WATER SUPPLY OF ST. LOUIS AND ITS COMING NEEDS.

Paper Read by Water Commissioner Flad Before the Commercial Club.

Mr. Edward Flad, Water Commissioner, read before the Commercial Club last night a comprehensive paper on the water supply of St. Louis. With the permission of Mr. Flad and of the Commercial Club, The Republic is able to present the paper this morning. The subject is becoming one of the principal features of our local government.

Since 1895 all of the water supplied to the citizens by the St. Louis Waterworks has been taken from the Mississippi River at the Chain of Rocks, about Seven miles above the location of the former intake, at the foot of Grand avenue. The inlet tower is located at the edge of the low-water channel, about 1,500 feet from the shore line, at a medium stage of water. Gates are placed on the sides of the tower at five different elevations. As far as practicable, the water is taken in just below the surface. After entering through the gates of the inlet tower the water drops vertically through the intake shaft and passes into a tunnel driven through solid rock forty to fifty feet below the surface. This tunnel is seven feet in diameter. After passing through about 2,200 feet of tunnel, the water reaches the screen chamber, where drift and vegetable fiber are intercepted, and then passes on to the low-service pumps, which pump the water into the settling basins located at the Chain of Rocks.

The casual observer, not knowing or forgetting the condition of the water in the river, would be inclined to the opinion that the water as drawn from the faucet was not different from the water in the river. It is true that at certain seasons a very substantial color may still be observed in our water. The stranger within our gates is apt to gaze with astonishment at the courage of the "old citizen" who gulps down the semi-liquid with a satisfying smack or plunges with impunity into a bath of the chocolate colored water. Let it be remembered, however, that much of the matter in suspension is removed by means of the settling basins. During the last fiscal year 317,000 cubic yards of sediment were removed from the basins. This would cover a block 400 feet square to a depth of 53 feet. About 90 per cent of the matter in suspension and about 50 per cent of the bacteria are removed in the settling basins.

After leaving the settling basins the water enters the conduit, in which it flows by gravity to the two pumping stations, the first pumping station being at Baden, about four and one-fourth miles by conduit from the Chain of Rocks, and the second at Bissell's Point. The conduit has a fall of one in 10,000, or about six inches per mile. It is built of brick and concrete. The section from the Chain of Rocks to Baden has a cross-section 11 feet wide and 9 feet high, inside measurements, and is calculated to deliver 160,000,000 gallons per twenty-four hours. The section from Baden to Bissell's Point has a cross-section 9 feet wide and 7½ feet high, inside measurement, and is calculated to deliver 65,000,000 gallons per twenty-four hours.

The Baden pumping station supplies water to the high-level district, which embraces approximately the following territory: West of King's highway and north of Forest Park.

The high points south of Forest Park and west of King's highway, including Clifton Heights, North Benton and Insane Asylum district.

South of Shaw and Lafayette avenues and west of Jefferson avenue, as far south as Osceola street.

Between Eighteenth street and Jefferson avenue, Shenandoah avenue and Arsenal street.

Between Beaumont street and Spring avenue, Easton avenue and Pine street, known as the Garrison Avenue District.

Several small leads supply isolated high points.

The pressure at the pumps is about 125 pounds to the square inch, which is sufficient to bring the water to the elevation of the overflow in the stand-pipe at Compton Hill Reservoir, to wit: 674 feet above sea level.

No storage of water is provided for the high-level district, so the pumps at Baden are required to pump at all times, day and night, a quantity of water sufficient to supply the district served from this station. Whenever the consumption is less than the amount being pumped the surplus spills over the overflow of the stand-pipe into the Compton Hill Reservoir, which latter is connected with the mains which supply the low-level district.

The pumping station at Bissell's Point supplies water to the low-level district. The pipe system of this district is connected with the Compton Hill Reservoir, which either absorbs the surplus water delivered by the pumps or supplies the deficiency whenever the consumption is greater than the amount being pumped.

Extensions.

At the Baden station we have just commenced the erection of the last two pumping engines contemplated for this station.

