Supplement-March 23, 1899.

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PERSONAL

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

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

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

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

Mr. W. D. Lovell has aucceeded the firm of Creliin & Mr. w. D. Loven has advected the firm of orefin at Loveli, civil and consulting engineers, of Des Moines, Ia., the firm having been dissolved by mutual consent.

Mr. F. W. Wblttridge, of New York, has been elected Mr. F. W. Wolchweiner, Akron & Columbua Ry. Co., President of the Cleveland, Akron & Columbua Ry. Co., to fill the vscancy caused by the death of Mr. Calvin S.

Mr. Pierre O. Keilholtz has been appointed Chief En-Mr. Pierre O. Reinholtz has beech appointed and mechanical engi-neering department of the United Railways & Electric Co., oi Baltimore, Md.

Mr. R. J. dowen, o Wausau, Wis., has been appointed Chief Englader of the Wisconsin & Michigan R. R., with headquarters in the Oid Colony Bidg., Chicago, vice Mr. A. M. Kinsinan, resigned.

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

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

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

Prof. Thomas J. See, of Miasouri, recently appointed Professor of Mathematica In the Naval Observatory, has been designated as Chief of the Nautical Almanac, to cceed Prof. Simon Newcomb, who retired on March 12, 1897.

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

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

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

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

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

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

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

Prof. James Dewsr, F. R. S., of London, has had conferred upon him the Hodgking gold medal of the Smith-sonian institute, for his discovery of the process of liquefying air. This medai is about 3 ina. diameter; has a huilion value of about \$300, and was made in Paris. It is the first gold medal given to anyone under the bequest of \$200,000 made to the Smithsonian Institute hy Thos. George Hodgkins; one-half of the income to he expended in aiding and rewarding discoveries of new properties in air. About two years ago \$10,000 from this fund was divided between the principal discovers of the new element argon, and four sliver and eight bronze medala were distributed at the same time.

OBITUARY.

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

M. Jean Baptiate Schastian Krantz, the French engineer, formeriy Director-General of Roads and Bridges, died at Paris, on March 17, aged 82.

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

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

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

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

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

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

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

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

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

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

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

March 28. Secy., Wm. H. Gentler, Cleveland. FRANKLIN INSTITUTE. March 28. "Water Power Electric Plants in the United States," B. C. Washington, Jr. April 12, "Riddles Wrought in Iron and Steel," Paul Krenzpointner, Secy., Wm. H. Wahl, 15 South 7th St., Philadel-Wrought in M. Wahi, 15 South ith St., A. Seey, Wm. H. Wahi, 15 South ith St., American Institute of ELECTRICAL ENGINEERS AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS March 29. Seey., Ralph W. Pope, 26 Cortlandt St., New York city.

- WISCONSIN ENGINEERS' SOCIETY, March 30. Annual meeting, Appleton, Wis. Secy., F. J. Harriman, Appleton Wis.
 CANADIAN SOCIETY OF CIVII, ENGINEERS.
 March 30. Secy., H. C. McLeod, 112 Mansfield St., Mon-treal. One.

- March 30. Secy., H. C. MCLCOU, A. L. March 30. Secy., H. C. MCLCOU, A. March 30. Secy., E. R. Fish, 2401 N. Spring Ave., St. Louis, Mo.
 CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
 April 3. Secy., C. L. Annan, City Engineer's office, St. Paul, Minn.
 ENGINEERING SOCIETY OF WESTERN NEW YORK.
 April 3. Secy., H. J. March, Library Bidg., Buffalo, N. Y.
- N. Y. WESTERN SOCIETY OF ENGINEERS. April 5. Secy., N. L. Litten, Monadnock Block, Chi-
- April 5. Secy., N. L. Litten, Monadnock Block, Chi-cago, II. AMERICAN SOCIETY OF CIVIL ENGINEERS. April 5. Secy., C. W. Hunt, 220 W. 57th St., New York
- April 5. Secy., C. W. Hunt, 220 W. 57th St., New York city.
 FOUNDRYMEN'S ASSOCIATION (Philadelphia).
 April 5. Secy., Howard Evans, Pier 45, N. Delaware Ave, Philadelphia, Pa.
 BROOKLYN INSTITUTE OF ARTS AND SCIENCES.
 April 7. Secy., Henry I. Weed, Brooklyn Institute of Artis and Sciences, Brooklyn, N. Y.
 TECHNICAL SOCIETY OF THE PACIFIC COAST.
 April 7. Secy., O. Von Geldern, S19 Market St., San Francisco, Cal.
 CHICAGO ELECTRICAL ASSOCIATION.
 April 7. Secy., J. R. Cravath, S25 Monadnock Block, Chicago, III.
 MONTANA SOCIETY OF ENGINEERS.
 April 8. Secy., A. S. Hovey, National Bank Bidg., Hel-ena, Mont.
 Nengina, La.
 ENGINEERS' CLUB OF KANSAS CITY.
 April 10. Secy., J. F. Coleman, 712 Union St., New Or-leans, La.
 ENGINEERS' CLUB OF KANSAS CITY.
 April 10. Secy., F. W. Tuttle, Baird Bidg., Kansas City, Mo.

