

CONTENTS OF SUPPLEMENT.

PERSONAL 57
 Obituary 57
 ENGINEERING SOCIETIES 57
 Coming General Meetings 57
 Coming Local Meetings 57
 NEW PUBLICATIONS 58
 Trade Publications 58
 CONSTRUCTION NEWS:
 Condensed List of Contracts Pending 58
 Railways 59
 Street and Electric Railways 59
 Street Light and Power 60
 Electric Light and Power 60
 Bridges 60
 Buildings 61
 Water-Works 62
 Sewerage 62
 Garbage Disposal and Street Cleaning 62
 Streets and Roads 62
 Streets and Roads 62
 Manufacturing Plants 63
 Miscellaneous Contracts 63
 Foreign Contracts and Export News 63
 Contract Prices 64
 INDUSTRIAL NOTES 64

PERSONAL.

Mr. R. J. Hoffman has been appointed Mechanical Engineer of the Atchison, Topeka & Santa Fe R. R., with headquarters at Topeka, Kan.
 Mr. William Ashton, who has been Division Engineer of the Union Pacific Ry., with offices at Denver, Colo., for 13 years, has been appointed Chief Engineer of the Oregon Short Line, with headquarters at Salt Lake City, Utah.
 Mr. Alonzo H. Kimball was confirmed as Street Commissioner of Medford, Mass., on Feb. 13. Mr. Kimball is the newly-elected President of the Massachusetts Highway Association, following a service of two years as director therein.

Mr. C. L. Harrison, formerly Division Engineer of the Lockport Division of the Chicago Drainage Canal, and more lately one of the engineering staff of the Deep Waterways Commission, has sailed for Panama accompanied by Messrs. H. H. Lotter, A. A. Conger and R. C. Smith, who were also of the engineering staff of the Deep Waterways Commission. Mr. Harrison and his associates will be employed on the Panama canal surveys of the Isthmian Canal Commission.

Mr. T. Howard Barnes, M. Am. Soc. C. E., has resigned as City Engineer of Medford, Mass., the resignation to take effect May 1, in order to engage again in private practice, with office No. 7 Water St., Boston, Mass. Mr. Barnes was primarily engaged in Medford to design and construct a system of sewerage (Mr. Rudolph Hering, M. Am. Soc. C. E., consulting engineer), subsequently becoming City Engineer upon creation of that office. During his incumbency the high service water supply was installed, surface drainage improvements carried out, and complete maps of the city for record and assessing purposes prepared; also studies for abolition of grade crossings and new bridges.

OBITUARY.

Mr. Charles Starker, a prominent merchant and banker of Burlington, Ia., died on Feb. 9, aged 74 years. Mr. Starker was born in Stuttgart, Germany, in March, 1826, and came to America in 1849. He was a graduate of the Stuttgart Polytechnic Institute's engineering and architectural department. At the age of 22 years he was the first assistant engineering architect to his uncle, who was the chief engineer in charge of the building of the Donau-Main River Canal. The revolution of 1848 in Germany stopped work on this great enterprise, and in the following year Mr. Starker left Germany and came to America. For a number of years after coming to America Mr. Starker practiced his profession of architecture.

ENGINEERING SOCIETIES.

COMING GENERAL MEETINGS.

ASSOCIATION OF ONTARIO LAND SURVEYORS.
 Feb. 27 to Mar. 1. Annual meeting at Toronto, Can. Secy., A. J. Van Nostrand, Yonge St. Arcade, Toronto, Can.
 AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION.
 March 14 to 16. First annual convention at Chicago, Ill. Secy., L. C. Fritch, Washington, Ind.
 INTERNATIONAL MINING CONGRESS.
 June 19 to 23. Annual meeting at Milwaukee, Wis. Secy., Irwin Mahan, Sentinel Building, Milwaukee, Wis.

COMING LOCAL MEETINGS.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.
 Feb. 28. At New York city. Secy., Ralph W. Pope, 26 Courtlandt St., New York city.
 ENGINEERS' CLUB OF MINNEAPOLIS.
 March 1. Secy., H. E. Smith, 1620 S. E. 4th St., Minneapolis, Minn.
 CHICAGO ELECTRICAL ASSOCIATION.
 March 2. Secy., Cloyd Marshall, 1310 Monon Bldg., Chicago, Ill.
 TECHNICAL SOCIETY OF THE PACIFIC COAST.
 March 2. At San Francisco. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.
 ENGINEERS' CLUB OF COLUMBUS.
 March 3. Secy., H. M. Gates, 12 1/4 North High St., Columbus, O.
 ENGINEERS' CLUB OF PHILADELPHIA.
 March 3. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.
 ENGINEERS' SOCIETY OF WESTERN NEW YORK.
 March 5. At Buffalo. Secy., H. J. March, Library Bldg., Buffalo, N. Y.
 AMERICAN SOCIETY OF CIVIL ENGINEERS.
 March 7. At New York. Secy., C. W. Hunt, 220 W. 37th St., New York city.
 ENGINEERS' CLUB OF ST. LOUIS.
 March 7. Secy., Richard McCulloch, 2401 N. Spring Ave., St. Louis, Mo.

WESTERN SOCIETY OF ENGINEERS.
 March 7. At Chicago, Ill. Secy., Nelson L. Litten, Monadnock Bk., Chicago, Ill.
 ENGINEERING ASSOCIATION OF THE SOUTH.
 March 8. At Nashville, Tenn. Secy., H. M. Jones, 1000 Broad St., Nashville, Tenn.
 BROOKLYN ENGINEERS' CLUB.
 March 8. At Brooklyn, N. Y. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.
 ST. LOUIS RAILWAY CLUB.
 March 9. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.
 LOUISIANA ENGINEERING SOCIETY.
 March 12. At New Orleans, La. Secy., J. F. Coleman, 712 Union St., New Orleans, La.
 CIVIL ENGINEERS' CLUB OF CLEVELAND.
 March 13. Secy., W. H. Searles, Case Library Bldg., Cleveland, O.
 DENVER SOCIETY OF CIVIL ENGINEERS.
 March 13. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.
 NEW ENGLAND RAILROAD CLUB.
 March 13. At Boston. Secy., Edw. L. Jones, P. O. Box 1158 Boston, Mass.
 NORTHWEST RAILWAY CLUB.
 March 13. At Minneapolis. Secy., T. A. Fogue, Soo Line Bldg., Minneapolis, Minn.
 PACIFIC COAST RAILWAY CLUB.
 March 17. At San Francisco, Cal. Secy., E. A. Gilbert, West Oakland, Cal.
 MONTANA SOCIETY OF CIVIL ENGINEERS.
 March 17. At Helena. Secy., Albert S. Hovey, Helena, Mont.
 ENGINEERS' CLUB OF CINCINNATI.
 March 20. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.
 ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
 March 20. At Pittsburgh. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburgh, Pa.
 WESTERN RAILWAY CLUB.
 March 20. At Chicago. Secy., J. W. Taylor, 667 The Rookery, Chicago, Ill.
 BOSTON SOCIETY OF CIVIL ENGINEERS.
 March 21. Secy., S. E. Tinkham, City Hall, Boston, Mass.
 FRANKLIN INSTITUTE.
 March 21. At Philadelphia, Pa. Secy., Wm. H. Wahl, 138 Seventh St., Philadelphia, Pa.
 NEW YORK RAILROAD CLUB.
 March 22. At New York city. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

THE MINNESOTA SURVEYORS' AND ENGINEERS' SOCIETY.—This society held its annual meeting at the court house in Minneapolis Feb. 20. The program was as follows: "Paints for Highway and Other Bridges," Max Toltz, Engineer of Bridges, etc., Great Northern Railway; "Stability of Bench Marks," George W. Cooley; "Water Levels," W. E. Stoopes; "Farm Drainage," T. A. Hoverstad; "Dredging in Duluth Harbor," T. F. McGilvray; "Dredging and Perpetuating Corners of the United States Government Survey," O. S. Anderson; "Macadamized Roads," Gates A. Johnson, supplemented by George W. Cooley; "Good Roads," Professor W. R. Hoag; "County Surveyors' Problems," N. Y. Taylor.

LOUISIANA ENGINEERING SOCIETY.—The regular monthly meeting of the society was held on Feb. 12. There was an interesting informal discussion of levee building by machinery. Eight new members were elected and ballots on eight applications for membership were ordered. This will increase the active resident members to over 60. The officers of the society for 1900 are as follows: Henry J. Maloche, Electrical Engineer, President; Alf. F. Theard, Assistant Engineer, Drainage Commission, Vice-President; Gervais Lamhard, Engineer Orleans Levee Board, Secretary; Walter H. Hoffmann, of the Board of State Engineers, Treasurer; Frank M. Kerr, of the Board of State Engineers, T. H. Tutwiler, Engineer New Orleans City Road, and E. D. Try, Mechanical Engineer, Directors; Thos. L. Raymond, First Assistant Engineer Drainage Commission, Representative on the Board of Directors of the Association of Engineering Societies.

STREET RAILWAY CONGRESS.—A street railway congress will be held at Paris in September, in connection with the series of congresses arranged by the administration of the Paris Exhibition. The list of subjects for the reports and discussions is as follows: (1) Fares on city tramways (or street railways); (2) Results of the application of electric traction in regard to traffic, maintenance expenses and net earnings; (3) Advantages and disadvantages of narrow and standard gage tracks for electric railways; (4) Central power station plant; (5) Current distribution for long lines by the continuous, alternating and polyphase systems; (6) Cast-welded joints; (7) Storage batteries for electric traction; (8) Heating street railways and light railways, as passenger and mixed trains; (9) Advantages of operating secondary railways by the companies owning them or by the trunk lines with which they connect; (10) The adoption of a uniform system for estimating the power of dynamos and motors; (11) Brakes for street railway cars operated by mechanical traction. The congress will be held under the auspices of the International Tramway Union, and will form the biennial meeting of that association.

ENGINEERING ASSOCIATION OF THE SOUTH.—The regular meeting of the association was held Feb. 8, at Nashville, Tenn. Communications from several parties as to the formation of local societies as branches of the association were read and discussed, the outcome of which was the appointment of a committee of three members to consider the subject and make such recommendations as they considered most wise at the next meeting. Mr. W. M. Leftwich, Jr., City Engineer of Nashville, Tenn., presented a paper on "The Approaches to the Viaducts on Church and Broad Sts." Maj. E. C. Lewis, of Nashville, Tenn., gave a comparative study of the "Nicaragua and Panama Canal Routes." The conditions existing at each location were described; the difficulties to be overcome and the advantages after completion were compared; the writer's conclusion being that the facts were favorable to the com-

pletion of the Panama Canal. The main points justifying this view being, the bed of the canal would be at a much less height above the sea-level, necessitating fewer locks; deep harbors of a permanent character were at the termini; length of the canal was far shorter, affording quick passage of ships, and the canal already being about half completed with all necessary equipment for its completion on the ground. A lively discussion of the subject followed. Mr. Lodge, of South Pittsburg, adding some very interesting facts from a personal visit and inspection of the Panama Canal. H. M. Jones, Secy.

NEW ENGLAND WATER-WORKS ASSOCIATION.—The February meeting of the association was held at Young's Hotel, Boston, Feb. 14. As usual, the business session was preceded by a lunch, to which about 80 members and visitors sat down at 1 o'clock. After the cigars were lighted the meeting was called to order by President Byron I. Cook, of Woonsocket, R. I., and seven new active members were elected. The first paper was presented by Dr. George A. Soper, of New York city, and was entitled "The Ozonization of Water." The paper contained nearly the same matter as the one by Dr. Soper which was published in Engineering News of Oct. 19, 1899, but the discussion brought out some new points. An abstract of this discussion is given elsewhere in this issue.

Mr. John L. Howard, Assoc. M. Am. Soc. C. E., Assistant Engineer Metropolitan Water-Works, followed with a paper entitled "The Construction of the Fells Reservoir for the Metropolitan Water-Works." This reservoir has an area of about 8 1/2 acres, and is located in the Middlesex Fells Reservation, about six miles north of Boston. It occupies a depression on the top of a rocky hill, from which all the muck was removed, and where it was only necessary to build five short dams, having an aggregate length of less than 1,000 ft., to complete the basin. The bottom of the hole was refilled to a practically uniform level with clean material, upon which a concrete floor was laid, and as the slopes of the dams were also paved with concrete, the water can come in contact with only rock or concrete. Some details of the cost of the reservoir, and a comparison with the engineer's original estimates were given.

Dr. F. S. Hollis, Biologist of the Metropolitan Water-Works, said in discussion that it had been a part of his duty to make examinations of the water from this reservoir from the time it was first filled, and he had found it uniformly lower in color and organisms than the water which was pumped into it. A brief description of this reservoir was given in our issue of Oct. 13, 1898, under "Notes Awheel in Boston and Vicinity."

The last paper, entitled "Cement-Lined Service Pipe," with a brief discussion of "Lead Poisoning Resulting from the Use of Lead for Service Pipe," was then read by Mr. Fayette F. Forbes, Superintendent of the Brookline Water-Works. An abstract of this paper and the discussions is given elsewhere in this issue.

NEW PUBLICATIONS.

THE WATER-WORKS OF EUROPE.—II. The European Continent, III. London and Liverpool. Compiled for the City Councils of Philadelphia by the Philadelphia Commercial Museum. Philadelphia: As above. Paper; 6 x 9 ins.; pp. 41 and 50, respectively.

The works described in the pamphlet devoted to the Continent of Europe are: Paris, Florence, Moscow, Vienna, Munich, Frankfurt-on-the-Main, Geneva and Zurich. The descriptions seem to have been prepared with care and are handy sources of reference.

NATURAL AND ARTIFICIAL FOREST RESERVOIRS IN THE STATE OF NEW YORK.—By Geo. W. Rafter, Consulting Engineer. Paper; 8 x 12 ins.; pp. 372-437 of the "Report of the Commissioners of Fisheries, Game and Forests" of the State of New York; illustrated. Address the author, at Rochester, N. Y.

The general subject of water storage in relation to water power and the natural water resources of the state, are discussed by the author; also the relation of forests to stream flow. The paper also contains a description of the Ludian River dam and reservoir, condensed from the articles by Mr. Rafter in our issue of May 18, 1899.

CENTRAL STATES WATER-WORKS ASSOCIATION.—Proceedings of the Third Annual Convention, Cincinnati, Sept. 5-7, 1899. Jos. J. Pater, Editor. Paper; 6 x 9 ins.; pp. 90; illustrations. Hamilton, O.: John Fisher, Secretary.

Abstracts of some of the papers read at this convention were given in Engineering News for Sept. 14 and 21, 1899. Some of the other papers were as follows: One describing briefly a simple alarm to indicate the water level in a stand-pipe, by H. C. Stillwell; "Efficiency of Water-Works Pumping Engines," by Lehman B. Hart; "Driven Wells and their Proper Treatment," by Jaa. B. Maxwell; "Sanitary and Chemical Purification of Water Due to Softening," N. O. Goldsmith; "Brief Description New Cincinnati Water-Works," G. Bouscaren; "Informal Talk on Pneumatic Work," D. E. Moran; "Electrolysis," F. A. Davis.

THE GAS FIGHT IN LOUISVILLE, KY.—Paper; 6 x 9 ins.; pp. 47. Louisville, Ky.: The Kentucky Heating Co.

This pamphlet purports to show both sides of the contest now waging between the Louisville Gas Co. and the Kentucky Heating Co. The latter company sells natural gas, supplemented by artificial gas in the winter, primarily for fuel. Since the advent of incandescent burners the fuel gas has been used, in some cases, for lighting purposes. The old company claims to have "the exclusive privilege for the manufacture and sale of illuminating gas for illuminating and heating purposes" and is seeking to prevent the new one from supplementing its natural gas with artificial, and from selling any gas for lighting

purposes. The case is further complicated by the fact that the city owns one-fourth of the stock of the Louisville Gas Co. and elects four-ninths of the directors.

THE OHIO MINING JOURNAL.—Official organ of the Ohio Institute of Mining Engineers. No. 20, Proceedings of the Meetings of Jan. 20-22, 1897, and June 15-18, 1897. No. 27, Proceedings of the Meetings of Jan. 19-21, 1898, and Aug. 2-4, 1898. Editor, R. M. Haseltine, Secretary and Treasurer, Columbus, O. Paper, 8 1/2 x 6 ins.; pp. 160 and 142; illustrated.

Contents: Address of President F. A. Ray; Compressed Air Locomotives, E. P. Lord; The Gyandott, West Va., Coal Fields, And. Roy; Mine Fires and the Mode of Extinguishing Them, John Stobs; Mine Maps, C. V. Martin; Fan vs. Furnace Ventilation, Wm. Clifford; The Jumbo Auger, F. W. Fowler; Adaptation of Multiphase Alternating Current System of Power Transmission to Mining Apparatus, C. R. Thomas; A Tramp's Visit to S. W. Colorado and N. W. New Mexico, J. G. Chamberlain; Wastage of Coal, W. H. Jennings; Extravagant Mining, James P. Davis; The Wastage of Our Coal Fields, Dr. Ed. Orton; The Certified Mine Boss, F. C. Keighley; Effusion of the Poet Laureate, Capt. J. L. Morris; Snap Shots About Mines of England and South Wales, E. D. Haseltine; Long Wall Advancing, Its Application to Ohio Mines, Ed. Jones; What We Pay For, F. C. Keighley; Eminent American Geologists, J. L. Morris; Progress of Coal Unloaders During 1897, Wm. B. Hanlon; The Iscr vs. the Waser, J. S. Doe; Some of the Conditions Affecting the Designing of Motors for Mining Purposes, Prof. F. C. Caldwell; Fire in the Sunday Creek Coal Co.'s Mine No. 10, Ed. H. Cox; The Practical Part of Electrical Haulage, D. C. Thomas; Gases Met with in Mines, their Specific Gravity, Wm. Rainston; Surface Plants of Bituminous Collieries, W. G. Wilkins; The Cost of Power in Electric Mining, Alex. Palmros; Geology of the Jackson Shaft Coal, Andrew Roy.

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 5 ins., 6 x 9 ins., and 9 x 12 ins.

LAUNDRY MACHINERY.—The F. M. Watkins Co., Cincinnati, O. Paper; 11 x 7 ins.; pp. 86; illustrated.

LEATHER WASHERS AND PACKING.—Detroit Valve & Washer Co., Detroit, Mich. Paper; 4 x 6 ins.; pp. 15; illustrated.

This is a priced catalogue of the various leather parts entering into plumbing and other pipe and valve work.

FLUSHMETERS FOR WATER CLOSETS AND URINALS.—The Kenny Co., 72 Trinity Place, New York. Paper; 6 x 6 ins.; pp. 12; illustrated.

This is a "partial and typical list of installations" of this system during 1890.

