessment work, etc.	29,432 69
<i>Acc't Water Works Shop.</i>	
Amount received for brass borings, lead dross, scrap iron and refund on pay roll	110 99
<i>Acc't South Pump. Works.</i>	
Scrap iron sold.....	63 26
<i>Acc't 68th St. Pump. Works.</i>	
Settlement with Weaver, Getz & Co. and scrap iron sold	140 00
<i>Acc't Lake View Pump. Works.</i>	
Scrap iron sold, etc.....	27 65
Carried forward.....	\$3,158,512 94

Brought forward.....	\$3,158,512 94
<i>Miscellaneous Receipts.</i>	
Rent of Rookery.....	35,000 04
From private parties to lay water mains	60,755 09
Total receipts.....	<u><u>\$3,254,268 07</u></u>

EXPENDITURES.

Acc't Water Pipe Extension.

Labor.....	\$ 252,031 87	
Water pipe and special cast- ings	116,583 12	
Cost of labor and material furnished by Water Works shop	59,437 55	
Teaming	36,709 10	
Hydrant rings, covers, stop- cocks, chambers, etc.....	26,439 71	
Lead	10,100 50	
Brick	9,980 56	
Branches of valves	6,799 44	
Plumbing.....	5,353 98	
Transfer to L. Earnst and others	4,916 00	
John Spry Lumber Co., pay- ment of notes and interest,	4,905 00	
Cement	4,785 21	
Lumber	3,858 44	
Rock and excavating	2,305 33	
Filling	2,100 00	
M. J. Bransfield, refund	1,900 00	
Sundries — car fare, hard- ware, coal, packing, sta- tionery, advertising, oil, use of pump, blacksmith- ing, etc	17,852 65	
		566,058 46
Carried forward.....	\$ 566,058 46	

Brought forward.....		\$ 566,058 46
<i>Water Works Repairs.</i>		
Labor.....	\$ 419,622 88	
Teaming	7,832 31	
Lumber	4,130 07	
Hydrant chambers, castings, etc	2,399 68	
Cost of labor and material furnished by Water Works shop	2,501 41	
Sundries	4,598 75	
		441,085 10
<i>Acc't North Pump. Works.</i>		
Labor	\$ 49,984 78	
Coal	100,621 92	
Oil	606 40	
Repairs to engines, boilers, buildings, etc.....	3,014 35	
Gas.....	1,391 60	
Waste, packing and sundry supplies	4,222 42	
Construction.....	4,551 16	
		164,392 63
<i>Acc't West Pump. Works.</i>		
Labor.....	\$ 40,317 07	
Coal	52,380 43	
Oil.....	798 89	
Repairing engines, boilers, pumps, buildings, etc	11,515 24	
Gas.....	1,542 00	
Waste, packing, sundry sup- plies	1,681 80	
Construction.	43,017 14	
		151,252 57
<i>Acc't Central Pump. Works.</i>		
Labor	\$ 27,759 68	
Coal	21,542 90	
Oil.....	833 07	
Repairs to engines, boilers, buildings, etc.....	9,196 30	
Carried forward.....	\$ 59,331 95	\$1,322,788 76

Brought forward.....	\$ 59,331 95	\$1,322,788 76
Gas	975 10	
Waste, packing and sundry supplies	843 57	
Construction.....	1,120 83	
		62,271 45

Acc't South Pump. Works.

Labor	\$ 45,560 47	
Coal.....	23,976 46	
Oil	880 30	
Repairs to engines, boilers, pumps, buildings, etc....	19,630 77	
Gas.....	504 40	
Waste, packing and sundry supplies	1,754 88	
Construction	4,158 04	
		101,465 32

*Acc't Washington Heights
Pump. Works.*

Labor	\$ 4,300 05	
Coal	2,399 37	
Steel boilers.....	456 00	
Repg. boiler and engine....	203 36	
Sundries.....	313 87	
Construction.....	826 80	
		8,499 45

*Acc't Sixty-eighth Street
Pump. Works.*

Labor	\$ 37,560 72	
Coal, fuel oil.....	28,522 34	
Repairs to engines, boilers, pumps, buildings, etc....	1,638 18	
Oil	1,209 23	
Electric lighting.....	2,550 00	
Waste, packing, sundry sup- plies	4,418 34	
Construction	199,238 37	
		275,137 18

Carried forward...

\$1,770,162 16

Brought forward..... \$1,770,162 16

Acc't Lake View Pump. Works.

