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PERSONAL.

Mr. Eugene Corridan has taken a position in the civil engineering department of the Boston & Albany R. R.

Mr. Harry K. Brocks, of Topeka, Kans., has been appointed mechanical engineer of the Axle Electric Light Co.

Mr. Boyd Ehle, Assoc. M. Am. Soc. C. E., of East Creek, N. Y., has joined the Davis expedition of the Barien Canal Commission.

Mr. William L. Glazier, who was defeated for re-election as City Engineer, has been appointed Superintendent of Public Works at Newport, Ky.

Mr. Monroe Warner is engaged at Putnam, Conn., as a civil engineer and surveyor in connection with the construction of an electric railway.

Ex-Governor Joseph W. Fifer, of Illinois, has been appointed by the President a member of the Interstate Commerce Commission, vice W. J. Calhoun, resigned.

Mr. E. J. Barney has resigned the presidency of the Barry & Smith Car Co., of Dayton, O. This is one of the largest street-car building concerns in the country.

Mr. John M. Hall has been elected President of the New York, New Haven & Hartford R. R., in place of Mr. Charles P. Clark, who has resigned because of ill health.

Mr. G. E. Waesche, formerly of the designing department of the Union Bridge Co., has been appointed Instructor in Civil Engineering in Purdue University, at Lafayette, Ind.

Mr. L. R. Pomeroy, who has been for seven years the Eastern agent of the Cambria Steel Co. and the Latrobe Steel Co., has resigned that position to go to the Schenectady Locomotive Works.

Capt. A. J. de Lohbein, of the Royal English engineers, is at Denver, Col., on his way from India to London. He has been detailed to perform electrical work in India, but hopes that the government will send him to South Africa.

Mr. J. J. Frey, General Manager of the Atchison, Topeka & Santa Fe R. R., has tendered his resignation. It is stated that Third Vice-President Robert Barr will succeed Mr. Frey as general manager, retaining also his present position.

Mr. K. Takeda, Chief Engineer of the Hosaka Mine, Itakubu, Japan, is visiting this country in the interests of his company, with the purpose of obtaining the best machinery and ideas on copper mining. Japan ranks third in the world as a copper producing country.

Mr. W. H. Barnes has resigned the position of City Engineer of Topeka, Kan., to take up contracting in the city and vicinity of New York city. Mr. P. L. Wise, who will take his place, resigns the position of Engineer of Maintenance of Way on the Chicago, Rock Island & Pacific R. R.

Mr. W. J. Murphy has been appointed General Manager of the Cincinnati, New Orleans & Texas Pacific R. R., vice Mr. S. M. Felton. Mr. Murphy is responsible for many improvements made in the equipment of this road, one of which is the application of a smokeless system of firing locomotives.

Mr. Milo S. Ketchum has been appointed Assistant Professor of Civil Engineering at the University of Illinois, Champaign, Ill. Mr. Ketchum has for several years been engineer and agent with the Gillette-Herzog Mfg. Co., of Minneapolis, Minn., with headquarters successively at Butte, Mont., Seattle, Wash., and Houghton, Mich.

Mr. A. C. Douglass, of Niagara Falls, N. Y., has been awarded an important contract in connection with the proposed increase in the power plant of the Cataract Power & Construction Co. He will have the work of putting in the tunnel to connect the new pit with the main tunnel, and also the shaft, which will be sunk where the new power house will be.

Mr. Schuyler Hazard, formerly Principal Assistant Engineer Cleveland, Cincinnati, Chicago & St. Louis R. R., has accepted the position of Assistant Engineer in charge of the construction of the Albany Improvements, including the renewal of the Hudson River Bridge and the new passenger station and the elimination of grade crossings in the city of Albany, N. Y., for the New York Central & Hudson River R. R. Co.

Professor Andre Ivanhoff, professor of mineralogy in the Imperial Mining Academy at St. Petersburg, is visiting the Illinois Steel Co.'s plant at South Chicago in the interests of the Russian Government. His visit is said to have been made at the instance of a steel chemist, who seeks recognition at the hands of the Czar for a new process of making steel billets, patterned after the method now used at the South Chicago mills.

Mr. C. K. Banulater has been selected as consulting engineer of the new electric power and irrigation plant to be built at Payette, Idaho, by Willard White, a capitalist of Boise, Ida., and W. Brunt Whitney. The plant will have a capacity of 6,000 HP., and, in connection with this plant, the company propose to put in a canal system to irrigate at least 50,000 acres of land. Power and light will be furnished for cities and towns in a radius of 40 miles.

Messrs. A. S. Berquist and B. Asp have opened a consulting engineer's office in the Bennett Bldg., New York, under the firm name of Berquist & Asp. Their specialty is the Berquist Patent Suspension Buiker, but they will also devote themselves to the designing of complete power houses, mills and factories, etc. Mr. Berquist was for a number of years connected with the improvement, power and repair department of the Baldwin Locomotive Works, later with the Spreckel's Sugar Refinery in Philadelphia, and lately he designed and built the American Coffee Co.'s plant in Brooklyn, N. Y. Mr. Asp's previous field has been in the line of mill construction. He was connected with the works of the Atlas Portland Cement Co., Northampton, Pa.

Mr. Richard L. Humphrey, Assoc. M. Am. Soc. C. E., has resigned as Engineer in Charge of the Testing Laboratory of the City of Philadelphia to accept the position of engineer and general manager of the Buckhorn Portland Cement Co. Mr. Humphrey entered the Department of Public Works of Philadelphia in 1891. The past seven years have been devoted to the establishment and development of one of the finest municipal testing laboratories in this country. The results of the tests made in this laboratory and Mr. Humphrey's contributions on the subject of cement have done much to extend the use of American cements. A series of tests, made by Mr. Humphrey, showing the superiority of American over foreign Portland cements, appeared in Engineering News of May 7, 1896. Mr. Humphrey will have entire charge of the design, construction and operation of the company's plant, which will have a capacity of 1,000 barrels per day, and will be located at Manheim, West Virginia. His headquarters will be at the offices of the company, 413 Girard Bldg., Philadelphia, Pa.

OBITUARY.

Mr. Louis Soleiac, superintendent of the Adelaide Silk Mills, at Allentown, Pa., died suddenly Nov. 18. Mr. Soleiac was a pioneer in the silk industry in the United States. He was also largely identified with the cement industry in the Lehigh Valley.

Mr. George Post Howell died at his home in Jersey City, N. J., on Nov. 15, being 80 years of age. He was educated as a civil engineer and assisted in the construction of the Delaware, Lackawanna & Western and the Erie R. R.'s, and of the gravity roads at Scranton, Pa.

Mr. William H. Hume, the well-known architect, died at his home in New York city on Nov. 11. Mr. Hume was 65 years old, and had followed his profession for over 40 years, having been the architect of some of the best-known buildings in New York city. He was a prominent member of a number of clubs and societies.

Col. Henry M. Fosdick died recently at Boone, Colo., after a lingering illness. Col. Fosdick was connected with the construction of the Grand Trunk R. R. of Canada, and, under his supervision, many of the irrigating ditches in the Arkansas Valley were constructed. He also surveyed the Reynolds reservation for the government.

Sir Richard Moon, who was Chairman of the London & Northwestern R. R. Co., died Nov. 17. He was created a baronet in 1887 in recognition of the important part he played in the development of the English railways. He was born in 1815, and was connected with the Northwestern Railway from the time the road was begun.

Col. Spoker, chief engineer; Dave Ulrich, assistant engineer, and Manvel Martinez and Charles Tyson, members of a railroad surveying party, are reported to have been lost in the Gulf of California. A party of eleven men were surveying a railroad from Yuma to the Gulf. The four above named started down the Gulf in a small boat and, a gale coming up, the boat was carried out to sea.

Col. Thomas H. Rickert, formerly an extensive railroad contractor, died at Pottsville, Pa., on Nov. 16. Among the railroads which he assisted in constructing are the Cumberland Valley, the Schuylkill Valley branch of the Pennsylvania R. R., the Buffalo extension of the Lehigh Valley and numerous extensions of the Philadelphia & Reading. Recently he became a member of a syndicate which purchased the Schuylkill Haven Iron Works.

Mr. G. W. Wundram, for 17 years an architect and engineer in the Water Supply Department of Brooklyn, N. Y., died at his home in that city on Nov. 11. Mr. Wundram was born in the Province of Hanover in 1838, and was graduated from the Polytechnic School of that state. In 1865 he came to this country, and started in business under the firm name of Griffith & Wundram, manufacturers of steam apparatus. He afterward became superintendent of Kreisher's Pottery Works, of Kreisherville,

Staten Island, and subsequently took charge of the Staten Island R. R. He was founder of the Technological Society of Manhattan, and the Technological Society of Brooklyn, being secretary of these societies for 25 years. He was also an active member of the Brooklyn Institute.

Mr. Sylvanus Howe Sweet died at Central Square, N. Y., on Nov. 21. He was a grandson of Surgeon Caleb Sweet, of the Revolution. In 1850-51, he assisted Col. Childs in the canal surveys across Nicaragua. On his return to the United States he became an Assistant Engineer on the New York State canals, and in 1860-61 he again was an assistant of Col. Childs in the survey of New York Harbor. In 1873 he was elected State Engineer and Surveyor, and for some time previous to his death he was consulting engineer for work on the Hudson River, near Albany, N. Y.

Sir J. William Dawson, naturalist and geologist, and for many years principal of McGill University, died in Montreal on Nov. 19. He was born in Pictou, N. S., in October, 1820, and was educated at Edinburgh University. He was early associated with Sir Charles Lyell in his geological work, and thereafter devoted his life to this science. In 1850 he was made Superintendent of Education for Nova Scotia; and in 1855 he became principal and professor of history in McGill University, at Montreal, and retained that position until 1870, also lecturing on natural sciences. He made many scientific discoveries in geology; and delivered lectures and wrote much on this subject. Dr. Dawson was a Fellow of the Geological Society, and of the Royal Society; President of the British Association in 1886; was a companion of the order of St. Michael and St. George (1882), and was knighted in 1885.

Mr. C. A. Carpenter, Engineer of the Lake Shore division of the Lake Shore & Michigan R. R., died Nov. 9 from injuries received by being struck by a train near Geneva, O., Nov. 7. He was a graduate of Union College, of Schenectady, N. Y., and began his professional career in northern New York. He was in the bridge department of the Chicago, Milwaukee & St. Paul R. R. for a number of years, and was connected with the work of extensions and branch lines until the summer of 1890, when he went to California in charge of railroad surveys. Later he was Division Engineer for the Northern Pacific R. R. at Helena, Mont., and went with the Lake Shore & Michigan Southern as Division Engineer in the fall of 1891. He was a member of the American Society of Civil Engineers, and also a member of the Cleveland Engineers' Society. He leaves a widow, three daughters and one son, Mr. Allan Carpenter, C. E., with F. C. Osborne, C. E., of Cleveland, O.

Mr. William Franklin Durfee, M. Am. Soc. M. E., a prominent engineer and inventor, died in the State Hospital at Middletown, N. Y., on Nov. 9. Mr. Durfee was born in New Bedford, Mass., in 1833. He graduated at the Lawrence Scientific School of Harvard University in 1853, after which he became an engineer and architect in his native town, and for five years served as city surveyor. In 1861 he was elected a member of the State Legislature, where he served as Secretary of the Military Committee. In 1862 he went to Lake Superior to test the suitability of the iron ores of that region for the manufacture of steel by the process invented by William Kelly. He succeeded in producing some ingots of steel, from which, in 1865, were rolled the first steel rails made in this country. After this he established at Wyandotte, Mich., the first chemical laboratory in connection with steel works in the United States, for the purpose of studying the Bessemer process and the use of the regenerative furnace. He afterwards built at Ansonia, Conn., the first successful furnaces for refining copper by the use of gaseous fuel. In 1886 he became general manager of a company which controlled patents for the production of wrought iron and steel castings. He did considerable writing on scientific subjects, and was a contributor to nearly all the leading engineering periodicals. He was the owner of a valuable library, which he bequeathed to the American Society of Mechanical Engineers, and which will be known as the Wm. F. Durfee Library. He was a manager of this society in 1883-86, and vice-president in 1890-98.

ENGINEERING SOCIETIES.

COMING GENERAL MEETINGS

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.
Dec. 5 to 8. Annual meeting at New York. Secy., F. R. Hutton, 12 West 31st St., New York city.

NEW JERSEY SANITARY ASSOCIATION.
Dec. 8 and 9. Annual meeting at Atlantic City, N. J. Secy., J. A. Epton, Arlington, N. J.

MICHIGAN ENGINEERING SOCIETY.
Jan. 2, 1900. Annual meeting at Kalamazoo, Mich. Secy., F. Hodgman, Climax, Mich.

COMING LOCAL MEETINGS.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Nov. 28. Secy., W. H. Searles, Case Library Bldg., Cleveland, O.

CHICAGO ELECTRICAL ASSOCIATION.
Dec. 1. Secy., Cloyd Marshall, 1310 Monon Bldg., Chicago, Ill.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Dec. 1. At San Francisco. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

ENGINEERS' CLUB OF COLUMBUS.
Dec. 2. Secy., H. M. Gates, 12½ North High St., Columbus, O.

ENGINEERS' SOCIETY OF WESTERN NEW YORK.
Dec. 4. At Buffalo. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.
Dec. 5. At New York. Secy., Francis E. Frothingham, 12 W. 31st St., New York city.

- AMERICAN SOCIETY OF CIVIL ENGINEERS. Dec. 6. At New York. Secy., C. W. Hunt, 220 W. 57th st., New York city.
- ENGINEERS' CLUB OF ST. LOUIS. Dec. 6. Secy., Richard McCulloch, 2401 N. Spring Ave., St. Louis, Mo.
- ENGINEERS' CLUB OF MINNEAPOLIS. Dec. 7. Secy., H. E. Smith, 1629 S. E. 4th St., Minneapolis, Minn.
- ST. LOUIS RAILWAY CLUB. Dec. 8. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.
- DENVER SOCIETY OF CIVIL ENGINEERS. Dec. 12. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.
- NEW ENGLAND RAILROAD CLUB. Dec. 12. At Boston. Secy., Edw. L. Jones, P. O. Box 1158, Boston, Mass.
- NORTHWEST RAILWAY CLUB. Dec. 12. At Minneapolis. Secy., T. A. Fogue, Soo Line, Minneapolis, Minn.
- MONTANA SOCIETY OF CIVIL ENGINEERS. Dec. 16. At Helena. Secy., Albert S. Hovey, Helena, Mont.
- ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA. Dec. 19. At Pittsburgh. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburgh, Pa.
- WESTERN RAILWAY CLUB. Dec. 19. At Chicago. Secy., J. W. Taylor, 667 The Rookery, Chicago, Ill.
- BOSTON SOCIETY OF CIVIL ENGINEERS. Dec. 20. Secy., S. E. Tinkham, City Hall, Boston, Mass.
- NEW YORK RAILROAD CLUB. Dec. 21. At New York city. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.
- ENGINEERS' CLUB OF CINCINNATI. Dec. 24. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

CHICAGO ARCHITECTURAL CLUB.—At the meeting held at the Art Institute Nov. 13, Mr. F. Cortez Wilson presented a paper on "Acetylene Gas for Lighting," and exhibited an "acetogen" apparatus built by his firm. Mr. Arthur Frantzen also presented a paper on "Safe Electric Wiring."

WESTERN SOCIETY OF ENGINEERS.—At the meeting on Nov. 15, Mr. C. E. Schaeffer read a paper on "Cement Coating," describing a new method of waterproofing brick walls and masonry. The coating consists of cement mixed with a fluid whose composition is kept secret, and the material has been used somewhat extensively in New York and Boston for covering the walls of large office and apartment buildings.

ENGINEERS' CLUB OF CINCINNATI.—The regular meeting of the club was held on Oct. 19. Mr. David Goldfogel read a paper on "Some Details of Two Sewer Tunnels." The first part of the paper comprised a description of the construction of a brick sewer, 11 ft. in diameter, and about 300 ft. in length, which was tunneled through the embankment supporting the Miami Canal at a point a short distance south of the Mitchell Ave. aqueduct. At this point there existed an old stone culvert, semi-circular in shape, from 5 1/2 to 6 ft. in height and about 2 ft. in width at the bottom, which had been built at the time of the construction of the canal. The old culvert, which was in very bad condition, had for its foundation a layer of hewn oak logs about 10 x 12 ins., laid close together and extending a short distance beyond the sides of the culvert. The new sewer was so located with reference to the old culvert that its bottom was about 6 1/2 ft. below the top of the old timber floor at the west end and about 5 1/2 ft. at the east end. A wooden flume was constructed on top of the old timber floor to convey the creek water during the construction of the lower half of the sewer. When this lower half was completed for the entire length up to the timber floor, the old culvert being supported in the meantime by means of wooden struts and beams as the work progressed, the water was turned into it, the timber floor cut away in sections, and the upper half of the circular sewer built inside of the old culvert, beginning at the middle and working each way. The space between the top of the new sewer and the inside of the old culvert was filled in solidly with brick work. The total cost of the work to the contractor was about \$22 per lin. ft. of sewer. The second part of the paper was devoted to a description of the construction of a tunnel for a sewer pipe 16 ins. in diameter. The material encountered was blue shale and stone requiring blasting for its removal, and was conveyed to the surface through shafts, in some of which brick manholes were built. The others were used simply for the purpose of facilitating construction, and were filled in after the work was completed.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—The twentieth annual meeting will be held Dec. 5 to 8. The convention will be opened by the delivery of the annual address by the President, Admiral Geo. W. Melville. Professional papers will be taken up as follows: "Report of the Committee on the Revision of the Society Code of ISSS, Relative to a Standard Method of Conducting Steam Boiler Trials;" "The Steam Engine at the End of the XIXth Century," by Prof. R. H. Thurston; "Berthier Method of Coal Calorimetry," by C. V. Kerr; "Test of Two Pumping Engines at St. Louis Water-Works," by J. A. Laird; "New Graphic Method of Constructing the Entropy Temperature Diagram of a Gas or Oil Engine," by H. T. Eddy; "Pressure in Pipe Due to Stoppage of Flowing Liquid," by Geo. M. Peek; "Liquefaction of Gases," by A. L. Rice; "Curved Glass Blue-Print Machine," by P. M. Chamberlain; "A Metal Dynagraph," by P. M. Chamberlain; "Education of Machinists, Foremen and Mechanical Engineers," by M. P. Higgins; "Experiments on Using Gasoline Gas for Boiler Heating,"

by Herman Poole; "Friction of Steam Packings," by C. H. Benjamin; "Friction Tests of a Locomotive Slide Valve," by F. C. Wagner; "Note on Flywheel Design," by A. J. Frith; "A Broken Flywheel, and How it was Repaired," by James McBride; "Efficiency Test of a 125-H.P. Gas Engine," by C. H. Robertson; "Strength of Steel Balls," by J. F. W. Harris; "Colors of Heated Steel at Different Temperatures," by M. White and F. W. Taylor; "Impact," by W. J. Keep; "The Southern Terminal at Boston," by H. J. Conant; "High Hydrostatic Pressures, and Their Application to Compressing Liquids; A New Form of Pressure Gage," by F. H. Stillman; "The Value of a Horse-Power," G. I. Rockwood. Cincinnati, O., is being considered as a probable place for the spring meeting of 1900.

