CHAPTER II

1870-1879

HISTORY OF DENVER WATER SYSTEM
# INDEX

CHAPTER II
1870-1879

<table>
<thead>
<tr>
<th>Subject</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acts, Congressional &amp; Legislative, water supply for City and Cherry Creek</td>
<td>35</td>
</tr>
<tr>
<td>Act, to incorporate City of Denver 1861</td>
<td>66</td>
</tr>
<tr>
<td>Artesian Wells, 1873 first attempt at drilling</td>
<td>11</td>
</tr>
<tr>
<td>Canal, construction, description, etc.</td>
<td>154</td>
</tr>
<tr>
<td>Canal, High Line, English Stockholders</td>
<td>54</td>
</tr>
<tr>
<td>Contract, Denver Gas Co. 1870</td>
<td>64</td>
</tr>
<tr>
<td>Contract, Water</td>
<td>131</td>
</tr>
<tr>
<td>Denver Aqueduct Company 1871</td>
<td>25 &amp; 36</td>
</tr>
<tr>
<td>Denver City Water Co. 1872</td>
<td>57</td>
</tr>
<tr>
<td>Denver City Irrigation &amp; Water Co. Inc. of 1878</td>
<td>151</td>
</tr>
<tr>
<td>Denver Ditch Company</td>
<td>29</td>
</tr>
<tr>
<td>Denver, water for</td>
<td>79</td>
</tr>
<tr>
<td>Denver Gas Company, contract 1870</td>
<td>64</td>
</tr>
<tr>
<td>Ditches, High Line Ditch, &quot;Low Line&quot; or &quot;Point of Rocks&quot;</td>
<td>36 &amp; 37</td>
</tr>
<tr>
<td>Ditches, Proposed irrigation</td>
<td>22</td>
</tr>
<tr>
<td>Ditch Company, Arapahoe County</td>
<td>23</td>
</tr>
<tr>
<td>English Company, stockholders</td>
<td>54</td>
</tr>
<tr>
<td>High Line Canal</td>
<td>54</td>
</tr>
<tr>
<td>Holly Machinery, contract for construction of</td>
<td>71</td>
</tr>
<tr>
<td>Holly System, Archer</td>
<td>30</td>
</tr>
<tr>
<td>Subject</td>
<td>Page Number</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Holly System, Water Works - Archer Bldg.</td>
<td>82</td>
</tr>
<tr>
<td>Holly Water Works System</td>
<td>95</td>
</tr>
<tr>
<td>Hydrants, Fire - agreement of</td>
<td>104</td>
</tr>
<tr>
<td>Hydrants, Fire, payment of</td>
<td>102</td>
</tr>
<tr>
<td>Hydrants, water - maintenance of</td>
<td>137</td>
</tr>
<tr>
<td>Platte Water Company, ditch, city control</td>
<td>50</td>
</tr>
<tr>
<td>Platte Water Company, proposal of sale</td>
<td>46 &amp; 47</td>
</tr>
<tr>
<td>Platte Water Company, with city</td>
<td>10 &amp; 11</td>
</tr>
<tr>
<td>Platte Water Company Canal, completion of 1867</td>
<td>8 &amp; 10</td>
</tr>
<tr>
<td>Population, trends 1860-61</td>
<td>7</td>
</tr>
<tr>
<td>Power Plant, water</td>
<td>155</td>
</tr>
<tr>
<td>Pumping Plant, water 15th St.</td>
<td>92</td>
</tr>
<tr>
<td>Pumping Plant, first</td>
<td>94</td>
</tr>
<tr>
<td>Purity, of water</td>
<td>125</td>
</tr>
<tr>
<td>Railroad, Denver Pacific 1868</td>
<td>3</td>
</tr>
<tr>
<td>Railroad, early situation</td>
<td>1-2</td>
</tr>
<tr>
<td>Schuyler, Joseph D. - Report on Water Works</td>
<td>133</td>
</tr>
<tr>
<td>Smelter, First 1867</td>
<td>7</td>
</tr>
<tr>
<td>Typhoid, Epidemic and cause</td>
<td>156</td>
</tr>
<tr>
<td>Union Station, corner stone 1868</td>
<td>4</td>
</tr>
<tr>
<td>Water, for Denver</td>
<td>79</td>
</tr>
<tr>
<td>Water, limit use of 1879</td>
<td>153</td>
</tr>
<tr>
<td>Water, purity of</td>
<td>125</td>
</tr>
<tr>
<td>Water Rights, priorities</td>
<td>92</td>
</tr>
<tr>
<td>Wells, artesian</td>
<td>153</td>
</tr>
<tr>
<td>Younkers vs Nichols, case 1872</td>
<td>34</td>
</tr>
</tbody>
</table>
CHAPTER II
1870-1879


Notwithstanding the many financial and other reverses of the early sixty's, the year 1870 opened with a feeling of cautious optimism upon the part of Denver's citizens.

One of the important reasons for this change in mental attitude was the approaching completion of the Denver Pacific and Union Pacific, Eastern Division, railroads which, within a few months, were to give Denver rail connections with Cheyenne 106 miles to the north and Kansas City about 640 miles to the east.

The story of the financing and building of these early railroads is a most interesting one, particularly that part having to do with the Denver Pacific between Cheyenne and Denver.

Although the valiant efforts of ex-Governor Evans and others were unsuccessful in getting the national road from Omaha to Salt Lake routed via Denver, the Gilpin County mines and Berthoud Pass, this group of dedicated citizens kept the railroad situation alive in 1866 and 1867 by frequent correspondence with the officials of both the Union Pacific proper, and the Eastern Division of that road, as well as with influential personal friends in Washington.
In June 1866, came the first ray of hope in the passage by Congress of the act compelling the Kansas Pacific to become the Eastern Division of the Union Pacific, although under distinct management and control, and to connect with the main line at a point not more than fifty miles west of the longitude of Denver.

The government land grant to the Kansas-Pacific, however, ended at Pond Creek, and by the middle of 1867 it was unable to go on with construction unless aid came from one of two sources, Congress in the shape of an additional land grant or from Denver, with its dream of greatness apparently shattered by the creation of a booming Cheyenne. Hence, in the midsummer of 1867, Denver was facing a stalled railroad 215 miles to the east in Kansas.

About this time also, the rivalry between Golden and Denver reached its peak which added further to the general confusion over the railroad situation. However, Judge Stone in his history of Colorado, gives credit to the keenness and to the genius of John Evans, for Denver's escape from the tangle which outsiders were then creating.

A new impetus was given to the railroad movement on November 8, 1867 by the arrival in Denver of Colonel James Archer, a prominent citizen of St. Louis, largely interested in great enterprises there and also in the Kansas road, who came as the representative of the Eastern Division Company to labor in that interest.

As a result of Colonel Archer's visit to Denver and the conferences held by him with its leading citizens, a Board of Trade was organized on
November 13, 1867, with three committees soon thereafter appointed to; (1) select corporators for a railway company to build a road from Denver to Cheyenne; (2) to examine the general incorporation law and prepare such amendments as were required for presentation to the Legislature; and (3) to take into consideration the expediency of building a railway from Denver to Pond Creek.

According to Judge Stone, November 14, 1867 was the day on which the fate of Denver was in the balance. On that day, Colonel Archer, after telling the people of Denver at a meeting called for the purpose of the financial plight of his road; presented his proposition, which was to the effect that it would require the purchase of $2,000,000 in stock of the Eastern Division by Denver citizens to secure its completion to Denver. This was new to many of those present, and fairly staggered the entire gathering.

Having learned in advance of this required subsidy to the Kansas road, a representative of the Union Pacific brought George Francis Train, then a famous orator, albeit an eccentric character, to Denver to argue in favor of a line to Cheyenne as an alternative to the Archer proposal. His elaborate and convincing argument won the day and on November 18, 1867, ex-Governor John Evans addressed a mass meeting of Denver citizens and informed them that a company had been formed to incorporate a railroad to run from Denver to Cheyenne. Thus was the Denver Pacific born.

In January 1868, the Kansas Pacific again sent emissaries to Denver, who were informed that the community was not to be deluded with promises, but that if the road was to be extended to Denver, the man back of the eastern
division must find the construction capital elsewhere than in Denver.

In the meantime, a contract had been entered into with the Union Pacific whereby that company was to build the branch from Cheyenne to Denver, with the Denver Pacific agreeing to supply half a million dollars towards its cost. This agreement was never carried out by reason of the fact that without further government subsidy the Union Pacific was financially unable to carry out its part of the contract.

Once again, Governor Evans came to the rescue and, after overcoming opposition from Kansas Pacific and other interests, succeeded in getting the Congress in March of 1869 to provide a land grant of alternate sections for the Kansas Pacific to Denver and for the Denver Pacific to Cheyenne, the arrangement being for the Kansas Pacific to operate both lines upon completion.

Ground was broken and grading for the Denver Pacific Railroad began at Denver on May 18, 1868, with completion on June 24, 1870. On that day, the corner stone for the first Union Station at 19th & Wazee Street, was laid and the driving of the last spike symbolizing completion of the first railway to enter Denver took place. A special train drawn by the bedecked locomotive, "D. H. Moffat", brought 200 Masons from Cheyenne.

After the ceremony and oration, ex-Governor John Evans, President of the railroad descended from the locomotive and proceeded to drive the last spike.

"A tinsel covered iron spike had to be substituted for the silver spike, donated for that purpose by two citizens of Georgetown. The hilarious party bringing the official spike down from Georgetown imbibed
too much at Golden and fell asleep, missing the stage and arriving in Denver one day too late. This undriven spike bearing appropriate inscription is now on display in the State Museum Building, Denver."

See "The First Five Years of the Railroad Era in Colorado", by E. O. Davis.

On August 15, 1870 ten and one quarter miles of track was laid on the Kansas Pacific, Eastern Division, in nine hours, closing the gap between the east and west track gangs at a point 3812 feet east of the present depot at Strasburg, Colorado. Here the last rail was laid without pomp or public ceremony.

A news item dated August 17, 1870 describing the occasion said:
"The last ox-wagon train with freight from the Kansas Pacific has arrived. Good-by ox-trains and bull-wackers! Welcome locomotives.

"Now for the first time, Denver is on a great through railroad route between the east and the Pacific. The first through train from Denver eastward left here at 8:00 o'clock yesterday morning for St. Louis and Chicago. The fare is as low as by any other route".

Another item published on November 24, 1870 is worthy of notice at this time. It read: "The first through freight car, Blue Line Number 4230 from New York City, arrived in Denver today. It was loaded with wines, liquors and cigars and passed over the following seven railroads, the last one being the Kansas Pacific between Kansas City and Denver. It was just thirteen days en route from the great metropolis". On the next day it
was stated that this same car was loaded with two hundred sacks (22,300 pounds) of silver ore from Central City, for its return trip to New York where it will be transferred to a boat for England to be smelted. The rate is about thirty-eight dollars a ton."

The second favorable factor pointing to a return of Territorial prosperity was the partial solution in 1868 of the baffling problem created in connection with the economic reduction of the sulphide and other complex ores uncovered in the lower levels of the mines of the Central City District.

For some time following the Gregory discovery, close to the surface ores in shafts and tunnels were highly oxidized and were known as blossom rock or burnt-quartz. Their gold content occurred as metallic or "free" gold. The first process used to recover the yellow metal was to crush or pulverize the ore and amalgamate the metal with mercury. This amalgam was then cleaned up periodically, heated in a retort to recover the mercury and the gold, cast in rough ingots, then sold to a bank.

This crushing and pulverizing process was first done with water powered arrastras and later on by batteries of vertical stamp mills operated by either water or steam power.

Neither of these methods was efficient but they served their purpose after a fashion until the zone of free gold surface ores became exhausted. Below that zone the veins went into a "cap", a horizon in which the ore was of such low value as to make it unprofitable to mine, or its character changed to an iron sulphide with which the operators were unacquainted, or the vein disappeared entirely. When these sulphide ores first appeared
they were believed to be worthless, which they were until the mill men hit upon a method of economically recovering the gold from them.

After much experimenting by many operators with little success, in this field, Boston capitalists, under the guiding genius of Professor Nathaniel P. Hill, formerly professor of chemistry at Brown University, raised $275,000 and started construction of the Boston and Colorado smelter in lower Black Hawk during the spring of 1867. The furnaces there were 'burned in' in January 1868. In 1873, the smelter began refining and separating metallic gold and silver, which until that time had been shipped as "matte" to Swansen, Wales.

In June 1878, incident to the increasing difficulty of obtaining fuel, the works were moved to Argo, three miles from Denver. Here they remained in operation until the slump in gold mining, at the beginning of World War I.

Note: See "Colorado's Little Kingdom", by Donald C. Kemp.

Soon after the end of the war in 1865, immigration to the West was resumed, with Colorado and Denver both benefiting materially thereby. In Denver, the population trend, which dropped from 4,749 in 1860 to less than 3,000 in June of 1861, reversed itself, so that when the census of 1870 was taken it was found to have regained the loss caused by the war, coming up with a total population of 4,759 in that year. A net gain of only 10 inhabitants in the decade to be sure, but significantly, it seemed to indicate that the worst was likely over.

The straggling, scattered city began to put on airs, and to give signs of stability that had been lacking ever since the boom days of 1859.
and 1860. According to Hall, the second wave of immigration and incidental prosperity for Denver, began in 1870 and continued for two years, with real estate becoming the center of speculative interest.

By this time, Denver had begun to show the beneficial effects of irrigation through the application of ditch water to the trees, shrubbery and lawns of the city, which had been planted in anticipation of completion, in the early summer of 1867, of the Platte Water Company Canal.

As the "News" said in an editorial published on February 23, 1870-

"The necessity of sustaining and perfecting the system of irrigation for our city requires no argument. Without it the beautiful trees and shrubbery now started in so many yards and along the principal streets, will soon go to decay and the city again become bare and desolate. To permit this is out of the question. The beauty of the city and the comfort of every citizen requires that we have full and permanent means of irrigation. The advantages of an abundant supply of water from this source in case of fire are too obvious to need anything more than a simple suggestion of the fact. A party under charge of Mr. Dean is now re-surveying, enlarging and cleaning out the ditches, and planting willows wherever they are required to prevent breaks.

"The expense of this work and of taking care of the ditches for the season will be at least $2,000. The most expensive portion of the ditch is at Cherry Creek, on both sides. The company has never collected enough to pay the expense of bringing water to the city and they now propose that the city assume the expense and collect from the citizens, or assess it
as a general tax. The company will not bring water further than Cherry Creek hereafter, unless a satisfactory arrangement can be made. These are the facts in the case as we understand it. "It is desirable that the water supply for use in case of fires and for irrigation, should be regular and abundant. It is also desirable that the whole matter be under the control of the city government".

Water was now the present great need of the city. In accordance with past custom, negotiations for a supply of irrigating water during the 1870 season were postponed until after a new city administration had taken office early in April of that year.

A newly elected council was sworn in on April 7, 1870 with Mayor B. B. Stiles and some Aldermen having been elected for a second one year term.

In his address to the Council on that date Mayor Stiles said in part: "Matters which are new and of importance will claim your attention; they must be met with a firm resolution, and acted upon with sole reference to the public interest, and not with reference to the interests of any individual. Schemes of various kinds are likely to be proposed to you, and you have but to ask yourself two questions; first, is the thing asked for legal, and in accordance with the Charter? Secondly, is it a public benefit? If not, and is simply a private enterprise, whereby individuals are seeking public funds to advance their own personal schemes, you will, of course, deny their demands".

Note: That these instructions from the Mayor relative to public ethics were not taken seriously by this and subsequent city administrations will be fully demonstrated later on in this story).
Continuing, the Mayor went on to say: "Water for irrigating purposes has become a prime necessity to the city. Our people evince a pride in adorning their residences with trees and shrubbery, and more trees will be planted this spring than ever before.

"The Platte Water Company is ready to contract with the city to furnish water in any quantity required, but they require the city to take charge of it at the city limits, and they refuse to introduce it into the streets.

"I have no doubt but that a satisfactory arrangement can be made with the company. I am of the opinion that the amount of money paid to said company should be charged to the general fund, for if we charge a special tax for water the cost of collecting the same will be so great, that but little or no revenue will be derived from it. The whole matter is in your hands and if you think proper, cisterns should be built at convenient points on the streets and filled with water for the extinguishing of fires".

Within a week, a special council committee of three reported that the Platte Water Company asked $5,000 to bring water to a point opposite Henry C. Brown's residence - Sherman Street and East 12th Avenue - or $3,500 to Smith's Lake. Council was not satisfied that the price asked was fair and reasonable and directed the committee on irrigation to continue negotiations. After much discussion by a political inspired council, a motion was passed on April 21, by a vote of 5 to 4 approving a contract whereby the city agreed to pay $4,500 for irrigation water at general fund expense. The time covered was six months, with water to be delivered at the city limits. The company agreed to forfeit $25 for each day it failed to keep the ditch supplied, or $50 a day should they fail to do so for a period of over four days.
Water was made available on all the streets ready to receive it on April 23, 1870 and, with the exception of about two weeks in all due to breaks in the canal, was supplied in ample quantity during the entire irrigating season. However, nearly every bill rendered by the company was questioned as to validity by one or more members of council.

Unfortunately, this quibbling attitude created an atmosphere of antagonism between the city administration and the ditch company which was never afterward fully dissipated.

Both before and after this arrangement for irrigation water in 1870, was concluded, special groups working both within and without the city council were busy on schemes of one kind or another for a water supply that would do a better job at less expense than the one here described. These included the sinking of artesian wells, the building of competing canals to tap both the Platte river and Cherry Creek and most important of all, the organization, late in the year of a company to construct a system of water works to supply water under pressure to Denver for fire, street and household purposes.

**Artesian Wells**

The first attempt of record to drill an artesian well was made early in 1867, when a group of prominent citizens secured a site and let a contract only to abandon the project, due to lack of funds.

Interest in the subject was revived however, when the Territorial Assembly of 1870 passed an Act – "To promote Arable Agriculture by Artesian Irrigation", approved on February 11, 1870.

The purpose of this Act was to stimulate the search for artesian water within the Territory by offering a reward of $2,000 to "the party
or parties who shall have first, under the directions of the board created by the Act, sunk a well 1,000 feet in depth or to such less depth as shall suffice to procure a flowing well, upon ground where irrigation is not practicable from the natural water courses, or from any ditch now constructed or contemplated under the laws of Colorado.

At the council meeting of March 3, 1870, Mr. L. S. Tappan and 32 other citizens presented a petition asking that the council offer a reward in addition to that offered by the Territory for an artesian well to be sunk within the city to establish water works under city control. This petition was referred to a special committee with the result that it was adversely reported upon at the council meeting of March 10th, and the matter dropped.

On June 8, 1870, the Tribune published a news item saying that an effort was being made to raise a subscription of $4,000 with which to pay for the sinking of an artesian well, and on July 12, another news item was printed to the effect that "The artesian well located just east of the city on the high ground back of the cemetery is progressing favorably. The derrick frame is up and a shaft sunk to the rock, a distance of 25 or 30 feet. The engine house is up and the engine and boiler on the ground". The necessary timbers and the cable were also reported as being on hand.

Note: Old map shows this well to have been drilled near the present location of the stand pipe at the Capitol Hill Reservoir site, on the "High ground back of the cemetery".

The story of this first real attempt to drill an artesian well in Denver is as told to a Tribune Reporter by Mr. Eli Brooks, Superintendent
of the well and published on February 11, 1873.

"Mr. Brooks said the works for drilling were put up early in July 1870, the drilling began the first of August in the same year. On August 11th, I was made Superintendent of the works by W. W. Ward, Director of the Company, and also paymaster of the Kansas Pacific Railroad, who had come to this country for his health and finding no immediate relief in Colorado, a short time afterwards, went to New Mexico. Here his health continued to decline, and early in the fall of that year he returned east to live only a few days.

"Mr. Ward had been a speculator in oil wells in Pennsylvania and had acquired some knowledge of their digging from his business association. He left the well entirely in my charge, seeming to have confidence in me. Other business having taken him away, I saw him but once or twice afterwards and then only for a moment.

"W. N. Byers, was President and D. H. Moffat, Treasurer of the company which was called the Denver Artesian Company.

"To one or the other of these gentlemen I would go for such suggestions or aid as occasion required. I was, however, in absolute charge after Ward's departure, especially as concerned the working of the well, the manner of its sinking, tubing, etc. We were some two or three weeks before all of the machinery was in good running order.

"After this time we went rapidly down, starting a bore 5 inches in diameter and striking the first stream of water at 251 feet, which rose some 80 feet. This was in the latter part of August. After striking
this first body of water, the well began to cave. We worked long enough to discover our progress would be fully impeded without casing. We enlarged the bore to 8 inches, so that the 7 inch casing, with an inside diameter of 6 1/4 inches, would go down.

"From this we began drilling the full measure of the inside of the casing. We struck our next bed of water at a depth of 530 feet. This, I think, was in October. This latter stream rushed up the bore with considerable force coming within 40 feet of the surface. It was very pure and soft and rising so near the surface encouraged us greatly in our labors, as it was self evident its bed was only 40 feet lower than the ground upon which we stood. When I communicated the news to the officers of the company they were very much elated. Our citizens, too, were rejoiced with the good sign. All seemed bright for a near and final completion when we got to the lower layer of sandstone whose fountain of water judging by the last, must be considerably above us which would have forced the water most likely to the very top of our derrick, giving an unfailing supply to every part of our city, even the Highlands across the Platte. After reaching the second vein, the well began caving again. This required a second casing which I did by putting it inside the first making it about 6 inches for that purpose, leaving the bore from this point 530 feet on down only 5 3/4 inches in diameter. The casing being firmly put down, drilling was started again, the work progressing finely. When at a depth of 575 feet, I was suddenly and without any good cause as I thought, ordered to stop work. This was the 11th day of February 1871, from which time I have never had any further connection with the company."
Lack of funds might well have been the reason for stopping work on this well, since the Tribune in reporting City Council proceedings of a meeting held on February 2, 1871 said: "Mr. Byers, from the Artesian Well Company, addressed the council at length in reference to a donation of $2,000 from the city, for the purpose of prosecuting the work. A motion to refer the matter to a special committee of three was defeated and then the matter was referred to the committee on water for irrigation by a vote of five to three.

Apparently the request was denied since the next item of significant news appeared in the Tribune on January 25, 1873. In reporting council proceedings of the day before, the following item was noted: A lengthy communication, signed by B. F. Woodward, W. N. Byers and A. C. Hunt was read and referred to the proper committee. In this communication it was stated that: being desirous of testing the practicability of furnishing artesian water for purposes of irrigation and being members of a company that has expended large sums of money in the furtherance of this object, on a piece of land originally donated by the Kansas Pacific Company, but which land has, by an Act of Congress, become the property of the city; would respectfully suggest that a new company be organized with a Capital Stock of $8,000, for the encouragement of artesian irrigation, and that the City of Denver subscribe for one half the said amount of stock; and that the City deed to said Artesian Well Company an undivided one-half interest in twenty acres of land upon which the said well is located".

Note: An Act of Congress, approved May 21, 1872 gave the Mayor of Denver the privilege of securing title to this and adjacent property
totalling 160 acres in all, by paying the minimum price of $1.25 an acre.
The land so purchased to be used for burial purposes.

The News on February 5, 1873 supported the artesian well project by saying: "It has been proposed, and we think wisely, that the City take hold of the artesian well business upon its own account, and not assist by aiding private companies."

On the next day the Tribune printed an editorial on the subject, saying in part: "There is hardly an enterprise connected with Denver of greater importance than the projected artesian well. The site of which at present resembles an Egyptian ruin more than anything of a practical nature. But the reverse is the truth. The old company by which the project was first undertaken failed almost at the inception of the work, although ample machinery was secured and everything else essential to its prosecution. The work was early abandoned; the money exhausted and for years the locality has been an unsightly object to the eye."

"By an outlay of a little over $1,000 all the derricks and machinery necessary to carry on the work to a successful issue can be secured," we are happy to learn that both the Mayor and the City Council are warmly in favor of the project, and it is thought they will prefer to make it a city matter throughout, advancing sufficient money from the treasury to secure the completion of the enterprise in giving to the city all the benefits that may accrue."