Labor	\$ 23,948 69	
Coal	23,255 43	
Oil	961 56	
Repairs to engines, boilers, pumps, buildings, etc.....	5,350 10	
Gas.....	399 20	
Waste, packing, sundry sup- plies	2,004 82	
Construction.....	10,557 55	
		66,477 35

*Acc't Norwood Park Pump.
Works.*

Labor.....	\$ 956 53	
Coal.....	309 84	
Sundries	182 40	
		1,448 77

Acc't New Lake Tunnel.

A. Onderdonk, interest..... 10,695 25

Acc't Lake View Tunnel.

Contractor.....	\$ 94,715 56	
Labor	9,085 64	
Sundries.....	65 91	
		103,867 11

*Acc't Sixty-eighth Street
Tunnel Extension.*

Contractor	\$ 115,504 33	
Labor, engineers, draughts- men, inspectors and rod- men.....	10,364 03	
Cable.....	2,725 00	
Tug service.....	993 30	
Water gate and frame	494 00	
Sundries.....	1,117 41	
		131,198 07

Carried forward..... \$2,083,848 71

Brought forward..... \$2,083,848 71

Acc't Lake Crib, "Old."

Labor.....	\$ 7,522 70	
Tug service.....	6,573 75	
Rip rap	1,100 00	
Diver.....	499 50	
Work done by Water Works		
shop	187 26	
Construction.....	1,831 17	
Sundries	971 04	
		18,685 42

Acc't Four-Mile Crib.

Labor	\$ 7,179 60	
Contractor.....	35,397 67	
Tug service.....	1,131 01	
Work done by Water Works		
shops	399 73	
Sundries	3,674 08	
		47,782 09

Acc't Lake View Crib.

Labor.....	\$ 1,822 00	
Construction.....	16,850 81	
Sundries	1,714 98	
		20,387 79

Acc't North Breakwater Crib.

Tug service.....	75 00
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Acc't Northwest Tunnel.

For labor, boring, etc.....	4,794 05
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Acc't Water Works Shop.

Miscellaneous expenses,	
labor, etc	2,792 75
Carried forward.....	\$2,178,365 81

Brought forward.....		\$2,178,365 81
<i>Acc't Water Service Cocks.</i>		
Labor.....	\$ 51,980 03	
Ferrules.....	2,393 21	
Taps, drills, sockets and corporation cocks.....	2,629 41	
Plumbing.....	186 50	
Sundries	197 58	
		<u>57,386 73</u>
<i>Acc't Water Meter and Private Work.</i>		
Labor.....	\$ 43,998 66	
Meters, counters, covers and fittings	22,588 99	
Rebates on deposits.....	5,356 41	
Lumber	380 37	
Work done by Water Works Shops.....	8,891 21	
Sundries	1,097 98	
		<u>82,313 62</u>
<i>Acc't Water Office Expense.</i>		
Rent.....	\$ 1,954 97	
Stationery, advertising, postage, car fare, etc	16,272 71	
		<u>18,227 68</u>
<i>Acc't Water Office Salaries.</i>		
Paid for—		
Collecting water rents assessed, inspectors, assessors and draughtsmen.....		208,093 84
<i>Acc't Water Fund Proportion of Commissioner's Office Expense and Salaries.</i>		
Labor.....	\$ 29,001 41	
Stationery, postage, annual report, etc.....	6,818 96	
		<u>35,820 37</u>
Carried forward.....		\$2,580,208 05

Brought forward.....	\$2,580,208 05	
<i>Other Expenses.</i>		
Water loan interest	\$ 187,257 60	
Refunding duplicate payments of water tax, etc. . .	20,472 14	
Water fund investment certificates	333,000 00	
Town of Lake water loan bonds 7 per cent	115,000 00	
Water loan bonds 7 per cent	95,000 00	
Town of Lake water loan bonds 5 per cent	15,000 00	
Refunding advances to lay water pipe.....	48,899 35	
Amount January 2, 3, 4, 5, 6 and 8, 1894, receipts.....	65,202 47	
		879,831 56
Total expenses.....		<u>\$3,460,039 61</u>

SEWER FUND.

RECEIPTS.