STONE PLANING MACHINES.—Lincoln Iron Works, Rutland, Vt. Paper; 9 x 6 ins.; pp. 15; illustrated.

We here have illustrated and described the several types of machines made for planing stone, together with their dimensions, peculiarities, foundation plans, etc.

GENERAL CONTRACTORS.—B. F. Sweeten & Son, Cooper St. Wharf, Camden, N. J. Paper; 10 1/2 x 7 1/2 ins.; pp. 34; illustrated.

By photographs this firm illustrates examples of work performed by them, in bridge building, street paving, factory building, sewer construction, etc.

MECHANICAL FILTERS.—The Continental Filter Co., 35 Wall St., New York city. Paper; 9 x 6 ins.; pp. not given; illustrated.

This pamphlet describes gravity and pressure filters and also the facilities for sedimentation provided for waters carrying large amounts of suspended matters.

WIRE FENCE.—Union Fence Co., De Kalb, Ill. Paper; 6 x 3 1/4 ins.; pp. 41; illustrated.

This is a wire fence of peculiar design, with the horizontal strands tied together in different ways, as shown. It is intended for making poultry, field, lawn and cattle fences. Dimensions, prices, methods of setting, etc., are given in full.

SHEET IRON.—W. Dewees Wood Company, McKeesport and Pittsburg, Pa. Paper; 7 x 5 ins.; pp. 29; illustrated.

This beautifully illustrated catalogue shows the processes of making Wood's patent planished sheet iron; gives statistics, standard gages and sizes furnished, both for sheet and locomotive jacket iron, and concludes with some tables very useful to the consumer of sheet iron.

WELL AND PUMPING MACHINERY.—The American Well Works, Aurora, Ill. Paper; 6 x 9 ins.; pp. 224; illustrated.

This comprehensive catalogue is termed by its publishers an encyclopedia in its line. It contains prices and illustrated descriptions of a variety of well sinking, prospecting, pumping, irrigating and hoisting machinery; Chapman's air lift, gasoline, gas and steam engines, hoilers and other supplies.

GASOLINE ENGINES FOR RAILWAY SERVICE.—Charles A. Stickney Co., St. Paul, Minn. Paper; 6 x 9 ins.; pp. 12; illustrated.

The plants include a combined engine and pump (for water supply stations), a deep well pumping engine and a power engine, all having vertical engine cylinders. The pamphlet contains seven pages of extracts from the report on pumping plants for water stations, presented at the meeting of the Railway Superintendents of Bridges and Buildings in 1890.

TIMBER PRESERVATION.—International Creosoting & Construction Co., Galveston and Beaumont, Tex. Paper; 4 1/2 x 7 ins.; pp. 32; illustrated.

The treating plant at Beaumont has a 9-ft. retort 104 ft. long, in which timber is treated for ties, piling, telegraph and electric railway poles, etc. Four different preservatives are used: (1) Creosote, (2) chloride of zinc, (3) chloride of zinc and dead oil, (4) chloride of zinc, glue and tannin. The illustrations show the works, and samples of treated and untreated timber.

ENGINEERING AND MINING INSTRUMENTS.—Buff & Buff Mfg. Co., 506-10 Atlantic Ave., Boston, Mass. Paper; 7 1/2 x 5 1/4 ins.; pp. 62; illustrated.

This catalogue is issued by the successor to the old firm of Buff & Beyer, established in 1871. In making high-grade engineering, surveying, mining and astronomical instruments, this firm has made a feature of so uniformly ribbing the parts that lightness is combined with strength. Especial care is also taken in graduating all instruments so that the firm can guarantee within 1 1/2" of arc, or an error less than 1-54,000 part of an inch. The catalogue handsomely illustrates and describes these various instruments and their accessories.

CLAY-WORKING MACHINERY.—The American Clay-Working Machinery Co., Bucyrus, O. Paper; 7 x 10 1/2 ins.; pp. 240; illustrated.

This is the 1900 catalogue of the above firm illustrating the full line of brick-making, tile-making, sewer-pipe, roofing-tile, terra-cotta and clay-refining machinery made by it. The book is fully illustrated with wood-cuts of the various machines, and home half-tones. Each separate piece of machinery is fully described, and may be readily found by means of the very complete index. Special chapters on clay testing, the operations of press brick machinery and the manufacture of hollow bricks are a feature of the book. The company also illustrates its line of brick cars, transfer and turntables, hand wagons, barrows, trucks, power transmitting machinery, friction clutch pulleys, die forms for pressed brick and terra cotta, etc.

PICTORIAL HISTORY OF THE LOCOMOTIVE.—Compiled by William Wright. Chicago: Chicago Pneumatic Tool Co. Cloth; 11 x 10 1/4 ins.; pp. 81; profusely illustrated.

This unique publication consists of a collection of outline drawings of locomotives, with descriptions lithographed from manuscript. Beginning with the French road locomotive of Cugnot, in 1771, we find the old engines of Blenkinsop, Trevithick, Hackworth and Hedley, followed by Stephenson's first engine (1815) and his famous "Rocket," 1829. The historical American engines of Horatio Allen, Peter Cooper, E. L. Miller, M. W. Baldwin and others are also included, as well as some of the old engines of the Baltimore & Ohio R. R., and the old rack-rail and center-rail engines. Numerous historical American and foreign engines, typical of the progress in locomotive design, carry the record down to modern days. The English compound of the Pennsylvania R. R., the Johnstone double-truck compounds for the Mexican Central Ry., and recent engines of ordinary design are included. The list is closed by the Pennsylvania R. R. consolidation engine of 1899, and an English locomotive of the Columbia type, of the same date.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Table with columns: Bids to be opened, Work, Place, See Eng. News, and Date. Includes entries like 'Electric lighting plant, Tarboro, N. C.', 'Pier extensions, Grand Rapids, Mich.', 'Water pipe, castings, etc., Cincinnati, O.', etc.

Table with columns: Mar. 1, Mar. 2, Mar. 3, Mar. 4, Mar. 5, Mar. 6, Mar. 7, Mar. 8, Mar. 9, Mar. 10, Mar. 11, Mar. 12, Mar. 13, Mar. 14, Mar. 15, Mar. 16, Mar. 17, Mar. 18, Mar. 19, Mar. 20, Mar. 21, Mar. 22, Mar. 23, Mar. 24, Mar. 25, Mar. 26, Mar. 27, Mar. 28, Mar. 29, Mar. 30, Apr. 1, Apr. 2, Apr. 3, Apr. 4, Apr. 5, Apr. 6, Apr. 7, Apr. 8, Apr. 9, Apr. 10, Apr. 11, Apr. 12, Apr. 13, Apr. 14, Apr. 15, Apr. 16, Apr. 17, Apr. 18, Apr. 19, Apr. 20, Apr. 21, Apr. 22, Apr. 23, Apr. 24, Apr. 25, Apr. 26, Apr. 27, Apr. 28, Apr. 29, Apr. 30, May 1, May 2, May 3, May 4, May 5, May 6, May 7, May 8, May 9, May 10, May 11, May 12, May 13, May 14, May 15, May 16, May 17, May 18, May 19, May 20, May 21, May 22, May 23, May 24, May 25, May 26, May 27, May 28, May 29, May 30, Jun 1, Jun 2, Jun 3, Jun 4, Jun 5, Jun 6, Jun 7, Jun 8, Jun 9, Jun 10, Jun 11, Jun 12, Jun 13, Jun 14, Jun 15, Jun 16, Jun 17, Jun 18, Jun 19, Jun 20, Jun 21, Jun 22, Jun 23, Jun 24, Jun 25, Jun 26, Jun 27, Jun 28, Jun 29, Jun 30, Jul 1, Jul 2, Jul 3, Jul 4, Jul 5, Jul 6, Jul 7, Jul 8, Jul 9, Jul 10, Jul 11, Jul 12, Jul 13, Jul 14, Jul 15, Jul 16, Jul 17, Jul 18, Jul 19, Jul 20, Jul 21, Jul 22, Jul 23, Jul 24, Jul 25, Jul 26, Jul 27, Jul 28, Jul 29, Jul 30, Aug 1, Aug 2, Aug 3, Aug 4, Aug 5, Aug 6, Aug 7, Aug 8, Aug 9, Aug 10, Aug 11, Aug 12, Aug 13, Aug 14, Aug 15, Aug 16, Aug 17, Aug 18, Aug 19, Aug 20, Aug 21, Aug 22, Aug 23, Aug 24, Aug 25, Aug 26, Aug 27, Aug 28, Aug 29, Aug 30, Sep 1, Sep 2, Sep 3, Sep 4, Sep 5, Sep 6, Sep 7, Sep 8, Sep 9, Sep 10, Sep 11, Sep 12, Sep 13, Sep 14, Sep 15, Sep 16, Sep 17, Sep 18, Sep 19, Sep 20, Sep 21, Sep 22, Sep 23, Sep 24, Sep 25, Sep 26, Sep 27, Sep 28, Sep 29, Sep 30, Oct 1, Oct 2, Oct 3, Oct 4, Oct 5, Oct 6, Oct 7, Oct 8, Oct 9, Oct 10, Oct 11, Oct 12, Oct 13, Oct 14, Oct 15, Oct 16, Oct 17, Oct 18, Oct 19, Oct 20, Oct 21, Oct 22, Oct 23, Oct 24, Oct 25, Oct 26, Oct 27, Oct 28, Oct 29, Oct 30, Nov 1, Nov 2, Nov 3, Nov 4, Nov 5, Nov 6, Nov 7, Nov 8, Nov 9, Nov 10, 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BALTIMORE & LEHIGH.—W. A. Moore, Ch. Engr., Baltimore, Md., informs us that the company is double-tracking its line of 43 miles with 70-lb. steel rails. J. Wilson, Brown, Pres., Baltimore, reports state that an extension of this line from Baltimore to the Cumberland to connect with the Philadelphia & Reading R. R. is proposed.

BALTIMORE & OHIO.—C. McC. Lemley, Asst. Engr., Philippi, W. Va., is now building a five-mile branch to the G. & B. division near Philippi, and has in progress surveys for two other short branches, besides a survey survey for 2.5 miles of the G. & B. division. The road is used mainly for coal transportation.

BOSTON & MAINE.—This company, it is stated, proposes to double-track its line from Springfield, Vt., to Claremont Junction, N. H., which will make a double track will be necessary to accommodate the increase of freight traffic from the Grand Trunk via the Central Vermont Ry. The Springfield freight station will be abolished, and a large freight depot will be erected at Charlestown. H. Bissell, Ch. Engr., Boston, Mass.

BURLINGTON & NORTHWESTERN.—Press reports state that the Chicago, Burlington & Quincy R. R., which owns this line, proposes to standard gage the road extending from Oskaloosa, Ia., to Burlington, about 30 miles, and build a connecting link between Tracy and Oskaloosa, thus saving about 50 miles between Des Moines, Ia., and Peoria, Ill. The work on this line will probably begin soon. A. Metz, M. M., Burlington, Ia.

CANADA.—J. H. Tilden, John and Rebecca Sts., Hamilton, Ont., is a director of the Crow Lake Ry. & Development Co., which has applied for incorporation to construct a line from White Fish Bay, Lake of the Woods District, Rainy River, to a point on Crow Lake; also to build electric plants, steamboats, hotels, wharves, mills, etc.

CAPE PEAR & NORTHERN.—It is reported that a 14-mile branch road will be built by this company, extending from its present terminus at Angler to Cokesburg, N. C. Another branch to Fuquay Springs, a health resort, is said to be contemplated. G. E. Lemmon, Ch. Engr. and Supt., Apex, N. C.

CHATTANOOGA, ROME & SOUTHERN.—Reports from Chattanooga state that arrangements are being made by General Manager Maury, the Dayton Coal & Iron Co., and President Wilburn, of this company, for the construction of a branch road down Dry Valley. The line, which will be a one road, will probably soon be built.

CHICAGO, BURLINGTON & QUINCY.—I. S. P. Weeks, Ch. Engr., Burlington & Missouri River in Nebraska, Lincoln, Neb., writes us that the report that Alliance-Hartsville line is to be extended to Salt Lake City is erroneous, there being no intention of extending further.

CHICAGO, INDIANA & EASTERN.—Fremont Wilson, Ch. Engr., Matthews, Ind., writes us that steel and ties for the construction of this road from Conway to Muncie have been secured, but will not let the contract for laying rails, etc., for about 30 days. The line will extend to Richmond, about 75 miles. E. G. E. Sewart, Pres. Chicago.

CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA.—Reports state that this company proposes to expend about \$1,500,000 in improving its system in South Dakota. The Luverne division will be ballasted from Luverne to Worthington and from Valley Springs to Brandon. The work will be commenced early this spring. C. W. Johnson, Ch. Engr., St. Paul, Minn.

CLEVELAND & PITTSBURG.—It is reported that the contract for constructing about two miles of double track and sidings at Bedford, O., has been let. The Pound Construction Co., Chicago, Ill., has the contract for grading, and the masonry work will be done by Egan, F. Egan, Pittsburg, Pa. The work will include about 300,000 cu. yds. of grading and 8,000 cu. yds. of masonry, and will cost about \$250,000. The new line will provide for the construction of four under-grade crossings in the town of Bedford, O., and a stone arch will span Tinkers Run, at a height of 150 ft. This work was advertised in our issue of Jan. 25. Thomas Rodd, Ch. Engr., Pittsburg.

COLORADO & SOUTHERN.—H. W. Cowan, Ch. Engr., Denver, Colo., writes us that 15 miles has been located on the Leadville branch—from South Platte Station to the junction of Horse Creek with the south fork of the South Platte River. Four miles of track has been laid and one mile graded, and a contract will be let about April 1 for constructing about 10 miles. Frank Trumbull, Pres., Denver, Colo.

COPPER RANGE.—Reports state that permission has been granted by the Houghton county board of supervisors to this company to build an approach to the city of Houghton, Mich., and to cross the Portage Lake bridge, between Houghton and Hancock. Thomas Appleton, Ch. Engr., Houghton, Mich.

ESCANABA & LAKE SUPERIOR.—Reports state that this line is to be extended from Wells, Mich., its present terminus, to the hardwood belt northward from that place. W. E. Wells, Supt., Wells, Mich.

ILLINOIS CENTRAL.—D. Sloan, Ch. Engr., Chicago, Ill., informs us that the terminal yards at New Orleans, La., are 60% completed, and grade reductions from Fulton to Memphis are practically completed. The curve stations at Fulton, Memphis and Covington will take about 90 days to complete.

ILLINOIS TRANSFER.—E. P. Bryan, Vice-Pres., St. Louis, Mo., informs us that surveys for this line have been finished and the construction is now under way; two miles have been surveyed. The line will be seven miles in length, and will extend around East St. Louis and in the vicinity.

INDIAN SPRING & FLOVILLA.—Local papers state that an effort is being made by the citizens of Jackson, Ga., to have this road extended to that city. The extension, if made, will be about five miles long.

KANSAS CITY, MEXICO & ORIENT.—This company has been incorporated in Kansas with a capital stock of \$1,000,000, to build a railway from Kansas City, Kan., to the Gulf of California, about 1,800 miles. Arthur E. Stillwell, Kansas City, Mo.; J. W. Hirst, Omaha, Neb.; J. C. Fox, Leavenworth, Kan.

MARSHALLTOWN & DAKOTA.—Hamilton Broome, Pres., Boone, Ia., writes that there is no definite intention of making any extensions this year.

MILWAUKEE & SOUTHWESTERN.—It is reported that a proposition is now pending at Milwaukee, Wis., to give this company \$800,000 in county bonds, and if the bonds are voted the company will build from Milwaukee to Rock Island, 200 miles, making connection with the Burlington, the Illinois Central, the Chicago Great Western, and other important systems. The object is to benefit the Great Northern of Canada, by water shipments from Milwaukee.

MISSOURI PACIFIC.—Surveys are reported to be in progress for an extension of the Bagwell branch to Springfield, Mo. J. N. Way, Ch. Engr., St. Louis, Mo.

NORFOLK, VIRGINIA BEACH & SOUTHERN.—The Norfolk & Southern R. R. Co. is reported to have purchased this line for \$520,000. Both of these companies are under Vanderbilt control.

POCAHONTAS, COAL RIVER & KANAWHA.—The Equitable Construction Co., Chicago, which has had the contract for building 5 miles of this line, beginning at St.

Alhans, W. Va., is reported to have suspended work. It is said that C. C. Watts, Pres., Charleston, W. Va., is in the East negotiating bonds of the railroad company to raise money for the construction of the road, and that the work will be continued as soon as new contracts can be let.

PENNSYLVANIA.—James R. Barnes, Uniontown, Pa., is said to be at the head of a coal syndicate which is urging the construction of a railway from Uniontown, Pa., to Wheeling, W. Va., about 70 miles. The road will open the coal fields in Lafayette and Greene counties.

PENNSYLVANIA R. R.—W. H. Brown, Ch. Engr., Philadelphia, Pa., confirms the report in our issue of Feb. 8, that surveys are under way for the extension of a branch line of this company from Vintondale to Black Lick, but the construction will not be started for several months.

QUEBEC & LAKE HURON.—Reports state that a project is being promoted by John M. Nicol and S. F. Angus, Detroit, Mich., and others, to build a railway about 461 miles in length, shortening the grain haul from Chicago and Duluth to the seaboard by about 500 miles. A charter will be applied for, and grain elevators will be erected at each end of the line. The estimate cost of the project is \$2,000,000.

QUINCY, CARROLLTON & ST. LOUIS.—H. C. Draper, Ch. Engr., Chicago & Alton R. R., Chicago, Ill., writes us that nothing is being done towards the construction of the extension of this line, which was recently reported. The line was recently purchased by the Chicago & Alton.

RAQUETTE LAKE.—A bill has been introduced for hearing in the legislature at Albany, N. Y., to build a railway under this name in the region of the Adirondack Mountains.

RIO GRANDE WESTERN.—Reports state that it is proposed to extend this line from Eureka, Utah, about 90 miles across the Utah desert, to bring the Deep Creek mining district in communication with the smelters. The construction will be easy, as little grading will be necessary. E. J. Yard, Ch. Engr., Salt Lake City, Utah.

SHARPSVILLE R.—G. M. McElvain, Sharpsville, Pa., writes us that the recent report that this company would build a branch from Oakland to Wheatland was erroneous, and no extensions are contemplated.

SOUTH DAKOTA.—Reports from Dakota state that steps are being taken by the farmers in Bryant and Harmon townships to organize a company to build a railway from Winans to Kankinson, N. Dak., about 40 miles.

SOUTHERN.—W. H. Wells, Civil Engr., Washington, D. C., informs us that it has not been decided to build the proposed extension from Round Hill to Snickerville, about four miles. This company is said to have closed a contract with the Balfour Quarry Co. for furnishing the ballast for the Ashville and Spartanburg division.