At Bissell's Point the three old engines which have had about thirty years' service will be removed and replaced by three modern engines of a capacity each of 20,000,000 gallons per twenty-four hours. The new engines will pump a given quantity of water for about one-third the coal required by the engines which are being removed. The contract for these three engines has been let and the construction is under way. The five engines now under contract are estimated to cost $670,000.

Some few months ago the Board of Public Improvements, after making an examination of the existing structures, concluded that certain reconstruction work was necessary at Bissell's Point, and drafted an ordinance providing for a new machine shop, blacksmith shop and storage coal shed, as well as a new roof for the boiler-house. The City Council, however, concluded that the work was unnecessary, and the bill failed to pass. In addition to the above we need a storage reservoir at Baden, so as to convert a constant discharge from the conduit into a variable supply for the pumps, and it is probable that ere long it will be found desirable to provide for storage in the high level district by constructing an elevated tank of large capacity.

The completion of the extension work, as outlined above, will require additional appropriations of $435,000, as detailed in statement attached, and will place the works in a position to supply the demands of the city until the average consumption for the month of maximum consumption has reached 100,000,000 gallons per day.

Quantity of Consumption.

Upon plotting the curves which indicate the average annual and monthly consumption of water for past years, and continuing said curves along the most probable lines, we find that in 1905 we may expect to have an average daily consumption of 87,000,000 gallons during the year, and an average daily consumption of 100,000,000 gallons during the month of maximum consumption. It is probable, therefore, that in 1905 we will be taxing the works to their full capacity, unless the system of charging by meter rates, which would reduce the waste of water, is introduced more extensively than heretofore.

Improvements.

As early as 1895, the City of St. Louis, recognizing the desirability of furnishing clear water to its citizens, sent James P. Kirkwood, an engineer of high repute, to Europe for the purpose of obtaining information upon the "modes in practice there for the filtration or clarification on a large scale of river water, where these are made use of for domestic purposes in the supplying of cities."

Upon his return Kirkwood made a voluminous report with illustrations, setting forth the practice abroad and recommending the adoption of a similar filtration system for the city of St. Louis. The people, however, seemed to prefer the muddy water, and Kirkwood's plans for filtration were not adopted. At that time filtration was looked upon as a means merely for removing the suspended matter. Since then we have learned that a proper filtration will do more. It will remove from a polluted water 95 to 99 per cent of the bacteria and render it safe and wholesome for domestic consumption.

The final and conclusive test of the potable qualities of any water is its effect upon the people who drink it. Tests in the laboratory are instructive, but when the conclusions drawn from same are at variance with the thousands of tests made daily upon the bodies of those who drink the water, one may infer that the laboratory tests have not been properly interpreted.

It is generally recognized that there is a close connection between the typhoid-fever death rate and the condition of the water supply. In European cities where filtration has been practiced for many years the introduction of filters has been followed by a marked decrease in the typhoid death rate. The introduction of filters in Hamburg in 1893 and in Lawrence, Mass., the same year was followed by a noticeable decrease in the typhoid death rate at both places. In Zurich new filters were placed in operation in 1885, since which time the typhoid-fever death rate averaged less than 10 per 100,000, whereas for six years prior to 1885 it averaged about 60 per 100,000.

It will be noticed that the typhoid death rate of American cities is very large in comparison with that of the European cities; the latter have learned their lesson, having at one time had death rates equal to or in excess of the present death rates in American cities. The introduction of sewerage systems and the filtration of their water supplies, whether taken from rivers, impounding reservoirs or large lakes, is probably responsible for their present comparative freedom from typhoid.

Since 1886, when St. Louis began to take her supply from the intake at the Chain of Rocks, the typhoid death rate for St. Louis has been less than that of any of the other American cities, except New York, and but very little more than that of New York.

The opening of the Chicago drainage canal in February, 1900, has naturally caused our water to be regarded with increased suspicion. An examination of the diagram No. 4, showing the monthly death rates from typhoid fever for the last three years, leads one to the conclusion that the effect of the sewage and waste from Chicago is much less than many supposed it would be, and, in fact, cannot thus far be distinctly discerned by the typhoid death rate. The number of typhoid cases reported cannot be considered accurate. No proper deductions can, therefore, be made by a comparison of the typhoid cases.

