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PERSONAL

Mr. William B. Ferguson has been appointed City Engineer of Vancouver, B. C.

Mr. C. A. Hoffnagle has been appointed Superintendent of the City Water-Works, of Burlington, Vt.

Mr. G. A. Gessner, Jr., has resigned as City Engineer of Alexandria, Ind., to take a position in the office of the City Engineer of Toledo, O.

Mr. J. H. Pennington has been appointed Superintendent of Motive Power of the Delaware, Susquehanna & Schuylkill Ry., to succeed Mr. J. R. Wagner, deceased.

Mr. W. D. Lovell has succeeded the firm of Crellin & Lovell, civil and consulting engineers, of Des Moines, Ia., the firm having been dissolved by mutual consent.

Mr. F. W. Whittridge, of New York, has been elected President of the Cleveland, Akron & Columbus Ry. Co., to fill the vacancy caused by the death of Mr. Calvin S. Brice.

Mr. Pierre O. Keilholtz has been appointed Chief Engineer in charge of the electrical and mechanical engineering department of the United Railways & Electric Co., of Baltimore, Md.

Mr. R. J. Downen, of Wausau, Wis., has been appointed Chief Engineer of the Wisconsin & Michigan R. R., with headquarters in the Old Colony Bldg., Chicago, vice Mr. A. M. Kinsman, resigned.

Mr. Timothy Howard, who will have charge of the government telegraph and telephone system of Australia, is in the United States making an investigation of American methods of management.

Mr. A. E. Godeffroy has been elected President, and Mr. T. W. Little, Secretary, of the Port Jervis, Monticello & New York R. R. Co., to succeed Mr. A. B. Calvin and Mr. John R. Lee, respectively.

Mr. Charles H. Black, of Chelsea, Mass., President of the Massachusetts Highway Association, has been appointed Superintendent of Paving for Havana, Cuba. He will begin work in Cuba about April 15.

Prof. Thomas J. See, of Missouri, recently appointed Professor of Mathematics in the Naval Observatory, has been designated as Chief of the Nautical Almanac, to succeed Prof. Simon Newcomb, who retired on March 12, 1897.

Messrs. R. Wigram, H. H. Ivatts, James Constantin, Thomas O. Mein and R. P. Ellis have arrived in this country from England as a Commission to study railway practice in America, and particularly to study methods of freight traffic and the use of automatic couplers.

Mr. Alexander J. Wurts, M. Am. Soc. E. E., engineer of the Westinghouse Electric & Mfg. Co., Pittsburg, Pa., delivered a lecture under the auspices of the Electric Club of Cleveland, March 15, at the Case School of Applied Science, Cleveland, O., on "High Tension Electric Disturbances."

Mr. Frederick C. Field, electrical engineer, and Mr. Frank W. Everitt, electrical and mechanical engineer, have formed a partnership under the firm name of Field & Everitt, with offices in the Queen Building, 41 Cedar St., New York. Both gentlemen are from the Massachusetts Institute of Technology. Mr. Field was formerly with the Edison Electric Illuminating Co., of Brooklyn, and Mr. Everitt with the Union Iron Works, of San Francisco.

Mr. Frank B. Ward has been appointed by Mr. Robert A. Boie as Manager of the Pittsburg and Cleveland branches of Manning, Maxwell & Moore, to have charge of their branch office at Cleveland, O. Mr. Ward was for several years the Secretary and General Manager of the Michigan Brass & Iron Works, of Detroit, Mich., and previous to that acted for two years as Manager of the Chicago office of the Brown Hoisting & Conveying Machine Co.

Mr. Charles Hansel, M. Am. Soc. C. E., has resigned his position as Manager of the Department of Sales and Installation of the Union Switch & Signal Co., to which he was appointed at the time of the consolidation of the National Switch & Signal Co., of which company he was Vice-President and General Manager, with the Union Switch & Signal Co., under the name of the latter. Mr. Hansel still retains his office as Vice-President and General Manager of the National Switch & Signal Co., and will continue in that position until May 1, with offices at 43 Cedar St., New York.

Mr. A. C. Rice, M. Am. Soc. M. E., consulting and hydraulic engineer, of Dayton O., has resigned the position he has long held as General Superintendent of the Stillwell-Bierce & Smith-Valle Co., in order to devote his entire time to his professional work. Mr. Rice has been prominently identified with the largest water power developments of the past few years, and at the present time is engaged on plans for several large pulp and paper mills and power developments. Among the largest of these is one of 80,000-H.P., at Grand Falls, N. B., for a wealthy syndicate of American and Canadian capitalists.

Mr. W. C. Armstrong has been appointed by the Chicago and Northwestern Ry. Co. Resident Engineer in Charge of the Boone County Ry. construction, with headquarters at Boone, Ia. Other appointments are those of Mr. D. C. Dunlap, as Resident Engineer in Charge of the Boyer Valley Ry. construction, with headquarters at Wall Lake, Ia.; Mr. C. S. Hall, as Resident Engineer in Charge of the Minnesota & Iowa Ry. construction, with headquarters at Butterfield, Minn., and Mr. L. P. Yale, Resident Engineer in Charge of the Mankato & New Ulm Ry. construction, with headquarters at Mankato, Minn.

Prof. James Dewar, F. R. S., of London, has had conferred upon him the Hodgkins gold medal of the Smithsonian Institute, for his discovery of the process of liquefying air. This medal is about 3 1/4 in. diameter; has a hullion value of about \$300, and was made in Paris. It is the first gold medal given to anyone under the bequest of \$200,000 made to the Smithsonian Institute by Thos. George Hodgkins; one-half of the income to be expended in aiding and rewarding discoveries of new properties in air. About two years ago \$10,000 from this fund was divided between the principal discoverers of the new element argon, and four silver and eight bronze medals were distributed at the same time.

OBITUARY.

Mr. Henry C. Eyre, founder of the foundry and machine works of H. C. Eyre & Co., died at Chester, Pa., on March 13, aged 63.

M. Jean Baptiste Sebastian Krantz, the French engineer, formerly Director-General of Roads and Bridges, died at Paris, on March 17, aged 82.

Mr. Charles Everett Clark, a former President of the Master Builders' Association of Boston, and a Director of the Boston Steel & Iron Co., died at Somerville, Mass., on March 20, aged 63.

Mr. George C. Thomas died at his home at East Orange, N. J., on March 18, aged 45 years. Until recently he was connected with the Steele & Condit Iron Works, of Jersey City, and was the inventor of an ice-making machine.

Mr. R. J. McClure, Consulting Engineer of the Chicago, Burlington & Quincy R. R., died at Miami, Fla., March 17. He had held this position for a number of years, and had been a member of the Western Society of Engineers since 1870.

Mr. Henry E. Smyser, a mechanical engineer, who for the last seven years had been in the employ of the Arbuckle, where machines of his patenting for packing sugar and coffee were used, died in York, Pa., his former home, on March 15, aged 62 years.

Capt. Samuel Trott died at Miami, Fla., on March 11, aged 67. He laid the French cable, and the cable for the United States between Key West and Dry Tortugas, and invented a number of devices used in deep-sea cable work, including an electric grapnel.

Mr. Arthur S. C. Wuertele, M. Am. Soc. C. E., died at Albany, N. Y., March 13, aged 68. He was formerly Division Superintendent of the New York Central R. R., and Bridge Engineer of the Delaware & Hudson Canal Co. From 1887 to 1892 he was Deputy State Engineer of New York.

Mr. John R. Downey, a builder, died of cancer of the throat at his residence in New York city, on March 16, aged 45. Mr. Downey, in conjunction with his father, Mr. John Downey, built the Waldorf and Astoria Hotels, the Park Row Syndicate and the Home Life Insurance Co.'s buildings.

Prof. Othnel C. Marsh, M. A., Ph. D., LL. D., Professor of Paleontology at Yale University, and one of the most famous geological scholars of the world, died at New Haven, on March 18. He was born at Lockport, N. Y., on October 29, 1831, and graduated from Yale University in 1860. He had held his late professorship since 1866.

Mr. Frederick Maack Barstow died at Burlington, Vt., on March 17, from a fever contracted in the South during the late war with Spain. He was born in Shelburne, Vt., in 1860, and was graduated in 1881 from the University of Vermont with the degree of Civil Engineer. Most of his professional life was spent on government river and harbor work as U. S. Assistant Engineer.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

CIVIL ENGINEERS' CLUB OF CLEVELAND. March 28. Secy., Wm. H. Searles, Case Library Bldg., Cleveland.

FRANKLIN INSTITUTE. March 28. "Water Power Electric Plants in the United States," B. C. Washington, Jr. April 12. "Riddles Wrought in Iron and Steel," Paul Krenzpointner. Secy., Wm. H. Wahl, 15 South 7th St., Philadelphia, Pa.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS. March 29. Secy., Ralph W. Pope, 26 Cortlandt St., New York city.