- MO. DENVER SOCIETY OF CIVIL ENGINEERS. April 11. Secy., W. B. Lawson, 36 Jacobson Bidg., Den-
- Ver, Colo.
 ENGINEERS' CLUB OF PHILADELPHIA.
 April 11. "The Fruits of Sanitary Science," Prof. J. B. Johnson, Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.
 NORTHWEST RAILWAY CLUB.
 April 11. Secy., T. A. Foque, Soo Line, Minneapolls, Minn.
- April 11. Secy., T. A. Foque, Soo Line, Minneapolls, Minn. EW ENGLAND RAILWAY CLUB. April 11. Secy., Edw. L. Janes, P.O. Box 1158, Boston,
- NEW Mass. AMERICAN INSTITUTE OF ARCHITECTS (New York
- AMERICAN INSTITUTE OF ARCHITECTS (New YORK Chapter).
 April 12. Secy., Chas. I. Berg, 10 West 23d St., New York city.
 AMERICAN RAILWAY ASSOCIATION.
 April 12. Detroit, Micb. Secy., W. F. Alien, 24 Park Place.
 BROOKLYN ENGINEERS' CLUB.
 April 13. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.
 ENGINEERING ASSOCIATION OF THE SOUTH.
 April 13. Secy., H. M. Jonea, 1000 Broad St., Nashville, Tenn.

- ENGINEERING ASSOCIATION OF THE SOUTH. April 13. Secy., H. M. Jonea, 1000 Broad St., Nash-ville, Tenn. ST. LOUIS RAILWAY CLUB. April 14. Secy., H. H. Roherts, 511 Commercial Bidg., St. Louis, Mo. WISCONSIN STATE CHEMICAL ASSOCIATION. April 14. Secy., I. Ladoff, 154 Knapp St., Milwaukee, Wis.
- Wis.
 Wis.
 ENGINEERS' CLUB OF COLUMBUS.
 April 15. Secy., H. M. Gates, 12½ North High St., Columnus, O.
 TECHNICAL CLUB OF OMAHA.
 April 17. Secy., J. Harry Lawrie, Omaha, Neb.
 ENGINEERS' CLUB OF MINEAPOLIS.
 April 17. Secy., H. E. Smith, 1620 S. E. 14th St., Minneapolis. Minn.

- April 17. Secy., H. E. Smith, 1620 S. E. 14th St., Min-neapolis, Mina. ENGINEERS' AND ARCHITECTS' CLUB OF LOUIS-
- VILLE. April 17. Secy., Marshall Morris, 16 Norton Bldg., Louisville, Ky., WESTERN RAILWAY CLUB. April 18. Secy., F. M. Whyte, 225 Dearborn St., Chi-
- WESTERN R. Secy., F. M. Whyte, 22, Description of the second seco

- April 18. Secy., R. A. Feasenden, 410 Penn Ave., Futshurg, Pa.
 BOSTON SOCIETY OF CIVIL ENGINEERS.
 April 19. Secy., S. E. Tinkham, City Hail, Boston, Mass.
 WESTERN FOUNDRYMEN'S ASSOCIATION.
 April 19. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.
 ENGINEERS' CLUB OF CINCINNATI.
 April 20. Secy., J. F. Wilson, P.O.Box 333, Cincinnati, O.
 SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
 April 20. Secy., F. A. Charplot, P.O.Box 13, Savannah, Ga.
- April 20. Secy., 4. Ga. NEW YORK RAILROAD CLUB. NEW YORK RAILROAD CLUB. April 20. Secy., W. W. Wheatley, 168 Montague St.,