SOUTHERN PACIFIC.—Press reports state that plans are being formulated by this company for a new line from a point in Southern California to Salt Lake City or some more westerly point on the Central Pacific. The Carson and Colorado road, which extends from Keeler to Carson City, Nev., will probably be made a standard gage and used as a link in the proposed road. The project is probably the one which we noted that surveyors were making inspections in Nevada and Utah for new routes and cut-offs. William Hood, Ch. Engr., San Francisco, Cal., writes us in connection with the project that no information can be given on the subject at present.

SPOKANE FALLS & NORTHERN.—It is reported that a survey has been made for a new line from Rossland, B. C., to Sophie Mountain, to open up the mineral territory in that vicinity. The construction of a branch to tap the valley of Main Sheep Creek is also being considered. John F. Stevens, Ch. Engr., St. Paul, Minn.

TEXAS.—Reports from Houston state that M. F. Myatt, of William Penn, has raised \$20,000 towards the construction of a railway from William Penn to Chappell Hill, about 18 miles. The right of way has been secured.

TEXAS NORTHERN.—Fred B. Johnston, Pres., Anderson, Tex., informs us that the contract for constructing this road from Anderson to Stoneham, 67 miles, has been let to Hipp & Key, Houston, Tex., who will begin work on March 15. The right of way has been secured, and road cleared and grubbed. H. J. MacNair, Ch. Engr., Anderson, Tex.

TUPELO, HELENA & DECATUR.—It is reported that project of constructing this line is being revived. The line will extend from Decatur, Ala., passing through the mineral belt of northwestern Alabama into the pine region in eastern Mississippi. J. C. Medford, Tupelo, Miss., is one of the promoters.

UTAH MIDLAND.—Reports state that negotiations are being made for the construction of the line, which was surveyed some time ago, from Denver, Colo., up the South Platte canon, to connect the Colorado with the Colorado Midland, shortening the route of the latter by 60 miles and relieving the heavy grades. The road was originally intended to give the Cripple Creek district a direct route to Denver. The proposed road will extend through deposits of coal and copper, and through gilsonite beds, and will be about 100 miles in length, with no heavy grades.

WESTERN MARYLAND.—Bids are asked until Feb. 25 for the purchase of \$875,000 in bonds. Thomas G. Hayes, Mayor, Baltimore, Md.

WICHITA & SOUTHERN.—H. L. Jackson, Ch. Engr. and Cy. Engr., Wichita, Kan., informs us that the permanent location of this proposed road from Douglas, Kan., to Okmulgee, Ind. Terr., about 235 miles, will soon be made. (The itemized estimate of the construction of this line was published in our issue of Feb. 1.)

STREET AND ELECTRIC RAILWAYS.

(For foreign street railway news see under "Foreign Contracts and Export News.")

BIDDEFORD, ME.—The railroad commissioners have approved the articles of association of the Atlantic Shore Line Ry., which asked for the privilege of constructing a line of electric railway from Biddeford to connect with the York Beach electric railway.

PORTSMOUTH, N. H.—It is reported that the capital stock of the Portsmouth, Kittery & York Electric Ry. Co. has been increased by \$30,000 for the purpose of building the proposed extension from York Beach to St. Aspinquid Park, to connect with the Atlantic Shore Line from Biddeford, and for the erection of a storage battery at York Beach to run the extension. A ferry boat will be purchased to run between Badgers Island and this city.

BUZZARD'S BAY, MASS.—The selectmen have granted a franchise to the Middleboro, Wareham & Buzzard Bay St. Ry. Co. to build through this village, according to local papers. The company has received all the necessary franchises for its line between Middleboro and Buzzard's Bay, and will soon begin the construction. It is stated that contracts are now being let for building the road. A power house, a plant for storing and repairing the cars, together with car houses, will be built here.

EAST BROOKFIELD, MASS.—T. Haviland Clark, Boston, who is one of the promoters of the proposed electric road to connect Southbridge, Sturbridge and Fishdale with this town, is reported as stating that plans and specifications are being prepared for this road, which will be built with 60-ft. steel rails, for freight and passenger traffic.

GRAFTON, MASS.—A franchise was granted by the selectmen on Feb. 8 to the Westboro & Worcester St. Ry. Co. to construct a railway from the Westboro town line to Depot Square, in North Grafton.

NORTHAMPTON, MASS.—R. W. Irwin, attorney for the Northampton & Amherst St. Ry. Co., informs us that the contract for constructing this line from Northampton to Amherst was let to Crosby & Coolidge, Northampton. The capital has been secured. It is proposed to build to Hatfield next summer. F. S. Coolidge, Pres., Fitchburg; E. E. Davis, Ch. Engr., Northampton.

SITTON, MASS.—Franchises are reported to have been granted by the selectmen of Sutton and Millbury to the Millbury, Sutton & Douglas St. Ry. Co. to build through those towns. The line will run through East Douglas, Maucheg and Sutton to Millbury, and will connect with the Worcester & Surbuban St. Ry. for Worcester.

WHITINSVILLE, MASS.—The Blackstone Valley St. Ry. Co. has accepted the franchise granted by the Northbridge selectmen some time ago for the extension of its line from the present terminus at Rockdale to Whitinsville, about 3 1/2 miles.

WILLIAMSTOWN, MASS.—Surveys have been started for the proposed electric road to extend from this town to Troy. The surveys are being made under the supervision of W. H. Slingerland and Leslie Allen, of Albany, N. Y. Samuel Foster, Troy, N. Y., is interested.

WARRENSBURG, N. Y.—The state railroad commissioners have granted permission to Addison B. Colvin and Joseph A. Powers, Lansingburg, to build a trolley line from Glen Falls to Warrensburg.

WATKINS, N. Y.—A franchise for building an electric railway from this town to Burdette has been let to Chas. W. Hathaway and others.

HACKENSACK, N. J.—The Ricefield & Teaneck R. R. Co. has been organized, with \$500,000 capital stock, to build a road three miles in length.

MT. HOLLY, N. J.—The Moorestown Traction Co. has filed articles of incorporation to build an electric railway from Merchantville to Moorestown and eventually to extend to other towns in the vicinity.

SOUTH AMBOY, N. J.—The Brunswick Traction Co. has applied for a franchise to build a trolley road through this town.

ALLEGHENY, PA.—The Evergreen St. Ry. Co. has been incorporated, with \$2,000 capital stock, to build an electric line. T. M. Latimer, H. B. Haffner, A. E. Manchester, Allegheny, are interested.

FRANKLIN, PA.—Local papers report that an electric railway is projected to extend from Franklin to Oil City. W. H. Forbes, Franklin, and Daniel J. Geary, Oil City, are interested.

NORRISTOWN, PA.—It is reported that the United Power & Transportation Co. will soon begin the construction of a line to extend from its western terminus at Collegeville to Pottstown.

PHOENIXVILLE, PA.—The Phoenixville & Bridgeport Electric Ry. Co. has been incorporated by H. H. Gikyson, Phoenixville; J. W. Perry, Philadelphia, and G. F. P. Wanger, Pottstown.

PITTSBURG, PA.—The Nunery Hill St. Ry. has been incorporated, with \$24,000 capital stock, to build an electric street railway. H. B. Haffner, A. E. Manchester, Allegheny, Pa., are the incorporators.

READING, PA.—Local papers state that the United Power & Transportation Co., which recently purchased the Schuylkill Valley Traction Co., Norristown, will soon extend the Norristown, Collegeville & Trappe line from Trappe, via Sanatoga, to Pottstown. John A. Kigg, Treas.

REYNOLDSVILLE, PA.—E. A. Ferrin, Pres., Reynoldsville Electric Co., informs us that surveys and rights of way have been completed for the company's electric line from Reynoldsville to Elmore, about 14 miles, and profiles and specifications are now being prepared by Vandegrift & Co., Drexel Bldg., Philadelphia.

TAMAQUA, PA.—The council on Feb. 8 granted a franchise to the Schuylkill Valley Ry. Co. to run its line over certain streets in this town. The line will connect Tamaqua with Pottsville, and will later extend to Lakeside.

DOVER, DEL.—The contract for constructing the Delaware General Electric Ry. Co.'s road has been let to McGlathery, Stone & Co., Philadelphia, Pa., according to reports. The construction will be started on Feb. 22, and will be finished about July 1. The first 20 miles will be built from Dover to Milford, after which the road to Woodland Beach will be pushed to completion so as to connect with the line of steamers connecting that point with Philadelphia. The line will be about 40 miles in length. Leo Belmont, Pres. Harris & Ramon, Ch. Engrs., Philadelphia, Pa.

WILMINGTON, DEL.—Reports state that a trolley line is projected by John E. Russell, Wilmington, to run from this city to Port Deposit.

FAYETTEVILLE, N. C.—The board of aldermen have granted a franchise to Dr. J. N. McNeill to build an electric road through this city. The road will be extended to the factories in the suburbs.

CHATTANOOGA, TENN.—We are informed that bids will be received at once for constructing the line of the Rapid Transit Co. of Chattanooga to St. Elmo, Tenn., at the foot of Lookout Mountain, about five miles, for which surveys have been completed. The construction capital has been secured. S. W. Divine, Pres.; R. D. Betts, Ch. Engr., Chattanooga. (This confirms a similar report in our issue of Feb.)

CAMDEN, O.—The council on Feb. 10 granted a franchise to the Hamilton & Eaton Electric Ry. The grading will commence in about four weeks, the balance of the franchises having been secured last summer.

DAYTON, O.—The Dayton & Troy Electric Ry. Co., through W. L. Caton, Secy., has made application to the council for a franchise to run its line on several streets in this city.

MANSFIELD, O.—Local papers state that negotiations are being made by representatives of the Mansfield, Savannah & Wellington Electric R. R. for the immediate construction of the line from Mansfield, through Savannah and Wellington and other towns, with its branches, for which franchises have been obtained. Additional surveys were recently made. T. Y. McCray, Nelson Ozler and B. F. Platt are interested.

MASSILLON, O.—Bids are asked until March 6 for constructing, maintaining and operating a street railway on certain streets in this city. Thos. H. Seaman, Cy. Clk.

TOLEDO, O.—Local papers state that the Toledo Traction Co. proposes to expend \$150,000 in improvements to its line, which will include an addition to the power house, and additional engines, generators, underground cable, etc., for which contracts will be let during the spring.

YOUNGSTOWN, O.—Bids are asked until Feb. 24 for constructing and operating a street railway on certain streets in this city. Wm. I. Davies, Cy. Clk.

LAFAYETTE, IND.—John H. Jack, Pres., informs us that contracts for constructing the proposed Lafayette & Frankfort Interurban Ry. Co.'s line through Lafayette to Frankfort, by way of Dayton, Mulberry and Hamilton, about 29 miles, will not be let until franchises have been

granted, which is not certain, although popular sentiment favors the company. Propositions for capital are expected soon. (See issue of Jan. 25.)

WABASH, IND.—The county commissioners on Feb. 6 granted a franchise to the Ohio & Indiana Traction Co. through Huntington county. The company will build an electric line from Hicksville, O., to Marion, via Fort Wayne and Huntington. Work will begin this spring, and the road is to be in operation by 1901.

WHEATON, ILL.—Charles Jones, Ch. Engr., Box 142, Wheaton, writes us that the surveys for the Aurora, Wheaton & Chicago Ry. Co.'s line have been completed and the rights of way obtained. The capital for construction has been secured and contracts will be let about April 1. The line will be an electric, 38 miles long, extending from Aurora through Warrenville, Wheaton, Glen Ellyn, Lombard, South Elmhurst to Chicago. B. Mahler, Pres., Garfield Bldg., Cleveland, O.; L. J. Wolf, Vice-Pres., 100 Washington St., Chicago, Ill.

KANSAS CITY, MO.—Surveys are in progress for an electric railway between Kansas City and O'athe, Kan. Burns & McDonnell, Consulting Engrs., Postal Telegraph Bldg., Kansas City, Mo., are engineers of the work. Robert L. Winter and Ed. O. Moffett, Kansas City, are interested.

KANSAS CITY, MO.—The Home Electric St. Ry. Co. has been incorporated, with \$50,000 capital stock, by B. Corrigan, R. Gentry, J. E. Perry and others, of Kansas City, to build an electric railway in this city, for which a franchise has been asked.—Franchises have been asked by the Metropolitan St. Ry. Co., E. Butts, Ch. Engr., and the Central Electric Co., for extensions of their systems on certain streets in the city.

PORTLAND, ORE.—The Portland Traction Co. has applied to the council for extensions of its lines on different streets.

LOS ANGELES, CAL.—A meeting will be held by the stockholders of the Pacific Electric Ry. Co. on March 15 to consider the advisability of issuing \$200,000 in the company's bonds.

SALT LAKE CITY, UTAH.—The Salt Lake Valley Ry. Co. has been incorporated, with \$32,000 capital stock, to build an electric road between Salt Lake and Ogden. The road will be built with 70-lb. rails and will be double-tracked to Farmington. The construction will be started at once, and will cost about \$640,000, or \$20,000 a mile. Arthur Kennedy, Pres.; Chas. A. Quigley, Vice-Pres.; Thad. W. Naylor, Secy.

NIAGARA FALLS, ONT.—A franchise has been granted by the Lincoln County Council to the Queenstown, St. Catharines & Port Dalhousie R. R. to build a trolley line over the public highways. The company will start work within three months and complete the line within nine months.

ELECTRIC LIGHT AND POWER.

(For foreign electric plants see under "Foreign Contracts and Export News.")

CLINTON, ME.—The Village Improvement Society is discussing the question of lighting the village.

SKOWHEGAN, ME.—Wm. H. Perry, Boston; G. B. Boutwell, Providence, R. I., and others, are said to be negotiating for the purchase and enlargement of the power plant of the Skowhegan & Norridgewock Electric Ry. & Power Co.

EVERETT, MASS.—It is stated that the United States Steel Co. will build a plant and other works here.—The council is discussing the question of a municipal plant.

ELMIRA, N. Y.—Plans will soon be prepared by Mr. Wetmore for a plant and water-works.

ILION, N. Y.—The question of building a municipal plant is being discussed. A. D. Morgan, B. B. Van Dusen and S. G. Heacock are on the committee.

ROCHESTER, N. Y.—The Rochester Gas & Electric Co. has purchased the Genesee Paper Co.'s mill on the Genesee River and will use it as a power station.

ROSLYN, L. I.—It is stated that the Roslyn Light & Power Co. has applied for a franchise.

FREEHOLD, N. J.—The council is said to be discussing the question of granting a franchise to the Freehold Electric Co.

CORRY, PA.—G. D. Gilbert, Cy. Engr., writes us that the following bids were received Feb. 12 for furnishing 65 1,200-c. p. arc and 50 16-c. p. incandescent lights, both local bidders: Climax Mfg. Co., per annum, \$4,730; Co-operative Electric Mfg. Co., \$3,900. Contract not yet awarded.

EMAUS, PA.—Bids are asked by the president of the council until Feb. 27 for lighting this town for three or five years from April 1.

HATBORO, PA.—The council has abandoned the question of building a plant and will use the power of the Jenkinstown Electric Light Co.

YORK FURNACE, PA.—Edgar B. Kay, C. E., 704 State St., Ithaca, N. Y., writes us that he is preparing plans for the development of the York Furnace water power on the Susquehanna River, to develop about 30,000 HP.

CLAYTON, DEL.—It is stated that the question of erecting a plant is being discussed.

WILMINGTON, DEL.—E. Mitchell, Pres., Universal Conduit, Light, Heat & Power Co., writes us that this company will build a plant and gas works and a subway for its wires. Plans not yet completed.

STILL POND, MD.—The council is said to be discussing the question of building a municipal plant.

ALEXANDRIA, VA.—G. S. Simpson, Mayor, writes us that no steps have yet been taken toward building a plant.

COLONIAL BEACH, VA.—It is stated that the business men are discussing the question of a plant.

BURLINGTON, N. C.—Reports state that W. G. Mebane, Graham, has applied for a franchise. A. C. Mitchell, B. N. Walker and J. P. Albright are on the committee to look into his plans.

CHARLOTTE, N. C.—It is stated that the Winston-Salem Gas & Lighting Co. has sold \$125,000 of bonds and will erect a plant.

NORTH WILKESBORO, N. C.—Preparations are being made for erecting a plant, according to reports.

BIRMINGHAM, ALA.—It is stated that the Consolidated Electric Light Co. has let the contracts for additions to its plant to cost about \$200,000.

TUSCALOOSA, ALA.—The council is considering the renewing for ten years of the contract with the Electric Light Co. B. F. Roden, Pres.

ELLSVILLE, MISS.—This town is discussing the question of erecting a plant.

RAYNE, LA.—Dr. R. C. Webb and A. S. Chaplin have been appointed to look into the proposition of the Rayne Ginning Co., to erect a plant.

CLEVELAND, O.—G. H. Billman, Pres. Council, writes us that no steps have been taken by the city toward securing plans, etc., for a municipal plant.

BAY CITY, MICH.—The council is discussing the question of additions to the plant, to cost about \$4,000.

ONAWAY, MICH.—W. W. McKune, President, writes us that no steps have yet been taken toward erecting a plant, but probably will be in the spring.

NEW LISBON, WIS.—The New Lisbon Advancement Co. will, it is said, erect a plant. W. H. H. Cash, Pres.; J. H. Marsh, Secy.

ELKADER, IA.—The people voted Feb. 13 to grant a franchise for a plant to Schmidt Bros. & Co. H. L. Griffith, Consult. Engr., will prepare plans.

RED OAK, IA.—C. D. Jones, of Creston, is said to have been granted a franchise for a plant at this place.

RUSH CITY, MINN.—The Johnson Block, where the electric plant is located, was destroyed by fire Feb. 5.

MILLVILLE, N. DAK.—It is stated that the contract for erecting a municipal plant and water-works to cost about \$26,000 has been let to W. I. Gray & Co., 802 Sykes Block, Minneapolis, Minn.

MINOT, N. DAK.—This town will, it is stated, erect a plant this spring.

MADISON, S. DAK.—The city council has asked for plans to enlarge the city plant to cost about \$8,000.

NEWTON, KAN.—It is stated that the Atcheson, Topeka & Santa Fe Ry. will erect plants here, at Albuquerque, N. Mex., and at Winslow, Ariz. W. H. Earl, Res. Engr.

BOONVILLE, MO.—The council is said to be discussing the question of putting in electric lights.

MONTICELLO, ARK.—We are informed that the contract for erecting a plant and water-works has been let to G. Jaeger, Rich Hill, Mo.

COLORADO SPRINGS, COLO.—The council has granted a franchise to the Citizens' Light, Heat & Power Co.

MONTE VISTA, COLO.—A. W. Horn, Mayor, writes us that the city is contemplating erecting a plant; no definite steps have yet been taken.

INDEX, WASH.—J. H. Mitchell and Harry Hoback have been granted a franchise and will erect a plant.