The ballot for officers closes on Dec. 5. The nominees are: For President, Charles H. Morgan, President Morgan Construction Co., and Morgan Spring Co., Worcester, Mass.; Treasurer, Wm. H. Wiley, 53 East 10th St., New York city; Vice-Presidents, Jesse M. Smith, Consulting Mechanical and Electrical Engineer, New York city; Stevenson Taylor, Vice-President and Gen. Supt., of W. & A. Fletcher Co., North River Iron Works, Hoboken, N. J.; David Townsend, Philadelphia, Pa.; Managers, F. H. Boyer, Chief Engr. John P. Squire & Co., East Cambridge, Mass.; John A. Brashear, astronomical instrument manufacturer, Allegheny City, Pa.; Alfred H. Raynal, Mechanical Engineer of the Bureau of Steam Engineering, U.S.N., Washington, D. C.

NEW PUBLICATIONS.

HOW TO USE PORTLAND CEMENT.—From the German of L. Golinelli; Published under the name of "Das Kleine Cement-Buch," by the Association of German Portland Cement Manufacturers.—Translated by Spencer B. Newberry, E. M. Ph. D. Chicago: Wm. Seuffer, 161 La Salle St. Paper; 8vo.; pp. 29. 50 cts.

The first 18 pages of this little book are devoted to the properties of Portland cement, its chemical composition, setting, resistance to weather, adulterations, etc. The second part deals with the selection of cement, and the composition and preparation of different cement mortars, plasters and concrete, with some particulars as to concrete floors and sidewalks. As to adulterants, the only one of any value is said to be gypsum, which reduces the rapidity of setting in quick-setting cements, but must not exceed 2%. The book is clearly and concisely written.

ELECTROLYSIS.—A Paper Read Before the Central States Water-Works Association, Sept. 6, 1899. By F. A. W. Davis, Indianapolis, Ind. Paper; 6 x 9 ins.; pp. 40; illustrated. Address the Author.

This paper is chiefly valuable for its record of instances of electrolysis reported by water-works men from all over the country. It contains the results of an inquiry sent by Mr. Davis to a number of water-works officials, together with the conclusions drawn therefrom by the author. Mr. Davis believes that he has presented the most valuable kind of evidence on the subject of electrolysis, coming as it does from the men who are responsible for city water supplies and who are daily facing the danger resulting from wandering electrical currents. He holds that the electrical companies should be held strictly accountable for all the damages arising from this source. A number of reproductions of photographs show the havoc played by electrolysis in many different cities.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3 1/2 x 6 ins., 6 x 9 ins., and 9 x 12 ins.)

DRILL GRINDERS.—G. T. Eames Co., Kalamazoo, Mich. Paper; 6 x 8 1/2 ins.; pp. 16; illustrated.

This pamphlet describes the "Yankee" twist drill grinder made by the above company. This machine is designed to enable an unskilled workman to grind a drill point as accurately as an expert machinist could do by hand. The machine is built to be driven either by a belt or by a direct connected electric motor.

TOOLS AND SUPPLIES.—Charles H. Besly & Co., 10 North Canal St., Chicago, Ill. Paper; 4 1/2 x 8 ins.; pp. 300; illustrated.

This is a comprehensive catalogue and price-list of a great variety of tools and supplies for machinists, foundrymen, grinders and polishers, model and pattern-makers, draftsmen, railway and manufacturing shops, etc. A special feature is that full particulars of prices are given for hand and machine tools, pipe, wire, rules and gages, and general lines of supplies.

CAST-WELD JOINTS.—The Falk Co., Milwaukee, Wis. Paper; 6 x 9 ins.; pp. 30; illustrated.

This pamphlet describes the Falk cast-weld joint now extensively used in street railway track construction, and shows the portable cupolas, sand blast machine, grinding machine, and the finished work. Special track construction (switches and curvings), and motor gears and pinions are also shown, and there are views of the company's work at Kansas City, Mo., and on the Oshkosh & Neenah interurban line.

PAINT & CHEMICALS.—Harrison Bros. & Co., 35th and Gray's Ferry Road, Philadelphia, Pa. Paper; 13 1/2 x 5 ins. pp. 7.

While this publication was evidently issued for use in connection with the exhibit of the company at the National Export Exposition, it is also worthy of notice for its artistic excellence. It is intended to call the attention of visitors to the works of the company, and asks them to there further examine into the outcome of "One Hundred Years of Good Paint Making." It is in no sense a price-list or ordinary trade catalogue.

STEAM PUMPS.—Union Steam Pump Co., Battle Creek, Mich. Paper; 6 1/2 x 7 1/2 ins.; pp. 96; illustrated.

This company makes a specialty of the Moore, Union and Burnham pumps, which are horizontal direct-acting machines, adapted to a great variety of uses. The former has no slide valve, the steam piston working telescopically on a pipe and being fitted with ports registering with openings in the pipe. The Union pump is used as a vacuum pump for sugar making plants. Well sinking pumps and hydraulic pressure pumps are also included. Lists of dimensions and capacities are given.

STEAM PUMPS AND AIR COMPRESSORS.—The Battle Creek Steam Pump Co., Battle Creek, Mich. Paper; 6 1/2 x 7 1/2 ins.; pp. 116; illustrated.

The Marsh steam pump, to which this catalogue is devoted, is said to be adapted to all kinds of service. It is of the horizontal type, with steam piston and water plunger at opposite ends of the rod, and a piston valve for the steam cylinder. It is made both single and compound. The Marsh air compressor is of the same design. Hydraulic pressure pumps for oil and cotton presses, etc., and vertical pumps for deep wells are also shown.

STREET SPRINKLERS AND DELIVERY WAGONS.—Winkler Brothers, South Bend, Ind. Paper; two pamphlets; 9 x 6 ins., 40 pp., and 7 1/2 x 5 1/2 ins., pp. 32, both illustrated.

The larger pamphlet is devoted to street sprinklers which have cylindrical tanks of wood or steel, mounted on four wheels, and having two sprinkler heads which throw a circular spray in a plane transverse to the road. Special designs are used for race tracks, large lawns, cemeteries, etc. The smaller pamphlet is a catalogue of trade delivery wagons of various kinds, open and closed. Prices are given of sprinklers and wagons.

ODORLESS PUMPS AND APPARATUS.—The Odorless Excavating Co., 64 Federal St., Boston, Mass. Paper; 6 x 9 ins.; pp. 24; illustrated.

A rock-shaft suction and force pump, mounted on two wheels, air-tight tank on four wheels, hose and connections and a special deodorizing tank make up the outfit put forth by this company for emptying vaults and cess-pools. The deodorizing tank contains a liquid deodorant, through which pass the gases from the main tank. The catalogue contains testimonials from a number of Massachusetts and New Hampshire cities and from U. S. army officers in Cuba and Porto Rico.

THE DISPOSAL OF CITY WASTES.—The City-Wastes Disposal Co., 874 Broadway, New York city. Paper; 4 x 8 ins.; illustrated.

This company has been organized from the staff of the late Col. Geo. E. Waring, Jr., with F. M. Gibson as President, G. Everett Hill, Manager, and Wm. L. Church, Engineer, and with several other engineers in consultation. It is engaged in "consulting and contracting in sewage disposal, garbage and refuse disposal and street cleaning." Further particulars regarding the company and the system of sewage treatment which it employs are given in the catalogue, which has as a frontispiece a fairly good portrait of the late Col. Waring.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened	Work	Place	See Eng. News
Nov. 23.	Electric lighting,	Philadelphia, Pa.	Nov. 16
Nov. 23.	Street cleaning, etc.	Philadelphia, Pa.	Nov. 23
Nov. 23.	Amunition hoists doors,	New York, N. Y.	Nov. 23
Nov. 24.	Building,	Westfield, Mass.	Nov. 23
Nov. 24.	Removing snow, etc.,	Brooklyn, N. Y.	Nov. 16
Nov. 24.	Crematories,	Minneapolis, Minn.	Nov. 2
Nov. 24.	Steel bridges (2),	Tiskilwa, Ill.	Nov. 2
	Advertised, Eng. News,	Nov. 2 to 16.	
Nov. 25.	Water-works,	Baltimore, Md.	Nov. 9
	Advertised, Eng. News,	Nov. 9 and 16.	
Nov. 25.	Rails, fishplates, etc.,	Glasgow, Scotland.	Nov. 16
Nov. 25.	Sewers,	Pittsburg, Pa.	Nov. 23
Nov. 27.	School building,	Williamsport, Pa.	Nov. 23
Nov. 27.	Court house,	Atlanta, Ga.	Oct. 5
Nov. 27.	Dredging, Harlem River,	N. Y.	Oct. 26
	Advertised, Eng. News,	Oct. 26 to Nov. 16.	
Nov. 27.	Public lighting,	Toledo, O.	Nov. 9
Nov. 27.	Electric plant,	Essex, England.	Nov. 9
Nov. 27.	School house,	Brooklyn, N. Y.	Nov. 16
Nov. 27.	Lumber and hdg. alterations,	New York, N. Y.	Nov. 16
Nov. 27.	Garbage disposal plant,	Joliet, Ill.	Nov. 16
	Advertised, Engineering News,	Nov. 16.	
Nov. 28.	Sewers (3 1/2 miles),	Tarboro, N. C.	Nov. 9
	Advertised, Engineering News,	Nov. 9.	
Nov. 28.	Dredging, Everett Harbor,	Wash.	Oct. 5
	Advertised, Eng. News,	Oct. 5 to Nov. 16.	
Nov. 28.	Electric wiring,	Newport, Ky.	Nov. 2
Nov. 28.	Water bonds (\$100,000),	Manistee, Mich.	Nov. 23
Nov. 28.	Park work,	Chicago, Ill.	Nov. 23
Nov. 28.	Sewerage system,	Pittsford, Pa.	Nov. 23
Nov. 28.	Brick, League Island Navy Yard,	Pa.	Nov. 23
Nov. 28.	Granite paving, Navy Yard,	New York, N. Y.	Nov. 23
Nov. 28.	Bridge bonds, Bellefontaine, O.		Nov. 23
Nov. 29.	Electric plant bonds,	Ukiah, Cal.	Nov. 23
Nov. 29.	Bridge piers, etc.,	Denver, Colo.	Nov. 23
Nov. 29.	Bridge, Cathlamet,	Wash.	Nov. 23
Nov. 29.	Sewer repairs,	New York, N. Y.	Nov. 23
Nov. 30.	Sewer, Salem, O.		Nov. 23
Nov. 30.	Sewers, Grant's Pass,	Ore.	Nov. 23
Nov. 30.	Water-works,	Gallatin, Tenn.	Nov. 23
	Advertised, Engineering News,	Nov. 23.	
Nov. 30.	Rebuilding wharf,	Buffalo, N. Y.	Nov. 2
	Advertised, Engineering News,	Nov. 2.	
Nov. 30.	Market plans,	Nassau, Bahamas.	Sept. 7
Nov. 30.	Water supply,	St. Agnes, England.	Nov. 9
Nov. 30.	Generators,	Newcastle-on-Tyne, England.	Nov. 9
Nov. 30.	Railway (7 1/2 mls.),	Dornock, Scotland.	Nov. 16
Dec. 1.	Pump eng. (1,000,000 galls.),	Dayton, O.	Nov. 16
Dec. 1.	Electric plant,	Gallatin, Tenn.	Nov. 16
Dec. 1.	Bridge, Seattle, Wash.		Nov. 16
Dec. 1.	Garbage crematories (2),	Galveston, Tex.	Nov. 16
	Advertised, Eng. News,	Nov. 16 to 30.	
Dec. 1.	Stone wall, San Francisco,	Cal.	Nov. 9
Dec. 1.	School house,	Ashtland, Ore.	Nov. 9
Dec. 1.	Dredging, New Jersey		Nov. 2
	Advertised, Eng. News,	Nov. 2 to 23.	

Dec. 1. Bridge, Caldwell, Idaho. Nov. 2
 Dec. 1. Increased water supply, Fort Worth, Tex. Nov. 2
 Dec. 1. Advertiser, Eng. News, Nov. 2 and 9.
 Dec. 1. Railway supplies, Liverpool, England. Nov. 23
 Dec. 1. Concrete sidewalks, Chicago, Ill. Nov. 23
 Dec. 1. Screenings, New York, N. Y. Nov. 23
 Dec. 2. Drainage, Valparaiso, Ind. Nov. 23
 Dec. 2. Electric plant, Batavia, O. Nov. 23
 Dec. 2. Advertiser, Engineering News, Nov. 16.
 Dec. 2. Water-works, Batavia, O. Nov. 23
 Dec. 2. Canal construction, Chicago, Ill. Nov. 9
 Dec. 2. Advertiser, Eng. News, Nov. 9 to 23.
 Dec. 4. Timber, Ottawa, Ont. Oct. 26
 Dec. 4. Water bonds, Los Angeles, Cal. Oct. 26
 Dec. 4. Sewer (15 miles), Greenville, Miss. Nov. 16
 Dec. 4. Advertiser, Engineering News, Nov. 16.
 Dec. 4. Paving, Gallipolis, O. Nov. 16
 Dec. 4. Lighting franchise, Pleasanton, Cal. Nov. 16
 Dec. 4. Pumping engines (8), Dixon, Cal. Nov. 16
 Dec. 4. Gas engine & compressor, E. Dereham, Eng. Nov. 23
 Dec. 4. Fire hose, New York, N. Y. Nov. 23
 Dec. 4. Fire engines, New York, N. Y. Nov. 23
 Dec. 4. Electric light posts & lamps, London, Eng. Nov. 23
 Dec. 5. Sewer, Elkhart, Ind. Nov. 23
 Dec. 5. Completing state house, Topeka, Kan. Nov. 23
 Dec. 5. Church, Warsaw, N. Dak. Oct. 5
 Dec. 5. Church building, Warsaw, N. Dak. Nov. 16
 Dec. 6. Sewer building work, Clearwater, Cal. Nov. 16
 Dec. 6. Gun forgings, Washington, D. C. Nov. 23
 Dec. 6. Erecting jail, Greensboro, N. C. Nov. 16
 Dec. 7. Street railway, Cadiz, Spain. Nov. 16
 Dec. 7. Sewers and water-w'ks, Ft. Defiance, Ariz. Nov. 16
 Dec. 7. Bridge cables, New York, N. Y. Nov. 16
 Dec. 7. Advertiser, Eng. News, Nov. 16 to 30.
 Dec. 8. Water bonds (\$20,000), Ventura, Cal. Nov. 23
 Dec. 9. Water bonds (\$11,000), Wheaton, Minn. Nov. 23
 Dec. 11. City building, Topeka, Kan. Nov. 23
 Dec. 11. Buildings, Liverpool, England. Nov. 23
 Dec. 11. Sewerage bonds, Chicago, Ill. Nov. 23
 Dec. 12. Two buildings, New Westminster, B. C. Nov. 23
 Dec. 12. Park bonds (\$25,000), Middleton, O. Nov. 23
 Dec. 12. Pipe sewers, Wichita, Kan. Nov. 9
 Dec. 12. Sewers and water-works, Ft. Mojave, Ariz. Nov. 16
 Dec. 12. Auditorium, Topeka, Kan. Nov. 16
 Dec. 12. Garbage crematories, Hackney, England. Nov. 16
 Dec. 13. Cleaning sewers, Hoken, N. J. Nov. 16
 Dec. 13. Interior painting, Milwaukee, Wis. Nov. 2
 Dec. 13. Ferry, New Orleans, La. Sept. 21
 Dec. 14. Breakwater, Sheboygan Harbor, Wis. Nov. 16
 Dec. 14. Advertiser, Eng. News, Nov. 16 to Dec. 7.
 Dec. 14. Bridges (wooden?), Shreveport, La. Nov. 16
 Dec. 14. Bridges, Wichita, Kan. Nov. 23
 Dec. 14. Steel vessel, Dublin, Ireland. Nov. 23
 Dec. 15. Purchase government bldg., Indianapolis, Ind. Nov. 23
 Dec. 15. Coal shaft, Alderson, Ind. Nov. 23
 Dec. 15. Cut stone, Washington, D. C. Nov. 23
 Dec. 15. Advertiser, Engineering News, Nov. 23.
 Dec. 15. Sewers (11 miles), Martinsville, Ind. Nov. 16
 Dec. 19. Quays, etc., Alexandria, Egypt. Sept. 14
 Dec. 20. Railway (29 miles), England. Nov. 23
 Dec. 23. Road, San Juan, Porto Rico. Oct. 26
 Dec. 23. Advertiser, Eng. News, Oct. 26 to Dec. 7.
 Dec. 26. Channel work, Oakland Harbor, Cal. Nov. 9
 Dec. 29. Aqueduct, Panama, Colombia. Oct. 26
 Dec. 30. Water-works, Panama, Colombia. Nov. 23
 Dec. 31. Mistretta, Italy. Nov. 23
 Dec. 31. Electric lighting, Porto Alegre, Brazil. Oct. 26
 Dec. 1. Water supply and plans, Levis, Que. Nov. 9
 Dec. 1. W.-wks & elec. p't plant, Charleston, Ind. Nov. 16
 Dec. 1. Air compressing machinery, London, Eng. Nov. 16
 Dec. 1. Railway (27 miles), Lumberton, N. C. Nov. 23
 Dec. 2. Electric light franchise, Marysville, Cal. Nov. 23
 Dec. 3. Bridge superstructure, Lockport, Ill. Nov. 16
 Dec. 3. Advertiser, Engineering News, Nov. 16.
 Dec. 3. Water-works and drainage, Concepcion, Chili. Oct. 26
 Dec. 4. Railway (200 miles), Ceylon. Sept. 7
 Dec. 6. Hospital buildings, Swindon, England. Nov. 16
 Dec. 6. Water mains (416 tons), Roscommon, Eng. Nov. 23
 Dec. 15. Rapid transit tunnel, New York. Nov. 16
 Dec. 31. Water-works, Ada, Minn. Oct. 26
 Dec. 15. Sewers and water-works, Tampico, Mex. Oct. 12
 Dec. 27. Mining lease, St. Petersburg, Russia. Nov. 2
 Dec. 28. Railway (75 miles), Matthews, Ind. Sept. 7
 Dec. No date. Asphalt paving, Mexico, Mexico. Oct. 19
 Dec. " Railway cars (640), Milan, Italy. Nov. 9
 Dec. No date. Wells, Arlington, Minn. Nov. 16
 Dec. " Electric plant, Pontiac, Ill. Nov. 16
 Dec. No date. Water-work, Wimbledon, N. Dak. Nov. 23
 Dec. " Bridge, Charlotetown, P. E. I. Nov. 23
 Dec. " Dredges (4,000 cu. yds), Philadelphia, Pa. Nov. 23
 Dec. " Plans for school bldg., Seattle, Wash. Nov. 23
 Dec. " Railway fence (32 miles), Picton, Ont. Nov. 23

RAILWAYS.

