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PERSONAL.

Mr. George N. Bell has been appointed City Engineer of Kingston, N. Y.

Mr. J. T. Hudson has resigned his position as City Engineer of Portsmouth, O.

Mr. J. Herbert Grant has been appointed Commissioner of Public Works of Rochester, N. Y.

Mr. George A. Hotchkin has been appointed Superintendent of Water-Works of Rochester, N. Y.

Dr. Georg Siemens, of the firm of Siemens & Halske, has been created a nobleman of Prussia by the German Emperor.

Mr. Jodd A. Lockwood has been appointed Assistant Engineer in the Department of Bridges of the city of New York.

Mr. Joseph W. Costello and Mr. James H. Judge have been appointed transmitters for the Department of Public Works of New York city.

Mr. Jas. P. Whiskeman, C. E., has been appointed Assistant Engineer of the Louisville & Nashville R. R., with office at Louisville, Ky.

Mr. Thomas E. Clarke, General Superintendent of the Minneapolis & St. Louis Ry., has been appointed General Manager of the Iowa Central Ry.

Mr. W. L. Stevenson has been appointed Superintendent of the Eastern Division of the Fitchburg R. R., to succeed Mr. J. R. Hartwell, transferred.

General A. P. Martin has been appointed Water Commissioner of Boston, Mass. Gen. Martin is an ex-Mayor of the city and a veteran of the Civil War.

Mr. Schuyler Hazard has been appointed Engineer of the Pennsylvania Division of the New York Central & Hudson River R. R., vice Mr. L. J. Carmatt, resigned.

Mr. Arthur B. Corthell has resigned his position on the engineering staff of the Boston Terminal Co. and is now with Westinghouse, Church, Kerr & Co., 53 State St., Boston, Mass.

Mr. Minard L. Holman, who was formerly Water Commissioner of St. Louis, Mo., has been appointed Superintendent of the Missouri-Edison Electric Co., to succeed Mr. Herbert A. Wagner, who has resigned.

Mr. Cornelius Murphy has been appointed Supervisor of Track for the New York Central & Hudson River R. R., with headquarters at Munson, Pa., vice Mr. J. L. Soghrue, transferred.

Mr. William Unruh, Chief Engineer of the Morris and Essex Division of the Delaware, Lackawanna & Western R. R., has resigned his position and gone to Los Angeles, Cal., where he will spend the winter.

Mr. Charles M. Heald has been appointed President of the Flint & Pere Marquette R. R., and Mr. S. T. Crapo, General Manager. The headquarters of the system will be located temporarily at Grand Rapids, Mich.

Mr. G. S. Barber, who has been connected with the civil engineering department of the Champion mine in Northern Michigan for several years, has gone to the Gogebic range to take charge of the Mikado mine.

Mr. Charles Evan Fowler, M. Am. Soc. C. E., formerly Chief Engineer of the Youngstown Bridge Co., has accepted the position of Chief Engineer and Structural Manager with Snare & Triest, 39 Cortlandt St., New York city.

Mr. George S. Davison, M. Am. Soc. C. E., has withdrawn from the firm of Wilkins & Davison, consulting engineers, Pittsburg, Pa., and has become Secretary and General Manager of the Monongahela Street Ry. Co. Mr. Wm. C. Wilkins, M. Am. Soc. C. E., will continue the business of the former company.

OBITUARY.

Mr. Allen B. Rorke, architect and builder, died recently at Philadelphia, Pa.

Mr. J. C. O'Neil, railway contractor, died at his home in Port Arthur, Ont., on Dec. 21.

Mr. James Kennedy, a bridge and steamboat builder, died at his home in Pittsburg, Pa., on Dec. 21.

Mr. Philip T. Begley, General Superintendent of the Lowell & Suburban Street Ry., died at his home at Lowell, Mass., on Dec. 24.

Mr. Theodore Altender, Sr., of the firm of Theodore Altender & Sons, manufacturers of drawing instruments, died at Philadelphia, on Dec. 27, at the age of 78 years.

Mr. John L. Cole died at Charlestown, W. Va., on Dec. 21. He was a civil engineer and did much work for the Federal Courts in surveying the coal fields of West Virginia.

Mr. Martin Hoag died recently at Rockwood, Tenn. He was a member of the Engineering Department of the Tennessee Central Ry., and a graduate of the University of Wisconsin.

Mr. Chas. E. Noble died at his home in Morristown, N.J., on Dec. 17. In 1857 Mr. Noble was appointed Assistant Engineer of the Morris & Essex R. R., and he was later Chief Engineer of the Sussex R. R., and of the Jackson & Alton R. R. In 1870 he built about 700 miles of the International & Great Northern Ry. in Texas.

Capt. Jacob J. Vandergriff died at his home in Pittsburg, Pa., on Dec. 23. He was a successful steamboat man; organized the Star Tank Line, and was interested in a number of pipe lines, and oil and natural gas companies. He was Vice-President of the Appolo Iron & Steel Co., and President of the Vandergriff Land & Improvement Co., and of numerous manufacturing companies.

Mr. Chas. P. Krauth, Secretary and Treasurer of the McConway & Torley Co., died on Dec. 27, at Pittsburg, Pa. Mr. Krauth was born in Philadelphia, and after graduating from the University of Pennsylvania, went to Freiberg, Saxony, to study engineering and graduated from the university there. He later returned to Philadelphia and connected himself with the Pullman Car Co.

Col. Napoleon Boardman died at his home in Fond du Lac, Wis., on Dec. 21. He was born at Grand Isle, Vt., in 1825. He began engineering on the Vermont Central Ry. in 1844, and in 1846 he began an exploration in the mineral regions of Lake Superior. From 1847 to 1851, he was engaged in the engineering department of the Rutland & Burlington Ry. In 1852 he went to Fond du Lac, Wis., and became a member of the engineering staff of the Chicago & North Western Ry. until he enlisted in the Union Army in the Civil War. He participated in numerous engagements and was promoted to a captaincy. He afterward served against the Indians under sitting Bull in the Black Hills. Afterwards he returned to Fond du Lac, and resumed his work as a civil engineer. He has been chief engineer of the Michigan Grand Trunk Ry., Milwaukee & Lacrosse Ry. and the St. Paul & Eastern Grand Trunk Ry. He built part of the Air Line of the Michigan Central Ry., and was for five years city engineer of Fond du Lac.

ENGINEERING SOCIETIES.

COMING GENERAL MEETINGS.

INTERNATIONAL ACETYLENE ASSOCIATION.
Jan. 9 and 10. Annual meeting at Buffalo. Secy., J. B. Carroll, Chicago, Ill.

CONNECTICUT CIVIL ENGINEERS' AND SURVEYORS' ASSOCIATION.
Jan. 9. Annual meeting at Hartford, Conn. Secy., George K. Crandall, New London, Conn.

MONTANA SOCIETY OF ENGINEERS.
Jan. 12 to 13. Annual meeting at Bozeman, Mont. Secy., A. S. Hovey, Butte, Mont.

AMERICAN ASSOCIATION OF INVENTORS AND MANUFACTURERS.
Jan. 16. Annual meeting at Washington, D. C. Secy., Arthur Stuart, Washington, D. C.

NORTHWESTERN ELECTRICAL ASSOCIATION.
Jan. 17. Annual meeting at Milwaukee, Wis. Secy., Thos. R. Mercein, 85 Michigan St., Milwaukee, Wis.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Jan. 17 and 18. Annual meeting at New York city. Secy., C. W. Hunt, 220 W. 57th St., New York city.

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS.
Jan. 23 to 25. Annual meeting at New York city. Secy., W. M. Mackay, P. O. Box 1818, New York city.

OHIO SOCIETY OF CIVIL ENGINEERS AND SURVEYORS.
Jan. 24 to 26. Annual meeting at Columbus, O. Secy., C. N. Brown, Columbus, O.

ILLINOIS SOCIETY OF ENGINEERS AND SURVEYORS.
Jan. 24 to 26. Annual meeting at Moline, Ill. Secy., Jacob A. Harman, Peoria, Ill.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
Jan. 30. Annual meeting at Montreal, P. Q. Secy., C. H. McLeod, 112 Mansfield St., Montreal, P. Q.

INDIANA ENGINEERING SOCIETY. Feb. 1 to 3. Annual meeting at Lafayette, Ind. Secy., Jos. B. Nelson, 61 Baldwin Bldg., Indianapolis, Ind.

LAKE SUPERIOR MINING INSTITUTE.
Feb. 6. Annual meeting at Iron Mountain, Mich. Secy., F. W. Speer, Houghton, Mich.

COMING LOCAL MEETINGS.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Jan. 9. Secy., W. H. Searles, Case Library Bldg., Cleveland, O.

DENVER SOCIETY OF CIVIL ENGINEERS.
Jan. 9. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.

NEW ENGLAND RAILROAD CLUB.
Jan. 9. At Boston. Secy., Edw. L. Jones, P. O. Box 1158, Boston, Mass.

NORTHWEST RAILWAY CLUB.
Jan. 9. At Minneapolis. Secy., T. A. Fogue, Soo Line, Minneapolis, Minn.

ST. LOUIS RAILWAY CLUB.
Jan. 12. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Jan. 16. At Pittsburg. Secy., R. A. Fessenden, 410 Penn. Ave., Pittsburg, Pa.

WESTERN RAILWAY CLUB.
Jan. 16. At Chicago. Secy., J. W. Taylor, 667 The Rookery, Chicago, Ill.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Jan. 17. At New York. Secy., C. W. Hunt, 220 W. 57th St., New York city.

BOSTON SOCIETY OF CIVIL ENGINEERS.

Jan. 17. Secy., S. E. Tinkham, City Hall, Boston, Mass. ENGINEERS' CLUB OF ST. LOUIS.
Jan. 17. Secy., Richard McCulloch, 2401 N. Spring Ave., St. Louis, Mo.

ENGINEERS' CLUB OF CINCINNATI.
Jan. 18. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

NEW YORK RAILROAD CLUB.
Jan. 18. At New York city. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

CHICAGO ELECTRICAL ASSOCIATION.
Jan. 19. Secy., Cloyd Marshall, 1310 Monon Bldg., Chicago, Ill.

ENGINEERS' CLUB OF COLUMBUS.
Jan. 20. Secy., H. M. Gates, 12 1/2 North High St., Columbus, O.

MONTANA SOCIETY OF CIVIL ENGINEERS.
Jan. 20. At Helena. Secy., Albert S. Hovey, Helena, Mont.

ENGINEERS' CLUB OF MINNEAPOLIS.
Feb. 1. Secy., H. E. Smith, 1620 S. E. 4th St., Minneapolis, Minn.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Feb. 2. At San Francisco. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

ENGINEERS' SOCIETY OF WESTERN NEW YORK.
Feb. 5. At Buffalo. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

ENGINEERS' CLUB OF CINCINNATI.—The 12th annual meeting of the club was held on Dec. 27. Officers for the ensuing year were elected as follows: President, Thomas B. Punshon; Vice-President, Wm. C. Jewett; Directors, A. O. Elzner, L. E. Bogen and Alfred Petry; Secretary and Treasurer, J. F. Wilson. Mr. A. O. Elzner read a paper on "The Commercial Value of Art." J. F. Wilson, Secy.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—At the meeting of the Institute held on Dec. 27, a communication by H. H. Walt, of Chicago, was read by Mr. Albright on "The Cost of Arc Lighting," being a discussion of Prof. Robbs' paper presented Sept. 27. The paper is reprinted in this issue. A paper was also read by Capt. Geo. O. Squier on "An American Pacific Cable," which was illustrated by lantern slides. The discussion was opened by Mr. Herbert Laws Webb and was participated in by Messrs. Hallberg, Hughes, Kennelly and Puplin.

THE ENGINEERS' CLUB OF PHILADELPHIA.—A business meeting of the club will be held Jan. 6. At the meeting of Dec. 16 a paper on "Annealing Armor Plates in the Construction of War-Ships" was presented by Mr. Chas. J. Dougherty. He described the electrical process of annealing Harveyized steel plates in places where they are to be afterwards drilled for bolts or other fastenings. By this method an electric current of low pressure and large volume is passed through the plate between two large copper terminals placed against it on opposite sides of the part to be annealed. The electric generator and transformer for furnishing the current and the apparatus used in applying it to the steel plate were fully described, with the aid of illustrations projected by the electric lantern. At the conclusion of the paper a general discussion upon its subject was participated in by Messrs. W. C. L. Egin, Francis Schumann, William Easby, Carl Hering, Edgar Marburg, John C. Trautwine, Jr., Edwin F. Miller and others. L. F. Rondinella, Secy.

NEW PUBLICATIONS.

LITERARY MAGAZINES.—In the December "Contemporary Review," Mr. E. S. Martin discusses "The Trend in American Cities." To an Englishman it seems absurd that in American cities, with their notoriously corrupt governments, a strong tendency should have arisen toward the municipal ownership of public utilities. Mr. Martin points out, however, that this movement really proceeds from a public conviction that the road toward better city government is through increasing, instead of decreasing, the responsibilities laid on public officers. He quotes from Governor Pingree the following statement: "Good municipal government is an impossibility while valuable franchises are to be had and can be obtained by the corrupt use of money in bribing the public servants." Mr. Martin adds: "Public ownership offers less temptation to jobbery and scoundrelism than the surrender of public services to private corporations. . . . It is cheaper for the city to lose small sums annually through the selection of workmen for political reasons than to remain in the grasp of private corporations who can levy exorbitant charges."

In the "Nineteenth Century" for December, Prince Kropotkin has a paper on "Meteorites and Comets," in which he describes in a popular way recent researches into the character of these celestial fireworks. He tells us that the number of small meteorites which annually reach the earth is estimated at 146,000,000, but so small are these visitors that it would take 100,000 years for their dust to raise the surface of the globe by a single inch.

The January "Forum" contains two articles on our foreign trade; "Commercial Possibilities of China," by J. S. Fearon, Vice-President of the American Association of China, and "Does Colonization Pay?" by Mr. O. P. Austin, Chief of the Bureau of Statistics. The latter article is devoted to showing that the trade to be gained from tropical colonies makes them profitable possessions. In the same magazine is an article of interest to sanitarians, "The California Quarantine Against Consumption." The author tells us that since Southern California became the Mecca for thousands of sufferers from tubercular disease, the deaths of the native residents from consumption have greatly increased.

"Appleton's Popular Science Monthly" for January appears in a new cover and with the price reduced to 25 cts. It contains this month an unusually large proportion of

articles on engineering topics. "What Makes the Trolley Car Go?" is the title of a paper by Wm. Baxter, Jr., in which a popular exposition is given of the electrical and mechanical operations in connection with electric car propulsion. Mr. H. S. Wynkoop, M. E., describes the electrolysis of underground pipes, etc., by stray return currents, and sums up the progress thus far made toward the curing of the trouble. In the same magazine the manufacture and uses of modern high explosives are described by Prof. Chas. E. Munroe, and Sir. Robert Ball summarizes the advance of astronomy in the Nineteenth Century.

The January "Century" contains a paper by Dr. F. A. Cook describing the Antarctic explorations of the "Belgica" in 1897 and 1898, illustrated by engravings in color, a notable feature in the illustrations of the literary magazines. The "Atlantic" for January has a brief article by Prof. John B. Clark on "Disarming the Trusts." He holds that potential competition is the force which must be relied on to keep trusts from oppressive measures, but recognizes the necessity of compelling the trusts to assent to publicity and to the principle of non-discrimination in order to bring this about. "The Future of the Chinese People" is the title of another paper in the same magazine. The writer speaks in high terms of the abilities of the Chinese as a race, and thinks that the integrity of the nation should be preserved.

"McClure's" for January contains a popular description of recent work with electric furnaces in the manufacture of carborundum, calcium carbide, and in chemical investigations. The author sets the temperature of the electric furnace at 7,000° F.

The January "Harpers" contains an unusually large number of articles describing travel and exploration. The number opens with an interesting paper on California by Mr. Chas. F. Lummis. Sir Martin Conway continues his accounts of explorations in the Andes with the story of the ascent of Mt. Sarmiento in the desolate land of Tierra del Fuego. Cairo and its life is described by Chalmers Roberts. Julian Ralph continues his papers on India, and Archibald Colquhoun his on Siberia. A timely article deserving a word of mention here is a description of the British system of colonial government as it is organized in London.

In "Scribner's" we find a very realistic and frankly critical account of sayings and doings in the Philippines. The writer presents, apparently from full knowledge, some comments as to the situation there, past and present, that deserve to be carefully read and pondered. In the December "Fortnightly Review" we find a long article on Russia's railway policy in Asia, with especial reference to her contemplated advance toward the Indian frontier.

THE THEORY AND PRACTICE OF SECTION WORK.—By Benjamin Reece, M. Am. Soc. C. E., Engineer of Railway Department, Diamond State Steel Co., Wilmington, Del. Paper; 8vo.; pp. 57; illustrated.

This pamphlet is a reprint of two "chalk talks" given by Mr. Reece to the track forces of the New York, New Haven & Hartford R. R., and show in an elementary manner the mechanics of rail deflection, and the principles underlying the construction of safe and substantial track. It also discusses the practical work upon the track, such as the tamping of ties, drainage, curve elevation, etc.

TARIFFS OF FOREIGN COUNTRIES.—Vol. XVI. Part 2. America. Issued from the Bureau of Foreign Commerce of the Department of State. Paper; 6 x 9 ins.; pp. 1303.

The State Department was authorized in 1897 to print a compilation of the tariffs of foreign countries. The present volume is one instalment of the work, which is issued in five parts, each part covering the countries of one continent. The present volume contains the tariffs of all countries in North and South and Central America, including the United States tariff of 1897. The book will be useful as a work of reference to all manufacturers engaged in the export trade.

WATER PURIFICATION BY MEANS OF MECHANICAL FILTERS WITH COAGULATION.—A Paper Read Before the Fourth Russian Water-Works Convention, Held in Odessa, April, 1899. By Nicholas Simin, Chief Engineer of the Moscow Water-Works. Paper; 7 x 11 ins.; pp. 24; tables.

This paper reviews the experiments with mechanical filtration made at Providence, Louisville, Cincinnati and Pittsburg. The pamphlet also contains an abstract of the recent test of the mechanical filtration plant at East Providence, R. I. The author, many of our readers will remember with pleasure, visited this country a few years ago to study water purification and other phases of water-works. The pamphlet is printed in the author's native tongue.

PAPERS READ BEFORE THE ENGINEERING SOCIETY OF THE SCHOOL OF PRACTICAL SCIENCE, TORONTO, No. 12, 1898-9.—Toronto. Paper; 8 1/2 x 6 ins.; pp. 216; illustrated. 50 cts.

Contents: Address of President W. E. H. Carter; The Process of Manufacturing Mechanical Wood Pulp, W. A. Hare; Modern Systems of Interior Wiring, L. B. Chubbuck; Electrolysis, F. W. Thorold; Construction of the Hamilton Cateract Power Co.'s Plant at De Cew Falls, W. Hemphill; Rat Portage Water-Works, J. Chalmers; Silica Portland Cement, M. J. Butler; Pavements, A. W. Campbell; Forestry, Thos Southworth; Land Drainage in its Sanitary Relations, P. H. Bryce, M. D.; Railroad Location in the Crow's Nest Pass, Don. A. Ross; Location and Construction of the Crow's Nest Railway, J. L. Davidson; Junkers Gas Calorimeter, W. H. Ellis; Notes from an Engineer's Note-book, A. E. Lott; Some Adventures on the Ahtitibi, E. V. Neelands; The Conjunction of the 19th and 20th Centuries, from an Engineering Stand-

point, C. T. Harvey; Hints to Prospectors, W. R. Stovel; The Value of Undeveloped Mineral Claims, G. R. Mickle; The High Pressure Steam Boiler, E. Richards; Neely's Formula for the Strength of Wooden Beams, J. A. Duff.