Filtration.

Be that as it may, there can be no question that the city of St. Louis should clarify the water supplied to its citizens. If such clarification is obtained by means of a proper system of filtration, a material purification will result, with a probable reduction of the typhoid death rate of 50 per cent, and an increased security against epidemics of water-borne diseases.

Habits of cleanliness are contagious. Is it too much to hope that clean water will lead to clean streets, clean sewers and a clean moral atmosphere? Let us begin with clean water. The money is available. Filtration works can be constructed by the city out of the revenue of the Water Department without any increase in the water rates. If the World's Fair is to be held in St. Louis we must at that time be prepared to furnish clear, pure water from our Municipal Waterworks.

The members of the Board of Public Improvements have thus far been unanimous in their recommendations to the Municipal Assembly in regard to the proper steps to take toward establishing a filtration plant, but the Municipal Assembly has taken a different view of the matter, and the various ordinances forwarded by the board have been rejected. We hold that an expenditure of perhaps $2,000,000 warrants careful consideration with such preliminary investigation and experiments as may be deemed necessary before adopting any particular style or design of filter. On the other hand, individual members of the Assembly have assured me that they wanted no experiments, but were ready to establish a filter plant immediately.

It is quite possible that a filter plant, if designed to-day upon the basis of such data as are now available, might prove to be the most economical and efficient. Few engineers, however, would have the temerity to assert that the outcome could be predicted with absolute certainty without further preliminary tests. The exigencies of the case do not appear sufficiently urgent to warrant the risk involved in constructing a filter plant without preliminary investigations. The slow sand filter has been used in Europe for many years. It is asserted that about twenty millions of people in Europe are supplied with filtered water. Among these may be mentioned London, Zurich, the suburbs of Paris, Antwerp, Rotterdam, Amsterdam, Berlin, Hamburg, Bremen and Altona. All of these use the same system, to wit—the slow sand filter, which consists of large beds of sand supported upon successive layers of coarse sand and gravel, provided with underdrains and inclosed in large basins of earth and masonry. In general, the water receives no treatment prior to filtration, but in some places such preliminary treatment has been found necessary and has been adopted. In several cities in Holland, such as Scheidam, Groningan, Leewarden, Gauda, etc., where the water at times contains considerable suspended matter, alum has been used for many years in connection with sedimentation prior to filtration.

A number of the smaller cities of America are filtering their water supply. A few, like Poughkeepsie and Albany, N. Y., are using the slow sand filter, sometimes called the European system. The Albany plant, which has only been in operation since September, 1899, is giving excellent results in the removal of bacteria but at times a slight coloration of the water is still observed. The majority of the cities in America which are using filters have adopted the mechanical filter, sometimes called the American system. This system requires the use of a coagulant, such as alum or some salt of iron, and permits of rapid filtration through a bed of coarse sand. Among the cities which use the mechanical system of filtration are St. Joseph, Mo., and Kansas City, Kas. (both of which filter the muddy water of the Missouri River), Atlanta, Ga., Davenport, Ia., Chattanooga, Tenn., and Quincy, Ill. At Kansas City, Mo., they use sulphate of alumina for settling the water from the Missouri River. The sulphate of alumina is dissolved and a known weight of same is injected into the water in the settling basins. This process has been in use for more than a year and the results have been very satisfactory. The water is at all times comparatively clear, but not as bright as filtered water. The average time of sedimentation allowed is, approximately, five days, about double the time allowed here. From one to three grains of sulphate of alumina is used per gallon of water. The tests at Kansas City show that the water, under the most unfavorable conditions, can decompose thirteen grains of alum per gallon, hence there is no fear of obtaining free alum in the water. The manner of regulating the quantity of alum is very simple and effective.