ARGENTINE.—Peacock & Co., Buenos Ayres, are reported to have applied to Cordova, Spain, for permission to construct a line from Juarez Celman to the Santiago del Estero boundary, passing through the departments of Union, San Justo, Tulumba, etc.

ARKANSAS WESTERN.—This company proposes to build from Hot Springs, Ark., to Wister Junction, Ind. Ter., via Waldron, Ark., 115 miles. Surveying is under way from Wister Junction, and grading is expected to be begun in January. C. C. Godman, Pres.; L. C. Torrence, Ch. Engr., both of Fort Smith, Ark.

ATHENS SOUTHERN.—This company has applied for a charter to operate the old Northeastern road from India, on the Atlanta & Charlotte Air Line Ry., to Athens, Ga., a distance of 40 miles. This line was recently sold to J. W. English for \$307,000. The capital stock of the new company will be \$300,000, and J. S. B. Thompson and Albert Howell, Jr., of Atlanta, Ga., are incorporators.

ATLANTA BELT LINE.—George C. Smith, Pres., Atlanta, Ga., informs us that A. & C. Wright & Co., Richmond, Va., have been awarded the contract for the construction of this proposed belt railway from Oakland, on the Atlanta & West Point R. R., and the Central of Georgia Ry., near the western limits of Atlanta, Ga., to a connection with the Georgia R. R. at Inman Park, near the eastern city limits of Atlanta. Work commenced Nov. 10, and work is expected to be completed within seven months. H. M. Abbott, Secy., and Treas., Atlanta; G. F. Huggans, Resident Engr., Montgomery, Ala.

BALTIMORE & OHIO.—Wade, Burners & Co., Baltimore, Md., are reported to have been awarded the contract for grading a 7-mile branch of this system in Harbour County, W. Va.—Improvements to cost about \$75,000 are projected for Fairmont, W. Va., including a new station and second track. J. M. Graham, Ch. Engr., Baltimore. The cutting down of grades on the Chicago division of this line will be begun at once, and most of the heavy work will have been completed by spring. The general plan of grade improvements contemplates an 18-ft. maximum grade from Chicago to Baltimore, except over the mountains where helping engines have to be used. The Chicago division work includes reduction between Tiffin, O., and Attica, where a 28-ft. grade will be reduced to 18-ft. for a distance of 16 miles, the heaviest cut being

at Republic; about \$50,000 cu. yds. will be excavated. C. E. Loss & Co., Pullman Bldg., Chicago, have the contract. At Tegard, Ind., there are 175,000 cu. yds. to be removed to reduce the grade from 28 to 16 ft. Loss & Co. also having this contract. Between Garrett and Ripley, Ind., there will be a relocation of the line for seven miles, reducing a 26-ft. grade to 16 ft., both east and west bound. These reductions will cost about \$300,000, but will allow an increase of nearly 30% in train loading when they are completed. A. M. Kinsman, Engr. of Construction; W. J. Yoder, Resident Engr., both of Tiffin, O.

BIAZIL.—It is proposed to extend the Paulista Ry. connecting Piracicaba with St. Jerony, Brazil, a distance of 22 miles. A. Pinto, Secy. Gen., Estado de San Paulo, Brazil.

CAROLINA NORTHERN.—H. L. Cummings, Engr., Lumberton, N. C., informs us that this company will be ready for bids by Jan. 1 on 27 miles of work from Barnesville, N. C., to Marion, S. C., requiring about 170,000 cu. yds. of earth work and 8,000 lin. ft. of pile trestle. Further information was contained in our last issue. Aug. Millier, Pres., 318 Bourse Bldg., Philadelphia, Pa.

CHICAGO, INDIANA & EASTERN.—Premont Wilson, Ch. Engr., Matthews, Ind., informs us that this line is now in operation from Matthews to Converse, Ind., and that preliminary surveys have been made for a new line between Matthews and Richmond, via Muncie, 75 miles. Contracts will be let about March 1. Eugene Stewart, Chicago, Ill. No president has yet been chosen.

CHICAGO, MILWAUKEE & ST. PAUL.—The Flich & Johnson Construction Co., Davenport, Ia., writes us that it has the contract for grading, constructing bridges and culverts on the entire line through Yankton, Tyndall and Yankton Indian Reservation, about 80 miles long. The company has already completed its work from Yankton to Tyndall, and expect to begin work west of Tyndall this winter.

CHINA.—Press reports state that a contract has been concluded by the French and Chinese authorities for a railway between Lunghou and Nanningfu, South China. A preliminary loan of about \$873,600 has been negotiated through the Russo-Indo Bank, of Peking, for constructing the road.—William Barclay Parsons, Ch. Engr. of the Fuch' Han Ry., 22 William St., New York, informs us that the preliminary survey has been made for the proposed line to Kwangtung, via Yangtze, Slang and Poi rivers through Hupeh and Hunan, a distance of 1,900 miles.

DENMARK.—The Budget has set aside \$2,700,000 for railway work, \$1,350,000 for other railway material and two new ferry services etc. The war department also proposes to build portable narrow gage lines. I. V. Tegner, Gen. Dir. State Railways, Copenhagen, Denmark.

ERIE.—Reports state that this company is now laying second track on its Ohio division between Kent and Gallon, O., 65 miles, and abolishing a series of very heavy grades. It is said that about \$1,000,000 will be spent on this system next year on improvements alone, most of the money being spent for double-tracking. Surveys are under way in Wayne county, Pa., for a new cut-off. C. W. Buchholz, Ch. Engr., New York.

FISHGUARD & ROSSLARE.—Bids are asked until Dec. 20 for constructing about 29 miles of road for this line in England. Sir Basil Baker, Engr., 2 Queen Square Place, Westminster, London, S. W.; G. J. Whitelaw, Secy., Paddington Station, London.

GILA VALLEY, GLOBE & NORTHERN.—A. C. Laird, Secy., Los Angeles, Cal., informs us that the survey has been completed for the proposed extension to the Black Warrior Copper Mines, 8 miles, but that nothing has yet been done about the right of way nor the letting of contracts. William Garland, Pres., Los Angeles.

GREENBRIER & CHEAT RIVER.—This company has been incorporated in West Virginia with \$50,000 capital stock to build a line from the forks of the Greenbrier River, Pocahontas, W. Va., to a point near Rowlesburg. C. F. Moore, Covington, Va.; Joseph K. Cass, Tyrone, Pa., and Robert D. Hopkins, Baltimore, Md., are incorporators.

GUYANADOTTE VALLEY R. R.—Huntington, W. Va., papers state that bids are wanted for constructing this line, which will extend from Huntington to Pineville.

GULF AND SHIP ISLAND.—Work is reported to have been begun towards clearing the right of way for this line between Steep's Creek and Jackson, Miss. A construction gang and engineers are also said to be on the field. S. S. Bullis, Gen. Mgr., Gulfport, Miss.

KLAR GOLD FIELDS.—The contract for the realignment of the East Indian line at a cost of about Rs. 272,000 has been let to R. G. O'Shaughnessy, Kinan Canal, Bagau Serai, Perak, S. S., India.—It is also reported that a line 8 1/2 miles long from Saldapat to Black Town, to connect with the South Indian Ry., is proposed. N. W. Notman, Mgr. Dir., 55 Grace Church St., E. C., London.

MONTOAN & GREGG.—This company was incorporated in Pennsylvania, Nov. 15, with a capital stock of \$30,000, to construct a steam railway in Allegheny county, Pa. James T. Armstrong, Pres., Glenshaw, Pa.; J. F. Scott, Pittsburg, Pa., and W. H. Shinn, Carnegie, Pa., are incorporators.

NASHVILLE, FLORENCE & NORTHERN.—Jere. Baxter, Robert L. Morris and Edward Buford, of Nashville, Tenn., have applied for a charter for this company, with a proposed capital stock of \$100,000, to build a standard line from Nashville through Davidson and Sumner counties to the Kentucky line, and thence to Louisville, Ky.; also south from Nashville to Florence, Ala.

NATIONAL TEHUANTEPEC.—Press reports state that Sir Weetman D. Pearson, 16 Airlie Gardens, Camden Hill, W. London, England, completed arrangements Nov. 18 to take the Isthmian railroad contract. He leases the railroad for 50 years, the government getting a percentage from the earnings according to a sliding schedule. The road, which is about 185 miles long, of standard-gage, was completed in 1895, at a cost of \$30,000,000 (silver), but must now be rebuilt. In 1894 Collis P. Huntington, Pres. Southern Pacific Ry., offered the Mexican government the amount of its cost for the road, but the government refused. Sir Weetman Pearson's contract includes the complete rehabilitation and equipment of the road, which, at the end of 50 years, must be returned to the government, the latter guaranteeing the contractors at least 6%. The contractors are also to make harbors at Salina Cruz and Coatzacoalcas at a cost of about \$11,000,000. Pearson will begin active operations in January.

NEW YORK CENTRAL BELT LINE.—Plans have been accepted for the laying-out of new railway tracks to be built from this line into the grounds of the Pan American Exposition grounds at Buffalo, N. Y. There will be nine tracks, each about 700 ft. in length. W. Cary Ely, Buffalo, and Director-General Buchanan are in charge of this work.

RICHMOND & TIDEWATER.—C. P. E. Burwyn, Ch. Engr., 819 East Main St., Richmond, Va., informs us that the entire route of this proposed line from Richmond to tidewater has been reconnoitered and practically deter-

mined upon within a few miles of each side of the center line. The field engineers have run about 10 miles of main line, and the right of way has been pledged for almost the entire distance. The counties through which the line will run have subscribed liberally towards the cost of construction, and the balance to be raised will be made up by a construction company and a bond issue. Contracts will probably be let in the spring.

PRINCESS ANNE, CAPE HENRY & LYNN HAVEN BAY.—Work is expected to begin soon on this proposed line from Virginia Beach, Va., to Cape Henry, 7 miles; and thence to Lynn Haven Bay, Jas. R. Werth, Pres., 46 Chamber of Commerce Bldg., Richmond, Va.

ROLAND LUMBER CO.—Reports from Faison, N. C., state that this company has had surveys made for a standard-gage railway to be built from Bear Swamp to Giddensville, N. C., 7 1/2 miles.

SANTA FE & GRAND CANYON.—R. L. Thomae, Treas., 11 Broadway, New York, informs us that this new line of railway will extend from Williams, Ariz., due north to the rim of Grand Canyon, a distance of 75 miles. About 7,000 tons of 56-lb. steel rails have been purchased, about 180,000 ties, also spikes, angle bars, switches, etc. Grading, bridging and trestle work is about one-third completed and paid for, starting at Williams on the main line of the Santa Fe Pacific R. R. Track has been laid for about 12 miles, and work is being pushed as fast as possible. The contractors for the whole road are Lombard, Good & Co., 11 Broadway, New York; L. W. Goode, Pres., 11 Broadway, New York; P. F. Randall, Ch. Engr., Williams, Ariz.

SONORA.—This railway, formerly controlled by the Santa Fe, but now leased to the Southern Pacific Ry., is to be brought up to the standard in regard to roadbed and equipment throughout. The line is 353 miles in length from Benson to Guaymas, Sonora, Mex., although the section in Arizona, comprising 89 miles, is officially known as the New Mexico & Arizona Ry. It is the only line now in actual operation on the Pacific coast, with the exception of two short lines connecting state capitals a few miles inland with their seaport towns. The improvements about to be made are believed to indicate an intention on the part of the company to extend the line further south into the state. At present the road is connected with a line of steamers to points along the coast, but the several railway extensions to the coast now in progress are evidently making the Southern Pacific hurry to get into the country to the south before its competitors.

TURKEY.—The Turkish government is reported to have approved of the concession to the Deutsche Bank, Constantinople, for a railway extension to Bassorah, a frontier city and river port of Asiatic Turkey, 270 miles southeast of Bagdad.

VIRGINIA & SOUTHWESTERN.—M. D. Chapman, Vice Pres. and Gen. Mgr., Bristol, Tenn., informs us that work is progressing satisfactorily on the Mountain City extension. The line from Elizabethton to Vaughtsville, a distance of ten miles, will be opened about Dec. 1, and the line to Mountain City, Tenn., 38 miles, will be opened about Feb. 1.

STREET AND ELECTRIC RAILWAYS.

PORTLAND, ME.—The Portland & Saco R. R. Co. has petitioned the railroad commissioners for permission to construct an electric railway from South Portland to Saco, with a branch from West Scarborough to Pine Point and Old Orchard, 18 miles. Chas. F. Libby, Wm. G. Davis and Joseph S. Kirkes are directors.

BERLIN, N. H.—D. J. Daley, Berlin, informs us that the preliminary survey has just been completed for the Berlin St. Ry. from Berlin to Gorham, eight miles. The capital has not yet been paid in. If construction is finally decided upon, contracts will probably be let early in the spring. Col. C. P. Day, Pres., Berlin; E. C. Jordan, Portland, Me., is said to have made the survey.

MEREDITH, N. H.—We are informed that the syndicate which has purchased the land in the Ossipee and Sandwich mountains for the construction of the Meredith & Ossipee R. R. will not develop the road through that district for two years. The road will be 25 miles long, and will extend through Meredith, Centre Harbor, Moulton borough, Sandwich and Ossipee. Geo. W. Armstrong, Pres., Centre Harbor, N. H.; also 80 Utica St., Boston, Mass.

BERLINGTON, VT.—The Burlington & Hinesburg R. R. Co. was granted a franchise Nov. 9 to operate an electric railroad from Burlington to Shelburne. The road will be of standard gage, and will be completed within one year. Gen. Robert Avery, Burlington, is interested.

GROTON, MASS.—John A. Cameron is said to have received the contract for the overhead work on the proposed electric road from Groton to Ipswich and Newburyport, about 19 miles.

KINGSTON, MASS.—The board of selectmen on Nov. 18 granted a franchise to the Pembroke Street Ry. Co. to run a road through this town, which will connect the line from Brockton to Plymouth. Work to be completed by June.

MARLBORO, MASS.—The Marlboro Street Ry., including the Hudson Line, Marlboro, Southboro and Framingham road and Union Street Ry., which connects Framingham, South Framingham and Saxonville, are said to have passed into the control of the Boston & Worcester Electric Street Ry. Co., which is negotiating for franchises to operate an electric road between Boston and Worcester. It is rumored that the company will absorb another line, so as to open a direct line from Fitchburg to Boston.

MEDFIELD, MASS.—We are informed that surveys have been made, the right of way obtained and capital secured for the Medfield & Medway St. Ry. to be built from Medfield to Medway, via Mills, eight miles. H. Gore & Co., 54 Kilby St., Boston, the contractors, have started work at Medfield, and bridge construction was begun Nov. 20. Wilmot W. Mitchell, Pres., Medfield; Hodges & Harrington, Engrs., 60 State St., Boston.

NORTON, MASS.—The Norton & Taunton Electric Ry. has changed hands, and Daniel Coolidge, Pres., Cleveland; Geo. L. Wetberill, Vice Pres., and A. H. Sweet, Treas., Norton, have been chosen officers. Improvements are said to be contemplated.

TERRYVILLE, CONN.—We are informed that preliminary surveys have been made for the proposed extension of the Hartford & Torrington Tramway from Torrington to Terryville, via Harwinton and Plymouth, 13 miles. Noble E. Pence, Pres., Bristol, Conn.; Geo. N. Merrill & Co., Engrs., Springfield, Mass.

BUFFALO, N. Y.—We are informed that the Buffalo & Erie R. R. Co., which proposes to construct 70 miles of electric railway along Lake Erie from Buffalo to Erie, has secured four franchises and obtained seven miles right of way. Surveys are now in progress, also negotiations for the balance of the capital. No contracts have yet been awarded. C. V. Boughton, Pres.; W. A. Calhoun, Ch. Engr., both of Buffalo.

BROOKLYN, N. Y.—The Brooklyn Rapid Transit Co. has taken steps to change the overhead system to underground by securing a permit for the removal of 36,000 ft. of heavy trolley feed wire from poles to subways constructed on Kent Ave., between Division Ave. and Broadway.—The Brighton & Bensonhurst Electric R. R. Co., known as the Boynton road, at Coney Island, is said to have been sold on Nov. 16 to a Brooklyn syndicate for \$25,000. Henry W. Slocum and George Hoffman are interested.

DUNKIRK, N. Y.—The Dunkirk-Hickoryhurst Co., C. V. Boughton, Pres., and W. M. H. Boughton, Secy., which proposes to construct lines between Dunkirk and Hickoryhurst, Fredonia and Lily Dale and Erie, has applied to the trustees of Fredonia for a franchise.