At the council meeting of February 6, 1873, the artesian well situation was discussed at length by the Mayor, the chairman of the finance committee and the Aldermen. All seemed to be in favor of proceeding with
completion of the well, but the exact line of procedure to secure the desired result was not agreed upon; and a committee on the well was appointed to investigate further.

Mr. Brooks, former superintendent of the well, whose remarks on its original construction have already been recorded, was consulted by the council committee. On February 16 he spent the greater part of the day sounding for obstructions in the abandoned well, and met with resistance about 48 feet from the top which could not be overcome. From his knowledge of the situation he remained firm in the conviction that the old well could not be reopened and recommended that a new one be started nearby.

A committee report on the artesian well was made to the city council on February 20, 1873. Briefly it was to the effect that it would be a needless expense and waste of time to fix it up.

At the council meeting of March 6, a petition was received from B. F. Woodward and others praying that the council take such action as would immediately secure the prosecution of the work of sinking an artesian well upon the lands of the city. This petition was received and referred to the committee on irrigation and the City Clerk was instructed to advertise for proposals to sink an artesian well to the depth of 1,000 feet.

On week later, two proposals for sinking an artesian well were received, read and referred to the committee on water for irrigation.

At the council meeting of March 27, 1873 a communication was read from Mr. J. O. Fease proposing to drill or bore an artesian well, anywhere within two miles of Denver, to a depth of 1,000 feet if a flowing stream was not reached at a less depth. He proposed to use a 5-inch auger
for the sum of $5,000 payable in installments. This proposal was likewise referred to the committee on water for irrigation.

At the municipal election of April 7, 1873, General F. M. Case was elected Mayor.

The new council committee on water for irrigation reported in favor of a Contract with Mr. J. G. Pease for the sinking of an artesian well for the City which was received and approved on May 22, 1873.

The substance of this agreement was: "For boring said well until flowing water is reached, if reached inside of 1,000 feet, or for boring said well to a depth of 1,000 feet, $5,000; for boring to the depth of 1,200 feet, the additional sum of $1,750; and for each additional foot down to 2,000 feet, the sum of $10.00 a foot. The city to furnish casing for the well, delivered alongside the well. Boring of the well was to begin within 35 days and to be continued from day to day until completed.

At this meeting, Alderman Barker from special committee to solicit subscriptions to aid in sinking an artesian well reported that he had received a subscription of $1,000 for said object from B. F. Woodward, payable one year after flowing water had been obtained. Also other subscriptions totalling $500 to be paid when flowing water became a reality.

An editorial in the Times of August 20, 1873 stated that: "Work on the Artesian Well by Pease and Company is now progressing rapidly. Only about a week has elapsed since the boring commenced but a depth of 225 feet has already been reached. The bore is eight inches in diameter, larger enough to give a generous supply of the necessary fluid, if the flowing vein is even struck".
Progress on the well boring was very satisfactory until on October 7, the Times reported that the well was then down to a depth of 640 feet, with further progress becoming quite difficult.

On October 17 a warrant for $400 was drawn in favor of Mr. Pease since the well was then down to a depth of 725 feet. On November 25, it was reported that the old cable was nearly worn out and a new one ordered from the east to be ready in case of emergency.

During this period of time the City Council was having difficulty with the Denver Water Company over franchise matters and nothing of interest was printed in the daily papers about the artesian well until the News in an editorial dated January 24, 1874 commented on the situation in part as follows:

"The condition of the Artesian Well is not satisfactory. There seems to have been some expense incurred, which was unnecessary, proven by its having for some time been undergoing an undoing process. Some of the tools or other substance which ought not to be there have found their way to the bottom of the well, and they possibly render it necessary to abandon the present well and commence a new one. This it will be remembered was the cause why the present attempt was not made on the well begun three years ago. The situation now has a bad look to it and has caused the remark to be made that improper influences had been at work to prevent the well ever being brought to a successful termination. Mr. Pease, the Contractor, is an old hand at sinking wells, and his reputation is at stake in this present
affair. He is engaged upon a public enterprise and the jealous eyes of not only the city but the people of the entire Territory are upon him watching for the success or failure of our experiment. The City government has lavishly furnished everything required for the rapid and satisfactory progress of the work; it has done its duty promptly in accordance with the wish of our citizens, and Mr. Pease must see to it that the failure of results must be from there being no water to strike and not from mistakes or accidents on his part”.

A resolution was presented and adopted at the Council meeting of January 29, 1874 instructing the committee on irrigation to inquire into the reason of the delay attendant upon the construction of the Artesian Well. On February 5, Alderman McCune asked what had become of the Artesian Well and was told that Mr. Pease had succeeded in getting the entire casing out and had drawn the tools part way out but had lost them again. Once more the Mayor appointed a committee to investigate and report.

An editorial in the News of February 12, 1874 attempted to explain what the condition of the big bore on the bluff was, going into some detail to do so. Mr. Pease was quoted as saying that by moving the machinery about ten feet to one side, with the knowledge of the strata obtained from this bore, he could sink another well to the depth of the present one in about six weeks. After commenting on the fact that the Contractor was not bonded to complete his contract, the News went on to say that: “Our efforts of getting an Artesian Well, or of testing the important question, have been unfortunate to say the least. Denver has expended privately and in its corporate capacity a number of thousand dollars and has met with no success, except that the second well
gained about 200 feet over the first, being 764 feet in depth. It appears to be now an utter failure, completely stopped up, unless the Contractor goes to the other end and pulls out the obstructions there."

This editorial was used by the special committee appointed to investigate the status of the well at a council meeting held on the day it was printed. Discussion was lengthy upon the subject of advancing the Contractor $500, since it then seemed to be conceded that the present hole would have to be abandoned.

As requested by Mayor Barker, Mr. Fease reported on the well situation under date of February 17, 1874. This report was in some detail and quite frank as to the difficulties encountered, closing with the statement that "the alternative of using another set of tools had progressed so far as to get the tools for "fishing" out the last tools and casing, and getting tools made for cutting and taking out the rope and getting them on the ground".

It was stated at the time this report was read that "the greatest obstacle to the Contractor then to the progress of the work was a lack of means. The cost to him so far having been upward of $6,000, only $2,000 of which he had received from the city in periodic payments.

Thus, the first attempt of Denver officials to obtain a public water supply for irrigation purposes turned out to be a complete failure.

Later on June 30, 1874, the Times published an article entitled, "An attempt to utilize artesian well water", in which it was said: "At the next meeting of the City Council the Odd Fellows will petition for permission to put a pump in the Artesian Well and erect a windmill for the purpose of irrigating their cemetery."
"This well was successfully sunk about 800 feet and the water had risen until it stood about 30 feet from the top and everyone expected that in a few days we would have a flowing well... Just at the time when expectation had ripened to a certainty, the trouble commenced. "The rope broke and left a portion of the tools 800 feet, more or less, in the bowels of the earth. In getting these out, others were got in. An effort was next made to get the casing out, but this also stuck and the whole affair was so contrary that the Contractor lost his courage and patience and gave up the job; and all we have for the outlay is the unsightly derrick, which looms up like the shears for setting the masts of a ship or whaleback lighthouse"...

At sporadic intervals of time during the next several months, the possibility of obtaining a supply of water from artesian wells for irrigation purposes cropped up to further disturb an otherwise complicated situation. For instance, on February 15, 1875 a petition was presented to the city council from the Colorado Artesian Well Company offering to sink a well for $25,000 when such well produced a flow of 30,000 gallons of water a day at its head. This petition was referred to a special committee for study and report. On February 20, 1875 an adverse report was made to the council and adopted by that body.

**Proposed Irrigating Ditches**

Among the numerous ditch schemes proposed in the early years of this decade, with each one intended to give the Platte Water Company competition for the City's irrigation business were the Arapahoe County Ditch Company, the Denver Aqueduct Company and the Denver Ditch Company, the latter having been sponsored by the City Administration as a public project.
Arapahoe County Ditch Company

This project proposed to get its water supply by ditch from a point on Cherry Creek located some eleven miles above the city and ending in a reservoir east of the cemetery, about four miles from town.

On May 21, 1870, a special council committee was appointed to confer with John Pierce in reference to the probable cost of such a water supply. A report dated June 2, 1870 prepared by General Pierce on the subject was submitted by the committee at the council meeting of that same date and placed on file. At this meeting, the regular council committee on water for irrigation was authorized to receive proposals for supplying the city with water by a canal from the Platte River or otherwise.

The Pierce report mentioned above was printed in full by the Tribune on June 5 and by the News on June 6, 1870. Both papers looked upon it with favor, believing that the plan as proposed would get a reliable supply of water for city use at much less expense than under any other scheme yet advanced. The News saying that the report "shows that it is quite feasible to get a full supply of water at a cost from Cherry Creek which will be very much less per year than the city government agreed to pay this year".

It was reported in the Tribune of September 7, 1870 that work would be started that week upon the seven mile long canal leading from Cherry Creek to the proposed reservoir, and which it was expected would be completed that fall. In the Pierce report it was stated that this ditch should

123.
be ten feet wide on the bottom, carry water to a depth of two feet and dis-
charge about 35 cubic feet of water per second on a grade of 5 feet a mile. 
General Pierce estimated that the project would produce a yield of water suffi-
sicient to meet the city's needs for the next twenty years.

On October 31, 1870, the Tribune printed an editorial headed -
"Irrigating our lands", which told of the progress being made on the canal
saying that it was being built eight feet wide on the bottom and was about
two thirds completed. The moving spirits behind this particular promotion
were Dr. John Parsons, Daniel Witter and John Gabathuler. Their plan was
to irrigate a strip of land six miles in width and ten miles long, with water
for the city as an incidental feature.

A new city council was sworn in on April 6, 1871 and soon thereafter
proposals were received for supplying irrigation water for that season.
On April 20th, it was announced by the News that the Platte Water Company
had offered to furnish irrigation water for $7,000 and that a council committee
was then negotiating with the company for better terms. It was also announced
that the Arapahoe County Ditch Company had also made an offer to furnish
400 inches of water daily to commence within ten days for $1,000 a month
for a season of five months. At the council meeting of April 20th, both
proposals were referred back to the committee on water for irrigation
with instructions that they, with the City Attorney, prepare a contract with
the company offering the best and most favorable terms and report back at
the next meeting. The committee presented a contract at a council meeting
held on April 27, 1871, with the Platte Water Company which provided for a
daily supply of 400 square inches of water for six months beginning with
April 28 at a rate of ten cents per square inch, $40.00 a day for an estimated 184 days - extra water to be furnished at the same rate, with delivery at several points located on the city limits. The committee report was received and approved and the Mayor authorized to sign the contract as presented.

**Denver Aqueduct Company**

This ditch company was incorporated in August 1871 for the purpose of supplying water for irrigation to Denver and to the lands lying to the north of the city on the east side of the Platte River. It was proposed to tap the Platte River at Brown's Bridge - West Union Avenue - about one mile north of Littleton, running through the heart of Denver, striking Sand Creek near the Kansas Pacific crossing and thence following the divide between the Box Elder and the Platte. The incorporators included, among others, Dr. John Parsons, who was also interested in the Arapahoe County Ditch Company, Walter S. Cheesman and D. H. Moffat. General John Pierce was the Engineer. The ditch was to be fifteen feet wide on the bottom and with water at a depth of four feet it was estimated that the capacity would be 8,240 inches, or about 215 cubic feet a second. It was planned to run water all winter under the ice.

On August 27, 1871, the News commented editorially on the water question saying in part: "The Platte Water Company's Ditch is the only one in existence which can supply the city with water. It is, therefore, a monopoly, and has the city in its power. Its contract to furnish water is being filled in an indifferent manner and in any event, it is not possible to furnish more than one-fifth or one-tenth the amount required. Its prices
are exorbitant and being without competition, it is in a position to demand them. The experience of the present season has proven that it is worse than fate to longer depend on this company alone for an adequate supply of water to irrigate the city.

"The Denver Aqueduct Company propose constructing a new ditch, which will be able to furnish a large supply of water. The company has been organized and we are assured that it will in a few days open its books for subscriptions to its capital stock; advertise for proposals; and finally go before the City Council with propositions to furnish water for a term of years. The construction and completion of this ditch will ensure one thing greatly needed, and what we have often urged, to wit: competition. With two ditches, our supply of water can hardly ever fail. The Platte Water Company will cease to be a monopoly"......

At the council meeting held on August 31, 1871, Dr. Parsons read a proposition offering to furnish the city of Denver with all the water necessary for irrigation for 10 percent annually of the cost of constructing the ditch - $50,000 - providing the City of Denver gives the right-of-way for said ditch, through and across the streets and alleys of the said city. The proposition was received and referred to the Committee on water for irrigation.

Although the News strongly advocated meeting the right-of-way and other demands of the company, the council committee refused to act one way or another upon them until the question of irrigation water for the 1872 season came up in February of that year.

In a News editorial published on February 18, 1872, it was stated
that subscriptions to the company's stock were being received with commendable rapidity, the aggregate at the time being between 10 and 15 thousand dollars or nearly one half the amount needed. Emphasis was given to the need for two ditches and to the fact that every consideration of good policy, public economy and wise foresight demanded the building of this second canal. The article concluded by saying "that the City Council should set a good example by immediately granting a right-of-way through the rest of the city limits, our voice is for two ditches, and for competition."

On this same day, the news columns carried a story to the effect that the Denver Aqueduct Company had made three propositions to the city, to all of which the committee seemed indifferent, with apparently no disposition to recommend the acceptance of any one of them. Almost immediately afterwards, the committee went into conference with the Platte Water Company and at an adjourned meeting of the city council held on February 20, 1872, reported a contract with the Platte Water Company to run for three years, beginning on May 1, 1872. The irrigating season was set to begin on April 15th, for the next two years and to last five and one half months. Six hundred inches a day was contracted for at $40 an inch. A penalty was provided for if the company failed to deliver water for more than seven consecutive days.

In presenting its report recommending the Platte Water Company Contract, the committee stated that in their conference with officials of the Denver Aqueduct Company, they learned that no contract would be made unless
the city would grant the required right-of-way and assume and pay all
damages occasioned by the construction of their ditch, which responsibility
the committee refused to assume. Nevertheless, the Aqueduct Company
proposition was presented to the City Council and laid on the table by a
vote of six to three.

The News reported on July 31, 1872 that a contract for the digging
of this canal had been let on July 27 to A. J. Williams.

At the council meeting of August 24, 1873, Dr. John Parson, President
of the Denver Aqueduct Company offered to sell the assets of that company to
the city on the following terms: That the city take their franchise, or as
much thereof that lies between the eastern limits of the City Corporation and
the head of the ditch; provided that the city constructs the ditch by the first
day of July 1873, according to the specifications and further that the City
respect all contracts of said Company, and further, that said City pay back
all money that said Company have expended on said ditch. Dr. Parson's
communication was referred to the committee on water for irrigation.

The News of April 27, 1873 commended this offer and hoped that it
would be accepted.

The City Council met on May 1, 1873 and received the report of
its committee on the offer of the Denver Aqueduct, recommending that the
tender be not accepted.
Denver Ditch Company

During this period of discussion over irrigation water, the News on August 27, 1871, argued that, while the city council should support competitive ditches, it should, if it had the legal power, inaugurate measures looking to the construction of a ditch capable of furnishing an adequate supply of water which would be owned and controlled by the city forever.

Apparently, this idea had been under consideration for some time since at the City Council meeting of August 31, 1871, an opinion was given by the City Attorney and an associated outside Attorney, to the effect that the city did have the right under its Charter to spend money to secure water from a source without the city limits if necessary. (Later found to be in error).

At this same meeting, the acting city surveyor reported that, in his opinion, the most water for the least money could be obtained by tapping the South Platte River at a point about three quarters of a mile above Brown's Bridge - opposite Prentice Street in Littleton.

It was also reported at this meeting that a corporation for the sole purpose of supplying the City of Denver with water had been organized under the name of the Denver Ditch Company.

The incorporators were John Harper, Mayor; Peter Winne, Alderman and F. M. Case, Acting City Surveyor. This method of procedure was adopted to avoid legal technicalities, with the understanding that these city officials would turn the whole matter over to the City at any time they were requested to do so.

At the council meeting of September 15, 1871, the City Surveyor's
report on a proposed route for a city ditch was read, received and placed on file. A committee of three Aldermen was then appointed to work with the surveyor in determining the most practical route, size and kind of ditch that should be built and when the necessary data was at hand to cause the City Clerk to advertise for bids for its construction. Later it was determined to build the ditch with a six foot bottom width on a grade of 2.64 feet per mile.

Twenty two bids were received to build the ditch. They were read at the council meeting of October 13, 1871 and referred to committee for recommendation. At a special meeting held on October 14th, the committee report was received and discussed, with action postponed until a later meeting.

The Tribune on November 22, 1871 commented on the fact that the water question had not yet been decided by the City Council and stated that it was understood that no action would be taken by it on the construction of a city ditch until Mr. Archer returned from the east so as to see what arrangements could be made with him or the water company of which he was the President, to supply water for irrigating purposes.

However, it was apparent to many that regardless of any arrangement that might be made for irrigation water from the "Holly" system, the demands of the growing city were such as to make it desirable for the council to be in position to finance additional water facilities of one kind or another as circumstances might require.
To that end, the Territorial Legislative Assembly was induced to pass an Act, which was approved on February 9, 1872, authorizing the City of Denver to create a public debt not exceeding $300,000, provided that the same was ratified by a two thirds vote of the people, with the money to be used for the purpose of furnishing said city with water for fire and other purposes, or for the erection of public buildings.

The year 1872 was a wet one. With other pressing problems before it, the city council temporarily set aside the need of securing an enlarged supply of irrigation water by the construction of a publicly owned ditch. One of the reasons being its lack of charter authority to spend tax money outside of the city limits.

With the failure of the Artesian Project and the uncertain and inadequate supply of water available from the Platte Water Company, as well as the refusal of the "Holly" system to help out in 1873, the matter was again revived in 1874, after the Charter had been amended as outlined hereafter.

An interesting editorial published in the News of June 26, 1873 is quoted here in part as follows: "The evening papers contained the following card: To the Citizens of Denver. I enclose with this communication an extract from the News of this morning written by a person named Thomas, charging a collusion between the "Holly" and "The Platte Water Company", to deprive you of water for your gardens and trees; the City Council looking on and forcing you to accept the water and pay the "Holly" Company for it.

"Another question is proper just here; how much of this delay is
due to a desire to force citizens to make contracts with the Holly Works in order to save their yards and grounds? The two companies are so dovetailed together that no one can tell where one begins and the other ends. "Our Holly" is a good thing for those who want it; but coercionary measures of this kind are apt to be distasteful to one portion of a community if not to all of it".

Mr. Archer then says: "It is well known that I own a controlling interest in the Denver Water Company and the above charge is a personal one. It is simply to put a few dollars in my pocket, I wish to see your labor of years, in cultivating fruit, shade trees and gardens, all sacrificed that I may make money. The facts are simply that I sympathize with you. The growth of Denver is my prosperity. I have expended a large sum to encourage it. Today we are paid for 800,000 gallons of water, but we furnish 1,500,000 gallons. "Every instinct of my nature revolts from such an idea and I assure that if I could with honest regard for your safety, open fire hydrants for irrigation, within our limits, I would do so. No proof of such collusion can be given".

After printing the above card from Mr. Archer, the News said: "We produce the above just to show our readers how near the mark we came. No man but one who was hit would ever rush into print in this matter, and we take great pleasure therefore in printing it.

"The results of Mr. Archer's interview are given elsewhere, which he may regard as personal or not, just as he pleases.

"One thing Mr. Archer must understand, he cannot hush up this
paper or bully its editors. He may single them out for personal insult, but he must remember that there are some "persons" who are beneath the contempt of decent men, in which class he places himself when he assumes the role of a scullion and a prize fighter".

An item taken from the minutes of a council meeting held on May 21, 1874, dealing with the subject of constructing a municipally owned ditch read as follows:

"Your committee on irrigation, to whom was referred the matter of furnishing water for irrigation for the City of Denver, would recommend that a survey be made by the City for a canal for irrigation purposes. In the meantime the Territorial Legislative Assembly had passed, and the Governor had approved on February 13, 1874 an Act to become effective on April 1, 1874.

Amending the City Charter, which among other things gave the city council power to provide the city with water, to erect hydrants and pumps, to construct cisterns, to provide for and regulate the manner of introducing water for irrigation and other purposes, to regulate and provide for the constructing of ditches, canals and gutters for conducting and distributing water through the city, and to keep same in repair, to regulate the use of water by the inhabitants of the city for irrigating the soil, to build and construct ditches outside of the city limits for the purpose of bringing water into the city for the use of the inhabitants thereof, in such way and manner as shall, by the city council, be deemed for the best interests of the city, and to keep the same in repair; to bore artesian wells for the purpose of obtaining water for the city, at such places within or
without the city of Denver as may be procured for that purpose by the City Council; to construct or purchase water works for the use of the city, and to enlarge their capacity from time to time, and keep the same in repair, and generally to do whatever may be needful and necessary to be done in order to supply the City of Denver with water for fire, irrigation and other purposes, and to regulate the same".

In addition to the broader powers given to the City by this 1874 amendment to the Denver Charter, there were two earlier events that helped to clear the legal atmosphere with respect to the construction of irrigating ditches in the Territory.

The first of these was the Supreme Court decision in the Younker vs. Nichols case reported in Volume I, Colorado Reports, at page 551. This case, decided in 1872, established the right to an appropriator of water to convey it by ditch over the land of another for the purpose of irrigating his land located at a distance from the stream from which the water was to be taken. The court held that "In this Territory lands are held in subordination to the dominate right of others, who must necessarily pass over them to obtain a supply of water to irrigate their own lands".

"A right to convey water over the land of another for the purpose of irrigating one's land may be acquired under the Statute, and such right needs not a grant from the owner of the servient estate to support it."

The second important item was the passage by the Legislative Assembly of 1872 and approved on January 22 of that year, of an Act to make section 48, of Chapter 18, Revised Statutes of Colorado, applicable
to certain corporations or bodies politic.

Section One of this Act made the provision of the above section applicable to all corporations, or bodies politic, heretofore formed or hereafter to be formed, for the purpose of supplying cities or towns with water for the purpose of domestic use or the suppression of fires, or for milling or manufacturing purposes; and all such corporations or bodies politic are authorized and empowered to proceed and obtain the condemnation of such land, real estate, or claims, as may be required for the construction or maintenance of the works of said corporations or bodies politic, the same as if said corporations or bodies politic had been specifically mentioned in said section forty-eight of Chapter eighteen of said Revised Statutes."

Section Two of this Act stated - "That any incorporated city or town shall have the power and authority to grant the right of way to such corporation or bodies politic over such portions of such street, alley, avenue or public property as may be necessary for the construction of a canal or ditch, or for laying water pipes, by such corporations or bodies politic."

According to King, the situation after April 1, 1874 was quite clear with the city having the power to own water works of any description and the power to grant or deny franchises as it saw fit.

The City Council, in granting a new franchise to the Denver Water Company, effective for a 17 year period beginning on May 1, 1874 disposed
of the water question most effectively so far as a supply of water for fire purposes was concerned.

This settled a long standing and at times, bitter controversy over fire hydrant charges, but left the question of a permanent supply of water for irrigation uses as far from solution as ever.

Beginning with May 1874 and continuing until the Platte Water Company purchase contract was signed on May 25, 1875, the City Council made a determined effort to secure a publicly owned irrigating ditch to relieve the city from the monopoly held by that company. Also, several schemes were advanced by competing organizations to accomplish the same result, but all ended in failure for one reason or another.

The Denver Aqueduct Company, of which Dr. John Parsons was the President, even got so far as to secure a contract for the delivery of 600 inches of water from Cherry Creek at $10 an inch for the season. The contract was approved by a vote of 9 to 3 on April 10, 1875, a few days after a new city administration had taken office. A performance bond of $25,000 was posted but never collected after the company let it be known that it had ceased work on its project and admitted on May 25, 1875 that the project was a failure.