Within the last few years a number of the larger American cities have undertaken to make experiments upon filtration to determine the effect of local conditions. Louisville, Cincinnati, Pittsburg and Washington, have all passed through this experimental stage. Philadelphia and New Orleans are at present engaged in experiments. It remains for St. Louis to join the procession. A city which aspires to a World's Fair and expects to invite the stranger from abroad cannot afford to lag behind in the matter of furnishing pure, clear water to all.

It is a well-known fact that clear water, whether collected from springs or delivered from filters should be kept in covered reservoirs. If the water from St. Louis is filtered it will be necessary to cover the Compton Hill Reservoir and also the old settling basins at Bissell's Point, which are at present used as storage reservoirs.

The cost of a filtration plant complete, including the covering of the reservoirs, is estimated at $2,500,000 to $3,500,000. The cost of operation including interest on the capital invested and sinking fund charges, is estimated at $10 per million gallons. At our present rate of consumption this would amount to about $225,000 per year, or less than 40 cents per year per inhabitant.

Meters.

It is estimated that at least 50 per cent of the water furnished to the city of New York is wasted. New York uses 111 gallons per inhabitant per day, which is about the same as the present consumption per inhabitant at St. Louis. A liberal use of water should be encouraged, but water wasted through leaky or defective plumbing or to prevent freezing due to inadequate protection of the service pipes should be paid for by the party guilty of the waste. The most effective way to prevent waste is to supply each tap with a meter.

With the universal introducilon of meters, the meter rates could be reduced without interfering with the net income of the works. Each consumer should be charged a fixed minimum rate, which could be somewhat less, perhaps three-fourths of the present schedule rates. The minimum rate would allow for each residence a fixed quantity of water, which would be ample to allow of a liberal use of same. All excess above such fixed quantity would be paid for at meter rates.

Summary.

Summing up, then, the needs of the Water Department:

First—We should complete the extension and reconstruction work at Baden and Bissell's Point, as outlined above.

Second—We should install a filtration plant, after making the necessary experiments.

Third—We should extend the use of meters as rapidly as possible, with the view ultimately of having every tap metered.

Fourth—We should ere long commence the consideration of an increase in the quantity of supply.

Most cities are hampered more or less by the necessity of floating bonds or otherwise raising funds for extension or betterment. St. Louis has funds at hand which cannot be used for any but waterworks purposes, and yet authority to use same is denied.

STATEMENT SHOWING AMOUNT OF MONEY AVAILABLE FOR FILTRATION PLANT.

Unappropriated balance at end of fiscal year, April, 1900		$ 920,864.30
Ordinances passed since then or introduced in the Municipal Assembly and pending:		
Pump main No. 9	$250,000.00	
Supplementary to previous ordinance	164,000.00	
New work required:		
Storage reservoir at Baden	200,000.00	
Elevated tank for high level district	150,000.00	
Machine shop, blacksmith shop and storage coal shed at Bissell's Point and reconstruction of boiler-house roof	65,000.00	829,000.00
On hand and available for filtration, April, 1900		$ 75,864.20
Anticipating surplus revenue for year ending April, 1901		642,000.00
November, 1900—Amount available for filtration plant		717,864.20
April, 1901—Additional amount available		782,000.00
April, 1902—Additional amount available		816,000.00
April, 1903—Additional amount available		861,000.00
Total amount available for filtration plant up to April, 1903		$3,376,864.20

From the statement above we find that the city could appropriate $435,000, required to complete the works, and would still be in a position to devote $3,377,000 up to April, 1903, to the filtration of the water supply. This amount would probably be sufficient to filter the whole supply to the end that the water furnished by the St. Louis Waterworks would be not only palatable, but clear and free from every impurity that might endanger the health of the community.

JEFFERSON CITY CANVASSING LEGISLATIVE POSSIBILITIES.

Special Correspondence of The Sunday Republic.