LA GRANDE, ORE.—J. K. Romig and others have purchased the electric plant and will double its present capacity.

MERCED, CAL.—W. H. Turner, Pres. Bd. Trustees, writes us that the council is considering the question of putting in a plant, water-works and other improvements; contracts will not be let for some time.

UKIAH, CAL.—Bids are asked until Feb. 24 for erecting a plant. James H. Carothers, Cy. Clk.

NEW COMPANIES.—People's Water & Power Co. of Red Lion, Red Lion, Pa.; \$1,000; J. A. Miller, C. E. Mayes.

Brownsville Electric Light, Heat & Power Co., Brownsville, Pa.; \$12,500; J. S. Elliott, Jefferson township; W. H. Fisher.

Merchants' Light, Heat & Power Co., Youngstown, O.; \$50,000; H. F. Kaercher, D. F. Anderson.

South Jersey Water & Electric Power Co., Vineland, N. J.; \$250,000; C. K. Landis, M. Fry.

Roslyn Light & Power Co. of Roslyn, North Hemstead, N. Y.; \$50,000; R. D. Winthrop, Westbury; C. H. Mackay.

The Colorado Springs Power Co., Denver, Colo.; \$500,000; W. P. Bonbright, William A. Otis.

Athena Light & Power Co., Athena, Ore.; \$30,000; H. C. Adams, J. W. Smith.

BRIDGES.

EASTPORT, ME.—Reports state that the Washington County R. R. will probably build a drawbridge between the north side of Carlow's Island and Governor's Island, to be about 700 ft. long. The bridge is to have three pillars 20 ft. in height. Chas. S. Hamilton, Eastport, may be able to give further information.

BOSTON, MASS.—Bids are wanted Feb. 26 for widening the opening for the passage of vessels at Chelsea Bridge. Wm. Jackson, Cy. Engr.

CAMBRIDGE, MASS.—A bill will be presented to congress to authorize the construction of the Cambridge bridge between this city and Boston. The bridge is to be drawless.

CLINTON, MASS.—The temporary wooden bridge at Still River has been rendered unsafe by the loss of three pillars during the high water. The Boston & Maine R. R. has plans for a new iron structure, which will be built next spring, according to reports.

HARDWICK, MASS.—The road commissioners estimate the cost of replacing the stone bridge at Gilbertville, which was recently washed away, at \$4,000.

SPRINGFIELD, MASS.—It is reported that a new county bridge is wanted at this place. Mayor Hayes has asked Holyoke to share the expense of such a structure.

WARE, MASS.—Local papers state that the stone bridge over the Ware River at Gilbertville, with one span of 60 ft., was partially washed away by the recent high water, involving a loss of about \$3,000.

WEST BOYLSTON, MASS.—The stone bridge at the lower depot was carried away by the freshet on Feb. 13.

THOMPSONVILLE, CONN.—The recent high water carried away a portion of the bridge over the Connecticut River, from Enfield to Suffield. The bridge was a covered wooden structure about one-third of a mile in length, and cost about \$100,000 to build.

SYRACUSE, N. Y.—Russell R. Stuart, Cy. Engr., has made investigations of the Dickerson St. bridge and found the structure to be unsafe. A new bridge is recommended, to cost about \$12,000.

CAMDEN, N. J.—Plans for the proposed new bridge over Coopers' Creek, at Pine St., have been completed by County Engineer Albertson. Together with the approach the structure will cost about \$30,000; but nothing will be done towards the construction until an appropriation is made.

BELLEVUE, PA.—It is stated that F. W. Keimer, Bellevue, has plans and specifications for a bridge to be erected at this place, for which estimates are being taken.

PHILADELPHIA, PA.—Local papers state that the committee of councils has apportioned \$750,000 of the \$11,200,000 loan, to the survey committee for the construction of bridges this year.

PHILADELPHIA, PA.—Reports state that Ryan & Kelley, 8 South Broad St., Philadelphia, have been awarded the contract for constructing the stone masonry for the new bridge for the Richmond branch of the Philadelphia & Reading Ry., at Fairhill Junction.

PITTSBURG, PA.—The project of erecting a bridge to reach Schenley Park from the Oakland Square settlement, is agitated by a committee appointed by the citizens of the 14th Ward.

RANKIN, PA.—It is reported that the Carnegie Steel Co. Ltd., has let a contract to the Drake & Stratton Co., Ltd., 14 South Broad St., Philadelphia, and the Keystone Bridge Co., Pittsburg, for constructing a steel bridge over the Monongahela River at Rankin, at \$500,000.

SUNBURY, PA.—Press reports state that a wagon bridge is to be constructed across the Susquehanna River from Sbamokin dam at this place, to cost about \$140,000.

NORFOLK, VA.—W. T. Brooke, Cy. Engr., writes us that a private corporation has applied to the legislature for permission to build a toll bridge over the eastern branch of the Elizabeth River.

FORT MILL, S. C.—T. G. Culp, County Supervisor, Fort Mill, writes us that the date of letting contracts for constructing the proposed bridge near this place, has not been decided on. The structure will have three spans each 115 ft. long, and will be 12 ft. wide. It will be of steel on iron foundation, and will cost about \$8,000.

THOMASTON, GA.—It is reported that the recent high water carried away many bridges, one of which was an iron structure recently erected over Swift Creek, at a point about four miles south of this place.

CLEVELAND, O.—Local papers state that John D. Rockefeller has offered \$100,000 towards building the proposed arch under Superior St. at the boulevard, which will probably be accepted.

CLEVELAND, O.—H. A. Everett, Pres., the Northern Ohio Traction Co., is reported about to let the contract for building the Windemere Bridge, to cross the New York, Chicago & St. Louis R. Co.'s tracks at that place. The structure will be of steel and double-tracked, and will cost about \$10,000, of which the Northern Ohio Traction Co. will pay 65%, and the New York, Chicago & St. Louis R. R. Co., 35%.

DETROIT, MICH.—R. N. McCormick, Cy. Engr., writes us that plans for abolishing grade crossings on all the railways in this city have been prepared in the office of the city engineer, and are now awaiting the approval of the grade separation commission and the engineers of the railways. Mr. McCormick states that the railways are in favor of the project and will share the expense of the improvements.

CHICAGO, ILL.—Bids will soon be asked by City Engineer Ericson for erecting a bridge over the Calumet River at 95th St., according to reports.

LA CROSSE, WIS.—Local papers state that the question of constructing a new bridge over the Black River is being considered.

COUNCIL BLUFFS, IA.—S. L. Etnyre, Cy. Engr., writes us that the bridge proposed to be erected over Indian Creek, at Fifth Ave., will be a girder structure, with one span, 50 ft. wide, on a concrete foundation, to cost about \$2,000.

DULUTH, MINN.—H. W. Cheadle, Cy. Clk., informs us that the St. Paul & Duluth R. R. Co., J. A. Morris, Cy. Engr., St. Paul, Minn., and the Northern Pacific Ry., R. E. McFarlane, Supervisor of Bridges, Duluth, have been ordered by the Supreme Court to build the Garfield Avenue viaduct. Address C. J. A. Morris, Ch. Engr., St. Paul & Duluth R. R.

SOUTH OMAHA NFB.—Herman Beal, Cy. Engr., writes us that the proposed bridge at O St. will be built by the Union Stock Yards Co. The structure will be a plate-girder and truss bridge with four spans of 91, 135, 21 and 46 ft., and 32 ft. wide, to cost about \$50,000. W. S. King, Des. Engr., South Omaha.

PUEBLO, COLO.—Wm. Peach, Cy. Engr., writes us that nothing has been done toward building the proposed viaduct over the Denver & Rio Grande R. R., except the council has appropriated \$10,000, as noted in last week's issue, which is about one-fifth of what the structure will cost.

BRYAN, TEX.—It is reported that the proposition of erecting a bridge over the Navasota River, at the old Ferguson crossing, is being agitated.

DENISON, TEX.—Reports state that 16 steel span bridges are to be constructed for a railway, one of which will span the South Canadian River, 600 ft., and another about 600 ft. long will be erected over the Red River at the Texas line, Johnston Bros. & Faught, contractors, Sapulpa, Ind. Ter., may be addressed.

SAN ANTONIO, TEX.—Bids are asked until April 2 for erecting a steel-girder bridge 100 ft. long with a 32-ft. roadway across San Pedro Creek, as stated in our advertising columns. M. Hicks, Mayor.

OAKLAND, CAL.—The following bids have been received by Maj. W. H. Heuer, E. S. Engr., Flood Bldg., San Francisco, for erecting a double draw span bridge over the Tidal Canal at Fruitvale Ave.: Bentley Construction Co., San Francisco, \$57,500; H. Krusi, San Francisco, \$56,883; Darby Laydon, San Francisco, \$53,750; Thomas Thomson, San Francisco, (a) \$54,900; (b) \$50,000; Dundon Bridge & Construction Co., San Francisco, \$74,883.

SAN FRANCISCO, CAL.—Local papers state that the Southern Pacific Co. has contracted for two steel bridges, on which work will be begun in about two months. One is to span Bear River, near Wheatland, and will be 350 ft. long, with nine spans of 40 ft. each. The other will cross the Santa Ana River, near Colton, and will be about 420 ft. long, with seven spans, each 60 ft. in length. The foundation will be masonry.

TEMECULA, CAL.—It is reported that Surveyor Pearson has plans for a bridge to have four 60-ft. spans and a span 20 ft. long, to be 20 ft. wide; estimated cost, \$3,000.

MOSCOW, IDAHO.—Bids are asked by the clerk of the county commissioners until March 5 for replacing of one bridge at town of Juliaetta, a bridge at the Juliaetta tramway and the extension and repairing of a bridge at Kendrick, according to reports.

GUERNSEY, NEB.—It is reported that the Chicago, Burlington & Quincy R. R. proposes to erect a steel bridge over the Platt River, near this place. H. P. Burgess, Engr. of Bridges, Aurora, Ill.

NOME CITY, ALASKA.—A bill has been introduced in Congress authorizing the Cape Nome Transportation, Bridge & Development Co. to construct a traffic bridge over the Snake River, at Nome City.

EAST ZORRA, ONT.—Bids are asked until March 3 for building a steel highway bridge, with stone abutments, in East Zorra, to be 60 ft. long, 13 ft. high and 11 ft. wide. James Anderson, Clk., Zorra, South Zorra P. O.

OMEMEE, ONT.—Bids are asked until March 3 for constructing a steel bridge over Pigeon Creek, with approaches, according to reports. R. J. Granby, Town Clk., Emily.

BUILDINGS.

BANGOR, ME.—Frank A. Bourne, 849 Tremont Bldg., Boston, is preparing plans for a library building, to cost about \$150,000.

FARMINGTON, ME.—Isaac and John L. Cutler, of Boston, have given this city \$10,000 for a public library building.

BOSTON, MASS.—Kendall, Taylor & Stevens, 87 Milk St., have prepared plans for a ten-story brick office building on Washington St., for C. H. Ditson.

CAMBRIDGE, MASS.—H. B. Ball, Arch., 2A Park St., Boston, writes us that contracts have been let for the masonry work on the 8-story brick apartment house for the Riverbank Court Trust, to cost about \$750,000; contracts for heating, plumbing and electrical work will be let in two weeks. S. Carr and B. D. Hyde are trustees.

PALMER, MASS.—Gardner, Pyne & Gardner, 33 Lyman St., Springfield, Mass., write us that the new school in Palmer will cost about \$35,000.

ROSLINDALE, MASS.—The council is discussing the question of issuing \$50,000 for the erection of a municipal building.

WORCESTER, MASS.—The following bids were received Feb. 9 for erecting, except heating, the new South High School: J. E. Fuller, \$124,661; Webb Granite & Cons. Co., \$125,749; J. W. Norcross, \$127,254; Cutting & Bardwell, \$134,664; O. W. Bishop & Co., \$128,422; A. W. Norcross, \$133,158; Thos. Barrett, \$141,700; H. Mellen & Son, \$137,957; Jas. Jacques, \$135,847; J. G. Vandreuil, \$141,750.

PROVIDENCE, R. I.—The building committee is considering plans for a new school house, to be erected on Berkshire St.

NEW BRITAIN, CONN.—The board of police and fire commissioners have accepted the plans of Davis & Brooks, Booth Block, for the proposed new police and fire buildings.

BUFFALO, N. Y.—The bid of R. E. Burger, 133 Lexington Ave., at \$43,626, was the lowest for constructing the foundation and superstructure of the Agricultural Building at the Pan-American Exposition.

NEW YORK, N. Y.—The following bids are said to have been received Feb. 10 for erecting a brick and steel building at the navy yard: (1) being for building complete: (2) same as 1, substituting a galvanized steel roof for the tin one; (3) same as 1, governing the furnishing granite, dressed, at building; (4) substituting wooden sashes, doors, etc., for galvanized steel coverings in item 2; (5) same as 4, omitting all plumbing; (6) same as 5, 2, (3) same as 4, omitting all plumbing; (7) same as 6, substituting a omitted roof for the cement one: Penn Bridge Co., Beaver Falls, Pa., (1) \$47,101; (2) \$46,914; (3) \$45,373; (4) \$43,626; (5) \$41,385; (6) \$41,170; (7) \$38,873. McIlvain, Unkefer Co., 24 Nat'l Bank Bldg., Pittsburg, Pa., (1) \$46,974; (2) \$46,774; (3) \$46,774; (4) \$44,143; (5) \$42,743; (6) \$42,343; (7) \$40,506. Frank Higgins, Saugerties, N. Y., (1) \$50,150; (2) \$50,150; (3) \$54,650; (4) \$55,550; (5) \$54,150; (6) \$52,050. Thomas Marshall, Pittsburg, Pa., (1) \$53,850; (2) \$52,050. Structural steel and iron work. Holtzclaw Bros., Hampton, Va., (1) \$50,008; (2) \$50,888; (3) \$49,113; (4) \$48,598; (5) \$47,000; (6) \$46,798; (7) \$43,611. Grant Wilkins, Atlanta, Ga., (1) \$48,994; (2) \$48,923; (3) \$48,653; (4) \$48,940; (5) \$47,728; (6) \$47,179; (7) \$43,516. L. L. Leach & Son, Marquette Bldg., Chicago, Ill., (1) \$47,000; (2) \$47,000; (3) \$46,000; (4) \$45,772; (5) \$44,772; (6) \$44,572; (7) \$42,175; \$800 extra for patent window frames. Snare & Trist, 39 Cortlandt St., New York, (1) \$48,826; (2) \$48,826; (3) \$47,826; (4) \$48,226; (5) \$47,000; (6) \$48,800; (7) \$45,800.

NEW YORK, N. Y.—Plans have been filed by Hallahan & Ahearn, 106th St. and 8th Ave., for a 7-story brick flat house at 112th St., near 7th Ave., to cost about \$200,000. G. M. Robinson, Arch., 39 Hancock Place; by T. H. Bell, 145 W. 96th St., for a 5-story brick flat at 131st St. and Amsterdam Ave., to cost about \$40,000. Edw. Flagg, Arch., 15 Broad St.; by P. Wagner, 215 W. 106th St., for three 5-story residences at 84th St., near West End Ave., to cost about \$54,000. G. F. Pelham, Arch., 503 Fifth Ave.—The plans of Horgan & Slattery, 1 Madison Ave., for an armory at 69th St. and Central Park, for the First Battery, to cost about \$200,000, have been accepted.—The same firm is preparing plans for an armory for the 69th Regiment, at Lexington Ave. and 27th St., to cost about \$90,000.

WATERLOO, N. Y.—M. L. Van Kirk, Arch., writes us that bids will be opened about April 1 for erecting two schools, to cost about \$30,000.

ATLANTIC CITY, N. J.—Milligan & Webber, 520 Walnut St., Philadelphia, Pa., have plans for an apartment house at State and Atlantic Aves., to cost about \$45,000.—The Oxford Hotel Co. will erect a new hotel, to cost about \$700,000, at Massachusetts Ave. and the beach. Mayor Joseph Thompson, Pres.—The people have voted to issue \$164,975 in bonds for new schools.

ORANGE, N. J.—Brower & Albro, 589 Main St., E. Orange, write us that they are preparing plans for the Stiekel Memorial, not for the Carnegie Library, as was recently reported. Nothing has been done yet regarding the Carnegie. Willard Smith, General Secy., writes us that no architect has as yet been selected for the proposed new Y. M. C. A. building.

RUTHERFORD, N. J.—The council is discussing the question of erecting a new schoolhouse, to cost about \$45,000, according to reports.

FREELAND, PA.—Benj. Davey, Jr., Bennett Bldg., Wilkes-Barre, has prepared plans for a mining institute, to cost about \$100,000.

HARRISBURG, PA.—T. H. Hamilton, 405 Market St., is preparing plans for an office building on Front St. for the Pennsylvania Steel Co.

PITTSBURG, PA.—The trustees of the Charity Hospital have filed plans for a new building at Miller St. and Hampton Ave., to cost about \$70,000.

PITTSBURG, PA.—Bids are asked until Feb. 21 for erecting police and patrol station 10. J. O. Brown, Dir.

SCRANTON, PA.—Col. H. M. Boles, Pres. Trustees, Scranton City Guards Association, writes us that no architect has yet been engaged to prepare plans for the proposed armory.

NORFOLK, VA.—Bids are asked until March 10 for erecting a shop fitter's shop at the navy yard. M. F. Endicott, Ch. Bureau, Washington, D. C.—The following bids were opened Feb. 10 by J. K. Taylor, Supv. Arch., for a wiring system in the U. S. building: (1) being for entire system, (2) for supply pump, etc., (3) for telephone conduits: Commercial Construction Co., New York, (1) \$3,218; (2) \$888; (3) \$308; 60 days. E. M. Henry & Co., Norfolk, Va., (1) \$3,490; (2) \$220; 3 months. D'Olier Engineering Co., Philadelphia, (1) \$3,661; (2) \$513; (3) \$341. Francis Bros. & Jellitt, Philadelphia, (1) \$3,950; (2) \$610; (3) \$305. Edward Heaton, New York, (1) \$6,145; (2) \$300; (3) \$246. National Electric Supply Co., Washington, D. C., (1) \$2,540; (2) \$425; (3) \$306. McKay Engineering Co., Baltimore, Md., (1) \$3,930; (2) \$345; (3) \$400. Brown Electrical Construction Co., New Haven, Conn., (1) \$3,748; (2) \$450; 60 days. Kingsbury, Samuel & Co., 204 E. Lexington St., Baltimore, Md., (1) \$3,579; (2) \$965; (3) \$248. D. M. Anderson & Co., Washington, D. C., (1) \$5,048; (2) \$593; (3) \$332; 3 months. The McEntee-Peterson Engineering Co., Peoria, Ill., (1) \$3,477; (3) \$700. J. F. Buchanan & Co., Philadelphia, Pa., (1) \$2,475; (2) \$500; (3) \$150. Norfolk Construction Co., Norfolk, Va., (1) \$2,877; (2) \$255; (3) \$200. Gaylord & Eutaw Electric Co., Birmingham, N. Y., (1) \$3,055; (2) \$616; (3) \$319; 40 days. Arthur Franzen Co., Chicago, Ill., (1) \$3,690; (2) \$1,100; (3) \$1,000. Western Electric Co., Chicago, Ill., (1) \$3,350; (2) \$453; (3) \$238.