TRADE PUBLICATIONS.

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

IRON AND STEEL WIRE.—Dillon-Griswold Wire Co., Sterling, Ill. Paper; 3 6 ins.; pp. 36; illustrated.

This book describes wire goods, such as nails, fencing, etc.

CARRIAGE FORGINGS.—D. Wilcox Mfg. Co., Mechanicsburg, Pa. Paper; 6 x 9 ins.; pp. 64; illustrated.

This is an illustrated catalogue of fifth wheels and carriage forgings.

GALVANIZING.—U. S. Electro-Galvanizing Co., 346 Broadway, New York city. Paper; 3 x 6 ins.; pp. 12.

The cold process of zinc plating controlled by the above company is described in this brochure.

CHUCKS.—Westcott Chuck Co., Oneida, N. Y. Paper; 3 x 6 ins.; pp. 40; illustrated.

Drill chucks, lathe chucks and other chucks are described in this catalogue of Westcott's chucks.

STEAM PACKINGS.—The Garlock Packing Co., Palmyra, N. Y. Paper; 3 x 6 ins.; pp. 24; illustrated.

This publication describes the merits of the Garlock packings for steam, gas, water, ammonia, etc.

VENTILATING FANS.—B. F. Sturtevant Co., Boston, Mass. Paper; 8 x 10 1/2 ins.; pp. 4; illustrated.

This circular describes direct-connected fans and electric motors for ventilating restaurants, boiler-rooms, etc.

HYDRAULIC PRESSES AND RIVETERS AND STEAM HAMMERS.—Chambersburg Engineering Co., Chambersburg, Pa. Paper; 6 x 9 ins.; pp. 26; illustrated.

This book describes hydraulic riveters and presses and steam and air hammers.

VALVE RESEATING MACHINES.—The Leavitt Machine Co., Orange, Mass. Paper; 7 x 4 ins.; pp. 42; illustrated.

This booklet describes various devices to be used in re-seating steam and water valves.

LATHES AND SHAPING MACHINES.—Potter & Johnston Co., Pawtucket, R. I. Paper; 9 x 6 ins.; illustrated.

Lathes and shaping machines specially adapted for manufacturing purposes are described in this pamphlet.

TAPPING AND DRILLING DEVICES.—F. A. Errington, 39 and 41 Cortlandt St., New York city. Paper folder; illustrated.

This leaflet describes automatic reverse tapping chucks and other devices for tapping, threading, stud-setting, etc.

SAW-MILL SUPPLIES.—Lombard Iron Works & Supply Co., Augusta, Ga. Paper folder; illustrated.

Steam engines, boilers, water-wheels and power transmitting machinery are illustrated and described in this pamphlet.

LATHES.—Sebastian Lathe Co., Cincinnati, Ohio. Paper; 3 x 6 ins.; pp. 48; illustrated.

The above firm manufactures engine lathes, foot lathes, speed lathes and lathe tools and supplies, all of which are illustrated and described with prices in this catalogue.

PLUMBING LEATHERS.—Detroit Valve & Washer Co., Detroit, Mich. Paper; 4 1/2 x 6 1/4 ins.; pp. 16; illustrated.

This is a catalogue and price-list of leather parts used in plumbing fixtures, such as washers, plunger leathers, pump valve leathers, gaskets, etc.

POWER PRESSES.—Niagara Stamping & Tool Co., Superior and Randolph Sts., Buffalo, N. Y. Paper; 8 x 10 1/2 ins.; pp. 48; illustrated.

Tools and machines for working sheet metal, such as shears, presses, can-makers' tools, etc., are described in this pamphlet.

ANTI-FRICTION METAL.—Magnolia Metal Co., 266 West St., New York city. Paper; 6 x 9 ins.; pp. 36; tables and illustrations.

In this pamphlet the merits of Magnolia anti-friction metal are set forth. The results of numerous tests by Government officials and others are given.

SAND-MOLDING MACHINES.—Henry E. Pridmore, 19th and Rockwell Sts., Chicago, Ill. Paper; 6 x 9 ins.; pp. 32; illustrated.

The sand-molding machines described in this pamphlet are of the type employing a stripping plate, the sand being rammed by hand. Machines for different purposes are illustrated and their operation described.

STEAM SPECIALTIES.—The Ashton Valve Co., Boston, Mass. Paper; 6 x 9 ins.; pp. 80; tables and illustrations.

In this book are described safety valves, water relief valves, snifting valves and pressure and vacuum gages and measuring instruments used in steam engineering. The text is well illustrated and contains tables of sizes and prices.

FEED-WATER INJECTORS.—The Hancock Inspirator Co., Boston, Mass. Paper; 9 x 6 ins.; pp. 60; tables and illustrations.

In this book is described the Hancock inspirator for stationary, marine and portable boilers; also jet pumps, general jet apparatus and specialties for steam, water, air and gas. Much information is given concerning this class of machinery.

TWIST DRILLS.—Syracuse Twist Drill Co., Syracuse, N. Y. Paper; 6 x 3 ins.; illustrated.

Twist drills are catalogued with prices in this leaflet.

MICROMETERS.—Paper; 3 x 6 ins.; pp. 20; illustrated.

This pamphlet is also by the above company. It describes Prof. Sweet's improved measuring machines. Each instrument is furnished with standards for adjustment.

FINISHED CASTINGS.—H. H. Franklin Mfg. Co., Syracuse, N. Y. Paper; 3 1/2 x 6 ins.; illustrated.

This booklet describes a new method of making small and complicated castings in so accurate a manner that they do not require machining. The castings are made of special alloys in metal dies.

MACHINE TOOLS.—The Garvin Machine Co., Spring and Varick Sts., New York city. Paper; 4 x 6 ins.; pp. 126; illustrated.

Milling machinery, lathes, gear cutters, and other special labor-saving machines are described in this book, which is well illustrated and contains tables of dimensions and price-lists.

PRESSURE REGULATOR.—Julian D'Esté & Co., 24 Canal St., Boston, Mass. Paper; 5 1/2 x 8 1/2 ins.; pp. 4; illustrated.

This pamphlet describes a pressure reducing valve which is controlled by air pressure in an independent reservoir. By means of a small hand-pump the pressure in the latter may be adjusted to any desired point.

HIGH-GRADE STEEL SPECIALTIES.—Crescent Steel Co., Pittsburg, Pa. Paper; 6 x 9 ins.; pp. 28; illustrated.

This is the November number of the publication entitled "Sparks from the Crescent Anvil," issued regularly by the above company. It is devoted to the scientific treatment of steel for dies and tools and other special purposes.

FIRE BRICK.—Kentucky Fire Brick Works, Firebrick, Ky., and Portsmouth, O. Paper; 9 1/4 x 6 ins.; pp. 20; illustrated.

The specialty of this firm is the manufacture of blast furnace lining, and 23 separate furnaces were employing this lining on July 20, 1899. The catalogue fully illustrates the many shapes of bricks necessary for this purpose.

GRINDING MACHINES.—Landes Tool Co., Waynesboro, Pa. Paper; 6 x 9 ins.; pp. 98; illustrated.

This book describes the construction and use of grinding machines for cylindrical, conical and plane face surfaces. It will assist those who are not familiar with such machines to have them properly cared for and profitably operated. Many illustrations are given showing their adaptation for various kinds of work.

MARINE PETROLEUM MOTORS.—Daimler Mfg. Co., 339 Steinway Ave., Long Island City, N. Y. Paper; 10 x 8 ins.; pp. 56; illustrated.

This is a handsomely printed and illustrated book showing the Daimler gasoline engine as applied to launches and yachts. The engine is made in sizes up to 50 HP., for the latter size four cylinders being used. This company also manufactures complete boats. Tables of dimensions and prices are given.

FIRE BRICK, CEMENT AND MOLDING SAND.—Garden City Sand Co., Chicago, Ill. Paper; 4 1/4 x 6 1/2 ins.; pp. 32; illustrated.

The fire brick is of various special shapes for lime kilns, blast furnaces, locomotive firebox arches, water-tube boilers, etc., and instructions are given for estimating quantities. Furnace linings, tile, flues, Portland cement, gravel, and sand for belts, molding, etc., are among the various supplies listed in this pamphlet.

ROPE TRANSMISSION.—T. B. Wood's Sons, Chambersburg, Pa. Paper; 9 x 6 ins.; pp. 33; illustrated.

This booklet illustrates the possibilities of rope driving for difficult places, where flat belting or gearing could not be used satisfactorily, and as an economical and satisfactory way of transmitting power over long distances. It also points out the many advantages of the continuous rope system. Diagrams are given showing the manner in which several important rope drives have been installed.

ELECTRIC APPARATUS.—The Emerson Electric Mfg. Co., St. Louis, Mo. Paper; 6 x 9 ins.; illustrated.

Bulletins Nos 3002-3015 of the above company describe switch-boards and switch-board supplies and alternating current motors. The latter are single-phase induction machines, and are made in sizes up to 2 or 3 HP. This company manufactures a combined motor and generating set for transferring single-phase alternating to direct current to be used for storage battery charging for automobiles.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened	Work	Place	See Eng. News
Jan. 4.	Power house, Greenville, S. C.	Greenville, S. C.	Dec. 21
Jan. 4.	Advertised, Eng. News, Dec. 21 and 28.	Butte, Mont.	Dec. 14
Jan. 4.	Extending water-works, Butte, Mont.	Butte, Mont.	Dec. 14
Jan. 4.	Advertised, Eng. News, Dec. 14 to 28.	Ceylon	Sept. 7
Jan. 4.	Railway (200 miles), Ceylon	Ceylon	Sept. 7
Jan. 4.	Water pipe, New York, N. Y.	New York, N. Y.	Dec. 28
Jan. 5.	Paving, New York, N. Y.	New York, N. Y.	Dec. 28
Jan. 5.	Dredging, New York, N. Y.	New York, N. Y.	Dec. 28
Jan. 5.	Water department supplies, Cleveland, O.	Cleveland, O.	Jan. 4
Jan. 5.	Gas mains (3 miles), Riverton, N. J.	Riverton, N. J.	Jan. 4
Jan. 6.	Electric traction work, Glasgow, Scotland	Glasgow, Scotland	Dec. 21
Jan. 6.	Plumbing shop, etc., Norfolk, Va.	Norfolk, Va.	Dec. 28
Jan. 6.	Dredging, New London, Conn.	New London, Conn.	Dec. 28
Jan. 8.	Elevator, Victoria, B. C.	Victoria, B. C.	Dec. 28
Jan. 8.	Electric lighting, Corry, Pa.	Corry, Pa.	Dec. 28
Jan. 8.	Paving and grading (3 miles), Rich, Ill.	Rich, Ill.	Dec. 28
Jan. 8.	Dredging, Savannah, Ga.	Savannah, Ga.	Dec. 14
Jan. 8.	Advertised, Eng. News, Dec. 14 to Jan. 4	Colorado Springs, Colo.	Jan. 4
Jan. 8.	Water bonds, Colorado Springs, Colo.	Colorado Springs, Colo.	Jan. 4
Jan. 8.	Sewers, Wichita, Kan.	Wichita, Kan.	Jan. 4
Jan. 9.	Sewers, Pittsburg, Pa.	Pittsburg, Pa.	Jan. 4
Jan. 9.	Sewers, St. Louis, Mo.	St. Louis, Mo.	Jan. 4
Jan. 9.	Naval supplies, Norfolk, Va.	Norfolk, Va.	Jan. 4
Jan. 9.	Jail, Nevada City, Cal.	Nevada City, Cal.	Dec. 14
Jan. 9.	Dredging, Boston, Mass.	Boston, Mass.	Dec. 14
Jan. 9.	Advertised, Eng. News, Dec. 14 to Jan. 4	Salisbury, N. C.	Dec. 7
Jan. 9.	Sewer (10 miles), Salisbury, N. C.	Salisbury, N. C.	Dec. 7
Jan. 9.	Advertised, Eng. News, Dec. 7 to 21.	New York, N. Y.	Dec. 28
Jan. 9.	Supplying gas, New York, N. Y.	New York, N. Y.	Dec. 28

Jan. 9. Street sweeping, etc., New York, N. Y. Dec. 28
 Jan. 9. Timber, New York, N. Y. Dec. 28
 Jan. 10. Bridge, Redding, Cal. Nov. 30
 Jan. 10. Masonry arch, Cleveland, O. Dec. 14
 Jan. 10. Court house, Selma, Ala. Dec. 21
 Jan. 10. Repeating two streets, Buffalo, N. Y. Jan. 4
 Jan. 10. Sewers, New York, N. Y. Jan. 4
 Jan. 10. Gas mains (4 miles), Palmyra, N. J. Jan. 4
 Jan. 11. Paving, New York, N. Y. Jan. 4
 Jan. 11. Pipe sewers, Williamsport, Pa. Dec. 21
 Jan. 11. Advertiser, Engineering News, Dec. 21
 Jan. 11. Electric plant, Gastonia, N. C. Dec. 7
 Jan. 11. Water-works, Gastonia, N. C. Dec. 7
 Jan. 11. Advertiser, Eng. News, Dec. 7 to 21
 Jan. 11. Sewerage system, Gastonia, N. C. Dec. 7
 Jan. 11. Advertiser, Eng. News, Dec. 7 to 21
 Jan. 12. Bridge Bonds, La Crosse, Wis. Nov. 30
 Jan. 12. Machinery, New Orleans, La. Dec. 14
 Jan. 12. Store house, San Francisco, Cal. Dec. 28
 Jan. 12. Removing wreck, Port Clinton, O. Dec. 28
 Jan. 12. Dust destructor, Bermondsey, England. Dec. 28
 Jan. 13. Crew quarters, Port Penn, Del. Dec. 28
 Jan. 13. Office building, Washington, D. C. Dec. 28
 Jan. 13. Breakwater, Michigan City, Ind. Dec. 14
 Jan. 13. Advertiser, Eng. News, Dec. 14 to Jan. 4
 Jan. 13. Officers' quarters, Washington, D. C. Jan. 4
 Jan. 13. Building material, Roschling, S. Dak. Jan. 4
 Jan. 15. Rapid transit tunnel, New York, N. Y. Nov. 16
 Jan. 15. Railway franchise purchase, Salinas, Cal. Dec. 21
 Jan. 15. Electric wiring, Chicago, Ill. Dec. 21
 Jan. 15. Electric extension, Portage, Mich. Dec. 21
 Jan. 15. Advertiser, Eng. News, Dec. 21 to Jan. 11
 Jan. 15. Railway ties, New York, N. Y. Dec. 21
 Jan. 15. Breakwater, Grand Marais, Minn. Dec. 21
 Jan. 15. Advertiser, Eng. News, Dec. 21 to Jan. 11
 Jan. 15. Bridge bonds, Cleveland, O. Dec. 28
 Jan. 15. School house, Centerville, Md. Dec. 28
 Jan. 15. Removing buildings, New York, N. Y. Dec. 28
 Jan. 15. Bridge, Milburn, N. J. Jan. 4
 Jan. 15. Bridge bonds, Sinclairville, N. Y. Jan. 4
 Jan. 15. City lighting, Milwaukee, Wis. Jan. 4
 Jan. 15. Hospital, Warren, Pa. Jan. 4
 Jan. 15. Sewers, Santa Monica, Cal. Jan. 4
 Jan. 16. Steel bridge, Weybridge, Ont. Jan. 4
 Jan. 16. Sewer, Mount Vernon, N. Y. Dec. 28
 Jan. 16. Water and light bonds, Oilville, Minn. Dec. 28
 Jan. 16. Sanitary bonds (\$1,000,000), Chicago, Ill. Dec. 21
 Jan. 16. Street improvements, Cincinnati, O. Dec. 21
 Jan. 16. Generator, Newcastle-upon-Tyne, Eng. Dec. 14
 Jan. 16. Pier extension, Grand Haven, Mich. Dec. 21
 Jan. 17. Advertiser, Eng. News, Dec. 21 to Jan. 11
 Jan. 18. Officers' quarters, Fort Schuyler, N. Y. Dec. 28
 Jan. 18. Paving, Cleveland, O. Jan. 4
 Jan. 19. Bridge, Ramsgate, England. Jan. 4
 Jan. 19. Pier extensions, Muskegon, Mich. Dec. 21
 Jan. 19. Advertiser, Eng. News, Dec. 21 to Jan. 11
 Jan. 20. Ferry slip, San Francisco, Cal. Dec. 21
 Jan. 20. Construction material, Philadelphia, Pa. Dec. 21
 Jan. 20. Advertiser, Eng. News, Dec. 21 to Jan. 11
 Jan. 20. Electric plant, Ilford, England. Dec. 28
 Jan. 20. Bridge superstructure, L'Orignal, Ont. Dec. 28
 Jan. 20. Locks and dams, Warrior River, Ala. Dec. 28
 Jan. 20. Advertiser, Eng. News, Dec. 28 to Jan. 18
 Jan. 20. Extending quay, Oban, Scotland. Jan. 4
 Jan. 22. Sewage pumping station, Glasgow, Scotland. Dec. 28
 Jan. 22. Steel and iron, St. Paul, Minn. Dec. 28
 Jan. 22. Advertiser, Eng. News, Dec. 28 to Jan. 18
 Jan. 22. City lighting, Wichita, Kan. Dec. 28
 Jan. 23. Sewer, Wash. Ind. Dec. 28
 Jan. 23. College building, Columbus, O. Dec. 28
 Jan. 23. Floating bridge, Petersborough, Ont. Dec. 28
 Jan. 24. Ditch, Champaign, Ill. Jan. 4
 Jan. 24. Electricity, Newcastle-upon-Tyne, Eng. Jan. 4
 Jan. 26. Canal improvements, Port Colborne, Ont. Jan. 4
 Jan. 28. Finishing building, Davenport, Wash. Jan. 4
 Jan. 28. Public baths, London, England. Dec. 28
 Jan. 29. Gas lighting contract, Omaha, Neb. Dec. 28
 Jan. 29. Pumping engines, Cleveland, Ohio. Jan. 4
 Jan. 29. Advertiser, Eng. News, Jan. 4 to 18
 Jan. 29. Street improvements, Toledo, O. Jan. 4
 Jan. 30. Breakwater, Bar Harbor, Me. Jan. 4
 Jan. 30. Advertiser, Eng. News, Jan. 4 to 25
 Jan. 31. Hospital building, New York, N. Y. Dec. 28
 Jan. 31. Water-works, Ada, Minn. Oct. 26
 Jan. 15. Sewers and water-works, Tampico, Mex. Oct. 12
 Jan. 19. Government building, Helena, Mont. Nov. 30
 Jan. 26. Waterway, shafts, etc., Valletta, Malta. Nov. 30
 Feb. 1. School building plans, Toronto, Ont. Nov. 30
 Feb. 1. Government building, Boise, Idaho. Dec. 7
 Feb. 1. Lighting franchise, Woodland, Cal. Dec. 28
 Feb. 1. Pier extension, South Haven, Mich. Jan. 4
 Feb. 1. Advertiser, Eng. News, Jan. 4 to 25
 Feb. 26. Residence, Sacramento, Cal. Jan. 4
 Feb. 27. Mining lease, St. Petersburg, Russia. Nov. 2
 Feb. 28. Railway (75 miles), Matthews, Ind. Nov. 23
 Mar. 1. Electric machinery, Melbourne, Victoria. Jan. 4
 Mar. 12. Plans for hall, Belfast, Ireland. Nov. 23

RAILWAYS.