ROCHESTER, N. Y.—The Rochester & Lake Ontario (Bay) R. R. was sold at auction Nov. 11 to Geo. W. Archer and Wm. C. Barry, of Rochester, and others, for \$50,000. It is reported that the new owners will buy new rolling stock, and supplant the present pony engine steam service with trolley cars. Work is to begin in the spring.

SARATOGA SPRINGS, N. Y.—The highway commissioners granted a franchise to the Schenectady & Saratoga Rapid Transit Co., Nov. 7, to construct an electric line in this city. The company must commence work by May 1, and complete the road by Nov. 1, 1900.

ATLANTIC CITY, N. J.—Surveys are being made for the proposed route of the Atlantic City Electric Ry. in the vicinity of Pleasantville.

ELIZABETH, N. J.—The council granted a franchise to the Westfield & Elizabeth St. Ry. Co., Nov. 15, to enter this city on Jersey Ave. Chandler Riker, Newark, N. J., is a promoter.—Senator John Kean is said to have commenced work for his proposed trolley line on the Union county road between this city and Plainfield.

GLOUCESTER, N. J.—Local papers state that the Seashore Electric Ry. is having surveys made for its route through this city.

ALLENTOWN, PA.—The nine street railway companies in and around Allentown have been merged into the Lehigh Valley Traction Co., with a capital stock of \$3,000,000. A. L. Johnson, Pres.; Tom J. Johnson, Vice Pres.

CARBONDALE, PA.—The Carbondale Traction Co. was granted a franchise by the council Nov. 10 over Mayor Kilpatrick's veto.

GLASSPORT, PA.—It is reported that the United Traction Co., of Pittsburg, Pa., has decided to extend its line from Glassport to Elizabeth at once.

LANCASTER, PA.—The Pennsylvania Traction Co., which has been in the hands of the receiver for three years, has been reorganized as the Conestoga Traction Co. The new company will have William B. Given as president, with John D. Skills and J. W. B. Bausman as directors. Application will soon be made for a charter providing for the enlargement of the system and new lines to New Holland and Ephrata.

LEBANON, PA.—The United Power & Transportation Co., successors to the Lebanon & Annville and Lebanon & Mystown Ry. Co. has secured cars and equipment necessary for both lines, and the extension to Palmyra. The company is installing new machinery and dynamos at the electric plant on North Eighth St., and will heat the cars by electricity. An extension from Palmyra to Campbelltown is said to be contemplated, and preparations are now being made for the erection of a large machine shop and an iron and brass foundry, to be located at its Third St. plant at Reading, which will furnish supplies to the railway in the vicinity.

OIL CITY, PA.—The Citizens' Traction Co. was incorporated Nov. 20 with \$150,000 capital stock, to operate an electric street railway. D. J. Geary, Wm. Hasson, Henry J. Beers and others of Oil City are interested.

PHILADELPHIA, PA.—The Delaware River & Atlantic R. R. Co., recently incorporated with \$6,000,000 capital stock, is said to have completed plans for its road from this city to Atlantic City. The road will be about 52 miles long, and will probably have branches to Longport, Ocean City and Cape May. Colonel Wm. Boyer is said to be the chief promoter.

PHILADELPHIA, PA.—The Union Traction Co. is reported to have prepared plans for a number of changes, including five storage stations; new equipment will also be ordered. J. B. Parsons, Pres.—The councils have passed ordinances authorizing the Fisher's Lane Ry. Co. to extend its line along Fisher's Lane from Wyoming Ave. and D St. to Asylum Pike, and to Castor Road, also authorizing the Lindley Ave. Ry. Co. to construct a line on Lindley Ave. to Windrim Ave., and thence to York Road.

PHILADELPHIA, PA.—The contract for completing the trolley line between Essington and Bow Creek, on the Island road, to connect with the Southwestern Traction Co., was awarded Nov. 13 to Frank McMaisters, Ridley Park, who has started engineers to work laying out the proposed road.

WILMINGTON, DEL.—Local papers state that a committee has been appointed by the Brandwine Hundred farmers to urge the Wilmington City Ry. Co. to extend its lines to Kennett Square, Pa. The North Side Improvement Co. is said to have subscribed \$10,000 towards the project.

BALTIMORE, MD.—The municipal board of estimate has reported to the council in favor of ordinance for granting a franchise to the United Rys. Co. to make a number of curve connections. As bids for the franchise were asked, and as none were received, the board will probably accept the company's offer.—The Baltimore & Washington Lard & Lumber Co. is said to project an electric railway to connect with the Edmondson Ave. and Elliott City Branch of the United Rys. The line will run to Alberton, across the Patapsco River in Howard county.

WINSTON, N. C.—The Twin City Construction Co. has sold the Winston-Salem Ry. & Electric Co. and its entire plant to the Fries Mfg. & Power Co. with other capitalists, who will cooperate with the present owners of the Fries Mfg. & Power Co. in the management of the street railway and lighting systems of this system. The new management proposes extensive improvements to its plant, together with the extension of its line south of Salem. H. E. Fries, Pres.; H. W. Fries, Vice Pres., and W. A. Blair, Secy. and Treas.

MOBILE, ALA.—D. R. Burgess, G. S. Obear and others have applied to the council for a franchise to construct an electric railway in Mobile.

DAYTON, O.—Local papers state that a Cleveland syndicate has purchased the Dayton Traction Co., the Cincinnati & Miami Valley Traction Co., and the Hamilton Electrical Co., and will consolidate the roads and form a line running from Dayton to Cincinnati. The syndicate, it is said, will extend its system from Dayton to different cities in northern Ohio. M. J. Mandelbaum, E. G. Tillotson and H. R. Newcomb, of Cleveland, are said to be interested.

EAST LIVERPOOL, O.—The East Liverpool Street Ry. Co., it is said, will accept the franchise granted it by the council recently to extend its lines in East Liverpool,

although not entirely satisfactory to the company. Work on the proposed extension, which will run from Sixth St. to the Riverview Cemetery, on the Calcutta road, will begin within 30 days.

NORWALK, O.—A franchise was granted by the county commissioners Nov. 8 to the Sandusky, Bellevue & Norwalk Electric Ry. Co., to construct a line from North Norwalk to Bellevue and to Norwalk, which is to be completed by July 1. W. W. Grabam, Norwalk, and Clark Rude, Sandusky, O., are said to be the chief projectors.

EVANSVILLE, IND.—It is stated that C. C. Henning, Dayton, O., has petitioned for a right of way for an electric railway to Boonville, which he expects to construct at once.

FORT WAYNE, IND.—The Fort Wayne Consolidated Electric Ry. has been purchased by the Fort Wayne Traction, which will be capitalized at \$2,000,000, with J. H. Wade, Cleveland, as president, and Gen. George Garretson, as one of the prime movers. An issue of \$1,500,000 in bonds has been authorized by the directors.

LOGANSPOUT, IND.—Local papers state that bids have been received by the Logansport, Rochester & Northern Traction Co., for the construction and equipment of its electric line through Logansport, Rochester, Mentone, Warsaw, North Webster, Albion and Kendallville, and that the contract will probably be let within ten days.

BAY CITY, MICH.—The Bay Cities Consolidated St. Ry. Co. has announced that improvements costing about \$150,000 will be undertaken at once, including a new power house, a new viaduct over the Michigan Central R. R., the reconstruction of the west side system, using T rails, the improvement of Wenona Beach and the purchase of new rolling stock. Michael P. Heraty, Pres.; Geo. E. Shaw, Director, both of Philadelphia, Pa.

MONROE, MICH.—The council granted a new franchise Nov. 13 to C. A. Black, C. W. Harrah, and others of Detroit, Mich., and the same was accepted. Work must be completed from Toledo to Monroe by Jan. 1, 1901, and from Monroe to Detroit, by Jan. 1, 1902.

MONMOUTH, ILL.—It is reported that the Galesburg and Monmouth electric lines will begin the construction of a new line to Oquawka, with branches which will probably extend to Kirkwood and Little York. Both companies propose to have its line running by next season.

DENISON, TEX.—The Sherman City St. Ry. Co. and the College Hills and Park line have been purchased by J. P. Withers, representing a Chicago syndicate. A new company will be formed, to be known as the Denison & Sherman Ry. Co., with \$275,000 capital stock, and will consolidate the two lines, equip it with electricity and extend it to Denison. A power plant will be erected. The contracts for the materials have been let, and the grading will be finished this winter. The erection of a large pavilion and the establishment of a park and summer resort is contemplated.

SAN JOSE, CAL.—The franchise for extending the Julian St. Electric Ry. from the creek to McKee Road, and then along Hale Ave. to Alum Rock Ave. has been awarded to George Tourney for \$50.

SKAGWAY, ALASKA.—John Laumeister is said to be considering the plan of purchasing a car equipment, and establishing it in this town. The plan calls for an electric line, to be operated on the principal streets to the wharves.

HAMILTON, ONT.—Local papers state that it is proposed to establish a line between Guelph and Gait, to cost \$100,000. J. M. Gibson is interested.

PORT DUFFERIN, ONT.—The Clark-McNair syndicate is said to be considering the extension of its lines to Gait and Berlin.

ENGLAND.—Press reports state that the following work in connection with electric railways in a number of towns in England is proposed: Bootle, to spend about \$175,925. J. A. Crowther, Borough Engr.; Limerick, (Ireland), to begin before January. W. E. Corbett, Borough Engr.; Manchester, to cost about \$4,500,000 (underground). T. C. Courcy Meade, Surv.; Warrington T. Longdin, Surv.; Salford, to cost \$267,250. C. L. Turner, Elec. Engr.; Burnley, about \$750,000. W. R. Wright, Elec. Engr.; Preston, reconstruction and about 38 miles of extensions. Thos. Cookson, Borough Engr.; Dundee (Scotland), extensions to Monifeth, W. H. Titterton, Elec. Engr.; Eccles, A. C. Turley, Borough Surv.; Little Hulton, Geo. Jones, Surv.; Radcliffe, W. L. Rothwell, Surv.; Whitefield, Urmston, and other places have granted a franchise to the United Kingdom Tramways, Light Ry. & Electrical Syndicate, Ltd. The town council of Wixan has applied for permission to construct a line. Wm. Bolton, Borough Surv.

SANTIAGO, CHILI.—It is stated that the electric street railway company will soon begin the construction of an underground system. The road is said to be about 100 miles long. P. Merry del Val, Mgr. Dir.; S. B. Norton, Engr., Santiago; London office, 120 Bishopsgate St., E. C.

ELECTRIC LIGHT AND POWER.

OAKLAND, ME.—The property of the Oakland Electric Light Co. has been sold to Walter S. Wyman and Harvey D. Eaton, Waterville, Me.

BELFAST, N. Y.—It is stated that this place is to have electric lights.

BUFFALO, N. Y.—The contract for electric wiring in the new post office building has been let to John Peirce, 85 4th Ave., New York, at \$17,951.

GLENS FALLS, N. Y.—Reports state that surveys and plans for the proposed plant for the Hudson River Water Power Co., recently incorporated, will soon be completed, and that bids will then be asked. It is proposed to furnish light and power to a number of cities in Saratoga, Washington and Warren counties. Capital stock, \$2,000,000. Eben H. Gray and Walter H. Trumbull, of Boston, and Elmer J. West and Chas. E. Parsons, of Glens Falls, N. Y., are interested.

MOUNT MORRIS, N. Y.—We are informed that the contract for rebuilding the power dam for the Mount Morris Hydraulic Power Co. was let Oct. 16, at about \$41,000, to W. A. Boland, 31 Nassau St., New York, who is to complete the work by Oct. 1, 1900. Geo. W. Rafter, Engr., 63 Kenwood Ave., Rochester, N. Y.

NIAGARA FALLS, N. Y.—W. W. Reed, of this city, has been awarded the contract for constructing a conduit from the power house to the upper steel arch bridge. The conduit will carry cables to supply temporarily the consumers on the Canadian side.

OSWEGO, N. Y.—City Engineer Ormsby and Wm. P. Judson, Oswego, are preparing plans and specifications for the new plant for the electric company.

WEST POINT, N. Y.—Lt. Malvern-Hill Barnum, Q. M., writes us that the following bids were received Nov. 3 for electric wiring Memorial Hall: The United Co., 13-21 Park Row, New York, \$1,473; Hewitt & Warden, 14 S.

Water St., Newburgh, N. Y., \$1,730; Brown Electrical Construction Co., New Haven, Conn. (accepted), \$1,774; Edward Heaton, Room 820, Park Row Building, New York, \$842; Geo. A. Williams & Co., 257 Washington St., Jersey City, N. J., \$1,628.

PLEASANTVILLE, N. J.—The borough clerk is reported as receiving bids for electric lighting.

DOYLESTOWN, PA.—It is stated that the Lehigh Coal & Navigation Co., 108 So. 4th St., Philadelphia, Pa., will begin on Dec. 1 the widening of the canal from Raubsville and Easton, a distance of five miles. A power plant will be built at Raubsville, and an electric railway constructed.

NEW WILMINGTON, PA.—G. H. Gatty, Pres. Council, writes us that bids for a plant to cost \$4,500 will be wanted about March 1. W. J. Shields, Engr.

SCRANTON, PA.—Councilman Cusick has introduced an ordinance providing for the holding of an election Feb. 20 to vote on the question of issuing \$300,000 in bonds for a plant.

BALTIMORE, MD.—A resolution will be considered by the council in three weeks providing for a committee to investigate the question of a municipal plant and appropriating \$2,000 for expenses.

RICHMOND, VA.—Councilmen Kennebold, O'Neal and Leftwich, have been appointed a committee to report on the advisability of constructing a plant.

NORTH WILKESBORO, N. C.—The people voted Nov. 14 to issue bonds for a plant.

WINSTON, N. C.—The Fries Mfg. & Power Co. H. E. Fries, Pres., Frank Battles, Philadelphia, Middletown, Oliver & Co., Baltimore, and J. L. Williams & Sons, Richmond, have purchased the Winston-Salem Ry. & Electric Co. from the Twin City Construction Co. and will enlarge the plant.

ATLANTA, GA.—Morris Brandon, of Atlanta, has introduced in the assembly a bill authorizing this city to hold an election to vote on the question of issuing \$150,000 in bonds for a plant.

CARROLLTON, GA.—The Mandville Cotton Mills Co. informs us that it will put in a plant to have a capacity of 500 lights, although only about 300 lights will be installed at present. The plant will be operated by steam.

ELBA, ALA.—J. F. Sanders writes us that a movement is being made to put in a plant.

CRYSTAL SPRINGS, MISS.—The board has decided to issue \$25,000 of bonds for a plant and water-works.

STARKVILLE, MISS.—The people have decided to expend \$15,000 for a plant and water-works.

WAVERLY, TENN.—It is stated that the question of putting in a plant is being considered.

BATAVIA, O.—Bids are asked until Dec. 2 for furnishing the materials and for constructing a plant and water-works, as advertised in our issue of Nov. 16. (Postponement from Nov. 25). The specifications are on file at the office of Engineering News, 220 Broadway, New York. H. C. Babbitt, Engr., Tippicanoe City, O.; A. T. Johnson, Secy. Bd. Trustees.

CONNERSVILLE, IND.—The plant and property of the Connersville Electric Light Co. have been sold to E. H. McKnight, Middletown, O.; P. S. Floca, Connersville, and G. W. McGriffith, of New York. It is stated that the new owners will make extensive improvements to the plant.

LAWRENCEBURG, IND.—We are informed that bids for a site for the proposed plant will be received Dec. 4, and as soon thereafter as possible arrangements will be made for the plant.

MORRICE, MICH.—It is stated that a plant will be put in this year.

SAGINAW, MICH.—H. E. Terry, City Engr., has been directed to prepare plans, etc., for a plant.

MOLINE, ILL.—We are informed that plans are being made for additions to the plant of the People's Electric Co. The present plant is operated by water power. The proposed new work includes the addition of more generators to be operated by water power. Work will not begin before the spring. O'Keefe & Orbison, Engrs., Appleton, Wis.

RUTLAND, ILL.—A. Milliken, of Walnut, Ill., is reported to have been granted a 20-year franchise for a plant, to have at first a capacity for 16 1,200-c.p. arc lights.

WARREN, ILL.—A. S. Tinker writes us that this place has refused to grant a franchise for a plant.

BRILLION, WIS.—C. Behuke & Son have been granted a 15-year franchise for lighting the village. Work will be started at once.

IOWA CITY, IA.—The plant and property of the Iowa City Electric Light & Power Co., it is stated, have been sold to a Philadelphia syndicate, who will at once improve the plant.

MINNEAPOLIS, MINN.—W. L. Luce has submitted a proposition for a franchise for a plant.

OLIVIA, MINN.—An election will be held Dec. 2 to vote on the question of issuing bonds for a plant and water-works.

HASTINGS, NEB.—The council has decided to issue \$20,000 in bonds for a plant. Bids will soon be asked for machinery, etc., according to reports.

DEADWOOD, S. DAK.—It is stated that Wm. Lardner, of this city, has sold to the Cascade Water Power & Electrical Transmission Co. 15 miles of water rights on Spear Fish Creek for \$100,000. The Cascade Co. proposes to put in a plant to furnish electric power and light for the Black Hills.

HILLSBORO, N. DAK.—Fred L. Goodman, Mayor, writes us that this city voted Nov. 14 to issue \$24,000 in bonds for a plant and water-works. Plans will be prepared soon.

INDEPENDENCE, MO.—It is stated that parties from Louisiana have submitted a proposition to put in a plant.

PINE BLUFF, ARK.—John Georgen, Kansas City, Mo., writes us that plans for a plant and an electric railway for this place are not yet fully matured, but probably will be about Dec. 15. M. R. Roberts, Independence, Mo., is interested.

BOERNE, TEX.—A plant to cost about \$4,000 is reported as proposed by local parties.

PILOT POINT, TEX.—It is stated that work on a plant will begin this month.

MAMMOTH, ARIZ.—It is stated that work will soon be begun on the proposed power plant on the Arlayafai River, 15 miles from the mines, for the Mammoth Collins Mining Co., Mammoth, G. P. Blair, Mgr.

MARYSVILLE, CAL.—Bids are asked by the clerk board of supervisors until Jan. 2 for the purchase of a power line franchise. The county board has sold a franchise to the Yuba Electric Power Co.