Jefferson City, Nov. 16.—The Missouri political pot that two weeks ago was boiling over has simmered down to its wonted consistency. The strife occasioned by it is now a closed incident until the recurring contest for political preferment two years hence. At the capital, though, politics is perennial. The atmosphere is charged with it, and it is never absent from the daily life of the denizens of Jefferson City. It is the sauce as well as the staff of life to many here, and in consequence is always uppermost. Without the confines of the capital people have lapsed into disinterestedness on the subject, but the scene has only shifted in Jefferson City. With the settlement of the issues involved in the State elections that is now history—new ones have arisen here. Nearly two months intervene between now and when the Legislature assembles, but there is already speculation as to the organization of the Forty-first General Assembly. It will grow apace until the Legislature meets, and will be at white heat until after the Speaker and Chief Clerk are elected and the numerous assistants are selected. There is no more interesting occupation than watching the formative period of a Missouri Legislature. Political finesse of the most finished kind may be seen, and the campaigns are carried on with a vigor and enthusiasm that attaches to no other political contest. There are candidates galore for every position within the gift of the Legislature, from Speaker down to spittoon cleaner, and while the latter's campaign may not be conducted along as dignified and as able lines as the former, the intensity of it does not suffer thereby.

The most important and, of course, the most talked of position is that of Speaker. The efficacy of a legislative body depends largely upon the tact and ability of its presiding officer, and effort is usually made to secure some one who has both ability and legislative experience. The capacity of more than half of those who are elected to this office is misguaged and the administration of many is accordingly a failure. A term as Speaker is usually the capstone of the incumbent's political career, and the same tradition that has made the vice presidency of the United States a political graveyard attaches to the speakership. Whether it is a popular fallacy or not, the fact still remains that not many Missouri politicians who have been speakers of the House have been able to use the office as a stepping-stone to higher things politically.

Up to date there are seven gentlemen who have been prominently spoken of for this important position. All are well-known Democrats, who will take an active part in the deliberations of the next House. The candidates in question are: C. C. Dickinson of Henry County, J. H. Whitecotton of Monroe, W. D. Hamilton of Davies, Peter Huck of Ste. Genevieve, Joseph Tapley of Pike County and J. R. Nicholson of Cass. Thomas Hackney of Jasper, who defeated "Fire Alarm" Flanagan in that county, has also been mentioned as a candidate.

Of the prospective candidates for the speakership three are old members, J. H. Whitecotton was a candidate before the last House, against W. J. Ward of Stoddard. Mr. Whitecotton was defeated, but the contest was sharp and interesting, and presages what kind of a fight may be expected from Monroe County's candidate. Mr. Whitecotton was also known as the leader in the last House of the "Filipinos," an organization of Democrats which was opposed to the administration.

W. D. Hamilton is from Governor-elect Dockery's county, and is a close political friend of Mr. Dockery. He has been one of the leaders of the Democratic side of the House for three sessions of the Legislature. He has always been accounted one of the readiest debaters in the House, and in political tilts with the minority he usually leads the fight. He was a member of the Revision Commission, and is responsible in part for the new arrangement of the statutes.

Peter H. Huck of Ste. Genevieve will serve his second term in the Legislature this winter. He was also a member of the Revision Commission. Mr. Huck, it is said, will receive the support of the members from Southeast Missouri for the Speakership.

J. R. Nicholson of Cass was a well-known member of the last Legislature. His candidacy has not been formally announced, but it is understood he will make the race.

Joseph Tapley, C. C. Dickinson and Thomas Hackney are newly elected members of the Legislature. They are prominent in their respective sections of Missouri, and can command a strong following. Not for many years have so many candidates sought the speakership, and the sequel will be an interesting contest.

The candidates thus far mentioned for chief clerk of the House are Joseph F. Tall of Clark County, Lon Luther of Pettis, Webster Gordon of Boone, and Joseph Shelby of Kansas City. Mr. Tall was enrolling clerk of the last House and Mr. Luther was on the clerical force of Chief Clerk Henry A. Newman. Mr. Gordon was representative from Boone County, and Mr. Shelby had a clerical position in the Fortieth General Assembly.

For enrolling clerk of the House the only candidate thus far talked of is Heygood Scott of Rolla. There will doubtless be others, but Mr. Scott is the only aspirant who has announced his candidacy.