WISCONSIN ENGINEERS' SOCIETY. March 30. Annual meeting, Appleton, Wis. Secy., F. J. Harriman, Appleton, Wis.

CANADIAN SOCIETY OF CIVIL ENGINEERS. March 30. Secy., H. C. McLeod, 112 Mansfield St., Montreal, Que.

ENGINEERS' CLUB OF ST. LOUIS. April 3. Secy., E. R. Fish, 2401 N. Spring Ave., St. Louis, Mo.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL. April 3. Secy., C. L. Annan, City Engineer's Office, St. Paul, Minn.

ENGINEERING SOCIETY OF WESTERN NEW YORK. April 3. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

WESTERN SOCIETY OF ENGINEERS. April 5. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

AMERICAN SOCIETY OF CIVIL ENGINEERS. April 5. Secy., C. W. Hunt, 220 W. 57th St., New York city.

FOUNDRYMEN'S ASSOCIATION (Philadelphia). April 5. Secy., Howard Evans, Pier 45, N. Delaware Ave., Philadelphia, Pa.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES. April 7. Secy., Henry I. Weed, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

TECHNICAL SOCIETY OF THE PACIFIC COAST. April 7. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

CHICAGO ELECTRICAL ASSOCIATION. April 7. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

MONTANA SOCIETY OF ENGINEERS. April 8. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

THE LOUISIANA ENGINEERING SOCIETY. April 10. Secy., J. F. Coleman, 712 Union St., New Orleans, La.

ENGINEERS' CLUB OF KANSAS CITY. April 10. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

DENVER SOCIETY OF CIVIL ENGINEERS. April 11. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.

ENGINEERS' CLUB OF PHILADELPHIA. April 11. "The Fruits of Sanitary Science," Prof. J. B. Johnson. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

NORTHWEST RAILWAY CLUB. April 11. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.

NEW ENGLAND RAILWAY CLUB. April 11. Secy., Edw. L. Janca, P.O. Box 1158, Boston, Mass.

AMERICAN INSTITUTE OF ARCHITECTS (New York Chapter). April 12. Secy., Chas. I. Berg, 10 West 23d St., New York city.

AMERICAN RAILWAY ASSOCIATION. April 12. Detroit, Mich. Secy., W. F. Allen, 24 Park Place.

BROOKLYN ENGINEERS' CLUB. April 13. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

ENGINEERING ASSOCIATION OF THE SOUTH. April 13. Secy., H. M. Jones, 1000 Broad St., Nashville, Tenn.

ST. LOUIS RAILWAY CLUB. April 14. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

WISCONSIN STATE CHEMICAL ASSOCIATION. April 14. Secy., I. Ladoff, 154 Knapp St., Milwaukee, Wis.

ENGINEERS' CLUB OF COLUMBUS. April 15. Secy., H. M. Gates, 124 North High St., Columbus, O.

TECHNICAL CLUB OF OMAHA. April 17. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS. April 17. Secy., H. E. Smith, 1620 S. E. 14th St., Minneapolis, Minn.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE. April 17. Secy., Marshall Morris, 16 Norton Bldg., Louisville, Ky.

WESTERN RAILWAY CLUB. April 18. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA. April 18. Secy., R. A. Feasenden, 410 Penn Ave., Pittsburgh, Pa.

BOSTON SOCIETY OF CIVIL ENGINEERS. April 19. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION. April 19. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.

ENGINEERS' CLUB OF CINCINNATI. April 20. Secy., J. F. Wilson, P.O. Box 333, Cincinnati, O.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB. April 20. Secy., F. A. Charplot, P.O. Box 13, Savannah, Ga.

NEW YORK RAILROAD CLUB. April 20. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

ROCHESTER ENGINEERING SOCIETY. April 21. Secy., John F. Skinner, Reynolda Library Bldg., Rochester, N. Y.

THE DETROIT ENGINEERING SOCIETY. April 21. Secy., Henry Goldmark, Wayne Co. Savings Bank Bldg., Detroit, Mich.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS. May 9-12. Spring meeting, Washington, D. C. Secy., F. R. Hutton, 12 W. 31st St., New York city.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—The spring meeting of this society will be held at Washington, D. C., May 9-12. F. R. Hutton, Secy.

ROCHESTER ENGINEERING SOCIETY.—A meeting of this society was held on March 17 and a paper on "The History of the Steam Engine" was presented by Mr. Edwd. G. Ashley.

WESTERN SOCIETY OF ENGINEERS.—A special meeting of this society was held at Chicago, Ill., on March 15. Mr. L. A. Ferguson, of the Chicago Edison Co., read a paper, entitled "The Development of a Central Lighting Station."

THE CIVIL ENGINEERS' CLUB OF CLEVELAND.—At the annual meeting of this club, held March 14, the following officers were elected: Pres., Col. Jared A. Smith, U. S. A.; Vice-Pres., Prof. John W. Langley; Secy., Arthur A. Skeels; Treas., John N. Coffin; Librarian, Wm. E. Reed; Directors, Jos. R. Oldham, Wm. B. Hanlon.

THE ENGINEERS' CLUB OF PHILADELPHIA.—A special meeting of this club will be held on March 25 to discuss the present problem of the water supply of the City of Philadelphia, and prepare an address to the public.

The annual report showed a slight falling off in membership, but an excellent financial condition. A report on the committee on federation of the Civil Engineers' Club, with other scientific societies of Cleveland, was adopted.

SCRANTON ENGINEERS' CLUB.—At the meeting of this club, held on March 16, Prof. A. H. Sabin, chemist for the Edward Smith & Co., New York city, read a paper on "The Protection of Iron and Steel Structures from Corrosion."

THE MONTANA SOCIETY OF ENGINEERS.—A meeting of this society was held at Butte, Mont., on March 11. This was the first meeting of the society held outside of Helena. The paper of the evening, entitled "The Development of Road Building and Street Pavements," was by F. W. Blackford.

NEW YORK ELECTRICAL SOCIETY.—A meeting of this society will be held on March 29 at the House of the American Society of Civil Engineers, 220 West 57th St., New York city. Prof. Elihu Thomson will deliver a lecture on "Electricity at High Pressures."

NEW ENGLAND RAILWAY CLUB.—The annual meeting of this club was held at Boston, Mass., on March 14. Mr. C. C. Elwell delivered an illustrated lecture, entitled "Travel in Europe."

ENGINEERS' CLUB OF ST. LOUIS.—The 487th meeting of this club was held on March 15. Plans for the celebration of the 30th anniversary of the club were discussed, and details of arrangements were left to the entertainment committee.

The paper of the evening, "Recent Concrete Construction on the Illinois and Mississippi Canal," was then read by the secretary, in the absence of the author, Mr. J. W. Woermann. The paper gave a description of the methods of construction of the locks being built on the canal, and the proportions and character of the materials used.

BOSTON SOCIETY OF CIVIL ENGINEERS.—At the meeting of the society, held March 15, the following officers were elected for the ensuing year: President, C. Frank Allen; Vice-President, T. H. Barnes; Secretary, S. E. Tinkham; Treasurer, E. W. Howe; Librarian, F. L. Fales; Director, A. E. Burton.

NEW PUBLICATIONS.

REPORT: MASSACHUSETTS HARBOR AND LAND COMMISSIONERS, 1898.—Woodward Emery, Clinton White, Charles E. Doten, Commissioners. Pub. Doc. Paper; 6 x 9 ins.; pp. 116.

This report reviews the work of the commission for the year ending Nov. 30, 1898, in improving the harbors and lauds of the State of Massachusetts.

MANILA AND THE PHILIPPINE ISLANDS.—An up-to-date handbook of facts compiled from official U. S. War Department information, Spanish reports and original investigation. The Philippines Co., New York. Paper; 7 1/4 x 6 ins.; pp. 31; maps.

This pamphlet gives a very general sketch of Manila and the islands, including the postal service, means of communication, population by provinces, religion, education, climate, trade, etc.

ANNUAL REPORTS; KENTUCKY RAILROAD COMMISSION, 1897, 1898.—John C. Wood, J. F. Dempsey, H. S. Irwin, Commissioners. Pub. Doc. Paper; 6 x 9 ins.; pp. 334.

Each of these reports, which come to us together, contains a brief summary of railway affairs during the years covered, followed by a full record of the assessments for taxation and a digest of the state laws relating to railway operation. The most interesting feature of the two

reports, however, is the digest of the railway laws of each state of the United States, which is contained in the report for 1897.