ROCKINGHAM, N. C.—It is stated that Hook & Sawyer, Charlotte, are preparing plans for new office building.

MOBILE, ALA.—Bids are asked until March 1 for erecting a club house for the Florida Club, Henry Hanaw, Chn. Bldg. Com.—We are informed that the Battle House as altered will be 106 x 250 ft., five stories high, have 400 rooms, and cost about \$100,000, with steam heat, elevators, ice plant, etc. Contracts will be let about May 1. Wilcox & Geary, Archs., 1110 Hennin Bldg., New Orleans, La.

MACON, MISS.—It is stated that the board of county supervisors has selected plans for a new court house

to cost about \$30,000, and that the board of aldermen has advertised for bids for erecting a new school house to cost about \$12,000.

CLEVELAND, O.—Plans are being prepared for a new building to cost about \$50,000 for the women's branch of the Western Reserve University. C. F. Thwing, Pres. DAYTON, O.—The fire commissioners have, it is said, asked for \$45,000 for two engine houses.

NORWOOD, O.—Bids are asked, according to reports, until March 7, for erecting a new school house. J. W. Tibball, Pres. Bd. Education; E. R. Edwards, Clk.

OSHERLIN, O.—The treasurer of Oberlin College writes us that plans for the new dormitory have not yet matured.

PORTSMOUTH, O.—Bids are asked, according to reports, until March 12, by A. B. Alger & Son, Archs., for erecting a 4-story building for the Portsmouth Hotel Co., to cost about \$50,000.

INDIAN SPRINGS, IND.—J. R. Walsh, Pres., Southern Indiana R. R., Chicago, Ill., writes us that sketches have been made for a hotel for the Southern Indiana Hotel Co.; nothing definite has been decided on yet, but the building will probably be built this year; cost, about \$250,000.

NATIONAL MILITARY HOME, IND.—Bids are asked until Feb. 27 for furnishing labor, tools and material for tile floors and putting on tile wainscoting, rearranging and renewing the plumbing in first and second floors of water-closets, in the south wing of the hospital at the Marlon Branch, N. H. D. V. S. Specifications may be seen at the office of Engineering News, 220 Broadway, New York. C. E. Worrell, Ch. Engr.; H. O. Helcher, Treas.

CHICAGO, ILL.—Plans have been prepared by Samuel A. Treat, Fisher Bldg., for a 7-story brick factory building on Randolph St. for Wm. A. Moxley, to cost about \$300,000.—J. M. Hoskins, 1280 Madison St., has prepared plans for a 4-story brick apartment house on Armour Ave., near 35th St., for G. E. Wilson, to cost about \$40,000.

DECATUR, ILL.—Theo. C. Link, 311 N. 9th St., St. Louis, Mo., has prepared plans for a passenger station for the Washburn R. R. and also for one for the same company at Quincy.

CLINTON, IA.—The Agatha Hospital Association will erect a 3-story hospital building. Address J. E. Reid.

HAYWARD, WIS.—Bids are asked until March 5 for erecting a brick building and water and sewer systems at the proposed Indian School near here. W. A. Jones, Indian Comm., Washington, D. C.

WAUKESHA, WIS.—Bids are asked by the secretary of the faculty, according to reports, until Feb. 28, for erecting an addition to Carroll College.

ALEXANDRIA, MINN.—Bids are asked until March 21 for erecting a new jail; check, \$300. E. P. Wright, County Audr.

DILETH, MINN.—Bids are asked by the building committee of the State Normal School here until March 10 for erecting a school house; check, \$500. J. C. Norby, A. T. Ankeny, Wm. F. Phelps, Comrs.

FAIRMONT, MINN.—Bids are asked until March 17 for erecting an eight-room high school building. M. Aldrich, Secy., Bd. Education.

MINNEAPOLIS, MINN.—H. B. Cabot has filed plans for a 5-story brick building at 39 to 43 S. 6th St., to cost about \$50,000.—The Great Northern Ry. Co. will add two stories to its office building, to cost about \$40,000.

ST. PAUL, MINN.—Bids are asked until March 6 for constructing a dome for the new state capitol building. C. Seabury, Vice-Pres., Bd. State Capitol Comrs.

FREMONT, NEB.—It is stated that all bids for erecting the high school building have been rejected, being too high. D. Delany submitted the lowest at \$31,800; W. R. Parsons & Son Co., Archs., 317 E. 5th St., Des Moines, Ia.

GREENWOOD, S. DAK.—Bids are asked for delivering a quantity of building materials at the Yankton Agency. J. W. Harding, U. S. Indian Agent.

LANGDON, N. DAK.—It is stated that Company A. N. G. N. D., will erect a new armory; contracts will be let about March 1.

KANSAS CITY, MO.—Van Brunt & Howe, Archs., 1214A Main St., write us that they will soon let the general contract for erecting a 3-story building, 44 x 142 ft., to cost about \$25,000.

ST. JOSEPH, MO.—The question of issuing \$100,000 in bonds for erecting a new library building will, it is stated, soon be submitted to the people.

ST. LOUIS, MO.—The following bids for erecting the new Eugene Field School and additions to the Froebel School were received Feb. 11 by the board of education: Hiram Lloyd, 213 N. 22d St., entire contract, \$105,357; Anton Wind, masonry work, \$30,964; Fitzgerald & Felix, fire-proofing, \$19,950; Christopher & Simpson Architectural Iron & Foundry Co., 811 Park Ave., iron work, \$20,872; R. Riemer, electric work, \$3,115; Martin Taffe, 1811 Cass Ave., plumbing, \$514; Modern Heating Co., 313 Chestnut St., heating, \$1,800.

GUTHRIE, OKLA. TER.—Bids are asked until March 10 for erecting a brick school building at the Kiowa and Comanche Agency. W. A. Jones, Comr., Washington.

ALAMEDA, CAL.—The board of free library trustees have approved the plans of Edmund Kollofrath, 923 Market St., for a new building, to cost about \$35,000, according to reports.

STANFORD UNIVERSITY, CAL.—G. A. Clark, Secy., Leland Stanford, Jr., University, writes us that Clinton Day, 135 Geary St., San Francisco, is the architect for the new memorial church and for a chemical laboratory and buildings for psychology and history. H. A. Schulze, Flood Bldg., San Francisco, is the architect for the natural history museum and science buildings.

VENTURA, CAL.—Bids are asked until March 9 for alterations and additions to the court house. A. S. Kenny, County Clk.

WATER-WORKS.

AUBURN, ME.—The water commissioners have voted to buy 300 ft. of 24-in. water pipe and fittings. The work of continuing this main to the site of the reservoir will be resumed in the spring. The large reservoir will probably not be built until 1901.

WORCESTER, MASS.—It is stated that the legislature will be petitioned to authorize this city to build three new reservoirs along the Kettle River, and to make extensive addition to the water mains. F. A. McClure, Cy. Engr.; R. B. Dodge, Jr., Mayor.

BRISTOL, CONN.—The Bristol Water Co. has purchased land for an increased water supply and for new reservoirs.

WOODBURY, CONN.—The Cromwell Water Co. has been incorporated with a capital of \$4,000 by Edward S. Boyd, Woodbury; F. W. Siebert, Engr., Waterbury, and Edward W. Shedd, Civil Engr., Providence, R. I.

ADAMS, N. Y.—Another election will be held March 20 to vote on the question of issuing \$21,000 of 3½% bonds for the proposed works, according to reports. The question was voted down at the election Jan. 4.

CLYDE, N. Y.—We are informed that it is not likely that the city will build works but that it will make a new contract with the Clyde Water Supply Co. E. M. Ellinwood, Supt.

DUNKIRK, N. Y.—A bill is before the legislature authorizing this city to spend about \$125,000 for improving the works.

HARRISON, N. Y.—The West Harrison Water Co. has been incorporated with a capital of \$50,000, by Samuel H. Gainsboro, of New York; Perrin H. Ryan and Aug. G. Beyer, of Harrison.

HORSEHEADS, N. Y.—The question of works and an electric plant is again being considered, according to reports. J. F. Wiltmer, Engr., Ellicott Square, Buffalo.

LANSINGBURG, N. Y.—Bids are asked until March 15 for furnishing the materials and for constructing a storage reservoir, and a curved gravity masonry dam, about 25,000 ft. of 12-in. cast-iron water pipe, etc., as stated in our advertising columns. A plan of the dam, etc., and specifications for the entire work are on file at the office of Engineering News, 220 Broadway, New York. C. E. Hicks, Engr.; Wm. M. Lea, Chn. Comrs.

PORT JERVIS, N. Y.—Bids are asked until Feb. 26 for the purchase of \$15,000 of 5% water bonds. P. E. Farnum, Pres. Port Jervis Water-Works Co.

UTICA, N. Y.—The Chamber of Commerce proposes to spend \$500 for employing an engineer to investigate the water-works question. A committee composed of R. H. Wicks, T. R. Proctor, E. L. Wells, and others, will have the matter in charge. Plans for works in Deerfield for the Consolidated Water Co. of Utica, have been approved by G. L. Record, Pres. There will be a reservoir, hydrants, pipe, etc., needed. It is said that work will begin May 1.

WALLINGTON, N. J.—The question of a new water supply is being considered. The firemen have petitioned the council for 1,000 ft. of new hose. Mayor Van Bussam has appointed Councilmen Polmann, Soap and Collins a committee to investigate the water question. An informal vote is likely to be taken March 13. P. O. Passaic.

WATERLOO, N. Y.—The Seneca Water Co., Geneva, N. Y., has submitted a proposition to furnish this city with water.

DOVER, N. J.—We are informed that the question of building works will be decided on Feb. 27. Reported cost, \$60,000.

PATERSON, N. J.—The Cold Spring Lake Co. has been incorporated in Bloomingdale to furnish water to houses, factories, etc., in Paterson; capital stock, \$25,000. J. F. Sisco, of Butler, N. J.; A. H. Knapp, 604 East 18th St., Paterson, and F. S. White, of Bloomingdale, are interested.

WESTFIELD, N. J.—C. P. Bassett, Civil Engr., Summit, N. J., is reported as about to submit a proposition to furnish this place with water. The Eddy Mfg. Co., Windsor, Conn., has also made a proposition, as noted in our issue of Jan. 4, under Westfield, Mass., a typographical error. A. A. Dennis, Chn. Com.

EASTON, PA.—A bill is before the legislature authorizing the town to make a new contract with the Town Water Co., with the privilege that the place may purchase the works.

McKEESPORT, PA.—Superintendent Verner has asked for \$86,165 for the water department, of this amount \$29,044 is for improvements. Address Chairman Inskip.

NORTH BRADDOCK, PA.—The Pennsylvania Water Co. has bought a 12-acre tract in North Braddock from David S. Elliott, for about \$11,000. The land lies on the hill portion of the town, and it is proposed to build a 13,000,000-gallon reservoir. The company supplies most of the water to the borough of Wilkensburg, North Braddock, Verona, Edgewood and Rankin and intends to extend its lines.

PHILADELPHIA, PA.—Bids are asked until March 1 for conduits and pump wells at Queen's Lane pumping station; pumping engines for Belmont pumping station; 4 boilers for Belmont pumping station, and engines and electrical generators for Roxborough pumping station. Wm. C. Haddock, Dir. Dept. Pub. Wks., Room 790, City Hall.

PITTSBURG, PA.—The Huron Water Co. has let the contract for constructing the pumping station for the works to P. J. McDonald, and that for laying about 15 miles of 20-in. pipe to Walter E. Bradley, both of Pittsburgh; estimated cost, \$250,000. About 12,000,000 gallons of water will be furnished to the property of the Eureka Fuel Co., controlled, together with the water company, by the American Steel & Wire Co.

COLUMBIA, S. C.—F. S. Earle writes us that next year it is hoped to build sewers and water-works to cost about \$500,000.

AUGUSTA, GA.—Bids are being considered for extending the 8 and 12-in. water mains, new hydrants, etc., to cost about \$9,000.

LAUREL, MISS.—The Iowa Engineering Co., Clinton, Ia., has been engaged to prepare plans for works, to cost \$50,000. There will be artesian wells, a 100,000-gallon pump, reservoirs, a 3,000,000-gallon pump, 6 to 12-in. mains and 6-in. hydrants. C. B. Chase, Engr., Clinton, Ia.

MOUNT STERLING, KY.—The Montgomery Water Co. has been incorporated, with a capital stock of \$50,000, by John T. Phillips, of Scranton, Ky.; A. A. Holbrook, Wilkes Barre, Pa.

CLEVELAND, O.—Bids are asked until March 17 for furnishing and erecting two or four 25,000,000-gallon pumping engines for the Kirkland St. pumping station, and for furnishing and erecting a 20,000,000-gallon engine for the Division St. pumping station, as stated in our advertising columns. The bids for these engines, received Jan. 29, were published in our issue of Feb. 1, the bidders being the Holly Mfg. Co., the Geo. F. Blake Mfg. Co., and the Edward P. Allis Co.

DAYTON, O.—H. J. McDargh, Civil Engr. Water-Works, writes us that the trustees will ask for bids next month for 1,900 ft. of 66 x ¾-in. riveted steel pipe, and 9,500 cu. yds. of excavation and backfilling for same. C. E. Rowe, Secy.

PIQUA, O.—W. B. Mitchell, Secy. Trustees, writes us that plans, etc., for the proposed reserved water supply have not yet been completed. The supply will be secured from driven wells. It is not known when contract will be made.

SANDUSKY, O.—It is proposed to put in water meters. Address Messrs. Link & Fuchs, of the water board.

KOKOMO, IND.—Chas. R. Ford, Cy. Clk., writes us that it is the intention of the present council to purchase the works in 1902.

CHESTER, ILL.—Estimates for putting in works at the state penitentiary, to cost about \$7,000, are being considered.

JOLIET, ILL.—D. W. Mead, First National Bank Bldg., Chicago, is making tests for increasing the water supply to 3,000,000 gallons. Address City Engineer Stevens.

MONMOUTH, ILL.—The plans for improving the works, prepared by D. W. Mead, First National Bank Bldg., Chicago, have been adopted by the council. A water tower of 100,000 gallons capacity will be built. Bids for the bonds are wanted until March 15. Address Mayor Sawyer.

DUBUQUE, IA.—An election will be held Feb. 28 to vote on the question of purchasing the works of the Dubuque Water Co. for \$545,000. C. H. Berg, Mayor; L. M. Langstaff, Cy. Recdr.

FREMONT, IA.—It is stated that this place wants works. **WALTHAM, IA.**—The question of building works and an electric plant is reported as being considered.

ST. PAUL, MINN.—Bids are asked until Feb. 26 for furnishing 20 tons of lead pipe, 4 to 16-in. gates, cast-iron pipe, stop boxes, seven tons of pig lead, castings, 25 hydrants, etc. John Caulfield, Secy. Bd. Water Comrs.

OMAHA, NEB.—An election will be held March 6 to vote on the question of issuing \$3,000,000 in bonds for purchasing the works or land therefor. F. E. Moores, Mayor; Hecher Higby, Cy. Clk.

PIERCE, NEB.—The question of works and an electric plant is reported as being considered.

PUKWANA, S. DAK.—The construction of works is reported as proposed.

HELENA, MONT.—F. J. Edwards, Mayor, writes us that as soon as the weather permits a new water supply will be investigated and surveys made. Bids will be wanted in about 30 days for the construction. The city voted Jan. 18 in favor of issuing \$614,000 in bonds for either building or purchasing works.

IOLA, KAN.—The council is reported to have been petitioned to call an election to vote on the question of issuing \$70,000 in bonds for works and \$10,000 for an electric plant. Plans were submitted by Capt. C. G. Walte, of Pittsburg, Kan.

MONTICELLO, ARK.—We are informed that the contract for building works and an electric plant was let Feb. 10 to G. Jaeger, of Rich Hill, Mo.

HOUSTON, TEX.—Bids are asked until March 12 for 1,400 tons of water pipe, 20 tons of castings, etc., as stated in our advertising columns (Postponed from Feb. 28.) Alex. Potter, Engr., New York; S. H. Brashear, Mayor.

SAN ANTONIO, TEX.—The council is considering a proposition to purchase the works of the San Antonio Water-Works Co. Alderman Barker, Chn. Com.

ALTMAN, COLO.—The works, it is stated, have been sold to W. A. Otis & Co., of Colorado Springs, for \$135,000, by F. Kilpatrick. Otis & Co. will double the present capacity.

FLAGSTAFF, ARIZ.—It is stated that the Santa Fe Pacific Ry. Co. will build a pumping plant here to elevate water from Oak Creek, about 1,300 ft.

CHEYENNE, WYO.—This city is about to commence on an extension of the works. The doubling of the capacity of the lower filter galleries, to cost \$1,200, will be begun first. The water supply will be increased by building one or more reservoirs in the hills near the head of the water supply. The cost cannot be determined until an investigation is made. Walter D. Pease, Cy. Engr.

POSSILL, ORE.—Bids are asked until March 6 for furnishing materials and for constructing works to consist of 12,000 ft. of 2½-in., 2,500 ft. of 2-in., 3,600 ft. of 6-in. and 1,400 ft. of 8-in. pipe, hydrants, castings, a 150,000-gallon cement-lined reservoir, etc. Check, 5% of bid. H. Stokes, Recorder.

BLOOMINGTON, CAL.—The Citizens' Water Co. has been incorporated, with a capital stock of \$12,500, by J. C. Boyd, Riverside, Cal.; D. Johnson, Colton, Cal., and J. S. Wheeler, of Bloomington.

OAKLAND, CAL.—M. K. Miller has submitted estimates for a new water supply and a salt water sprinkling system. E. H. Dyer and G. H. Umbson & Co. have submitted propositions to furnish this city with a new water supply.

SONOMA, CAL.—F. T. Duhring, Pres. Bd. Trustees, writes us that the question of building works will be submitted to a vote in the last week of March; estimated cost, \$20,000. There will be about four miles of pipe, and the water will be secured from artesian wells. Otto von Geldern, Engr., 56 Academy of Sciences Bldg., San Francisco.

YREKA, CAL.—This place voted Feb. 8 to issue \$75,000 in bonds for works. The \$50,000 voted last fall was found to be insufficient.