An interesting contest and one that is already attracting a good bit of attention is that for secretary of the Senate. Major Henry A. Newman of Randolph, chief clerk of the last House, and Cornelius Roach of Jasper County, who was secretary of the Senate in both the Thirty-ninth and Fortieth general assemblies, are pitted against each other. Both are past masters in the political game, both are popular, and both have influential friends. Both had comparatively easy victories in the Fortieth General Assembly, although strong opposition was not wanting. The outcome is being watched with more than passing interest, and the indications are that this race will develop into the closest and most hotly contested of those attendant upon legislative organization.

This Legislature is more strongly Democratic than was the last. The relative strength in the Senate is the same as in the Fortieth General Assembly—twenty-five Democrats and nine Republicans. In the House there are ninety Democrats and fifty Republicans, making a Democratic majority on joint ballot of 56 votes. There were eighty Democrats, two Populists and fifty-eight Republicans in the Fortieth House. On joint ballot the Democratic majority was thirty-eight, and the two Populists, who voted usually with the Democrats, made forty.

In the Senate lawyers are largely in the ascendency, there being twenty Senators who are members of the bar. Other vocations represented in the Senate are: Farmers, three; merchant, one; undertaker, one; medical student, one; hotelkeeper, one; molder, one; banker, one; one lumber dealer and one physician. In the House lawyers again are in the ascendency. There are thirty-eight. The farmers are a close second with thirty-four. There are eleven merchants and an equal number of doctors, five editors, nine school teachers, four ministers of the gospel, three real estate men, two bankers, two clerks, and two manufacturers, and one shoemaker, reporter, municipal agent, commercial traveler, stockman, boilermaker, car inspector, insurance agent, proofreader, machinist, contractor, miner, painter, abstractor, miller and druggist make up the personnel of the Forty-first General Assembly.

The roster of the newly elected Legislature shows some additional interesting facts. Of 140 members of the House thirty were members of the last General Assembly. Of these nineteen are Democrats and eleven are Republicans. Only seven members have served in sessions other than that of 1899, so that only thirty-seven members of the House have had legislative experience. The number is remarkably small. About sixty members of the last Assembly had been members of former assemblies. The Republicans gained two Senators in Jackson County and lost two in St. Louis. They gained three members in the House over 1899 in Kansas City and lost three in St. Louis. The loss in St. Louis exactly offsets the gain in Kansas City. In eighteen districts where Republicans were elected in 1898 Democrats were elected this year. Except the three St. Louis districts, the districts carried by Democrats where Republicans served before were very close, showing that it was probable that the national ticket brought out a full vote.

Congressman Cowherd of Kansas City, recently elected by an increased majority in the Fifth Congressional District, was a visitor at the capital Friday. Mr. Cowherd was here on business in the Supreme Court. He is popular at the capital and has a number of stanch friends here. Whenever occasion requires he is called upon to do campaign work in the Eighth District, and he always responds to the request. He is accordingly well known in most of the counties in this district, where he is admired for his democracy and his oratorical powers. This latter gift comes naturally to him. Back in the late seventies and early eighties when Mr. Cowherd was a student at the State University at Columbia he eclipsed all in the student corps as an orator and has many souvenirs of oratorical triumphs. His "Man, the Shekinah" and "Licht mur Licht" are still remembered there as among the best specimens of college oratory. Mr. Cowherd has hosts of friends in Missouri who were students at the university. He is even now being favorably spoken of in different parts of the State as a probable successor to Mr. Dockery in 1904, and the college men, the alumni of the State University, who have since become prominent and who know Mr. Cowherd personally would be no small factor in his support should he become a candidate for Governor of Missouri.

What Governor Stephens intends to do when his term as Governor expires is causing some speculation, and is of special interest to the politicians. In conversation with the Governor one day this week his future plans were under discussion. I asked him what he intended doing when he returned from the chief executiveship and where he would make his home. He replied: "I shall remain in Jefferson City and keep my residence at the capital. I have property here and shall occupy the home I lived in before I was elected Governor. I don't anticipate engaging in any business for a year, other than attending to my estate, which I have neglected somewhat during my political career. I have been in public life now a number of years, and I shall take a rest. I was five years receiver of the First National Bank in St. Louis, seven years State Treasurer and four years Governor. I have had several excellent offers made me both from St. Louis and Kansas City to engage in business, but have accepted none of them and shall entertain no proposition for the present."