OAKLAND, CAL.—The Standard Electric Co. has been granted a 5-year franchise to string wires in Alameda county.

RIVERSIDE, CAL.—J. R. Newberry, Los Angeles, Cal., is reported to have asked for the use of 20,000 ins. of water of the Santa Ana River for power purposes.

IRIAH CITY, CAL.—Bids are asked until Nov. 29 for the purchase of bonds for the proposed plant. Jas. H. Carothers, City Clk.

SALT LAKE CITY, UTAH.—Press reports state that the Union Light & Power Co. proposes to spend about \$500,000 in improving its plant. Judge Le Grand Young may be addressed.—The Salt Lake City Water & Electric Power Co., it is stated, has applied for an additional appropriation of water for power purposes.

NOME CITY, ALASKA.—Charles E. Rosener, of Nome City, and Dr. H. C. Wilkinson, of Seattle, Wash., have been granted a franchise for a plant, street railway and telephone system.

BRACEBRIDGE, ONT.—It is proposed to put in a new water power plant at a cost of about \$20,000. C. H. Mitchell, Engr., Niagara Falls, Ont.

THAMESVILLE, ONT.—The council will soon submit the question of purchasing a plant to the people.

MAGDALENA (SONORA), MEX.—Alberto Azcona and Carlos Casanova are reported to have applied for a franchise for a plant.

BUENOS AYRES, ARGENTINE.—Vieyra & Sastre, 25 de Mayo, 130, of this city, have submitted a proposition to light this city for 10 years. A large plant is proposed.

LONDON, ENG.—Bids are asked until Dec. 4 for furnishing arc lamps and posts for the new plant for St. Mary's Parish, Battersea, London. R. B. W. Kennedy, Engr., 17 Victoria St., Westminster; W. M. Wilkins, Vestry Clk.

COLOGNE, PRUSSIA.—Reports state that the Helios Co. of Cologne, will begin the construction soon of a plant in the Province of Posen, Prussia. The power will be used to furnish light and power to places within a radius of 15 miles of the station. Estimated cost, about \$1,300,000.

COMO, ITALY.—Press reports state that the Societa Tramvie e Ferrovie Electriche Varesine has received permission to construct a plant and utilize the water power of the Glona and Canerera streams at Como. The plant of the Societa Piemontese per la Fabbricazione del Carburo di Calcio at S. Marcel, it is said, is about to be enlarged by the addition of five 400-K-W. triphase alternators. Schuckert & Co., Milan, Italy, will let the contracts for this work.

MISTRETTIA, ITALY.—Bids are asked by this municipality until Dec. 31 for establishing an electric light plant. Population, 12,000. Specifications may be examined at the Commercial Department of the Foreign Office, London, Eng.

CALCUTTA, INDIA.—The present contract for public lighting between the city and the Oriental Gas Co. will expire next year. The question of extending the use of electricity on the main streets is being considered by the city officials.

SINGAPORE, MALAY PENINSULA.—This municipality has decided to build a plant; low tension and underground conduits for the central district and high tension and overhead wires, etc., for the residence district. Estimated cost, about \$400,000. Sam'l Tomlinson, Municipal Engr.

BRIDGES.

HARTFORD, CONN.—Edwin D. Graves, Engr., New Connecticut River Bridge Commission, writes us that no plans have as yet been adopted for the proposed bridge.

NEW HAVEN, CONN.—The board of councilmen has been petitioned for a bridge over the Bridge St. crossing near Bell dock.

BROOKLYN, N. Y.—The committee on bridges and tunnels of the board of aldermen has decided to report in favor of the ordinance authorizing the construction of the new bridge over Newtown Creek, from Grand St., in the Borough of Brooklyn, to Grand St., Borough of Queens. The structure is estimated to cost \$200,000.

DELPHI, N. Y.—A suspension bridge is proposed, to extend from Delaware Ave. to the fair grounds. An effort is being made to secure funds for the project, according to reports.

OSWEGO, N. Y.—The department of public works is said to be considering the question of reconstructing the lower bridge. It is reported that a bridge company has offered to do the work for \$70,000.

WAVERLY, N. Y.—T. P. Yates, Cy. Engr., writes us that an appropriation of \$4,000 has been voted for constructing a joint bridge across the Erie R. R. tracks at Spaulding St.

HOBOKEN, N. J.—W. K. McFarlin, Ch. Engr., Delaware, Lackawanna & Western R. R., writes us that no definite arrangements have been made toward the construction of the company's new bridge over the Passaic River, and that nothing will be done for some time.

GLASSPORT, PA.—Local papers state that a new bridge is to be built to connect Glassport with Coal Valley, and that work will be started soon. It is stated that several men interested in the Pittsburgh Steel Co. are the chief promoters of the project.

SUFFOLK, VA.—Bids are asked until Nov. 23 for constructing a bridge 108 ft. long with a 90-ft. draw, according to reports. John T. Capp, Cy. Comr.

LOUISVILLE, KY.—R. Montfort, Ch. Engr., Louisville & Nashville R. R., writes us that the company has not yet determined on the proposed bridge at Selma, Ala.

AKRON, O.—The report of Mr. Brown, of the railroads and bridges committee, in favor of constructing a bridge across the Ohio Canal at Falor St., has been accepted by the council.

BELLEFONTAINE, O.—Bids are asked by the county clerk until Nov. 28 for the purchase of \$5,000 in pike bonds, and \$4,500 in bridge bonds, according to reports.

CLEVELAND, O.—James Ritchie, Ch. Engr. Dept. Pub. Wks., writes us that plans have been prepared for the Holton St. bridge, and submitted to the Pennsylvania R. R., but nothing further has been done.—Local papers state the project for a bridge over Kingsbury Run is being agitated, and that Councilman Coughlin, who has estimates for the proposed structure, will introduce a bill to issue bonds for the construction of the proposed improvement. The bridge will be 1,000 ft. long, and will extend from Francis to Kinsman Sts.

CHICAGO, ILL.—Commissioner of Public Works McGann has recommended the plan of City Engineer Ericson, to Mayor Harrison, to advertise for plans for bridges to replace those at Division St., Weed St., Ciybourn Place and 85th St., offering prizes for the best designs. The council has appropriated \$10,000 for the preparation of plans for these bridges, and the money will be used in

prizes, if approved by the mayor.—The Chicago, Burlington & Quincy Ry. Co. has requested Mayor Harrison to modify the plans for the viaduct to be erected over the tracks in 16th St.—The committee on harbors, viaducts and bridges will ask an appropriation of \$1,000,000 for bridges to be built next year.

DES MOINES, IA.—The board of public works has received the completed plans for the new 6th St. bridge, which call for a deck bridge with concrete and brick flooring, and steel substructure. Bids will be asked upon the completion of the specifications.

LINCOLN, NEB.—The question of erecting a viaduct over the Rock Island & Peoria Ry. at 18th and Vine Sts. is being agitated by the residents of that vicinity. Councilman Young will introduce the matter in the council for consideration.

TOPEKA, KAN.—Jas. Dun, Ch. Engr. Atchison, Topeka & Santa Fe Ry., is quoted as stating that the wooden and iron bridges on the road will be replaced by the company with steel structures.

WICHITA, KAN.—Bids are asked until Dec. 14 for a 160-ft. bridge with two 80-ft. steel spans, over Ninescab River at Darby's Ford; a 304-ft. pile bridge, same location; a 42-ft. steel span bridge over Prairie Creek, and a 90-ft. pile bridge, same location; a 42-ft. steel and a 42-ft. pile bridge over Spring Creek; a 75-ft. pile structure over Comskin Creek. W. E. Wood, County Clk.

ST. JOSEPH, MO.—Local papers state that Chief Engineers Kittredge and Moore, and General Manager Schaff, of the Cleveland, Cincinnati, Chicago & St. Louis Ry., have been consulting with Mayor Church and others in reference to the proposed improvements to be made in this town, in which is included the construction of a wagon bridge, estimated to cost \$60,000. The company agrees to bear half the expense of this improvement.

ST. LOUIS, MO.—Bids are asked until Nov. 24 for constructing a steel railway bridge over Maline Creek, requiring about 229,000 lbs. of iron and steel work, according to reports. Robt. E. McMath, Pres. Bd. Pub. Improvements.

DENVER, COLO.—Bids are asked until Nov. 29 for constructing six cylinder piers with concrete footings and fillings, and steel girders, brackets with two pile approaches required for a bridge over Cherry Creek at South 14th St. Joel W. Shackelford, Pres. Bd. Pub. Wks.

CHIEYENNE, WYO.—Local papers state that the Union Pacific R. R. will construct a steel bridge over Dale Creek, early next year to replace the one now in use.

ABERDEEN, WASH.—Local papers state that the county auditor has been instructed by the commissioners to advertise for bids for constructing a bridge across the Chehalis River, near Block House Ferry.

CATHLAMET, WASH.—Bids are asked until Nov. 29 for constructing a draw bridge across Deep River. Jesse Baker, County Auditor.

ALAMEDA, CAL.—Maj. W. H. Heuer, U. S. Engr., 41 Flood Bldg., San Francisco, received the following bids Nov. 14 for constructing a double-draw span bridge across the tidal canal at Fruitvale, as advertised in Engineering News:

Bids Received at Alameda, Cal., Nov. 14, 1899.

Table with columns: Bidders, Sec. 1, Sec. 2, Sec. 3, Bridge, Extra for power, Aggregate without extra. Bidders include Darby Laydon, California Bridge & Construction Co., H. Krusi, William H. Healy, Pacific Construction Co., The J. G. Wagner Co., Cotton Bros. & Co., Thomson Bridge Co., Dundon Bridge & Construction Co.

OROVILLE, CAL.—We are informed that nothing has been done in reference to the proposed bridge. Address O. W. Jasper, Civil Engr., Oroville.

KESWICK, CAL.—The board of supervisors has accepted plans and specifications for a Howe truss wooden bridge, which is to be built here, and have instructed the clerk to advertise for bids for its construction.

SAN BERNARDINO, CAL.—Legare Allen, Cy. Clk., writes us that the estimates made by the city engineer for the proposed bridge were in excess of the amount allowed for the improvement, and consequently the board of trustees took no action in the matter.

DE LAMAR, IDAHO.—It is reported that the Idaho Gold Mining Co. of Montreal, Que., will build a steel suspension bridge across the Snake River at the Blue Lakes.

CHARLOTTETOWN, P. E. I.—Bids are asked for reconstructing the South River Bridge, Murray Harbor South, according to reports. Richard Smith, Secy. Provincial Pub. Wks. Dept.

BUILDINGS.

HALLOWELL, ME.—Plans have been prepared by A. G. Wing, Augusta, for a Knights of Pithias Block.

ROCHESTER, N. H.—The question of a site for a new school house is being discussed.

BOSTON, MASS.—Plans have been prepared for a \$2,000,000 grain elevator in East Boston for the Boston & Albany and New York Central R. R. Co.'s.

QUINCY, MASS.—The council has appropriated \$40,000 for a new schoolhouse, according to reports.

WESTFALL, MASS.—Bids are asked until Nov. 24 for erecting a 3-story brick building for Wm. Warren Thread Works.

NEWPORT, R. I.—The following bids were received Nov. 18 by Maj. H. P. Young, U.S.A., 209 Thames St., for plumbing in the addition to barracks at Fort Adams: Patrick Tierney, 522 Westminster St., Providence, R. I., \$4,011; T. H. Duggan, 10 Cambria St., Boston, \$3,790; L. Hammett & Co., 71 Mills St., Newport, R. I., \$3,800.

NEW BRITAIN, CONN.—W. H. Caldwell, Cy. Engr., is preparing plans for the new police and fire building.

BROOKLYN, N. Y.—H. B. Moore will erect four dwelling houses at Greene and Clinton Aves., to cost about \$45,000.—The contract for building the 4-story brick school at Haywood, near Harrison Sts., has been awarded to P. J. Walsh, 503 5th Ave., at \$223,000.

BROOKLYN, N. Y.—The following bids for heating, ventilating, and electric lighting apparatus in public school No. 30, Brooklyn, were received by the department of education Nov. 20: E. Rutzler, 178 Centre St., \$10,895; F. Dobson, 12d St., \$11,105; Evans Almirall Co., Dey St., \$11,775; Williams & Gerstle, 44th St. and 1st Ave., \$12,100; John Neals Sons, 218 Centre St., \$12,345; New York Steam Fitting Co., 137 Elm St., \$13,000. It is stated that James Kilpatrick, of New York, will erect a \$250,000 hotel at Pierrepont and Hicks Sts.

NEW YORK, N. Y.—Plans have been filed by Annie Cordier, 245 Brook Ave., for two five-story 25 x 80 ft. brick flats, at 143d St. and Willis Ave., to cost \$30,000; J. Hauser, Arch., 1441 Third Ave., by A. C. Mauder, for six three-story frame tenements, 27 x 86 ft., at 168th St. and Prospect Ave., to cost \$60,000; Higgins & Garigan, Arch., 1123 Broadway; by Adams & Co., for a six-story brick store and warehouse, at 21st to 22d Sts. and Sixth Ave., to cost \$750,000; De Lemos & Cordes, Archs., 130 Fulton St.; by L. Lese, 130 E. 82d St., for seven six-story brick flats, 25 x 80 ft., at 75th St., near Ave. A., to cost \$175,000; G. F. Pelham, Arch., 503 5th Ave.; by Wm. H. Stearns, 7 W. 118th St., for an eight-story brick office building at 11 E. 22d St., to cost \$90,000; C. H. Rich, Arch.—The contract for the mason work for the power house of the New York Electric Light, Heat & Power Co. at 1st Ave., 38th to 39th Sts., has been awarded to P. J. Carlin & Co., 26 Court St., Brooklyn.

NEW YORK, N. Y.—Plans have been filed by Ellen Mulholland, 3106 Park Ave., for three five-story brick flats at St. Ann's Ave. and 150th St., to cost \$75,000; W. Cunningham, Arch., 483 Cortlandt St.; by Mrs. A. P. Henry, 6 E. 58th St., for a five-story brick residence at 43 E. 49th St., to cost \$80,000; Barney & Chapman, Archs., 44 W. 34th St.; by Herb & Leitz, 471 E. 90th St., for three five-story brick flats at 90th St. and 1st Ave., to cost \$74,000; Moore & Landsiedel, Archs.; by Wm. Preuss, Jr., 2750 Broadway, for two six-story brick apartment houses at 124th St. and Amsterdam Ave., to cost \$100,000; Neville & Bage, Archs., 217 W. 125th St.; by Etta Binn, 255 W. 116th St., for a 6-story brick flat at 122d St. and Mt. Morris Ave., to cost \$85,000; W. C. Dickerson, Arch., 534 Willis Ave.; by the R. C. Church of the Immaculate Conception, H. O. Otterbein, pastor, for a 2-story brick church at Melrose Ave. and 151st St., to cost \$30,000; A. F. Schmit, Arch., 604 Cortlandt Ave.

NEW YORK, N. Y.—Plans have been prepared by Brun & Hauser, 1125 Broadway, for a two-story brick church at 45 E. 27th St., for the Church of St. Esprit, A. V. Wittmeyer, rector, to cost \$50,000.

WATERLOO, N. Y.—The Towseley House was destroyed by fire Nov. 10, reported loss, \$85,000.

HACKETTSTOWN, N. J.—The trustees of Hackettstown Institute are reported to have decided to erect a series of buildings, to cost about \$300,000, to replace those destroyed by fire.

JERSEY CITY, N. J.—The board of education has selected a site on the Harrison estate for the new high school building.

NEWARK, N. J.—Reports state that M. R. Sherrerd, Ch. Engr., has completed plans for a three-story 28 x 32 ft. brick addition to the building, 128 and 130 Halsey St., to cost \$8,000.

PHILADELPHIA, PA.—Plans have been filed for a two-story brick addition to Bethany Presbyterian Church at 22d and Bainbridge Sts., to cost \$27,000. C. P. Nesbitt; by Theo. Kollischer, for a three-story 114 x 352 ft. ice factory at 27th and South Sts., to cost \$150,000. F. M. Day, Arch., 501 Penn. Mutual Bldg.

PHILADELPHIA, PA.—Plans have been filed by S. Gourley, Jr., for a three-story 164 x 54-ft. brick school

for Constructing a Double-Draw Span Bridge.

Table with columns: Sec. 1, Sec. 2, Sec. 3, Bridge, Extra for power, Aggregate without extra. Bidders include Darby Laydon, California Bridge & Construction Co., H. Krusi, William H. Healy, Pacific Construction Co., The J. G. Wagner Co., Cotton Bros. & Co., Thomson Bridge Co., Dundon Bridge & Construction Co.

house at Allegheny Ave., near 12th St., to cost \$81,000.—The contract for erecting a 12 division school house at 54th St. and Greenway Ave. has been awarded to W. R. Smith at \$54,941, and for a four division school house at Girard Ave. and Lelper St. to S. Gourley at \$31,875.—J. B. Parsons, Pres. Union Traction Co., has plans for five storage stations.

PITTSBURG, PA.—Andrew Carnegie has approved plans for the enlargement of the library building and donated \$1,750,000 to carry on the work.—The Homestead Brewing Co. has purchased a lot in Seventh Ave. and will erect a plant.

WILKINSBURG, PA.—Milligan & Miller have prepared plans for a five-story brick store building.

WILLIAMSPORT, PA.—Bids are asked until Nov. 27 for erecting a two-story school house, to cost \$14,000. L. W. Green, Chn. Bldg. Com.

BALTIMORE, MD.—Supervising Architect Taylor, Washington, D. C., will ask for plans for the new custom house; Col. J. P. Lone has secured the necessary data, etc.—J. Epstein, proprietor of the Baltimore Bargain House, will let contracts soon for erecting a five-story brick store building on Garrett St., to cost \$150,000.

WASHINGTON, D. C.—The District Commissioners will ask Congress for \$437,500 for ten new school buildings.—B. R. Green, Supt. Library, will soon let contract for erecting the Washington City Library on Mount Vernon Square. Andrew Carnegie has donated the money for its erection.

WASHINGTON, D. C.—It is stated that Col. T. A. Blingham, Supt. Pub. Bldgs. and Grounds, is preparing plans for an addition to the White House.