- NEW YORK RAILROAD CLUB.
 April 20. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.
 ROCHESTER ENGINEERING SOCIETY.
 April 21. Secy., John F. Skinner, Reynolds Library Bidg., Rochester, N. Y.
 THE DETROIT ENGINEERING SOCIETY.
 April 21. Secy., Henry Goldmark, Wayne Co. Savings Bank Bidg., Detroit, Mich.
 AMERICAN SOCIETY OF MECHANICAL ENGINEERS.
 May 9-12. Spring meeting, Washington, D. C. Secy., F. R. Hutton, 12 W. 31st St., New York clty.
- AMERICAN SOCIETY OF MECHANICAL ENGI-NEERS.--The spring meeting of this society will be held at Washington, D. C., May 9-12. F. R. Hutton, Secy.
- ROCHESTER ENGINEERING SOCIETY .- A meeting of this society was held on March 17 and a paper on "The Hiatory of the Steam Engine" was presented by Mr. Edwd. G. Ashley.
- WESTERN SOCIETY OF ENGINEERS.—A special meeting of this society was held at Chicago, Ili., on March 15. Mr. L. A. Ferguson, of the Chicago Edison Co., read a paper, entitled "The Development of a Central Lighting Station."
- THE CIVIL ENGINEERS' CLUB OF CLEVELAND.-At the annual meeting of this club, held March 14, the following officers were elected: Pres., Col. Jared A. Smith, U. S. A.; Vice-Pres., Prof. John W. Langley; Secy., Arthur A. Skeels; Treas., John N. Coffin; Li-brarian, Wm. E. Reed; Directors, Jos. R. Oldham, Wm. Hanlon

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

The annual report showed a slight falling off in mem bership, hut an excellent financial condition. A report on the committee on federation of the Civil Engineers A report Ciuh, with other scientific societies of Cieveland, was adopted. Wm. H. Searles, Secy

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

THE MONTANA SOCIETY OF ENGINEERS.-A meeting of this society was held at Butte, Mont., on March 11. This was the first meeting of the society held outside of Heiena. The paper of the evening, entitled "The Development of Road Building and Street Pave-ments," was by F. W. Blackford. Granite block paving was opneed and wood block and aspheli navements were was opposed and wood hiock and asphalt pavements were ongly favored. The next meeting will he held at Butte in April.

NEW YORK ELECTRICAL SOCIETY.—A meeting of this society will be heid on March 29 at the House of the American Society of Civil Engineers, 220 West 57th St., New York city. Prof. Elihu Thomson will deliver a lecture on "Electricity at High Pressures." Apparatus will be exhibited and experiments performed which will old be interact of the occession. Tickits of admission add to the interest of the occasion. Tickets of admission will be required, which can be obtained by members upon application to the secretary on or before March 25.

George H. Guy, Secy.

NEW ENGLAND RAILWAY CLUB .- The annual meeting of this cub was heid at Boston, Mass., on March 14. Mr. C. C. Eiweii delivered an iiiustrated lecture, en-14. Mr. C. C. Enwein derivered an industrated rectre, en-titled "Travei in Europe." The officers elected for the ensuing year are as follows: Pres., W. P. Appleyard; Vice-Pres., Henry Bartlett; Secy., E. L. Janes; Treas., Chas. W. Sherburne. The next meeting will be heid on April 11, at which it is expected that Prof. E. F. Milier, of the Massachusetts Institute of Technology, will pre-sent a paper on "The Use of the Steam Engine Indicator."

ENGINEERS' CLUB OF ST. LOUIS.-The 487th meet-ing of this club was held on March 15. Plans for the celebration of the 30th anniversary of the club were disussed, and details of arrangements were left to the enterialnment committee.

The paper of the evening, "Recent Concrete Construc-tion on the Iliinois and Mississippi Canal," was then read by the secretary, in the abscept of the author, Mr. J. W. Woermann. The paper gave a description of the methods of construction of the locks being huit on the canal, and the proportions and character of the materials used. Costs of the various items making up the total cost of two of the locks were given and comparisous were made of their cost per cubic yard on this work, with the cost of similar work in other parts of the country. Some drawings and photographs showing the details of construction were ex-E. R. Fish, Secy. hibited.