ATCHISON, TOPEKA & SANTA FE.—The stockholders of this company have adopted a new rule which allows the directors to acquire or construct as much as 200 miles of track in one year. Previous to this, the average total construction of a year amounted to about 50 miles. E. P. Ripley, Pres., Chicago, Ill.

ATLANTA & GEORGIA.—This company has had its charter extended for 50 years. It is proposed to construct a system from Atlanta, Ga., southwest into Randolph county, Ala. W. A. Handley, Pres.; L. E. O'Keefe, Secy., Atlanta, Ga.

ATLANTA, KNOXVILLE & NORTHERN.—Reports state that the contract for building six miles of new line near Hiwassee, Tenn., for this road has been let to Thos. McFarland and John Shea, of Knoxville, Tenn. J. G. Newton, Acting Gen. Mgr.

BALTIMORE & OHIO.—Reports state that this company will purchase the Zanesville & Ohio River Ry., which will be sold at Zanesville, O., on Jan. 20. A bridge will be built across the Ohio River at this point and a new line will be constructed through West Virginia to Pennsylvania, joining the main line there. The through trains between the East and West will then come down the Zanesville & Ohio to Marietta and pass through Pennsylvania. This will involve the expenditure of a large sum of money, but will avoid several bad tunnels and shorten the distance to the East. The new route will also open up valuable and extensive timber and coal regions in West Virginia.

BELLEFONTAINE, KENTON & LIMA.—This company has been incorporated in Ohio, with a capital stock of \$100,000, to construct this proposed line through Allen, Anglaise, Logan and Hardin counties, with terminals at Bellefontaine, Kenton and Lima. Wm. H. Miller, Frank B. Williams and Robert F. Ferguson are incorporators.

CENTRAL NAVIGATION & CONSTRUCTION.—Winters & Chapman are reported to have been awarded the contract for constructing a railway from Columbus, Ore., east 20 miles along the north bank of the Oregon River to

Crates Point, three miles above The Dalles, for the Central Navigation & Construction Co., of The Dalles, Paul Mohr, Gen. Mgr. This same company also contemplates the construction of a line to connect Spokane, Wash., with a point on the Columbia River from which place it will run a line of steamers down the river to the Columbia line. The entire project comprises about 1,000 miles of river navigation and about 350 miles of railway feeders. A corps of engineers has been in the field since the summer, and has about completed the survey of the Spokane-Columbia River line.

CHESTER & LENOIR.—This system has been purchased by a company which, it is said, proposes to make part of it standard gage and to extend it from Chester to Charleston and from Lenoir to the Bluefield coal mines in West Virginia. Work on the latter end is to begin next month. It is said the gage of the 22 miles between Hickory and Lenoir will be changed to standard by April 1. This will enable it to get supplies over the Southern Ry., which it crosses at Hickory. It will also pass the Cranberry iron mine. It is said that as soon as the road is completed to Cranberry the section between Hickory and Chester will be made standard gage.

CHICAGO & NORTHWESTERN.—Reports state that it is now definitely settled that an extension to this system will be built from Moline to Sioux City and to Centerville, S. Dak. The new line will open up a large territory in Iowa and South Dakota. The Sioux City & Pacific R. R. will first have to be sold, however, and a bill for that purpose is now before the Pacific Railway Committee in Congress. J. E. Blunt, Ch. Engr., Chicago, Ill.

CHICAGO, MILWAUKEE & ST. PAUL.—Track-laying upon the new 19-mile extension of this railway, from Libertyville to Fox Lake, Wis., has been completed and a work train has been run over the line. The ballasting of the road will be left until spring. Passenger traffic will not begin for some months. D. J. Whittemore, Ch. Engr., Chicago, Ill.

CHICAGO, PEORIA & ST. LOUIS.—This company has been incorporated in Illinois, with a capital stock of \$2,000,000, by Curtis Millard, Springfield, Ill.; James Duncan, Alton, Ill.; George D. Mulford, New York; E. Smith, St. Louis, Mo., and others. It is the purpose of the new company to purchase the Chicago, Peoria & St. Louis, and to operate them under the name of the Chicago, Peoria & St. Louis. The Chicago, Peoria & St. Louis R. R. runs from Pekin to Springfield, Havana to Jacksonville, Havana to Rock Island, and the St. Louis, Chicago & St. Paul from Springfield to East St. Louis, and Lock Haven to Grafton.

CLEVELAND, OHIO CENTRAL & CINCINNATI.—F. G. McCauley, Nova, O., informs us that this company has not yet been organized, and will not be for some time. The company was incorporated Dec. 5, with a capital stock of \$10,000, to construct a line from Cleveland to Cincinnati, via West Salem, O.

ENGLAND.—Reports state that work will begin at once on the proposed Yorkshire Dales Ry., from Skipton to Grassington, Eng.; estimated cost, about \$3,000,000. It is said that the Midland Ry. Co. will furnish the money. G. H. Turner, Gen. Mgr. Midland Ry., Derby, Eng.; J. A. McDonald, Ch. Engr., Derby.

FAYETTEVILLE & ALBEMARLE.—Work is expected to begin early this year on this projected line from Fayetteville to Southern Pine, N. C., via Argyle and Galatia, 33 miles, through a long leaf pine timber district, which will give Moore County direct communication with Wilmington. Surveys have been completed from Southern Pine to Argyle, 18 miles, and 7 1/2 miles of grading have been finished. C. J. Brown, Pres.; H. L. Thurston, Ch. Engr., both of Southern Pine, N. C.

FITCHBURG.—Reports from Baldwinville, Mass., state that a survey has just been made for a spur track to run from the terminus of Smith, Day & Co.'s track due west along the north side of Otter River to manufacturing plants along the stream, requiring considerable heavy work. A. S. Cheever, Ch. Engr., Boston, Mass.

FORT SIMPSON, TESLIN & DAWSON.—Application will be made to the next Canadian parliament for an act to incorporate this company, which proposes to build from the Pacific Coast, near Fort Simpson, to Dawson City, via Tealin Lake. D'Arcy Scott, Ottawa, Ont., is the Solicitor.

HILGARD & GRANITE.—This is a contemplated line of railway from Hilgard, Ore., on the Oregon R. R. & Navigation Co.'s line, to Granite, about 40 miles. John D. Casey, Gen. Mgr., La Grande, Ore.

ILLINOIS CENTRAL.—Pond & Cooper, Moorehead, Miss., are reported to have completed three-fourths of the grading on the branch line being constructed by this company, 18 miles southeast from Leland, Miss., towards Murphy.

IOWA & MISSISSIPPI VALLEY.—We are informed that contracts will be let early next spring for the construction of this new line from Burlington to Oakdale, Ia., 23 miles. Surveys have been completed and three-fourths of the right of way obtained. W. R. Stewart, Jr., Pres., 58 Board of Trade Bldg., Chicago, Ill.; G. M. Willis, Ch. Engr., Minneapolis, Minn.

JAMESTOWN, WILLIAMSBURG & YORKTOWN.—Senator Tyler has presented a bill in the Virginia legislature for the incorporation of this company, with \$500,000 capital stock, to construct a line from Jamestown, Williamsburg and Yorktown, Va., on the York River. Thomas J. Shuba, Harry N. Phillips and Edward Warburton are proposed incorporators.

JAPAN.—Reports state that the Japanese government at Tokyo received the following bids recently for furnishing 2,570 tons of 60-lb. rails and fastenings and 100 tons rolled joists for bridges, for the Taiwan Ry.: Formosa: Mitsui & Co., 445 Broome St., New York, \$26,293; Jardine, Matheson & Co. of China, 74 Wall St., New York, \$27,457; same firm in Yokohama, \$28,142. To be delivered in Formosa before June 30, 21,526 tons of 60-lb. rails and fastenings for the government railways in Japan: Mitsui & Co., \$178,217; Tokata & Co., 10 Wall St., New York, \$185,981; American Trading Co., 100 William St., New York, \$196,744; China & Japan Trading Co., Ltd., 32 Burling Slip, New York, \$206,426. Thirty per cent. of the total quantity to be delivered in Japan before May 31, and the balance before Sept. 30. In each case Mitsui & Co. are supposed to have bid on behalf of the Carnegie Steel Co., Ltd. In the first case import duty was included in the price, but not in the second case. The Formosa line is controlled by a military staff called Rinji Taiwan Tetsudotai. J. U. Crawford, Consul, Engr. Japanese Imperial Ry., Broad St. Station, Philadelphia; Geo. Cawley, Consul, Engr., 29 Great George St., London, S. W. Eng.

KENTUCKY.—Ballard Thurston, Louisville, Ky., is reported to be at the head of an enterprise which has for its purpose the construction of a railway from Big Stone Gap, Va., for a distance of 27 miles down the Clover Fork of the Cumberland River. Surveys have been made.

LEAVENWORTH & TOPEKA.—This company has been incorporated in Kansas, with a capital stock of \$250,000, to operate the old Leavenworth, Topeka & Southwestern

system which was recently sold on foreclosure to Edward Wilder, Topeka, Kan.; A. L. Williams, E. Wilder and C. T. McLennan are directors.

LAKE SUPERIOR & MENOMINEE VALLEY.—This company has been incorporated in Wisconsin, with a capital stock of \$100,000, to build from Hayward to Cameron, Wis., about 60 miles. Byron B. Blake, T. A. Charron and R. M. Parker are incorporators.

LAUREL FORK.—This company has been incorporated in West Virginia, with a capital stock of \$200,000, to construct a railway. J. W. Bowman, C. B. Clark and H. F. Colebank, all of Hendricks, W. Va., are incorporators.

LOCKHART MILLS.—Track-laying is said to be progressing well on 15-mile line from Lockhart Mills, S. C., to the Spartanburg, Union & Columbia division of the Southern Ry. The grading is finished, with the exception of about four miles near Lockhart Mills. R. C. Strother, Jonesville, S. C., is the principal contractor. Albert Only, Ch. Engr., Lockhart, S. C.

LONG ISLAND R. R. TERMINAL.—This company was incorporated in New York, Dec. 30, with a capital stock of \$500,000, to construct a standard gage line two miles in length from the Long Island R. R. at Laurel Hill, Borough of Queens, New York city, to Newtown Creek. Henry V. Palmer, Brooklyn, N. Y.; Thomas P. Riley, New York; and F. L. Van Tassel, Passaic, N. J., are incorporators.

MEMPHIS & CHARLESTON.—This company has been organized at Huntsville, Ala., and steps taken towards incorporation in Alabama. It is proposed to construct a line from Stevenson, Ala., to Chattanooga, Tenn., which will be operated by the Southern Ry., which now uses the Nashville, Chattanooga & St. Louis Ry., between those two points. Two routes are under consideration, and the one which will probably be chosen will require the construction of a two-mile tunnel through Lookout Mountain. Total estimated cost, \$2,500,000. W. A. Henderson, Pres., Chattanooga, Tenn.; N. K. White, Secy. and Treas., Huntsville, Ala.

MEXICAN INTERNATIONAL.—F. Lehman, Galveston, Tex., has secured the contract for constructing nine miles of railroad to connect the newly opened mines near Barometer with the Mexican International Ry.

MEXICO.—A Puebla (Mex.) correspondent informs us that nothing is known of the two railway projects referred to in our issue of Dec. 11, at least they have not taken definite shape as yet. This refers to the proposed line 450 miles long, to connect four lines with Mexico City, and the concession granted to Emilio Pardo for a line from Puebla in the railroad line, with the exception of the line from Tlacotepec in the direction of Huajuapam de Leon in the State of Oaxaca, of which 30 kilometers is in operation, and some 20 kilometers more will be ready for rail laying in a week or so. This branch is being operated by the Mexican Southern Ry., although it belongs to Sr. Luis Garcia Teruel, of Mexico City.

NASHVILLE, CHATTANOOGA & ST. LOUIS.—J. W. Thomas, Pres., Nashville, Tenn., writes us that he has informed Joseph Wassman, Mayor of Chattanooga, Tenn., that this company will do all in its power towards abolishing the grade crossing at Market St., Chattanooga. Hunter McDonald, Ch. Engr., says that the only feasible plan of obviating this trouble is to build a viaduct with a clearance of 22 ft. over the tracks, and 10% approaches, which he estimates will cost about \$50,000. The company would probably be willing to construct the viaduct over its right of way if the city would construct the approaches and pay damages to abutting property.

NEBRASKA & GULF.—Surveys have been completed between Sutton and Davenport, Neb., 40 miles, according to reports, for this new line projected from Running Water, S. Dak., through Nebraska, to the Kansas State line, a distance of about 200 miles. It is expected to begin construction as soon as the surveys have been completed. C. B. Hutton, Treas., Hastings, Neb.

OMAHA, KANSAS CITY & EASTERN.—Reports from Marshall, Mo., state that this company is arranging to make extensive improvements along the western end of its line, from Pattonsburg to Council Bluffs, Ia. New steel rails are to be laid along the track this entire distance, and several new trestles built. The long trestle near McJimsey Park, and another just east of Maryville, are to be replaced by new ones. Changes are to be made in the local passenger station, and new stock yards are to be built. New rails have been laid as far west as Bedison, Nodaway county, and work on the trestle near McJimsey Park has been begun. E. M. Collins, Ch. Engr., Quincy, Ill.

SIAM.—Hamilton King, U. S. Consul-Gen., Bangkok, Siam, reports the following railway work as under construction or proposed: The government line from Bangkok to Korat, a distance of 165 miles, standard gage, is nearly completed at a cost of about \$32,000 a mile; K. Bethge, Dir.-Gen., Bangkok. A line from Ban Mayee to Chienmai, a distance of about 400 miles, standard gage, has been started; only a few small contracts have yet been let. A line, gage 3 ft. 3 1/2 in., will likely be started this year to extend from Bangkok to Pathuri, 45 miles, and to Petchaburee, 73 miles. No contracts for this line have been let. The King has granted a franchise to Prince Chow Sai to build a line 70 miles long from the Menam River to the Nakawm Nayok River. The King proposes to negotiate a loan for building a line to be about 500 miles long.

TACOMA EASTERN.—Work is expected to begin at once on the extension of this line, now running from the head of the bay at Tacoma, Wash., southeast six miles to Larchmont. The new line will be located for a distance of about 18 miles into the large tracts of timber owned by W. H. Ladd, Portland, Ore., the new owner of this system, and also to the coal fields in the Nesqueally upper valley.

TEXAS.—Bids are asked by the United States government for the lease of the railway constructed by the government contractors when building the jetties from Galveston, Tex., to Fort Point. Capt. C. S. Riche, U. S. Engr., Galveston.

UNION CENTRAL.—The attorney-general of Texas approved this company's charter on Dec. 21. The capital stock is \$600,000, and it is proposed to build a line from Waco to Palestine and from Paris to Houston, Tex., a total distance of 500 miles. The Atlas Construction Co., Wortham, Tex., is said to have been awarded the contract for constructing the first 25 miles. Cyrus Baldrige, Pres., Wortham.

VICTORIA & SIDNEY.—A. L. Belyea, Victoria, B. C., is said to be about to apply for the incorporation of this company with power to acquire the present Victoria & Sidney Ry. and to extend the same. T. W. Paterson, Gen. Mgr., Victoria.

WASHINGTON & COLUMBIA RIVER.—The stockholders of this company have authorized the construction of branches in Walla Walla and Columbia counties, Wash., as follows: From a point near Riverside station, on the Walla Walla branch of the Washington & Columbia River Ry., easterly along the valley of the Touchet River, to

the present Walla Walla branch near the station of Waltsburg; estimated length, 16 miles. Also, from a point on the line described above, designating the route of the Riverside-Waltsburg branch, in section 32, township 10 north, range 36 east, W. M., easterly along the course of Whiteoak Hollow Creek to a terminal point in township 11, range 40 east, W. M., a distance of about 32 miles through Walla Walla and Columbia counties.

YUCATAN, MEXICO.—U. S. Consul Thompson, Progreso, Yucatan, reports that the following companies are purchasing or intend to purchase heavily of materials in their respective lines: Merida a Peto Ferrocaril, Rodulfo G. Canton, Pres.; Merida a Progreso Via Ancha, Joaquin Peon, Pres.; Merida a Tamal, Joaquin Peon, Pres.; Merida a Valladolid Via Angosta, Gen. Francisco Canton, Pres.; Sud Oriental de Yucatan, Rafael Peon y Losa, Pres.; Electric Light Co., of Merida (Compania de Luz Electrica de Merida), Rafael Peon, Pres. Other companies and projects are in process of formation. All the officials are of Merida, Yucatan. F. C. Canton, 29 Broadway, is the New York agent.

YUKON.—Press reports from Winnipeg, Man., state that the Dominion government apparently contemplates building a railway from Great Slave Lake to Chesterfield Inlet and through the Yukon district. A survey party is now being fitted out in this city.

STREET AND ELECTRIC RAILWAYS.

CAPE NEDDICK, ME.—Local papers state that an electric railway is proposed for Cape Neddick. The survey for the new line has been completed. Chas. Bodwell, Supt., and Percy Richardson, Surv. and Engr., are interested.

LIMERICK, ME.—The York County Central Electric R. R. has asked the railroad commissioners for a franchise from Limerick to Waterboro Centre. F. M. Higgins, Limerick; W. R. Anthonie, Portland, and T. O. Bradbury, Saco, were the petitioners.

BOSTON, MASS.—The secretary of the commonwealth has received a petition from Carl Dickinson and others to construct and operate a street railway through Aver, Groton, Townsend, Fitchburg, Lunenburg, Shirley, Harvard, Lancaster and Hudson to be known as the Aver, Lancaster and Fitchburg Belt Line St. Ry. Co. Also for a line to be known as the Concord & Billerica St. Ry. Co., to operate a line through Billerica, Carlisle, Chelmsford, Westford, Concord, Lincoln, Acton, Maynard and Hudson.—E. Moody Brovnton has filed petition for the extension of the Boston, Quincy & Fall River Bicycle Ry.

FITCHBURG, MASS.—F. S. Coolidge writes us that little progress has as yet been made in the matter of constructing an electric railway from East Douglas to Millbury, via Sutton, a distance of 10 miles, but some definite steps will be taken soon towards the establishment of the line.

NORTHAMPTON, MASS.—The board of aldermen granted a franchise to the Northampton, Easthampton, Holyoke and Westfield St. Ry. Co., on Dec. 23. J. B. O'Donnell, Pres., Northampton; Robt. L. Warner, Treas., Brookline.

ROCHESTER, MASS.—The Middleboro, Wareham & Buzzards Bay St. Ry. has applied for a franchise to the selectmen of Rochester. A petition has been granted in Middleboro and Wareham. Geo. H. Randall and Jonathan Perry were the petitioners.

WORCESTER, MASS.—Reports state that the Worcester & Suburban St. Ry. Co. has plans whereby all its power plants, carhouses, machine and repair shops, including those at Leicester and Worcester, will be concentrated in Worcester. The new power house will have a 2,000 HP. unit, and the carhouse will be able to accommodate about 75 cars. It is proposed to begin work this spring. At the meeting of the directors in January the plans and specifications will be formally adopted.

WINDSOR LOCKS, CONN.—Geo. H. Dunham, New York, owner of the charter of the Springfield & Southwestern St. Ry. and the charter of the Suffield & Windsor Tramway Co., is reported to have stated that the proposed road between Rainbow and the state line will be built this spring.

GRANVILLE, N. Y.—E. R. Norton writes us that the right of way is now being secured for the Whitehall & Granville Electric R. R. Co.'s line, which will extend about 28 miles in Washington county. Surveys for the line have been completed, and contracts will probably be let this spring. The capital has not been decided on. S. M. Weatherbee, Whitehall, will be president of the company when organized.