Revival of activity concerning the Aldermanic Ditch resulted in three different routes being investigated before one was finally selected for construction on June 25, 1874.

These were: 1. A High Line Ditch; 2. A "Low Line" or Point of Rocks Ditch; and 3. a ditch from Cherry Creek.
The selection of a "Low Line" or Point of Rocks Line from the Platte River was made after a committee of six Aldermen had made a trip to Pueblo, in company with G. S. Nettleton, Consulting Engineer of Colorado Springs, to view the operation of ditches built on grades of 1.5 to 2.0 feet per mile. The estimated cost of this ditch was $33,803, exclusive of Right-of-Way.

Before selecting the Intake of this proposed ditch which was finally to be located between Brown's Bridge and Littleton, the city council had seriously considered buying a half interest in the Rough and Ready Mill Ditch, taking the water after it had been used for mill purposes.

The proposal of the owners of the Mill Ditch was: "To sell to the City of Denver a one-half interest in the water power and ditch belonging to us for $5,000 cash, and $500 to be paid by the City each year for keeping up the same and delivering the water north of the mill, we reserving the water not needed for city use".

From the Mill, the ditch would run for about two miles along the line of the original Capital Hydraulic line built in 1860-1861 and thence to Denver on a grade of about 2 feet to the mile. It was stated that this ditch would deliver water in Denver at about the elevation of the Platte Water Company Canal, 4 feet lower to be exact, and that it could be built easily within 90 days.

The objections against this ditch were three in number; one, it would deliver water to Denver at no higher elevation than the Platte Company
ditch; two, the city would be only half owner of the water at its source and finally, that considerable opposition would be met with in obtaining a right-of-way.

Arguments in its favor were, that it would be only 12 miles long, that its cost would not exceed $30,000 and thereby could be built without voting city bonds; that it could be built during the season of 1874; that being on about the same level as the Platte Company ditch there would be no farmer demand upon it for water, and finally, that the water right was one of the oldest, and consequently one of the most valuable on the Platte.

In selecting a ditch route with its intake somewhat below the Littleton Mill, the length of the ditch was shortened, and by using a grade of 19 inches to the mile water delivery could be made at the head of the 15th Street only 8 feet lower than the existing Platte ditch.

At the council meeting of June 25, 1874, a committee of three was appointed to ascertain the cost of a right-of-way and authorization given to advertise for bids for construction of the ditch. Later, the Mayor was authorized, in conjunction with this committee, to secure upon the best possible terms the required right-of-way.

The News of June 30, 1874 said: "The council are going resolutely to work and are evidently determined that the city shall own a ditch of its own - which action will receive unanimous endorsement at the hands of all who are interested in the growth and prosperity of the city. Now let those who are anxious to see a ditch constructed on the high line organize a
company and apply to the council for aid and the News predicts it will be granted. It seems to us that there has been enough playing one line against the other just for the benefit of those who don't want any ditch built at all. There has been enough wrangling about routes; now let the ditch digging begin."

An editorial in the News of August 2, 1874 reports on the 'Aldermanic' ditch as follows: - "Mayor Barker has secured the right-of-way for the city ditch from Point of Rocks, on the Platte, to the line of B. F. Woodward's land, this side of Cherry Creek, except from the following parties, whose lands the ditch crosses: John W. Smith, Rufus Clark and Peter Magnes. Proceedings to condemn the right-of-way have been begun, and will come up before Probate Judge Kingsley on Monday - August 3, 1874.

"It will be observed that the entire opposition, therefore, comes from the Platte Water Company, which has a ditch for sale; and the exact amount of personal self-interest which has placed itself in the way of the city having a ditch of its own, can be seen". ---

Again on August 6, 1874, the News Editor says: "The opposition to the construction of a city ditch has dwindled down to the Platte Water Company and its friends".

"The management of the Platte Ditch has been better than for any previous season, less breaks have occurred, and they have been more promptly repaired. But just at the dryest part of the season, when water was most needed, the ditch broke, and had the city not been blessed with
frequent showers, hundreds, even thousands of trees would have died, saying nothing about the damage to gardens, lawns, etc. This fact demonstrates the necessity for two ditches instead of one, and shows how unsafe it is to depend on a single water supply.

"This season as well as last, the city was obliged to be divided into sections, which received water on stated days at intervals of six or seven days".

In an editorial published on September 12, 1874, the Times said: "The legal opposition to the building of the new canal to supply the city with water, by which much time is being consumed in the condemnation of lands for the right-of-way, may extend the work of building the canal far into the winter. Of course, no one has a right to denounce any gentleman for opposing condemnation of his lands for any purpose, yet our people generally regret that the first bona-fide movement ever made by a city government to secure a canal belonging to the people should meet with such determined opposition".

The first inkling of a major change in the situation came with a news item in the Times of September 19, 1874 in which it was said: "The public is evidently soon to be treated to a new phase of the ditch question."

After the regular council meeting of September 28, 1874 was over, the council went into executive session.

"It was apparent that the outside world wasn't to know what was to transpire whether regular or irregular, legal or illegal. But the best laid plans of legislators and other men frequently go astray and somebody can't hold his or her tongue."
"For sometime past, it has been hinted that the new Denver Ditch would never be built. Be that as it may, at the executive session of the council last evening, a proposition was received from an existing Ditch Company, offering to sell all its rights, franchises, appurtenances, water and everything else in its possession to the City at a very low figure, below that which the condemnation of lands alone for the new ditch would cost, to say nothing of the expense which would be incurred in its construction. This much has been developed thus far, and it is expected that, ere long additional interesting facts will leak out."

The proposition referred to above came into the open at the council meeting of October 5, 1874. At that time a Platte Water Company communication was read offering to sell to the city 4,333 1/2 shares of stock at $12 a share, or a total of $52,000 to be paid in city bonds bearing interest at the rate of ten percent, payable semi-annually. The city was given 90 days in which to consider the matter.

This offer was freely discussed for some time thereafter with many questions being raised as to the legality of the company charter, its rights to the water and the land used for right of way purposes and incidental matters.

That the members of the city administration were at odds with each other over the best means of solving the irrigation problem at this time is shown by the fact that a committee was appointed on October 22, 1874 to secure the services of a competent engineer to make studies with respect to securing a sufficient supply of water from Cherry Creek, and providing
also that Mr. Nettleton, Consulting Engineer, be employed to run a new ditch line from some point on the Platte river above the Platte Company Intake and report back to council.

In commenting on the situation, the News, on October 23, 1874 stated that: "The city council is at sea again on the water question. The practical failure of the low line ditch enterprise, for which the people have to thank the Platte Water Company and Mr. Peter Magnus, and upon which our city fathers were nearly all united, has set them afloat again.

"Some are wading in the sands of Cherry Creek, some are clinging to the low line enterprise in the vicinity of Magnus' farm; some have gotten into the mud of the Platte Ditch, and others don't know what to do".

"We can see no other alternative now than for the city to buy this ditch. It is a disagreeable truth, but one which might as well be openly confessed that we are in the hands of this corporation, and will be until this ditch is purchased. The sooner it now becomes the property of the city, the better".

On October 28, Mr. Nettleton reported that to take a ditch out of the Platte any higher than the Platte Company ditch was impracticable. However, he suggested that the Platte Company ditch might be tapped about two miles below its head and a ditch constructed on a lighter grade which would deliver water to the white house at the cemetery.

He stated that such a ditch would be about twenty four miles long and would cost no more than either of the other two ditches under consideration, namely, the Littleton "Rough and Ready" connection, or the "Point of Rocks" ditch with its Intake lower down on the river.
After much discussion of the various ditch plans, a resolution was adopted, giving the Mayor authority to employ Mr. Charles or some other good attorney to assist Mr. Patterson, the City Attorney in making a thorough examination of the rights, titles and charter of the Platte Water Company, and report the same in writing to a council meeting as soon as possible.

Mr. Nettleton reported to the Council at its meeting of November 5, on his investigation of the lower ten miles of Cherry Creek as a source of irrigation water for the city. His report was an evasive one in many respects, which without saying so directly, strongly intimated that the possibility was a conjectural and expensive one. His report was received and filed.

The report of City Attorney Patterson and Special Counsel Charles on the status of the Platte Water Company was submitted to the city council at a meeting held November 12, 1874.

In summary the attorneys said:

That the Platte Water Company was a legally organized corporation and had a legal corporate existence. That it had a legal right of way insofar as it was obtained from legal land owners subsequent to the disposal of such land by the government, but that it was liable to be ejected from other lands by the legal owners of the same. Also that by the purchase of company stock, it would be compelled to buy water from the company in the same manner as would any other corporation or individual. It was stated that the company did not have the exclusive right to divert water from the
Platte river between the Platte Canyon and the mouth of Cherry Creek, but that such right was subject to the higher rights of riparian owners and those owning the land along the banks of the river, but that the company did have a superior right to the water over companies of a later organization than itself. Again, it was stated that if a lateral ditch - as suggested by Mr. Nettleton - was constructed, the right to surplus water turned into that ditch would be held subservient to all water rights acquired by other companies or parties, prior to the construction of such branch ditch. It was held that the City, under its charter, had the power to purchase the ditch of the company and finally that by taking the necessary steps, the ditch company could sell its canal to the city, but that this did not include the right to sell all its franchises while there was a dissenting stockholder of the company.

Note: It should be remembered, that it was not until the years 1879-1881 that the mechanics of applying the appropriation doctrine to water rights were provided for by Statute.

Alderman Currigan, presented to the council at a meeting held on November 19, 1874 an outline of his plan to furnish the city with water. Briefly it was to pump the water from the Platte at a point about two miles above the city into a large reservoir, at an initial cost, with adequate machinery of about $150,000.

In reporting this particular meeting, the Times said: "After an entire session of floundering, the city council was coming back to first principals on the irrigation question. This was done by appointing
a committee to confer with the Platte Water Company to ascertain the figure at which it would furnish the city with water for irrigating purposes during the 1875 water season."

As might have been expected, this committee had its conference with officials of the Platte Water Company and found themselves compelled to report on November 28 that no bargain could be made.

Unwilling even at this late date to abandon the idea of securing a supply of irrigation water from a source other than that of the Platte Water Company canal, a resolution was offered and adopted at the first council meeting of January 1875, for a committee of three to ascertain and report upon the practicability of securing a supply of water for irrigating or other purposes, by the use of machinery to be driven by water power.

An elaborate report on this subject was presented to the council meeting of February 4, 1875. The main features of the plan were to install water turbine wheels in the Whittemore Ditch at a cost of $95,000 exclusive of the purchase of the ditch itself. After discussion, it was agreed that surveys should be made to determine the feasibility of the project. At this same meeting, it was decided to again get a legal opinion from Mr. Patterson and Mr. Charles on how the city could legally acquire title to the Platte Water Company's ditch.

Further discussion of the question took place on February 8, with the attorneys saying that the best authorities agreed that the city had the power to purchase or lease the ditch for a long period of time. A resolution was then adopted to the affect that until the officers of the
Platte Water Company show the council that they had the right-of-way over the land on which the ditch was located, the council would take no further action in the matter.

Two days later, on February 10, a committee was appointed by the Mayor to wait upon the officers of the Holly Company to ascertain whether they could furnish water for irrigating purposes. In the discussion preceding this action, Mayor Barker said that it already had been learned that the corporation could not do this. An Alderman said he thought the Mayor was mistaken, since Mr. Archer, President of the Company, prior to his departure for St. Louis, where he expected to purchase new machinery, had said that with the proposed improvements to the Holly system, irrigating water might be supplied.

After hearing various and sundry proposals for artesian wells to be sunk in the bed of Cherry Creek and elsewhere, the council on February 18 received another communication from the Platte Water Company for the sale of its property to the city. This proposal, was an offer to sell for $60,000 in 20 year 10 per cent bonds, to bear interest beginning with April 1, 1875 with five thousand dollars of said bonds to be placed in escrow conditioned that they should only be delivered when the right-of-way along the whole line of the ditch was obtained.

A motion to accept the offer was lost by a vote of 7 to 2.

On February 18, it was reported to the city council that President Archer of the Holly Company had no inclination to furnish water for irrigation. When pressed as to the cost of doing so he remarked that the figure would likely be about $100,000.
At a council meeting held on February 20, 1875, a special committee of that body reported that it had suggested to the Company, which was agreeable, that the City pay $60,000 in city bonds to run for 20 years, carrying an interest rate of 10 percent beginning on April 1, 1875, with $10,000 and interest thereon to be withheld until the right of way along the entire ditch had been obtained. A motion was then passed by a vote of 8 to 2 authorizing a proclamation for an election to buy the ditch.

The election was held on March 15, 1875 and the proposal to purchase the Platte Company canal was defeated by a vote of 330 to 58.

This decision by the people left the City Council with five alternatives before it. These were, as listed by the Times on March 18, 1875:

1. To go ahead and build the Aldermanic Ditch started in 1874, paying $30,000 for land secured by condemnation.

2. To order pumps, turbine wheels, pipe etc. and pump water from the Whittmore Ditch into a reservoir on Capitol Hill.

3. To assist the High Line Company to get water down during the fall of 1875.

4. To run the risk of getting a supply from Dr. Parsons Cherry Creek project.

5. To buy the Platte Water Company canal without submitting the question to a vote of the people.

Again the conflicting views of various Aldermen came into play with the old proposals once more being brought for discussion. A new proposal submitted on March 18, 1875 from Peacock and Nichols stated that these gentlemen would furnish 4,680,000 gallons of water every day of 12 hours for irrigation and other
purposes for the sum of $40,000. The plan was to pump the water from Cherry Creek into reservoirs so that water could be supplied to the high ground at the City Cemetery.

About this time, on April 3, 1875, the Denver Water Company decided to raise the price of pumped water for irrigation purposes effective May 1, 1875 from $10.00 for the first lot and $5.00 for each subsequent lot, to $12.50 and $5.00 respectively. No change in price was made for water used for household purposes.

The annual municipal election of April 5, 1875 was a tame affair, with Mayor Barker remaining in office for the last year of his two year term beginning with April 1, 1874.

In addressing the retiring council members on April 8, Mayor Barker reviewed the history of the "Aldermanic" ditch, saying that the right-of-way had been obtained, either by purchase or condemnation for the entire line, except over the lands of Mr. Peter Mangus. It was necessary to obtain personal service upon all those through whose lands the ditch would run, and Mr. Magnus knowing this, and being opposed to the enterprise, suddenly left for Europe for the purpose of defeating the city. When he returned, it being late in the season, and an organized opposition having been formed from the various parties who desire the adoption of one or another of the many plans to supply water and knowing that the Aldermanic Company would be obliged to look to the next council to reimburse them for the money expended, it was deemed advisable not to proceed.

Again efforts to get the Platte Water Company to furnish water for irrigation during 1875 were unavailing, the company maintaining that its ditch was for sale.
or lease and it could not sell water on a short term contract.

At the council meeting of April 10, 1875, a proposition from the Platte Water Company for the sale of its franchises was read and voted down, and a contract with Dr. Parsons for a supply of water was authorized.

At a council meeting held May 15, 1875, a special committee report on a conference with officials of the Platte Water Company was submitted carrying with it a proposition recommending careful attention.

It was - "The Platte Water Company proposes to lease their canal to the City of Denver, with its appurtenances, for a term of eight (8) years, upon a basis of $60,000 with ten percent per annum interest on all deferred payments; $10,000 to be paid in advance, and $10,000 each year until the whole amount is paid.

After much discussion, it was decided to submit this latest proposition to an informal vote of the people, the date of the election being set for May 19, 1875.

In discussing the results of that election on May 20, the News said: "Although the majority in favor of the purchase is only fourteen, it will be observed that the four wards of East Denver give 124 majority for the ditch, while the heavy opposition comes from the First and Sixth Wards, and is easily accounted for by the fact that these wards are supplied with water already".

The total vote was 860 with 437 for and 423 against.

An interesting side light is shown in a "Card" from the Platte Water Company to the Editor of the Times which was printed on May 21, 1875. The card read: "We notice in last evenings "Democrat" an editorially charging that all the other papers of the City and the Mayor are subsidized by the Platte Water Company. In reply the company desires to say that with but one exception, no
newspaper or official of the city has asked or received one cent from the Platte Water Company, except in payment for legitimate advertising or printing. That one exception is the Editor of the Democrat, who stated to the Treasurer of this company that he knew the influence of his paper could carry the sale of the canal for the Council on last Saturday night and that for a consideration, he would do it. He was informed that the company would be glad to have his influence, but had decided at the outset not to spend money for such purposes."

Council held a number of meetings during the week following the election with determined effects being made upon the part of a few Aldermen to prevent execution of the proposed lease of the Platte Canal, insisting that Dr. Parsons should have a few days extension of time to make good on his contract. However, at a meeting held on May 25, 1875, the contract and bond in the amount of $60,000 for the lease of the Platte Water Company canal, was adopted unanimously and the Chairman of the Irrigating Committee authorized to have the ditch repaired immediately. The first year's payment of $10,000 was made and fifty men put to work on the next day.

The original long hand entries of the various documents executed in connection with this lease are recorded in Book No. 1 - Abstract of Title to property belonging to the City of Denver, at pages 35, 36, 37 and 38 with copies to be found in the Appendix hereof.

Operation of the ditch under City control began on June 1, 1875 with storms thereafter causing trouble necessitating shut downs for considerable periods of time and then when water was again turned in the farmers took more than their share, making life miserable for the water police.
The Times on August 13, 1875 had this to say: "When the water was first let in, the farmers took it all. Sluice ways and flood gates were open and the water did not reach the city for several days. Then when it began to appear, the people of the suburbs turned it into their gardens. The water police made strenuous efforts to keep the stream flowing to the heart of the city, but the women would drive them away with clubs, brooms, mops and second hand umbrellas until life became a burden to the officers".

At this point, it should be mentioned that the officials of the Platte Water Company had previously spent considerable effort and money in more or less successful attempts to increase the quantity of water available to its consumers as well as to improve the continuity of service.

For instance, the company advertised for proposals to clean out, repair and enlarge the canal throughout its entire length to be received until November 10, 1873. Although details of the work done are lacking we do know that when the 1883 District Court Decrees were entered, the Platte Water Company was given a 13.00 second foot first enlargement decree as of November 1, 1873 in addition to its construction decree of 30.00 second feet as of November 28, 1860.

This was followed by the letting of a contract to Pat Riley on June 29, 1874, for the construction of a side ditch beginning on the main canal south of the Cherry Creek crossing and running upstream along Cherry Creek about 2200 feet to bedrock where a diversion dam was built to divert about 200 inches of water into the main canal from this secondary source of supply. On August 11th it was reported that a recent flood had carried away the original Cherry Creek diversion dam but that it had been replaced with a more substantial structure with the project then in good working order.
An indication of what some of the problems were in this first year of city control of the Canal is shown by the passage of an ordinance on August 16, 1875, for the preservation and protection of the Platte Water Ditch, which set fines from $5.00 to $300.00 for the conviction of any person who dammed up, obstructed, cut into, opened or broke the ditch for the purpose of using water without permission, or maliciously damaging the ditch in any way. A copy of this ordinance will be found in the Appendix.

The first three of the remaining four years of this decade were years of above average rain fall in Denver, with 1879 falling 29 percent below average. This was not an unmixed blessing since violent summer storms occurred at intervals close enough together to keep the city busy repairing major breaks in the canal, with much criticism from consumers over the manner in which the city forces conducted their operation.

In 1876 the position of Ditch Superintendent was created as a political plum, and the man appointed to fill the job at $200 a month was retained for that year only. On November 2, 1875, the chairman of the committee on irrigation reported nearly $17,000 had been spent since April in repairs, labor and salaries, and that $1,900 had been received in cash and notes from farmers using water on the ditch line, leaving over $15,000 to be paid from tax funds. In this report, the Chairman went on to say: "We have seen by experience that the Irrigation Committee of the City Council cannot run a ditch profitable for they are totally unfit, that it is almost impossible to put competent men in places where they are most needed".

As a result of this costly experience an advertisement was released
on November 7, 1876 requesting sealed bids for furnishing water to the city and to the farmers along the Platte Ditch for the 1877 season with all bids to be returned by November 23, 1876.

At the council meeting of that date, four bids for furnishing the city with 800 inches of water were opened and read. A special committee appointed to canvass the bids reported later in the evening that the bid of one Pat Riley was the best of all received and the Mayor was authorized to execute a contract with him, the consideration being $5,500.00.

Operation of the City Ditch during the year 1877, was fairly satisfactory. Water was abundant for most of the season leading to wasteful practices accompanied by a number of neighborhood rows, family feuds, and some petty law suits. Most of these disputes could have been prevented had the water policemen operating within the city been experienced and competent, instead of partisan and incompetent political appointees. At times the citizens took ditch matters into their own hands, successfully defying the Mayor, City Council, Police and the entire machinery of the city government.

Nevertheless, the committee on water for irrigation reported on September 7, that up to the first of August, Mr. Riley had furnished from 100 to 200 inches of water a day in excess of his contract and recommended that he be paid a bonus of $100 for the good job he had done.

The first State legislature amended the City Charter by fixing the time for holding municipal elections on dates coinciding with those of the State. This Act was approved on April 6, 1877 and as a result, a new city administration came into office on October 9, 1877, with former Mayor B. B. Stiles again becoming the Chief Administrator of the city. Only two days later, the committee
on water for irrigation was instructed to confer with Mr. Riley and obtain from him a proposition to furnish 1,000 inches of water for the year 1878 as well as a similar proposition for a three year period commencing with that season. After considering the matter, the committee recommended that competitive bids be taken. This was done with the result that none of the three submitted were satisfactory. However, in reporting that fact on November 6, the committee stated that Mr. Riley had offered to furnish the required quantity of water during the 1878 season for $2,500 in city warrants plus all the proceeds of water rents obtained from the farmers along the ditch. On November 8, a contract with bond was submitted on the above basis and the Mayor authorized to execute on the part of the city by a vote of 9 to 1.

The first public notice with respect to the proposed construction of a High Line ditch was noted by the Times on November 21, 1877. It was stated that on that day articles of incorporation for the Denver Canal and Irrigation Company had been filed. This was said to be but a preliminary step, since negotiations had only progressed far enough to be certain that sooner or later such a ditch was sure to be built.

On January 30, 1878, the Times ran a news item under the heading - "The Highline Canal", saying that much local interest had been aroused by the proposal. The article read in part as follows: "Nothing further will be known regarding the project until the English Stockholders are heard from. The parties now here, representing the English stockholders, have no authority to accept any propositions differing from those originally made, and therefore the supplementary contract insisted upon by Governor Evans to protect the interest of Denver Pacific bond holders, had to be sent to England for approval". --
On May 22, 1878 a sizeable flood came down Cherry Creek, damaging the Cherry Creek flume and putting the city ditch out of commission for several days. As a result it became necessary to construct about 1200 feet of new ditch, with the city contributing $200 toward the extra expense incurred by the Contractor.

On October 8, 1878, the city council was reorganized following the annual municipal election of the day before with Richard Sopris, the pioneer, succeeding B. B. Stiles as Mayor.

By this time, public interest in the construction of a sanitary sewer system had reached a point where the City Council found it desirable to call a special meeting on November 14, to discuss the subject. The outcome of that meeting was the appointment of a committee, Mayor Sopris acting as Chairman, with instructions to visit St. Louis for the purpose of examining the system of sewage in use there and to study the method used to finance its installation.

A complete and satisfactory report containing much valuable information, was made by this committee to the City Council on December 8, 1878.

Before the City Council could establish a system of sewerage, however, it was necessary to amend the Law Incorporating the City of Denver. This was done by persuading the General Assembly to pass an Act for that purpose, which was approved on February 19, 1879.

Among other things this Act required the city council to establish sewer districts by ordinance; to cause sewers to be constructed in any district whenever a majority of property owners resident therein should petition therefore or when the Board of Health recommended the same for sanitary reasons, after said recommendation had been approved by the city council; provided that no public sewers were to be constructed until the question of constructing them
should first have been submitted to a vote of such of the taxpayers of the city as were legal voters and approved by a majority thereof.