It was suggested that an expression as to whether he had any senatorial aspirations might be of interest.

"That will probably be an interesting subject to some, but no one need give themselves any alarm about that. I am not a candidate for the United States Senate, and will not be. I see some of the papers are kind enough to say that I will be a candidate to be reckoned with should I be an aspirant for this honor. I have never lost a political fight in my life, and I have engaged in many. I am satisfied that I could make myself felt in the race for the United States Senate were I to enter the field. No one, however, need have any apprehension on this score, as I have no ambition in this direction to gratify. What I am most desirous of now is absolute rest and surcease from political strife of any kind for a season."

EDWIN M. WATSON.

Barr's are showing handsome lines of new goods for the Fall and Winter of 1900. Every department has made extraordinary efforts to prepare for the busiest season in the history of Barr's. Early selection is advised.

SPECIALTIES.

THAT'S IT.
The High Grade, Fair Price BAKING POWDER
JACK FROST
A Full Pound Can, 25 Cents.
Your Grocer recommends Jack Frost.

2% PAID on CURRENT ACCOUNTS.
Mississippi Valley Trust Co.

DEATHS.

CLARK—On November 17, 1900, at Frederick, Md., in the seventieth year of her age, Jane Gaither Clark, wife of Robert Breckenridge Clark and mother of Robert S. Clark, S. Gaither Clark and Mrs. Harvey G. Mudd.

DALE—On the morning of November 16, 1900, Anna Della, beloved wife of George I. Dale and daughter of John Allan, aged 23 years.

Funeral from residence, No. 2722 Evans avenue, on Sunday, 18th inst., at 2 o'clock p. m., to Bellefontaine Cemetery.

HOLMES—On Saturday, November 17, 1900, at 7:25 o'clock a. m., Emma Elizabeth, beloved wife of Alexander S. Holmes, after a brief illness, entered into rest.

Funeral Monday, from residence, No. 1246 Franklin avenue, at 2 o'clock p. m.

JOHNSON—On November 15, 1900, at 7:20 p. m., Kate A. Johnson, daughter of Alfred and Agnes S. Johnson, aged 28 years 2 months and 8 days.

Funeral from the residence, No. 3821 Arsenal street, Sunday, November 18, at 1:30 p. m. Interment private.

SCHUSTER—On Saturday, November 17, 1900, at 6 o'clock a. m., Elizabeth Schuster, mother of Martin E., Louis and Edward A. Schuster and Ernest Berlemann, aged 86 years and 4 months.

Interment from residence of Edward A. Schuster, No. 2786 Missouri avenue, on Monday, November 19, at 1:30 o'clock p. m. Services at Evangelical St. Paul's Church, Ninth street and Lafayette avenue, at 2 o'clock p. m. Friends invited to attend.

TALBOT—On Friday, November 16, 1900, Joanna Talbot, relict of the late James Talbot, aged 83 years, mother of Charles, Josie, James, Robert, Maude, May Talbot and Mrs. J. Adams.

Funeral will take place from residence, No. 2715 Howard street, Sunday, November 18, at 2:30 p. m., to St. Leo's Church, thence to Calvary Cemetery.

For Other Death Notices, See Page Two, Part One.

AMUSEMENTS.

HAVLIN'S MATINEE TO-DAY AT 2.
Most All Car Lines in the City Pass the Door.
Night Prices: 15c, 25c, 35c, 50c
25 Cent Matinees TUESDAY THURSDAY SATURDAY—ENTIRE LOWER FLOOR 25c
WM. A. BRADY'S PRESENTATION OF SORROWS OF SATAN.
The most realistic of STAGE SETTINGS and magnificence of costumes. Marie Corelli's novel, the most realistic of dramatizations of a work of fiction representing Satan on earth and in everyday life. SEE THE GREAT YACHT SCENE.
Sunday Matinee Next—Humpty Dumpty; grand spectacular revival.