BOSTON SOCIETY OF CIVIL ENGINEERS .- At the BOSTON SOCIETY OF CIVIL ENGINEERS.—At the meeting of the society, held March 15, the foilowing offi-cers were elected for the ensuing year: President, C. Frank Allen; Vice-Presideut, T. H. Barnes; Secretary, S. E. Tinkham; Treasurer, E. W. Howe; Librarian, F. L. Fales; Director, A. E. Burton. The reports of the Secretary and Treasurer showed the finances of the so-sing the in growing of the finances of the so-Secretary and receivent condition, the total property on hand amounting to \$10,179, of which \$9,252 are credited to the permanent fund and \$927 to the current fund The literary exercises of the meeting consisted in a de-scription of the Providence, R. 1., sewerage and sewage disposal systems, and more particularly of the new sew-age pumping plant and the new hasius for purification by ical precipitation, which are now in process of con ruction. This description was illustrated by stereopti-n views of the work and was delivered orally by Mr. struction. This O. F. Clapp, City Engineer, Providence, R. I.

NEW PUBLICATIONS.

REPORT: MASSACHUSETTS HARBOR AND LAND COMMISSIONERS, 1898.-Woodward Emery, Clinton White, Charles E. Doten, Commissioners. Pub. Doc. Paper; 6×9 ins.; pp. 116. This report reviews the work of the commission for the year ending Nov. 30, 1898, in improving the harbors and

of the State of Massachusetts.

MANILA AND THE PHILIPPINE ISLANDS.—An up-to-date handbook of facts compiled from official U. S. War Department information, Spanish reports and original investigation. The Philippines Co., New York. Paper; $71_4 \times 5$ ins.; vp. 31; maps. This pamphiet gives a very general sketch of Manila

and the islauds, including the postal service, means of communication, population by provinces, religion, educa-tion, climate, trade, etc.

ANNUAL REPORTS; KENTUCKY RAILROAD COMMIS-SION, 1897, 1898.-John C. Wood, J. F. Dempsey, H. S. Irwin, Commissioners. Pub. Doc. Paper; 6×9 ins; pp. 334. Each of these reports, which come to us together, con-

tains a hrief summary of railway affairs during the years covered, followed by a full record of the assessments for taxation and a digest of the state laws relating to railway operation. The most interesting feature of the two

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

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

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

TRADE OF THE PHILIPPINE ISLANDS.—By Frank H. Hitchcock, Chief Section of Foreign Markets, U. S. Department of Agriculture, Washington, D. C. Paper; 9×6 ins; pp. 160; map. This is an exhaustive tabular statement of the exports and imports of these islands up to 1894, together with a description of their character, and the proportionate trade with other countries. The average annual value of the commerce of the islands for the period 1880-1894 is put down at \$37,566,005. The leading exports are Manila hemp and sugar, with leaf tobscco, clgars, clgarettes and coffee, following in the order given. The chief imports are cotton goods, kerosene, wine, rice, wheat flour, canned goods, naiis, household utensils, etc.

TRADE PUBLICATIONS.

(The standard sizes for pamphiets and trade catalogues recom-mended by all the princips! engineering societies of the United glutes are: 51-2x61ms, and 9x121ms.)

FRICTION CLUTCHES, PULLEYS AND COUPLINGS.-Hess, Snyder & Co., Massillon, Ohio. This is a circular illustrating some of the products of the company named.

OIL FILTERS.—The Burt Mfg. Co., Akron, Ohio. Pamph.; $3\% \times 8\%$ ins.; pp. 13 and 8. These pamphlets describe the Cross and the Warden oil fliters and purifiers for use in all places where large quantities of lubricating oil are required.

HEATING APPARATUS.—The J. H. McLain Co., Canton, Ohlo. Pamph: $74 \times 8\%$ ins; pp. 48; illustrated. This pamphlet contains illustrations and descriptions of eight types of hot water heaters for residences, apartment houses, schools, public buildings, etc.

PAINTS.-Lowe Brothers Co., Dayton, O. Paper: four pamphlets; 4 × 9 ins.; pp. 4; 3% × 4% ins.; pp. 10; 2% × 4 ins.; pp. 8; 2% × 3% ins.; pp. 8.