HULL, QUE.—It is stated that bids will be wanted in April for improving the works and for putting in an electric plant. The city treasurer will probably sell \$55,000 of 4% 40-year bonds for the works in the summer. R. W. Farley, Cy. Surv.

SEWERAGE.

LACONIA, N. H.—The question of building sewers at the Wells is being considered, according to reports. Wm. Nelson, Supt. of Sewers.

BROOKLYN, N. Y.—Bids are asked until Feb. 28 for sewers in five streets and Benson Ave. Jas. Kane, Sewer Comr., 13 Park Row, New York.

PERRY, N. Y.—A bill is before the legislature authorizing this place to build a system, according to reports.

COLLINGSWOOD, N. J.—Mayor Roberts has vetoed the ordinance recently passed by the council granting a franchise to the Collingswood Sewerage Co. to build a system. The mayor recommends certain changes in the plans, but it is not certain that the company will accept them.

SEA ISLE CITY, N. J.—W. G. Wright, Pres. Council, informs us that the council has granted a franchise to construct and operate a system to the Sea Isle City Sewerage Co., which is headed by S. Twitchell of Philadelphia, and John J. Burrell, of Camden, N. J. Work will begin at once and be completed by June 20.

GLENOLDEN, PA.—The question of sewers and macadam paving is being considered.

LAUREL, MISS.—A correspondent informs us that the Iowa Engineering Co., Clinton, Ia., has been engaged to prepare plans for a system to cost \$25,000. There will be about ten miles of pipe.

BERNARD, O.—Plans for a system have been prepared; estimated cost, \$200,000. The ordinance to submit the bond question to the voters has passed its second reading. J. C. Stewart, Village Engr., Johnston Bldg., Cincinnati.

LAKEWOOD, O.—The plans for a system prepared by F. Herbert Snow, Tremont Bldg., Boston, Mass., and Columbus, O., were adopted at a public meeting Feb. 10; estimated cost, \$150,000. The plan provides for two systems, one for sewage and one for storm water. The details provide for the purification of the sewage by the septic tank process, the location of the purification plant at Rocky River, and procuring enough land to allow of an increase in the plant later. Prof. H. W. Elliott, Cbn.

NORWOOD, O.—J. A. Stewart, Engr., 517 Johnston Bldg., Cincinnati, writes us that it is proposed to build about 1,000 ft. of 12-in. pipe sewer here. Address A. E. Wichgar.

SPRINGFIELD, O.—It is proposed to spend \$20,000 for dredging Buck Creek and otherwise improving that portion of the system. Phillip Huenker, Cy. Clk.

BEDFORD, IND.—G. C. Houston, Cy. Engr., writes us

that the council has ordered plans for a system which will probably be built the coming season.

CHICAGO, ILL.—It is proposed to build a 9½ to 7½-ft. brick main outfall sewer in Western Ave., at a cost of \$800,000.

OMAHA, NEB.—The question of issuing \$75,000 in bonds to complete the North Omaha system, which has already cost \$40,000.

CANTON, S. DAK.—Bids are asked until March 5 for constructing about 3,600 ft. of 15 to 8-in. pipe sewers. D. B. Howe, Cy. Engr.; A. Heigerson, Cy. Clk.

KANSAS CITY, KAN.—The following bids were received Feb. 13 for constructing the 12th St. sewer: W. W. Atkin, \$52,812; R. J. Boyd, \$51,718; F. A. Willard, \$53,553; Parker-Washington, \$52,460; W. R. Smiley, \$47,576; P. A. Johnson, \$47,359; T. J. Enright (accepted), \$46,924.

HOUSTON, TEX.—Bids are asked until March 12 for sewage pumping machinery, brick and cast-iron pipe sewers, as described in our advertising columns. (Postponed from Feb. 28.) Alex. Potter, Engr., New York.

EL RENO, OKLA. TER.—The proposed system for this place will have about 15,300 ft. of 12 to 6-in. pipe sewers; estimated cost, \$7,500. H. H. Hendershot, Engr., Wichita, Kan.

WALLA WALLA, WASH.—The Denny Clay Co., Seattle, Wash., has been awarded the contract for furnishing 23 miles of 24 to 6-in. sewer pipe, at \$30,370. The following were the other bids: Little Falls Fire Clay Co., Little Falls, Wash., \$33,067; Western Clay Mfg. Co., Portland, Ore., \$30,862; R. P. Reynolds, Cy. Clk., on Feb. 7 was directed to ask for bids for 175 bbls. of Portland cement and 250,000 sewer brick.

POMONA, CAL.—It is stated that an election will be held about May 1 to vote on the question of issuing \$30,000 in bonds for sewers.

REDONDO, CAL.—S. D. Barkley, Cy. Clk., writes us that a special election will be held about March 5 to vote on the issue of \$40,000 in bonds for sewers and streets.

ROCKLIN, CAL.—Bids are asked until Feb. 26 for constructing certain sewers. J. M. Walden, Town Clk.

SAN LUIS OBISPO, CAL.—It is stated that work will soon be begun by the city trustees on the proposed system to cost about \$36,000.

VISALIA, CAL.—The question of building sewers in a new sanitary district will be voted upon March 31.

GARBAGE DISPOSAL—STREET CLEANING
ROCHESTER, N. Y.—Bids are asked until Feb. 23 for removing and disposing of garbage and dead animals of the city. E. P. Porter, Clk. Bd. Contract.

NEWCASTLE, PA.—A bill is reported as before the legislature authorizing this city to build a crematory at a cost of \$20,000.

JACKSON, MISS.—Bids are wanted at once for constructing a disposal plant. Walter G. Kirkpatrick, Cy. Engr.

COLUMBUS, O.—Senator Dunham has introduced a bill empowering cities to erect garbage crematories. It is likely that Toledo and a number of other cities in Ohio will take immediate steps to build should the bill become a law.

MILWAUKEE, WIS.—The health committee of the council has decided to ask the board of public works to call for new bids for garbage crematories. Bids will be wanted for plans for the best system, which will be adopted, and then new bids will be asked for building this system. Aldermen Greatner and Havenor may be addressed.

STREETS AND ROADS.

ATHOL, MASS.—The town has appropriated \$13,000 to build a road to the Gay & Ward Mills.

BOSTON, MASS.—Bids are asked until Feb. 26 for furnishing the city with beach gravel and crosswalk flagging for one year from March 1, and for furnishing 500,000 large paving blocks, 500,000 gutter blocks, and 500,000 Philadelphia size paving blocks. B. T. Wheeler, Supt. Streets.

HARTFORD, CONN.—The street board has decided to pave five streets with sheet asphalt and two with granite.

BUFFALO, N. Y.—The following were the lowest bids received by the board of public works Feb. 14: Barber Asphalt Paving Co., Ellicott Square Bldg., repaving with asphalt Utica St., between Rhode Island and Main Sts., \$12,660; between Rhode Island and Massachusetts Sts., \$7,112; between Main and Jefferson Sts., \$6,453. H. P. Bengard, asphalt Anderson Place, \$7,000; P. B. McNaughton, repaving the same streets with brick, respectively, \$10,252, \$6,466, \$7,160, \$7,195.

DUNKIRK, N. Y.—J. P. Morrissey, Cy. Engr., has started to make surveys for the improvement of Griswold St.

HERKIMER, N. Y.—The question of extending and improving Albany St. is being discussed.

MOUNT VERNON, N. Y.—The following bids were received Feb. 6 for improving and grading West Chester Ave., all local bidders: Peter Sheridan, \$6,405; Charles Sillery, \$6,447; Quistman & Light, \$7,866; Cartright & Kenlon, \$8,216; Frank Nordone, \$7,395.

MOUNT HOLLY, N. J.—We are informed that J. R. Shanley, Philadelphia, submitted the lowest bid, \$23,800, Feb. 6, for constructing three 8-in. macadam roads, 10 ft. wide, beginning at York Road through Georgetown to Wrightstown and Rising Square, about 4 1-10 miles.

WOODBURY, N. J.—Bids are asked until March 10 for constructing 6.2 miles of macadam road, and 6.54 miles of gravel road, W. M. Carter; and for 4½ miles of gravel road, as stated in our advertising columns. Wm. C. Cotter, Wenonah.

PHILADELPHIA, PA.—Director of Public Works Hadcock has asked the council for \$204,850, more than the original appropriation for paving, etc.

ATHENS, GA.—Capt. Barnett, Cy. Engr., has estimated the cost of macadamizing Prince Ave. at about \$25,000.

JACKSONVILLE, FLA.—The board of public works has authorized the paving of four streets with brick.

CHATTAHOOGA, TENN.—Bids are asked until Feb. 27 for repaving Market St. Sam Erwin, Chn. Bd. Pub. Wks. This is a re-advertisement of the Tennessee Paving Brick Co. having forfeited the contract.

CARTHAGE, O.—Bids are asked until March 9 for macadamizing and improving portions of 3d and 4th Sts. L. Hall, Village Clk.

MARIETTA, O.—Bids are asked until March 17 for improving and paving with brick portions of four streets. Carl Becker, Cy. Clk.

SANDUSKY, O.—Bids are asked, according to reports, until March 2 for laying about 10,938 sq. yds. of sheet or block asphalt or brick, and about 4,835 ft. of curb. A. W. Miller, Cy. Clk.; J. W. Miller, Cy. Engr.

SPRINGFIELD, O.—John Foss writes us that an effort will be made to complete the sidewalk this spring, the matter having been held in abeyance by the opposition of one of the park commissioners.

FINDLAY, O.—The council is said to be discussing the question of improving West Lima St.

ANN ARBOR, MICH.—The council is discussing the question of paving Huron St.

BATTLE CREEK, MICH.—Bids are asked until March 5 for furnishing about 2,400 sq. yds. of paving bricks. G. W. Hamm, Recorder.

BAY CITY, MICH.—The following bids were received Feb. 9 for paving First St.: Osborne, Wolfe & Co., \$22,225; P. Ryan, \$20,690 (irregular); P. Peterson, \$21,550; Robt. Donohue, \$22,000; H. Campbell (reported accepted), \$21,135.

GRAND RAPIDS, MICH.—It is stated that the board of public works has let the contract for paving a portion of Cherry St. with gravel to Albert Prange, at \$2,922 and a portion with brick, at \$4,420.

CHICAGO, ILL.—The board of local improvements is discussing the question of street improvements, to cost about \$700,000.

KEWANEE, ILL.—J. C. Quade, Cy. Engr., writes us that the city contemplates laying about 11,000 sq. yds. of brick paving, to cost about \$21,000; also sewers and water mains.

PARIS, ILL.—L. E. Fischer, Cy. Engr., writes us that 9,500 sq. yds. of brick paving will be done, to cost about \$16,000; also sewer work, to cost about \$10,000.

MINNEAPOLIS, MINN.—The city council has decided to do all paving by day labor. G. W. Sublette, Cy. Engr.

WINONA, MINN.—The council will, it is said, shortly order more sidewalks to be paved.

OMAHA, NEB.—Reports state that Vinton St. will be paved, to cost about \$11,000.

DENVER, COLO.—The council will, it is said, soon order several streets to be paved, graded and improved.

ABERDEEN, WASH.—The city council has decided to build a road over a mile long to the cemetery.

SEATTLE, WASH.—City Engineer Thompson estimates the cost of paving in nine districts at about \$40,000.

SPOKANE, WASH.—Bids are asked until about March 1 for laying about 12,700 sq. yds. of asphalt paving on First Ave., to cost about \$34,000. Otto A. Welle, Cy. Engr.—It is stated that the city will spend about \$12,000 in street improvements.

MERCED, CAL.—W. H. Turner, Pres. Bd. Trustees, writes us that the board is discussing the question of repaving streets, constructing sewers, electric light plant and water-works.

PASADENA, CAL.—It is stated that the Better Roads Society is discussing the question of building a boulevard 15 miles long. F. D. Allen, Engr.

REDLANDS, CAL.—The board of trustees have passed a resolution of intention to pave three streets with asphalt and one with granite, according to reports.

LEWISTON, IDAHO.—E. McCollough, Cy. Engr., writes us that the board has been petitioned to macadamize about 1,300 lin. ft. of Main St. Bids have not yet been asked.

TORONTO, ONT.—Bids are asked until Feb. 26 for paving three streets with asphalt and ten with blocks. E. A. MacDonald, Mayor and Chn. Bd. of Control.

MANUFACTURING PLANTS.

(For foreign manufacturing plants, see under "Foreign Contracts and Export News.")

EVERETT, MASS.—Reports state that the United States Steel Co. proposes to establish a steel plant in this place on a site of 3,000,000 sq. ft., which it has purchased. Harbor approaches and a spur track to the Boston & Maine R. R. will be constructed, the work to begin about March 1. The plant will employ about 250 men. C. G. Miller is said to be interested.

BELLEVILLE, N. J.—It is reported that Tiffany & Co., New York, proposes to make an addition to its plant at Forrest Hill for the watchmaking branch of its business, which is now established in New York.

NEWARK, N. J.—The American Tin Plate Co., it is said, and the National Steel Co., which now have offices in Chicago, will soon move to Newark, where they will establish plants near the freight yards of the Pennsylvania R. R., at Broad St.

PHILADELPHIA, PA.—The plans for the proposed addition to the Cambria Steel Co. are said to have been completed, and bids will probably be asked soon. The plans call for doubling the capacity of the present plant, which is estimated to cost \$1,000,000.

PHILADELPHIA, PA.—Wilson Bros. & Co., Archs. and Engrs., 1636 Drexel Bldg., Philadelphia, are reported to have asked for estimates for the new locomotive shops of the Philadelphia & Reading Ry., at Reading.

SHARON, PA.—The Sharon Steel Co., it is said, proposes to build a 10-mill tinplate plant in connection with its present plant.

PARKERSBURG, W. VA.—It is reported that the Peerless Mills is about to let the contract for a new equipment for its plant, which will cost several thousand dollars.

FAITH, N. C.—J. T. Wyatt writes us that he will need cotton mill machinery and granite quarry outfit, with crusher, steam drill, etc., for granite quarries and the cotton mill development to be made here at an early date. The contracts for buildings and equipments will soon be let. The equipment will cost about \$50,000.

ATLANTA, GA.—It is stated that Geo. B. Hineman, Atlanta, has been awarded the contract for additions to the Dallas Mills, to cost about \$619,000.

CARTERSVILLE, GA.—We are informed that the Clifford Lime & Stone Co. is erecting a Gates crusher and a complete plant for ballast macadam, dimension stone, etc. A spur track is being built from the lime stone quarry to the Western & Allen R. R., above Kingston. S. P. Jones, Pres.; W. P. Larimore, Gen. Mgr., Cartersville, Ga.

DECATUR, ALA.—It is reported that Frank Conner, Pres., has purchased the site and buildings of the United States Rolling Mill Stock Co., on which the Groton Bridge & Mfg. Co., Groton, N. Y., will erect a plant to cost about \$500,000.

ROANOKE, ALA.—It is stated that preliminary arrangements have been made for the organization of a manufacturing company to be known as the W. A. Handley Mfg. Co., with \$100,000 capital stock, to build a large cotton mill at this place.

UNIONTOWN, ALA.—The Ella White Cotton Mills Co. has been organized, with \$100,000 capital stock, and will soon begin the building of a factory.

HOLLY SPRINGS, MISS.—It is reported that a cotton mill company will be formed, capitalized at \$100,000, to build a factory in this town.

CHATTAHOOGA, TENN.—Local papers state that the Bedford Pulp & Paper Co. has decided to double the capacity of its plant at Big Island. New machinery will be added at once, and plans are being prepared for buildings and an additional 8,000 HP.

TULLAHOMA, TENN.—The Tullahoma Ice factory will have a lecture plant added to it, according to reports. L. E. Fox, Mgr.

CLEVELAND, O.—The Empire Rolling Mill Co. has been incorporated to build a rolling mill, in this city, for the manufacture of iron and steel. W. R. Dunbar, Louis D. Round and John D. Paton are interested.

TOLEDO, O.—Reports state that the Toledo Bridge Co. will double the capacity of its plant; cost, about \$100,000.

BEDFORD, IND.—A company is said to have been formed by E. J. Robinson, Ludianapolis, and others, to build a \$300,000 cement plant at this place.

FLINT, MICH.—A company has been formed, according to reports, to erect a factory for the manufacture of paints, at this place. D. T. Stooze and Irving Bates are the chief promoters.

APPLETON, WIS.—A canning factory will be erected in this town during the spring to have a capacity of 30,000 cans of corn and tomatoes a day, to employ 200 hands, according to reports.

WACKESHA, WIS.—It is reported that capitalists of this place have subscribed \$65,000 for the erection of a manufactory of iron bridges and iron structural work, to employ about 200 men.

McKINNEY, TEX.—J. A. Barrett, McKinney, Tex., informs us that bids will be wanted in about 30 days for the erection of one building, two stories high, and about 5,000 spindles and 200 looms for a cotton mill, for which a company is being organized.

EUREKA, CAL.—Reports state that a woolen mill is to be erected here. A. W. Berr, the chief promoter, has received \$15,000 in subscriptions for the mill.

BARRIE, ONT.—The question of granting a loan of \$30,000 to the Barrie Tanning Co. to enlarge its plant is being considered.

MISCELLANEOUS CONTRACTS.

TELEPHONE.—Sterling, Colo.—The council has granted a franchise for 20 years to the Colorado Telephone Co.

BUOY SERVICE.—Buffalo, N. Y.—Bids are asked until March 15 for maintaining the buoys in several harbors. Commander F. Hanford, U. S. N.

BUOY SERVICE.—Detroit, Mich.—Bids are asked until March 15 for maintaining buoys in several harbors. Commander J. C. Wilson, U. S. N.

PIER.—Sea Isle City, N. J.—Mayor T. E. Ludlam and others are said to be forming a company to build a pier 700 ft. long, to cost about \$25,000.

SUBWAY.—Pittsburg, Pa.—Reports state that the P. C. C. & St. L. Ry. will build a subway under its tracks at Second Ave. and Ross St. G. L. Peck, Supt.

FIRE ALARM SYSTEM.—Atlantic City, N. J.—It is stated that bids will soon be asked for extending the fire alarm system; 12 new boxes will be installed.

MOORING STONES.—Portland, Me.—Bids are asked until March 24 for furnishing mooring stones for one year from June 30. Commander J. K. Cogswell, U. S. N.

SHIPYARD.—Bucksport, Me.—McKay & Dix, 11 Broadway, New York, are reported to have leased the Beasley shipyard and will soon start work on several vessels.

PIER.—New York, N. Y.—Bids are asked by the department of docks, Pier A, N. R., until Feb. 28, for erecting a wooden pier near the foot of Coenties Slip, E. R.

BREAKWATER.—New Harbour, N. S.—Bids are asked until March 6 for erecting a breakwater at New Harbour. J. R. Roy, Acting Secy., Dept. Pub. Wks., Ottawa, Ont.