ENGINEERING ASSOCIATION OF THE SOUTH.—Transactions for 1898. Vol. IX. Office of Secretary and Treasurer, 1000 Broad St., Nashville, Tenn. Paper, 9 x 6 ins.; pp. 80. \$2.

The contents of this volume of the Transactions are: Small Railway Culverts, Hunter McDonald; The Relation of Biology to the Purification of Water, Paul M. Jones; A Typical Loading for Railway Bridge Specifications, W. H. Schuerman; Phosphate Rock of the South, John S. O'Neal; Coal Cost Sheets, J. J. Ormshee; Annual Address of the President, J. S. Walker; Annual Report of the Secretary, C. B. Wilson; Memorial and List of Members.

TRADE OF THE PHILIPPINE ISLANDS.—By Frank H. Hitchcock, Chief Section of Foreign Markets, U. S. Department of Agriculture, Washington, D. C. Paper; 9 x 6 ins.; pp. 160; map.

This is an exhaustive tabular statement of the exports and imports of these islands up to 1894, together with a description of their character, and the proportionate trade with other countries. The average annual value of the commerce of the islands for the period 1880-1894 is put down at \$37,606,006. The leading exports are Manila hemp and sugar, with leaf tobacco, cigars, cigarettes and coffee, following in the order given. The chief imports are cotton goods, kerosene, wine, rice, wheat flour, canned goods, nails, household utensils, etc.

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. and 9 x 12 ins.)

FRICITION CLUTCHES, PULLEYS AND COUPLINGS.—Hess, Snyder & Co., Massillon, Ohio.

This is a circular illustrating some of the products of the company named.

OIL FILTERS.—The Burt Mfg. Co., Akron, Ohio. Pamph.; 3 1/4 x 8 1/4 ins.; pp. 13 and 8.

These pamphlets describe the Cross and the Warden oil filters and purifiers for use in all places where large quantities of lubricating oil are required.

HEATING APPARATUS.—The J. H. McLain Co., Canton, Ohio. Pamph.; 7 1/4 x 9 1/4 ins.; pp. 48; illustrated.

This pamphlet contains illustrations and descriptions of eight types of hot water heaters for residences, apartment houses, schools, public buildings, etc.

PAINTS.—Lowe Brothers Co., Dayton, O. Paper; four pamphlets; 4 x 9 ins.; pp. 4; 3 1/2 x 4 1/2 ins.; pp. 10; 2 1/2 x 4 ins.; pp. 8; 2 1/2 x 3 1/2 ins.; pp. 8.

These little pamphlets contain brief particulars of some of the company's specialties, including high standard liquid paint, freight car paints, and red lead metal preservative.

GAS AND GASOLINE ENGINES.—Coal Handling Machinery Co., Chicago, Ill. Four circulars; paper; 3 1/4 x 6 1/4 and 6 x 9 1/4 ins.; illustrated.

The Cornell gas and gasoline engine, manufactured by this company, is of the vertical inverted type, mounted on a pedestal foundation with outside flywheels. It may be used to drive pumping and electric light plants, and for various other purposes.

GENERATORS AND MOTORS AND MINING LOCOMOTIVES.—The Akron Electrical Mfg. Co., Akron, Ohio. Pamph.; 7 x 10 1/4 ins.; pp. 4 and 8; illustrated.

These are bulletins 2 and 3 of the series issued by this company. No. 2 briefly describes the Akron electric mining locomotives which are made in sizes from 25 to 150 HP. No. 3 is entitled "Direct Current Apparatus" and describes the main features of the generators and motors manufactured for lighting, railway or power purposes.

HOT WATER AND STEAM BOILERS.—The Novelty Iron Co., Canton, Ohio. Circulars; 6 x 9 ins.; pamph.; 4 x 6 ins.; illustrated.

These are a series of circulars of uniform size in which the good points of the hot water and steam heaters of this company are set forth. The illustrations afford a clear idea of the general appearance and construction of the several types. The pamphlet in addition to data on the company's steam heaters contains illustrations and dimension tables of steam-heating accessories.

ROAD BUILDING MACHINERY.—Climax Road Machine Co., Marathon, N. Y. Pamph.; 9 x 6 ins.; pp. 44; illustrated.

Describes and illustrates rock-crushers of various types, with elevators and screens; 10-ton portable bins; portable engines; rotary screens; distributing wagons; steel highway bridges; reversible street roller; and shows views of plants as erected and in operation. The Climax road machine is very fully illustrated, together with several varieties of scrapers, grading plows, etc.

ASPHALT PAVING.—Warren-Scharf Asphalt Paving Co., 81 Pulton St., New York. Paper; 8 x 6 1/2 ins.; pp. 64; illustrated.

By handsome photogravures, maps of cities and tables, this pamphlet illustrates the work performed by this company. The character and advantages of asphalt paving are fully set forth in the text and by the illustrations. The summary of work done shows that the square yards laid by the Warren-Scharf Co. in 42 cities and towns is equivalent to one street 30 ft. wide and about 260 miles long.

COILS AND BENDS.—The Whitlock Coil Pipe Co., Elmwood, Conn. Two pamphlets; 6 x 3 1/2 ins.; pp. 20; illustrated; 3 1/2 x 6 ins.; pp. 36.

In the first of these pamphlets attention is called to the forms of coiled pipes manufactured by this concern for condensers, refrigerating plants, etc. The second pamphlet illustrates and describes the American Feed Water Heater, the American Purifier and other forms of heaters, also a novel form of power pump.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Table with columns: Bids to be opened, Work, Place, See Eng. News. Contains numerous entries for construction projects with dates and locations.

Table listing various engineering projects and dates, such as 'Street surfacing, Clinton, Mass.' and 'Excavating, Vicksburg, Miss.'.

RAILWAYS.

AFRICA.—Press reports state that arrangements are being made between the German Government and Cecil Rhodes, the British South African magnate, for the construction of a telegraph line in German East Africa, and for building a railway through the same territory.

ing this proposed line from Atkinson to Perry, about 25 miles; work was to begin at once. A. A. Perry, Gen. Mgr., Atkinson.

BALTIMORE & OHIO.—L. B. McCabe & Bros., Baltimore, Md., are said to have been awarded the contract for the improvements on the Wheeling division of this line, including the construction of a long double track tunnel at Whitehall summit, at about \$400,000.

BRAINERD & NORTHERN MINNESOTA.—A preliminary survey for the extension of this line from Bemidji north towards Nebish, Minn., has just been completed. A dock is now being built by the company on the east side of Lake Irvine for loading logs on cars to be taken to the Brainerd Lumber Co.'s mill at Brainerd.

BROOKFIELD.—This company has been incorporated in Ohio with \$10,000 capital stock, to build a steam or electric railway from Brookfield township northward to a point on the Mahoning Coal Co.'s line.

CENTRAL OF GEORGIA.—H. M. Comer, Pres., Savannah, Ga., informs us that this company is now extending its tracks from Covington to Porterdale, Ga., four miles.

CHICAGO & NORTHWESTERN.—We are informed that the right of way has been obtained and one-half of the grading completed for the Boyer Valley extension of this line from Waukegan to Denison, Ill., 28 miles.

CHICAGO & WEST WISCONSIN.—This company, formerly known as the Chicago, Montello & Northwestern, has revived the project of building a line from Princeton to Wautoma, Wis., German Landing and Neskeo, Wis., about 50 miles.

CHICAGO, MILWAUKEE & ST. PAUL.—C. A. Goodnow, Asst. Gen. Supt., Chicago, Ill., informs us that this company is changing the grades and cutting down the hills on the Eastern Iowa division between Preston and Marion, Ia., requiring the easement of 900,000 cu. yds. of earth; work to be completed this year.

FORT DODGE & OMAHA.—Wickham Bros. are reported to have received the sub-contract for six miles of grading on the extension of the Illinois Central R. R. from Tarr to Carnarvon, Ia., 40 miles.

IOWA CENTRAL.—Balch & Peppard, Minneapolis, Minn., are reported to have been awarded the contract for the grading and bridging of the proposed extension from Belmont to Algona, Ia. Work will begin as soon as weather is favorable.

JACKSONVILLE SOUTHWESTERN.—This company was incorporated in Florida, March 15, with \$450,000 capital stock, to build from Cummer's mill, near Jacksonville, through the counties of Duval, Baker, Bradford, Alachua and Levy, to Manatee, Fla., on the Suwannee River, 103 miles.

KANSAS, MISSOURI & NORTHERN.—R. A. Reese, Vice-Pres. and Gen. Mgr., Lincoln Trust Bldg., St. Louis, Mo., informs us that contract will be let about April 15 for the construction of this line from St. Joseph to Council Bluffs, Ia., an Omaha, Neb., via Savannah, Fillmore, Maitland, Tarkio, Riverton and Sidney, 130 miles.