Although this Act gave the City Council authority to proceed with this much needed public facility, the majority members of that body were unable to come up with a definite plan of action, until after the municipal election of October 7, 1879 was held. At that time Mayor Sopris was re-elected, despite the bitter opposition to him by the News. At the same time, a proposition permitting the council to spend not to exceed $25,000 of general tax funds for a start on a sewer system was approved by a vote of 1,158 for, and 340 against.

Mayor Sopris was interviewed on the subject by a Times Reporter on October 15, 1879. The Mayor was quoted as saying that a petition was in circulation asking the Council to construct sewers in a district running from 15th to 17th Street between Wazee and Broadway.

The Mayor also stated that all the calculations and estimates had been made and that as soon as the petition had been completed and presented, bids would be called for and the actual construction work promptly gotten under way.

The City Engineer presented a comprehensive report on a proposed sewer system to the City Council on November 13, 1879. It covered the territory between Larimer and Champa Streets, from 13th to 19th Streets.

This report was immediately referred to the council committee on drainage and sewers with resulting recommendations for changes which appeared to be for reasons other than engineering ones. In any event, after the committee reported that it could not agree on the size of the main sewer, the Council resolved itself into a committee of the whole with much discussion but no action
taken. The matter became quite controversial, but at a meeting held on December 22, 1879, the report of the City Engineer, with plans and specifications was finally adopted and ordered printed.

The contest for the privilege of operating the city ditch between its headgate and the city limits for the year 1879, resulted in a three year award to William Toovey by unanimous vote of the City Council on February 20, 1879. For reasons unknown, the terms of this contract, other than the fact that it was to run for three years, were not published by the Tribune in its official report released the following day.

**Denver City Water Company**

The most important single event of this decade was by far, the organization of this company.

It was the first water plant designed to supply water under pressure for public use in Denver, with service beginning in January 1872.
This corporation was organized and created under and by virtue of the laws of the then territory of Colorado on or about the thirtieth day of October 1870.

The stated purpose was to supply water to the City of Denver by laying pipes through the streets, and in such other manner and way as engineering should show to be the best calculated to accomplish such purpose.

The original officers and directors of the company were:

James Archer, President; David Moffat, Treasurer; R. R. McCormick, Secretary. In addition to these three men, the Board of Directors included Jerome B. Chaffee, Walter S. Cheesman, E. F. Hallack, Edward M. McCook, F. Z. Salomon, Wilson Waddingham and Daniel Witter.

The authorized capital stock of the company was $250,000 with a further authorization of $250,000 in bonds.

The sequence of events leading up to the granting of a twenty year, exclusive franchise, beginning on the eighth day of December 1870, to this infant corporation, was described in considerable detail by the local newspapers of that time.

The first news item printed by the Tribune and the News on the formation of this company were published in their respective issues of November 3, 1870.
In the record of the City Council Proceedings for the meeting of
November 17, 1870 we find the following item of business:

"James Archer, Esq. of the Denver City Water Works, requested the
privilege of laying the views of the company before the Council, which being
granted, Mr. Archer stated the advantages to be derived by the citizens of
Denver and Colorado, by the immediate construction of water works in the
City of Denver, and closed by requesting a meeting with his company by a
committee of the City Council, and trusted that there would be a liberal spirit
exhibited towards the company by the City Council.

"On motion of Alderman Londoner, a committee of three was appointed
to confer with the Denver Water Company. The Mayor (B. B. Stiles) appointed
as such committee Aldermen Londoner, Bailey and Bates."

The News on November 18, commented on Mr. Archer's request for a
charter, mentioning his statement to the effect that such works were a necessity,
not only for the health of the city but for its security against fire.

The Tribune on the same date printed a long statement outlining the merits
of the proposed agreement ending with the following:

"It only remains to decide how Denver shall get them. (water works)
It must either be done by the City or by private enterprise. They may cost
$200,000. While we should like to have the city owner of the works, we do
not see how we can wisely burden ourselves at the present time with such a debt.
We do not believe the citizens wish to do that, in view of the large sums they
now pay for taxes. It remains then for private parties to build the works, and
this company has the money, are thoroughly reliable and responsible in all
particulars, are large property owners themselves, and will make a contract
satisfactory to the city. We do not believe that better opportunity will present itself than the present with its greatly needed improvement, and we think we speak the mind of the people when we say we hope the contract asked for may be made."

In order to bring the question before the city government in the time honored way, a petition was circulated among the banks and business houses of the city so that all who desired to do so could sign it. This petition according to the Tribune of November 21, 1870 read as follows:

"To the Honorable Mayor and Council of the City of Denver":

"Your petitioners respectfully represent that the City of Denver is greatly in need of a full and ample supply of water for general use, and for the use of the Fire Department of the City. The present supply is obtained solely from wells and street gutters, and for the purposes of the Fire Department is insufficient, and so distributed as to be practically useless, while it is inferior in quality and unfit for general use. We therefore pray that your honorable body will speedily provide a system of water works calculated to supply the citizens abundantly and for every purpose. We respectfully call your attention to the fact that as we are now situated we are almost powerless against the ravages of fire, and by a simple conflagration will in all probability suffer a greater loss than a perfect system of water works would amount to. Also to the further fact that the cost of fire insurance would be greatly reduced if an ample supply of water would be furnished and properly distributed for extinguishing fire, thus relieving our business from what is now a heavy burden, and your petitioners as in duty bound will, ever pray, etc."
On this day also, the Tribune stated: "We trust that these petitions will receive the signature of every business man. The matter is of vital importance, and if the city sees proper to contract with the company offering to build works, we shall have hydrants by next July, able to play 150 feet above Larimer Street."

That the News was not completely sold on the Archer plan will be seen from the editorial published on November 22, 1870 entitled "Water Works".

"The most important improvement now required for Denver is a good system of water works. Water for irrigation is abundant and good, but it is not fit for household use nor is the supply so arranged as to be serviceable in case of fire. Already many of our shallow wells are spoiled; more will be and it is plain that in a very few years their use must be generally given up. As a protection against the ravages of fire the wells of the town are totally inefficient. The street gutters have been and may be again, in rare cases, of great service, but the water runs in them only four or five months of the year. The balance of the time they are dry. Such a resource will not do to depend on.

"Either the Platte Water Canal must be enlarged, protected from frost and kept full of water all the time, then pipes laid from it through the streets of the city, and hydrants set up, or else we must look to some other source and means of supply. We hoped the problem might be solved by the artesian well and still think the prospect good.

"Other plans are also proposed and the City Council is likely to have its hands full with the water question. The people are getting interested and importunate, because all are satisfied that an ample supply of water must be secured."
Among the items of business listed at the City Council meeting of December 1, 1870 we find:

"Propositions from two street railway companies were received and referred, also a proposition from the water company, which was re-referred to the committee to be reported at the next meeting."

The proposition referred to above concerning water was in the form of a memorandum agreement signed by Mr. Archer which covered six points as follows:

One - that the Denver City Water Company be given the exclusive right to lay pipes for the distribution of water within the city limits and the additions made thereto.

Two - In consideration of said right the company would agree to lay, within one year from contract date, at least three miles of main distributing pipe within the city limits, supply the same with water and extend mains to meet the demands as fast as possible.

Three - The Company agreed to erect hydrants on the line of the main pipe at all points that the City Council may direct, the City to pay the actual cost therefor. Each hydrant to furnish a supply of water for fire department use, not less in quantity than one stream forced through a nozzle one inch in diameter, to a height of seventy-five feet above the grade of the city at the intersection of Larimer and F (15th) Streets. The supply to be continuous unless cut off by accident or casualty, with the company obligated to make all reasonable effort to repair the same immediately.

Four - The city to pay the Company annually the sum of one hundred and fifty dollars for the use of each hydrant, to be paid quarterly.
Five - The company to furnish water to the occupants of houses and other persons desiring the same along the line of the water pipes for domestic and other purposes, at rates not to exceed those charged by the City of St. Louis, in the State of Missouri, to its inhabitants.

Six - At the expiration of twenty years from acceptance by the City, it to have the option to purchase the water works of the company, at a valuation to be fixed by five appraisers, two of whom were to be appointed by each party to the contract, who, when appointed, would appoint a fifth appraiser. Any three of them having the power to fix such valuation.

The citizens petition quoted above was also received and ordered placed on file at the council meeting of December 1, 1870.

In an editorial dated December 4, 1870 the News commented on Mr. Archer's memorandum of December 1, by summarizing the six points enumerated, ending with the following: "The proposition seems extremely fair and favorable."

At the council meeting of December 8, 1870, the following report of the special water committee was read:

Denver, December 8, 1870

"To the Honorable Mayor and Council:

Gentlemen: Your committee, to whom was referred the proposition of the Denver City Water Company, beg leave to report in favor of the same, and would recommend that the Honorable Mayor be authorized to sign a contract with the said Company upon the basis of the proposition submitted by their President, with the following proviso, to-wit:

That the city shall have the use of the fire plugs for the purpose of washing gutters and watering streets."
All of which is respectfully submitted, W. Londoner, J. E. Bates, J. L. Bailey.

After defeating a motion to amend by striking out the part relating to hydrants, the original motion to adopt the report as made was passed by a vote of 7 to 2.

The water contract as drawn and signed by both parties as a result of Council action on December 8, 1870, was dated December 16, 1870. A copy of this contract will be found in the Appendix.

On November 1, 1869, the News reported that the Honorable James Archer of the Kansas Pacific was registered at the American House, and on November 4 of that year the Tribune carried a news item to the effect that no less than three parties were then looking to the erection of gas works in Denver, Mr. James Archer of St. Louis representing one of them.

At the Council Meeting of November 12, 1869, consideration was given to the proposition of Messrs. James Archer, John Evans, Louis M. Tappan, William N. Byers, L. F. Barteld, W. S. Cheesman, D. Tom Smith and D. H. Moffat, Jr., for erecting gas works and supplying the City of Denver and the citizens thereof with gas.

On November 13, 1869, a contract with the Denver Gas Company for the introduction of illuminating gas in and throughout the city was approved by the city council. This contract was an exclusive one to run for fifty years from the first day of January 1870. Mr. Archer was the first president of this company.

One year later on November 19, 1870, the last rivet in the gas holder marking the completion of the gas works was driven. A celebration was held on that day with Mr. William N. Byers, acting as Master of Ceremonies. His remarks in part were as follows: "There are no more perfect works in the west,
and they will long stand as an evidence of the far-sighted enterprise and the firm confidence which Mr. Archer possesses in the future of Denver. Few gentlemen are now more largely interested in Denver, in its improvement and in its growth, or in those enterprises which promise so much toward hastening both.

"We claim him as a Denver man, with no little pride, and with him a long career of usefulness in our city, and in the territory of Colorado. His large capital, his energy, enterprise and business capacity, and his free, whole-souled and generous social characteristics render him a gentlemen whom to know is to honor and respect, and who as a public or private citizen, is entitled to public and private honor from our people." A biography of James Archer, Colonel by courtesy only, is to be found in the Appendix.

Returning to the affairs of the Denver City Water Company, we find that, even before actual construction work had been begun, the authority of the City Council, to grant the franchise of December 16, 1870, was being questioned.

In discussing this phase of the situation, King in his book, "The History of Government of Denver, with special reference to its relations with Public Service Corporations", states on Page 182 -"Construction work was well under way by midsummer of 1871, and on January 10, 1872, the company began supplying water. In the meantime, the company had made a contract with the city whereby the company was allowed to dig upon the city's streets, and water was furnished for city hydrants. Just what this contract was does not appear, save that the company was to get $150 per annum for each city hydrant, but at that time, neither the city nor the legislature had power to grant franchises to water companies."
"Such power was first granted to the incorporated cities of the Territory on January 22, 1872, by an amendment to the incorporation statutes, authorizing the incorporation of water companies under the general law, and empowering incorporated cities to grant them the right of way in their streets."

Enabling acts passed by the Territorial Legislature, defining the powers and duties of the Denver City Council insofar as a public water supply was concerned, are here listed for the purpose of a better understanding of subsequent events in this connection.

1. An Act to incorporate the City of Denver, passed at the First Session, Territorial Legislature, and approved November 7, 1861.

   Article V, Section 8

   "To provide the City with water; to erect hydrants and pumps; build cisterns and dig wells, in the streets, for the supply of engines and buckets."

2. An Act to reduce the law incorporating the City of Denver, and the several acts amendatory thereof into one act and to amend the same. Passed at the Fifth Session, Territorial Legislature, and approved February 9, 1866.

   Article V, Section 8

   "To provide the city with water, to erect hydrants and pumps; build cisterns and dig wells in the streets for the supply of engines and buckets; to provide for, and regulate the manner of introducing water into the city for irrigating and other purposes, and to regulate and provide for constructing ditches, canals and gutters for conducting and distributing water through the city; and to regulate the use of water by the inhabitants of the city for irrigating
the soil, and the seasons of the year when water shall be introduced, and the quantity of water in the several seasons; to establish and maintain one or more ferries upon the South Platte river, within the corporate limits, whenever such ferries shall be necessary and for the purpose of paying the expenses of operating such ferries, to charge toll for crossing in the same."

3. An Act to legalize the Ordinances of the City of Denver.

Passed at the Sixth Session, Territorial Legislature, and approved January 11, 1867.

4. An Act to authorize the City of Denver to create a public debt not exceeding three hundred thousand dollars: Provided, the same is ratified by a two-thirds vote of the people, for the purpose of supplying the city with water for fire and other purposes, and for the erection of public buildings. Approved February 9, 1872.

Section 1.

"That the corporate authorities of the City of Denver shall have the power to contract an indebtedness, in behalf of the city, by borrowing money or by issuing the bonds of the city, in any sum not exceeding the sum of three hundred thousand dollars, for the purpose of furnishing said city with water for fire and other purposes, or for the erection of public buildings: Provided, That such indebtedness shall not draw interest to exceed eight per cent. per annum, and that no such debt can be created or bonds issued until the question has been submitted to a vote of the people of the city and ratified by a two thirds vote."

5. An Act to make Section Forty-eight (48) of Chapter Eighteen (18), Revised Statutes of Colorado, applicable to certain corporations or bodies politic.
Approved January 22, 1872.

Section 1. "The provisions of section forty-eight (48), of Chapter eighteen (18) of the Revised Statutes of Colorado, entitled "Corporations", approved January 18, 1868, are hereby made applicable to all corporations or bodies politic, heretofore formed or hereafter to be formed, for the purpose of supplying cities or towns with water for the purpose of domestic use or the suppression of fires, or for milling or manufacturing purposes; and all such corporations or bodies politic are authorized and empowered to proceed and obtain the condemnation of such land, real estate, or claims, as may be required for the construction or maintenance of the works of said corporations or bodies politic, the same as if said corporations or bodies politic had been specifically mentioned in said section forty-eight of chapter eighteen of said Revised Statutes."

Section 2. "That any incorporated city, or town shall have the power and authority to grant the right of way to such corporations or bodies politic over such portions of any street, alley, avenue or public property as may be necessary for the construction of a canal or ditch, or for laying water pipes by such corporations or bodies politic."

Section 3. "Nothing in this act contained shall be so construed as to authorize the taking and condemnation of any street, alley, or other public way, or of any park or public square, or of any part or portion thereof, situated in such town or city, without the consent of the legal authorities of such town or city. Nor shall any such street, alley, public way, park, or public square, or any part thereof, be so taken and condemned by any
incorporated company without such consent."

6. An Act to Amend an Act entitled "An Act to Reduce the Law Incorporating the City of Denver, and the Several Acts Amendatory thereof, into one Act and to Amend the same." Approved February 13, 1874, to become effective April 1, 1874.

**Article VI Section 3, paragraph Fifty Nine**

"To provide the city with water, to erect hydrants and pumps, to construct cisterns, to provide for and regulate the manner of introducing water for irrigation and other purposes, to regulate and provide for the constructing of ditches, canals and gutters for conducting and distributing water through the city, and to keep the same in repair, to regulate the use of water by the inhabitants of the city for irrigating the soil, to build and construct ditches outside of the city limits for the purpose of bringing water into the city for the use of the inhabitants thereof, in such way and manner as shall, by the City Council, be deemed for the best interests of the city, and to keep the same in repair; to bore artesian wells for the purpose of obtaining water for the city, at such places within or without the city of Denver as may be procured for that purpose by the City Council; to construct or purchase water works for the use of the city, and to enlarge their capacity from time to time and keep the same in repair, and generally to do whatever may be needful and necessary to be done in order to supply the city of Denver with water for fire, irrigation and other purposes, and to regulate the same."

Again referring to "King" page 83 we find -

"The charter of 1874 granted to the city power to "own water works of any description."

69: 176
"The situation was now clear. The city had power to grant or deny a franchise; it had the power to build its own water system, if the terms of the company were not satisfactory; there was considerable demand for municipal ownership".

Even though there seemed to be widespread doubt as to the legal status of the Denver City Water Company's contract of December 16, 1870, that company lost no time in perfecting its plans for a water works system preliminary to the start of actual construction work.

At the Council meeting of April 7, 1871 as reported by the News, it was stated that the object of the meeting was to hold a consultation with Messrs. James Archer and Charles Keep, the latter gentleman being the Secretary of the Holly Manufacturing Company of Lock Port, N. Y.

"The presence of these gentlemen was for the purpose of their stating to the City Council the wonderful and unparalleled merits of the "Holly System" of fire protection and water supply, and especially to learn the prospect of their erection in the City of Denver. Both Mr. Keep and Mr. Archer addressed the Council at some length. The result was the appointment of a committee of four from the Council to designate the number of hydrants and the places at which they should be located. Adjournment was had until the afternoon of the same day, Saturday, April 8, 1871, at which time Alderman Bates, Chairman of the council committee, informed Mr. Archer and Mr. Keep, that after consultation with the water company it had been decided to fix the number of hydrants at thirty."
This number did not meet with the approval of Mr. Archer, who felt that sixty should be installed as a minimum, with Mr. Keep, when pressed for an answer, stating that the smallest number put into any city with the Holly System was fifty. Since there was no hurry for a final decision the matter was postponed until the next council meeting.

Late in the afternoon of April 8, a contract was signed by the Denver City Water Company for the construction of a set of the Holly machinery, to be of the same size as that in use in Indianapolis, Indiana at an estimated cost, including pipe, of $150,000. Mr. Keep at once telegraphed the Holly Company to immediately commence the manufacture of the machinery. A telegram was also sent to the Associated Press stating that the above arrangements had been entered into with the works to be ready for operation about the first of November 1871.

On April 11, 1871, the News printed an editorial reviewing in some detail the terms of the contract and commenting on the merits of the Holly system. Attention was directed to the fact that the contract yet lacked some dependent action by the council, and upon that action, yes or no, probably depends the erection of the works at all. If the city agrees to put up and pay the annual rate upon a certain number of hydrants the work will go forward. If it does not they will probably rest indefinitely. The contract may be a good one for the city. It undoubtedly is for the Contractors. After discussing the cost of "Holly" works as erected in an unnamed eastern city, the editorial concluded by saying, "It is safe to say that works sufficient for the wants of Denver for many years to come can be constructed for less than $100,000."
The papers of Denver had, by this time taken sides, with the News inclined to question the legality and many of the provisions of the contract, with the Tribune giving it all out support.

The following "card" printed in the Tribune of April 10, 1871 shows that the matter had become involved to some extent in the Municipal Election of that year.

"Regretting to appear in a newspaper in any personal manner, the continued misstatements as to my position in regard to the race in the municipal election, compel me to state, First: Until my arrival in Denver four days ago, I did not know who were the candidates on the Republican Ticket, and was equally ignorant as to the existence of a Citizens Ticket. Second: I neither subscribed or paid any money to elect or defeat any person who presented himself for election to any municipal office. I hope the parties who have made so many unfounded assertions on the streets, will have enough sense to feel they have done me a wrong. Hoping this notice will end the matter and prevent me calling any of my fellow citizens a dirty dog and liar, I am, your obedient servant, James Archer."

On April 12, 1871, the News printed a long letter addressed to the Editor and signed by "A Citizen" which was highly critical of the proposed "Holly" water movement. The author of this letter was interested principally in water for irrigation purposes, stating among other things: "The system of wells, is quite sufficient at present for all other than irrigating purposes. Why then should the city run so rashly into an experiment to supply water for uses not required at present at an immense cost, and neglect to supply water for such uses as are urgent and immediate?" Also he challenged the
wisdom or the right of the city council to grant the exclusive right to any
man or set of men to supply the city with water for the next twenty years. A
series of questions ended the letter, the last one of which was: "Who are the
persons to whom the contract is let? And are not members of the present city
council interested in these water schemes?"

On the same day, April 12, 1871, the Tribune printed a letter in reply
to the above signed by James Archer, President, Denver City Water Company
in which it was stated:

"I notice a communication in the News of today, in which "A Citizen"
asks, "what is the Holly Water Movement, and what movement is it?"

"It reminds me of the case of Rip Van Winkle, who just as pertinently
remarked on recovering from twenty years sleep, "where is my dog Schneider"? For years the press of the country has been discussing the Holly Water System
and almost without exception in its favor.

"Commencing at Auburn, N. Y. several years ago, it is now in use
in twenty-seven cities of the United States, at least eight cities more will
have it this year - "A Citizen", by applying to my care, can have a pamphlet
which will tell "what is it."

"The City of Denver by its Council and Mayor in December last,
(Rip was asleep then) made a contract for a supply of water, with power
enough to extinguish fire without the aid of fire engines, and supply her
citizens with pure water for domestic uses. They named no system, but only
desired results.

"The called meeting of the City Council was solely to appoint a
committee to examine and report to the next regular meeting of that body the
points of which fire hydrants should be located. "A Citizen" affirms "the
system of wells" is quite sufficient at present for all other than irrigating purposes." Did the fire alarm on Curtis and E Streets, two months ago, fail to awake "Rip" from his slumbers"?

"The writer was present, and the wells in the vicinity were put into requisition; the results - the fire stopped when there was nothing else convenient to burn, and a larger loss of property than the cost of one year of the Holly System entailed on our citizens. Again, what is the water you use? A combination of privy drainings and slops, mixed with alkali. Already every well below Larimer Street is filled with the refuse of privies, the water on standing in a vessel overnight, is offensive to the taste. All the eminent physicians in the city say the health of our city will suffer unless pure water is obtained.

"Under the Council contract, the mass of the people - the bone and sinew of the community - can have pure sweet water for $5 per annum, and bath room for $3.

"I will add for the information of the people that the Holly works can't be in operation before the first of November next."

An Editorial published by the News on April 13, 1871 headed - Exclusive Privileges - removed all doubt as to where the Editor of that paper stood with respect to the December 16, 1870 agreement with the Denver City Water Company. It is here quoted in part because, subsequent events proved that in a large measure, his fears were well-founded.

"It will be well if our City Council go slow and heed what they are doing.
It will be still better if our citizens awake to their real danger, and by proper means warn their representatives not to transgress the limits of their real danger, and by proper means warn their representatives not to transgress the limits of their authority. "We hear just now a great deal about "exclusive privileges" and coupled with those words are two which tickle the popular ear, "public improvements."

"One would think that the latter would cease entirely were it not for the former. The fact is however, that through all the talk and smoke and dust and hurrah which is raised about the latter, the real anxiety to possess the former crops out. The cloven hoof is plainly discernible. Those who are apparently most anxious to aid public improvements and to press them forward are really only desirous of obtaining certain "exclusive privileges," certain valuable franchises which will be to them a source of wealth and power beyond calculation, and which will increase yearly as the city grows and prospers. Our voice is always for progress, always in aid of every public enterprise but we hereby enter our most emphatic protest against the purchase of these enterprises at the price of having the city in its municipal capacity bound hand and foot, and delivered over helpless to the hands of any number of capitalists, or any association of individuals. We apply these remarks to water, street railway, gas, omnibus, or any other companies who are now asking for exclusive rights and special privileges, and covering up their true designs upon the public by modestly vaunting their own enterprise, and loudly professing their devotion to the public welfare.
"Not only objecting to the policy of granting exclusive privileges, on account of their despotic results upon the public, we now go farther and take the broad ground that the city council has no authority to grant exclusive privileges, and that all such grants are null and void.