NORFOLK, VA.—St. Vincent Hospital will erect an \$80,000 building to replace the one recently destroyed by fire. Address W. H. White.

RICHMOND, VA.—Wilson Bros. & Co., 1036 Drexel Bldg., Philadelphia, are preparing plans for a new union station for the Chesapeake & Ohio and the Seaboard Air Line R. R.'s, to cost about \$400,000.—The contract for erecting a four-story brick business building at 38th St. and Washington Ave., for D. S. Jones, has been awarded to Holtzclaw Bros., Hampton, Va., at about \$28,000.

WINCHESTER, VA.—A \$40,000 public building will be erected in Market Square, according to reports.

EVERGREEN, ALA.—The contract for erecting the court house has been awarded to W. A. Andrews, Opelika, at about \$25,000.

DURHAM, N. C.—A. H. Wright will erect a new \$25,000 business house, and G. W. Watts a new store building, according to reports.

GREENVILLE, S. C.—Tully Babb will erect two two-story stores, 125 x 26 ft. on the plot near the Wright block. Jamison Bros. have the contract.—J. S. Westervelt writes us that the Brandon Mills, recently organized, will receive bids for tenements according to plans in their office, 106 E. Washington St.

GREENSBORO, N. C.—Bids are asked until Dec. 6 for erecting a county jail. W. C. Boren, Chm. County Com.

ATLANTA, GA.—Charles McCaul, contractor, 10 N. 11th St., Philadelphia, Pa., is receiving bids for the three-story brick addition to the Fulton county court house.—The question of a union depot here is being discussed.

NEWPORT, KY.—Andrew Carnegie has donated \$20,000 toward the construction of a library.

TOLEDO, O.—The Erie Building Co. has awarded the contract for constructing a \$40,000 five-story brick building at Erie and Jefferson Sts. to M. Rabbitt & Sons.

INDIANAPOLIS, IND.—Bids are asked by the Treasury Department, Washington, D. C., until Dec. 15 for purchasing the government building; no bid under \$400,000 will be accepted.

SALGATUCK, MICH.—Reports state that Col. E. C. Young and Wm. S. Herbert will build a resort and Chautauqua summer school.

CHICAGO, ILL.—Plans have been filed by the Grand Trunk Ry. Co. for a brick boiler house, Homan Ave. and W. 49th St., to cost \$50,000; by S. T. Cooper for five three-story brick flats at 5818 to 5828 Prairie Ave., to cost \$50,000; by Union Stockyards & Transit Co., for a one-story brick pavilion at 43d and Halsted Sts., to cost \$50,000.—H. K. Holzman, 1111 Y. M. C. A. Bldg., has prepared plans for a 4-story brick apartment house at Garfield Boulevard and Indiana Ave., for A. B. Mulvey, to cost \$100,000; plans have been prepared by A. Sandegren, 155 Dearborn St., for a three-story apartment house at Woodlawn Ave. and 47th St., Kenwood, for Swenson Bros., to cost \$45,000.—A committee composed of C. E. Coffin, D. P. Erwin and C. E. Hollenbeck, is looking for a site for the Herron Museum.

CHICAGO, ILL.—The seven-story building at 146 State St. was destroyed by fire Nov. 16; reported loss, \$175,000.

CHICAGO, ILL.—Plans have been filed by N. P. Cummings for a four-story brick apartment building at 3035 and 3037 Grand Boulevard, to cost \$100,000.

DES PLAINES, ILL.—The St. Mary's Industrial school at Feehansville will be rebuilt at a cost of about \$200,000. Address Archbishop Feehan.

HUDSON, WIS.—The supervisors are considering the question of building a new court house. W. H. Thorn, Chm.

ABERDEEN, S. DAK.—The people voted in favor of issuing \$40,000 for the new court house and jail.

BUTE, MONT.—Plans have been filed by W. D. Thornton for a five-story brick block at Broadway and Wyoming St., to cost \$70,000. White & Linguell, Archts.

TOPKA, KANS.—Bids are asked until Dec. 5 for completing the third floor of the State house, to cost \$90,000. G. A. Clark, Secy. of State, and until Dec. 11 for erecting a city building, to cost \$79,849. J. H. Squires, City Clk.; P. L. Wise, Cy. Engr.

KANSAS CITY, MO.—Plans are being prepared for a three-story 90 x 120 ft. brick extension to St. Joseph's Hospital at 8th and Penn Sts., to cost \$35,000.

PALMYRA, MO.—The question of building a \$50,000 court house here, and also one at Hannibal, will be voted on shortly.

COLORADO SPRINGS, COLO.—The county commissioners will soon let the contract for erecting the new court house.

ALBUQUERQUE, N. MEX.—The Santa Fe R. R. Co. will erect a new depot and hotel early in the spring, according to reports.

SEATTLE, WASH.—The board of directors, Dist. No. 1, want competitive plans for a \$200,000 high school building.

LOS ANGELES, CAL.—The fire commissioners have instructed the chief to secure plans for the new engine house, to cost \$10,000.—Work will soon be started on the new Methodist Church building. F. S. Wallace, R. H. Primey are on the building committee.

SAN FRANCISCO, CAL.—Plans have been prepared for two new buildings for Stanford University. Mrs. Stanford has donated \$11,400,000 to the institution.—Jas. Flood has purchased part of the Baldwin site, and reports state that he will erect a \$1,000,000 hotel.

MONTREAL, QUE.—It is stated that the Connors Syndicate, of Buffalo, N. Y., will expend about \$4,500,000 on grain elevators and a fleet of 12 vessels.

PARIS, ONT.—The question of issuing \$30,000 for a new school building will be voted on shortly, according to reports.

NEW WESTMINSTER, B. C.—Bids are asked until Dec. 12 for erecting a Post Office building and an examining warehouse building. E. F. E. Roy, Secy., Ottawa, Ont.; J. R. Roy, Res. Engr., New Westminster.

BELFAST, IRELAND.—Plans and estimates are wanted until March 12 for an assembly hall and buildings for the Presbyterian Young Men's Association. First prize, \$500; second, \$250; third, \$125. Address W. D. Eakin, 12 May St., Belfast.

LIVERPOOL, ENG.—Bids are asked until Dec. 11 for constructing a group of buildings at Mount Olive, Waverley, to accommodate 400 children. Edmund Kirby, Arch., 5 Cook St., Liverpool; H. J. Hagger, Vestry Clk., Parish Office.

RESHT (GHILAN), PERSIA.—Press reports state that a fire in this city Nov. 15 did about \$500,000 worth of damage.

TOKYO, JAPAN.—Dr. T. Katayama, Ch. Arch. of the Imperial Household Department, has let contracts in Chicago for a steel frame palace to cost about \$3,000,000. The Carnegie Co. has the contract for the steel work. The building will be 400 x 270 ft. and 60 ft. high. The foundations are now being built, as it is proposed to erect the framework in February. E. C. & R. M. Shankland, The Rookery, Chicago, Ill., are preparing plans for the frame work. Chas. M. Wilkes, of D. H. Burnham & Co., The Rookery, Chicago, is preparing plans for the heating and ventilating plant. In February Richard D. Gottlieb, of Chicago, will go to Japan to superintend the erection of the frame work. The palace will rest, it is stated, on 400 deeply anchored steel columns, imbedded in concrete piers.

WATER-WORKS.

GARDINER, ME.—The Maine Water Co. is now controlled by a new syndicate, headed by Samuel C. Manley, Pres. and Gen. Mgr., Augusta, Me., and Arthur S. Bodsworth, Treas., 493 Commercial St., Portland, Me. The Maine Water Co. was a consolidation of the Gardiner Water Co., works built in 1885; the Bath Supply Co., works built in 1886; the Pelepscott Water Co., the Dover & Foxcroft Water Co., the Calais Water Co., and of the St. Croix Electric Light & Water Co. The Maine Water Co. supplies water to the following cities and towns: Bath, Benton, Brunswick, Calais, Dover, Fairfield, Farmington, Foxcroft, Gardiner, Milltown, N. B.; St. Stephens, N. B.; Randolph, Waterville, Winslow. Woolwich—combined population 70,000; 10,000 customers; 120 miles of pipes.

PEAKS ISLAND, ME.—Portland papers state that work on the proposed works will be begun in the spring, so as to be in operation during the summer season. Estimated cost, \$40,000. Richard K. Gately and ex-Alderman Rounds, Portland, Me., are interested.

ESSEX JUNCTION, VT.—This place voted Nov. 11 to issue 25,000 in bonds for works. J. S. Reynolds, W. B. Johnson and G. W. Allen, Comrs.; F. W. Booth, Village Pres.

MILLERS FALLS, MASS.—The Millers Falls fire district has voted to spend \$2,000 for water meters.

READING, MASS.—The town has voted \$10,000 for water main extensions. G. A. Shackford, Chm. Selectmen.

MILFORD, CONN.—This place at a town meeting Nov. 16 voted to make a contract with the Milford Water Co. to furnish the town with water 10 years. W. G. Mitchell and Chas. H. Townbridge are on the committee.

CANAJOHARIE, N. Y.—H. A. Swortfuer, Pres., writes us that a date on which to hold an election to vote on the question of works has not yet been decided. Estimated cost, about \$100,000. Population, 2,500.

ITICA, N. Y.—The Consolidated Water Co., noted last week as having been incorporated, will make extensions to the works, of which it recently secured control. It is proposed to extend the mains and to increase the supply to 6,000,000 gallons a day. A new water shed is to be developed and reservoirs built. Dr. A. G. Brower, Pres.; H. J. Wood, Secy.

WATERFORD, N. Y.—The Waterford Water-Works Co. has filed a mortgage for \$90,000, and of this \$20,000 will be used for extensions.

NEWARK, N. J.—Local papers state that the purchase by the street and water commissioners of a large number of water meters without advertising was illegal, and that it is likely that bids will be asked by advertisement.

ASBURY PARK, N. J.—It is stated that the Tintern Manor Water Co., incorporated at Eatontown Nov. 14, will apply for franchises to supply water to the towns along the shore of Monmouth county. Capital stock, \$1,000,000. John L. Wentz, Scranton, Pa.; Cecil C. Higgins, Pound-bridge, N. J., and Chas. D. McGuire, of New York, are interested.

NEWARK, N. J.—Chas. E. Dodd, Orange, N. J., has been awarded the contract, at \$7,896, by the county freeholders, for laying 1,500 ft. of 4-in. iron water pipe and for constructing a 20 x 60-ft. brick tank at the Overbrook Hospital. Jas. Owen, County Engr.

PATERSON, N. J.—The Barbour Flax Spinning Co. has been granted permission to lay water mains in several streets.

ALLENTOWN, PA.—Jos. Martz has been awarded the contract for erecting a new pumping station, at \$15,937, exclusive of foundations and concrete work, and for altering the old station, at \$2,944. The contract for the pumping machinery was let some time ago to the Holly Mfg. Co., Lockport, N. Y.

DARBY, PA.—It is stated that the question of issuing \$75,000 in bonds for new works will be voted upon in February.

HARRISBURG, PA.—It is stated by local papers that bids will soon be wanted for furnishing the new pumping machinery, to cost about \$75,000.

LILLY, PA.—The Mountain Spring Water Co. has been incorporated, with a capital stock of \$10,000, by J. M. Noll, F. C. George and M. K. Pipe, of Lilly.

NEW WILMINGTON, PA.—R. J. Totten, Supt., writes us that the New Wilmington Water Co. may drill new wells. The company is placing several meters as an experiment to ascertain the greatest wastes.

SCRANTON, PA.—Local papers state that Scranton parties are considering the matter of forming a new water company in opposition to the present one.

SHARON, PA.—The Sharon Water Co. is now sinking a test well for an increased water supply, and if the well is a success the company will spend \$10,000 in sinking additional wells.

WASHINGTON, D. C.—Bids are asked until Dec. 14 for furnishing and delivering cut stone for the gate houses of the Washington Aqueduct, as stated in our advertising columns. Lt.-Col. A. M. Miller, U. S. Engr.

CRYSTAL SPRINGS, MISS.—The council has decided to issue \$25,000 in bonds for works and an electric plant.

STARVILLE, MISS.—This place has voted to construct works, at a cost of about \$15,000, which, it is stated, will be followed by an electric plant.

GALLATIN, TENN.—Bids are asked until Nov. 30 for furnishing the materials and for constructing works, as described in our advertising columns. Walter G. Kirkpatrick, Engr., Jackson, Miss.; J. W. Blackmore, Chm.; E. O. Buchanan, Secy.

CHATTANOOGA, TENN.—The Chattanooga Co., Ltd., it is stated, will begin at once the construction of works for Hill City. The water supply will be secured from a spring near Vallambrosa.

MEMPHIS, TENN.—The Artesian Water Co. proposes to extend the water tunnel about 1,500 ft., and also to sink 21 additional wells. It is stated that other improvements are proposed. Judge T. J. Latham, Pres.

BATAVIA, O.—Bids are asked until Dec. 2 for furnishing the materials and for constructing works and an electric plant, as stated in our advertising columns of Nov. 16. (Postponement from Nov. 25.) The specifications are on file in the office of Engineering News, 220 Broadway, New York. H. C. Babbitt, Engr., Tippecanoe City, O.; A. T. Johnson, Secy. Bd. Trustees.

BUCYRUS, O.—It is stated that the Bucyrus Water Co. will begin at once work on a new reservoir to have a capacity for 50,000,000 gallons of water. The water will be furnished by gravitation.

SALINEVILLE, O.—This place has defeated the proposition to issue \$4,000 in bonds for extending the works.

KNOX, IND.—An election will be held Nov. 24 to vote on the question of granting a franchise for works.

MANISTEE, MICH.—Bids are asked until Nov. 28 for the purchase of \$100,000 of bonds for the municipal works, according to reports. E. W. Muenscher, Cy. Engr.; Henry Taylor, Cy. Clk.

READING, MICH.—Plans for works are being prepared by Geo. S. Pierson, Kalamazoo, Mich.

MONMOUTH, ILL.—W. P. Graham, Chm. Com., writes us that D. W. Mead, First National Bank Bldg., Chicago, and Rockford, Ill., is preparing plans for improving the works, at a cost of \$30,000.

KENOSHA, WIS.—Press reports state that the water commissioners will put in a new pump, to cost about \$15,000.

SHEBOYGAN, WIS.—The committee has recommended that the council offer the City Water Co. \$300,000 for the works, but that if the offer is not accepted to submit the question of building new works to the people. Alderman Dieckmann, Chm. Com.

AURORA, ILL.—The council is considering the question of putting water meters in throughout the city.

DES MOINES, IA.—The State Agricultural Society has asked for works and a sewerage system at the fair grounds; the system to cost about \$5,000.

OSKALOOSA, IA.—An election will be held Dec. 26 to vote on the question of granting a 25-year franchise to the Oskaloosa Water Co. The works owned by the company are to be improved at a cost of \$35,000.

OLIVIA, MINN.—An election will be held Dec. 2 to vote on the question of issuing bonds for works and an electric plant.

ST. PAUL, MINN.—The water board has secured land in the vicinity of Pettier and Centerville lakes for an increased water supply. It is stated that plans for reservoirs will be made at once.

WHEATON, MINN.—Bids are asked until Dec. 9 for the purchase of \$11,000 of bonds for the proposed works and sewers, according to reports. A. J. Fitzgerald, Village Reodr.

HILLSBORO, N. DAK.—F. L. Goodman, Mayor, writes us that this city voted on Nov. 14 to issue \$24,000 in bonds for works and an electric plant, plans for which will soon be prepared.

WIMBLEDON, N. DAK.—Bids are asked by A. G. Moore, Pres. Bd. Trustees, for constructing works, according to reports.

HELENA, MONT.—P. P. McNulta, representing a Chicago syndicate, is reported to have submitted the only bid Nov. 6, at \$75,000, for furnishing a water supply.

KANSAS CITY, MO.—The water department wants \$12,320 appropriated for new mains.

ORONOGO, MO.—F. A. Smith, of the committee, writes us that no contracts for works have yet been let; estimated cost, \$12,000. Population, 12,000.

GILLETT, COLO.—This place has voted to let the works to Maynard Gunsul. A pipe will be laid to Cameron.

AZUSA, CAL.—An election will soon be held to vote on the question of issuing \$20,000 in bonds to purchase the works owned by J. S. Slauson.

KERN CITY, CAL.—Chas. Offer has been granted a franchise for new works, according to reports.

REDLANDS, CAL.—H. H. Sinclair writes us that the question of new works will not be submitted to the voters prior to Dec. 1.

WHITTIER, CAL.—W. G. Butler, Cy. Clk., writes us that the question of issuing \$5,000 in bonds for extending the works will soon be submitted to a vote of the people.

PHOENIX, ARIZ.—The council recently refused to order an election to vote on the question of issuing \$315,000 of 5% bonds for municipal works and a sewerage system. Local papers state that at a later meeting the question was reconsidered and that it is likely that the city may build works. Address Mayor Ganz and Councilmen Dyer and J. M. Ford and E. J. Bennett.

TEMPE, ARIZ.—The mayor has been authorized to issue \$50,000 of 30-year 6% bonds for works. F. M. Schureman, Clk.

SALT LAKE CITY, UTAH.—The council has voted to lay 2,500 ft. of 12-in. and 500 ft. of 6-in. mains.

LEWISTON, IDAHO.—Reports state that the Lewiston Water & Light Co. has offered to sell its works for \$35,000, the city to assume a bonded debt of \$50,000.

SYDNEY, N. S. CAN.—W. Crowe, Mayor, writes us that it has been decided to make further surveys for an increased water supply. It is proposed to make the improvements next year.

LINDSAY, ONT.—The council is considering the question of purchasing the works.

ROSCOMMON, ENG.—Bids are asked until Jan. 6 for furnishing about 416 tons of socket and spigot water mains. C. Mulvany, Engr.; J. J. O'Keefe, Clk. Council.

PANAMA, COLOMBIA.—Propositions and bids are wanted by the secretaryship of finance for the department until Dec. 30 for furnishing a water supply and for constructing the works for this city and La Boca, a suburb. The water supply is to be secured from the drainage area of the River Juan Diaz. A supply of at least 1,500,000 gallons must be furnished daily. The reservoir is to be situated on Ancon Hill, and must be at least 14 1/2 ft. above sea level. Population (1890), 30,000. Specifications and conditions may be seen at the office of Engineering News, 220 Broadway, New York.