GRAND MATINEE TO-DAY AT 2.
MATINEES WEDNESDAY, SATURDAY. GOOD SEATS, 25c
Charles H. Yale and Sidney R. Ellis present AL H. WILSON, An entirely new, scenic play of the most picturesque part of the world,
The Sweetest of Singers and most Charming of German Dialect Comedians, in THE WATCH ON THE RHINE.
Sumptuously equipped with magnificent and historical SCENERY. SONGS OF HOME. OF LOVE.
Sunday Matinee next—A Lion's Heart. Special Matinee Thanksgiving Day.

CENTURY. To-Night.
Prices: $1.50 to 25c. (Wed. Mat., 25c and 50c.)
"A great production of a splendid romance, charmingly interpreted and picturesquely presented."—N. Y. Herald.
OTIS SKINNER
And Associate Players, including PERCY HASWELL, GRACE FILKINS, GEORGE NASH, FRANK SYLVESTER and 30 others, will present Mr. Skinner's new play,
PRINCE OTTO.
Next Sunday—MR. WILLIAM COLLIER.

OPYMPIC. MONDAY.
Farewell Appearance of
F. C. WHITNEY AND EDWIN KNOWLES,
Managing Directors for THE QUO VADIS AMUSEMENT COMPANY.
Present the Only Authorized Dramatic Version of Henryk Sienkiewicz's Immortal Romance, Dramatized by Stanislaus Stange, Music by Julian Edwards, Staged Under the Direction of Max Freeman.
QUO VADIS
Original—Massive—Last Engagement.
Original—Massive—Last Engagement.
Original—Massive—Last Engagement.
Farewell—Big—Spectacular.
Farewell—Big—Spectacular.
Farewell—Big—Spectacular.
SCENERY AND COSTUMES FROM ADELPHI THEATER, LONDON.
The Big Cast Includes: Arthur Forest, Richard Buhler, Samuel Edwards, Robert McWade, Wilton J. Douglass, William Leyden, Walker Dennett, Herbert Pryor, Geo. Conway, Ward McDonald, Dallas Tyler, Nellete Reed, Ruth Berkeley, Ann Fairchild, Mabel Mortimer, Master Jack Ryan and many others.
200—PEOPLE ON THE STAGE—200
Augmented Orchestra. A Troupe of Corybantes. Special Music by Julian Edwards. Chorus of Mixed Voices.
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Inaugurates its Second Season of Opera in English on
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With Meyerbeer's Grand Spectacular Creation,
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First Time in English in This Country.
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JOSEPHINE LUDWIG, MARIE MAURER, MIRO DELLAMOTTA, FRANCIS ROGERS, GERTRUDE RENNYSON, BARRON BERTHALD, W. H. CLARKE, HERMAN HAYNES, FRANCES GRAHAM, WM. WEGENER, HARRY LUCKSTONE, WM. WOODS.
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Continuous Vaudeville.
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CHARLES WAYNE & ANNA CALDWELL, Versatile Comedy Duo, in George M. Cohan's Farcical Skit, "To Boston on Business."
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Admission to all parts of the house, 25c.
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Old-Time Fiddlers' Contest,
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THURSDAY, NOVEMBER 22.
Reserved Seats, 75c and 50c; on sale at T. P. A. Headquarters, Nos. 912-916 Chemical building.

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Heinemann & Welb, Managers.
Sunday, Nov. 18, 1900. New scenery; new costumes. Appearance of the entire company. Arthur Fitger's great play,
DIE HEXE!
Reserved seats and dozen tickets, $7 and $9. On sale at box office, from 10 to 1 o'clock Sunday.

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MEMORIAL HALL.
SYDNEY P. BIDEN, Baritone, Assisting.
Tickets $1.00, at Box Office.

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All seasonable goods and no old stock. Stock on exhibition with catalogue, Tuesday, November 20.
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