JAMAICA (L. I.), N. Y.—Local papers state that the Brooklyn Heights R. R. Co. is making preparations for the extension of its line to Newtown.

LOCKPORT, N. Y.—It is reported that the International Traction Co. will extend the Lockport & Buffalo Ry. from Lockport to Olcott this spring. The power house to supply this line will be built at Burt, where a 50-ft. dam will be built. Burt Van Horn, Gen. Mgr.

PATCOGUE (L. I.), N. Y.—J. B. Swazey writes us that all the rights of way have been secured and the franchises granted for the Patchogue & Port Jefferson Traction Co.'s line, which will extend through Patchogue, Waverly, Selden, Ebo, Terryville, Port Jefferson and other towns, about 15 miles in length. Edwin Bailey, Pres., Patchogue.

RENSSELAER, N. Y.—The council on Dec. 26 granted a franchise to the Albany & Hudson Ry. to construct and operate a street railway in this town.

RYE, N. Y.—The final hearing was given by the highway commissioners, Dec. 28, on the petition of the Port Chester St. Ry. Co. for a trolley franchise between Rye and Mamaroneck, on the Boston Post Road. The commissioners recommended that another route be selected for the line.

ELIZABETH, N. J.—The Westfield & Elizabeth St. Ry. Co. has accepted the franchise granted by the council some time ago, giving the company 30 days to consider the terms. Chandler W. Riker, Adrian Riker and Edwin W. Hine are interested.

JERSEY CITY, N. J.—Bonds to the amount of \$20,000,000 have been issued by the Jersey City, Hoboken & Paterson St. Ry. Co., recently organized by B. M. Shanley. The proceeds of the bonds will be used for the bettering and extending the lines in Bergen, Passaic and Hudson counties.

HAMILTON, N. J.—The township committee on Dec. 27 granted a franchise to the Trenton St. Ry. Co. to extend its line from Yardville to Allentown, N. J.

HASBROUCK HEIGHTS, N. J.—Local papers state that Newark & Hackensack Traction Co. and the Saddle River Traction Co., running from Passaic to Lodi, will probably ask for a franchise in this town.

EAST BANGOR, PA.—W. H. Sawin, Engr., Worcester, Mass., is reported as stating that the construction of the proposed State Belt trolley, extending from Wind Gap to East Bangor, would be commenced about Feb. 1.

ERIE, PA.—It is reported that the Jefferson & Andover Electric Ry. Co. is interested in a scheme to build an electric line from Erie to Cleveland, O. The preliminary

surveys for the route from Jefferson, via Pierpont to Conneautville, thence by way of Springboro, Shadeland and Albion to Edinboro, have been started.

EASTON, PA.—Local papers state that the Delaware River Quarry & Construction Co., which has the contract for constructing the Easton & Nazareth St. Ry. Co.'s electric road between Easton and Nazareth, will begin work on the roadbed this month.

NORRISTOWN, PA.—The Doyleston Ry. Co. has filed plans for an extension of its line, which will form a continuous electric road from Easton to Germantown Ave., Philadelphia, via Hatboro, Hartsville, Hillside, Semerton, Abington, Glenside, Weldon and other towns. Wm. J. Fell, Pres.; Wm. C. Ryan, Secy., Doylestown.

PITTSBURG, PA.—Local papers report that an attempt is being made to connect all towns of any importance in the Allegheny valley with those in the Monongahela valley, at the same time giving the most direct route to the city of Pittsburgh. W. L. McKon, president of the Monongahela Traction Co., is said to be the chief promoter of the scheme.

WASHINGTON, D. C.—A bill has been introduced in Congress providing for an extension of the Falls Church & Potomac Ry. to opposite the city at Analoatan Island, thence by a steam ferry to New Hampshire Ave. at the foot of E St. N. W., and through the city to 9th and B St., N. W. The underground electric system to be used in the city.

ASHEVILLE, N. C.—It is reported that I. B. Willford, Bowling Green, Ky., backed by Chicago capitalists, will soon begin the construction of an electric railway from Asheville to Weaverville, about eight miles in length. The board of aldermen is now considering the question of granting a charter for the line.

NEW ORLEANS, LA.—The franchise committee has recommended that bids should be asked for the franchise to operate a street railway in this city, for which the St. Charles St. R. Co. has petitioned.

LEXINGTON, KY.—It is reported that plans are being prepared for the Mansfield extension of the Lexington St. Ry. Co.'s lines. The company will need nine new motor equipments, new generators and rails and joints.

BELBROOK, O.—J. S. Turner, Village Clk., writes us that Dayton & Xenia Traction Co.'s electric line, extending through Dayton, Xenia, Beavertown, Pellbrook and Spring Valley, a distance of 32 miles, is nearly completed, and will be in operation by Feb. 1. A. Richardson, Pres., Worcester, Mass.; Wm. Sawin, Ch. Engr., Dayton.

COLUMBUS, O.—The county commissioners on Dec. 23 granted a franchise to the Worthington, Clintonville & Columbus Electric Road for a period of 25 years.—The Toledo, Postoria & Findlay Traction Co. has filed a certificate for an increase of capital stock, from \$100,000 to \$150,000.

DAYTON, O.—N. J. McDargh writes us that the surveys have been made for the Columbus & Lancaster Traction Co., which will operate an electric line through Columbus, Valley Crossing, Grovesport, Winchester, Lithopolis, Greencastle, Hookers Station and Lancaster, a distance of about 30 miles, and that all the rights of way have been obtained. The date of awarding contracts is undecided as all the capital for construction has not yet been secured. Judge D. Dwyer, Pres.; Perry Sebald, Ch. Engr., Dayton.

HAMILTON, O.—The Cincinnati & Hamilton Electric St. Ry. is negotiating for consent to construct three additional loops to its line.

ANDERSON, IND.—The Union Traction Co. has plans for its power to be erected in this city, and is now preparing to receive bids for the construction. The new plant will supply motive power for about 200 miles of road. The present power stations at Anderson, Marion and Muncie will be abandoned as soon as the new plant is in operation.

NEW ALBANY, IND.—A franchise has been applied for by Edward L. McDonald, in the interest of the Southern Ry. Co., which proposes to purchase the Kentucky & Indiana bridge and the electric line between Louisville and New Albany.

ALLEGAN, MICH.—Local papers state that the franchise for the proposed electric railway from this place to the lake shore have been received and that the line will be built this summer.

DETROIT, MICH.—It is reported that I. C. Schafer, Chicago, Ill., has the contract for furnishing steel rails and other materials for the construction of the Chicago, Detroit & Toledo St. Ry., and will have the line ready for operation by June 1. The road will cost about \$1,500,000. A. E. Riponell and C. W. O'Brien are interested.

DETROIT, MICH.—Local papers state that the franchise rights for an electric railway from Port Huron to Bay Clair were sold by William Wheat, Tuscola, on Dec. 27, to E. M. Hopkins, New York, and associates. A company will be formed, and the construction of the line, which will extend through Lexington, Crosswell, Sanilac Center and Caro, about 110 miles in length, will be started this spring.

LEMONT, ILL.—The Joliet & Chicago Rapid Transit Co. will ask the board of trustees on Jan. 3 for a franchise through Lemont. Some of the right of way has already been secured, and the construction will be rapidly pushed as soon as the franchise is granted.

TOMAHAWK, WIS.—An electric railway from Eagle River to Port Edwards is being proposed. W. H. Bradley, Pres. the Wisconsin Valley Improvement Association, is agitating the scheme.

COFFEYVILLE, KAN.—C. L. Long, representing eastern capitalists, has asked for a franchise to operate a street railway in this city.

KANSAS CITY, MO.—A new company is being organized to construct and operate an electric line in this city. E. F. Swinney, Bernard Corriban, W. D. McLeod and others are interested.—An electric railway, to be known as the McClure line, to extend from Rosedale to Olathe and Emporia, is projected. The power house will be located either at Rosedale or at Olathe.

CORSICANA, TEX.—The Corsicana Commercial Club wants propositions relative to the construction of a street railway in Corsicana. Population 12,000.

SEATTLE, WASH.—E. F. Blaine, Secy. and Treas. Grant St. Electric Ry. Co., states that the company proposes to supply light and power to outside consumers.

SARINA, ONT.—The Sarina St. Ry. Co. has decided to issue \$60,000 in bonds for converting its line into an electric system.

OAXACA, MEX.—Report states that Tbos. Welcher, Elec. Engr., is investigating the question of building an electric line.

TAMPCO, MEX.—Henry T. Levison, Elec. Engr., is reported as interested in a proposed electric line for this place.

LONDON, ENG.—The London County Council, press reports state, has decided to build an electric railway at a cost of about \$13,000,000. Permission of Parliament

will now be asked. The conduit system will be used. T. McKinnon Wood, Chn. L. C. C., Central Hackney, London; Sir Alex. R. Binnie, Ch. Engr., 77 Ludbrook Grove.

MANCHESTER, ENG.—It is stated that in December the tramways committee, who will soon have full charge of the tramways, asked for bids for 450 cars, and that a contract was let for about 5,000 tons of rails, first delivery to be made in April, when the work of building the entire system will be begun. C. H. Worthington, Gen. Engr.; J. M. McElroy, Gen. Mgr.

NEWCASTLE-UPON-TYNE, ENG.—Bids are asked until Jan. 24 for laying about 11 miles of double-track electric railway, the rails, poles, etc., to be furnished by the city. Deposit for plans, etc., £3 3s. Hill Motum, Town Clk. Other contracts are reported as having been let by the public works loan commissioners for the proposed electric line to cost about \$2,500,000. Bids for generators are wanted until Jan. 16. W. G. Laws, Cy. Engr.

PORTSMOUTH, ENG.—The following bids were received by the corporation last month for furnishing 60 electric street railway cars: Dick, Kerr & Co., Ltd., 150 Cannon St., E. C., London, about \$171,910 (accepted); R. W. Blackwell & Co., London, \$186,000; British Westinghouse Electric Co., Ltd., 32 Victoria St., Westminster, London, \$180,455; Brush Electrical Engineering Co., Ltd., 40 Queen Victoria St., E. C., London, \$182,860; McCarty, McElroy & Co., London, 40 cars, \$114,655.

GLASGOW, SCOTLAND.—The National Conduit & Cable Co., 41 Park Row, New York, has been awarded the contract for the feeder wire, etc., at about \$750,000 for the electric line extensions.

ROME, ITALY.—The Societa della Tramvia e Ferrovii Elettriche di Roma has been incorporated with a capital stock of \$300,000 to build a line between Taranto, Manduria and Lecce.

BANGKOK, SIAM.—Hamilton King, U. S. Consul-Gen., reports that the Bangkok Tramway Co. will probably extend its electric line in the near future, and also that another company will build an electric line. Mr. Jacobson, Mgr.

CALCUTTA, INDIA.—The Calcutta Tramways Co., Ltd., it is stated, has at last secured the permission to acquire its line with electricity, and also to make a number of extensions. Estimated cost, about \$1,700,000. The company now has 38 miles of road and 186 horse cars. The London, Eng., office is at 11 Abchurch Lane, E. C.; Chas. Dira, E. C. Morgan; Mgr. Agent, J. R. Maples.

SENDAL, JAPAN.—The Rikun Electric Ry. Co., recently incorporated, is reported as arranging for the construction of the proposed ten-mile line; estimated cost, about \$500,000.

TOKYO, JAPAN.—The various companies organized to build electric lines in this city have consolidated under the name of the Tokyo St. Ry. Co., which has applied for incorporation to build about 200 miles of track, gauge 4 ft. 8½ ins. The work is to be completed in six years and is to cost about \$7,000,000. Work will probably be begun at once. Considerable street railway work is proposed in Yokohama.

ADELAIDE, AUSTRALIA.—Reports state that F. H. Snow has purchased the property, etc., of the Adelaide & Suburban Tramways Co. for about \$1,007,500. It is proposed to make extensive improvements to the line.

ELECTRIC LIGHT AND POWER.

HARTFORD, CONN.—The People's Tramway Co. has decided to install a 3,000 HP. plant at the Deer Dam in Danielson, in which there will be included four 500 HP. wheels and steam engines capable of generating 2,000 HP. The original plan called for a power house 125 x 60 ft. with a wing 70 x 29 ft. for the boilers and engine. Extensions are now under way for a main structure 208 x 60 ft. and a wing for the engine house 116 x 48 ft. and on the east end of this wing a boiler house 80 x 42 ft.

SOUTH NORWALK, CONN.—A. E. Winchester, Des. Engr., General Supt., writes us that plans are being prepared for an increase to the municipal electric light plant, and that two 60-K-W, 220-volt direct-connected dynamos, two 100-HP. high-speed engines, one 125 to 150-HP. horizontal tubular boiler, piping, flue, electrical apparatus, etc., will be wanted.

BUFFALO, N. Y.—A resolution providing for a plant in Buffalo, and the issuance of \$2,500,000 for the city lighting has been referred by the board of aldermen to the committee on lamns.

OSWEGO, N. Y.—The only bid for lighting the city for five years from Feb. 29 was submitted by the Peoples Electric Light Co.

SARATOGA SPRINGS, N. Y.—Local papers state that the Water Power Co. proposes to rebuild its plant and develop electricity by the water power owned by the company on the Hudson River.

PAULSBORO, N. J.—The question of constructing new water works and an electric lighting plant is being considered.

WESTFIELD, N. J.—The Eddy Mfg. Co., Windsor, Conn., has offered to build an electric light plant and a water works system for the sum of \$100,000. The water plant will consist of about 12 miles of mains, a pumping station and water tower high enough to furnish ample pressure for fire purposes. The stand pipe will have a capacity of about 100,000 gallons a day. The company further agrees to place on their poles police and fire alarm wires and keep them in repair. A company will be formed to be known as the Consumers Water & Light Co., of Westfield. A committee composed of Henry C. Sergeant, W. S. Welch and John Platt has been appointed by the township committee to consider the matter.

BOYERTOWN, PA.—An election will be held in February to vote on the question of issuing \$15,000 in bonds for the establishment of a plant in this town. The plant will be constructed before April if the vote favors the improvement.

GREENSBORO, PA.—The county commissioners propose to purchase a plant for the court house and jail, to cost about \$1,700, according to reports.

HARRISBURG, PA.—It is reported that E. V. Einstein & Co. propose to install a plant in this place.

HAZLETON, PA.—A plant for this place is proposed.

WESTCHESTER, PA.—An ordinance granting a franchise to the York Haven Water & Power Co. was passed by the council on Dec. 18 over the mayor's veto.

RICHMOND, VA.—Reports state that a plant will be erected on the site of the old Haxall Mills, to cost about \$1,000,000.

WILMINGTON, N. C.—The Wilmington Gaslight & Electric Co., recently reorganized, proposes to rebuild its plant and install modern machinery. R. J. Jones is interested.

WINCHESTER, KY.—It is reported that the Martin Construction Co. wants a 75-K-W. alternating machine of 1,040 voltage and for a 75-light arc machine of 1,200 candle-power.

LEXINGTON, GA.—It is reported that G. H. Smith desires information concerning a plant of 250 lights com-

CLEVELAND, O.—Councilman Huffner, chairman of the municipal lighting committee, is securing information concerning municipal lighting plants.

CLEVELAND, O.—The question of establishing a plant in the court house is being considered by the county commissioners; estimated cost, \$8,000.

COLLINGSWOOD, O.—Plans for extensive improvements are being made by the village, in which is included an electric light plant, to supply 63 arc lights in this village.

LOWELLVILLE, O.—J. H. McWilliams, Ck. Bd. Trustee, writes us that bids will be received during January for a plant of 20 arc lights of 2,000 c. p. and 1,000 incandescent lights of 16 c. p. to be operated by steam.

MUSKOGEE, MICH.—The council has appointed a committee composed of Aldermen McCracken and Cunningham, to investigate the proposition to establish a municipal plant in this city.

SAGINAW, MICH.—H. E. Terry, Cy. Engr., writes us that the question of building a plant is now in the hands of the council.—Local papers state that the council on Dec. 26 decided to ask lighting companies for bids for lighting the city.

CHICAGO, ILL.—City Electrician Elliott has plans whereby he expects to substitute about 9,000 electric lamps of various descriptions for the gas and gasoline one now in use.

MILWAUKEE, WIS.—Bids are asked by the city clerk until Jan. 15 for lighting the city from Dec. 15, 1900.

RACINE, WIS.—W. M. Secor has received permission from the council to build a plant in this city.

TWO RIVERS, WIS.—The question of issuing bonds for a light and water plant will be voted on April 13.

ARLINGTON, MINN.—The village recorder writes us that specifications will soon be prepared for the proposed plant for this place. The size of the buildings and the power capacity has not been decided on. Estimated cost of buildings \$2,000. The equipment will cost about \$3,000.

COUNCIL BLUFFS, IA.—The council has accepted the bid of Thomas Bowman for lighting the city for five years at \$69.50 per lamp.

WHAT CHEER, IA.—Reports state that the contract for lighting the streets of this town with the What Cheer Electric Light & Power Co. will expire Sept. 1, and that the city clerk is now receiving bids for a new franchise.

LAS VEGAS, N. MEX.—The electric lighting proposition is now in the hands of the council, according to reports.

SEATTLE, WASH.—The Grant St. Electric Ry. Co. has been granted a franchise to furnish light and power. Work on building the line will start at once.

OAKLAND, CAL.—The Standard Electric Co. has accepted the franchise granted by the board of supervisors to operate in this county.

REDDING, CAL.—Local papers state that a plant will probably be erected on the bank of a Shanta county stream. C. W. Naller, Engr., San Francisco, has made investigations of several proposed sites, and the site on the Pit River, ten miles east of Redding, will be selected.

SANTA MONICA, CAL.—The contract for furnishing the city with 36 2,000 c. p. lights on the moonlight schedule has been let to the Santa Monica Electric & Power Co. at \$8 each.

LA COLORADA, MEX.—Geo. Wilcox, La Colorada, (Sonora), Mex., proposes to establish a plant and an ice manufacturing plant, according to reports.

ILKESTON, ENG.—The town council, it is stated, will spend about \$400,000 on improving its light plant and street railway. The gas works will also be extended at a cost of about \$75,000. H. J. Kilford, Borough Surv.

SALFORD, ENG.—The question of building a generating plant to cost about \$600,000, conduits to cost about \$750,000 and tramway equipment to cost about \$225,000, is being considered. Plans for the work have been approved. C. L. Turner, Elec. Engr.; Jos. Corbett, Borough Engr.

DUBY, AUSTRIA.—Reports state that the Austrian Schuckert Co., Vienna, has been awarded the contract for the electric plant for the mains at that place belonging to the Buschtrader Railway Co. Dr. H. Boehm, Dir., Prague, Austria.

BILBOA, SPAIN.—Reports state that the Sociedad General de Centrales Electricas has been organized with a capital stock of \$1,000,000 to acquire and operate the electric plant in Torreveja, Real Sitis de San Lorenzo, Escorial de Abajo, Nava del Rey, Medina de Rioseco, Lora, Almaden, Marchena, Arahil, Paradisa, Cerebros, El Triembo, San Martin de Valdeiglesias and Santander. At each of these towns improvements will likely be made.

PORT ARTHUR, CHINA.—The contract for a power plant for the East Chinese Ry. is reported to have been let to Ganz & Co., Budapest, Austria. Address P. I. Sopoloff, Asst. Dis., Place Michel, 3, St. Petersburg.