"We therefore warn our city council against the commission of any act on the grant of any franchises which will be not only impolitic but illegal. We want no individuals, no associations of individuals placed beyond the power of control by a healthy competition; we want no tyrannical corporations created to be exclusive in their character, or to possess the single privilege of furnishing water or running street cars without fear of any rival in either business." ----

The News on April 14, 1871 published another letter to the Editor by "Citizen" which chided Mr. Archer for not answering any of his essential questions, and expanded at length upon his views as earlier expressed on the water situation in general and the undesirability of the "Holly" water contract in particular.

About this time the News seemed to get a great deal of satisfaction in belittling the efforts of the City Council as well as those of the Water Company in the attempt to get the work under way. To illustrate, on April 19, 1871, the News commented as follows: "We now learn that the committee on conference regarding the number of fire plugs necessary for the city, and to make the Holly system work, have decided to recommend eight only. If thirty were a setback to the water works company, and to the individuals particularly interested in the works, how sad they must feel over this latest revelation. We do not vouch for its truthfulness, but supposing it was so,
fancy the feelings of the parties who are "determined to put the works in whether the city orders a single plug or not."

"Sixty was the lowest number they could get along with, as was shown from the little peace talk held by them with the committee: on the day the contract was signed with the Holly Company. If sixty only would make the system work, what for heaven's sake will eight do? The parties are probably desperately indignant at this fact; and, if so, will they go on and put up the works?"-------

At the regular council meeting of April 20, a petition was received from the Denver City Water Company stating that the company had selected the southeast corner of ground at F Street bridge. The company respectfully asked the city to give them a quit claim deed to the piece of ground selected. This petition was then referred to a committee of three to report at the next meeting.

At the Council meeting of April 27, the special committee to whom was referred the petition of the Denver Water Company asking for title to certain land near F Street asked for and obtained further time to report.

An Editorial headed "Water Works" was printed in the Tribune of April 29, 1871, obviously in answer to that of the News of April 13, 1871. Since it stated the Tribune's position on the general water situation it is here copied in its entirety.

"Some months since the Denver City Water Company proposed to the City Council to put up water works here if the city would comply with certain conditions. After the matter was made public, and had been considered in
the Council for about three weeks, and discussed in the daily papers, the
proposition of the water company was accepted and a contract made. There
seems to be a party now which would like to prevent the water company from
erecting the water works which have been ordered, and they claim that the
city made a contract with said company without authority, and without the
people knowing what was being done. This looks to us as veritable trifling.

"The contract was made by the old City Council in good faith, after
the matter had been made public for several weeks; no citizen was opposed
to it enough to petition against the contract; indeed the strongest argument
in favor of the same, was the apparent universal desire of the citizens that
it should be made. Now that the contract has been inexistence some months,
and some one has come to the conclusion that the water company will make
too good a thing of it, they want the contract annulled and the city put back
to its old helpless position, at the mercy of every spark that flies.

"Our opinion on this subject may be expressed in a few words: As
to the legality of the contract between the city and company, we are not able
to judge, but presume it to be good. But supposing it is not, this is not the
time to prove it. We should naturally suppose that the interest of the city
would require the immediate construction of water works, and everybody
knows that unless the water company does it, it will not be done very soon.

"Let the company go on and put up the works, and if after they are
completed, or at any time, it is found that the interests of the people or the
city are not being subserved by the works or company, that will be the time
to "go for them". As we said before, we do not know as to the legality of
the contract, nor do we want to know until we have the works. The Contractors
have faith enough in it to go ahead, and we are by all means then, in favor of their doing as they want to. We are not desirous of proving at this time that they have no right to expend their money in putting up expensive works to guard our property from destruction by fire, when they are satisfied with the way the matter stands, and will go on with the desired improvements.

"Prove that they have no rights, and you take away the incentive to work. It is time enough to do that, when the works are built, and when the city is oppressed or swindled by the company, but which we are satisfied will not occur."

At the council meeting of May 4, 1871, Alderman Bates from the special committee handling the Archer petition praying for a quit claim deed for certain land near F Street bridge presented a minority report in favor of granting the request. The tract of land in question comprised 0.36 acres and was needed by the water company to enable it to carry out its contract to supply the city with water. A motion to adopt the minority report was lost by a vote of 3 to 6 and the committee discharged.

The News again discussed the problems involved under the heading "Water for Denver" in its issue of May 7, 1871.

Some of the comments were: "Meantime, the Denver Water Company, "Our Holly" is working away slowly down in the sand at the foot of F Street on ground without title or assurance of one. It having been understood in the early stages of the enterprise that the works were to be situated a mile or two up the river, southwest of town, the new location, after contract was made, seems to be looked upon by the council as a disposition to act in bad
faith; hence the delay and indifference. It does look a little ungenerous for that body, after having made a contract, to whiffle about and put off the supplemental conditions thereto - the location of fire plugs; the decision as to whether there shall be one, eight or a larger number, the making of title for site of works, etc. Especially does this appear so after the means by which the original contract was secured - if public report speaks truly. Nevertheless, the public mind is serene and taxpayers manifestly enjoy the delay and evident weakening of "Our Holly"?

In this same article the News took occasion to criticize the company for building its plant at the foot of a hill and installing monstrous steam engines to force water up hill to supply the town at great cost, when two hundred feet up the hill there already existed a small canal, which could easily be enlarged, supplied by water from the Platte River which flowed by gravity all over the town.

However, the Editor went on to say: "Supposing it possible that the Holly system was the best to be adopted by Denver, the News showed some weeks ago how the works could be erected for one hundred thousand dollars or less. Denver's twenty-year, eight per cent bonds could doubtless be used for their construction at par. The interest would be far less than the annual tax to the Denver Water Company, whilst the works would remain under the control of the city and belong to it when the debt was paid."

"The creation of these overshadowing private corporations is damaging to the general interests of the people, increases taxes and discourages the settlement of prudent, careful business men among us. 

80. 187
"The city should retain control and ownership of all such necessities but more especially, that of water supply. Let it slip away and in ten years, places on the water committee of the city council will be considered worth ten thousand dollars. This is our prediction."

"There may be cases in which art improves upon nature, but when it undertakes to do so by forcing water to flow up hill the end will be failure.

"Now if this water company must be made a pet of the city, cannot it be induced to give us water from the up-hill side, in a natural way, and in sufficient quantity for all ordinary uses?"

The repeated attacks of the News upon the Denver City Water Company, brought forth a letter to the Editor of the Tribune, published on May 31, which sheds some further light upon the controversy then well out in the open. This letter, signed "Business" stated that the company had thoroughly investigated the practicability of bringing water down from ditches and reservoirs above town and came to the conclusion that it would be comparatively worthless for extinguishing fires, and that during several months of the year the water would be unfit for use for culinary purposes on account of the sediment it would contain. It was stated that the works under process of construction by the company were designed to supply two million gallons of water each day, which would be an abundant supply for all purposes for the present and prospective inhabitants of Denver for years to come. The letter concluded by stating: The Denver Water Company has entered into a contract with the city to do certain things, which it was believed they were preparing to do in a manner that would not only be satisfactory to the people but a credit and
ornament to the city.

Random comments on construction progress during the last six months of 1871 follow:

"Tribune July 3, 1871 -

"Mr. Archer, President of Denver City Water Company, is back from the east, where he has been examining the Holly system of water works in operation in various parts, of the country, and where he has contracted for several miles of pipe, etc. He informs us that four miles will be shipped this month, and that the works, with seven miles laid, will be ready for operation in November; also that two thirds of the machinery is finished and $20,000 paid on it; also that the brick work of the establishment at the foot of E Street will be commenced this week."

Tribune, July 26, 1871 -

"Mr. Archer leaves for the east tonight to organize a pipe-laying force, and a plumbing department for the water works. The first shipment of pipe is expected to arrive today. The contract with the Holly Company provides that the machinery shall all be shipped by the fifteenth of August and thirty thousand dollars has already been paid on it.

"Mr. Archer's new building on Larimer Street, to comprise the gas and water offices, will be ready in about ten days.

"The basement will be devoted to steam plumbing and gas fitting shop. The first story, for gas and water offices, gas fixtures, rubber goods and pumps. The furniture, counters, etc. are coming from St. Louis.

"The second and third stories will belong to Sargents Hotel. Altogether, the building will doubtless be the finest in the territory. Mr. Archer himself
occupies two rooms in that part of the building now finished, and is having two more added to the suite.

"The finishing of the four rooms, and the furniture, will cost some ten thousand dollars, the two now in use, undoubtedly excelling in elegance anything between St. Louis and San Francisco. Mr. Archer is an Irishman who has the means, the taste, the enterprise, and the generosity to beautify and improve the city, and he has certainly done a great deal. Coming here a stranger to most of our people, but with a foresight which told him that the future of Denver would be brilliant, he at once commenced, and has steadily carried on, improvements which have required a greater outlay of money than any others here except what has been done by foreign capital. Mr. Archer has proved himself one of the most substantial friends of our city, and we are not backward in expressing our pleasure at having him with us."

The Denver City Water Company presented a communication at the City Council meeting of October 13, stating that the laying of water pipe would begin on Monday October 16, 1871 and asked that the council designate such points as they required hydrants to be located.

This matter gave rise to considerable discussion among the councilmen, the number of hydrants to be erected being a matter of much disagreement.

It was finally resolved that a committee of four be appointed to confer with the water company on this matter, said committee to report to the council on October 14.

At the adjourned council meeting of October 14, the special committee
to whom was referred the communication of the Denver City Water Company reported that, in their opinion, it was "not best for the council to designate any fire plugs or hydrants for the use of the city, but to leave it to the citizens to take for themselves and pay for such plugs as they may wish." The report was then placed on file.

A resolution was then offered to accept the report of the committee which upon a vote of five to three was tabled.

An attempt to adjourn was lost and a further communication from the Denver City Water Company was read. It offered to furnish water for hydrants, on seven miles of pipe for $7,500 per annum, and an extension of pipe for seven or eight miles, to be located on routes designated by the council, for $5,000 per annum, the number of hydrants to be optional with the council.

A motion was made to accept the proposition, but pending the vote, the council adjourned to October 16.

On October 15, the News took occasion to comment upon the actions of the city council stating in part: "We have only space to tell the City Council that the proposition of the Denver Water Company, if accepted, will raise a storm of excitement in this community, such as they never saw before.

"This city cannot afford to pay $7,500 yearly, besides the expense of putting up hydrants, to any corporation.

"We tell the people they are in danger."

In its report on the council meeting of October 16, 1871, the News on the next day stated: "A meeting of the city council was held yesterday afternoon for the purpose of coming to some definite understanding, if possible,
on the subject of furnishing the City with hydrants for fire purposes, all the Aldermen, with the exception of Mr. Woeber, were present.

"The proposition under discussion was that of the Denver Water Company, offering to furnish the City with water at the rate of $7,500 per year, and the Aldermen were vainly endeavoring to settle the matter of the number of hydrants to be contracted for. Regarding this subject, there is much diversity of opinion amongst the worthy Aldermen. The matter was discussed, at great length and at a late hour the Council finally determined to take no action but to let it rest until their return from the Kansas City Exposition."

An Editorial in the News of October 17, headed "Water and Fire" attempted to summarize the problem as it then stood before the City Council. It was covered under five subdivisions as follows:

First: A statement that the City Council had granted a franchise without cost to the Water Company for twenty years time and that, being a valuable one, it could not fail to bring large profits to the Company's stock holders.

Second: That the proposal under consideration would cost the city $12,500 annually.

Third: That the cost to the City for the installation of hydrants would be between $60 and $65 each, the total amounting to $6,000 or $6,500 for this item.

Fourth: That the City then had no protection against fire and must rely on the Holly Water Works to furnish water for extinguishing fires.
Fifth: That the Denver Water Company was aware of the defenseless condition of the city, and of the necessity of providing some means of protection, which might account for the exorbitant proposition made to the city by the water company.

After stating that, if accepted, the proposition would necessitate the raising of at least $14,000 a year in addition to other taxes, with an annual tribute to the company of $12,500, the Editor frankly stated that its acceptance would ensure as complete water protection against fire as it was possible to obtain.

This would greatly reduce insurance rates and guarantee greater safety to property.

It was pointed out that, even if the city did not buy a dollar's worth of water from the company, its franchise was of great value with the investment being one of the best paying in the whole west.

Such being the case, the charge for fire hydrants should be nominal with a payment of $25 per hydrant per year being ample.

In conclusion, the writer went on to say: "We believe the water company is in the power of the council, not the council in that of the company. We insist on such advantage being maintained, and that the council force the company to give them a fair and reasonable proposition. There is no sense in allowing the people to be thus bled. We must be protected against fire at some rate; but $12,500 a year is most outrageously exorbitant under existing circumstances. The council must provide against fire; but they must do it by bringing this new monopoly to reasonable terms."
Notwithstanding the failure of the council and the Water Company to agree upon the number and location of fire hydrants to be set, the work of installing mains continued. On October 26, the News reported that mains had been laid in Welton Street from E to I (14th to 18th Streets), and from the corner of Welton and E Streets to Arapahoe. Pipe was then being laid at the rate of three blocks a day or about twelve hundred feet.

The Tribune reported on November 2 that the water pipe of the Holly Works was approaching completion with seven miles being the whole length laid, something over 100 men having been employed in putting down the pipe. As will be seen later the statement that seven miles of pipe had then been laid was in error.

Although bad weather and frozen ground were encountered during the months of November and December, the newspapers reported that pipe laying was being carried on, even though at times sledge hammers and iron wedges had to be brought into play.

On November 27, pipe was laid on F (15th Street) from Wazee to Blake continuing beyond Blake on the 28th. Again we find that on December 6, 1871 pipe was laid on Wazee Street, and on F between Holladay and Larimer.

At the Council meeting of December 7, 1871 a communication from the Denver Water Company was read. The statement presented at that time showed that 13,702 feet of pipe had been laid with progress of work delayed unavoidably by reason of a recent heavy snow storm.

It was moved that the report be received and placed on file and a
reasonable extension of time given for the company to finish their work on the contract. An amendment was offered to receive the report and place it on file, which was passed by a vote of 5 to 2. The vote on the original motion as amended was 4 to 3, and the report was filed without time extension being given.

At this same meeting a special committee of three was appointed to again confer with the Denver Water Company to ascertain its terms for fire plugs, water supply, etc.

At the council meeting of December 21, 1871 the special committee appointed to confer with the Denver Water Company asked for and was granted further time. On December 30, 1871 the News reported that fire hydrants were being put in along F (15th St.), two at each crossing, with the work going slow because of the frost. This news item also stated that in a few days there would be a grand exhibition of the power of the works and the utility of the hydrants.

On December 29, the Tribune printed an editorial, headed "Fire Hydrants" which read as follows:

"The Water Company is rapidly setting the fire hydrants at the corners of the streets, so that shortly we may congratulate ourselves on having a means to extinguish fires as well as to pull down burning buildings. This necessitates a formation of a regular fire department, consisting of engineers and a company, the latter to act under the direction of a foreman whenever an active duty occurs. This department must be a responsible concern, under the authority of the city government - not a party of citizens who simply volunteer to do fireman duty. "We give all honor, but the city has outgrown that system, and now requires a department like those in other
places where hydrants and engineers exist."

In its review of the year 1871, the Tribune on December 30, 1871 gave the following data on population: "Population - we find the census of July 1870 gave Denver a population of 4,731. Our voting force then was 1,149; the September following there were 1,474 voters; in April of this year 1,767; and in September 2,1500. Taking the rates of 1 to 4 our population September last was 8,600.------Our present population cannot be less than 10,000."------

We now go back to cover an editorial printed in the Tribune on November 22, 1871 of interest for the general information it contains about the water situation as it was then.

"The water question which has been considered in the City Council for some months, is undecided still, and we understand it is the design to take no action on the construction of a city ditch until Mr. Archer returns, so as to see what arrangements, if any, can be made with him or with the water company, of which he is president, to supply water for irrigating purposes. We are glad they have come to this conclusion, for as we said some weeks ago, we believe water ought to be furnished by machinery, cheaper and shorter than in any other manner. Mr. Archer subsequently informed us that the water company could do so. There is at present no hurry about next season's water supply, and the council will come to no harm if they take the time to examine all sources before adopting any. In this connection, we suggest, that inasmuch as Mr. Archer and the council are at a deadlock on the hydrant question, that there is room for new propositions on the hydrant question.
and irrigating questions combined."

Also on November 6, 1871, the Tribune printed an Editorial headed - "The Holly Water Works of Denver" which reviewed the history of the company and the contract it had with the city. This editorial described in detail the works then about completed and named the men identified with its actual construction.

This was followed by an editorial in the News on December 8, 1871 headed "The Philosophy of Water Supply" which also described in some detail the water enterprise then about ready to be put in operation.

Both of these descriptive editorials, written by laymen but nevertheless informative, will be found in the appendix.

A brief description of the source of supply, the amount of water later decreed to this diversion, the first building and the history of the plot of ground upon which it was built follows:

**The Well**

This structure was located about two hundred feet from the south bank of the Platte River. At first it was thirteen feet deep with a superficial area, 16 by 17 feet in size. It was walled by driving round pine piles, about twelve inches in diameter and faced with twelve inch square sills. The capacity not being sufficient for the desired supply, it was enlarged to 30 by 50 feet inside measurement with rock filled cribs, four feet thick, faced and backed with six inch planking resting on a bed of granite boulders. These cribs were sunk by keeping the water pumped out while excavation was carried on under them, the sinking process being from 12 to 18 inches a day.
The water in the well was reported as coming from Cherry Creek with the water surface in the well at an elevation six inches higher than the water level in the Platte River at this point.

The average capacity for which this first plant was designed has been variously reported at from two to two and one half million gallons daily.

In the Tribune write up of November 6, 1871, we find the following:

"The engine room is the principal one containing two sets of works complete, either or both of which may be run at a time. They may briefly be described as stationary fire engines, with as many miles of hose laid and ready to turn their streams upon a fire, as there are miles of street pipe. The larger is a piston engine of 350 horsepower; the smaller a rotary of 200 horsepower. The larger engine runs two rotary pumps, whose capacity is 20 gallons each at every revolution, or 2,000,000 gallons each, every 24 hours. The smaller engine runs six piston pumps, whose capacity is 3,000,000 gallons a day, or including the rotary pumps about 7,000,000 a day. (Peak capacity). The larger engine and one of its pumps, which supplies the pipes for street purposes, will be kept running all the time; one or more of the smaller pumps is for domestic purposes.

"Some of the pumps will be kept in reserve, though the entire force can be instantaneously turned on for fire or other purposes." ---

A report on the Water Works of Denver dated June 1893 written in long hand, by Jas. D. Schuyler, Consulting Engineer on "The Water Works of Denver" contains the following statement about this original water plant:
"The first works, built in 1871, consisted of a pair of Holly pumps, with a capacity of 2,500,000 gallons daily, drawing water from a large well sunk in the gravel beds of the Platte River, at the foot of 15th Street, then the main thoroughfare of the city. The town had then but 6,000 inhabitants, but was growing rapidly and two years later an additional pump with 2,000,000 gallons capacity was added, which sufficed for public needs till 1879."

On June 16, 1930, District Judge Arthur Conforth approved and signed a decree, case No. 807, in the matter of the Priorities of Water Rights in Water District No. 8 in the State of Colorado, in which, beginning at Page 59 we find the following:

The Denver Municipal Water System
The City and County of Denver, Colorado (Claimant -)

"As shown by the findings filed herein, the South Platte River is a natural stream and a part of it is located in Water District No. 8 in the State of Colorado; that Cherry Creek is a natural stream located in Water District No. 8, and is a tributary of the South Platte River, and that the water involved in this case is taken from said streams."

"The Fifteenth Street Pumping Plant, No. 163 1/2"

The Fifteenth Street Pumping Plant, owned by said claimant, and through which it originally diverted water for city use, was located and had its intake in the bed of the South Platte River at or near the point where Fifteenth Street crossed the South Platte River in the City of Denver; it consisted of cribs in the bed of said river, a pumping plant on the bank of said river, and a pipe line connecting said cribs and said pumping plant;
the water was taken from the river into said cribs, thence through said pipe line to said pumping plant and there distributed to said City and the inhabitants thereof for domestic and municipal uses, and was so used; the original construction of said pumping plant was begun on or about December 20th, 1870, and was prosecuted with reasonable diligence to completion soon thereafter; that said Fifteenth Street Pumping Plant diverted 3 cubic feet of water per second of time from the South Platte River as of December 20, 1870, for domestic and municipal purposes and ever since such diversion said water has been so used; that after said pumping plant was put into use the water of the South Platte River became polluted and unfit for domestic use, and in order to obtain a supply of pure water the intake for said 3 cubic feet of water was moved about 20 miles up the South Platte River to the intake of the 60 inch pipe line or Conduit No. 8 hereinbefore described, and thereafter said 3 cubic feet of water was diverted from said river at said intake, and by said Conduit No. 8 and pipe line connecting therewith was brought down to the City of Denver and distributed to said City and the people thereof for domestic and municipal purposes and has been so used to the present time.

"That by said original construction and use by claimant of said Fifteenth Street Pumping Plant, there was duly appropriated and applied to beneficial use for city purposes. Three cubic feet of water per second of time from the South Platte River as of December 20, 1870, and claimant has continued to use said water for said purposes down to the present time."
"It is hereby adjudged and Decreed that there shall be allowed
to flow into the intake and headgate of said Conduit No. 8 hereinbefore des-
cribed and located at a point on the south bank of the South Platte River
whence the northeast corner of Section 5, T. 7S., R. 69 West bears
north 28° 33' east 2556.6 feet, by virtue of the original construction,
appropriation of, and use through said Fifteenth Street Pumping Plant,
herein numbered Ditch No. 163 1/2, and Priority No. 192 1/2, as of
December 20, 1870, and the continued use of such appropriated water
through said Conduit No. 8, three cubic feet of water per second of time
for domestic and municipal use, and for the use and benefit of whomsoever
is lawfully entitled thereto."

(3 cubic feet of water per second of time is equivalent to a total
of 1,939,237 gallons in 24 hours.)

The Building

The main building was built by brick, 325,000 of them (from Mr.
Archer's brickyard). It was 48 feet wide, 62 feet long and 23 feet high in
the clear. The stack was ten feet square at the base, 5 feet at the top,
and 80 feet high.

A photograph of this, the first pumping plant in the water system
will be found on page 456 of Smiley's History of Denver.

The historic tract of land upon which this installation was located
was first owned by William McCaa, alias "Jack Jones" the old plainsman,
who was issued certificate No. 1 for lot 1, block 1 by the St. Charles Town
Association. His certificate was dated at Lawrence, Kansas Territory,
December 1, 1858. According to Hall, Volume IV, Page 18, this was the first real estate transaction in Denver.

Although the title was, in common with all pioneer real estate transactions, a shaky one, it was quieted in 1872 by the issuance of a Probate Deed to the Denver City Water Company, dated October twenty-first of that year. The consideration was given as $500.

The long awaited day for a trial of the new Holly system arrived on January 3, 1872. On that day hoses were attached to three hydrants in "F" Street, and water thrown a distance of about ninety feet, with a pressure of one hundred pounds at the works and one boiler under fire. A stream was thrown at least one hundred and twenty feet into the air at the works. The exhibition, reported by the News on January 4, 1872 attracted great crowds.

On January 6, 1872, the formal test of the works was held.

The News reported this event in an editorial headed "The Holly Water Works" on January 7, 1872 in the following laudatory terms:

"Yesterday afternoon a grand experimental test was made of the Holly Water Works System which has just been introduced into our city, and the result was most satisfactory to the thousands of tax payers and excessively gratifying to the score of stockholders who gathered to see "how the old thing works." At 2 o'clock, P.M. there was a gathering of Aldermen and other city official, stockholders, newspaper reporters and other monied men, at the rooms of Mr. James Archer, the head and front of the water works scheme for Denver, in the Sargeant House.