SURABAYA, JAVA.—The Netherlands government, it is stated, proposes to build works and an electric railway.

SEWERAGE.

SWAMPSCOTT, MASS.—The sewerage commission is said to have petitioned the state board of health for permission to construct the proposed sewer, which, according to the plans prepared by Rudolph Hering, New York, in 1891, will cost about \$10,000.

WEST GARDNER, MASS.—Local papers state that McIntock & Woodfall, Boston, have made surveys for the proposed system, which will provide for the drainage of the section below the Commercial House.

BATAVIA, N. Y.—The question of establishing a new system in this village is being urged by the board of health. A committee has been appointed by the aldermen to consider the matter.

GOSHEN, N. Y.—Local papers state that Olin H. Landreth, Consulting Engr. State Board of Health, Schenectady, N. Y., has made inquiries into the matter of pollution of the Rio Grande and the necessity of establishing a system here, and will report on the matter to the state board of health at Albany.

NEW YORK, N. Y.—Bids are asked by the department of sewers, 21 Park Row, until Nov. 29, for repairs to the wooden barrel sewer under pier 13 and one under pier 8, North River.

OSWEGO, N. Y.—City Engineer Ormaby has completed plans for four miles of sewers in the Fifth and Seventh Wards. The plans have been filed with the department of works, and the work will be started next year.

SYRACUSE, N. Y.—Bids are asked until Nov. 29 for furnishing materials and making connections from the main sewer to curb lines in Warren St., from East Washington St. to East Onondaga St. Geo. J. Metz, Cy. Clk.—It is proposed to construct a brick sewer, 42 ins. in diameter, in West Brighton Ave., from Onondaga Creek to Webster Ave.; a brick sewer, 38 x 57 ins. in diameter, in West Brighton Ave., from Webster Ave. to South Salina St. and one, 30 x 45 ins., in East Brighton Ave., from South Salina St. to the property of the Syracuse, Binghamton & New York Ry. Co.

MADISON, N. J.—Local papers state that the board of health has plans for a system which is proposed for this town.

ASBURY PARK, N. J.—The Tintern Manor Water Co., it is said, proposes to construct a system for the Monmouth coast towns which will carry the sewage from all

the towns along the shore to the sandy pine lands of Neptune or Howell townships, where it will be treated. The company will also build a dam, 35 ft. high, below the juncture of Hop Brook and Yellow Brook, about two miles below Colt's Neck, and will furnish water.

NEWARK, N. J.—It is reported that the New Jersey Sewerage Commission is considering the plan of creating two sewerage districts in the Passaic Valley, one to comprise Paterson, Passaic and Rutherford and the other to comprise Newark, the Oranges, Bloomfield, Belleville and Montclair, both of which will have intercepting sewers to carry the sewage to places for partial treatment. The meadows south of here may be used for the Newark district.

PATERSON, N. J.—City Engineer Ferguson estimates that \$20,000 will be needed for a sewer to the river from Oliver St., to abate the nuisance caused by the stench from the refuse in the sewers running from Grand and Spence Sts. to Oliver St. It is stated that an effort will be made to have the legislature pass an ordinance authorizing the issuance of bonds for the construction of the improvement.

MEKEESPORT, PA.—City Engineer Hallam has decided to recommend the construction of the proposed sewer on Sixth Ave., instead of the Fifth Ave. sewer, which the council had decided on, as petitioned by the property owners of the Eighth Ward. The improvement will cost about \$28,800.

PITCAIRN, PA.—Bids are asked by Squire John C. McGinniss until Nov. 28 for constructing a system in Pitcairn Borough. Frease & Sperling, Borough Engrs., Wilkensburg.

PITTSBURG, PA.—Bids are asked until Nov. 25 for constructing 6 ft. to 4 ft. 6-in. brick and 37-in. to 8-in. pipe sewerage. E. M. Bigelow, Dir. Dept. Pub. Wks.

SAVANNAH, GA.—We are informed that the council passed a resolution Nov. 13 providing for the completion of the system by the city, under the supervision of Waring, Chapman & Farquhar, 874 Broadway, New York. The improvement calls for 40 miles of pipe and brick sewers, and the work will begin about Dec. 1.

BESSEMER, ALA.—The council has engaged J. H. Elliott, Memphis, Tenn., to prepare plans for a system and estimate on the cost of its construction.

ALEXANDRIA, LA.—Ira N. Sylvester, Cy. Engr., wrote Nov. 15 that an election would be held on Nov. 20 to vote on the question of issuing bonds for constructing a system, street paving and drainage, for which he is now preparing plans.

LAKE CHARLES, LA.—Local papers state that Alexander Potter, Engr., 157 Broadway, New York, is preparing estimates for a system for this city.

GREENVILLE, MISS.—Bids are asked until Dec. 4 for laying about 15 miles of sewer pipe, as stated in our advertising columns. The advertisement published last week was telegraphed to us just as our paper was going to press, and by an error in our office was made to read as though bids would be received also for furnishing materials. The contract to be let Dec. 4 is for the construction work only. John M. Lee, Cy. Clk.; Alexander Potter, Engr., 157 Broadway, New York.

CLEVELAND, O.—Rudolph Hering, 100 William St., New York, with City Engineer Ritchie, Park Engineer Pratt, Director of Public Works Rice and Assistant City Engineer Parmelee have been in consultation over the proposed change in the plans for the Doan St. sewer in order to drain Doan Brook. The plans and territory have been investigated by the engineers, and Mr. Hering will submit his report, which, it is said, will be acted upon as final.

SALEM, O.—Bids are asked until Nov. 30 for constructing a sewer in East Fifth St., from Ellsworth St. east to the first alley west of Garfield Ave. Geo. Holmes, Cy. Clk.

ELKHART, IND.—Bids are asked until Dec. 5 for constructing a sewer in Pacific St., from East Jackson St. to the tailrace of the Elkhart Hydraulic Co. D. F. Cordey, Cy. Engr.

FORT WAYNE, IND.—Henry Monning, Cy. Clk., writes us that plans for the intercepting sewer in this city have been submitted to the board of public works, and that borings are now being made to ascertain the kind of soil that will be encountered in excavation. Bids will be asked upon the completion of this work, which will take about two weeks. The money for the improvement will be obtained by a general assessment over the entire city. C. G. H. Gose, Asst. Cy. Engr., is the designing engineer.

NORTH MANCHESTER, IND.—The plans prepared by Robert P. Woods, Cy. Engr., Wabash, for a combined sewerage system for this city, to be 15 miles in length, have been accepted, and that nothing will be done towards the construction this winter.

CHICAGO, ILL.—Local papers state that the Gage Park Improvement Association, composed of property owners in the vicinity of Gage Park, has petitioned the department of public works for a sewer on Western Ave., running from 87th to 39th St.

CHICAGO, ILL.—Bids are asked until Dec. 11 for the purchase of \$265,000 in sewer bonds. Wm. D. Kerfoot, Comptroller.

OTTUMWA, IA.—Local papers state that the question of sewer improvements is being agitated. Dr. J. F. Herrick, of the board of health, is reported to have suggested plans for an improvement to the system.

ST. LOUIS, MO.—Bids are asked until Nov. 28 for constructing the Tower Grove storm sewer, which will contain about 700 ft. of 12.5 x 15-ft. brick and concrete sewer, and Dakota St. sewer, embracing about 500 ft. of 4 x 6-ft. sewer in tunnel through rock, and about 730 ft. of 5-ft. diameter brick sewer in open cut, according to reports. Robt. E. McMath, Pres. Bd. Pub. Improvements.

EL RENO, OKLA. TER.—At a recent election it was voted in favor of establishing a system in this town.

ARDMORE, IND. TER.—H. H. Hendershot, Engr., Wichita, Kan., writes us that he has been advised that no sewers will be built in this town this year.

GLENWOOD SPRINGS, COLO.—The trustees on Nov. 9 awarded a contract to Henry Morrill for constructing a sewer running from the school house on 11th St. north to the Grande River, about one-half mile, at \$2,300.

EVERETT, WASH.—The council on Nov. 6 awarded the contract for a system for this city to G. N. Miller, at \$55,000.

GRANT'S PASS, ORE.—Bids are asked by the street committee until Nov. 30 for constructing a partial system, according to plans on file with Geo. P. Furman, Cy. Clk.

PORTLAND, ORE.—The council has ordered the construction of pipe sewers in Albina and Gautenbein Aves. and Hancock and Hood Sts. A. N. Gambell, Audr.

PASADENA, CAL.—W. B. Clapp, Cy. Engr., writes us that nothing is being done toward the construction of the proposed system, but that the project is being agitated and it is hoped to establish municipal water-works and to issue bonds for the work soon.

FREDERICTON, N. B.—Reports state that the council has decided to construct a system, and has appointed a committee to obtain estimates for work and submit them with its report at the January meeting.

ROSSLAND, B. C.—It is reported that the council has decided to wait until spring before acting on the question of establishing a system, but will in the meantime submit a by-law to the taxpayers to provide funds for the project.

OTTAWA, ONT.—City Engineer Galt estimates that \$30,000 will be needed to divert the present course of the sewer on the east side of the Rideau River, as petitioned by the property owners of that vicinity.

MORCAMBE, ENG.—Bids are asked until Dec. 6 for contract, &c. of the proposed system; this contract to include two miles of cast-iron pipe, manholes, flushing arrangements, a 5-ft. culvert, pumping station and machinery, etc., the work to cost about \$300,000. Bids for contract 1 were opened Nov. 15. Beesley, Son & Nichols, Engrs., 11 Victoria St., Westminster, S. W., London; John Bond, Surv.

GARBAGE DISPOSAL—STREET CLEANING

NEW LONDON, CONN.—The following bids were received by the street committee Nov. 11 for street cleaning for the coming year: Wallace Knight, \$3,800; Arthur Chapman, \$3,764; Charles M. Brown, \$3,700; John Cone, \$3,500; Joseph Bates, \$3,200.

ROCHESTER, N. Y.—Commissioner Wbalen, of the Executive Board, is urging the adoption of a new method of operating the street department when the new charter goes into effect Jan. 1. He proposes that all the street cleaning and collection of ashes be done by contract.

LONG BRANCH, N. J.—The Long Branch Sanitary Co. has been incorporated to collect offal, garbage, dead animals, etc.; capital stock, \$75,000. Incorporators: Patrick J. Casey, New York city; Cornelius Berrien, Montclair, N. J.; Frederick G. Smith, Plainfield, N. J.; Edward Handy, Long Branch.

PHILADELPHIA, PA.—Bids are asked until noon Nov. 23 for cleaning the streets, collecting and disposing of refuse, dead animals, removing snow, etc., for the year 1900. Wm. C. Haddock, Dir. Dept. Pub. Wks.

CINCINNATI, O.—Health Officer Tenny is urging the use of air-tight covered steel wagons for collecting and removing the garbage. He will also make suggestions with regard to the street sprinkling.

MANSFIELD, O.—Wm. Fogle has presented a proposition to sweep the asphalt pavement.

MINNEAPOLIS, MINN.—Dr. A. K. Norton, Comr. of Health, writes us that no information can be given out regarding the collection of the garbage, etc., noted in our last issue under St. Paul, which was a mistake.

ST. PAUL, MINN.—Controller McCarty is urging the investigation of the present method of street sprinkling, it being proposed to dispense with contractors.—The assembly committee has approved the plan proposed by Health Commissioner Ohage for collecting and disposing of the city garbage and refuse, and that \$25,000 be appropriated for the work.

STREETS AND ROADS.

AMESBURY, MASS.—Bids are asked by the Massachusetts Highway Commission, 4 Mount Vernon St., Boston, until Nov. 23 for building about 2,700 ft. of state road; check \$250.

BOSTON, MASS.—Bids are asked until Nov. 24 for macadamizing portions of two streets; check \$300 each. B. W. Wells, Supt. Streets.

BROOKLINE, MASS.—Alexis H. French, Cy. Engr., writes us that the plan for improving about two miles of Boylston has been approved. The cost will be \$188,000, and work will be started early next spring.

WAKFIELD, MASS.—At a special town meeting \$5,000 was appropriated for extending the boulevard over Har's Hill.

WATERTOWN, CONN.—Highway Commissioner MacDonald has approved the contract of G. S. Abbott for highway improvements at \$4,400.

BEDFORD, N. Y.—The contracts for grading at the Woman's State Reformatory has been awarded to Duffy & McCabe, White Plains, at \$38,720.

NORTHWOOD, N. Y.—It is proposed to build a road from Sixth Lake to Eagle Bay to connect with the railway, according to reports.

ROCHESTER, N. Y.—The question of paving, etc., to the extent of about \$500,000 is being discussed.

WHITE PLAINS, N. Y.—The state surveyors have nearly completed their work for the two state highways in Putnam county, and at Peach Lake.

DUNELLEN, N. J.—The contract for macadamizing the road to Bonnd Brook has been awarded to J. E. Hillpot at \$6,058.

GLOUCESTER CITY, N. J.—Bids are asked by the council until Nov. 23 for paving portions of several streets; check \$200. D. F. Lane, Cy. Clk.

JERSEY CITY, N. J.—H. I. Budd, State Comr. of Roads, Trenton, writes that no steps have been taken toward constructing a road to Cape May; old roads are being macadamized that will make a continuous line to Cape May.

NEW BRUNSWICK, N. J.—The contract for macadamizing six miles of road to Millstone has been let to Richard Bros. at \$32,000.

PITTSBURG, PA.—Surveys have been completed for extending the macadamized road from Neville Island to Coraopolis.

WASHINGTON, D. C.—Bids are asked until Nov. 28 for furnishing brick, terra cotta, etc., at the League Island Navy Yard, Pa., and also for furnishing a quantity of granite paving blocks at the Brooklyn, N. Y., Navy Yard. A. S. Kenny, Paymaster General, U. S. N.

BALTIMORE, MD.—Wm. W. Varney, City Comr., writes us that there are several paving ordinances pending, but nothing will be done until 1901, owing to the adoption of a new charter and the desire to keep down the tax rate.

WILMINGTON, N. C.—Hugh MacRae, Chn. Street Com., writes us that the question of paving two blocks with brick is under consideration, nothing will be done for two or three weeks.

ATLANTA, GA.—The council has decided to grade and improve Edgewood Ave. at a cost of \$32,000.

SAVANNAH, GA.—Extensive street improvements for next year are being discussed by the council, according to reports.

HUNTSVILLE, ALA.—The council is reported to be in favor of paving the streets around the square with brick.

NEW ORLEANS, LA.—Bids are asked until Nov. 27 for asphaltizing portions of two streets and sidewalk in 11 streets. W. T. Douglas, Comptroller.

CLEVELAND, TENN.—F. A. Dunham, County Engr., writes us that the contract for building about 95 miles of county roads has been awarded to John K. Wilson, Merchantsville, N. J., at about \$106,350.

OWENSBORO, KY.—The people voted Nov. 7 to issue \$200,000 of 4% street improvement bonds, according to report.

CINCINNATI, O.—The council has approved plans for the asphalt improvement of Spring Grove Ave., to cost \$155,957.

PORTSMOUTH, O.—The following bids were received Nov. 9 for paving: Offuere St., James A. Kelly (accepted) \$10,137; Samuel Mourie, \$10,000; Richardson & Bratt \$10,431. Eleventh St.: James A. Kelly, \$20,500; Samuel Monroe (accepted), \$20,087.

ADRIAN, MICH.—The question of holding an election to vote on the issue of \$30,000 of bonds for street improvements is being considered by the council, according to reports.

SAGINAW, MICH.—The council decided to pave four streets at a cost of \$47,700. Work will be started shortly.

CHICAGO, ILL.—Bids are asked until Dec. 1 for concrete sidewalk and approaches for nine fire engine houses. L. E. McGann, Comr. Pub. Wks.

SHEBOYGAN, WIS.—Work on the paving of North 6th St. with macadam will start early next year.

DETROIT CITY, MINN.—Bids are asked until Nov. 27 for constructing about 2,000 sq. yds. of artificial stone sidewalk. T. A. Nottage, Recorder.

ST. JOSEPH, MO.—The question of macadamizing four blocks of Illinois Ave., to cost \$10,000, is being discussed.

OAKLAND, CAL.—The council has decided to macadamize 20th St. from Harrison to Webster Sts. The contract for re-macadamizing Fifth St. has been awarded to the Piedmont Paving Co. J. W. Tompkins, Cy. Clk.

POMONA, CAL.—Bids will soon be asked for grading about 2½ inches of roadway, according to reports.

MANUFACTURING PLANTS.

CONCORD, N. H.—Local papers state that A. G. Stevens, Civil Engr., has completed plans for the new works of the Manchester Print Co., of Manchester. The Head & Dowst Co. have the contract for the foundations.

WATERBURY, VT.—The tannery of C. C. Warren was completely destroyed by fire on Nov. 15, with a reported loss of \$50,000.

BAYONNE, N. J.—It is reported that the Safety Insulated Wire & Cable Co., New York, will soon begin the construction of a large plant for the manufacture of submarine cable. The company has acquired 15 acres of land, on which it will erect the plant, which will cost about \$500,000.

LEECBURG, PA.—Reports state that West Leechburg Steel & Tinplate Co. proposes to expend \$150,000 in an open-hearth steel furnace and a hot mill, to be added to its plant near this place.

PHILADELPHIA, PA.—The Chicago Pneumatic Tool Co. has received contracts for riveters, hammers, drills and other tools driven by compressed air, which amount to about \$50,000, to be used in the shipbuilding yards of the William Cramp & Sons Ship & Engine Building Co., who will expend \$100,000 in adopting pneumatic tools throughout its yards and shops.

ROCKINGHAM, N. C.—Robert L. Steele writes us that nothing has been done toward establishing the bleaching and dyeing plant.

COLUMBIA, S. C.—W. B. Smith Whaley & Co., Engrs. and Archts., write us that the contracts for the materials for the plant of the Capital City Mills, which will cost \$20,000, have been let.

ATHENS, GA.—W. D. Griffiths writes us that the Royal Mills, which will construct a building 75 x 250 ft., 2 stories high, to be used in the manufacture of brown sheetings, have not yet been organized.