MELBOURNE, VICTORIA.—Bids are asked until March 1 for furnishing boilers, dynamo feeders, mains, wire, accumulators, etc., for a complete lighting plant for this city. Forms, etc., may be obtained by addressing the Agent-General for Victoria, 15 Victoria St., Westminster, London, or A. J. Arnot, Cy. Elec. Engr., Melbourne; deposit for forms, £1 ls. Alex. B. W. Kennedy, Engr., 17 Victoria St., S. W., London.

NEW COMPANIES.—The San Francisco Electric Light & Power Co., San Francisco, Cal.; \$1,000,000; C. E. Green, Mallison Power & Electric Co., Westbrook, Me.; \$150,000; W. K. Dana, Pres.; L. Lane, Treas.

People's Electric Co., Cripple Creek, Colo.; \$50,000; M. L. Bond, H. T. Shepherd, Edw. Bell.

Equitable Heat, Light & Power Co., Des Moines, Ia.; \$200,000; F. F. Merrill, P. M. Stearns, G. L. Dobson.

Home Electric Light & Power Co., Kansas City, Mo.; \$2,000; B. Corrigan, G. E. Green.

Raleigh Ice & Electric Co., Raleigh, N. C.; capital stock \$95,000; E. C. Hillier, Pres., Newport News, Va.

Oakland Electric Co., Waterville Me.; \$10,000; W. S. Wymen, G. K. Boutelle, H. D. Eaton, Waterville.

Sutton Mining, Smelting & Power Co., Augusta, Me.; \$1,000,000; A. C. Burnett, G. A. Broulett, C. S. Beatty.

Belmont: R. W. Babson, Gloucester; R. Kimball, Ipswich; Keokuk & Hamilton Water Power Co., Keokuk, Ia.; C. P. Birge, Pres.; E. Taage, Secy. and Treas.

Oakland Electric Co., Oakland, Me.; \$10,000; H. D. Eaton, Pres.; G. Boutelle, Treas.

BRIDGES.

BRIDGEPORT, CONN.—H. G. Scofield, Cy. Surv., City Hall, writes us that nothing definite has been done towards building the proposed bridge over Pembroke Lake at Arctic St., which will be of pile and timber construction, about 450 ft. long; estimated cost, \$4,500. The work will be done locally.

FREPORT, N. Y.—We are informed that there is no intention of purchasing the toll bridge across the river at this place and making it free.

NEW YORK, N. Y.—The board of aldermen on Dec. 29 authorized the construction of a bridge over Newtown Creek, at Grand St., Brooklyn, at a cost of \$200,000.—The following bids for the construction of two bridges connecting the kitchen in an adjoining building with the west and south wings of the Metropolitan Hospital on Blackwell's Island, were opened by Department of Charities Dec. 26: Hartmann & Hergan, 287 4th Ave., \$6,087; Thos. McKeown, 267 W. 50th St., \$6,643; Mahoney Bros., 32 New Bowery, \$6,680; Williams & Gerstle, \$8,975.

SAVANNAH, N. Y.—Addison P. Smith, Supervisor, writes us that appropriations are wanted from the state for the construction of bridges over the Seneca and Clyde Rivers, each of which are about 300 ft. in width.

MILLBURN, N. J.—Bids are asked until Jan. 15 for constructing a bridge over the dam at Campbell's Pond. John J. Cuddy, Chn. Water Com.; F. T. Crane, Cy. Engr., both of Orange, N. J.

CHARLEROI, PA.—The Charleroi & Monessen Connecting R. R., recently incorporated, proposes to erect a bridge over the Monongahela River, between Charleroi and Monessen. Chas. F. Thompson, Pres., Charleroi.

MORELAND, PA.—A new bridge to replace the present structure over Laurel Run, at this place, has been recommended by a commission composed of Robert Faries, Theo. Hill, and H. R. Mehrling.

PITTSBURG, PA.—The plans for the Union R. R. Co. bridge over the Monongahela River, from Millin township to Rankin borough, have been completed. The structure will have a span 450 ft. long. Congress will be asked for permission to build the structure.

READING, PA.—Local papers state that the Philadelphia & Reading Ry. Co. has plans for a steel bridge, which it proposes to erect at Front St., to cost about \$10,000. Bids will soon be asked for its construction. H. K. Nichols, Ch. Engr., Philadelphia; F. S. Stevens, Div. Engr.

RICHMOND, VA.—R. S. Williams writes us that no definite steps have been taken towards the construction of the proposed bridge and that nothing will be done for several months.

BENTON, TENN.—The lowest bid received by the committee appointed to receive bids for the construction of three steel bridges, one at Columbus, one at Catesford and the other at Conasauga, was submitted by the Converse Bridge Co., Chattanooga, at \$20,000.

YOUNGSTOWN, O.—Marcus Westerman, County Comr., writes us that no definite action has been taken toward the construction of the bridge over the Mahoning River.

MARTINSVILLE, IND.—The county commissioners have awarded the contract for constructing a 96-ft. bridge over Indian Creek, on the Bloomington and Martinsville road, to the J. B. Adams Bridge Co., Indianapolis, at \$1,840.

SOUTH OMAHA, NEB.—The proposition of building a viaduct to span the railroad tracks, from the foot of O St. to the stock exchange building, is being agitated.

DEVIL'S LAKE, S. DAK.—Press reports state that it has been decided by leading business men to construct a bridge over Devil's Lake, connecting this city with Fort Totten, the structure to cost about \$4,500. F. W. Cockburn, W. H. Brown and E. J. Chamberlain have been appointed a committee to solicit funds for the improvement.

HOQUIAM, WASH.—O. P. Burrows writes us that the contract for the construction of the Howe truss bridge over the Hoquiam River at 8th St., was let Dec. 19 to Douglas Bros. & Mason, at about \$10,000. The structure will have one span with a 280-ft. draw. Seattle Bridge Co., Des. Engrs., Seattle.

PORTLAND, ORE.—Reports state that the Southern Pacific Co., proposes to construct a bridge for the Mohawk branch across the McKenzie River at Hoydons.

LOS ANGELES, CAL.—The city engineer is preparing plans for a bridge to replace the present structure over the Arroyo de Las Pesos on Macy St., according to reports.

WYEBRIDGE, ONT.—Bids are asked until Jan. 16 for constructing a steel bridge over the Wye River, at this place, according to reports. Daniel Quinlan, Chn. Roads and Bridges, Simcoe County, Barrie, Ont.

RAMSGATE, ENG.—Bids are asked until Jan. 19 for constructing an iron bridge, with approaches over the River Stom at Plucks Gutter, and also for constructing a highway from Monkton Sournmouth, to include two bridges. L. W. Hoghin, Surv., Birchington; Chas. Taylor, Ck.

LILLE, FRANCE.—Press reports state that the contract for a bridge over the Tage River has been let to La Compagnie de Fines Lille, of Lille; estimated cost, about \$3,000,000.

BUILDINGS.

RUTLAND, VT.—Plans have been prepared, according to reports, for a theatre to cost about \$35,000.

BOSTON, MASS.—Bids are asked until Jan. 4 for erecting a morgue building; check \$500; S. H. Durgin, Chn. Bd. Health.—The Edison Electric Light Co. has let the contract for building a brick building on Atlantic Ave., to Norcross Bros., Tremont Bldg.—A new building will be built at 214 to 222 Washington St.

BROOKLINE, MASS.—It is proposed to build galleries in the Town Hall at a cost of about \$12,000. W. F. Humphrey, Comr.

HARTFORD, CONN.—J. J. Dwyer, Arch. 78 Trumbull St., has let the contracts for the masonry work on the St. Joseph's Seminary building on Collins St. to Wm. F. O'Neill, 172 Farmington St.; and the contract for carpenter work, to McCone Bros., 174 Sheldon St. The building will cost about \$110,000.

BUFFALO, N. Y.—A four-story brick apartment house, to cost about \$100,000, will be built at Chapin Parkway and Potomac Ave.

NEW YORK, N. Y.—The following bids were opened by Dept. Charities, Dec. 26, 1899, for installing of main steam rising lines, etc., including new radiators in the Metropolitan Hospital, Blackwell's Island: Francis Bros. & Gillett, 70 Trinity Place, \$14,250; Blake & Williams, 362 West Broadway, \$14,531; James Curran Mfg. Co., 512 W. 36th St., \$16,459; E. Rutzler, 178 Centre St., \$16,650; Frank Dobson, 218 E. 42d St., \$18,454; Williams & Gerstle, \$23,000. For installing one passenger elevator and two dumb-waiters in the Metropolitan Hospital, Blackwell's Island: Mahony Bros., 52 New Bowery, \$7,700; Hartmann & Hergan, 287 4th Ave., \$8,597; Williams & Gerstle, \$9,728. For

alterations to the men's dormitory, Randall's Island: Hartmann & Hergan, \$6,037; Mahony Bros., \$6,348; Tolmie & Kerr, 245 W. 12th St., \$6,757; Williams & Gerstle, \$9,463. For the refitting with new double sash and window frames and inside window guards the Metropolitan Hospital, Blackwell's Island: Mahony Bros., \$14,943; screens, \$3,500; Lavala & Kiernan, 102 E. 28th St., \$19,136; screens, \$3,200; Thos. McKeown, 267 W. 50th St., \$21,148; screens, \$4,000; Hartmann & Hergan, \$24,000; screens, \$3,600; Tolmie & Kerr, \$24,149; screens, \$3,000. For wood flooring, steel ceilings, painting, etc., in the Metropolitan Hospital, Blackwell's Island: Mahony Bros., \$28,683; John W. Callan, \$29,974; Hartmann & Hergan, \$30,300; Viege & Gerroll, \$32,750; Thomas McKeown, \$38,830; Williams & Gerstle, \$49,825.

NEW YORK, N. Y.—Plans have been filed by the Trustees of the Teachers' College, 120th St., West, for a 5-story brick building, 292-101 ft., at 120th to 121st St. and Broadway, to cost about \$350,000. Josselyn, Howells & Stokes, Archs., 100 William St.; by Henry Miller, 150 W. 35th St., for a 7-story brick flat, 25 x 81 ft., at 28 W. 26th St., to cost about \$80,000. Neville & Barge, Archs., 217 W. 125th St.; by the Church of St. Stanislaus, 143 Stanton St., for a 1-story brick church building at 103 to 109 E. 7th St., to cost about \$70,000. Arthur Arcander, Arch., 320 Broadway.

NEW YORK, N. Y.—The Morningside Heights Realty Co. will build a 19-story brick dormitory at 116th St. and Amsterdam Ave., to cost about \$300,000.—The Manhattan Congregational Church, 834 St., near Broadway, Rev. H. A. Stimson, Pastor, has purchased a site for a new church building at Broadway and 76th St.—Plans have been filed by the Durland Riding Academy Co., 59th St. and 8th Ave., for a two and five story brick riding academy building at 66th St., near Central Park West, to cost about \$200,000. H. F. Kilburn, Arch., 156 5th Ave.

ROCHESTER, N. Y.—Bids are asked until Jan. 4 for repairing the U. S. court house building, Henry Harrison, Custodian.

TROY, N. Y.—M. F. Cummings & Son, Times Bldg., have prepared plans for a building to cost about \$10,000 for St. Joseph's Lyceum, to replace the one recently burned.

HOBOKEN, N. J.—Andrew Carnegie has approved the plans of Ackermann & Ross, 156 5th Ave., New York, for an engineering laboratory for Stevens Institute for which he has given \$50,000.

ORANGE, N. J.—The question of building a new city hall is being discussed.

WESTFIELD, N. J.—A new school building, to cost about \$45,000, will be built in the spring, according to reports.

HAVERTFORD, PA.—Plans have been prepared for a gymnasium building for Haverford College, to cost about \$40,000.

LEBANON, PA.—Plans for the passenger station of the Philadelphia & Reading Ry. are being prepared by Willson Bros., 1038 Drexel Bldg., Philadelphia.

NEW CASTLE, PA.—It is stated that the Pennsylvania R. R., the Pittsburgh & Lake Erie R. R., and the Western New York & Pennsylvania Ry. will erect a union passenger station, to cost about \$300,000.

PHILADELPHIA, PA.—Doyle & Doak are taking estimates on a 10-story, \$3 x 123-ft. office building.—Plans have been prepared by Thos. Bennett, 1024 Walnut St., for an apartment house, to cost about \$150,000.—The council has recommended the appropriation of \$137,690 for the Boy's High School building at 15th and Brandywine Sts.

PHILADELPHIA, PA.—The city treasurer has received \$100,000 from the state for new schools.—The Geo. M. Newhall Engineering Co., 136 54th St., is preparing plans for two factory buildings for Davis Bros. on Wissahickon Ave., near the Pennsylvania R. R.

PHILADELPHIA, PA.—Plans for a clubhouse at Howard and Somerset Sts., for the Church Club, have been prepared by Duhring, Okie & Ziegler, 1420 Chestnut St.—The contract for adding four stories to the Baldwin Locomotive Works on Broad St., has been let to Roydhouse, Arrey & Co., 24 S. 7th St.—It is stated that the contract for a 4-story extension to W. B. Sanders' printing house, 925 Walnut St., has been let to Stacy, Reeves & Sons, 1611 Filbert St.; W. L. Price, Arch., 731 Walnut St.

PITTSBURG, PA.—The East End Charity Hospital will erect a building, to cost about \$500,000, at Wellesley Ave. and Mellon St. Mother Josephine, 420 Collins Ave., has plans, etc.

WARREN, PA.—Bids are asked until Jan. 15 for erecting a brick hospital building. J. O. Jefferson, Secy.

NEW CASTLE, DEL.—The trustees have accepted the plans of the Pauly Jail Mfg. Co. for a new workhouse and jail building.

WASHINGTON, D. C.—Bids are asked until Jan. 13 for erecting a brick building for officers' quarters at the navy yard. M. T. Endicott, Ch. Bureau Yards & Docks.

WASHINGTON, D. C.—The following is a list of the contracts pending in the office of the supervising architect at the date of his last report, June 30, with the names of the firms holding such contracts and the dates they were made: Brockton, Mass.—Post office, Melvain-Unkefer Co., 24 Nat. Bank Bldg., Pittsburg, Pa.; construction, etc., \$42,673, Oct. 1, 1898; Pittsburg Heating Supply Co., 113 Wood St., Pittsburg, heating, \$3,290, May 15, 1899. Buffalo, N. Y.—Post office, John Pierce, superstructure, etc., \$878,989, Sept. 26, 1898. Camden, N. J.—Post office, custom house, etc., Rankin & Kellogg, 1021 Walnut St., Philadelphia, Pa., plans, etc., local supervision, etc., \$8,149, March 26, 1898; Charles McCaul, 10 N. 11th St., Philadelphia, construction, \$154,686, Nov. 16, 1898; Edward Joy, 135 Market St., Syracuse, N. Y., heating, etc., \$2,380, March 30, 1899. Cheyenne, Wyo.—Public building, Keefe & Bradley, foundations, etc., basement and area walls, etc., \$56,469, July 7, 1898. Chicago, Ill.—Marine hospital, L. L. Leach & Son, 1402 Marquette Bldg., boiler house, isolation ward, etc., \$29,892, Sept. 21, 1899. Denver, Colo., mint building, John A. McIntyre, 135 S. 8th St., foundation, superstructure, etc., \$249,986, March 29, 1898. Detroit, Mich.—Custom house, Vinton Co., 126 Woodbridge St., changes, repairs and alterations, \$14,900, June 13, 1899. Ellis Island, N. Y.—Immigrant station, Boring & Tilton, 32 Broadway, New York, plans, local supervision, etc., \$34,277, Feb. 9, 1898; H. Hood & Co., 229 Broadway, New York, construction, etc., main buildings, etc., \$472,149, August 15, 1898; G. A. Suter & Co., 108 Wooster St., certain portions of heating, \$33,000, June 8, 1899. Kansas City, Mo.—Court house and post office, W. T. Osborn & Co., 1705 Delaware St., system of interior conduits and electric wiring, \$5,275; L. L. Leach & Son, 1402 Marquette Bldg., Chicago, interior finish, etc., \$164,550, May 4, 1899. Knoxville, Tenn.—Court house and post office, Pittsburg Heating Supply Co., 113 Wood St., Pittsburg, heating, etc., \$39,936, Louisville, Ky.—Marine hospital, Jessen McWilliams & Co., 323 W. Main St., heating, etc., \$3,978, April 20, 1899. Memphis, Tenn.—Marine hospital, Pittsburg Heating & Supply Co., 113 Wood St., Pittsburg, heating and repairs to heating, \$1,-

121, Oct. 12, 1898. Milwaukee, Wis.—Post office, court house and custom house, F. P. Gleason & Son, plumbing, etc., \$28,854, July 19, 1897; Hennessey & Cox, interior finish, etc., \$265,463.09, July 28, 1897; Chas. B. Kruse Heating Co., 120 Cloybourn St., heating, etc., \$56,387.70, March 24, 1898; Johnson Electric Service Co., 118 Sycamore St., temperature regulation, \$4,392, March 31, 1898; Crane Elevator Co., 223 S. Jefferson St., Chicago, elevators, \$10,800, Aug. 15, 1898. New York, N. Y.—Appraisers' warehouse, Otis Bros. & Co., Potter Bldg., elevators, etc., \$54,000, Jan. 6, 1898; court house and post office, W. G. Triest, 39 Cortlandt St., extension of mailing platform, etc., \$11,523.51, Dec. 17, 1898; G. A. Suter & Co., 108 Wooster St., ventilating, etc., engine and boiler rooms, \$9,875, April 5, 1899; sub-treasury, A. B. & W. T. Westervelt, 102 Chambers St., steel window frame, etc., \$6,500, March 20, 1899. Norfolk, Va.—Court house and post office, Wyatt & Nolting, 4 E. Lexington St., Baltimore, Md., plans, etc., and local supervision, etc., \$8,750, Feb. 18, 1899; Melvain-Unkefer Co., 2d Nat'l Bank Bldg., Pittsburgh, construction, \$163,641, Dec. 1, 1899; Ogdenburg, N. Y.—Custom house and post office, Charles Lawler, 70 Isabella St., heating, \$4,806, Aug. 13, 1898. Omaha, Neb.—Court house, custom house and post office, Angus McLeod Co., completion of interior finish, etc., \$84,276.80, Jan. 31, 1898; Crane Elevator Co., 223 S. Jefferson St., Chicago, elevators, etc., \$10,000, Aug. 20, 1898. Paterson, N. J.—Post office, Melvain-Unkefer Co., 2d Nat'l Bank Bldg., Pittsburgh, erection, etc., \$132,497.43, Oct. 5, 1897; heating, \$5,355, Aug. 27, 1898; Otis Elevator Co., 71 Broadway, New York, mail lift, \$2,190, April 24, 1899; the E. Howard Watch & Clock Co., 41 Maiden Lane, New York, tower clock, \$1,252.50, May 5, 1899. Petersburg, Va.—Custom house and post office, Pittsburgh Heating Supply Co., 113 Wood St., Pittsburgh, heating, etc., \$1,193.75, Aug. 30, 1898. Philadelphia, Pa.—United States mint (new), Chas. H. McCaul, 10 N. 11th St., superstructure above XX, \$495,445.50, Nov. 5, 1898; Remington & Sherman Co., 624 Beach St., storage vault for silver bullion, \$195,950, Dec. 22, 1898; Remington & Sherman Co., electric lighting and ventilating compartment bullion vaults, \$3,852, April 25, 1899. Portland, Ore.—Custom house (new), the Bentley Construction Co., new custom house foundations, superstructure, etc., \$348,757.24, May 11, 1898. Pueblo, Colo.—Post office, Gardner Elevator Co., Riser and 21st Sts., Detroit, Mich., passenger elevator, \$3,575, Mar. 9, 1898. Racine, Wis.—Custom house and post office, Adam H. Marcus, erection and completion, \$57,000, Sept. 9, 1896. San Francisco, Cal.—New appraisers' stores, Geo. H. Tay Co., 49 1st St., boiler plant, repairs to heating, etc., \$8,750, March 9, 1899; branch mint, James E. Britt, 7 8th St., plumbing, \$4,886.50, Nov. 14, 1898; post office, court house, etc., Thomas Marshall, steel work, roof framing, etc., \$154,219.12, June 25, 1898. Savannah, Ga.—Court house, post office, Miles & Bradt, stone, brick and terra cotta work of superstructure, \$220,729, Aug. 26, 1895; John F. Dalton, system of interior conduits and wiring, \$2,802, Nov. 24, 1897; Chas. B. Kruse Heating Co., heating apparatus, \$5,627, Sept. 21, 1897; Anderson Construction Co., interior finish, etc., \$84,040.25, April 19, 1898; Sprague Elevator Co., 52 Broadway, New York, elevator, \$3,735, Nov. 12, 1898. South Omaha, Neb.—Post office, Chas. W. Gindele Co., erection, etc., \$69,396.95, Feb. 21, 1898; Kornsmeier Plumbing & Heating Co., 215 S. 11th St., Lincoln, heating, \$3,923, Sept. 20, 1898. St. Albans, Vt.—Custom house and post office, Richardson & Burgess, rebuilding, etc., \$58,060.34, March 8, 1897; Huey Bros., heating, etc., \$4,000, Oct. 10, 1898. St. Paul, Minn.—Post office, court house and custom house, Butler-Ryan Co., Globe Bldg., interior finish, etc., \$146,950, May 5, 1898; Allen Block, 149 E. 6th St., heating, etc., \$53,568, May 6, 1899; Johnson Electric Service Co., Lumber Exchange, Minneapolis, temperature regulation, \$2,962, May 11, 1899; the Western Electric Co., Chicago, Ill., system of interior conduits and wiring, etc., \$5,170, Dec. 1, 1897. Washington, D. C.—Post office, E. F. Gobel, interior finish, etc., \$204,571.81, Oct. 31, 1896; Wm. H. Doyle, plumbing and gas piping, \$89,177.85, Feb. 4, 1897; Philadelphia Steam Heating Co., 1513 Filbert St., heating, etc., \$123,354.63, March 29, 1897.—From the "Government Advertiser."