KANSAS, OKLAHOMA CENTRAL & TEXAS.—This company was incorporated in Oklahoma, March 14, with a capital stock of \$5,000,000, to build from Salina, Kan., to New Kiowa and Oklahoma City to Denison, Tex., to have a total length of 650 miles.

LOUISVILLE & NASHVILLE.—Surveys are under way, according to reports, for an extension from Selma to Yolande, Ala., on the Birmingham Terminal, thus giving this company a straight route from Birmingham, Ala., to Pensacola, Fla.

MASSACHUSETTS.—Bids are asked by the Metropolitan Water Board, Boston, until April 4, for grading a short section of railway in the Wachusett Reservoir, as stated in our advertising columns.

MISSOURI MIDLAND.—Daniel B. Ely, Vice-Pres. and Gen. Mgr., St. Louis, Mo., informs us that the contract for the complete construction of this steam railway from Columbia to Kennard, Mo., 8 1/2 miles, was awarded Feb. 25 to Johnson Bros. & Fought, St. Elmo, Ill.

NAZARETH & LEHIGH.—Incorporated in Pennsylvania, with a capital stock of \$10,000, to build a line of steam railway from the terminal of the Bangor & Portland Ry. at Nazareth, Pa., to a point about one mile west to a siding near the new cement mills.

PARAGUAY.—Consul John N. Ruffin, Asuncion, Paraguay, reports that this country offers a good opportunity for building 300 kilometers (186 miles) of railway between Ignatini and Rosario, with a 6% guaranty.

SANTA FE TERMINAL OF CALIFORNIA.—Incorporated in California, with \$1,000,000 capital stock, to build railroads, terminals, etc.

SCOTLAND.—Bids are asked until March 27 for the construction of part of the Edinburgh, Leith & Newhaven extension of the Caledonian Ry.

SIERRA RY. OF CALIFORNIA.—We are informed that all the contracts have been let for extending this line from Sonora to Carters, Cal., 14 miles.

SOUTH CAROLINA & GEORGIA.—Official reports state that surveys are under way for an extension of this line from Gaffney to Clifton, S. C., about 12 miles, and that construction is expected to be begun this spring.

UNION PACIFIC.—Kilpatrick Bros. & Collins, Newcastle, Wyo., are reported to have received the contract for grading the cut-offs on the main line of the Union Pacific between Hutton Station and Dana, Wyo.

WICHITA & SOUTHERN.—O. H. Bentley, Pres., Wichita, Kan., informs us that a preliminary survey has been made over a portion of this proposed line from Wichita to Dennison, via South McAlester, Tex., 200 miles, and that 50 miles will probably be built this season.

STREET AND ELECTRIC RAILWAYS.

BOSTON, MASS.—Governor Walcott of Massachusetts has signed the bill extending the time for the construction of the Boston, Quincy & Fall River Bicycle Ry.

GREENFIELD, MASS.—The Greenfield & Turners Falls St. Ry. Co. has been petitioned by the people of Montague Centre and Turners Falls to assist in the construction of a line from the present terminus at Lake Pleasant to Montague Centre.

MIDDLETOWN, CONN.—The Middletown St. Ry. has applied to the legislature for a charter granting the power of extending its lines to Meriden.

BROADALBIN, N. Y.—Wallace Cleveland, Broadalbin, and Seymour Husted, Brooklyn, N. Y., are reported to be interested in the construction of an electric railway between Broadalbin and Amsterdam.

GREENBUSI, N. Y.—Reports state that the proposed electric railway between Rensselaer, Nassau, Kinderhook and Hudson, for the construction of which Beiden & Seeley, Syracuse, N. Y., are said to have the contract, will be controlled by the Columbia & Rensselaer Ry., Light & Power Co.

DUNKIRK, N. Y.—Frederick H. Stevens, C. J. Carney and others have petitioned the council for a franchise to construct an electric line to Hickoryhurst or Point Gratiot Park, summer resorts.

HERKIMER, N. Y.—The village trustees granted a franchise to the Little Falls & Herkimer St. Ry. Co., March 11, to build and operate in Herkimer.

MINEOLA, N. Y.—The Nassau Belt Line Traction Co. was incorporated, with a capital stock of \$300,000, March 20, to operate 30 miles of street railway to be propelled by any other motive power than steam.

NIAGARA FALLS, N. Y.—The Niagara Falls & Suspension Bridge Ry. Co. has applied for a franchise to lay tracks on various streets in this city.

BRIDGETON, N. J.—The Bridgeton & Millville Traction Co. is about to award contracts for extending its line through Cedarville. Work is expected to begin as soon as the materials can be secured.

BETHLEHEM, PA.—The Bethlehem & Freemansburg St. Ry. Co. was incorporated, March 16, with \$21,000 capital stock, to build an electric street railway from Bethlehem to Butztown, Northampton county, 3 1/2 miles.

COKEVILLE, PA.—The Coke Belt St. Ry. Co. was incorporated March 17, with \$900,000 capital stock, to build 30 miles of electric railway through Westmoreland and Fayette counties.

EASTON, PA.—The Northampton Southern St. Ry. Co. was incorporated March 16, with \$36,000 capital stock, to build six miles of electric railway between Easton and Middletown, Northampton county.

NAZARETH, PA.—The Worcester Construction Co., Worcester, Mass., is reported to have been awarded the contract for building the Northampton Central St. Ry., from Nazareth to Farmersville, 4 1/2 miles.

WILMINGTON, DEL.—It is reported that the Wilmington & New Castle Electric Ry. Co. has decided to extend its lines to Delaware City, nine miles from New Castle.

ARLINGTON, VA.—Gen. Samuel S. Burdett, Glencairn; Joseph E. Willard, Fairfax, and others are said to be interested in the immediate construction of an electric railway from Arlington Junction to Fairfax and Manassas.

HUNTSVILLE, ALA.—T. W. Pratt has applied to this city for an electric street railway franchise, offering to have three miles of line in operation within 90 days.

CHILLICOTHE, O.—The Chillicothe, Bainbridge & Hillsboro Electric Ry. Co. was incorporated March 16, with \$1,000 capital stock, to build from Chillicothe to

Millshoro. The incorporators are: J. K. Duffy, T. S. Mitchell, J. F. Harmon, Samuel Ryland and F. C. Jeffreys.

CLEVELAND, O.—It is reported that the Cleveland & Warren Electric Ry. Co. has been chartered with \$10,000 capital stock, to build eventually about 50 miles of line in Cuyahoga, Genesee, Portage, and Trumbull counties. Martin Dodge, Gen. Mgr., Chagrin Falls, O.

CLEVELAND, O.—Bids are asked by this village until April 6 for the construction and operation of a street railway through Cleves, to be in operation before Jan. 1. V. M. Henderson, Village Clk.

FINDLAY, O.—The Findlay St. Ry. Co. is said to contemplate extending its lines to Mortimer, Van Buren and possibly to Fostoria; estimated cost, \$50,000. A new 250-HP. boiler has recently been bought from the Turner Boiler Co., Bucyrus, O. C. F. Smith, Mgr.

HOME CITY, O.—Bids are asked by this village until April 8 for the construction and operation of a street railway in Home City. J. O. Falkenburg, Village Clk.

OXFORD, O.—The Richmond, Oxford, Rely & Cincinnati Electric Ry. Co. has been organized at Oxford by M. T. Morris, Shannon, O.; S. E. Frye, St. Charles, and others. A survey will be made at once.

PHONETON, O.—The National Traction Co. of Phoneton has been incorporated with \$10,000 capital to build along the old National Road from Columbus to the state line. J. O. H. Hooker and O. P. Waymire are incorporators.

XENIA, O.—The council has granted a franchise to the Dayton, Spring Valley & Wilmington Traction Co., of which J. M. Wilson is the promoter.

KOKOMO, IND.—The Kokomo Ry. & Light Co. was incorporated, March 13, with \$80,000 capital stock, to operate in Kokomo. Wm. P. Stevens and H. L. Woolfenden are directors.

LEBANON, IND.—The commissioners of Boone county have granted a franchise to the Commercial Club of Lebanon down the Frankford Road to Lebanon and to the county line.

AURORA, ILL.—The Aurora, Wheaton & Chicago Ry. Co. was incorporated March 11, with \$1,500,000 capital stock, to build an electric line from Aurora to Chicago. B. Mahler, M. J. Mandelbaum, L. J. Wolf, directors.

OTTAWA, ILL.—The Ottawa Ry. & Light & Power Co. was incorporated March 16, with \$150,000 capital stock, by F. S. Donnell, Louis W. Hess and Jacob I. Warner.