Amount received for drain permits.....	\$ 38,949 75	
Amount received for drain layers' licenses.....	2,095 00	
Appropriated by City Council for cleaning sewers and catch-basins.....	\$ 115,000 00	
Repairing sewers and catch-basins.....	20,000 00	
Sewerage office salaries.....	27,810 00	
Sewerage sinking fund. ...	500 00	
Deficiency in collection of taxes.....	1,244 20	
Sixty-ninth street sewer pump	9,400 00	
Ninety-fourth street sewer pump	4,000 00	
Seventy-third street sewer pump	8,500 00	
Woodlawn sewer pump.....	8,500 00	
Seventieth street sewer pump	8,500 00	
		203,454 20
Carried forward.....		<u>\$ 244,498 95</u>

Brought forward.....	\$ 244,498 95
Received for special assessment inspection from Comptroller.....	263,691 68
Amount received from private parties for labor and material	7,181 70
Total receipts.....	<u>\$ 515,372 33</u>

EXPENSES.

Sewers North Division	\$ 3,557 81
Sewers South Division	9,462 38
Sewers West Division.....	8,323 66
House drains	36,742 38
Cleaning sewers and catch-basins.....	150,725 45
Repairing sewers and catch-basins.....	55,776 06
Catch-basins.....	\$ 15,632 39
Less amount distributed to sewers, North, South and West divisions	14,392 41
	<u>1,239 98</u>
Sewerage office salaries.....	28,196 54
Intersections.....	69,778 62

OTHER EXPENSES.

Salaries of inspectors (special assessment work)....	76,226 72
Building sewers (private work)	780 91
Sewerage stock account	598 80
Sixty-ninth street sewer pump	9,427 06
Ninety-fourth street sewer pump	7,828 88
Seventy-third street sewer pump	7,757 54
Woodlawn sewer pump.....	12,811 07
Seventieth street sewer pump	7,934 11
Miscellaneous expenses.....	451 33
Total expenses.....	<u>\$ 487,419 30</u>

APPROPRIATION FUND.

RECEIPTS.

Acc't Improved Streets.

Amount appropriated by City

Council \$ 200,000 00

Paving and inspection 53,960 58

\$ 253,960 58*Acc't Unimproved Streets.*

Amount appropriated by City

Council \$ 200,000 00

Paving and inspection 500 00

200,500 00*Acc't Scavenger Service.*

Amount appropriated by City

Council 335,000 00

*Acc't Cleaning Improved and
Macadam Streets.*

Amount appropriated by City

Council \$ 250,000 00

Other receipts 7,960 05

257,960 05*Acc't Ward Inspectors.*

Amount appropriated by City

Council 34,000 00

Acc't Removal Dead Animals.

Amount appropriated by City

Council 15,000 00

Acc't Office Salaries.

Amount appropriated by City

Council 14,450 00

Acc't Sidewalk Repairs.

Amount appropriated by City

Council \$ 10,000 00

Inspection, etc. 544 50

10,544 50

Carried forward

\$1,121,415 13

Brought forward.....		\$1,121,415 13
<i>Acc't Public Buildings.</i>		
Amount appropriated by City Council.....	\$ 36,000 00	
Rec'v'd from Public Library, etc.....	3,349 45	
		39,349 45
<i>Acc't Janitors' Salaries.</i>		
Amount appropriated by City Council.....	\$ 45,383 20	
Received from Public Library	1,640 00	
		47,023 20
<i>Acc't Bridge Telephone Operator's Salary.</i>		
Amount appropriated by City Council.....		11,825 00
<i>Acc't Public Parks.</i>		
Amount appropriated by City Council.....		10,500 00
<i>Acc't East End Park.</i>		
Amount appropriated by City Council.....		5,000 00
<i>Acc't House Moving Permits.</i>		
Amount received for permits		3,361 00
<i>Acc't Street Department Office Expense.</i>		
Amount appropriated by City Council		1,500 00
<i>Acc't City Engineer's Office Expense.</i>		
Amount appropriated by City Council		750 00
Carried forward.....		\$1,240,723 78

Brought forward	\$1,240,723 78	
<i>Acc't Map Office Expense.</i>		
Amount appropriated by City Council	900 00	
<i>Acc't Street Permit Depositors.</i>		
Amount received from street permit depositors.....	142,283 71	
<i>Acc't Special Assessments.</i>		
Amount received from special assessment fund for cost of making and collecting special assessments, salaries and office expenses	314,885 08	
<i>Acc't Street Lamp Repairs.</i>		
Amount appropriated by City Council	\$ 50,000 00	
Amount received from special assessments, etc.....	28,591 85	
		78,591 85
<i>Acc't Street Office Salaries.</i>		
Amount appropriated by City Council	15,570 00	
<i>Acc't City Engineer's Office Salaries.</i>		
Amount appropriated by City Council	12,460 00	
<i>Acc't Map Office Salaries.</i>		
Amount appropriated by City Council	16,740 00	
<i>Acc't Proportional Office Salaries.</i>		
Amount appropriated by City Council	13,540 00	
Carried forward.....		\$1,835,694 42