BALTIMORE, MD.—The Fifth Regiment, N. G. Md., has purchased the Bolton property from W. W. Spence for a site for its new armory. Architects will soon be selected and work started in the spring.

PETERSBURG, VA.—It is reported that the Petersburg & Carolina R. R. Co. will erect a passenger depot.

RICHMOND, VA.—It is stated that the Seaboard Air line has purchased 20 acres of land just outside the city and will build shops and a roundhouse.—The plans of Wilson Bros. & Co., Drexel Bldg., Philadelphia, Pa., have been accepted for the new union depot for the Chesapeake & Ohio R. R., and the Seaboard Air Line, to cost about \$400,000.

LAGRANGE, GA.—The question of issuing \$50,000 in bonds for a new court house, will be voted on in February or March.

MOBILE, ALA.—It is stated that a hotel to cost about \$75,000 will be built on Bienville Square.

AKRON, O.—The trustees of Buchtel College have decided to rebuild at once the buildings recently burned.

CLEVELAND, O.—An auditorium to seat about 10,000 people will be built at a cost of about \$200,000, according to reports.

CLEVELAND, O.—Plans are being prepared for a business block for the Dime Savings Bank.

LODI, O.—A. B. Taylor will erect a \$60,000 hotel in Hexagon Park. W. W. Sabin, Arch., New England Bldg., Cleveland, O.

RICHMOND, IND.—It is stated that the P. C. & St. L. R. R. Co. has prepared plans for a new passenger station on Ft. Wayne Ave.

CHICAGO, ILL.—The buildings, 212 to 222 Monroe St. were damaged by fire Dec. 30, to the extent of about \$90,000.

MADISON, WIS.—The regents have approved plans of Arch. Jenkins for a new three-story brick engineering building for the State University, to cost about \$100,000.

ROSEBUD, S. DAK.—Bids are asked until Jan. 13 for furnishing a quantity of building materials at the Rosebud Agency, or Valentine, Neb. C. E. McChesney, U. S. Indian Agent.

EL PASO, TEX.—The question of issuing \$30,000 in bonds, part of which are for completing the city hall, will be voted on Jan. 9.

HAMILTON, MONT.—The question of issuing \$20,000 in bonds for a court house will be voted on Feb. 20.

DAVENPORT, WASH.—Bids are asked until Jan. 28 for finishing the interior of the Catholic Church. Father J. A. Faust, Pastor.

LOS ANGELES, CAL.—Plans have been filed for a 4-story brick block at 4th and Hill Sts., to cost about \$40,000.

SACRAMENTO, CAL.—Bids are asked until Feb. 26 for erecting a residence for the Governor, for which \$50,000 has been appropriated. W. H. Davis, Secy. State Capitol Com.

OAKLAND, CAL.—The Oakland Ebell Society has raised \$20,000 to purchase a site for the Carnegie Library. Mrs. Gleason, Pres.

SAN FRANCISCO, CAL.—Plans have been prepared by Curlett & McLaw, Phelan Bldg., for the branch library building which Mayor Phelan will give to the city.

SAN FRANCISCO, CAL.—The C. T. Crocker estate will erect a hotel at Sutter St. and Van Ness Ave., to cost about \$850,000. H. T. Scott and T. E. Green, Executors.

SANTA ANA, CAL.—The supervisors are examining plans for a new court house.

LIVERPOOL, ENGLAND.—It is stated that work will soon be begun on the proposed new workhouse, to cost about \$500,000. J. A. Brodie, Cy. Engr.

WATER-WORKS.

ACTON, MASS.—Joseph R. Bassett has applied for a charter for the Acton Water Co., which will supply water to this town.

WESTFIELD, MASS.—The Eddy Mfg. Co., of Windsor, Conn., has offered to put in works and an electric plant for \$100,000. Henry C. Sergeant, W. S. Welch and John Platt are on the committee to consider the matter. A. A. Dennis, Chn. Com.

ADAMS, N. Y.—The appraisers have valued the works of the Adams Water-Works Co. at \$21,000. The question of issuing \$23,000 in bonds for the purchase of the works and paying water rent and \$6,000 for improving them will be voted on Jan. 4.

NEW YORK, N. Y.—The board of public improvements passed a resolution Dec. 27 to build a storage reservoir on the Cross River Branch of the Croton River, in Westchester county, with a capacity of 9,000,000,000 gallons, to cost about \$10,000,000. Wm. Dalton, Comr. Water Supply, has recommended the following: In addition to the proposed improvements to the water supply which have been decided upon or are being considered: An additional reservoir on the Cross River branch of the Croton River, estimated to cost about \$980,000; to place the storage reservoir, built in 1894, near the Milburn pumping station, in a serviceable condition, cost \$500,000, and an additional pumping station, boilers and force main for the Brooklyn high-service station at Mount Prospect, to cost about \$100,000.

SINCLAIRVILLE, N. Y.—Bids are asked, according to reports, by the City Clerk until Jan. 15 for the purchase of \$7,000 of water-works bonds.

CAMDEN, N. J.—Press reports state that the council has decided to accept the report of the water committee recommending the purchase of a new 10,000,000 gallon pump.

JERSEY CITY, N. J.—The Street and Water Board on Jan. 2 decided to notify P. H. Flynn, who has the contract for the new water supply, to make the capacity of the works 70,000,000 gal. daily instead of 50,000,000 galls. This will make no difference in the cost of water so long as it is delivered by the company, but should the city decide to purchase the plant outright on completion, which it may do under its option, the upset price will be increased from \$7,595,000 to \$8,745,000.

PAULSBORO, N. J.—The question of establishing works is being discussed by the Business Men's Association, and information on the question is wanted by it.

DANVILLE, PA.—The Walenraepack Water Co. has been incorporated, with a capital stock of \$1,000, by Isaac X. Grier, Chas. P. Gearhart and R. B. Polk.

MAUCH CHUNK, PA.—The Nesqueboning Water Supply Co. and the Monroe Water Supply Co. have been incorporated, each with a capital stock of \$5,000, by Henry Baker, Philadelphia, Pa.; Geo. Ruddle, Mauch Chunk; Jas. McCready, Lansford, and others.

MILRAY, PA.—P. D. Warrer, Chn. Reading Foundry Co., Ltd., Reading, Pa., and Pres. Reedsville Water Co., writes us as follows regarding the information about the Milroy Water Co., furnished to us by D. C. Kaseman, Secy., and noted in our issue of Dec. 28: Mr. Kaseman wrote that his company had been organized to construct works to supply the territory between Milroy and Lewistown in the county of Mifflin, Pa., and that it had control of the waters of Laurel Run and Cooper's Gap Run, and practically all the soft water in the northwestern part of that county, and that arrangements would be made to construct gravity works that would afford an ample supply of water and fire protection to Milroy, Reedsville, Burnham, Yeagertown and the suburbs of Lewistown, etc. This article would not have been noticed but for the reason that it is incorrect and probably misleading to many who should be better informed. The facts are that the Reedsville Water Co., of Reedsville, Pa., was organized and obtained a charter prior to the Milroy Water Co., obtained by purchase the lands through which the two streams above referred to flow and near the terminus where they sink away, and has already done as much as the season permitted towards securing the supply of these streams from these points, obtained by purchase, to supply Milroy, Reedsville, Yeagertown, Burnham and suburbs of Lewistown.

KENNINGTON, MD.—We are informed that it has been decided to ask the legislature for permission to issue \$20,000 in bonds for works. No engineer has yet been employed.

ELKINS, W. VA.—We are informed that the following bids were received Dec. 30 for constructing works, as advertised in Engineering News: Engineer's estimate \$27,725; D. G. Adelsberger, Engr., 722 Pennsylvania Ave., Baltimore, Md.; Moore & McCreary, Atlanta, Ga., \$27,700; E. F. Kitson, Reading, Pa. (accepted), \$27,700; D. R. Burns, Philadelphia, \$31,350; Jolly Bros. Co., Pittsburgh, \$27,900; Consolidated Public Works Co., Philadelphia, \$34,980; G. R. Minor, Salem, W. Va., \$23,564; Chanley Bros., Beaver Falls, Pa., \$31,500; J. C. Sebrade, Williamsport, Pa., \$37,137; Owen Patterson, Baltimore, Md., \$29,063; Rosser & Casto, Belleaire, O., \$28,800.

CLEVELAND, O.—Bids are asked until Jan. 29 for furnishing and erecting two or four 25,000,000-gallon pumping engines for the Kirkland St. pumping station, and for a 20,000,000-gallon pump for the Division St. station, as stated in our advertising columns. M. W. Kingsley, Supt.; W. P. Rice, Dir. Pub. Wks.

CLEVELAND, O.—Bids are asked until noon, Jan. 5, for furnishing the following for the water department: About 100 1/4-in., 2,700 3/4-in., 50 3/4-in., 50 1-in. stop cocks for lead and iron pipe; 20 1/4-in., 20 3/4-in., 20 1-in. stop cocks for iron pipe; 100 1/4-in., 2,700 3/4-in., 50 3/4-in., 50 1-in. corporation cocks; 15 1 1/2-in. and 20 2-in. stop valves; 20 2-in. air valves; 15 two-way, 15 three-way, and 15 four-way multiple connections; 30 caps for 1/2-in., 30 caps for 3/4-in., 10 caps for 1-in. and 10 caps for 1-in. stop cocks; 30 tail pieces for 1/2-in. corporation cocks; 30 tail pieces for 3/4-in. corporation cocks; 10 tail pieces for 1-in. corporation cocks, and 10 tail pieces and unions for 1-in. corporation cocks; 10 1-in. soldering nipples for multiple connections. W. P. Rice, Dir. Pub. Wks.

COLLINWOOD, O.—It is stated that arrangements are being made to sell \$300,000 of 4% bonds for water-works and \$18,000 of bonds for an electric plant, as well as for constructing sewers.

EAST LIVERPOOL, O.—Work on the proposed water-works for the south side will be begun in the spring. Chas. A. Smith, A. G. Mason and Peter A. Pugh are interested.

KOKOMO, IND.—Engineers are making a valuation of the works, with a view to the city's purchasing the plant from the American Water-Works & Guarantee Co., Pittsburg, Pa. C. P. Gerrard, Galesburg, Ill., and Elwood Haynes, Kokomo, are on the commission.

WYANDOTTE, MICH.—The Stirling Co., Barberton, O. has submitted the lowest bid, at \$4,685, for a new water-tube boiler for the works.

LA SALLE, ILL.—The council has directed that the city engineer and the mayor prepare estimates, a report, etc., for improving the works, to cost about \$100,000. Address Superintendent Walker and Alderman J. Martin.

OSKALOOSA, IA.—This city voted down the proposition granting a 25-year extension to the franchise of the Oskaloosa Water Co., on Dec. 26.

STARBUCK, MINN.—Fairbanks, Morse & Co., St. Paul, Minn., are reported to have been awarded the contract for erecting works and an electric plant; population, 500.

OMAHA, NEB.—Councilman C. O. Lohbeck writes us that a contract now exists between the city and the Omaha Water Co., which expires soon. The city has the privilege of purchasing, and an ordinance authorizing an issue of \$5,000,000 of bonds for that purpose has been introduced but not passed as yet. The ordinance will probably be amended authorizing a much less sum, and it will then come before the voters in March.

LITTLE ROCK, ARK.—Hiram Phillips, Oriel Bldg., St. Louis, Mo., has been engaged to examine the works of the Home Water Co., and to determine what alterations should be made. Address Mayor Woodson, or Fred Kramer, Chn. Com.

COLORADO SPRINGS, COLO.—Bids are asked until Jan. 8 for the purchase of \$60,000 of 15-year 4% water bonds. I. S. Harris, Cy. Clk.

PURCELL, IND. TER.—The mayor writes us that the city is considering the question of whether to bond the city or not for works, the water supply to be secured from wells. Population, 3,500.

ABERDEEN, WASH.—The city clerk is reported to have been directed to advertise for bids for extending the water mains in South Aberdeen.

PORTLAND, ORE.—F. T. Dodge, Supt., writes us that the council having decided to permanently improve North 21st St. by macadamizing it, the water committee voted to lay a 6-in. main 4,000 ft. long, the pipe to be purchased from the Oregon Iron & Steel Co., Oswego, Ore.

WOODBURN, ORE.—A franchise for works and a sewerage system have been granted to A. B. Kurtz, and work it is stated, will be begun at once.

PLEASANTON, CAL.—This place voted Dec. 19 to issue \$20,000 in bonds for works.

SALT LAKE CITY, UTAH.—City Engineer Kelsey has submitted a report and plans for increasing the water supply, to cost about \$300,000, and a second plan to cost about \$400,000.

HAMILTON, ONT.—E. L. Barrow, Mgr. Water-Works, writes us that the following bids were received Dec. 30, 1899, for furnishing 20 and 30-in. cast-iron water pipe and for extending filter basins: all local bidders except McQuillan & Co.; Laying conduit and filter basin work: Thos. Barnes, \$32,000; extra excavation, 40 cts. a cu. yd.; John Dickinson & Son, \$20,375 and 30 cts. (accepted); Geo. J. F. Webb, \$29,779; M. A. Spigott, \$29,950 and 30 cts.; McQuillan & Co., Toronto, Ont., \$55,000 and 25 cts.; Pipe-U. S. Cast Iron & Foundry Co., The Rookery, Chicago, Ill., \$28.50 a net ton, not including duty of \$8 a ton; Garstshore-Thomson Pipe Co., \$35.00.

IRRIGATION.

CHICAGO, ILL.—The Colorado Bijou Land & Irrigation Co. has purchased 35,000 acres of land along the Bijou River from the Union Pacific R. R. Co. and will irrigate about 20,000 acres. W. H. Davis, Pres.

ABILENE, TEX.—Henry Layles wants a contractor to move about 300,000 cu. yds. of dirt for dam and ditches in West Texas.

HEMET, COLO.—The Fruitvale Irrigation Co. is negotiating for land near Bowers on which it proposes to sink wells.

SALT LAKE CITY, UTAH.—The Sheen Creek Irrigation Co., recently incorporated with \$50,000 capital, will carry water from Sheep Creek in Uintah County. E. Daggett, Pres.

TRENTON, UTAH.—Washington Jenkins, Locating Engr., Ogden, writes us that the West Cache Irrigation Co. will divert 250 ft. of water from Bear River in Idaho through a canal 19 miles long to irrigate about 20,000 acres along the west side of Cache Valley. The laterals will be about 20 miles in length. Estimated cost about \$50,000. M. W. Butler, Pres.; Trenton; A. F. Parker, Des. Engr., Ogden.

SEWERAGE.

NEW BRITAIN, CONN.—The state sewer board has examined the plans for the proposed new sewerage disposal plant for this place.

WEST HAVEN, CONN.—A committee has been appointed to investigate the proposition of establishing a system in the borough.

COHOES, N. Y.—Edw. Hayes, Cy. Engr., has completed his survey and is preparing plans for the system in the Eighth Ward, according to reports.

NEW YORK, N. Y.—Bids are asked until Jan. 10 for constructing a sewer in Kirkside Ave., borough of the Bronx, and a sewer in Little St., Brooklyn, and for furnishing 6,000 barrels of Maine rock lime for the sewage disposal works in the 26th and 31st wards, Brooklyn. Jas. Kane, Comr. Sewers, 21 Park Row.

ROCKAWAY BEACH (L. I.), N. Y.—The question of establishing a new system in this town and erecting a crematory is being considered.

VINELAND, N. J.—Reports state that the New Jersey State Sewerage Commission has plans under consideration for a sewerage system to be constructed at Vineland. It approved bids for estimates will be advertised for.

BEAVER FALLS, PA.—An election will be held Feb. 20 to vote on the question of issuing \$60,000 in bonds for constructing a system in this borough.

McKEESPORT, PA.—Local papers state that a sewer 5,250 ft. in length and 7 ft. in diameter will be built at this place for Crooked Run; estimated cost \$83,500.

PITTSBURG, PA.—Bids are asked until Jan. 8 for constructing a 24-in. pipe sewer in Kelly St., from Braddock Ave. to Homewood Ave. Edward M. Bigelow, Dir. Dept.

SOUTH BETHLEHEM, PA.—The board of health of the Bethlehem has recommended the establishment of a new system in this place, and the purchase of a garbage crematory.

WILMINGTON, N. C.—The question of installing a system is being considered. W. E. North, Pres. Chamber Commerce.

BROOKHAVEN, MISS.—A petition has been presented to the municipal board for a system in this town.

JACKSON, MISS.—The contract for constructing the system in Jackson has been transferred by Ford, Delahunt & Yeater, Cedar Rapids, Ia., to A. B. Sanders, Louisville.

ELMWOOD PLACE, O.—The question of issuing \$30,000 in bonds for improving the village sewerage system is being considered.

JACKSON, MICH.—Mayor Lonnecher has vetoed the resolution recently passed by the council awarding the contract for building the Trail St. sewer extensions to P. Casey & Co., at \$11,780. It is probable that city will re-advertise for the work.

GALESBURG, ILL.—M. J. Blanding is preparing plans for the main trunk sewer down Cedar Fork, which will be the main trunk center for the sewage of the city. The plans call for a brick sewer 15 ft. wide, with walls 4 1/2 ft. high and an arched top and curved invert. The section will have an area of 120 sq. ft. The cost will be about \$2 a foot. Estimated cost for the entire work \$150,000.