ST. JOSEPH, MO.—W. E. Montague, Surveyor of Platte County, has applied to the county commissioners for a franchise to build between St. Joseph and St. Louis.

TACOMA, WASH.—Reports state that the Tacoma Ry. & Power Co. has applied to the county commissioners for a franchise to extend its lines from Center St. to American Lake. Frank Dame, Supt.

QUEBEC, QUE.—It is announced that the contract for the equipment of an electric railway between Quebec and Ste. Anne de Beaupre, via Montmorency Falls and Beauport, 28 miles, has been awarded to Aeburn & Soper, Ottawa, Ont. The railway has hitherto been operated by steam, and the change will necessitate the manufacture of a number of large cars by the Ottawa Car Co. and the installation of a large electrical plant.

HAVANA, CUBA.—The Havana Electric Ry. Co. of New Jersey has increased its capital stock from \$5,000,000 to \$10,000,000. It is said that 25 miles of additional street railway track will be built. Col. G. B. M. Harvey, New York, is a director.

DUBLIN, IRELAND.—Bids are asked until March 27 for the construction of about 2½ miles of tramway through fields, etc., for the Great Northern Ry. Co. T. Morrison, Secy., Dublin.

ELECTRIC LIGHT AND POWER.

KENNEBUNK, ME.—Estimates have been submitted for a new plant to cost about \$5,500.

EAST HARTFORD, CONN.—Ex-Mayor Wm. W. Hyde and Percy S. Bryan, Hartford, have been authorized to prepare a new bill permitting the East Hartford fire district to purchase the plant, water-works, etc.

NEW LONDON, CONN.—Wm. T. May, Chn. Com., writes us that the matter of a city electric light plant has been referred to a committee to report at the next council meeting. Nothing can be done for two years, as the city would have to get a charter or buy the plant of the present company. C. G. Beckwith, Mayor.

SIMSBURY, CONN.—The act granting a charter to the Simsbury Electric Co. has passed both branches of the legislature.

WINDSOR LOCKS, CONN.—The Suffield Electric Lighting Co., it is stated, has been organized and will build a plant about three miles from here to supply this place with light.

ADDISON, N. Y.—It is stated that this place is to have a plant.

GREAT BEND, N. Y.—Bids are asked until April 13 for excavating about 300,000 cu. yds. of earth and rock for a hydraulic canal for the St. Regis Paper Co. as stated in our advertising columns. Frank A. Hinds, Engr., Flower Bldg., Watertown, N. Y.

ELION, N. Y.—N. A. Hanchett, Pres., writes us that this place voted recently by a large majority for a municipal plant. The town is already lighted by a private company. The vote is not conclusive, but only an expression of the people.

LYONS, N. Y.—Jacob Strauss, Lyons, writes us that an effort is being made to secure a franchise for a plant to have a capacity of 100 2,000-c.p. and 1,000-c.p. incandescent lights. A. B. Blabon, of Clyde, N. Y., and Rochester parties are reported as interested. The Lyons Electric Light & Power Co. has an exclusive franchise until March 6, 1901. This franchise, the new company says, was illegally granted.

NEW YORK, N. Y.—It is stated that the New York Gas & Electric Light, Heat & Power Co., with the gradual taking over of electric light and subway companies in Manhattan, has increased its capitalization from \$25,000,000 to \$72,000,000. It is understood to be the plan of the Whitney syndicate, owning this company, to generate at three or four large central stations all the electricity needed for lighting and heating purposes, and for the operation of the lines of the Metropolitan St. Ry. Co., which corporation is controlled by the same syndicate; to store in storage batteries manufactured by a Philadelphia company recently acquired by the syndicate the surplus power generated, as the dynamos will be run constantly, and to distribute its product by means of wires laid in the subways of the Empire City Subway Co. and the conduits which have been laid alongside the tracks of the Metropolitan company on many of its lines.

SYRACUSE, N. Y.—Mayor McGuire has recommended the city's ownership of the electric plant.—Certain improvements have been decided upon by the Syracuse Electric Light & Power Co. to its plant, to cost about \$200,

000. The plant in Fulton St. It is said, will have to be doubled in order to supply the demand for incandescent lights, and the additions will provide for 30,000 more lamps. For an additional station, \$75,000 has been set aside. The addition will be a 3-story brick building about the same width as the present structure, and about 200 ft. deep. The cost of new machinery will be about \$100,000. It is stated that the company will put its wires underground this spring.

ROCHESTER, N. Y.—Mayor Warner has made an address, urging the city's ownership of the electric plant.

CLAYTON, N. J.—The Pitman, Glassboro & Clayton Electric Light Co. has been granted a franchise to light this place. It will probably extend the lines to Bridgeport.

NEWARK, N. J.—At the meeting of the People's Light, Heat & Power Co., March 27, the plans for subways for its wires will be considered.

PAULSBORO, N. J.—It is stated that a company will be organized to build a plant here.

PRINCETON, N. J.—C. S. Robinson, the present owner of the plant, writes us that a company just formed will take the plant and enlarge it. Further information may be secured about April 1.

SEA ISLE CITY, N. J.—The Sea Isle City Electric Light & Power Co. has been awarded the contract for electric lighting.

BRIDGEPORT, PA.—The question of putting in a plant, to cost \$30,000, is being considered, according to reports.

CONNEAUTVILLE, PA.—It is stated that plans for remodeling the power house are being prepared. D. F. Booth, Pres. Council; L. D. Corey, Clk.

PHILIPSBURG, PA.—It is stated that work will likely soon be begun on the proposed plant for the Phillipsburg Electric Light Co. Capital stock, \$25,000; directors, E. D. Pursell, John Ellenberg and David Gorgas.

ST. CLAIR, PA.—The council proposes to put in new boilers and to build a new smokestack at the electric plant.

SAYRE, PA.—Frank C. Roberts & Co., Engrs., Real Estate Trust Bldg., Philadelphia, have requested bids on a new power house to be erected at Sayre, for the Pennsylvania & New York Canal & R. R. Co. This will be steel skeleton, of brick construction, one story high, with truss roof and slate covering. The foundations will be concrete and brick, and machinery and the equipment to be installed will include four engines, two dynamos, generators, boilers, pumps, condensers, etc.

SOUTH BETHLEHEM, PA.—Bids were asked until March 20 for furnishing electric lights for five years from June 20. C. C. Boyer, Chn., 404 Wyandotte St.

ANNAPOLIS, MD.—Peter J. Carlin & Co., 186 Remsen St., Brooklyn, N. Y., have been awarded the contract for the power house, etc., at the academy.

BALTIMORE, MD.—Baldwin & Pennington, 44 South St., are preparing plans for an annex to the power house of the United Rys. & Electric Co. The addition will be 100 x 100 ft., and will have hoilers and a 12,000-HP. engine.—Chas. F. Cassell, 404 Law Bldg., has completed plans for a combined store and power house, to cost about \$1,000,000, for Posner Bros., Howard and Lexington Sts. It is likely that work may soon be begun.

BALTIMORE, MD.—The Wallace Co., West New Brighton, N. Y., has been awarded the contract for a portable railway for the electric subway commission, at \$2,109. The contract for the electric plant at the Mount Royal pumping station has been let to Morton, Reed & Co., Baltimore, at \$5,490.

WILLIAMSPORT, MD.—Jos. L. Motter, of the committee, writes us that work will be begun on the plant as soon as it is possible to do so. Estimated cost, \$6,000. Geo. Thompson, Mayor.

PETERSBURG, VA.—The purchase of the street railways, electric light and water power companies located here was completed March 15, and a syndicate, of which Middendorf, Oliver & Co., German St., Baltimore, Md., are the managers, now own the properties. It is proposed to consolidate the companies into one corporation. The old companies are the Virginia Traction Co., the Piedmont Traction Co. and the Union Annonetator Co., the latter controlling the water power on that river for 80 miles. The new corporation will be known as the Southside Railway Co.

MOUNDVILLE, W. VA.—Plans for a plant for the state prison have been completed; estimated cost, \$6,000.

RAVENSWOOD, W. VA.—W. S. McKay and T. J. Moore have applied for separate franchises.

TARBORO, N. C.—An election will be held April 15 to vote on the question of issuing \$50,000 in bonds for the plant, water-works, etc. J. A. Weddell, Cv. Clk.

AUSTELL, GA.—Estimates are reported as wanted for a plant to be operated by water power. C. J. Shelverton, Mayor.

FORSYTH, GA.—The question of putting in a plant is again being considered, according to reports.

ROME, GA.—H. M. Smith, Cv. Engr., writes us that the plant is to be owned and operated by the city. Nothing definite has yet been decided upon.

BIRMINGHAM, ALA.—The Consolidated Electric Light Co. has let a contract for two engines of 600 HP. each to the Birmingham Machine & Foundry Co., and that for the boilers to the Birmingham Boiler Works. The improvements to the plant will cost about \$50,000.