Brought forward.....		\$1,835,694 42
<i>Acc't Proportional Office Ex- pense.</i>		
Amount appropriated by City Council	\$ 1,750 00	
Amount stationery turned over to W. A. Hess, etc..	481 21	
		2,231 21
<i>Acc't Chicago Harbor.</i>		
Amount appropriated by City Council		60,490 00
<i>Acc't Street Opening and Ob- struction Inspectors' Sal- aries.</i>		
Amount appropriated by City Council		7,200 00
<i>Acc't Bridge Repairs.</i>		
Amount appropriated by City Council	\$ 112,500 00	
From Health Department, West Chicago St. R. R. Co., W. and So. Town St. R. R. and others	9,055 06	
		121,555 06
<i>Acc't Vessel Despatcher's Salary.</i>		
Amount appropriated by City Council		2,250 00
<i>Acc't Steam Roller Engineer's Salary.</i>		
Amount appropriated by City Council	\$ 1,800 00	
Amount received for use of steam roller.....	1,639 50	
		3,439 50
Carried forward.....		\$2,032,860 19

Brought forward		\$2,032,860 19	
<i>Acc't Bridge Tenders' Salaries.</i>			
Amount appropriated by City Council	\$ 83,430 00		
Sundries	150 00		
			83,580 00
<i>Fullerton Avenue Conduit.</i>			
Amount appropriated by City Council			14,755 00
<i>Acc't Canal Pump. Works.</i>			
Amount appropriated by City Council	\$ 57,600 00		
Sundries	152 26		
			57,752 26
<i>Acc't Van Buren Street Bridge.</i>			
Amount appropriated by City Council	\$ 56,118 23		
From Metropolitan Electric R. R. Co.	45,000 00		
			101,118 23
<i>Acc't Kedzie Avenue Bridge.</i>			
Amount appropriated by City Council			1,500 00
<i>Acc't Deficiency in Collection of Taxes.</i>			
Amount			17,998 22
<i>Acc't Canal Street Bridge.</i>			
Amount appropriated by City Council			8,500 00
<i>Acc't Special Deposits.</i>			
Amount received for inspection			1,092 77
Carried forward			\$2,319,156 67

Brought forward.....	\$2,319,156 67
<i>Acc't South Halsted Street Bridge.</i>	
Amount appropriated by City Council.....	61,100 00
<i>Acc't Street Engineers' Permits.</i>	
Amount received.....	149 00
<i>Acc't Bridgeport Locks.</i>	
Amount appropriated by City Council.....	2,800 00
<i>Acc't Hegewisch Road.</i>	
Amount appropriated by City Council.....	8,000 00
Total Receipts.....	<u>\$2,391,205 67</u>

EXPENSES.

Acc't Improved Streets.

Paid for—

Salaries	\$ 154,671 35	
Repaving	40,759 42	
Lumber and blocks	19,167 16	
Crushed stone and gravel...	10,700 11	
Refund	3,000 00	
Other expenses.....	25,983 98	
	<u>\$ 254,282 02</u>	

Acc't Unimproved Streets.

Paid for—

Salaries	\$ 179,369 69	
Lumber	5,888 00	
Crushed stone and gravel...	4,345 00	
Paving	1,640 00	
Other expenses	9,165 94	
	<u>200,408 63</u>	
Carried forward.....	\$ 454,690 65	

Brought forward	\$ 454,690 65	
<i>Acc't Street Cleaning.</i>		
Paid for—		
Street cleaning by contract..	\$ 133,494 71	
Street cleaning by bureau...	137,152 07	
		270,646 78
<i>Acc't Garbage.</i>		
Paid for--		
Removal of garbage, ashes, etc.....		339,718 29
<i>Acc't Dumps.</i>		
Paid for—		
Care of dumps		12,573 75
<i>Acc't Street and Alley Clean- ing, Office Salary.</i>		
Paid for—		
Office salaries.....		15,741 94
<i>Acc't Ward Inspectors.</i>		
Paid for—		
Ward inspectors.....		31,972 30
<i>Acc't Removal Dead Animals.</i>		
Paid for—		
Removal Dead Animals		37,500 00
<i>Acc't Sidewalk Repairs.</i>		
Paid for—		
Salaries	\$ 10,377 72	
Other expenses	81 80	
		10,459 52
Carried forward.....		\$1,173,303 23

Brought forward \$1,173,303 23

Acc't City Hall.