QUINCY, ILL.—F. A. Grover, Cy. Engr., writes us that the construction of 10,000 ft. of 22 to 30-in. brick sewer is proposed.

WALWATOSA, WIS.—A special committee on sewers has recommended that an election be held for the purpose of voting on the question of issuing \$30,000 in bonds for the disposal of the city's sewage. A suitable plan will cost about \$100,000.

MARSHALLTOWN, IA.—Reports state that the municipal authorities of Marshalltown have agreed to improve the system at this place providing the citizens of Tama will drop their suit brought to prevent the emptying of refuse from the Marshalltown Glucose Factory into the river.

WICHITA, KAN.—It is reported that bids are wanted by the city clerk until Jan. 8 for constructing the proposed sewer district, No. 3; estimated cost \$15,000.

ST. LOUIS, MO.—Bids are asked until Jan. 9 for constructing the Tower Grove storm sewer, consisting of 700 ft. of 12 1/2 x 15 ft. brick and concrete sewer, and 1,420 ft. of 15-in. and 80 ft. of 12-in. pipe sewers in Rock Spring District No. 8. R. E. McMath, Pres. Bd. Pub. Impvts.

WEBB CITY, MO.—The council has received petitions for an election to vote on the question of issuing bonds for constructing an adequate system in Webb City.

BONHAM, TEX.—The Williams, Moore & Stone Sewer Co. has been incorporated with \$25,000 capital stock by A. J. Moore, T. B. Williams, G. W. Stone and others.

HOUSTON, TEX.—Plans for the first section of the new system have been approved by the board of public works. It is proposed to start the construction this spring.

ROSWELL, N. MEX.—An election will be held Jan. 16 to vote on the proposition of issuing \$30,000 in bonds for constructing a system in this place, also the question of issuing \$25,000 in bonds for erecting a school building will be voted on. B. F. Hammett, Jr., Clk. Trustees.

SEATTLE, WASH.—The board of public works on Dec. 22 received the following bids for constructing a sewer on Jackson St., between Occidental Ave. and Fifth Ave., south, both of which were rejected as being in excess to City Engineer Thomson's estimate, which was \$2,750: J. A. Bailey, \$5,708; T. Ryan, \$5,976.

SANTA MONICA, CAL.—Bids are asked until Jan. 15 for constructing about 2,000 ft. of 12-in. salt glazed pipe sewer for main sewer No. 3, about 3,800 ft. of 14 to 10-in. pipe sewer for main sewer No. 4, with 15 manholes, and 2 flush tanks; estimated cost \$5,800. Tbos H. James, Town Engr. and Supt. Sts.

FREDERICTON, N. B.—It is reported that a system for this place would cost about \$70,000.

UXBRIDGE, ENG.—Bids are asked until Jan. 22 for constructing about 13 miles of stoneware and cast-iron pipe sewers, etc. Deposit for forms, \$5.00. J. Austic, Engr., Ealing; Chas. Woodbridge, Clk.

GARBAGE DISPOSAL—STREET CLEANING

BROOKLYN, N. Y.—The board has authorized the issue of \$100,000 for the purchase of a street cleaning plant, and \$125,000 for a filter plant.

JOHNSTOWN, PA.—Plans are being prepared for alterations to the garbage plant, to cost about \$10,000.

PEORIA, ILL.—It is stated that a crematory will shortly be built.

STREETS AND ROADS.

DANVERS, MASS.—The question of building a road 7,200 ft. long in Danvers and Topsfield is being discussed.

BRIDGEPORT, CONN.—We are informed that no contracts will be let until March 1; about \$25,000 worth of work is talked of.

BUFFALO, N. Y.—The aldermen are discussing the question of paving Curtiss St., at a cost of about \$45,000.

BUFFALO, N. Y.—Bids are asked until Jan. 10 for repaving Elliott and Jefferson Sts. R. G. Parsons, Secy.

MIDDLETOWN, N. Y.—The Mayor has signed a resolution for the opening of Centre St., to cost about \$30,000.

NEW YORK, N. Y.—Bids are asked by the Department of Highways, 21 Park Row, until Jan. 11, for paving 11 streets with asphalt and one with granite, and for repaving the asphalt on several streets in Brooklyn.—The board has appropriated \$1,094,000 for the Concourse from E. 161st St. to Moshou Parkway, and \$305,000 for completing the Harlem River Speedway.

SYRACUSE, N. Y.—The following bids have been received for paving McBride St.: J. W. Bustin, New York Brick & Paving Co., brick, \$10,725; J. W. Bustin, havel edge brick, \$11,019 (accepted); Syracuse Improvement Co., Trinidad asphalt, \$13,360; Asphaltina Construction Co., asphaltina, \$14,108.

NEWARK, N. J.—The following bids have been received by the Park Commissioner for grading the playstead and circuit drive at Lake Weequeub reservation, township of Clinton: Joseph Seme, Newark, \$44,345; F. C. O'Reilly, Orange, \$57,980; Harrison Construction Co., Newark, \$58,320; John F. Shanley, Newark, \$81,850; Drake & Stratton, New York, \$107,860.

PHILADELPHIA, PA.—Chief Brooks of the Highway Bureau has received bids for about \$600,000 worth of street improvements.

ROANOKE, VA.—Bids are asked until Jan. 6 for certain street improvements. J. H. Wingate, Cy. Engr.

LAKE CITY, FLA.—R. F. Rogers, Mayor, writes that the contract for sand and rock paving has been let to E. L. Snowden. The city has no sewerage system.

MEMPHIS, TENN.—Bids are asked until Jan. 4 for road work for 1900. D. P. Prescott, Secy. Turnpike Com.

CINCINNATI, O.—It is stated that the board has approved the paving of Eastern Ave. with asphalt, and Reading road with granite. It also let the contract for improving Elberon Ave., to Ruebel Bros., at \$13,960.

CLEVELAND, O.—Bids are asked until Jan. 18 for paving with brick and improving 14 streets. W. P. Rice, Dir. Pub. Wks.—It is stated that the Park Board will build a speedway connecting Woodland Hills and Shaker Parks.

GALLIPOLIS, O.—The board has let the contract for paving Vine St. with brick to Juniper & Welch, Nelsonville, O., at \$16,221.

PORTSMOUTH, O.—The council has authorized the paving of Front St., from Scioto to Chillicothe St.

CHAGRIN FALLS, O.—The council will meet Jan. 5 to discuss the paving of five streets. Councilman H. A. Sheffield.

TOLEDO, O.—Bids are asked until Jan. 29 for improving several streets. W. O. Holst, Cy. Clk.

URBANA, O.—The council has passed a resolution to sidewalk both sides of South Main St. W. E. Berry, Cy. Clk.

KANSAS CITY, MO.—The commissioners have decided to re-advertise for bids for paving Benton Boulevard.—The alley between the city hall and the market house will be asphalted.

OKLAHOMA CITY, OKLA. TER.—It is said that extensive street improvements for 1900 are being discussed.

DENVER, COLO.—The board has approved the paving of Champa St., to cost \$82,765.

ROCK SPRINGS, WYO.—It is stated that a road will be built to Verual, Utah; also a \$3,500 bridge across Greu River.

SPOKANE, WASH.—Mayor J. M. Comstock writes us that contracts for asphalt for four streets have been let. Plans are being prepared for asphalt for two avenues; total cost about \$50,000. O. A. Welle, Cy. Engr.

OTTAWA, ONT.—Alderman Rapbael has prepared an estimate of improvements in St. George's Ward. He places the cost at about \$210,000 for asphalt and macadam.

WINNIPEG, MAN.—The board has recommended the improvement of several streets.

MANUFACTURING PLANTS.

SHOWHIEGAN, ME.—We are informed that nothing definite has been done towards erecting an addition to the Marston Woolen Mills at this place.

NEW YORK, N. Y.—Fire destroyed the factory of the William Campbell Wall Paper Co., between 24th and 25th Sts., on the East River; reported loss, \$750,000.

BRADDOCK, PA.—The new plant of the Bradock Machine & Mfg. Co. will consist of foundry, machine shop, charging and cleaning rooms, arranged for 30, 20 and 15-ton cranes. The building will be 160 x 375 ft., steel frame with tile walls and slate roof. The general contract has been awarded to the Pittsburg Bridge Co. J. C. Munn, Secy, and Gen Mgr.

PHILADELPHIA, PA.—A. Whitehead, contractor, has submitted plans drawn by the Geo. M. Newhall Engineering Co., for two spike mills to be erected for Davis Bros., to the bureau of building inspection for approval. The structures will be 77.2 x 153.2 ft. and 77.2 x 180.6 ft., and will be located on Wissahickon Ave., near the Peusylvania R. R.

PITTSBURG, PA.—The contract for the extension to the Carbon Steel Co.'s plant has been awarded to Wm. B. Schaife & Sons, Pittsburg, Pa.—It is reported that the Oliver Iron & Steel Co. will erect a steel building on the Monongahela River, to be used as a machine shop; estimated cost, \$15,000.—The American Pipe & Foundry Co., has been organized with \$250,000 capital stock. The company will remodel the Berlin Iron & Lead Works and the Wm. G. Price Co.'s plants at Jeannette, for the manufacture of soil and plumbers' pipe.

POTTSTOWN, PA.—Local papers state that the Warwick Iron & Steel Co., Dec. 26, awarded the contract for foundations of large draft stack, engine house and engine, and pier and abutments for the steel shipping pier, 125 ft. in length, for a furnace, to Willauer & Missimer, of Pottstown.—It is reported that \$20,000 has been raised by the city authorities toward the establishment of a large steel plant, which will be constructed by a private company.

SCRANTON, PA.—The Lackawanna Iron & Steel Co. has increased its capital stock from \$3,750,000 to \$25,000,000.

NEWPORT NEWS, VA.—Otto Newkirch, Secy. and Treas., writes us that the contracts for the buildings and the equipment of the Leo Schulz Brewing Co.'s plant, will be let in about 30 days.

CHARLOTTE, N. C.—The Florence Cotton Mills, Forest City, are reported to be considering the advisability of building a \$1,000,000 mill near this place.

RALEIGH, N. C.—The Melrose Knitting Mill Co. has been incorporated by J. S. Wynne, F. T. Ward, E. C. Smith and others, with \$25,000 capital stock. A plant will be erected in this city.

ANNISTON, ALA.—Local papers state that the Anniston Knitting Mill will have its capacity doubled this spring.

BRISTOL, TENN.—J. E. Parrish, Lynchburg, Va., has received the contract for erecting the Columbian Paper Co.'s pulp plant, which will cost about \$20,000.

HUMBOLDT, TENN.—We are informed that the entire plant of machinery and equipments will probably be contracted for within 60 days, for the proposed cotton mill in this town, which will cost about \$100,000. H. C. Burnett, Pacific Bldg., Washington, D. C.

STUEBENVILLE, O.—Local papers say that the American Axe & Tool Co., New York, will build a factory at Steubenville, with a view of concentrating all of their plants there in the near future.

KOKOMO, IND.—We are informed that bids will be received about Jan. 12 for the building for the Globe Steel Range Co.'s plant, manufacturers of steel ranges and stoves. Estimated cost, \$6,000. The company will also need engines and electric fittings.

DETROIT, MICH.—The American Car & Foundry Co. has received bids for an addition to its works at this place, 86 x 735 ft., in which it proposes to manufacture steel cars. Geo. J. King, Engr.

VALENTINE, NEB.—C. H. Cornell, who owns water power at Valentine, capable of developing about 10,000 HP, is negotiating with J. A. Ogden, of Philadelphia, Pa., for the erection of an ore-treating plant.

STOCKTON, CAL.—It is reported that the California Fruit Cannery Association will erect a plant, to cost \$30,000 on the site recently purchased.

VICTORIA (TAMAULIPAS), MEX.—Reports state that the Barber Asphalt Paving Co., 11 Broadway, New York, has purchased all the principal asphalt deposits in Mexico. The most extensive and best grade asphalt deposit is located near Soto La Marina River, Tamaulipas, for which the Barber company paid \$300,000 gold. These deposits have been worked for several years in a small way by the American company. Other deposits purchased by the Barber company are located in the State of Vera Cruz, south of Tampico, and are said to have brought \$200,000 gold. The Barber company proposes to establish extensive asphaltum plants in Mexico, and, it is stated, will make a total investment of about \$1,000,000 in the enterprise.

CUBA.—Press reports state that H. Kelly, Contr. Engr., 71 Broad St., N. Y., has contracted to erect a sugar plant at Baues, Cuba, by the Dumroy Bros. of San Domingo, at a cost of about \$700,000; and capacity about 1,200 tons of cane daily. Messrs. Kelly and Farrell have been renewing and improving the plants on their own sugar plantations at San Domingo, and the Ansouta factory. The Pioneer Iron Works, William St., Brooklyn, N. Y., is to supply the triple effects for evaporating apparatus, and the boilers are being built by the Klonbrock Boiler Co. Engineers and manufacturers are estimating on five new factories at Gibara, Cuba. The reason for the present activity among manufacturers of sugar plants is stated to be the result of the section of President McKinley's message regarding modification of the Puerto Rican and Cuban duties.

MARIPOSA, RUSSIA.—We are informed that contracts for the construction, etc., for the Nicopol-Mariopole Mining & Metallurgical Co.'s plants were let some time since. There is some little work being carried on most of the time for this company, the items of which are quite unimportant. Julia Kennedy, Engr., 323 Fourth Ave., Pittsburg, Pa.

ST. PETERSBURG, RUSSIA.—It is stated that Leopold Erbe, 5 Spasskaja Uleza, St. Petersburg, wants catalogues for ice-making machines, refrigerators, etc.

TANIKAWA, JAPAN.—It is reported that Yagoro Ishikawa, retired naval paymaster, Tokyo, is forming a joint stock company, to build a shipyard at this place.

GAS PLANTS.

PALMYRA, N. J.—Bids are asked by the River Shore Gas Co., Rivington, until Jan. 10 for laying about four miles of gas mains.

RIVERTON, N. J.—Bids are asked until Jan. 5 for laying about three miles of gas mains for the River Shore Gas Co. H. Sheldou, 112 N. Broad St., Philadelphia, Pa.

KALAMAZOO, MICH.—It is stated that the Kalamazoo Gas Co. has been reorganized with a capital of \$300,000.

BUTTE, MONT.—The Butte Gas Co. will spend about \$20,000 this year in extending its mains.

MISCELLANEOUS CONTRACTS.

PARK.—St. Paul, Minn.—The question of building a park at Lake Phelan is being discussed.

FIRE DEPARTMENT.—Cleveland, O.—The council has been asked for \$250,000 for improving the fire department.

TELEPHONE.—Greensboro, N. C.—The council has granted a franchise to the American Telephone & Telegraph Co.

PIER.—Baiting Hollow (L. I.), N. Y.—It is stated that the citizens will erect a pier. Chas. and Eugene Warner are interested.

PARK.—Reading, Pa.—The city has received a gift of 12 1/2 acres of land for a park next to the City Park. G. F. Baer, Pres. Bd.

PARKS.—Pittsburg, Pa.—Director E. M. Bigelow has asked for an appropriation of \$1,622,421 for the department of parks for 1900.

BREAKWATER.—New York, N. Y.—The Sinking Fund Commission has decided to build a new breakwater on the south side of Pier A, N. R.

HARBOR WORK.—Osaka, Japan.—A loan of about \$800,000 is being negotiated according to reports, for building a harbor at this place.

PARK.—New York, N. Y.—The legislature will be asked to appropriate \$1,000,000 for a park at Eldridge, Delancey and Allen Sts. J. B. Reynolds is interested.

CIVIL ENGINEER.—St. Catharines, Ont.—This city is advertising for an engineer to take charge of the department of public works. J. Rollinson, Cy. Clk.

IMPROVEMENT BONDS.—Boston, Mass.—Bids are asked until Jan. 5 for the purchase of \$2,175,000 of 3 1/2% improvement bonds. A. T. Turner, Cy. Treas.

TELEPHONE.—Canal Dover, O.—The Independent Telephone Co., Cleveland, O., is reported to have been granted a franchise. Ex-Mayor R. E. McKisson, Cleveland.

FLOATING DOCK.—Nome City, Alaska.—G. N. Wright, postmaster of Nome City, is reported to have secured \$150,000 for building his proposed floating dock.

PARK.—Newark, N. J.—The Essex Park Commissioner has acquired 128 acres of the Campbell Estate, near the South Mountain reservation, for park purposes.

WHARF REPAIRS.—Savannah, Ga.—Bids are asked until Jan. 5 for repairing wharf at the quarantine station. W. J. Linley, Acting Assistant Surgeon, M. H. S.

PUBLIC WORKS.—Valparaiso, Chili.—Press reports state that the government propose to spend about \$2,000,000 on public works. Address the Minister of Public Works.

MINING.—Chevillon, France.—The Compagnie des Forges et Acleries de la Marine, Paris, has been granted a concession to develop the deposits of iron ore at Chevillon.

NAVAL SUPPLIES.—Norfolk, Va.—Bids are asked until Jan. 9 for furnishing a quantity of bolts, nuts, rivets, etc., at the navy yard. A. S. Kenny, Paymaster-General, U. S. N., Washington, D. C.

HARBOR IMPROVEMENTS.—San Francisco, Cal.—The Governor has been petitioned to call an extra session of the legislature to provide more and better docking facilities.

DRY-DOCK.—Theodosia (Crimea), Russia.—Press reports state that the Russian government is desirous of having a company build a dry-dock at a point on the Black Sea.

EXTENDING QUAY.—Oban, Scotland.—Bids are asked until Jan. 20 for extending the railway quay, dredging the hay, etc. T. M. Barr, Engr. Northern Div., Caledonian Ry., Perth.

TELEPHONE.—Caddo, Ind. Ter.—The Choctaw Telephone Co. will extend its line to Jackson, Mayhew, Bennington, Blue and elsewhere in the spring, according to reports. J. M. Hodges.

TELEPHONE.—Chicago, Ill.—It is stated that the American Electric Telephone Co., Kellogg Switchboard Co., Stromberg-Carlson Telephone Mfg. Co. and Victor Telephone Mfg. Co. will combine.

CANAL IMPROVEMENTS.—Port Colborne, Ont.—Bids are asked until Jan. 26 for improvements at the upper entrance to Welland Canal, Port Colborne. L. K. Jones, Secy. Dept. Ry. and Canals, Ottawa.

MINING.—Minas, Brazil.—It is stated that Herbert K. Scott, Engr. Minas, Minas, Brazil, is visiting in the United States, and that while there he proposes to purchase certain machinery for the mines.

DAM.—Topeka, Kan.—It is stated that Wm. Tweedale, of Topeka, has plans for a concrete dam 12 ft. high, 900 ft. long, in the Kan River, using Silver Lake as a reservoir, to supply power to mills in Topeka.

DOCKS.—New York, N. Y.—The Dock Board will, it is stated, purchase from the New York, New Haven & Hartford R. R. Co. for about \$65,000 the ground on the East River between Catharine and Market Sts. for docks.

BREAKWATER.—Bar Harbor, Me.—Bids are asked until Jan. 30 for placing stone in breakwater near Bar Harbor, Me., as stated in our advertising columns. Maj. S. W. Roessler, U. S. Engr., 537 Congress St., Portland, Me.

MOTOR CARRIAGES.—Stockholm, Sweden.—U. S. Consul Robt. S. S. Bergh, Gothenburg, Sweden, reports that the cab owners of Stockholm, Gothenburg and Malmo are considering the question of purchasing motor carriages.

PIER EXTENSION.—South Haven, Mich.—Bids are asked until February for the extension and repairs of pier at South Haven, as stated in our advertising columns. Capt. Chester Harding, U. S. Engr., 57 Park St., Grand Rapids, Mich.