"Up there water was talked of and wine indulged in, and a very enjoyable occasion made, when the entire party adjourned to the works at the foot of F Street (15th St.).
"Here the machinery was inspected and placed in operation that its admirable workings might be fully noted. The machinery, engines, etc. of the Holly works have already been described at length in these columns, and a repetition of the same is unnecessary here. In F Street, between Larimer and Wazee, six hydrants were opened and hose attached and water thrown to a height of more than a hundred feet.

"The Company by the contract, were obliged to throw six streams at one time one hundred feet into the air, and this was done with the utmost ease. With ninety pounds of steam the rotary pump performed the work admirably and with one hundred pounds the gang pumps sent the water through the hose in perfect torrents above the requisite height which had been marked over Larimer Street with a wire stretched from two poles. The machinery was placed under no strenuous exertion, worked charmingly, threw water further than was required by contract, pleased everybody who witnessed the operations, and was a source of gratification to the property owners who now are placed beyond all fear of disastrous fire.

"Mr. James Archer deserves great credit for the part he has taken in securing water for the city, and the people will accord him his full need of honor.

"And so another link in our chain of metropolitan adjuncts has been fashioned.

"Gas Works, Horse Railway, Boulevards, Water Works, and --- what next?"
A news item printed on the same day seems worthy of copying at this time. It read: "In general jubilee yesterday, over the water works, the Larimer Street nozzle was accidentally or intentionally turned upon some of the bystanders who lined the streets. Mr. Finn, a veteran ex-fireman who worked on the brakes of the great New York Fire in 1835, fared worst of any. He was facing the distance the stream was thrown when it met him square in the face, drenching him completely and hurling him from his feet. Fortunately, there was no injury beyond the ducking, and the old gentleman knows all about such bids. The incident is much regretted, however, and by none more than the firemen:"

The work of installing mains continued during January of 1872, with the News complaining on January 10 about the special pleasure the men delivering water pipes got out of dumping them exactly where most in the way.

A special meeting of the City Council was held on January 10 at which time a proposition was received from the Denver Water Company expressing the desire of the company to modify its contract with the City for furnishing water for fire purposes. Since the communication was not signed, it was not considered by the Council. At this meeting, it was resolved, on motion of Alderman Clifford, that the Denver Water Company be requested to furnish the city with a proposition for the sale of their works.

The City Council met again on January 19, at which time the Denver Water Company offered to modify its proposition to the City of Denver so as to read $100 for the first, $50 for the second and $30 for the third fire
hydrant on each square; or $1,000 per mile for the first seven and a half miles, and $500 for each additional mile. The offer was received and placed on file. Also, on motion at this meeting, the City Attorney was instructed to draft a bill to amend the City Charter so as to allow the City to issue bonds to the amount of $300,000 for water purposes, subject to a vote of the people.

It will be remembered that the Territorial Legislature passed, and the Governor approved on February 9, 1872 an Act authorizing the City of Denver to create a public debt not exceeding three hundred thousand dollars, for the purpose of supplying the City with water for fire and other purposes, and for the erection of public buildings.

On Sunday, January 21, 1872, the News printed an Editorial, headed "The Water Question and the City Council," which seems worth quoting from at this time.

"The water question in this City is a double one, and susceptible of a fair diversion, viz: Water for purposes of irrigation; and water for fire purposes. In its action, or more correctly, want of action regarding the irrigation side of the question, the present city council has been about as inefficient, as short sighted, and as unconcerned for the public good as can well be imagined. Its position, however, on the fire side of the question is one which we take pleasure in approving, and which relates to the Holly Water Works.

"At its last meeting, Alderman Clifford, in a terse and sensible manner, gave expression to the views of the majority in a speech in reply to an Editorial article in the Tribune of the 17th, demanding that the Council
at once close a contract with the water company for fire plugs."

The speech of Mr. Clifford was then printed in full, but is here quoted in part only as follows:

"Mr. Chairman: I have long suspected that my position, and that of the majority of the members of this council on this question of water for fire purposes was little understood and I am not sure, from an editorial article in the Tribune of the 17th instant, that the public press is fully enlightened as to the matter in controversy between the City Council and the Denver City Water Company; or if it is, I feel quite confident the Tribune is doing a great injustice to the City Council in this matter.

"The question is not whether the Holly system of water works is good or not; whether the city does not stand in need of better protection against fire, for I consider and believe it is acknowledged by all that this system of water works is the best known to the world. At any rate it is good enough and a man of the most common observation and understanding can see without difficulty that the City of Denver is not properly prepared with the appliances for extinguishing of fires. What then is in the way, inasmuch as the Holly Works are completed and ready for operation, of the city being put under their protection at once? Why, simply this, the council is of the opinion that the Denver City Water Company charge too much for the use of water for fire purposes.

"Is it just for the Denver City Water Company to demand a yearly sum for fire purposes only, which in twenty years will amount to $125,000 more than their works are worth? I am as anxious to place the city under the protection of the water works as the Tribune or any citizen can be; but
I have decided scruples about entering into such a contract in behalf of the city, for so long a period.

"Twenty years is a long time and $12,500 a year is a big tax for one necessity. I doubt whether all the people are quite ready to put on this yoke.------

"Does not the Tribune, and all other who will, know that the council has, time and times without number sent committees to the water company to try and get better and more reasonable terms? Why then talk about the conduct of the council being "reprehensible", unless it means to say that the council ought to give the water company a bonus of $168,000 and if it means that, why not say so. It takes two to make a bargain, and the City Council and the Denver City Water Company cannot agree. That is all. Why then find fault with the council? The water company demands too much, and I for one will never agree to it, let the consequences be what they may ----

"The Council has time and again proposed that they would for one or a short number of years take the water at the exorbitant price demanded, as they were willing to give the company a bonus for a limited time, but not for so long a time as twenty years. But no, the company will make no proposition for a period of less time. If the present members of the council are unreasonable and not willing to do justice to the company, why not accept a contract for one, two or three years until more just or reasonable men can be elected? Why insist on making a bargain that a majority of the council cannot agree to; and why again repeat the bold threat that we have all heard
so often until it is threadbare that if we do not accept the proposition of the water company now, it will be withdrawn forever?

"In closing, I again repeat that I am as desirous as anyone possibly can be to secure the desired protection from fire, and I am willing to pay the Denver City Water Company a good deal more than the water is worth, but to accede to any proposition they have so far made, I cannot do it."

The News vigorously supported Mr. Clifford's stand on the matter and closed an editorial by saying:

"The Holly Water Works are a credit to Denver, and we yield all honor and praise to the gentlemen whose money has erected them. The City Council deserves to treat this company fairly even generously. The extreme necessity of these fire plugs and a number of them is admitted.

"But to pay for them at a rate that in twenty years will buy two such sets of works is too much. The people will not submit to such a contract."

"If in ten years we must buy these works under the proposed contract, let us do so at once, and then the city will own and control its own water works. We favor the purchase of the works to the present proposition. Whenever the company will offer reasonable rates for fire plugs, then let a contract be closed and not before."

A special council meeting was held on January 22, 1872, at which time, among items of business taken up, we find that "a communication was received from the Denver Water Company, stating that the works were not for sale, as they were unable to even approximate the cost."

See Appendix.
Pending agreement with the City Council on the hydrant question, the water company apparently did not feel obligated to keep the hydrants in operating condition, since we note a news item dated February 1, 1872, referring to the total destruction of the livery establishment of J. H. Estabrook by fire. "Water for the extinguishment of the flames was furnished in the old time way, with buckets. The Holly works were without steam, and were therefore unable to do anything in the way of saving the property."

At the council meeting of February 1, 1872, in an attempt to break the deadlock, Alderman Winne offered a resolution that a committee of five be appointed to offer the Denver Water Company payment for fire hydrants at the rate of $75 per annum each for double hydrants, to be placed one on every block for fifteen miles of pipe. The committee immediately proceeded to tender this proposal to the water company. They returned in a short time and reported that the Denver Water Company would make answer to the offer that evening.

The council chamber was densely crowded when council convened on the evening of February 1, 1872. At that time the following proposition from the Denver Water Company was read:

"In answer to your proposition of the 1st instant, the Denver Water Company propose for the term of two years from and after this date, to make a discount of fifty percent from the former contract price, under date of December 16, 1870 made by this company with the City of Denver, for supplying water hydrants for fire purposes; provided the City of Denver take one hydrant for each and every block reached by main distributing pipe of
six inches or more in diameter, for the first fifteen miles of pipe laid by this company, the hydrants to be single or double, as may be designated by the city council of Denver, the said hydrants to be used only for fire purposes. And further, that the city pay for each and every hydrant, beginning from the date at which the company is prepared to furnish a regular supply of water for the same."

This offer seemed at first glance to be a fair one, and Alderman Winne moved that the chair appoint a committee of three to confer with the Denver Water Company, and, at the next meeting, report a contract with said company for one hydrant to each block on fifteen miles of pipe.

On February 3, 1872 the News came out with an editorial heartily commending the offer made by the City Council on February 1st.

The next day, February 4th brought forth an editorial in the News headed: "The City Not Yet Caught." which sharply criticized the water company for attempting to trap the council into a hydrant agreement at $75 each for two years, after which time the charge would be doubled and remain at $150 a year each for the following eighteen years.

After asking the question, "Are the gentlemen who compose the Denver Water Company honorable business men, or are they sharpers? The writer went on to say: - "In plain words, this proposition, apparently so fair, is only a dodge to entrap the city into the old one, which we have so often denounced. It has the merit of being cunning; the language is well chosen; but what else does it mean."-------

We can only pronounce this whole affair disgraceful and dishonorable; and a cunning and unprincipled attempt to swindle the public; and bind the
people to a contract which they are anxious to avoid. We warn the City Council, and beg them in the name of the people to go slow. They are dealing with men who are evidently trying to put up a "job" of the worst description and in view of this fact, their own action must be more than ordinarily cautious and circumspect.

"We suggest to the committee which is to confer with the water company that the following points be incorporated in the new contract:

"First - That the contract of December 16, 1870 be declared null and void, whose existence, if ever it had any, is terminated.

"Second - That nothing in the new contract shall be so construed as to render the existence of any contract between the water company and the city valid and binding after the expiration of the new contract aforesaid.

"Finally whatever contract is entered into between the city and the water company should be examined and passed upon by the best legal talent in the city. If we are dealing with rogues, let us arm ourselves accordingly."

At that time, "the committee appointed at the meeting of the council February 2, to enter into details of a contract between the City of Denver and the Denver City Water Company, to furnish the city with hydrants for fire purposes, through City Attorney, D. D. Belden, reported an Agreement, dated February 6, 1872 to run for two years from that date, with hydrant compensation at $75 each per year.

The last paragraph of this agreement read as follows: "And it is further expressly agreed and understood between the parties hereto, that this agreement shall not be construed to be a substitute for a written instrument dated December 16, 1870, between the parties hereto, nor to amend, or ratify, or in any manner effect said written instrument; but the same shall be
construed in every respect as though this contract had not been made."

The vote on approval of this contract was 7 to 1 in favor, with
Alderman Clifford offering the only dissenting vote.

A copy of this Agreement will be found in the Appendix.

On February 7th, the News published an Editorial entitled "Our Holly" - A review - which admitted that some of the language used in the previous Sunday's Editorial (February 4th) was unnecessarily severe, but in defense claimed that the provocation was great.

After saying that, "It was our opinion, charitably reached, that a majority of the gentlemen whose names were appended to the water company proposition, either did not sign it themselves, or else did not understand its meaning, the writer went on to say: "Now let us look at another phase of this question. Ever since the News took a part in this water fight, whether in opposition to the fire plug contract or in favor of a city ditch, or of a second ditch above town by the Denver Aqueduct Company, it has met the violent opposition of many of the Platte Water Company (Smith Ditch, so called) and the Denver Water Company. The two companies are so interwoven and dovetailed together that it is hard to distinguish between them, and the public is doubtless right in associating them together in interest. Some of the gentlemen connected with these enterprises have been in the habit of slandering the editor of this paper and we have borne it quietly.

"One said within the last few days: "It would have been all right if we had given Byers five hundred dollars interest in the company", or words to that effect. Another made a similar statement in a public ball room some weeks ago. Names can be given if required. They think themselves
licensed to slander and vilify, but the moment we charge them with attempting a "sharp trick" on the city, their immaculate sensibilities are terribly shocked.

"If they have the right to libel by word of mouth, we shall claim and exercise the privilege to criticize their actions, when they affect the public and to designate them by such terms as they may seem to deserve - "Sauce for the goose, is sauce for the gander" gentlemen, and there is a good deal of questionable history pertaining to this water works business yet unwritten. Perhaps you had better review your own words, and recall the worse terms you have applied to the writer of this, than anything that has been said in the News about you."

Thus, after many months of bitter controversy between the City Council and the Water Company, a two year armistice was arranged, with the long awaited fire protection presumably an accomplished fact.

In discussing the issues of the municipal campaign of 1872, the News on February 29 took occasion to remind its readers that the City's contract with the Holly Water Works was a temporary one and that the Aldermen to be elected that spring would be called to pass upon the question again before the expiration of their term of office.

On March 20, 1872, the News carried a story stating - "The first water for domestic purposes from the pipes of the Denver Water Company, was run through the pipes in Londoner and Brothers' store yesterday." This store was located at No. 148 F Street, in the First National Bank Building.

The municipal election held on April 1, 1872 resulted in the election of Alderman J. E. Bates as incoming Mayor.
In his retiring address delivered at the Council Meeting of April 4, Mayor Harper said in part as follows:

"The Holly system of water works has been completed, and on a scale and with capacity to furnish the city with an abundance and a never failing supply of the purest filtered water for domestic use, as well as for protection against fire. You have secured a contract for two years with the Denver City Water Company, at one-half the price they claimed the City was bound to pay for twenty years; so with an eye single to the interests of the City no future Council need allow any exorbitant unconstitutional contract to be forced upon our people."

At the City Council meeting of April 18, the Denver Water Company submitted its bill for installing thirty hydrants at a cost of $3,226.10. Apparently this was the first statement filed by the Company under the terms of the two year contract dated February 6, 1872.

A peaceful climate, insofar as the Denver City Water Company was concerned seems to have prevailed for the remainder of the year 1872. Most of the News items had to do with routine construction items related to the continued expansion of the distribution system.

The News of April 27, commented on pipe laying as follows: "When laying down the water pipes, some of the workmen seemed to have been rather careless about cleaning them out perfectly. The company has been put to much trouble and considerable expense in the last few days to remove obstructions. Swabs are the main difficulty, but in one instance, a boulder was removed from the pipe."
On July 12, the Tribune reported that: "The Holly Water pipe is being extended on Larimer Street and under the Cherry Creek bridge, to West Denver as far as Ferry Street, and for a short distance south of the corner of Larimer and Ferry Street. The 8-inch main is now laid and caulked to the west side of the Larimer Street bridge, and one week later stated that the pipes were being laid to the Corn Exchange Hall on Blake Street.

At the Council meeting of July 18, a communication from the Denver City Water Company was read advising that the company then had in position and complete working order on F and G Streets, 14 single hydrants for which no charge had been made for the three months they had been in use. It was further stated that the Fire Chief was satisfied with single hydrants and if the Council preferred to let them remain in place, payment would be billed commencing on the 20th. The Council then accepted the 14 single fire plugs as installed.

At the Council meeting of October 31, the City Attorney, Mr. D. D. Belden resigned his position which was immediately filled by the election of Mr. M. Benedict.

This resignation resulted from a difference of opinion between the City Attorney and a majority of the City Council over the question of how the transfer of the bed of Cherry Creek to the City should be made.

The News on November 5th printed an editorial on the subject of "Bed of Cherry Creek", ended with the statement, "Mr. Belden was not correct in his legal position, and was differed with by a majority of the Council."
"The City now owns the bed of Cherry Creek; not through Mr. Belden's method, but through one equally as legal. Now tell us how, and by whom this title is to be disputed?" ---

One of the items of business before the Council meeting of December 12, 1872 had to do with a report from the Water Company stating that since their last report, 18 fire hydrants had been erected at various points in the City and were all in working order and ready for use.

This report was referred to the Committee on Fire Department, who, at the Council meeting of December 26, recommended its acceptance; which recommendation was approved.
Signing of the interim agreement of February 6, 1872, in which the "fire hydrant" issue was settled for two years, seems to have directed much of the official and public criticism away from the Denver City Water Company, and concentrated it upon the Platte Water Company.

Nevertheless, we learn from the News of January 3, 1873, that on the day before, during a gale of wind, a barn owned by Mayor Bates was totally destroyed by fire, largely by reason of the fact that very little water was available at the hydrants due to lack of head. The News asked: "Was the Engineer asleep yesterday? Did he have to get up steam after the bells rang? Had he gone fishing down the Platte? Or, were the works or the engine out of repair?"

At the Council meeting of January 8, a resolution was passed calling for the appointment of a committee to investigate the causes of the Holly Water Works not supplying sufficient water at fires.

The committee so appointed, reported to the Council at a meeting held on January 23, 1873, in part as follows:

1. That after a thorough and careful examination of said works, they believed the works under the management of Mr. Barker, an experienced engineer of the Holly Company, with his two assistants, to be in the most complete and thorough working order.

2. We find the signals in perfect order.

3. The company is putting in a third boiler and doing all within its power to put the works in the most complete and efficient order.

In commenting on the situation the committee went on to say: - "A committee from said company, waited on your committee and have agreed.
to put up a fire alarm telegraph, provided the City Council would appropriate $500 towards defraying the expense of the same. Your committee would recommend that the Council make the appropriation asked for. The advantage will be readily seen when you take into consideration that the necessity of having a full supply of water at a fire as early a moment as possible. Every hydrant opened diminishes the pressure at the works, and takes time to restore the pressure.

"We therefore are of the opinion that a different system of giving the fire alarm would be beneficial, thereby obviating the necessity of opening any hydrants to give the alarm and enabling the works to keep up their full power all the time."

That the "Holly Works" benefited from past experience seems to be indicated by the following "Card" signed by Mayor Bates and published in the News of January 21, 1873:

"On behalf of the citizens of the City of Denver, I desire to tender thanks to the several fire companies of the city of their prompt and efficient service at yesterday's fire: What threatened to be a very destructive conflagration was very promptly arrested by the assistance of the firemen and the prompt readiness of the Holly Water Works. The latter fairly filled the promises that had been made for it."

On January 30, the committee authorized to investigate the suggestion for a city contribution of $500 toward the installation of a fire alarm telegraph asked for further time to report. The request was granted.

The City Council at its meeting of February 6, instructed the City
Marshall to notify the Denver City Water Company to forthwith put all the fire hydrants in good working order.

The next reference of importance concerning the ability of the "Holly Systerii" to meet its obligation with respect to fire protection is to be found in an editorial printed in the March 12, 1873 issue of the News. It was headed "Yesterday's Fire" and read in part as follows:

"No water, high winds, the reason why the Holly Water Works did not do their duty."

"There were, of course, many severe strictures upon the Holly Water Works from the fact that water in the pipes lacked fire pressure. The reporter sent to cover the incident "found that the blame did not rest upon any neglect on their part of inefficiency of the works. Several weeks ago the hub, connecting the shaft from the gang pumps with the wheel of the main engine was broken. A new one was at once sent for, and it arrived a day or two since. Yesterday, Mr. Henry Baker, from the Holly Manufacturing Company with Mr. Bradford and assistant, was engaged in replacing the broken hub with the new one."

This work was in progress when the fire broke out, so that only the rotary could be used until the main engine was cleared of the encumbrance. When this was done, after about 20 minutes of delay, the main engine and the two rotaries were set in motion and a heavy pressure obtained.

Furthermore, the Holly Works gave the fire signal before the alarm was sounded up town. At that time they had about 60 pounds of water pressure, which would have done some service. Instead of heeding the signal, somebody in the city opened the hydrant, and thus lowered the pressure to 20 pounds.
"Over zealous firemen, and others who have hydrant keys, will please bear in mind that when the signal is sounded at the works, there is no necessity to open more plugs.

"The coupling of the shaft would have been completed in the course of an hour had not the fire broken out. As it was, the works were crippled. They did the best they could under the circumstances, and it is certainly unfair to condemn them for what could not be helped."

The News printed an editorial on March 21, 1873 concerning Water, Irrigation and Fire Protection, which started out by saying that - "the water question is by no means a dead issue, it will not be for some years to come."

The portion of this article regarding water for fire protection read as follows: "Our Holly - can we rely on it? That is the question. It seems to be generally admitted that if the alarm is given in time, if too many plugs are not opened as alarms, if the works are in order, if they do not give out at the critical time, if steam can be gotten up, and if nothing happens, these works will furnish an ample supply of water.

"Is Denver satisfied with all these ifs in the way? Are they not too numerous? Can Denver take the risk, and at the same time pay $75.00 per annum for each hydrant? Our opinion is that she cannot. If there is any "if" in the way, it must be swept aside. Nothing short of as absolute protection as human foresight can provide ought to be satisfactory to our people. Now we ask, is it not possible to unite measures for providing an increased water supply for irrigation and fire protection? We believe it is. Whether the water supply shall come from the Artesian Well, or from a new
ditch, it will naturally be collected upon the bluffs back of and above
the city. Hence, it will be distributed over the city for irrigation; and
there it can be held in reservoirs to be used for fire purposes, by
whatever methods deemed best. We urge these suggestions upon the
attention of our citizens. We also submit that the matter should be taken
in hand at once."

"The contract with the Holly Company expires next February; with
the Platte Ditch Company at the close of the summer of 1874. We have
not many months to throw away. If we put off the day of action until the
expiration of these contracts, we shall be at somebody's mercy."——

That the water question was one of the issues of the spring election
of 1873 is shown by numerous editorials and news items printed both before
and after April 7, the date of that election.

For instance, in an editorial printed by the News on March 23,
we read that: "There is a very important question to be decided at the
coming city election, and it is well that the people do not lose sight of
the fact. It is simply this; are the franchises of the city to remain in the
hands of the Council subject to the control of the people, or are they to be
handed over to different companies and corporations?"

The special contract with the Denver Water Company for hydrants
at $75 each expires in February next. We understand that it is the purpose
of that company to then fall back upon the old original contract running
for 20 years, at $150 a hydrant, and attempt to force it upon the city."
"The question to be determined at the ensuing election, therefore, is whether the Aldermen to be elected will yield to the demands of the Water Company, or whether they will stand up for freeing the city from such a burden. There have been Aldermen who have voted for such iniquitous contracts; are we to elect any such on the 7th of April?"

F. M. Case, a candidate for Mayor, stated his position on the various issues of the day in a "card" published in the Tribune on March 31, 1873. Regarding water he said: "I am in favor of granting all the assistance to the Holly Water Company that the City can in reason be expected to give, but I am in favor of no long contract with that or any other Company or individual."

General Case was supported by the Tribune for two reasons, first, he was known to be an honest, impartial and thorough executive, and second, he was acknowledged universally as one of the best surveyors and engineers in the West.

On Sunday, April 6, 1873, the News printed an editorial on the candidacy of Alderman John Malony for re-election.

After commenting on the position taken by him with respect to Artesian well matters, the Editor went on to say: "The following are our objections to the election of Mr. Malony, aside from political reasons:

First, it is well understood that Mr. Malony was a special champion of the Denver Water Company's 20 year, $150 per plug per annum contract with the city:

115/
Second, the original contract as above was drawn in his house.

Third, the Water Company set apart $25,000 of its stock to be used "where it would do the most good", in getting that contract through the Council. (Contract of December 16, 1870)

Fourth, the contract ultimately failed but Mr. Malony had performed his task well, worked faithfully, and the laborer is worthy of his hire. It is alleged that Mr. Malony received for his services $5,000 in eastern exchange, and that the same was paid a little less than two years ago.

"We understand that when Mr. Malony is met by this $5,000 charge, he answers it by saying that he had "a lot of traps"; which the Water Company bought and paid him "a good price for them." The News thinks they did, and the people want Aldermen who can't be bought. That's all."

Notwithstanding these objections, Alderman Malony was re-elected at the April 7th election, along with General Case as Mayor.