TRANSMITTER.—New York, N. Y.—Bids are asked by the fire department, 159 E. 67th St., until Feb. 28, for furnishing one Gamewell, Manual Transmitter. J. J. Scannell, Comr.

TUNNEL.—Bakersfield, Cal.—The contract for building a tunnel in the Kern River Cession, has been let to the California Construction Co., 24 8th St., San Francisco, at about \$93,000.

MAINTAINING BUOYS.—Tompkinsville, N. Y.—Bids are asked until March 29 for maintaining the buoys in several harbors for one year from June 30. Capt. E. M. Shepard, U. S. N.

REMOVING WRECK.—Wilmington, Del.—Bids are asked until March 8 for removing the wreck of the schooner "Mary L. Bird," in Little Creek, Del. Wm. F. Smith, U. S. Agent.

IMPROVEMENT BONDS.—San Diego, Cal.—Edwin M. Capps Mayor, writes us that the council has not yet voted to issue the \$80,000 of improvement bonds, but will probably do so this month.

REPAIRING PIER.—Charlevoix, Mich.—Bids are asked until March 23 for repairing pier, as stated in our advertising columns. Capt. C. Harding, U. S. Engr., 57 Park St., Grand Rapids.

NAVAL SUPPLIES.—Norfolk, Va.—Bids are asked until Feb. 27 for furnishing a quantity of brick, bar steel, brass pipe, valves, etc., at the navy yard. A. S. Kenny, Paymaster-General, U. S. N., Washington, D. C.

FIRE APPARATUS.—Dayton, O.—The fire department has asked for \$1,000 worth of hose, five steam fire engines, to cost about \$25,000, and one combination chemical wagon to cost about \$1,200.

NAVAL SUPPLIES.—Washington, D. C.—Bids are asked until Feb. 27 for furnishing a quantity of files, weather-proof cable and wire, etc., at the navy yard. A. S. Kenny, Paymaster-General, U. S. N.

CEMENT AND SAND.—Portsmouth, N. H.—Bids are asked until March 23 for furnishing a quantity of Portland cement and sand, as stated in our advertising columns. Maj. W. L. Fisk, U. S. Engr.

HARBOR.—Winthrop Harbor, Ill.—The Winthrop Harbor & Dock Co., 95 Dearborn St., Chicago, is said to have received permission to construct an artificial harbor. Plans for docks, etc., have been prepared.

ARCH.—Detroit, Mich.—Plans have been prepared, according to reports, by A. E. French, 90 Griswold St., for a triumphal arch for the Supreme Lodge, Knights of Pythias. F. J. Peddie, Secy., 88 Griswold St.

CEMENT, ETC.—Fort Monroe, Va.—Bids are asked until March 17 for furnishing cement, broken stone, lumber, etc., as stated in our advertising columns. Maj. Jas. B. Quinn, U. S. Engr., 106 Granby St., Norfolk.

DREDGING.—Grand Rapids, Mich.—Bids will be received at the office of the U. S. Engr., 57 Park St., until March 15 for dredging in harbors along the east shore of Lake Michigan. Capt. Chester Harding, U. S. Engr.

STEEL PONTOONS.—St. Louis, Mo.—Bids are asked until March 21 for furnishing 175 steel pontoons, as stated in our advertising columns. Capt. M. M. Patrick, U. S. Engr., Secy., Mississippi River Commission, Fullerton Bldg.

RIVER IMPROVEMENTS.—Cleveland, O.—The council has passed an ordinance to widen, deepen, enlarge, straighten and improve the south side of the Cuyahoga River. F. F. Klingman, Vice-Pres. Council; H. H. Burgess, Cy. Clk.

NAVAL SUPPLIES.—Naval Station, Puget Sound, Wash.—Bids are asked until March 3 for furnishing a quantity of nuts, bolts, cement, fire brick, fire clay, etc., at the naval station. A. S. Kenny, Paymaster-General, U. S. N., Washington, D. C.

ROAD ROLLER, TRAP ROCK, ETC.—Brooklyn, N. Y.—Bids are asked until March 1 by the Park Department, Arsenal, Central Park, N. Y., for furnishing, in Brooklyn, a 12-ton steam road roller, a quantity of trap rock, sand stone screenings and blue limestone screenings.

PIER.—New York, N. Y.—The following bids were received by the dock board Feb. 16, 1900, for building a new wooden pier at Pike Slip, East River: W. H. Jenks, 132 Pearl St., (accepted), \$34,897; Seaboard Contracting Co., \$38,917; Henry L. Bearin, \$30,225; W. T. Ritch, \$37,419; the engineer's estimate, \$36,500.

MASONRY ARCH.—Cleveland, O.—The following bids were received Jan. 31 for constructing a masonry arch under the Lake Shore & Michigan Southern Ry. tracks at Gordon Park; Beers & Doolittle, \$101,567 (accepted); Northern Ohio Paving and Cours. Co., 30 Case Library Bldg., \$115,000; Alex. Tubman, 872 Fairmount Ave., \$112,062.

FOREIGN CONTRACTS AND EXPORT NEWS

RUSSIA.—The construction of a line about 500 miles long, from Zarlyzn to Orsk, has been decided upon by the Railway Administration. The line has, on several occasions, been proposed and rejected on account of the engineering difficulties, but the preliminary survey has been completed and the project submitted, definitely accepted. Estimated cost for construction and equipment, \$62,800,000. Y. A. Messoyeff, Pres. and Engr. Ry. Administration, Fontanka 117, St. Petersburg.—The management of the Nicolas (Nicolas-Ostachkovo Rjev & Rjev Wyashma) has asked the Minister of Ways and Communication for permission to enlarge the stations at St. Petersburg and Moscow and to increase its rolling stock. P. Michalzev, Gen. Mgr., St. Petersburg.

SIAM.—Our correspondent informs us that through the representations of the American Minister, Hamilton King, and the Siam & American Trading Co., L. E. Bennett, Trustee, Bangkok, the King has agreed to extend the time for receiving tenders for the supply of rails, etc., for the Petchaburi Ry. until American manufacturers can be heard from. The German Director of Railways had fixed the last date Feb. 12. The supplies required are: 6,730 tons of Bessemer steel rails, 8 meters long; weight, 20.8 kilos per meter; with shorter rails for 80 single switches; 187 tons iron Dog spikes, weight 0.18 kilos per piece; 446 tons fishplates of Bessemer steel or mild steel, weight 11 kilos per pair; 66 tons bolts and nuts, weight 0.33 kilos per piece; 22 tons washers (spring steel rings), weight 12.5 kilos per 1,000; 164 tons bearing plates of mild steel, weight 1.3 kilos per piece. The supply to correspond to the requirements of the leading American railways. The tenders must be binding for three months, and contain price per ton of 1,000 kilos, for each kind of material f. o. b. at a large seaport; time of delivery eno. b. after receipt of the order by letter or telegram. Delivery may be made in instalments, but the time of delivery and quantity of such instalment must be mentioned in tender; conditions of payment in case those mentioned hereafter are not satisfactory: 1/3 of the amount on ordering; 3-5 on shipment against delivery of the bill of lading; 1-5 after arrival in Bangkok in satisfactory condition. The payments will be made in the case of the United States through the Hong Kong & Shanghai Banking Corporation, 50 Wall St., New York, by telegraph. The Siam-American Trading Co. (cable address "Sateco, Bangkok," A B C code), offer to act for Americans if 1% commission be included in amount of bid. Cablegrams should be followed immediately by letters confirming them, and enclosing detailed specifications of what would be furnished. U. S. Minister King states that this is only one of many railways that are to be built in Siam.

BRITISH NORTH BORNEO.—A contract has been made by Pauling & Co., 26 Victoria St., London, S. W., with the British North Borneo Co. whereby the former will build a railway between Gaya Harbor and Brunel Bay, about 60 miles, according to reports.

RUSSIA.—The Catharine Ry. Co. (5-ft. gage), will lay a third set of rails over its system, in addition to a number of branch lines. A. Verchovtzer, Gen. Mgr., Yecaterinoslav, Russia.

FRANCE.—The Western Ry. Co. (Cle. des C. de f. de l'Ouest), gage 4 ft. 9 ins., is in the market for 300 car wheels and a quantity of axles. M. Clerault, Ch. Engr., 44 Rue de Rome, Paris.

CHILE.—The Minister of Industry and Public Works (Ministro de Industria i Obras Publicas), Santiago, has granted a concession to Augustin Ross to construct a railway from the Mina Loreto coal mines to Punta Arenas, on the Straits of Magellan. Mr. Ross can be addressed in care of the Minister of Public Works.

CETTE (HERAULT), FRANCE.—The contract made between the Mayor and the Cete Tramway Co. for electric lines has been approved and the work will soon begin.

TOKYO, JAPAN.—The council has authorized the Tokyo City Ry. Co. to build the 200 miles of proposed lines. Part of the capital, 15,000,000 yen, is to be applied as follows: Rails, 2,210,000 yen; sleepers, points and laying rails, 1,312,000 yen; 600 electric cars, 2,140,000 yen; 6,000-HP. powerhouse, 1,500,000 yen; 8 accumulating stations, 1,000,000 yen; electric wire, 2,000,000 yen; stores and other buildings, 550,000 yen; bridges, 1,000,000 yen. The engineer proposes to use 30 200-HP. water-tube boilers; five 1,200-HP. triple-expansion engines, 100 revolutions per minute, and five 3-phase, 3,500-volt, 800-K-W dynamos, with a speed of 1000 revs. A 60-lb. T-rail is proposed.

LINARES, SPAIN.—It is proposed to build an electric line, according to reports.

HAVANA, CUBA.—The Cuban Electric Co., controlled by Canadians, has secured the ferry system between Havana and Regla, and also the right of way to Guanabacoa, 3 miles, and work on the line, it is stated, will begin at once.

DURBAN, NATAL.—Bids are asked until April 2 for furnishing 1,900 tons of steel girder rails, 64 tons of fishplates, nuts, tie-bars, etc., and for laying about 14.36 miles of single track and for bonding 2.96 miles of the present line of the corporation tramways. The town will lay the concrete foundations, etc. Deposit for forms, \$50. Webster, Steel & Co., Agents, 5 East India Ave., Leadenhall St., London, E. C.

SALFORD, ENG.—Bids are wanted at once by the town clerk for furnishing mechanical stokers, pumps, traveling crane, etc., for the new electric plant. Deposit for forms, \$15. Lacey, Clirreugh & Sillar, Engrs., 2 Queen Anne's Gate, London.

MARTINIQUE, AFRICA.—La Compagnie Electrique de St. Pierre de la Martinique has been formed at 17 Boulevard Madeleine, Paris, to build a power plant in Martinique; capital stock, \$50,000.

BADEN, SWITZERLAND.—Der Motor Actengesellschaft für Angewandte Electricität has decided to erect a large power plant on the River Rare, near Dottingen. About 10,000 HP. will be developed.

VILLAMARCANTE, SPAIN.—The council (Junta Municipal), Senor Patrocinio Peris, Secy., will install a plant for which the power of the Turin River is to be utilized. Francisco Capdequi is Alcalde.

CARDIFF, WALES.—The South Wales Electric Power Distribution Co., Ltd., has been incorporated with a capital of \$150,000 by T. F. Brown, Cardiff; Sir Wm. T. Lewis, The Marly, Aberdare; Walker, E. P. Martin, Glamorgan, Wales, and A. T. Walker, Leeds, all civil engineers.

HOKKAIDO, JAPAN.—The Sapporo Brewing Co., Sapporo, Hokkaido, has given the contract for erecting its

new brewery of 50,000 bbls. capacity to H. Steinmann, Arch. and Eogr., 29 Broadway, New York. The machinery and steel work will be bought in the United States.

APOLDA, GERMANY.—The Electra Gesellschaft, of Dresden, has secured a 50-year franchise for a power plant here, according to reports.

WAITERA, NEW ZEALAND.—The Waitera Freezing Works, it is reported, will spend about \$65,000 in improving its plant.

MOSCOW, RUSSIA.—Reports state that the approval of the imperial government is only wanted to begin the construction of the proposed new works. The works include the building of an aqueduct, which shall give a daily supply of 38,500,000 gallons. N. P. Simin, Ch. Engr., Water-Works Dept.

LONDON, ENG.—C. Wall, Chelsea, S. W., has been awarded the contract at \$31,000 for the public baths, etc., at Kentish-Town, and Greagar & Son the contract for a school building in Manor Park at \$102,000.

THE HAGUE, HOLLAND.—Bids are asked until March 15 for furnishing an engine and two boilers, etc., for raising water from the canal in the Sandhills to the setting reservoir, and from the filtering reservoir. Address the manager of The Hague Water-Works, 25 Pruisegracht.

MONTEREY, MEX.—Reports state that an American syndicate, with a capital of \$10,000,000, will immediately begin the construction of a steel rail plant in this city. The plans have been completed.

NEW CASTLE-UPON-TYNE, ENG.—Bids are asked by the town clerk until March 5 for furnishing 50 and 6-ton electric cranes and 25 and 2-ton hand cranes, deposit for forms, \$10. Hopkinson & Talbot, Engrs., 23 Princess St., Manchester, and 25 Victoria St., London.

GREAT BRITAIN.—The following concludes the list of projected work in British towns, given in our last issue. **Liverpool.**—H. J. Evans, Engr.—electric lighting. **Heywood.**—J. A. Settle, Engr.—low will soon take over the steam tramways from the private company, whose lease will soon expire, and plans for the adoption of electric traction are being prepared by W. P. Adams. **Hligman Ferries.**—Cyril Dunkley, Surv.—water-works and a tramway, to be built by the British Electric Traction Co., Donington House, Norfolk St., Strand, London. **Hoddesdon.**—T. Salford, Mayor.—electric tramways, to cost about \$450,000. **Holmfirth.**—C. E. Vint, Surv.—electric tramways and extension of water-works. **Houghton-le-Spring.**—Vincent Smith, Engr.—electric tramways. **Huddersfield.**—K. F. Campbell, Engr.—conversion of the steam tramways to electric, at a cost of \$500,000, and in addition Parliament will be asked to grant powers to extend the lines about 25 miles, at a cost of \$2,000,000. **Sewers.** to cost \$150,000, are proposed. **Lancaster.**—J. Cook, Surv.—electric lines and a new town hall. **Leighton Buzzard.**—J. Stewart, Engr.—refuse collection and water-works. **Lincoln.**—R. A. MacBair, Cy. Surv.—abattoir and electric tramways. **Llandilo, Wales.**—David Jenkins, Surv.—plans for electric light plant have been prepared by J. C. Horvell, of Llandilo, Llandudno. **London.**—Sir Alex. H. Binnie, Ch. Engr. county council.—Welsh water scheme, the Rotherhithe tunnel, schemes for 13 new tramlines and doubling or changing eight existing lines, also for four light railways. The council has powers to operate by electric traction any existing tramways. **London, Bermondsey.**—R. J. Angel, Engr.—dust destructor and electric light plant. **Luton.**—A. J. L. Evans, Engr.—electric plant, to cost \$130,000. **Lytham.**—A. Price, Surv.—electric plant and extensions to gas and water-works. **Maldenhead.**—Percy Johns, Surv.—electric plant and sewage disposal. **Malton.**—T. P. Hunting, Surv.—electric plant, to cost \$150,000. **Middleton.**—W. Welburn, Surv.—3 1/2 miles of electric tramways, to cost \$175,000. **Morley.**—W. E. Putnam, Engr.—new reservoir with 200,000,000 gals. capacity, and 21 miles of pipe. **Morsley.**—Jas. Diggle, Surv.—steel girder bridge over River Tames and electric plant and tramways. **Moss side, Manchester.**—H. B. Longley, Engr.—reconstructing tramway, 2 1/2 miles of new streets and 1,000 houses. **Nelson.**—H. Ball, Surv.—extending electric plant, and in August the landings—E. P. Stephenson, Engr.—electric plant will convert them into electric. A light railway will be built to Colne and Harrowford. **New Haven.**—F. J. Rayner, Surv.—electric lighting. **Neuaton.**—J. S. Pickering, Surv.—sewage disposal works, \$225,000; water-works pumping machinery, etc., \$80,000, and the Neuaton Electric Co. will spend \$50,000 on extending the electric plant, and the Neuaton & District Light Railways Co. has applied for powers to build eight miles of electric traction. **Penrith.**—C. W. Thompson, Surv.—new gravity water-works and electric light plant. **Perrin.**—A. J. Dickenson, Surv.—electric light tramway. **W. J. Petch, Engr.**—electric tramways, 4 1/2 miles long. **Rawtenstall.**—A. W. Lanson, Engr.—electric light and tramways, and refuse destructors. **Redcar.**—J. Howcroft, Engr.—electric lighting. **Redditch.**—Bernard Perrins, Engr.—new electric plant. **Reigate.**—W. H. Prescott, Engr.—electric plant, \$150,000. **Rhyl.**—A. A. Goodall, Engr.—electric plant of 3,000 eight c. p. and 20 arc lights, to cost \$100,000. **Rockdale.**—S. S. Platt, Engr.—24 miles of electric tramways, to cost \$1,200,000. **St. Helens.**—G. J. C. Broom, Engr.—3 1/2 miles of 4-ft. sewers, disposal works, a skew bridge, 10 miles of tramway, besides completing the lines between St. Helena, Haydock, Deuton's Green, Wudie City, etc., making a total of 20 miles. Application has been made for three miles of additional tramway. **Salford.**—J. Corbett, Engr.—3 1/2 miles of tramways to be equipped with electricity, \$1,250,000; new cars, sheds, etc., \$1,000,000; extension of power plant, \$1,900,000, and 400 cottages, \$565,000, and intercepting sewers, \$800,000. **Sandgate.**—A. R. Bowles, Surv.—electric plant and water-works extension. **Scarboro.**—H. W. Smith, Engr.—electric tramways. **Sevenoaks.**—J. Mann, Surv.—electric plant. **Sheffield.**—C. F. Wilke, Cy. Engr.—tramway power station, \$90,000; two refuse destructors, \$250,000; powers have been asked to extend tramways in certain streets, etc., \$4,000,000. **Southend-on-Sea.**—F. Alder Engr.—electric tramways, \$400,000; refuse destructor, \$47,000. **Sudbury.**—T. W. A. Hayward, Town Surv. and Engr.—electric plant and refuse destructor. **Teddington.**—M. Hainsworth, Surv.—electric plant and tramway. **Teignmouth.**—C. Jones, Surv.—electric plant, \$40,000. **Tonbridge.**—S. G. Roberts, Engr.—electric plant, \$160,000. **Wrexham.**—J. W. M. Smith, Surv.—electric plant and destructor. **York.**—A. Creer, Cy. Engr.—acquiring of the tramways and adopting them to electric traction. **Wolverhampton.**—J. W. Bradley, Engr.—to acquire the 9 1/2 miles of line of the Wolverhampton & District Tramways within the borough limits, and to equip same with electricity, and also to extend to a total of 25 miles, to cost \$1,250,000. Bills are before Parliament granting the necessary powers for considerable of the above-mentioned work, so it may be some time before some of the work is started, while some of the applications may not be granted.