EAUFALA, ALA.—The question of a city plant is reported again being considered.

DEFIANCE, O.—Bids are asked until March 30 for lighting the streets with 75 arc lights for five or 10 years. M. W. Steinsberger, Cv. Engr.—The city clerk writes us that the city will vote April 3 on the question of building a plant to cost \$25,000.

JACKSON, O.—Bids are asked until April 1 for purchasing the plant owned by the city and for furnishing the city with electric lights. The plant is out of repair and gives unsatisfactory service. M. D. Jones, Cv. Clk.

UHRIGSVILLE, O.—The committee, consisting of Councilmen Greenlee, Cooper and Ross, is securing information for a plant to cost \$16,000. C. A. Greenlee, Chn. Com., writes us that the question of issuing bonds will be voted upon in April.

CRAWFORDSVILLE, IND.—F. Hoffman, Cv. Engr., writes us that the council is considering the question of enlarging the plant. J. C. Hutton, Chn. Com.

EVANSVILLE, IND.—The Frank B. Rae Engineering Co., Fort Dearborn Bldg., Chicago, has been engaged to prepare plans for the proposed plant.

FORT WAYNE, IND.—The Jenney Electric Light & Power Co. has asked for a 50-year franchise.

SCHOOLCRAFT, MICH.—G. M. Hudson, Mayor, writes us that this place has voted against the proposition to put in a plant. The board wishes to grant a franchise and contract for lighting the town for 10 years with 25 arc lights.

DETROIT, MICH.—The public lighting commission has asked for an additional appropriation to put up 100 new arc lights and for new machinery to operate the plant.

ASHTON, ILL.—Geo. Schmidt, Mayor, writes us that nothing has been done towards securing a plant.

CHICAGO, ILL.—Bids are asked until 11 a. m., March 25, for supplying the department of electricity with the following: Two vertical high speed compound engines, the direct connected to shaft; 1,000 arc lamps series shunt, and 15 150-light arc belt driven dynamos. Edward B. Elliott, Cv. Electrician.

EDWARDSVILLE, ILL.—J. H. Tun and B. H. Richards have been awarded the contracts for building the new power house for the Edwardsville Electric Light Co.

ELROY, WIS.—This place will soon vote on the question of a city plant or for a franchise.

WATERTOWN, WIS.—The council has decided not to build a plant and has extended the franchise of the Watertown Electric Light Co. for five years from next May.

DES MOINES, IA.—The question of lighting the parks by electricity is being considered by the park commissioners.

KEOTA, IA.—Bids are asked until April 2 by the Star Oatmeal Co., Keota, Ia., for constructing a plant to cost about \$30,000. The plant will be operated by steam and will have a capacity of 600 or 700 incandescent lamps. The company is to pump the water and to light the tower. There will be required a 180-HP. Corliss engine, a high speed engine of 75-HP., two 70-HP. boilers, two 400-light dynamos, three-wire system, a pump of 200 or 250 gallons of water a minute, etc. Wm. J. Pugh, of Muscatine, Ia., may be addressed.

SEYMOUR, IA.—The question of issuing bonds for a plant will be voted upon March 27.

OSAKIS, MINN.—B. H. McCray has been granted a franchise for a plant. F. J. Herberger, Pres. Village.

SPARTA, MINN.—The question of building a plant is being considered, according to reports.

NORTHBEND, NEB.—This place will vote April 14 on the question of issuing bonds for a plant and water-works. Population, 1,300. J. H. Johnson, Mayor.

WYMORE, NEB.—A number of citizens propose to purchase the plant and property of the Wabaska Electric Co., which furnishes lights to this place and Blue Springs. If the plant is purchased the new owners will build a new power plant at Holmesville, about five miles up the river.

MAYVILLE, N. DAK.—Bids are asked until April 5 for constructing a plant and water-works, according to reports. Samuel Torgerson, Cv. Audr.

ABERDEEN, S. DAK.—The city auditor writes us that nothing definite has been done towards securing a plant.

FULTON, MO.—G. T. Grancey, Clk., writes us that this place voted Feb. 21 to issue \$10,000 in bonds. Of this amount \$4,000 is to be used in buying a new engine and repairs to the plant. Bids for the purchase of the bonds are invited.

KANSAS CITY, MO.—Bids are asked until March 23 for a system of conduits, wiring, etc., for the post office. O. L. Spaulding, Acting Secy. Treasury Dept., Washington, D. C.

LITTLE ROCK, ARK.—The Little Rock Light & Power Co. has been absorbed by the Consumers' Light & Power Co. G. B. Rose, Pres.; W. A. Badger, Gen. Mgr.

HILLSBORO, TEX.—It is stated that the council has granted a franchise for a plant.

SHERMAN, TEX.—Wm. Tolson, Supt., writes us that this city has sold \$44,000 of bonds, \$24,000 of which will be for extending the plant and water-works.

WAXAHACHIE, TEX.—It is stated that the Waxahachie Electric Light Co. has decided to use aluminum line wire in making its extensions, and has ordered 500 lbs. of aluminum wire. It will need several thousand pounds more for extensions in the spring.

SILVERTON, COLO.—John Casey, Mayor, writes us that a proposition to put in a plant will be submitted to the voters at the election next month. Population, 3,000.

SPOKANE, WASH.—D. L. Huntington, Secy. and Gen. Mgr. Washington Water Power Co., writes us as follows regarding the proposed addition to the plant: The company has let contracts for almost the entire work with the exception of the building. The enlargement consists in two 750-kw. direct current generators, running at a speed of 800 revolutions per minute, connected directly to the shaft of the turbines. One of these machines will be used for street railway power purposes, the other will be connected across the outside wires of the Edison three-wire system. The generators are being manufactured by the General Electric Co., and will be delivered in July. The water-wheels are two pairs of special McCormick turbines, manufactured by the S. Morgan Smith Co., York, Pa., and operated under a working head of 68 ft. It has not yet been decided what water power governor will be used, but the Lombard governor is receiving considerable attention. The new installation will be placed directly alongside of the present plant, and is designed in a manner to allow for enlargement along the same line of three or four times the capacity which is now being installed. The building will not be extended except as noted to cover the generating apparatus installed. This work will necessitate the lengthening of the dam and head gates, and the placing in position of a 10-ft. diameter steel flume, about 600 ft. long. It is hoped to have the plant in operation before the middle of next summer. It is proposed to install a 25-ton traveling crane. The switchboard appliances will be mounted on standard General Electric Co. panels, of Tennessee or Italian marble, and will consist of standard instruments, etc. In addition to this it is proposed to install total station wat. meters and total station ammeters, as the added machines will give an output in excess of the capacity of the instruments now in position. The engineering work has been done by J. B. Fiske and Mr. Huntington.

PRINEVILLE, ORE.—H. V. Gates, Hillsboro, Ore., has been granted a 15-year franchise for a plant and water-works; estimated cost, \$10,000. Work, it is stated, will begin in about 15 days.

LAKEPORT, CAL.—The Clear Lake Electric Power Co. has made application for a franchise permitting it to erect a line of poles and wire for the transmission of power along the county roads. Bids for the purchase of the franchise are asked by the county clerk until May 1.

NAPA, CAL.—Bids are asked until April 17 for the purchase of a 50-year franchise. H. H. Thompson, Cv. Clk.

SAN BERNARDINO, CAL.—It is stated that the Lytle Creek Light & Power Co., headed by Judge J. L. Campbell, proposes to develop 3,900-HP. in Lytle Creek Canyon this summer. The company has already expended over \$3,000 in tunnels, surveys and preliminary work. The water will be taken from the main channel at Miller's Narrows to a point near the Parrish Flap, where the drop will be sufficient to develop 1,500-HP. Judge Camp-

WEST HOBOKEN, N. J.—Bids are asked until March 23 for grading, etc., on Shippen St. J. P. McMabon, Clk.

WOODBURY, N. J.—The board of freeholders have appointed a committee to prepare plans for a road through Harrison and South Harrison township. Wm. M. Carter, Engr.

ERIE, PA.—B. E. Briggs, Cy. Engr., writes us that about nine or ten blocks will be paved with brick or asphalt. The appropriation committee is now working on appropriations for the coming year.

FRANKLINVILLE, PA.—A contract has been awarded to Quillian & Leary, South Amboy, N. J., for a gravel road from this place to the Cumberland county line.

PITTSBURG, PA.—Bids are asked until 2 p. m., March 23, for repairing asphalt streets for one year. E. M. Bigelow, Dir. Dept. Pub. Wks.—Reports state that a bill will be presented to the state legislature to authorize this county to issue \$3,000,000 of 3% road bonds.