The Council was reorganized at a meeting held on April 10, 1873, at which time the retiring Mayor, Joseph E. Bates, stated: "The Holly Water Works, contingent to, and part of the fire department, have been thoroughly tested during the past year, and have successfully performed all claims for them, except in one or two instances where repairs were being made at the works. (in the extinguishment of fire). The total number of miles of water pipe laid by the company is nine. Most all of our citizens are availing themselves of the water for domestic purposes, and
for the watering of their private grounds. No estimate can be made of its value to the City."

The News of April 25, 1873 carried another editorial on the water question. After commenting on the need for irrigation water, this article continued-- "In providing water for irrigation, the city government will also place itself in a position to deal even handed with the Holly Company in renewing, if renewed at all, the contract which terminates in February next."

During the summer, the Denver Water Company continues to extend its distribution system, erecting hydrants as the work progressed.

The personal differences of opinion between the Editor of the News, Mr. Byers and Mr. Archer, President of the Denver Water Company were aired to some extent in an editorial published by the News on June 26, 1873. After noting a "card" signed by Mr. Archer and published in other local papers in which collusion between the Denver Water Company and the Platte Water Company had been indignantly denied, Mr. Archer went on to say: - "It is well known that I own a controlling interest in the Denver Water Company, and the above charge is a personal one. It is simply, to put a few dollars in my pocket, I wish to see your labor of years, in cultivating fruit, shade trees and gardens, all sacrificed that I make money. The facts are that I sympathize with you. The growth of Denver is my prosperity. I have expended a large sum to encourage it. Today we are paid for 800,000 gallons of water, but we furnish 1,500,000. Every instinct of my nature revolts from such an idea, and I assure you that if
I could with honest regard to your safety, open fire hydrants for irrigation, within our limits, I would do so. No proof of such collusion can be given."

In reply Mr. Byers said: "The results of Mr. Archer's interview are given elsewhere, which he may regard as personal or not, just as he pleases. One thing Mr. Archer must understand, he cannot hug up to this paper or bully its editors. He may single them out for personal insult, but he must remember that there are some "persons" who are beneath the contempt of decent men; in which class he places himself when he assumes a role of a scullion and a prize fighter."

The Times reported on July 14, that a visit had been made to the Water Works, where everything had been found in complete order and the machinery working perfectly.

However, less than a month later on August 2, when a demonstration of the water system was arranged for a visiting group of municipal officers from Philadelphia, a series of blunders occurred which turned the display into a complete fizzle, much to the chagrin of all concerned. After venting his displeasure in no uncertain terms in an editorial printed on August 4, 1873, the Editor of the News sent a reporter to find out the cause of the failure.

"The Superintendent, Mr. Cairns, was interviewed on August 4 and the following explanation was published in the News the next day."

"This gentleman, with a number of workmen, was engaged in making a connection at the corner of Champa and 16th Street. In order to do this, a circuit of water was shut off from 16th Street at the corners of Welton and Wazee."
"This was done at 5 P.M. and the water was cut off until after 6 P.M. At that time Mr. Cairns knew nothing of the contemplated display, having received no notification from the company. The result was that the hydrants on 17th Street received their water through a three inch pipe and hence the lack of fire pressure, which would otherwise have been given. This, we think, explains the failure fully."

On August 8, the Times printed an editorial commenting on the weak and strong points of the Holly Water Works, as demonstrated since they have been in service, concluding with the following:

"With a large reservoir kept filled with water from the works, at a height to furnish sufficient pressure in itself, our fire system would be much more complete. The Holly Company would do well to consider this feature and increase the efficiency in area of their service by some such means."

It will thus be noted that the need for gravity storage of water for fire protection was recognized by representative citizens many years before the Denver City Water Company or its successor corporation got around to providing it.

The shaky situation with respect to a water supply for expanded fire protection after February 6, 1874 when the interim contract with the Denver City Water Company would expire, was pointed at the Council Meeting of September 5, 1873. At that time Alderman Barker offered a resolution, which was referred, to the effect that the Mayor appoint a committee to report some plan for furnishing water for the extinguishment
of fire beyond the limits of the fire plugs; also to examine the practicability and cost of reservoirs throughout the city, together with the cost of a steam fire engine.

The first "gun" in the battle over reinstatement of the terms of the original franchise given to the Denver City Water Company was "fired" at the Council meeting of September 19, 1873. At that time Alderman Barker, from the special committee reported to the Council that the Holly Water Company would furnish the city with water for the ensuing year at the rate of $150 a plug a year, or that the Company would dispose of their works and privileges to the City at cost.

On October 3, 1873, the News printed an editorial calling attention to the prevalence of fevers of a typhoid nature at that time, and warned of the dangers to public health from impure milk and water supplies. Since contamination of the public water supply was one of the many sources of friction between the citizens of Denver and the privately owned water utility for more than thirty years after that date, it seems desirable to quote from that article at some length.

"It is only a few days since we had the particulars of much sickness caused in London by the use of impure milk. Can it be that any portion of the sickness in this community is caused by the use of impure water? Since the Holly Works were put in, a great number of persons have gone to using their wells for sinks. - Cesspools - "The result of this is simply to render impure all the water courses beneath the city. The digging of sink holes to any depth has the same effect only in a less degree. "The sandy, gravelly, porous nature of our soil renders this result almost
certain to occur. There being no system of sewage, all the waste and
filth of the city is absorbed in the grounds, and sooner or later, especially
in the lower portion of the city, will have its effect upon the well.---

"We believe it is a duty which all citizens owe to themselves and
to their family, to abandon the use of wells, wherever the Holly pipes
extend, without a doubt it is the best and purest water which can be had in
the city. It comes from the Platte, and is filtered through several hundred
feet of sand and gravel, rendering it very free from all impurities.------

"While we do not regard the situation of the Holly Works as favorable
and believe that the future may lay them liable to the same objection, we
now urge against the well, we do not believe it now exists in any degree.
The location of works are just where they will receive all the wash of the
city whenever any drainage system is adopted, but this is a matter of the
future. For the present, Holly water is best and purest, and should be used
in preference to the well."----

Apparently, the City Council devoted most of its time during the last
two months of the year 1873 to municipal problems other than those having
to do with the Denver City Water Company. For instance, we find that at
the Council meeting of December 17, 1873, an executive session was held and that a
at a special meeting held on December 21, the time of council was largely
taken up in a discussion of a proposed revision of the City Charter which
was to be presented to the next session of the territorial legislature.

Negotiations between the special council committee and the President
of the Water Company started in January 1874 with the Company demanding
a return to the terms of the original contract, which established hydrant
rentals at $150 per year per hydrant, with the Council determined to main-
tain the temporary rate of $75 as named and paid under the interim contract.

On January 22, the City Council made an offer to the company of
$12,000 for fire protection water for 1 year. This offer was rejected by
President Archer, who once more insisted on either the payment of $150
per hydrant per year, or the purchase by the city of the water works system
at cost with interest, or if that was not acceptable, to arbitrate the amount
that should be paid for it.

The Council immediately passed a resolution to the effect that it
would not accede to the demands of the Company.

On February 5th, with no agreement reached, Mr. Archer offered
to extend the existing contract for three months time so that the people
could express their opinion at the polls. This offer was accepted by the
Council with payment of $1,000 a month for fire protection agreed upon.

On March 12, a special committee of three was appointed by the
Mayor to fully investigate the cost of the Holly Water Works, and to find
out what new works of any system would cost to erect.

It will be remembered that the revised city charter passed by the
Territorial Legislature on February 13, 1874, but which did not become
effective until April 1, 1874, gave the City Council power to issue bonds for
water works purposes in a total amount of $200,000 upon approval of two
thirds of the voting property taxpayers of the City.

The usual end

122.
The annual municipal election was held on April 7, and at the Council reorganization meeting of April 9, Alderman McCune of the special water committee reported that Mr. Archer was the man to see, but since he was out of town, his committee needed further time to report on negotiations, which was granted.

The election of Dr. Wm. R. Whitehead to membership on the City Council in April of 1874 and his appointment as Chairman of the Health Committee of that body, brought immediate official attention to the long neglected sewerage and drainage problems of the young and growing city.

At the Council Meeting of April 16, he gave notice to the Council that he was investigating the condition of the wells, between Lawrence and Wazee, and 14th and 17th Streets. At that time he reported that he had found instances where the water was not only offensive to the taste, but also to the smell, and cases where the privy vaults and cesspools were almost in contact with wells, from which the citizens obtained water both for culinary and drinking purposes.

At the Council Meeting of April 23, Alderman Whitehead read a lengthy paper on the rapid progress recently made in sanitary science and its relation to the problems then before Denver which, in his opinion, demanded prompt and vigorous action.

Some of the high lights of this timely paper on public health are quoted below, because it was recognized, even at that early date, that the purity of the public water supply was of first importance in the fight against such wide spread diseases as typhoid fever, dysentery, cholera and the like.
"Nothing has contributed more to the growth and prosperity of American Cities than the rapid progress recently made in sanitary science."

"The mere removal of offensive garbage, and other causes of defilement from the surface of our streets and alleys, is the work of the street commissioner and of the city scavenger."

"In times of threatened epidemics, the throwing of a few handfuls of chloride of lime into privy vaults, as a protection against disease, is the duty of every citizen solicitous to preserve the health of his family."

"But the duty of those charged with the supervision of the health of a city is to point out and abate or remove the causes of ill health and of deadly disease that are concealed from the public view; causes that are insidiously and fatally at work, especially among the weak and delicate portion of our population."

"If I can, on this occasion, as your colleague and as a physician interested in public hygiene, merely call your attention in a general manner to the very great importance of a proper sanitary condition of our rapidly growing city, my present object will be attained."

"I have been too recently appointed to the Chairman of your committee on health to become thoroughly acquainted with all the local peculiarities which this city affords for the application of sanitary rules. But permit me, however, to briefly mention for your consideration, certain facts which are most suggestive of the hidden causes of disease in our midst."

"I took occasion at our last meeting to allude informally to the condition of certain wells in a part of our city. Subjoined is an analysis of the water from some of these wells, and which Professor Schirmer, of the
Then follows the report of Professor Schirmer giving the analysis for putrid matter of four samples of well water delivered to him by the city scavenger.

No. 1, at Chinese wash house, block 43, 20 grains of putrid matter to one gallon of water.

No. 2, from Block 18, 2 grains putrid matter to one gallon of water.

No. 3, from Block 43, one grain putrid matter to one gallon of water.

No. 4, from Block 43, one and three-fourths grains of putrid matter to one gallon of water.

Then Alderman Whitehead went on to say:

"As Coloradoans, we speak with pleasure of the pure and health-giving qualities of our territory. As citizens of Denver, let us endeavor to maintain this reputation, by an intelligently directed application of certain ordinances for the promotion of health.

"Next to the air we breathe, nothing is more important than the water we drink. In a sanitary point of view, and regarding Denver as an attractive sanitarium for invalids from all parts of this country, an abundant supply of pure water is of inestimable advantage to this city. ---

"The proximity of an over flowing privy vault with a well is a frequent cause of defilement of drinking water.

"The soakage of the filth of stables, privies, and cesspools, through porous soil, will contaminate well water. This contamination is not always
readily perceptible to the taste or smell, yet the germs of fatal diseases are thus conveyed into the human system.

"It is a serious and sometimes fatal error to believe that percolation through a few feet of soil will purify the soakage from sewers, privies or cesspools. Neither is it correct to suppose that a small amount of defilement of a river or other source of water supply, will be unattended with injurious results.

"In view of the porous nature of our soil, and of the natural tendency of the filth of the city in the absence of sewers, to soak through and discharge into the Platte River near the site of the Holly water works, this very important question is suggested: Are these works in the proper place? And, gentlemen, this question is especially pertinent, if we recollect that recently an uncedented reservoir has been made near these works. In the course of a few years we may, unless suitable precautions are taken, be made to drink from the Platte River, diluted with the excremental filth and foul drainage of the most populous part of Denver, pumped back into it by the Holly Works."

At this same meeting with Mr. Archer still out of the city, it was reported that the company would extend the temporary contract for one month additional, continuing to furnish water while negotiations were under way.

On April 29, the special Council water committee reported that it had offered to pay the company $15,000 a year for fire protection, plus permission for the Company to raise private water consumer rates 25 percent, except for irrigation, the Company in return to agree to install one and one half miles of distribution mains each year.
Upon Mr. Archer's refusal to accept $15,000 instead of the $20,000 a year demanded by him, he was told by the Mayor that immediate steps would be taken to submit the question to the people of voting bonds for their own works.

On May 1, a copy of a Council resolution was left with the water Company, with 10 additional fire plugs designated therein to protect the city's legal position. This resolution stated further that the city would not pay for water at existing hydrants other than the ten named.

In order to check the rumor that all water would be shut off by the Company, the Times, on the same day, sent a reporter to the Company office with money to tender for a new water license. He was then told that no new licenses were being issued but that water would continue to be furnished those already taking service.

Mayor Barker and President Archer held a last minute conference on the evening of May 2, at which time a tentative agreement was reached, which each was willing to recommend to his associates.

This agreement was presented to a meeting of the City Council and a number of prominent citizens on the evening of May 4, 1874.

The Mayor said he had called the meeting in order to talk over the proposition submitted by the Holly Water Company through its President, Mr. Archer. Mr. Archer's memorandum was read by the City Clerk, after which a general interchange of opinion was indulged in.
In its editorial report of this Council Meeting, the News of May 5 summarized the Archer Memorandum as follows:

"First: - The sum of $20,000 a year for seventeen years from May 1, 1874, was substituted for the $150 per hydrant per year charge in the original contract. The City of Denver to erect as many fire hydrants at its own expense as it saw fit.

Second: The Water Company to annually lay at least one and one half miles of distribution pipes, agreeing to maintain a pressure, in case of fire, at any point on the line of said pipe sufficient to force a stream through a one inch nozzle sixty feet high, accidents to machinery excepted.

Third: The quality of water furnished during said seventeen year term to be equal to what it was then.

Fourth: In case of failure on the part of the Water Company, in any of the above conditions, the Contract would then become null and void.

In response to the Council's invitation to comment on the latest proposal, the following statements were recorded:

Mr. Archer:

Said he went east with the impression that the City Council wanted to buy the works.
Stated that the two propositions upon which the Company was willing to sell were - (1) Cost of works, with ten percent interest; and (2) arbitration as provided for in the contract of 1870. He was opposed to a Contract for five years because at the end of that time the same trouble would occur.

He thought $25,000 was a very low figure for the City to pay for fire protection, and a small renumeration to the Company considering the money it had expended, and the responsibility assumed. The Company had expended $97,000 besides the bonds; and at $20,000 per annum, the rate now compromised on, he thought it would be a long time before they would get even. Mr. Archer also pointed out that in dealing with the Company, the City should not forget that the water works had so increased the value of property that at least $40,000 a year was added to the general taxes collected by the City.

Mr. Reithmann, businessman and former Alderman, asked if any definite price had even been placed upon the works. Mr. Archer replied that there had not been. Thereupon Mr. Reithmann spoke in favor of buying the works as being better policy than paying $20,000 annually without having control of them.
General Pierce, Engineer and former city surveyor, when called upon, stated that he also favored the purchase of the works, which he regarded, with the franchise held, as very valuable. He said that at the end of twenty years the plant would be worth $1,000,000. He believed the proposed new contract a better one than the 1870 one, and felt that as a debt of only $200,000 could be incurred by the city, which Mr. Archer said was not enough to buy the works, the only thing to do was to conclude a new contract on the basis offered.

General Case, Engineer, City Surveyor, Alderman and Mayor from April 1, 1873 to April 1, 1874, endorsed the views of General Pierce.

Ex-Governor, John Evans, when called upon, said he had not studied the details of the water question to any great extent; so had little to add to the remarks of Mr. Reithmann and Generals Pierce and Case. He approved of buying the works, and said it was very bad policy to go into a law suit over the matter. The proposition was a fair one. Although the price seemed large now, and probably was, the city would have the advantage in the end. Since it was impossible to purchase now, he suggested that a clause should be inserted in the memorandum which would enable the council to buy at the end of two or four years, or at any time the city had the power and the means. He thought the council would act wisely in accepting the proposition.

The city owed much to Mr. Archer. He had shown more confidence in the future of Denver than our own citizens would have done at the time and deserved liberal treatment at the hands of the public.

Other prominent citizens spoke in connection with the proposal with the News concluding: "The sentiment of all present seemed very
unanimous in favor of buying the works, if possible; and if not, then to conclude the new contract. As the meeting adjourned, Mr. Archer assured the Mayor and Council that the hydrants would all be found flowing in case a fire occurred."

The proposed contract as amended to include suggestions coming out of the above meeting was presented to the City Council on May 7, 1874. It was read and referred back to the committee, including the City Attorney, with instructions to make certain additional amendments, and report back at the next meeting of the Council.

The new water contract as finally amended, was approved by the City Council (vote unknown) at a special meeting held on May 9, 1874. It became effective on May 1, 1874 and was to run for a period of seventeen years, or until May 1, 1891. At this same meeting, the Chairman of the Committee on Health in connection with the Water Company, was instructed to procure an analysis of the water now used.

A copy of this Contract dated May 9, 1874 as transcribed from the Abstract of the Record in the Case of The Denver Water Company vs The Citizens Water Company before the Colorado Supreme Court in 1890 will be found in the Appendix.

The comments beginning on Page 83 of King's History of the Government of Denver with special reference to its relations with Public Service Corporations, "1911" are of interest here. Quote: "The Charter of 1874 granted to the City power to own water works of any description."

The situation was now quite clear. The City had power to grant
or deny a franchise; it had the power to build its own water system, if the terms of the Company were not satisfactory; there was considerable demand for municipal ownership. Under such circumstances, the way was opened for a fair contract with the Company. The Company saw the situation and saw the necessity of securing a more valid franchise, and on May 9, 1874, after winning and feasting the Council, obtained from it a franchise granting the Company "the sole and exclusive right to lay pipes for the distribution of water within the city's limits -- for the period of seventeen years from the date of this agreement." For this monopoly however, far better terms were secured than were granted by the Gas Company. The Company agreed to lay each and every year during the continuation of this agreement, one and one half miles of main distributing pipes and to supply the same with water "and" to furnish water to the occupants of houses and to other persons along the line of water pipes, for domestic use and other purposes, at rates not to exceed those charged by the City of St. Louis, "the Company to furnish" as good a quality of water -- as it has heretofore done and is now doing.

"Moreover, the Company agreed that the City should have the right to purchase the plant at the expiration of five, ten or seventeen years, at the valuation determined upon "by five disinterested appraisers", two of whom were to be appointed by the City, and two by the Company. These four to choose the fifth. This franchise annulled all former contracts. For this monopoly, no remuneration was asked. In this Contract, the City agreed to pay $20,000 a year through the full term for the use of water from City hydrants. There was no provision in the franchise for extensions.
other than the one given; no provision for future regulation of rates, save as St. Louis conditions might regulate them; no provisions adequate to ensure unpolluted water, a grave omission, as the water was pumped from within the City's limits. The Company at once increased its capacity 2,000,000 gallons a day."

At this point it seems proper to refer to a report, made in June 1893 by Jos. D. Schuyler, Consulting Engineer for the Citizens Water Company in which the history of the Denver Water System was reviewed from its beginning in 1871 up to the time the report was written. The following paragraphs are quoted therefrom:

"The first works, built in 1871, consisted of a pair of Holly pumps, with a capacity of 2,500,000 gallons daily drawing water from a large well sunk in the gravel beds of the Platte River, at the foot of 15th Street, then the main thoroughfare of the City.

"The town had then but 6,000 inhabitants but was growing rapidly and two years later an additional pump with 2,000,000 gallon capacity was added, which sufficed for public needs until 1879, when a higher source of supply was sought, above the sewage contamination of the spreading city."

It should be noted here that this franchise was granted during the first year of the administration of Mayor William J. Barker, with Thomas M. Patterson occupying the important position of City Attorney, he having succeeded Mr. M. Benedict, to that position on April 9, 1874."
We again digress for the purpose of calling attention to the fact that Mr. Patterson was elected a Delegate to Congress on the Democratic Ticket in the summer of 1874, at the time that statehood for Colorado and New Mexico was being considered by the Congress.

A good description of Mr. Patterson's very fine efforts toward the success of Colorado's admission into the Union of States on August 1, 1876, is to be found in Volume I, Stone's History of Colorado, beginning on Page 423.

According to the newspapers of Denver, the granting of this franchise met with fairly general approval as evidenced by the following press reports:

Daily News of Sunday, May 10, 1874 - Editorial headed - "Holly Water" - with two subheadings (1) - "Conclusion of a Contract between the City and the Company and (2) "Equitable Terms - end of a long contest."

"We are gratified to announce to our readers that a contract was signed yesterday afternoon between the City of Denver and the Holly Water Company - Denver City Water Company - which settles the long standing dispute between the two parties, and disposes of the water question most effectively so far as a supply for fire purposes is concerned. The Contract is for 17 years from May 1, and the following is a brief statement of its terms:

"The News regards these terms as fair and equitable, and such as will conduce to the safety and prosperity of the city, and afford ample renumeration to the Water Company. Through almost constant bickering

134.
and dispute, a vexed question has been settled in a manner satisfactory to all parties, a result due to the prudence and firmness of Mayor Barker and the Council, as well as to the compromising disposition of the Water Company."

The Daily Times in a news item dated Monday, May 11, 1874: - "The Contract between the City and the Denver City Water Company has been signed, and there will be no further opportunity to "jaw" about this interesting subject for 17 years. Provisions of the new contract have heretofore been published in the Times." In the Times of May 4, 1874 in an editorial on the subject, the following comments were made: - "Mayor Barker, in making the proposition agreed to between himself and Mr. Archer, said he spoke for himself only. He could not answer for the Council, yet we, the Times, believe that the plan will be approved not only by the Council but by the Citizens at large. --

"In the first place, it saves us from the immediate building of works, which, to be of a capacity sufficient for the future, would probably cost not less than $25,000 a year. We already have a large bonded county indebtedness, which must be liquidated by the time an 18 year contract would expire, at which time we would be in good condition to build or buy water works. --

"The plan now proposed will give us plenty of pure water at an annual cost less than the interest on the money required to put up good works; and save us from the expense of building until our railroad bonded indebtedness is paid."
The analysis of water requested on May 9th was made by Jacob R. L. Schirmer with his report on samples taken on May 14, from the reservoir well of the Holly Water Works and submitted to the City Council at the meeting of May 28, 1874.

The total solids in grains per gallon of 231 cubic inches was then reported as 12, which was nearly 2-1/2 times as much as the comparable figure (4.9) found to be present in Kassler raw water on June 12, 1961. However, only a trace of organic matter was found to be present in the water of that early day's supply.

Settlement of the contract dispute brought a notice on May 14, 1874 saying that semi-annual licenses would be available at the office of the Water Company from Monday, May 18 through Thursday, May 21, with the warning that if not paid for by May 25th, water would be cut off without further notice.

A well written condensed account covering the first three years of the corporate life of the Denver's City Water Company is to be found in Volume II, Hall's History of Colorado, beginning on Page 114, thereof.

Extensions to the existing water distribution system were started soon after the franchise dispute had been settled, a typical situation being described by the Times in its June 3, 1874 issue as follows:

"Colonel Jacobson, Chairman of the Citizens Meetings, called to effect an extension of the water mains to 27th Street, informs us that the negotiations have been brought to a successful termination and that the street mains will be extended out Champa to 27th Street inside of five weeks. Colonel Archer has gone east to attend to the shipment of the main.
The citizens interested in the extension contributed very liberally to the Water Company to make it an object to start the extension at once, and they are deserving the thanks of every person interested in the eastern part of the city."

Again on September 3, we find the News reporting that the Council had received a petition for water main extensions, signed by a number of citizens, which, after considerable discussion was referred to a council committee for conference with the Water Company.

At this same meeting, a communication from the Denver Water Company was read stating that they had erected a hydrant on the southwest corner of Larimer and Sixth Streets, West Denver. It was stated that pipe had been laid to the mill. It was agreed that the pipes laid there should not be included as part of the pipes to be laid as specified in the contract with the city - one and one half miles per annum.

One of the many items in dispute with the Denver City Water Company was that concerning hydrant maintenance.