CONTRACT PRICES.

SEWERS.—Pueblo, Colo.—Wm. Peach, Cy. Engr., writes us that contracts have been let to Piper Bros. for 4,150 ft. of 8-in. pipe, and to J. H. McCabe for 7,350 ft. of 8-in. pipe sewers, at an average cost of 50 cts. a ft.; manholes, \$60; flushtanks, \$97.

SEWERS.—Martinsville, Ind.—F. A. Gageby, Cy. Engr., informs us that the following bids were received Feb. 9 for constructing sewers; contract awarded J. P. Thompson & Co.:

Table with columns: Quantities, J. P. Thompson & Co., Erier & Peter, Haute, River-side Const'n Co., W. S. Fries, Greenfield, W. C. Smith, Indianapolis, Ganzburg, Roney & Haywood, Indianapolis, Norton & Gilmore, Terre Haute. Rows include 24-in. pipe, 18-in. pipe, 15-in. pipe, 12-in. pipe, 10-in. pipe, 8-in. pipe, 6-in. pipe, 18-in. cast-iron pipe, 12-in. pipe, 8-in. pipe, Manholes, Flushtanks, Lampholes, Extra concrete, Lumber, Bulkhead masonry, Rip-rap.

GUN FORGINGS.—Washington, D. C.—Chas. O'Neil, Ch. Bureau of Ordnance, informs us that the following bids were received Feb. 14, 1900, for furnishing two sets of 4-in. gun forgings: Bethlehem Steel Co., South Bethlehem, Pa., 28 cts. a lb.; Midvale Steel Co., Philadelphia, 28 cts.; B. Atha & Hillingworth Co., Newark, N. J., 22 cts.

STOREHOUSES, SHEDS, ETC.—Buffalo, N. Y.—Maj. T. W. Symons, U. S. Engr., Buffalo, received the following bids Feb. 10 for constructing storehouses, sheds, etc., at the light-house depot, as advertised in Engineering News; all bidders of Buffalo:

Table with columns: Bidder, Excav. place meas., Dry rubble masonry, Ruble foundn. masonry, Mortar rubble masonry, Filling, place meas., Concrete pave-ment, Water pipe, Hydrants, Tram-road tracks, Iron fence, Storehouses and sheds, Total. Rows include Chas. A. Dennis, Menach, M'Keown & Menach, C. A. Rupp, Charles Mosier, John Feist, Crage & Teuch, J. B. Donnelly, Jos. J. Churchyard, Buffalo Dredging Co., A. F. Chapman & Co., Geo. W. Moore, Edw. J. Hingston.

DOCK.—Toledo, O.—Riggs & Sherman, Engrs., received the following bids Feb. 3, 1900, for constructing a new dock for the Toledo Dock & Warehouse Co.: Filling—Breyman Bros., 23 cts.; Wm. Rooney, 25 cts.; M. Rabbit & Sons, 2 1/2 cts. Timber work—J. N. Bick, oak piling, 32 cts.; elm piling 21 cts.; oak timber, \$45; pine timber, \$40; oak plank, \$43; iron, 5 cts. M. O'Sullivan, oak piling, 27 cts.; elm piling, 15 cts.; oak lumber, \$40; pine lumber, \$30; oak plank, \$34.50; iron, 5 and 6 cts. Rabbit & Sons, oak piling, 23 cts.; elm piling, 12 cts.; oak lumber, \$45; pine lumber, \$37; oak plank, \$30; iron, 5 1/2 cts.

BRICK SEWER.—Champaign, Ill.—W. H. Tarrant, Cy. Engr., informs us that the following bids were received Feb. 14 for constructing a brick sewer:

Table with columns: Quantities, J. H. Knowles, Green & Price, & Son, Appletton, Wis., Earlier & Peter, Jackson, Haute, Ind., J. H. Roche, Chicago, Ill., W. A. Edgar, Cedar Rapids, Wm. Horra, Iowa City, Wm. G. Maffioli, Rockford, Ill., Norton & Webster, & Blake, Du-que, Ind., Terre Haute, Ind. Rows include Trenching and backfilling, For material and construction, 60x84-in. swr., 60-in. brk swr., 54-in. swr., Brkn str. conc., Stone masonry, Excav., open ditch, Manholes.

*8 ft. deep from cover to grade line with average cut of 1 1/2 ft.

IRON CASTINGS.—Boston, Mass.—The following bids were received by B. T. Wheeler, Supt. Sts., Feb. 8, 1900, for furnishing iron castings: Sessions Foundry Co., \$1.55 per 100 lbs. (accepted); Osgood & Hart, \$1.80; Mechanics' Iron Foundry Co., \$2.54.—The following were received by the water commissioner Feb. 8 for furnishing small castings; contract let to the Sessions Foundry Co.:

Table with columns: Bidder, No. 1, No. 2, Total. Rows include Mechanics' Iron Foundry Co., Sessions Foundry Co., Osgood & Hart.

DREDGING.—Milford Haven, Va.—We are informed that the only bid received Feb. 12, 1900, for Lieut.-Col. Chas. J. Allen, U. S. Engr., for dredging at Milford Haven was submitted by the Norfolk Dredging Co., Norfolk, Va., at 24 cts.

CABLES.—Fort Totten (S. I.), N. Y.—The following bids were received by Maj. W. L. Marshall, U. S. Engr., Army Bldg., New York, for furnishing lead-covered cables for Fort Totten, Willets Point, N. Y.; (1) being for the Okonite Co., 253 Broadway, New York, and (2) for the Safety Insulated Wire & Cable Co., 223 W. 28th St., New York: 530 ft., 133,079 cm. area, stranded conductor, price per ft., (1) 72 cts., (2) 59 cts.; 530 ft., 105,562 cm. stranded, (1) 62 cts., (2) 43 cts.; 400 ft., 66,373 cm. stranded, (1) 46 1/2 cts., (2) 36 cts.; 80 ft., 41,742 cm. stranded, (1) 39 1/2 cts., (2) 30 cts.; 1,000 ft., 26,250 cm. stranded, (1) 33 cts., (2) 27 cts.

PORTLAND CEMENT.—Duluth, Minn.—Maj. C. B. Sears, U. S. Engr., received the following bids Feb. 10, 1900, for furnishing 9,000 bbls. of Portland cement for north pier, Duluth Canal: The Northwestern Lime Co., St. Paul, Minn., \$2.29 a bbl., delivered and piled up in Duluth warehouse (Atlas); Sparrow, Fridenberg & Co., New York, \$2.38; (Teutonia or Harcourt); Holmes, Strachan & Co., Detroit, Mich., \$2.29 (Wyandotte); the Kelley Island Lime & Transfer Co., Cleveland, O., \$2.59 (Lebligh).

PIPE, VALVES, ETC.—National Military Home, Ind.—C. E. Morrell, Ch. Engr., informs us that the following bids were received Feb. 12, 1900, for furnishing standard wrought-iron gas pipe, gate valves, etc., for the Marion Branch H. N. D. U. S. S.; (1) being for 3,000 ft. of 6-in. pipe; (2) for 2,700 ft. of 4-in. pipe; (3) for 2,700 ft. of 5-in. pipe; (4) for two iron tanks, 30 ins. x 10 ft.; (5) for three 6-in. gate valves, extra heavy; (6) for five 2-in. valves, extra heavy; (7) for two 6-in. Y's, extra heavy, lipped for lead; (8) for two 6 x 8-in. elbows; (9) for 6-in. elbows, extra heavy, 45° lipped; (10) for four 8-in. caps, with 2-in. hole; (11) for one 6-in. pipe coupling; (12) for one 4-in. coupling; (13) for seven 3-in. couplings, and (14) for hauling, distributing and laying 13,800 ft. of pipe, trenching, etc.; average depth, 3 ft.: The Kapp Supply Co., Union City, Ind., (1) \$2.49 cts. a ft.; (2) \$1.24 cts.; (3) \$2.49 cts.; (4) \$2.49 cts.; (5) \$2.49 cts.; (6) \$2.49 cts.; (7) \$2.49 cts.; (8) \$2.49 cts.; (9) \$2.49 cts.; (10) \$2.49 cts.; (11) \$2.49 cts.; (12) \$2.49 cts.; (13) \$2.49 cts.; (14) \$2.49 cts.; (15) \$2.49 cts.; (16) \$2.49 cts.; (17) \$2.49 cts.; (18) \$2.49 cts.; (19) \$2.49 cts.; (20) \$2.49 cts.; (21) \$2.49 cts.; (22) \$2.49 cts.; (23) \$2.49 cts.; (24) \$2.49 cts.; (25) \$2.49 cts.; (26) \$2.49 cts.; (27) \$2.49 cts.; (28) \$2.49 cts.; (29) \$2.49 cts.; (30) \$2.49 cts.; (31) \$2.49 cts.; (32) \$2.49 cts.; (33) \$2.49 cts.; (34) \$2.49 cts.; (35) \$2.49 cts.; (36) \$2.49 cts.; (37) \$2.49 cts.; (38) \$2.49 cts.; (39) \$2.49 cts.; (40) \$2.49 cts.; (41) \$2.49 cts.; (42) \$2.49 cts.; (43) \$2.49 cts.; (44) \$2.49 cts.; (45) \$2.49 cts.; (46) \$2.49 cts.; (47) \$2.49 cts.; (48) \$2.49 cts.; (49) \$2.49 cts.; (50) \$2.49 cts.; (51) \$2.49 cts.; (52) \$2.49 cts.; (53) \$2.49 cts.; (54) \$2.49 cts.; (55) \$2.49 cts.; (56) \$2.49 cts.; (57) \$2.49 cts.; (58) \$2.49 cts.; (59) \$2.49 cts.; (60) \$2.49 cts.; (61) \$2.49 cts.; (62) \$2.49 cts.; (63) \$2.49 cts.; (64) \$2.49 cts.; (65) \$2.49 cts.; (66) \$2.49 cts.; (67) \$2.49 cts.; (68) \$2.49 cts.; (69) \$2.49 cts.; (70) \$2.49 cts.; (71) \$2.49 cts.; (72) \$2.49 cts.; (73) \$2.49 cts.; (74) \$2.49 cts.; (75) \$2.49 cts.; (76) \$2.49 cts.; (77) \$2.49 cts.; (78) \$2.49 cts.; (79) \$2.49 cts.; (80) \$2.49 cts.; (81) \$2.49 cts.; (82) \$2.49 cts.; (83) \$2.49 cts.; (84) \$2.49 cts.; (85) \$2.49 cts.; (86) \$2.49 cts.; (87) \$2.49 cts.; (88) \$2.49 cts.; (89) \$2.49 cts.; (90) \$2.49 cts.; (91) \$2.49 cts.; (92) \$2.49 cts.; (93) \$2.49 cts.; (94) \$2.49 cts.; (95) \$2.49 cts.; (96) \$2.49 cts.; (97) \$2.49 cts.; (98) \$2.49 cts.; (99) \$2.49 cts.; (100) \$2.49 cts.

27 cts.; 415 ft., 16,500 cm. area, solid conductor, (1) 41 cts., (2) 16 cts.; 300 ft., 10,381 cm. solid, (1) 39 cts., (2) 18 cts.; 900 ft., 6,529 cm. solid, (1) 21 cts., (2) 15 cts.; 1,775 ft., 4,106 cm. solid, (1) 33 1/2 cts., (2) 11 cts.

WATER METERS.—Alhany, N. Y.—The following bids were recently received for furnishing water meters: Thompson Meter Co.—3/4-in., \$0.80; couplings, 44 cts.; 1/2-in., \$1.20; couplings, 66 cts.; 1-in., \$1.70; couplings, 88 cts.; 1 1/2-in., \$2.33; 2-in., \$3.30; 3-in., \$4.50; 4-in., \$6.00; 6-in., \$8.18. National Meter Co.—"Crown" meter, 3/4-in., \$12.50; couplings, 50 cts.; 1/2-in., \$21.75; couplings, 75 cts.; 1-in., \$31; couplings, \$1; 1 1/2-in., \$52; couplings, \$2; 2-in., \$69; couplings, \$4; 3-in., \$135; 4-in., \$250; 6-in., \$500. Neptune Meter Co.—"Trident" meter, 3/4-in., \$9; couplings, 50 cts.; 1/2-in., \$13.50; couplings, \$5; 1-in., \$18; couplings, \$7; 1 1/2-in., \$27; 2-in., \$35; 3-in., \$45; 4-in., \$60; 6-in., \$80. Hersey Mfg. Co.—Prices with couplings: Rotary, 3/4-in., \$12.50; disc, \$9.50; 1/2-in., rotary, \$19.75; disc, \$14.25; 1-in., rotary, \$27; disc, \$19; 1 1/2-in., rotary, \$45; disc, \$35; 2-in., rotary, \$65; disc, \$55; torrent, \$45; 3-in., rotary, \$125; disc, \$95; torrent, \$80; 4-in., rotary, \$250; disc, \$200; torrent, \$175; 6-in., rotary, \$500; disc, \$400; torrent, \$400. Standard Meter Co.—With couplings: 3/4-in., \$7; 1/2-in., \$10; 1-in., \$14.50; 1 1/2-in., \$27; 2-in., \$42; 3-in., \$80; 4-in., \$125; 6-in., \$250.

PAVING MATERIALS, SEWER PIPE, ETC.—Galveston, Tex.—Geo. Q. McCracken, Sewer Bd. Pub. Wks., informs us that the following bids were received Feb. 13, 1900, for furnishing paving materials, etc.: (1) being for standard brick 1,000, (2) for bull-nose brick 1,000, (3) for common brick per 1,000, (4) for sharp sand per cu. yd., (5) for Kronsberg German Portland cement per bbl., (6) for Dyerhoff cement per bbl., (7) for Golden Eagle Belgian cement per bbl., (8) for 15-in. sewer pipe per ft., (9) for 8-in. sewer pipe, (10) for Borsneger Portland cement per bbl., (11) for broken stone per short ton, (12) for Hummer cement per bbl., (13) for crushed stone per cu. yd.: Green & Hunter Brick Co., 107 W. 7th St., Fort Worth, Tex., (1) \$17.75, (2) \$37.55, (3) \$13.55 (accepted); W. H. Pollard & Co., Galveston—(2) \$12.50, (3) \$7.75, (4) \$1.25, (5) \$2.45, (6) \$2.95, (7) \$2.20, (8) 12.5 cts., (9) 16 cts.; Geo. H. Henchman, Galveston—(8) 70 cts., (9) 16 cts., (10) \$2.45 (accepted); W. H. Haden, Cedar Bayou, Tex.—(2) \$9, (3) \$7, (4) \$1 (accepted); Suderman & Dolsen, Galveston—(11) \$2.95; Wm. Parr & Son, Galveston—(7) \$2.15, (12) \$2.50; Chase & Smith, Galveston—(13) \$3.75; May & Wainwright, Galveston—(8) 36 cts., (9) 15 cts.; W. G. Fabb—(4) \$1.05; J. W. & R. D. Lauderdale, Galveston—(13) \$3.25; Galveston Cement & Pipe Works—(8) 22.5 cts., (9) 27.5 cts., (13) \$2.85 (accepted).

INDUSTRIAL NOTES.

FOLEY, RICHARDS & DUNN, 14 South Broad St., Philadelphia, have succeeded the firm of Foley & Richards, contractors and engineers. Messrs. Thomas Foley, Wm. R. Richards, C. E., and Wm. A. Dunn, C. E., now compose the firm.

THE AMERICAN WOOD PRESERVING CO., 806 Chestnut St., Philadelphia, announces that the Boston Elevated Ry. Co. have just placed an order for 4,000 gallons of "Woodline." The company began the use of this compound about February, 1897, treating cross-ties for the Boston Subway in a plant erected for the purpose.

HYDE BROS. & Co., Lewis Bldg., Pittsburg, are at present installing their water-tube boilers at the following plants: Tyrone Iron Works, Tyrone, Pa.; Scranton Bolt & Nut Co., Scranton, Pa.; Pullman Car Works, Pullman, Ill.; Reeves Iron Works, Canal Dover, Ohio; Emlyn Iron Works, East Chicago, Ind.; Laramie Iron & Steel Co., Laramie, Wyo.

THE UNION BRIDGE CO., New York, is reported to be erecting a pier 1,800 ft. long and 45 ft. wide, at Progreso, Yucatan, the value of the structural steel contract being nearly \$150,000. The pier will have three tracks of rail. All the rails have been furnished by the Carnegie Steel Co., which has also received a contract for 700 tons of steel rails for the narrow-gauge railway to run from Merida, the capital of the state, direct to the pier. The Baldwin Locomotive Works has the contract for four locomotives. Two locomotive cranes and one pillar crane for use on the new pier have been shipped by the Brown Hoisting & Conveying Machine Co.

THE LAWRENCE MACHINE CO., Lawrence, Mass., through its New York agent, H. E. Maxfield, 39 Cortlandt St., has recently secured the following contracts: Pumping plant for the St. Louis Transit Co.; capacity, 42,000 gallons a minute; an electrically-driven centrifugal pumping plant for Elmhurst, L. I., for which the United Co. are engineers; a complete contract for a sewage pumping plant to be installed for the Weston Electrical Instrument Co., at its new factory at Waverly, N. J.; and a complete contract for a pumping outfit for the new Havenmeyer residence at Islip, L. I., for which Waring, Chapman & Farquhar are the engineers.

THE SHELBY STEEL TUBE CO. has been incorporated in New Jersey with a capital stock of \$15,000,000. Press reports state that the plants included in the new concern are as follows: Newcastle Tube Co., Newcastle, Pa.; McCool Tube Co., Beaver Falls, Pa.; Auburn Nut & Bolt Works, Auburn, Pa.; Hercules Seamless Tube Co., Garwood, N. J.; Pope Tool Co., Hartford, Conn.; Ellwood Weldless Tube Co., Ellwood City, Pa.; Greenville Tube Co., Greenville, Pa.; American Weldless Tubing Co., Toledo; Brewer Seamless Tubing Co., Toledo; United States Standard Drawn Steel Co., Cuyahoga Falls, Ohio; Shelby Tube Co., Shelby, Ohio; and the Albany Mfg. Co., Albany, Ind. In addition, the company acquires the tubing business of the United States Projectile Company, of Brooklyn, and of the Mansfield Machine Works, of Mansfield, Ohio. The Pope and Auburn companies were among those absorbed last year by the Shelby Tube Co., which at that time increased its capital stock to \$10,000,000. It is said that the capacity of the old company was 57,000,000 ft. a year and that the new acquisitions increase this to 100,000,000 ft.

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