READING, PA.—Bids are asked until March 30 for 1,650 sq. yds. of asphalt paving. S. S. Hoff, Cy. Engr.

SHARON, PA.—Francis F. Davis, Burgess, informs us that an ordinance will probably be passed to pave East state st., at a cost of about \$15,000. It is expected to have money enough from the regular taxes to pay the borough's share of \$5,000.

UNION CITY, PA.—Bids are asked until April 3 for brick paving on Main St. J. E. Gillette, Borough Secy.

STATESVILLE, N. C.—C. H. Armfield, County Atty., writes us that the measure allowing Iredell county to issue \$100,000 of bonds for improvements to public roads failed to pass the legislature. Lack of time to get the measure through before adjournment of the legislature is the reason assigned. The proposed improvement is postponed until a bill can be passed authorizing issue of bonds, by the next legislature.

WHEELING, W. VA.—Bids are asked by the board of public works until March 25 for furnishing paving brick, curbing and sewer pipe during 1899. W. H. Hornish, Clk.

ATHENS, GA.—Bids are asked until April 1 for furnishing Belgiau blocks, brick, stone curbing, terra cotta piping, sewer castings and cement. J. W. Barnett, Cy. Engr.

ROME, GA.—H. M. Smith, Cy. Engr., informs us that the city is now in the market for a rock crushing outfit, and engine for macadamizing, etc.

GREENVILLE, MISS.—An election will be held April 4 to vote on the question of issuing \$50,000 of 5% bonds for paving, according to reports.

NEW ORLEANS, LA.—The council proposes to pave the sidewalks on portions of 17 streets. W. R. Brashear, Clk.

HARBORSVILLE, KY.—The Commercial Club has asked the council to call an election to vote on the question of issuing \$10,000 of bonds for macadamizing. The proposition will probably carry, according to reports.

LOUISVILLE, KY.—Bids are asked by the board of public works until 12 m., March 24, for brick paving and curbing on five alleys. Thos. P. Craig, Secy.

AKRON, O.—Bids are asked until April 1 for 1,600 sq. yds. of brick paving on Maiden Lane Alley, and until April 15 for paving Maple St. with brick, 11,000 sq. yds. and Crosby St. with brick or asphalt, 9,100 sq. yds.—John W. Payne, Cy. Engr., writes us that legislation is under way for the paving of Market St., Summit St., Fay St., Kirkwood St., Buckeye St. and Johnston St.

BELLEFONTAINE, O.—Bids are asked until 12 m., March 28, for 1,970 sq. yds. of brick paving, and 4,888 lin. ft. of curb and gutter, on three streets. We are informed that the advertisement stating that bids were asked until April 28 was a mistake. M. J. Nichols, Cy. Clk.

BRIDGEPORT, O.—Bids are asked by the village clerk until April 17 for paving with brick, for furnishing brick, for paving with asphalt, for curbing and for filling; appropriation, \$9,778. H. G. Hix & Hearue, Engrs., 1400 Chapline St., Wheeling, W. Va.

CAMBRIDGE, O.—O. M. Hoge, Cy. Engr., has been directed to prepare plans for the paving of portions of Stubenville Ave., East and West Eighth Sts., Fourth and Fifth Sts.; estimated quantity, 18,000 sq. yds.

CANTON, O.—Lawrence and Mahoning Aves. will be paved with brick.

CELINA, O.—J. S. Metzner, Mayor, writes us that the election held March 6 to vote on the proposition of issuing \$75,000 of bonds was carried by a vote of 434 to 73.

SALERON, O.—Bids are asked until April 12 for brick paving in seven streets, for curbing and for filling; appropriation, \$19,778. H. G. Hix & Hearue, Engrs., 1400 Chapline St., Wheeling, W. Va.

TIFFIN, O.—Bids are asked until April 1 for furnishing the material and for brick paving in three alleys. J. B. Krenfried, Cy. Clk.

TOLEDO, O.—Bids are asked until April 17 for furnishing the material and for block paving on Broadway. Wm. O. Holst, Cy. Clk.

VAN WERT, O.—It is proposed to pave the main business street with brick, a distance of three-fourths of a mile.

WAVERLY, O.—H. W. Overman, Cy. Engr., writes us that a proposition to issue \$4,000 of bonds for the purpose of extending and improving Lock and Second Sts. will be submitted to a vote at the coming April election.

YOUNGSTOWN, O.—Bids are asked until April 8 for furnishing the material and for laying sidewalks and crosswalks. H. W. Calvlu, Clk.

BEDFORD, IND.—Bids are asked until April 10 for constructing three gravel roads. John M. Gainey, County Audr.

CRAWFORDSVILLE, IND.—Bids are asked until April 10 for about 30,000 sq. ft. of cement sidewalk. F. Hoffman, Cy. Engr.

LAFAYETTE, IND.—Bids are asked until March 27 for improving one alley, and until April 10 for 40,000 sq. yds. of sheet asphalt or asphalt block paving and stone curbing, on four streets. W. K. Eldridge, Cy. Engr.; Jas. K. Risk, Cy. Clk.

MICHIGAN CITY, IND.—About three miles of brick and asphalt paving will be constructed this season, according to reports. H. M. Miles, Cy. Engr.

PORTLAND, IND.—Bids are asked until April 17 for constructing 25,000 sq. yds. of brick paving. A. J. Frost, Engr. and Cy. Clk.

RISING SUN, IND.—Bids are asked until April 17 for 16 miles of gravel and macadam roads; estimated cost, \$46,000. Robt. C. Nelson, County Audr.

SAGINAW, MICH.—City Clerk Davis has been instructed by the board of public works to ask bids for macadamizing on Genesee Ave.

PEKIN, ILL.—Reports state that 4,000 sq. yds. of paving is contemplated. I. R. Siebert, Cy. Engr.

PEORIA, ILL.—The Central Construction Co. has been awarded a contract for the brick paving of Adams and Elizabeth Sts., according to reports.

BELOIT, WIS.—It is reported that the city is contemplating the construction of about 8,000 sq. yds. of brick paving. F. E. Swope, Cy. Engr.

MARIETTA, WIS.—Bids are asked by the board of public works until April 7 for cedar block paving, grading and stone retaining wall; estimated cost, \$5,000. Harry McCallum, Cy. Engr.

DES MOINES, IA.—Bids are asked by the board of public works until April 10 for brick paving and Portland cement curbing on certain streets.

OTTUMWA, IA.—The question of constructing about two miles of brick and asphalt paving is being considered, according to reports. L. C. Brady, Asst. Cy. Engr.

OMAHA, NEB.—Ordinances have been passed to pave four blocks of Capitol Ave.

WAUKESHA, WIS.—Bids are asked by the board of public works until April 14 for furnishing the material and for constructing about 14,000 sq. yds. of brick paving, 4,850 cu. yds. of grading and 5,750 lin. ft. of limestone curbing, as stated in our advertising columns.

KANSAS CITY, MO.—Bids are asked until 11 a. m., March 25, for furnishing the material and for grading and brick paving on certain streets. Henry A. Wise, Cy. Engr.—Park Engineer Kessler has submitted to the park board a plan of the proposed Oak St. Boulevard.

ST. LOUIS, MO.—Bids are asked until March 31 for reconstructing 27 alleys, and until April 7 for improving 25 alleys. Root E. McMATH, Pres. Bd. Pub. Improvements.

PUEBLO, COLO.—A bill has been passed by the legislature to permit the city to pave certain streets.

COLFAX, WASH.—Bids are asked until April 4 for furnishing six road machines. John F. Corner, County Audr. and Clk.

QUEBEC, QUE.—W. D. Ballalrag, Asst. Cy. Engr., writes us that bids were asked until March 22 for furnishing broken stone, macadam, stone curb and stone and brick paving; also for retaining walls, iron gully wells, etc. Bids will be asked later for asphalt blocks.

ST. LOUIS, QUE.—Bids are asked until March 27 for the purchase of a steam road roller of about 10 tons. A. F. Vincent, Secy. and Treas., 1225 St. Dominique St.

MANUFACTURING PLANTS.

FORESTVILLE, CONN.—The movement shop of the E. N. Welch Clock Co. was destroyed by fire March 7. Reported loss, about \$100,000; insurance, \$60,000.

MOUNT JOY, PA.—The works of the Grey Iron Casting Co. were destroyed by fire March 11. Reported loss, \$65,000; partially insured.

PHILADELPHIA, PA.—The workshops of the Charles Scott Spring Co. were destroyed by fire March 13. Reported loss, \$150,000; insurance, about \$100,000.

JACKSONVILLE, FLA.—The plant of the Cumner Lumber Co. was destroyed by fire March 13. Reported loss \$20,000; partially insured.