DUBLIN, GA.—The D. A. Tompkins Co., Charlotte, N. C., is said to have received a contract from the Dublin Cotton Mills for machinery consisting of 3,328 spindles and 100 looms. The buildings, for which the contracts have not been let, will be constructed large enough to admit an increase in the amount of machinery, in case of necessity.

TOCCOA, GA.—It is stated that a new cotton mill will soon be built in this town by T. A. Capps and others, to cost about \$100,000.

WEST POINT, MISS.—J. A. McArthur, Pres. and Treas. West Point Cotton Mills, writes us that the contract for a brick building, 236 x 75 ft., one story, to cost about \$10,000, will be let at once. The contract for the equipment, which amounted to \$60,000, has been let. Howard & Billings, Archts., Pawtucket, R. I.

INDIANAPOLIS, IND.—It is reported that the Brower & Love cotton mill will increase its capacity from 400 looms to 1,000.

ESSEXVILLE, MICH.—It is reported that the saw mill, salt block, docks and trains of Jonathan Boyce were destroyed by fire on Nov. 17, involving a loss of \$50,000.

PINE BLUFF, ARK.—Reports state that the Wm. T. Lemp Brewing Co. will erect a \$50,000 ice factory and cold storage plant in this city.

FORT WORTH, TEX.—It is stated that a cotton mill will be built in this city, to cost about \$50,000, if the city will furnish the necessary land.

BILBOA, SPAIN.—Press reports state that estimates are being received by La Sociedad de Aitos-Fabrica de Hierro, of Bilboa, for making extensions to its plant next year.

SANTANDER, SPAIN.—The Sociedad del Hierro y del Acero, Nueva Montañesa, has been formed with a capital of \$1,600,000 to build a plant to manufacture pig iron, work on which will begin next year, according to reports.

MISCELLANEOUS CONTRACTS.

RAILWAY FENCING.—Picton, Ont.—Bids are asked for erecting about 32 miles of railway fencing. Address Lock Box 513.

DRAINAGE.—Valparaiso, Ind.—Bids are asked until Dec. 2 for constructing a ditch 26,120 ft. long. M. J. Stinchfield, County Audr.

PARK BONDS.—Middletown, O.—Bids are asked by the city clerk until Dec. 12 for purchasing \$25,000 of 3½% 20-year park and improvement bonds.

GUN FORGINGS.—Washington, D. C.—Bids are asked until Dec. 6 for furnishing 50 sets of 3-in. gun forgings. Chas. O'Neil, Ch. Bureau of Ordnance.

BARRELS AND WOOD PULP GOODS.—Buenos Ayres, Argentina.—H. R. de Schuttere, 41 Caballito St., Buenos Ayres, is in the market for wooden barrels and wood pulp goods.

PARK.—Jersey City, N. J.—Chief Engineer Van Keuren is said to have completed plans for improvements to the Ogden Ave. Park site, to cost about \$35,000.

HARBOR IMPROVEMENTS.—Quebec, Que.—It is stated that the harbor commission will expend \$50,000 in improving the south shore of the St. Lawrence River.

LOCK.—Tuscaloosa, Ala.—Plans have been completed by Capt. R. C. McCallia, U. S. Engr., for locks to be built below here. Bids will be advertised for shortly.

COAL SHAFT.—Alderson, Ind. Ter.—Bids are asked until about Dec. 15 for sinking a 400-ft. shaft near Alderson for the McAlester Coal Co. Franklin Bache, Pres.

MACHINERY.—Bilbao, Spain.—It is stated that Carlos Yenson, U. S. Consul, Bilbao, is reported as wanting to act as agent for American manufacturers of machinery.

UNDERGROUND CROSSING.—Elmira, N. Y.—Plans have been completed for the proposed underground crossing under the Erie R. R. tracks at Pennsylvania Ave.

STEEL VESSEL.—Dublin, Ireland.—Bids are asked until Dec. 14 for constructing a steel light vessel, sheathed with teak. Owen Armstrong, Secy. Irish Light Office.

TELEPHONE.—Lewiston, Me.—The board has voted a franchise to the Eastern Telephone Co. The company will connect the Franklin, Lewiston, Auburn and Eastern lines.

BREAKWATER.—Port Jefferson, N. Y.—The Hudson Construction Co., New York, has been awarded the contract for extending and raising the breakwater, at about \$7,000.

HOISTING ENGINES, ETC.—Alderson, Ind. Ter.—Franklin Bache, Pres., writes us that the McAlester Coal Co. will soon advertise for bids for boilers, hoisting engines, fans, etc.

DOCK.—San Francisco, Cal.—Chief Engineer H. C. Holmes is preparing plans for the new dock at Howard St. He will use a patent wooded cylinder in place of steel, which will lessen the cost greatly.

GAS ENGINE AND COMPRESSOR.—East Dereham, Eng.—Bids are asked until Dec. 4 for furnishing a 10-HP. gas engine, a small air compressor, etc. B. H. Vores, Clk. Council, Theatre St., East Dereham.

FILLING.—Long Island City (L. I.), N. Y.—The New York Land & Warehouse Co. will soon begin the work of filling in the swamp lands along Newtown Creek near the terminus of the Blackwell's Island Bridge.

PUMPING DREDGES.—Philadelphia, Pa.—Bids are asked by the Chelsea Investment & Development Co., 710 Land Title Bldg., until Nov. 29, for the purchase of two or three pumping dredges of 4,000 cu. yds. capacity.

MACHINERY, TOOLS, ETC.—Brussels, Belgium.—It is stated that E. B. Hotchkiss, Paris Mgr. of Adolphe Janssens, of Brussels, is at the Hotel Imperial, Broadway and 32d St., New York, and will purchase certain machinery, tools, etc.

SANDSTONE SCREENINGS.—New York, N. Y.—Bids are asked by the Department of Parks, Arsenal, Central Park, until Dec. 1, for furnishing 500 cu. yds. of marcellus shale sandstone screenings, for Prospect Park, Brooklyn, and vicinity.

FIRE APPARATUS.—New York, N. Y.—Bids are asked by the Fire Department, 157 E. 67th St., until Dec. 4, for furnishing two second-size fire engines, two third-size fire engines, and one 85-ft. extension ladder truck and fire escape. J. J. Scannell, Comr.

RAILWAY SUPPLIES.—Liverpool, Eng.—Bids are asked until Dec. 1 for furnishing iron bars, spike iron, telegraph materials, wire, iron tubing, lead piping, screws, nails, bolts, signal wire, cement, fog signals, creosoted

will consist of a broad parade along the seaport, formation of harbor for goods traffic, widening of roadway, etc. First prize, \$500; second, \$250, and third, \$125. J. Valrose, Clery, Town Clk.

COAL MINING.—Pueblo, Mex.—It is said that an English syndicate has secured control of the coal fields near Matamoros de Izucar, Pueblo. The fields will be developed at once. It is said that Sir Richard H. Sankey, Chn. Bd. Pub. Wks., of Ireland, 6 Lowndes Square, S. W., London, Eng., is interested.

DREDGING.—Oakland, Cal.—The board of public works received the following bids from Johnson & Peterson on Nov. 10: For dredging 75,000 cu. yds. in Lake Merritt; depositing same on strip between 12th and 8th Sts., \$16,980; cleaning entire lake and dredge to four feet, deposit on strip between 12th and 8th Sts., \$18,880; dredging small part of lake near dam, \$120.

CANAL WORK.—Albany, N. Y.—The following contracts were awarded Nov. 9 by J. N. Partridge, State Supt. Pub. Wks.: Edwin Lodder, Syracuse, repairing slide in tow-path of Erie Canal at Warner's Cement Co. Works, \$18,265; Reardon & Burnham, Glens Falls, rebuilding waste weir No. 12 north of Fort Miller, Champlain Canal, \$1,687; John W. Flynn, Waterford, rebuilding waste weir and spillway, Champlain Canal, at Mechanicville, \$7,114; A. Freiderichs & Sons, Rochester, rebuilding culvert No. 31 in Pittsford, Monroe county, \$3,000.

FIRE HOSE.—New York, N. Y.—Bids are asked by the Fire Department, 157 E. 67th St., until Dec. 4, for 5,000 ft. 2 1/2-in. cotton rubber-lined fire hose, and 2,000 ft. 3 1/2-in. rubber and duck woven fire hose, for Brooklyn, and for 2,500 ft. 2 1/2-in. wax and gum treated rubber-lined fire hose, and 1,500 ft. 3-in. rubber and duck woven fire hose, for Manhattan. J. J. Scannell, Comr.

MACHINERY.—Italy.—Press reports state that Orlando Bros., Leghorn, Italy, will improve its shipyards, requiring considerable machinery. It is said that the following companies in Italy propose to improve their plants: The Societa Esercizio Baccine, Riva Trigoso; La Industriale Italiana, di Castellamere di Stabia; Diatti Bros., of Turin; Mianl, Silvestre & Co., of Milan; and Gronzona, Comi & Co., of Milan.

CONTRACT PRICES.

RESERVOIR WORK.—Boston, Mass.—The following bids were received by the Metropolitan Water Board Nov. 17, 1890, for excavating soil, Section 7, and for building part of westerly portion of North Dike, Wachusett Reservoir:

Table with columns: Bidder, Clearing and grubbing, Soil, areas marked (A, B, C), Earth, Gravel, Total. Includes bids from John A. Doolittle & Co., Long & Little, National Contracting Co., Nawn & Brock, Moulton & O'Mahoney.

*On Plan No. 1.

LEVEE WORK.—New Orleans, La.—Maj. Geo. McC. Derby, U. S. Engr., 3232 Prytanla St., received the following bids Nov. 15 for certain levee work in the Fourth District, Improving Mississippi River:

Table with columns: Bidder, Forlorn Hope, Pt. Clear, Leper House, Indian Camp, Hard Times. Includes bids from Ogden Bros. & Park, F. M. McLaughlin, Thos. Whelan, Batt. O'Brien, etc.

Bids Received at New Orleans, La., Nov. 15, 1890, for Work in Fourth District, Improving Mississippi River.

ties, etc., for the Cheshire Lines. S. S. Barton, Storekeeper, Warrington, Eng.; G. Thomas, Central Station.

DREDGING.—Galveston, Tex.—The only bid received Nov. 15 by Capt. C. S. Riche, U. S. Engr., for deepening the channel from Galveston Harbor to Texas City was submitted by Drake & Stratton Co., 100 Broadway, New York, at \$250,000.

PARK WORK.—Chicago, Ill.—Bids are asked by Board of Commissioners of Lincoln Park until Nov. 28 for furnishing 8,000 cu. yds. of black soil, bores for 600 trees 8 x 3 1/2 ft., 9 in. clay in each, 40,000 sq. ft. sod, and sow 13,000 sq. yds. lawn grass. I. J. Bryan, Secy.

AMMUNITION HOIST DOORS.—New York, N. Y.—Bids are asked until Nov. 23 for furnishing at Pier 3, E. R., New York, ammunition hoist doors for 6-in. gun emplacements at Fort Wadsworth, N. Y. Maj. H. M. Adams, U. S. Engr., Room H-7, Army Bldg., New York.

JETTIES.—Wilmington, Del.—The following contracts have been awarded to B. T. Collins, Milford, Del.: For constructing Brandywine Jetty, at \$7,311; for constructing fourth jetty and cross-dyke, at \$33,512. The bids were given under Contract Prices in our issue of Nov. 9.

NAVAL SUPPLIES.—San Francisco, Cal.—Bids are asked by the bureau of supplies and accounts, Navy Department, Washington, D. C., until Nov. 28, for furnishing miscellaneous supplies at the Mare Island Navy Yard, Cal. Paymaster-General A. S. Kenny, U. S. N., Washington.

MACHINERY.—New Orleans, La.—The following bids were received Nov. 1 by Major J. B. Quinn, U. S. Engr., for furnishing machinery for removing water hyacinths in Louisiana: The Johnson Iron Works, Ltd., New Orleans, \$4,200; Schwartz Foundry Co., Ltd., New Orleans, \$5,400.

HARBOR WORK.—Salina Cruz, Mex.—Sir Weetman D. Pearson, Chadden Hill, W., London, Eng., will make harbor and other improvements at Salina Cruz and Coahuacillas, to cost about \$11,000,000, in connection with the reconstruction of the National Tebantepec R. R., as noted under Railways.

HARBOR WORK.—Dunoon, Scotland.—Plans, estimates, etc., are wanted by the commissioners until Jan. 31 for improvements to East Bay, Dunoon. The improvements

DREDGING AND BULKHEAD.—Delaware River, Pa.—Lieut.-Col. C. W. Raymond, U. S. Engr., received the following bids Nov. 20 for dredging in the Delaware River, near Reedy Island, and for constructing a bulkhead for retaining the dredged material; (1) is the Virginia Dredging Co., Richmond, Va.; (2) Morris & Cumings Dredging Co., New York; (3) American Dredging Co., Philadelphia.

Table with columns: Bidder, Channel river, Bulkhead and bank, Total. Includes bids from Channel river, Bulkhead and bank, etc.

LEVEE WORK.—New Orleans, La.—The following bids were received by the state board of engineers, Cotton Exchange Bldg., Nov. 10, 1890, for certain levee work (1) being for the Delta levee, Madison parish, new, 3,200 lin. ft., and 14 ft. high, 86,000 cu. yds.; (2) Augusta levee, Iberville parish, raising and enlarging stretch about three miles long, 90,000 cu. yds.; (3) for Southwood levee, Ascension levee, raising and enlarging for about four miles, about 100,000 cu. yds.; L. Aschaffenburg, (1) 17.4 cts.; H. F. Garblsh, (1) 13.74 cts. and (3) 19 cts. (accepted); Clark & Reagan, (1) 18.7 cts. and (3) 19 cts. (accepted); Maxwell & Nicholson, (1) 16.5 cts.; estate of S. L. James, (3) 22 cts.; Dameron & White, (1) 16.5 cts. (2) 14 cts. (accepted); Deeper & Ryan, (1) 16.9 cts.

INDUSTRIAL NOTES.

THE ROEBLING CONSTRUCTION CO., New York, has opened a western office at 171 Lake St., Chicago, in charge of Mr. J. T. Montgomery.

COLLINS & NORTON, N. E. agents, Pittsburg Bridge Co., have been awarded the contract to furnish steel roof trusses and other iron work for the new cotton mill to be built for the Columbus Mfg. Co., Columbus, Ga.

THE BERLIN IRON BRIDGE CO., East Berlin, Conn., has just shipped from its works 27 cars of structural material, consigned to the United States Commission, Paris.

for Excavation, Etc., on Wachusett Reservoir.

Table with columns: Bidder, Soil, areas marked (A, B, C), Earth, Gravel, Total. Includes bids from John A. Doolittle & Co., Long & Little, National Contracting Co., Nawn & Brock, Moulton & O'Mahoney.

The building will be 343 x 77 ft., and will be a machine shop, to be used exclusively by the American exhibitors of iron and wood-working machinery at the Paris Exposition of 1900.

THE OLDS GASOLINE ENGINE WORKS, Lansing, Mich., has established new and extensive works at Detroit for the manufacture of gas and gasoline engines and motor vehicles operated by these engines. The main offices will also be removed to Detroit.

A. O. NORTON, Boston, Mass., manufacturer of ball bearing lifting jacks, announces that he has added additional special new machinery to his plant to keep up with the increasing demand for his product. He reports several large export orders received this month.

THE LAWRENCE MACHINE CO., Lawrence, Mass., announces that it is no longer represented in New York and vicinity by the Frindle Pump Co., 120 Liberty St., but has opened an office under its own name at room 117, 30-41 Cortlandt St., in charge of Mr. H. E. Maxfield.

THE FEDERAL STEEL CO., New York, announces that it has closed a contract to furnish a large supply of street railway materials in Glasgow, Scotland, the total value of which aggregates \$500,000. The order includes girder rails, frogs, switches, and the like. The girder rails will be manufactured at the Lorain plant, while other work will be done at the Johnstown plant.

PORTER & CHAPIN, engineers and contractors, 39 Cortlandt St., New York, announce that the partnership heretofore existing was dissolved Nov. 14, and that Mr. Robt. H. E. Porter assumes all liabilities, and will hereafter carry on the business in his own name at the same place. Porter & Chapin are local agents for the Buffalo Steam Pump Co., North Tonawanda, N. Y., and for the Nordberg Mfg. Co., Milwaukee, and conduct a general business as designers and installers of power plants, etc.

THE PRATT CHUCK CO., Frankfort, N. Y., reports that owing to the large demand for its chucks, it has not only found it necessary to largely increase its force, but it is also rebuilding and making additions to its plant in order to meet these demands. Among the foreign orders recently received was a large order from one of the subdividing firms on the Clyde. The company is now in correspondence with one of the largest railway systems of Great Britain with a view to the adoption of its chuck in its several railway shops. The railway company has already placed a trial order with the Pratt Chuck Co.

NEW COMPANIES.—Delaware Valley Construction Co., 4 Union Square, Philadelphia, N. J.; \$200,000; John S. Osterstock, Easton, Pa.; Sylvester C. Smith, Philadelphia.

John King Metal Co., Elizabeth, N. J.; \$125,000; Walter C. Childs, William G. Woolfolk, Jr., New York; Thomas Milea Day, Jr., Plainfield, N. J.

Maryland Smokeless Coal Co., Chicago; \$50,000; H. A. Gardner, G. A. Bickett.

Pontiac Spring & Wagon Works, Pontiac, Mich.; \$50,000; H. Hamilton, A. G. North, W. H. Dawson, Pontiac.

Bids Received at Chicago, Ill., Nov. 13, 1890, for Canal Work on the West Section, Illinois & Mississippi Canal.

Table with columns: Bidder, Earthwork in cu. yds., Miles (28 & 29, 30, 40, 41, 42, 43 & 44, 45, 46, 47, 48). Includes bids from Thomas & Wickham, Thomas Donabue, Katz & Callahan, Found Const'n Co., John J. McCaughey, Christie, Lowe & Heyworth, T. W. Kinser & Sons.

Nearly Every Prominent Contractor and Manufacturer of Contractors' Supplies READS ENGINEERING NEWS. AVAIL YOURSELF OF THIS PAPER WHEN BIDS ARE WANTED FOR CONSTRUCTION OR FOR FURNISHING SUPPLIES.

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