PIER.—Port Orchard, Wash.—Plans are being completed for a steel pier 550 ft. long for the dry dock at the naval station. A storehouse for heavy ordnance, to cost about \$80,000, and a coal storehouse will be built in the spring. Capt. J. B. Coghlan, U. S. N.

RAILWAY EQUIPMENT.—Havre, France.—Reports state that estimates are wanted by the Central Phosphate Co., Mount Pleasant, Tenn., for furnishing two locomotives of about 17,500 tons each, gage 23 1/2 ins., to be delivered at Havre or Dunkirk, France.

MINING.—Columbia, S. A.—The Anglo-Colombian Exploration Co. has been incorporated in Delaware, with a capital stock of \$5,000,000, to develop mining properties in Colombia. Guggenheimer, Untermyer & Marshall, 30 Broad St., New York, are the lawyers for the company.

STEAMSHIP LINE.—New York, N. Y.—F. Leyland & Co., Liverpool, England, will establish a freight and passenger service between New York and Liverpool, running five steamers from the Boston line until new ones are built. P. W. Gibson, Gen. Mgr., Battery Park Bldg.

CONDENSING PLANTS.—Tunbridge Wells, Eng.—Bids are asked until Jan. 15 for a surface condensing plant capable of dealing with 30,000 lbs. of steam per hour. Deposit for specifications, £2 2s. W. C. Cripps, Town Clk. C. H. F. Barrett, Vestry Clk., Pancras Road, London, N. W., wants bids until Jan. 9 for furnishing a condensing plant. Deposit, £1.

FIRE APPARATUS.—Guayaquil, Ecuador.—Vice-Consul Gen. Reiberg reports that the question of purchasing modern fire apparatus is being considered. A fire in this city on Nov. 27 destroyed property valued at about \$1,000,000. The buildings destroyed included the theatre, the San Jose Church, the San Vincente College and the main office of the custom house, besides a number of residences.

SEA CABLES.—Iceland.—V. E. Nelson, U. S. Consul, Bergen, Sweden, reports that the question of laying a cable from the Spretland Island, Scotland, to Iceland, 403 miles, is being considered, and a proposition to do the work has been submitted by the Northern Telegraph Co., of Copenhagen, Denmark; estimated cost, \$550,000. Another company has offered to lay a cable between Iceland and the Orkney Islands for about \$850,000.

DRAINAGE DITCH.—Champaign, Ill.—Bids are asked until Jan. 24 for excavating a ditch 6,214 ft. long in the Long Point Slough District, requiring the removal of 8,637 yds. of earth, and for furnishing about 10,514 ft. of 24-in., 6,800 ft. of 22-in., 5,000 ft. of 20-in., 4,600 ft. of 18-in. and 3,000 ft. of 16-in. drain tile. M. H. Keefe, Longview, Ill.; J. Watts, Fairland, Ill., Comrs.; J. L. Hay, Attorney for Comrs., Champaign.

CANAL.—Panama, Colombia.—The Panama Canal Co. of America has been incorporated in New Jersey, U. S. A., with a capital of \$30,000,000, which may be increased to \$130,000,000. The company proposes to acquire and complete the ship canal across the Isthmus of Panama begun by the New Panama Canal Co. of France. It will cost about \$100,000,000 to complete the canal. Work is to be begun at once and pushed to completion. The canal will permit the passage of the largest vessels. Among those interested are August Belmont & Co., Bankers; ex-Gov. Levi P. Morton; J. Edward Simmons, Pres. Fourth National Bank; W. P. Chapman, 310 W. 45th St., all of New York.

MINING.—China.—J. G. H. Glass, 1 Courtfield Gardens, Castle Hill, Ealing St., London, Eng., has submitted a report regarding the proposed development of the coal fields and iron ore deposits in the Shansi district, China, for the Peking Syndicate, Ltd., Peking, China. The main object of the expedition sent out by the syndicate was to ascertain if the coal fields and iron ore deposits were as extensive and valuable as represented; to see if it were feasible to construct railways to connect the mines with certain rivers, and to make surveys for such lines, etc., as may be necessary for the development of the mines. To construct a line from the coal fields at North Honan with Tientsin, a distance of 80 miles, will cost, including rolling stock, about \$2,400,000, and for the lines, to be 650 miles long, the total cost will be about \$25,000,000.

TUNNELS AND BRIDGES.—New York, N. Y.—The following is a list of tunnels and bridges either building or that are under consideration: Bridge, from Delancey St., Manhattan, to South 5th St., Williamsburgh; pier foundations completed, and bids received for cables, Bridge, from Peck Slip, Manhattan, to Washington St., Brooklyn; plans have been approved, and \$100,000 voted for surveys. Bridge, from about 65th St. to Ravenswood, L. I., crossing Blackwell's Island; plans have been approved and \$100,000 voted for surveys; estimated cost of this and the above one is \$28,382,100. Tunnel, from West St. along and below Canal, Sullivan and Grand Sts. to and below the East River to Kent Ave., and under that street to Wallabout Market; projected; length, 3 1/2 miles; estimated cost, \$7,750,000 complete, with stations. Tunnel, crossing 14th St., Manhattan, from the North River to and under the East River to North 9th St., Brooklyn; projected; estimated cost, \$4,850,000. Tunnel, crossing 57th St., Manhattan, under Blackwell's Island to Jackson Ave., L. I. City, connecting with the Long Island R. R. lines; projected; estimated cost, \$4,700,000. Tunnel, from 11th Ave. under 125th St., Harlem River, Sunken Meadow and East River to Astoria; projected; estimated cost, \$3,250,000. Tunnel, from foot of Whitehall St. to Hamilton Ave., Brooklyn; projected; estimated cost, \$3,000,000; extension possible through Bay Ridge and Fort Hamilton and across the Bay to Clifton, S. I. Two bridges and a

tunnel, across the North River; one bridge projected at 23d St., the other at 50th St. or 65th St.; the tunnel is now partially completed, and a reorganization of the promoting company is going forward.

CONTRACT PRICES.

STREET SWEEPING.—Indianapolis, Ind.—The following bids were received by the board of works Dec. 27, 1899, for sweeping and cleaning the improved streets of the city under the specification adopted by the board: (1) being for 1900, (2) for 1901, and (3) gross for 1900: C. H. Stuckmeyer, (1) 15 1/2 cts., (2) 20 cts., (3) \$32,000; Shover & Austin, (1) 2 1/2 cts., (2) 2 1/2 cts., (3) \$37,500; Capital Sweeping Co., (1) 21 cts., (2) 2 1/2 cts., (3) \$50,000; Union Contracting Co., (1) 2 1/2 cts., (2) 2 1/2 cts., (3) \$61,000. As the amount appropriated for this work was \$50,000, it is quite probable that all bids will be rejected.

PUBLIC LIGHTING.—New York, N. Y.—The commissioner of lighting, etc., received bids on Dec. 22 for lighting the public buildings, parks and thoroughfares during 1900. The Edison Electric Illuminating Co. was the only bidder for the electric lighting in this borough. They bid 35 cents per night for each 1,200-candle power lamp, providing the total was less than 4,000, and 15 cents per 600-candle power lamp for 4,000 lamps or less. For over 4,000 lamps the price for the 1,200-candle power is 34 cents and for the 600-candle power 17 cents. The New York & New Jersey Globe Gas Light Co., which has been supplying the naphtha lamps in the parks, bid \$22 for this lighting for 1900, while the Welsbach St. Lighting Co. of America, which has the present contract, bid \$30 for single burner Welsbach lamps and \$47 for double burners, also making a figure of \$13 for supplying the old-fashioned lamps with single burner Welsbach appliances and \$25 for the double burner appliances. The Welsbach Lighting Co.'s price also includes the maintenance of these lamps.

The bids presented by the gas companies in Manhattan for lighting the public buildings were higher than the present prices while the bids for lighting the streets were about the same.

ENGINEERING MATERIAL PRICES

TRACK MATERIAL.—Chicago—Steel hsh-plates, 2.25 to 2.50 cts.; spikes, 2.65 to 2.75 cts.; track bolts, 3.95 to 4 cts. Pittsburg—Steel hsh-plates, 2.50 to 2.60 cts.; spikes, 2.50 cts.; track bolts, 2.60 cts.

RAILS, STEEL.—New York, new, \$35; old iron, \$23.50 to \$24; old steel, \$18.50 to \$20. Chicago, new, \$35 to \$37; old iron, \$25 to \$26; old steel, \$19 to \$20. Pittsburg, new, \$35 to \$37; old iron, \$26 to \$27; old steel, \$21 to \$22.

STRUCTURAL STEEL.—New York—Beams, 2.40 to 2.50 cts.; channels, 2.40 to 2.50 cts.; tees, 2.40 to 2.45 cts.; angles, 2.40 to 2.45 cts. Chicago—Beams, 2.40 cts.; channels, 2.40 cts.; tees, 2.45 cts.; angles, 2.50 cts. Pittsburg—Beams, 2.25 to 2.35 cts.; channels, 2.30 cts.; tees, 2.30 to 2.50 cts.; angles, 2.25 to 2.50 cts.; zees, 2.25 cts.

PLATES AND SHEETS.—New York—Universal mill plates, 2.65 to 2.75 cts.; tank, 2.45 to 2.60 cts.; shell, 2.65 to 2.75 cts.; flange, 3.00 to 3.10 cts.; firebox, 3.15 to 3.30 cts. Chicago—Universal mill plates, 2.60 to 2.70 cts.; tank, 2.90 to 3.05 cts.; shell, 3.10 cts.; flange, 6.15 to 3.25 cts.; firebox, 4.00 to 6.00 cts.; sheets, 3.00 to 3.20 cts. Pittsburg—Universal mill plates, 2.50 to 2.75 cts.; tank, 2.40 to 2.60 cts.; shell, 2.60 to 2.70 cts.; flange, 2.70 to 2.80 cts.; sheets, 2.95 to 3.00 cts.

MERCHANT STEEL.—Machinery, per lb., 2.95 to 3.05 cts.

IRON.—Pig iron: New York—No. 1, \$25; No. 2, \$23.50. Chicago—No. 1, \$22 to \$23; No. 2, \$23 to \$24. Pittsburg—No. 1, \$24 to \$25; No. 2, \$23. Bar iron: Pittsburg—2.15 cts.

LUMBER.—New York: Hemlock timber, 20 ft. and under, per M, \$16.00. Piling, Eastern spruce, 35 to 40 ft., 30 to 40% 12-in. butts, 5 cts. Yellow pine, random cargoes, \$23 to \$26. North Carolina pine, \$3.00 to \$4.00 advance over Norfolk rates. San Francisco: Oregon pine, per M, \$16 to \$18. Redwood, per M, \$20 to \$22. Redwood tank stock, up to 10 ft., \$17.

GENERAL MATERIALS.—Lead, New York, 4.70 to 4.75 cts. Soler, per lb., 1 1/2 to 15 cts. Spelter, per lb., 4.60 cts. Copper ingots, 16.50 cts.

INDUSTRIAL NOTES.

THE CONTINENTAL FILTER CO., 35 Wall St., New York, has opened branch offices in the Marquette Building, Chicago.

THE EXETER MACHINE WORKS, Pittston, Pa., has opened a branch office in the Chemical Building, St. Louis. Its New York office is at 32 Broadway.

THE NATIONAL CONDUIT & CABLE CO., Times Building, New York, has a contract to furnish electric feeders for the tramway at Glasgow. It is reported that this company bid \$151,000, while the lowest English bid was \$161,000.

THE WARWICK IRON & STEEL CO., Pottstown, Pa., is reported to have awarded a contract for the foundation of a large draft stack, engine house and engine, and plans and abutments for a steel shipping pier 125 ft. in length, for a furnace, to Willauer & Missimer, of Pottstown.

THE HAZELTON BOILER CO. has removed to its new works, on the main line of the Erie R. R. at Rutherford, N. J., which have been erected to meet the requirements of the increased business this season. The New York offices and headquarters are now at 120 Liberty St., New York city.

THE HOFFMAN ENGINEERING & CONTRACTING CO., Harrison Building, Philadelphia, has been organized to continue the engineering and general contracting business heretofore carried on by J. W. Hoffman & Co. Mr. J. W. Hoffman continues as president and general manager of the new company.

WM. HINGSTON & SON, Buffalo, N. Y., have a contract for two dredges, reported as to cost \$120,000 each, and ten scows, to cost \$25,000 each, for Hughes Bros. & Bangs, who have large government contracts on the Atlantic coast. The Osgood Dredge Co., Albany, will build the machinery for operating the boats.

ERNEST LAW & CO., Harrison Building, Philadelphia, is the name under which Mr. Ernest Law, formerly a partner in J. W. Hoffman & Co., will continue the general iron and steel, coal and coke and kindred interests of that firm. Ernest Law & Co. assume all contracts and outstanding obligations of the old firm.

THE CHARLES MILLAR & SON CO., Utica, N. Y., has been incorporated, with a capital stock of \$200,000, to continue the business started by Mr. Chas. Millar in 1861 and continued later under the firm name of Chas. Millar & Son. The officers of the company are: Pres. and Treas., Henry W. Millar; Vice-Pres., Charles S. Symonds, Secy., John A. Kernan; Mgr., Levi H. Burdette; Asst. Treas., Alfred H. Dobson.

WM. B. SCAIFE & SONS, Pittsburg, announce that the new Empire building, Pittsburg, will contain two Scaife water filters having a combined capacity of 3,500 gallons an hour. The arrangement is designed so that either filter can be shut off from the main supply pipe while being cleaned, the other filter meanwhile furnishing the filtered water for the entire building. Wm. B. Scaife & Sons are the manufacturers of these filters, and they contain no chemicals or coagulant of any description.

THE THOMSON METER CO., Brooklyn, N. Y., announces that at 3 o'clock p. m., Dec. 28, it stamped and braced the event by giving a lunch at the factory to its officers and employees. It also distributed prizes amounting to \$150 to those guessing nearest the date of stamping meter No. 150,000, which meter was made at the time the company stamped meter No. 100,000, two years and four months before (Aug. 24, 1897). The company sold and delivered 2,644 meters in the month of December, 2,544 meters in the year 1899, and 139,151 meters in nine years, an average of 15,461 meters a year.

NEW COMPANIES.—The Chemical & Electrical Ore Reducing Co., Charleston, S. C.; \$2,000,000; J. E. Chilton, J. E. Scaggs.

Automatic Machinery Co., New York, N. Y.; \$500,000; C. H. Cochrane, John J. McBride.

Interstate Telephone Construction Co., New York, N. Y.; \$1,000,000; Clarence M. Smith, New York; James Virgin, Dover, Del.

John King Metal Co., Garwood, N. J.; \$125,000; Wm. G. Woolfolk, Jr., New York; Thomas M. Day, Jr., Plainfield, American Duplex Telephone Co.; Boston, Mass.; \$1,000,000; P. B. Mansfield, E. B. Robinson.

Boston Reduction Co.; Concord, N. H.; \$500,000; E. C. Ketchum, C. H. Burligh.

Rice Gear Co., Portland, Me.; \$250,000; Chas. D. Rice, Hartford, Conn.; A. P. Day, Hartford, Conn.

Eastern Transportation Co., Portland, Me.; \$100,000; C. H. Gray, Jackson, N. H.; Geo. P. Thomas, Portland, Me.

The Headlight Copper Mining Co., Cheyenne, Ind. Ter.; \$1,000,000; Philip Lee, A. F. Priest.

Chicago-Cartierville Coal Co., Chicago, \$100,000; James Pease, of Chicago; E. E. Mitchell.

Electrical Construction & Maintenance Co. of America, 421 Market St., Camden, N. J.; \$100,000; W. H. Stirling, Irwin Mfg. Co., 215 East State St., Trenton, N. J.; \$100,000; Russell M. Irwin, Nashville, Tenn.; Walter F. Smith.

High Metalic Air Brake Hose Co.—New Jersey Registration & Trust Co.'s Bldg., East Orange, N. J.; \$1,000,000; James S. Garvin, Oscar L. Leffert.

Excelsior Zinc Mining, Milling & Smelting Co.—Corporation Trust Co.'s Bldg., Jersey City; \$500,000; Rudolph Schalk, Rudolph Schalk.

United States Iron Co.—The Corporation Trust Co. Bldg., Jersey City; \$1,000,000; W. H. Brearley, C. W. Perkins.

Havana Traction Co.—Corporation Trust Co. Bldg., Jersey City; \$10,000,000; R. A. C. Smith, Wm. Barbour.

Federal Telephone Co.—New Jersey Registration & Trust Co. Bldg., East Orange, N. J.; \$10,000,000; Fred W. Garvin, Frederick Smith.

Colorado, Finance & Construction Co., Denver, Colo.; \$150,000; J. C. Osgood, A. C. Cass, Denver.

St. Louis, Alton & Carondelet R. R. Co., Springfield, Ill.; \$100,000; Royal J. Whitney, Alton; Edward C. Damerson, Marlborough Automobile & Carriage Co., Marlboro, Me.; \$100,000; O. P. Walker, Marlboro; C. F. Choate, Southborough, Mass.

Great Western Pneumatic Tool Co., Denver, Colo.; \$250,000; Lon D. Sweet, E. W. Bassick.

Hooper Knitting Co., Lowell, Mass.; \$100,000; G. L. Hooper, pres.; H. P. Bates, treas.

Chaquette Electric Dredge Co.—Corporation Trust Co. Bldg., Jersey City, N. J.; \$1,000,000; B. Block, Michael J. Fenton.

Millington Pump Co., Memphis, Tenn.; \$30,000; C. W. Metcalf, J. H. Malone, Memphis.

New York Air Compressor Co.—New Jersey Registration & Trust Co. Bldg., East Orange, N. J.; \$100,000; John W. Duntley, Thomas Aldcorn.

Multiplex Phonograph Co., Newark, N. J.; \$150,000; J. A. Gray, New York; F. B. Wechler, Passaic Bridge, N. J.

Campbell Construction Co., Kingston, N. Y.; \$20,000; J. J. Campbell, J. T. Cloonan.

Sterling Oil & Development Co., San Francisco, Cal.; \$250,000, paid in \$150,000; W. S. Gage, J. A. Bunting.

National Tin Plate Co.; Wheeling, W. Va.; \$3,000,000; N. E. Whitaker, Wheeling; Wm. Rodgers, Lockburg, Pa.

Anglo-American Rapid Vehicle Co., Dover, Del.; \$75,000, paid in \$5,000; E. Martin, New York, J. Nirdin.

Red Star Touring & Wrecking Co., Kittery, Me.; \$200,000; wrecking business; C. F. Lyman, Pres., Boston; W. C. Appleton, Treas., Cohasset, Mass.

The Royal Steel & Iron Co., Portland, Me.; \$5,000,000; H. D. Sawyer, Pres., Boston; W. A. Collins, Treas.

Queen Oil & Mining Co., Visalia, Cal.; \$100,000; D. G. Overall, E. D. Farrow.

Mail Delivery Notice.

Special efforts are made to deliver our paper to its readers each week at the earliest possible moment. All papers for Boston, Philadelphia and Washington are usually in the New York post-office by midnight Wednesday evening; all Brooklyn and New York city papers by 3 o'clock—in ample time for the first delivery Thursday morning. The entire edition, including foreign copies, is in the mail soon after 6 o'clock Thursday morning. If your paper is not received promptly we advise that you make a complaint to your local post-office officials.

If you want additional help, or to procure second-hand tools, machinery, plant, etc.

If you have anything to sell or to rent, we suggest that you advertise for a few weeks on

If you want bids for doing any work, or for furnishing supplies, try an advertise-

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