Paid for—

Coal	\$	25,790 19	
Repairing engines and boilers		2,845 96	
Labor		2,102 58	
Repairing elevators		1,623 00	
Plumbing		581 45	
Decorating and cleaning ...		314 00	
Other expenses		8,177 25	
			41,434 43

Acc't Special Assessments.

Paid for—

Salaries of assessment office.	\$	69,386 16	
Salaries of others		63,347 34	
Services as commissioners ..		29,606 90	
Clerk of County Court		20,427 75	
Real estate expert		12,523 00	
Expert services		8,244 75	
Repairing sidewalks		5,137 94	
Books, printing, stationery		4,595 50	
Advertising		3,928 15	
Legal services		6,850 00	
Collecting special assessments		44,777 83	
Other expenses		16,846 11	
			285,674 13

Acc't Chicago Harbor.

Labor	\$	13,534 87	
Dredging		44,662 65	
Damages to Schooner Burton		1,051 00	
Other expenses		1,829 46	
			61,077 98

Acc't Bridge Repairs.

Salaries	\$	81,861 78	
Lumber		35,384 55	
Coal		10,085 70	
Carried forward	\$	127,332 03	\$1,561,489 77

Brought forward.....	\$ 127,332 03	\$1,561,489 77
Machine-work.....	8,434 20	
Steel rollers and castings ...	3,679 31	
Painting.....	816 00	
Other expenses.....	14,531 49	
		154,793 03
<i>Acc't Canal Pump Works.</i>		
Labor.....	\$ 28,491 76	
Coal	45,599 45	
Engine and boiler repairs...	4,814 42	
Oil and packing.....	1,128 59	
Other expenses	5,084 99	
		85,129 21
<i>Acc't Fullerton Avenue Conduit.</i>		
Salaries.....	\$ 6,606 80	
Coal.....	5,061 97	
Other expenses.....	1,546 63	
		13,215 40
<i>Acc't Public Parks.</i>		
Washington Park, labor, etc.		2,020 67
<i>Acc't East End Park.</i>		
Labor, etc.		786 04
<i>Acc't Aldine Square.</i>		
Labor, etc.		1,261 19
<i>Acc't Douglas Monument Park.</i>		
Labor, etc.....		1,427 44
<i>Acc't Ellis Park.</i>		
Labor, etc		1,251 31
<i>Acc't Bickerdike Park.</i>		
Labor, etc		1,868 15
<i>Acc't Jefferson Park.</i>		
Labor, etc		159 50
Carried forward.....		\$1,823,401 71

Brought forward		\$1,823,401 71
<i>Acc't Irving Park.</i>		
Labor, etc		88 00
<i>Acc't Green Bay Park.</i>		
Labor, etc		727 50
<i>Acc't Oak Park.</i>		
Labor, etc		724 38
<i>Acc't Gross Park.</i>		
Labor, etc		899 25
<i>Acc't Shedd's Park.</i>		
Labor, etc		1,098 75
<i>Acc't Lakewood Park.</i>		
Labor, etc		103 84
<i>Acc't Holstein Park.</i>		
Labor, etc		157 75
<i>Acc't Congress Park.</i>		
Labor, etc		102 75
<i>Acc't Eldred Park.</i>		
Labor, etc		93 00
<i>Acc't South Halsted Street Bridge.</i>		
Construction	\$ 94,754 24	
Labor	7,717 05	
Dredging and Pile Construc- tion	2,595 23	
Services J. A. L. Waddell . .	2,500 00	
Carried forward	\$ 107,566 52	\$1,827,396 93

Brought forward	\$ 107,566 52	\$1,827,396 93
Services C. W. G. Ferris & Co.....	463 20	
Professional services.....	250 00	
Sundries	1,015 05	
		109,294 77

*Acc't Van Buren Street
Bridge.*

Construction.....	\$ 134,561 65	
Labor.....	3,027 89	
Lumber	300 14	
Sundries.....	11 83	
		137,901 51

Acc't Street Lamp Repairs.

Labor.....	\$ 31,759 55	
Repairing street lamps.....	13,532 40	
Glass and lamp fittings	12,070 02	
Other expenses.....	4,517 53	
		61,879 50

Acc't Salaries.