A decision in this matter was announced in a 'Times' news item on October 2, which stated; -

"It has been decided by the City Attorney - presumably Mr. T. M. Patterson, who did not go to Washington as a Territorial Delegate until after the New Year of 1875, that the Denver Water Company is bound to keep all fire hydrants in repair free of charge after they are once set, and that free and uninterrupted use of water must be furnished from the same. Consequently, the recently rendered bill of $416.50 as rendered to the City for repairs to broken hydrants will not be paid."
At the Council Meeting of October 1, 1874, Alderman Whitehead of the special committee, reported that he could not make satisfactory arrangements with the Water Company for the extension of its main from 14th and Welton, as prayed for in a petition of B. M. Hughes and others, the President of said Company saying he would extend the main as soon as practicable.

One of the items of business reported in the newspapers of December 8, on the Agenda of the Council Proceedings of the previous day, was a petition from the Denver Water Company, praying that their assessments for 1873 be reduced from $125,000 to $50,000. The matter was referred to the finance committee, who reported at the Council Meeting of December 15, recommending the abatement of taxation of the Denver Water Company from $125,000 to $50,000 and when said Company pays its taxes on the full amount, that a warrant be issued to the Company for the amount of such excessive taxation, to wit: for the taxes and interest accrued on $75,000. The recommendation as made by the finance committee was adopted by the Council.
The year 1875 started out with the Denver City Water Company in considerable trouble due to the freezing of mains and hydrants, following an exceptionally cold winter.

Pertinent news items on this subject follow:

Resolution passed by the City Council at a meeting held on January 7 to the effect that the Holly Water Company report daily to the Chief Engineer of the fire department on the condition of the fire plugs.

The Daily News of January 10 stating that the Water Company had succeeded in thawing out most of the fire plugs on the day before, but the house pipes were nearly all frozen up.

The Times in an editorial on January 22, discussed the subject in the following manner: "The freezing of numerous water pipes in this city the present winter is a serious affair, and would subject the water company to a forfeiture of their contract with the City should the latter insist upon it. The coming season must see the possibility of a similar defect remedied, or the city will be called upon to take steps to furnish a supply of water that will be free from this danger. And we may here state that it would not be a bad idea for the City Council to make an immediate investigation of the water supply, similar to that lately made by the committee on gas and gas lamps. Such a report will sooner or later be valuable to the Council."

The Times reported on January 25, 1875 that the Chief and Assistant Engineers of the fire department had made a tour of the city on the 23rd instant and examined all of the plugs, 117 in number. About one-half of them being found frozen, with the water company working a large force of men to thaw them out.
On February 2, the Times reported that the Water Company was still engaged in thawing out the plugs that remained frozen. It was said that nearly all the mains were thought to be free of ice, but that numerous service pipes were still congealed with many citizens not getting their supply of Holly Water.

The Times of February 8th, carried a news item on water plant improvements about to be made which is quoted below since it seems to be the best available information on what was done to enlarge the original plant capacity, already commented upon.

"Mention was made a few days ago of the arrival of new boilers for the water works. The two new boilers are 54 inches in diameter, 20 feet long, containing 14 six inch flues, and weigh six tons each. A new brick boiler house and coal shed will be built, and two of the boilers now in use, the locomotive and one of the dome boilers will be removed, the others being retained for reserve power. The present boiler house will be converted into another engine room, and a Henderson pump of 2,500,000 gallons capacity per twenty-four hours, will be put in. These pumps are warranted to save 33 percent in fuel, which will be no great undertaking, as it required a great waste of power to run the heavy and bungling machinery of the Holly.

"The capacity of the well will be increased from the present one 56 x 36 feet, by adding another of 60 x 20 feet, and extending to the river. If satisfactory arrangements can be made, a side track will be run from the Rio Grande road to the works for coal delivery.

140.
"After the new improvements are completed, the old works and pumps will be kept in good order and ready for any emergency. S. C. Bradford, the Engineer, not only keeps the outfit in good condition, but has on hand arms enough to stock an arsenal and if any roughs should attempt to fire the city and disable the works, they would be wise if they had their prayers all said up beforehand."

Reference has already been made to the transfer of 3.0 second feet of water from the 15th Street Pumping Plant to the Intake of Conduit No. 8 with appropriation dated December 20, 1870 as noted in Case No. 807, approved by Judge Cornforth on June 16, 1930.

In this same case, the above enlargement of the 15th Street Pumping Station was approved for a further 3.78 cubic feet of water per second of time transfer to the Intake of Conduit No. 8 with priority as of December 31, 1874.

The total amount of 15th Street water transferred from the original plant to the Intake of Conduit No. 8 under this Case being 6.78 cubic feet of water per second of time, which is equivalent to about 4,383,000 gallons a day.
Alderman Currigan suggested at the Council Meeting of February 10, that a committee be appointed to wait on the officers of the Holly Company to ascertain whether they could furnish water for irrigating purposes. In response, Mayor Barker said that it had already been ascertained that that corporation could not do so.

Alderman McLellan said he thought the Mayor was mistaken, as Mr. Archer, the President of the Company, just prior to starting for St. Louis, to purchase new machinery, said that with the improvements to the Holly Works, irrigating water might be supplied.

After discussion at some length of the irrigating water problem, two committees of three each were appointed to wait upon the officers of the Platte Water Company and upon the Holly Company respectively to ascertain upon what terms these two companies would furnish irrigating water for the coming season.

The committee appointed to confer with the Holly Company officials reported, at the Council Meeting of February 17th, that the President of that Company said he felt no inclination to furnish water for irrigation, and when pressed as to the probable cost of it, remarked that the figures would likely be about $100,000.00.
In a news item carried by the Times on February 23rd, it was stated that the water pipes continued to burst and flood the streets. Early that morning the main on Arapahoe Street near 15th and the one on California between 18th and 19th having given way. And on the next day it was reported that another water main on Stout Street near 16th had burst causing an extended amount of gratuitous irrigation for many blocks around.

On March 17, it was announced that the Holly Water Company contemplated making a change in the price of water for irrigating city lots, which would most probably be an advance on the old rates.

This was followed by a statement in the Times of April 3, 1875 to the effect that the Denver City Water Company had decided to raise the price of water for irrigating purposes, effective May 1st. The new rates were set at $12.50 for the first lot and $10 for each subsequent lot, the existing rate then being $10 and $5 respectively.

No change was to be made in the price of water for household purposes. The Company claimed that the advance in rates was brought about by the increased cost of pumping, caused mainly by consumers not restricting themselves, in the use of water to the three hours daily during the irrigation season, according to the regulations, but frequently allowing their sprinklers, in many instances, to run all day and all night.

The offices of the Company stated most emphatically that the recent repairing of frozen pipes had had nothing to do with the advance in irrigation rates announced at that time.

The City election of April 5, was a quiet and orderly one. In
commenting on it the News said - "The apathy and indifference manifested by scores of citizens who ought to have felt a lively interest in the formation of the City Council, were in striking contest with the enthusiasm and excitement formerly prevailing at our charter elections."

In reporting on the Council reorganization meeting the News on April 8, 1875 printed Mayor Barker's address to the old council in which he said in part:

"The vexed question of a contract with the Denver City Water Company was the first to claim your attention. It was a subject that had been before the people and city council for the previous four years, and one that all wished to avoid and pass over to their successors in office.

"I am pleased to say that the firm and judicious course pursued by you enabled the city to make a contract with the Water Company, on what all have considered very favorable terms, and which will become more apparent as the time of the contract rolls on. While at $20,000 a year, it costs us more at present than would have been the case under the old contract, (by which the water company was paid $150 per annum for each hydrant) it will make a saving to the City of $245,500 for the balance of the term of seventeen years, estimating that there will be an increase of twenty hydrants per year during that period."

At this meeting the new appointive officers were named, the most important one being Charles S. Thomas, City Attorney, to succeed Thomas M. Patterson.

A resolution was adopted at the City Council Meeting held on April 4 directing the Holly Water Company to purchase, in the name of the
City, fifteen improved hydrants recommended by the committee on water, provided the cost should not be much greater than the Holly Hydrant then in use.

The next item of interest published by the local papers concerning the Denver Water Company was one printed by the News on August 11, 1875, following a council meeting held the day before. It follows:

"The Denver Water Company was reported as seeking to enforce a tax of $444 per annum for the use of water in the market house, although but one small pipe is in service, such as other parties pay $10 per year for. The Mayor was instructed to resist the demand."

As a result of action taken at the Council Meeting of September 6, 1875, the Water Company was instructed, as recommended by the committee on Fire Department, to put on grade such fire plugs which were not then on grade.

President Archer, of the Denver City Water Company, appeared before the City Council at its meeting of September 16, and extended a verbal invitation to the Mayor and members of the Council to visit the gas and water works on the following day. The invitation was accepted.

In reporting on this visit the Times, among other things, said:

"After the visit, Mr. Stiles called the gathering to order and briefly recounted the trials and obstacles which were contended against in introducing water and gas, when the population of this City amounted to only 5,000 and that Colonel Archer was due a great measure of the credit in bringing these things to a successful issue. A vote of thanks was proposed
and carried by acclamation.

"Colonel Archer was called up, spoke in thankful terms of the kindness to which the Company had been treated by the executive officers of the City and its citizens, when difficulties amounting almost to barriers had been contended against.

He assured the meeting that the machinery and apparatus was now in such perfect order that reductions would shortly be made in the prices of both gas and water, which seems to be gratifying intelligence, particularly as election having just passed, water will be the principal beverage for some time to come."

On September 17, the News suggested that in place of devising ways and means for spending the people's money in adopting plans for turning Cherry Creek and other wildcat schemes, the Council had much better be making provisions for providing the City with a system of sewers.

One of the new items of business introduced at the City Council Meeting of November 4, 1875 had to do with the installation of a fire alarm telegraph. Also at this meeting considerable discussion was had on the subject of constructing an 8-inch main from the Water Works to Wazee Street, estimated to cost $4,000 as recommended by the Chief of the Fire Department.

Both of these items were discussed at the meeting of November 11th with no action taken. However, it was stated at that time that the Superintendent of the Water Company thought the existing main on 15th Street to Wazee was sufficient.

The News of November 20, carried an advertisement of the Denver City Water Company, dated November 19 which read as follows: "To whom
it may concern: Take notice that there is at this date, no plumber in the
City of Denver, territory of Colorado, who has any authority to do plumbing
work in connection with the mains of the City of Denver City Water Company.
Parties who contemplate having work of this kind done are cautioned against
employing any plumber without consulting the undersigned: Signed, Charles
W. Dwelle, Supt. Denver City Water Company."

The council committee on water reported on the matter of extending
water mains from the Water Works across the Platte and to the corner of
15th and First Streets in North Denver, at the meeting of December 9, 1875
as follows:

"That we would recommend that a contract be entered into between
the Denver Water Company and the City for a six inch main to be laid on the
14th Street bridge, with a valve placed underground on the north side of
said bridge, so that in cold weather a constant stream of water can flow
from the main pipe into the Platte River to keep the water from freezing in
that portion of said water pipe that may be exposed to the weather, provided
that said Denver Water Company will furnish said pipe and do all the work in
laying the same and keep it in repair for the city for the sum of $1,250, the
ownership of said pipe to be in the City. The Denver Water Company not
to include this in their contract with the City to lay one and one half miles
of water mains per annum." The recommendation was accepted and a
contract ordered drawn.

This contract was read, adopted and ordered spread on the record
at a special meeting of the City Council held December 16, 1875.
Another special meeting of the City Council was held on December 22, at which time the proposition of the Metropolitan Company of Detroit was accepted from the three bids submitted for a Fire Alarm Telegraph system. The offer was for a total cost of $5,000 with the work to be completed in four months.

This action was followed up at a meeting held two days later at which time the contract as read was accepted and the Mayor authorized to sign it. An ordinance providing for a system of fire alarm telegraph was also introduced, at this meeting, the rules suspended and carried by a vote of 7 to 1.

Although not directly related to the early water system of Denver, it seems desirable to again digress for a short statement concerning important state wide events which took place in the years 1875 and 1876. These were most certainly of importance to the business interests as well as to all citizens living in the general area; as will be seen from the brief resume that follows:

October 25, 1875 was the day upon which, in obedience to the proclamation of Governor Routt, the people of Colorado Territory elected representatives to a convention to form a constitution and State Government. These representatives assembled in Denver on the 20th day of December 1875 and formed a constitution, completing their labors on March 14, 1876.

On July 24, 1876, Governor Routt formally advised President Grant of the several steps taken, stating that the constitution and ordinance were adopted by a vote of 15,443 for and 4,062 against, the majority being 11,381.

On the first day of August 1876, President Grant issued his proclamation, declaring and proclaiming the fact that the fundamental conditions
imposed by Congress on the State of Colorado, to entitle it to admission into the Union, had been ratified and accepted, and that the admission of said State into the Union was now complete.

For an excellent account of these and other pertinent items of interest relating to this important event, the reader is referred to Hall's History of Colorado, Volume II, beginning at page 322.

The period of prosperity ushered in by the extension of the railroads to Denver lasted only a year or two. The effects of the panic of 1873 combined with crop losses, accentuated by the ravages of grasshoppers and the exceedingly severe winter of 1876-77, caused universal depression along the eastern slope of the Rocky Mountains. Times were hard with the Denver of that winter being but an overgrown village of less than 10,000 people.

However, for the second time in Colorado's early history, the critical state of the region's economy was relieved by the discovery in 1874 of immense deposits of carbonate of lead ores—properly silver ores—in the Leadville mining district.

By the summer of 1878 a new era of peace and plenty had arrived.

Historian Hall describes the changed conditions as follows: "The locusts had taken flight, the tillers of the soil were inspired with renewed courage to plant, and sow, and reap; the area of cultivation widened, crops were abundant, and all trains from the eastward came crowded with people; millions of fresh capital poured in, and the premonitory signs of a grand revolution dispelled the clouds, quickening the energies of men, set a
thousand propelling influences at work, and turned all eyes with eager interest to the delvers beneath the porphyritic hills above the new metropolis, Leadville, that had arisen and already become great, from whence came glad tidings of regeneration and salvation".

"The chief city of the State, stagnant and inert before, now began to assume the appearance of an active, bustling community. Real estate, for which there had been neither inquiry nor sale of consequence during the preceding four years, suddenly rose into unwanted prominence for safe and profitable investment. The rapid increase in Denver's population to 35,629 by 1880, was so great it was impossible to provide shelter for the multitudes notwithstanding the enormous and wholly unprecedented advance of building that followed. Not Denver alone, but all the settled divisions of the State were incalculably benefited by the new blood thus forcibly injected into their veins".

"Therefore, when we say that Leadville was the base and moving power, which in its on-rushing force made Colorado what it is today - 1890-it is but the proclamation of strict historical truth."

The 15th Street pumping plant as enlarged in the early months of 1875 to a total daily pumping capacity of 5,000,000 gallons became inadequate to meet the needs of the fast growing city by the summer of 1878. Plans were therefore prepared for a new plant to be constructed about two miles upstream on the Platte, or at a point sufficiently far above the City to escape any possible impurity incident to the natural drainage of the ground upon which the city was then built.

In order to finance and build this proposed new plant, a corporation
called "The Denver City Irrigation and Water Company" was incorporated on November 23, 1878.

The announced object was "to construct a ditch and filtering well, and with the aid of machinery, supply Denver and the lands contiguous with water for domestic, irrigation, mechanical and fire purposes". The capital stock was $100,000 divided into 1,000 shares at $100 each, with bonds in addition authorized up to $100,000.

The incorporators, who were to be trustees for the first year were James Archer, Daniel Witter, Robert R. McCormick, George W. Clayton, Walter S. Cheesman, David H. Moffat, Jr., Frederick Z. Salomon, Erastus F. Halleck and Richard Holme. It will be noted that this organization was composed of the same gentlemen who then controlled The Denver City Water Company.

A marked stone, set in the upper belt course on the West Side of the old pump house at the present west side yard lists the following officers for the year 1880: R. R. McCormick, President, D. Witter, Vice President, C. W. Kassler, Treasurer, Richard Holme, Secretary.

James Archer was the Contractor, John Pierce, Chief Engineer, William Toovey, Superintendent of Masonry and M. Spangler, Superintendent of earth work.

The Times of November 26, 1878 commented editorially on the new project as follows: "The proposed construction of new water works for the city, at a point on the Platte some distance above the center of population
which will insure for a long period of time the protection of water sources from all impurities from extensive drainage, meets with general approval. We shall get better water than we are now receiving, and there will be no probability of infection by any of the causes which are likely soon to operate against the present supply. It will enable the company to extend lines of pipe into quarters not now reached, and become in all respects more advantageous to all classes of residents for fire and domestic purposes. At the present rate of growth, Denver will, in a few years, have advanced beyond the limited capacity of the present establishment."

On May 1, 1879, the trustees of the Denver City Water Company caused the following "card" to be published in the News.

"The rapid growth of our city has imposed duties on the water company which necessarily limit the supply of water for irrigation. Our duty is to provide water for domestic uses, and for the protection of property from fire; the surplus water we are at liberty to rent for irrigation or other uses. The experience of the past year shows that the demand for irrigation tasks our water works 200 percent over that for domestic uses, while it adds but 15 percent to our income.

The water company is interested with you in the desire to have our city beautified by handsome gardens and lawns, and the new works we are now constructing at a cost of $150,000 with a daily capacity of 6 million gallons, are rendered necessary at this time only because the demand for irrigation is so large. As it is impossible to complete our new works
before September, it becomes a necessity for the water company to
limit the use of water for irrigation as follows: All that portion of the
city west of 17th Street will be licensed to use water for irrigation only
between the hours of 4:00 A. M. and 1:00 P. M.; and all that portion
east of 17th Street between the hours of 1:00 P. M. and 10:00 P. M. and
it is earnestly desired that all consumers will, as far as possible, prevent
any unnecessary waste of water, and will confine the use of their hose to
the hours specified.

"By carefully adhering to the above requirements, the water company
anticipates no difficulty in meeting all the demands upon it for water during
the present season, and the company believes all consumers will willingly
abide by these necessary restrictions."

Surveys for this project were started in the fall of 1878 and actual
construction work began early in 1879. Water was first turned into Lake
Archer on November 30, 1879, although actual operation as a unit of the
Denver water system was not started until the spring of 1880.

On September 4, 1880, Chief Engineer, John Pierce, accepted the
completed project from the contractor in writing as follows: "This certifies
that the Contract made March 1, 1879, between the Denver City Irrigation
and Water Company and James Archer, for the building of the Water Works
for said company has been completed to my satisfaction as Chief Engineer

As originally constructed in 1879, the project was composed of two
parts, one, a canal approximately 2.44 miles in length extending from a point
on the east bank of the South Platte River opposite W. Alaska Place, northerly
to a small terminal reservoir located on the present west side yard site, between West 11th and West 12th Avenues; and two, a water power plant located in the north end of the existing masonry building at the West Side Yard, now used as a machine shop. The outline of the original wheel pits can easily be traced on the floor here.

**Canal**

The canal was constructed with a bottom width of 35 feet with side slopes of 1 to 1, making its width at operating depth of 7 feet about 49 feet on top.

Between West Ellsworth Street and West 7th Avenue, the width of this canal was increased in varying amounts to a maximum of over 500 feet, forming a settling basin of some 40 acres in extent, with a water depth varying from 8 to 20 feet. This artificial pond was named Lake Archer in honor of Mr. Archer, the promoter of the project.

The Intake Structure was equipped with butterfly gates and sand gates, so that by closing the butterfly gates and opening the sand gates, the sand which accumulated in the upper reaches of the canal over a period of time, could be bypassed into the river at periodic intervals. The volume of water admitted to the forebay at the plant was also controlled by butterfly valves at that point.

A head of 30 feet was developed at the terminal reservoir. This basin served a dual purpose, in that some of the water brought to it by the canal was used to run the turbine wheels, while the remainder, after passing over a filtering bed was delivered to a clear water well, from whence it flowed as needed to the pumps for the city supply.
Water Power Plant

This consisted of a battery of two turbine wheels and a set of Holly horizontal pumps, having a combined capacity of 6 million gallons a day.

The contract for the purchase of this equipment from the Holly Manufacturing Company was dated March 7, 1879 and provided for the purchase of two American turbines, each 54 inches in diameter set in iron cases; and two duplex horizontal reciprocating pumps with cylinders 13-1/2 inches in diameter and a stroke of 27 inches. A Holly automatic regulating device was also included. The cost f. o. b. Lockport, New York was $14,500.

The water company was to prepare the foundations and pay the freight, with the Holly Company to install the equipment in complete running order at the above price.

The pumps were to be of sufficient strength to run at a rate of 25 revolutions a minute against a pressure of 130 pounds a square inch. The turbines were designed to operate the pumps at the rate named when running under a head of 27 feet of water. These pumps discharged into a 20 inch cast iron main, 1.10 miles long, laid from the west side plant diagonally across open unplatted ground to the intersection of West 14th Avenue and Mariposa Street, thence north along Mariposa Street to West Colfax Avenue and thence easterly on West Colfax Avenue to a connection with the original distribution system at the Welton Street intersection.

The year 1879 was a busy and frustrating one for the Mayor and Aldermen.

In addition to all the new municipal problems incident to "boom
time", activities, the general unsanitary condition of the city was brought into sharp focus by a near epidemic of typhoid fever and other water borne diseases, which reached a peak during the month of October.

The cause of this epidemic was fiercely debated in the newspapers of the day. Rather belatedly, the council committee on health recommended on November 14, that a sewage system be built, that immediate removal of garbage be undertaken, that water tight cesspools be required beyond the sewer district and that an immediate increase be made in the force of street cleaners. The report stated that the Holly water supply, which had been suspect off and on for some time, was as good as could be expected.

The Denver Medical Association got into the act through a letter published over the signature of H. A. Lemen, M. D. on December 12, 1879 entitled "Water of Death".

This letter was extremely critical of the Holly water supply, stating among other things, that the water furnished to the city for drinking and other purposes was not filtered, and that even crude chemical tests showed that it frequently contained enormous amounts of organic matter from sewage emptied into the West Denver Mill Race and into Cherry Creek above the intake of the 15th Street Water Plant.

Dr. Lemen stated that all over the civilized world, numerous outbreaks of typhoid fever had been traced to the domestic use of water which, like the Holly water, had become polluted with human excrement and seepage of organic filth in a state of solution.

As might have been expected, this letter brought a prompt reply from Colonel Archer, which was printed on the next day. After denying many of the
allegations made against the practices of the Holly company, Mr. Archer went on to say: "Dr. Lemen stated yesterday that chemical analysis would show what wrongs the Holly water was doing to the people. His "eyes and nose" were his guides. I suggested nasal catarrh and what railroad men call "color blind" might interfere with smell and vision. As Dr. Lemen had mentioned in his "card" in the Denver Times, that less than one twentieth of sickness is chargeable to Holly water would he not confer lasting favor on this community by turning his "eyes and nose" more particularly to the cause of the remaining nineteenth twentieth.

"In conclusion, your readers will observe, that throughout this discussion, no charges made against this company or the Holly water have been substantiated by proof, therefore, it has not been necessary for the company to assume the defensive.

"It is a satisfaction, however, for us to say that at no distant day we will be able to supply our beautiful city with water drawn from a locality, that will at least remove the prejudice now existing in the minds of many as to its purity."

It goes without saying that this answer of Mr. Archer's did not stop criticism of the Holly water by many prominent Denver physicians, who insisted, with apparent good reason, that the Holly water supply was contaminated with organic matter, and therefore unfit for human consumption.

The year 1879 was, from the point of view of everyone interested in the appropriation of water for beneficial use, a most important one.

It was in that year, that the Legislature passed an Act, approved on February 19th providing a procedure for defining, fixing and establishing
the relative rights of appropriators in accordance with the date of each appropriation. This Act was very shortly after its passage declared by the Supreme Court unconstitutional in part. However, it represents the beginning of our present system. The defects in it were remedied at the next session of the Legislature by an Act approved on February 23, 1881 which, with modifications and amendments not specially far reaching or drastic, still forms the basis by which we are capturing, utilizing and developing the water supplies of our State.