Bids Received at Washington, D. C., March 11, 1899, for Constructing a Reservoir near Brightwood.

Table with columns for Bidder, Subject to retention of 10%, and Not subject to retention of 10%. Includes items like Excavation, Concrete, Coping, etc.

*If Hummelstown stone is used in gate-house the bid is reduced \$1,900.

CHICAGO, ILL.—It is reported that the Link Belt Machinery Co., which has recently increased its capital stock from \$250,000 to \$375,000, will erect a new wrought iron foundry.—Reports state that the Schwarzschild & Sulzberger Co., of Kansas City and New York, will erect a new packing-house in Chicago. The new house will be of the most modern design and will be operated by electricity; estimated cost, \$2,000,000.

MARYSVILLE, CAL.—The Marysville woolen mill has been damaged by fire. Reported loss, \$125,000; insurance, \$71,400.

BIG BUG, ARIZ.—A fire at this place has destroyed the stamp mill and hoist of the Red Rock Mining Co.; reported loss, about \$25,000.

MANILA, PHILIPPINES.—Bids are asked until March 30 for the erection of a large refrigerating plant and ice-making machine at Manila, capable of turning out 140 tons of ice a day. Estimated cost, \$300,000. Col. J. G. C. Lee, Q. M., 415 Putnam Bldg., Chicago, Ill.

MISCELLANEOUS CONTRACTS.

SUPPLIES.—Toronto, Ont.—Bids are asked until March 27 for general supplies. John Shaw, Chn. Bd. of Control.

FIRE ALARM SYSTEM.—Flemington, N. J.—It is reported that the town authorities are considering the question of installing a new fire alarm system.

HARDWARE, ETC.—New York, N. Y.—Bids are asked by the department of public charities, East 28th St., until March 27, for furnishing hardware, oils, etc.

WHARF.—Montecito, Cal.—The Santa Barbara County Club has awarded a contract to John Williams, at \$2,750, for a footpath wharf 288 ft. long on iron piles.

STORAGE WHARF.—Boston, Mass.—The state has awarded a contract to Geo. A. Cahill, at \$131,000, for constructing a storage wharf at South Boston.

DREDGES.—Petersburg, Va.—The Virginia Dredging Co. has let contracts for two dredges, each 136 ft. long, 36 ft. wide and 15 ft. deep, to cost about \$17,000.

BONDS.—Cleveland, O.—Bids are asked by the board of park commissioners until April 5 for the purchase of \$500,000 of 4% park bonds, according to reports.

EXCAVATING.—New Orleans, La.—Bids are asked until April 22 for excavating the main outfall canal; bond, \$5,000. A. Schreiber, Secy. Drainage Comm., City Hall.

EXTENDING TUNNEL, ETC.—Ontario, Cal.—Bids are asked by the San Antonio Water Co. until April 8 for constructing an extension to the Bodenhamer tunnel, a bulkhead in the tunnel and a shaft near 21st St. B. C. Shepherd, Secy.

WHARF.—Martinez, Cal.—Patrick Manian will apply to the board of supervisors, May 1, for permission to construct a wharf in the straits of Carquinez.

PIER.—Atlantic City, N. J.—Geo. O. Rehffuss & Spencer Roberts, Arcbs., 1017 Harrison Bldg., Philadelphia, have made plans for a steel pier, 40 x 1,500 ft., for the Auditorium Pier Co.

DAM.—Waterbury, Conn.—Bids are asked until March 27 for building a small stone dam, using 15 cu. yds. of masonry, and for laying 700 ft. of 15-in. drain pipe. R. A. Cairns, Cy. Engr.

PIERS.—Norfolk, Va.—It is reported that the Norfolk-Hampton Roads Co. has awarded a contract, at \$75,000, to Sanford & Brooks, Baltimore, Md., for constructing piers on 15,000 ft. of water front.

DOCK AND DREDGING.—Sarnia, Ont.—The Erie & Huron Steamboat Co. has awarded a contract to John Ginzel, Wyandot, Mich., for a slip dock, and to Geo. Lackerbie, Detroit, Mich., for dredging.

CULVERT AND CEMENT.—Pittsburg Landing, Tenn.—Bids are asked by the Shiloh Battlefield Commission until April 6 for furnishing about 1,700 ft. of 24 to 12-in. culvert pipe and 100 bbls. of Louisville cement.

PIPE CULVERTS.—Chicago, Ill.—Bids are asked until April 18 for constructing nine pipe culverts under the feeder of the Illinois & Mississippi Canal. Maj. W. L. Marshall, U. S. Engr., 1637 Indiana Ave.

BOLTS, NUTS, BOILER, ETC.—New York, N. Y.—Bids are asked by the department of correction, 148 East 20th St., until April 4, for furnishing a hot water pressure tank, bolts, nuts, flat iron, etc., and for installing a new boiler in the steamer "Wm. L. Strong."

CONCRETE WORK, ETC.—Marquette, Mich.—Bids are asked until April 17 for furnishing natural cement, Portland cement, broken stone, iron and hardware supplies, etc., for the concrete superstructure of the breakwater, as stated in our advertising columns. Maj. Clinton B. Stars, U. S. Engr., Duluth, Minn.

DOCKS AND WHARVES.—Tacoma, Wash.—It is reported that the Great Northern Ry. Co. will enlarge its wharfage facilities, extend the tea sheds north 600 ft. and south 100 ft., and build a story to 700 ft. of the ocean shed, and construct a passenger depot and the wharf. C. S. Bibler, Div. Engr., Tacoma.

DITCH.—Wapakoneta, O.—Bids are asked until March 29 for constructing about 3,100 ft. of 24 to 12-in. pipe, etc., in the New Bremen ditch, to cost about \$1,200, and until April 15 for deepening and widening Prairie Creek by excavating about 30,000 cu. yds., at a cost of about \$3,400. Samuel Craig, Engr., Wapakoneta.

CONTRACT PRICES.

RESERVOIR.—Washington, D. C.—The following bids were received by the district commissioners March 11 for constructing a reservoir near Brightwood, as advertised in Engineering News:

Table showing contract prices for various items like Excavation, Concrete, Coping, etc., with columns for quantities and prices.

WATER PIPE.—Washington, D. C.—The district commissioners received the following bids March 11, 1899, for furnishing cast-iron water pipe: National Foundry & Pipe Works, \$23.30 a ton; Camden Iron Works (accepted), \$21.08; McNeal Pipe & Foundry Co., \$24.40.

PAVING.—Saginaw, Mich.—H. E. Terry, Cy. Engr., informs us that the following bids were received March 17, 1899, for asphalt and brick paving; the paving is on Court St., from M. C. R. R. to Bay St.:

Table showing paving contract prices for items like Excavation, Brick paving, Asphalt paving, etc., with columns for quantities and prices.

The same submitted bids for paving in Hamilton St., from Court to Mackinaw St., at the same prices. The quantities are 2,000 cu. yds. of excavation; 1,800 yds. of brick paving; 3,860 yds. of asphalt paving; 2,200 ft. of curbstone, reset, 135 rods of tile drain; 1,600 ft. of protection timber. Totals: Barber company, \$10,085; Alcatraz company, \$10,657; F. E. Cole, \$10,856.

SUPPLIES.—Detroit, Mich.—The following bids were received by the board of public works March 13, 1899, for furnishing supplies for the year: Lumber—Sallotte & Ferguson, 2-in. Norway pine, \$18.64 a M. ft.; 2 1/2-in. Norway pine, \$19.64; common lumber, \$14.36; white pine, \$24.86; hemlock plank, \$14.24; hemlock scantling, \$13.64. C. W. Restricket, 2-in. Norway pine, \$16.22; 2 1/2-in. Norway pine, \$18.57; common lumber, \$12; hemlock plank, \$12.33; hemlock scantling, \$11.33; resurface sides, 50 cts. each. Cement—Milwaukee Cement Co., 60 cts. a bbl., 8 cts. to be allowed for empty sacks; Western Cement Co., 68 cts. a bbl., 10 cts. for empty sacks; H. Houghton, 53 1/2 cts. a bbl., 5 cts. for empty sacks; F. B. Stevens, 56 1/2 cts. a bbl., 6 cts. for sacks. Receiving basin stone—E. J. Delehanty, \$19 each, complete; Orman & Co., Euclid \$19.84, Elyria \$21.04 each. Iron castings and fountains—The Co-operating Foundry Co., \$1.30 round lock covers, \$2.25 round lock gates, \$1.40 iron castings, \$29 iron horse fountains. This company will allow \$15 a ton for the city's scrap iron. Last year \$26,000 was expended for lumber, \$22,000 for cement, \$4,200 for sewer gates, \$7,800 for basins.

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