Paid for—

Janitors' salaries.....	\$ 47,136 66	
Bridge Telephone Operators	9,405 84	
House-moving clerks.....	1,910 00	
Bridgeport lock tender.....	2,877 46	
Street office salary....	15,259 84	
City Engineer's office salary.	12,964 44	
Map Department salary.....	16,703 84	
Proportional office salary...	11,712 93	
Street opening and obstruc- tion inspector's salary	7,177 50	
Vessel Despatchers	2,556 27	
Steam Roller Engineers....	4,045 92	
Bridge Tenders' salary.....	81,800 14	
		213,550 84

Carried forward..... **\$2,350,023 55**

Brought forward.....		\$2,350,023 55
<i>Acc't Miscellaneous Expenses.</i>		
Paid for—		
Street Dept. office expense..	\$ 1,196 55	
City Engineer's office ex- pense	960 22	
Map Dept. expense	812 64	
Work on street permits.....	42,814 54	
Rebates on street permits...	78,714 30	
Hegewisch road.....	7,848 00	
Proportional office expense..	1,835 35	
Diversey street bridge.....	791 96	
Belmont avenue bridge.....	336 29	
Kedzie avenue bridge.....	473 62	
Ogden Ditch Dam.....	84 52	
Taylor street bridge	5 95	
Canal street bridge	305 10	
Salaries of inspectors of Metropolitan El. R. R. Co.	1,804 77	
No. Halsted street viaduct..	24 00	
		138,007 81
TOTAL EXPENSES		<u>\$2,488,031 36</u>

TRIAL BALANCE.

LEDGER, DEPARTMENT PUBLIC WORKS, CHICAGO,
DECEMBER 31, 1894.

	<i>Dr.</i>	<i>Cr.</i>
Water fund	\$ 203,155 95	
Water Works	22,894,214 87	
Water Works, income		\$35,845,595 47
Water works, general taxes		2,713,878 58
Annexed territory		197,525 48
Water loan bonds, 6 per cent.		132,000 00
Water loan bonds, 7 per cent.		1,485,000 00
Water loan bonds, 4 per cent.		1,706,500 00
Water loan bonds, 3 $\frac{6}{10}$ % per cent.		332,000 00
Water loan bonds, 3 $\frac{1}{2}$ per cent.		333,500 00
Water loan bonds, canceled		1,493,900 00
Water loan certificates, 5 per cent.		667,000 00
Water loan, interest	7,595,385 71	
Water loan bonds, Hyde Park 5 per cent.		50,000 00
Water loan bonds, Hyde Park 7 per cent.		331,000 00
Water loan bonds, Town of Lake 5 per cent		120,000 00
Water Works, expense and repair acc't.	15,260,315 63	
Water loan bonds, Lake View 4 per cent.		50,000 00
Water loan bonds, Lake View 5 per cent.		23,000 00
Water loan bonds, Lake View 7 per cent.		75,000 00
W. A. Prendergast, Town of Lake water office	100 00	
J. W. Lyons, cashier water office	2,000 00	
Meter Department, stock account.	7,004 70	
Water Works shop, stock account	12,494 58	
Tapping Department, stock account. .	5,279 77	
Carried forward ..	\$ 45,979,951 21	\$ 45,555,899 48

Brought forward.....	\$ 45,979,951 21	\$ 45,555,899 48
Advances to lay water pipe		422,079 91
Hydrant wrenches.....		1,971 82
Annexed territory, sewers		2,614,224 75
Sewers constructed by Special Assessments.....		5,690,379 06
Sewers, North Division.....	2,669,263 16	
Sewers, South Division.....	6,632,318 75	
Sewers, West Division.....	6,928,652 70	
Sewerage loan bonds, 4 per cent.....		2,117,500 00
Sewerage loan bonds, 7 per cent.....		13,000 00
Sewerage loan bonds, 4½ per cent.....		489,500 00
Sewerage loan bonds canceled.....		380,000 00
Sewerage sinking fund		65,532 66
Sewerage sinking fund in hands of City Treasurer	65,532 66	
River improvement sinking fund	80,893 52	80,893 52
Sewerage fund, general taxes construction.....		4,933,532 48
Sewer stock account	7,901 68	
Appropriation fund.....		1,500 00
E. W. Walsh, cashier.....	1,500 00	
Special deposit funds.....	66,964 85	
Suspense account		4,300 90
Hydrant wrenches....		228 76
Street Engineer's permit		137 00
Street permit depositors.....		45,167 43
Advances to construct sewers.....		12,431 37
Corporation account		4,699 39
	<u>\$ 62,432,978 53</u>	<u>\$ 62,432,978 53</u>

Respectfully submitted,

LOUIS E. GOSSELIN,

Book-keeper.

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