These iittle pamphlets contain hrief particulars of some of the company's specialities, including high standard liq-uid paint, freight car paints, and red lead metal preservative

GAS AND GASOLINE ENGINES.—Coal Handling Ma-chinery Co., Chicago, Ili. Four circulars; paper; 3½ × 6¼ and 6 × 9½ ins.; i.lustrated.

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

GENERATORS AND MOTORS AND MINING LOCOMO-TIVES.—The Akron Electrical Mfg. Co., Akron, Ohio. Pamph; $7 \times 10\%$ ins.; pp. 4 and 8; illustrated. These are bulletins 2 and 3 of the series issued by this company. No. 2 briefly describes the Akron electric min-ing locomotives which are made in sizes from 25 to 150 HP. No. 3 is entitled "Direct Current Apparatus" and describes the main features of the generators and motors manufactured for lighting, railway or power purposes.

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

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

ROAD BUILDING MACHINERY.—Climax Road Machine Co., Marathon, N. Y. Pamph.; 9×6 ins.; pp. 44; il-lustrated.

Describes and Illustrates rock-crushers of various types, becomes and inustrates rock-crushers of various types, with elevators and screens; 10-ton portable hins; porta-hie engines; rotary screens; distributing wagons; stee highway hridges; reversible street roller; and shows views of plants as erected and in operation. The Olimax road machine is very fully illustrated, together with several varieties of scrapers, grading plows, etc.

ASPHALT PAVING.-Warren-Scharf 'Asphalt Paving Co., 81 Fulton St., New York. Paper; 8×5% ins.; pp. 64. Iliustrated.

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

COILS AND BENDS.—The Whitlock Coil Pipe Co., Elmwood, Conn. Two pamphs; 6 × 3½ ins.; pp. 20; iliustrated; 3½ × 6 ins.; pp. 36. In the first of these pamphlets attention is called to the forms of coiled pipes manufactured by this concern for a statement of the statement of th condensers, refrigerating plants, etc. The second pamph-let illustrates and describes the American Feed Water Heater, the American Purifier and other forms of heaters, also a novel form of power pump.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING Bid

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Bids to be opened. Work. Mar. 23. Water-works extension, Bi Advertised, Engineering 1 Mar. 23. Water-works, extension, Bi Advertised, Engineering 1 Mar. 23. Syntakling wagons, New Mar. 23. Sprinkling wagons, New Mar. 23. Sprinkling wagons, New Mar. 23. Steam plant, New York, J Mar. 23. School building, Monticell Mar. 23. School building, Monticell Mar. 23. School building, Monticell Mar. 23. Retaining walls, Oneida, Advertised, Engineering 1 Mar. 24. Electric plant, Charlotte Mar. 24. Electric plant, Charlotte Mar. 24. Sever system, Clenfuegon Mar. 24. Sever system, Clenfuegon Mar. 24. Severs, Schon, Mar. Advertised, Engineering 1 Mar. 24. Severs, Schenfuegon Mar. 25. Schenfuegon Mar. 25. Schenfuegon Mar. 26. Schenfuegon Mar. 27. Schenfuegon Mar. 27. Schenfuegon Mar. 27. Schenfuegon Mar. 27. Schenfuegon Mar. 27. Schenfuegon Mar. 27. Schenfuegon		-
opened. Work.	Place	See Eng.
Mar. 23. Water-works extension. B	ioomington	News.
Advertised, Engineering	News, Mar	Jud. Mar. 2
Mar. 23. Water-works, Windsor, N	Y	
Advertised, Engineering M	Vews Mar	
Mar. 23. Sprinkling wsgons, New	York N V	7.
Mar. 23. Hydrants, cocks, hoxes, e	tc., New V	Mar. 16
Mar. 23. Steam plant, New York, 1	N.Y.	Mar. 16
Mar. 23. School huilding, Monticell	0. Ind	Mar. 16
Mar. 23. Retaining walls, Oneida.	NV	····. Mar. 16
Advertised, Engineering	News Mar	10 Mar. 16
Mar. 23. Plate-girder hridge, Buffa	IO. N Y	10.
Advertised, Engineering	Vews Mor	Mar. 16
Mar. 23. Road roller (12 tons), New	York N V	
Mar. 24. Electric plant, Charlotte	Harbor N	
Mar. 24. Bridge work, Boston, Ma	188.	1 Mar. 16
Advertised, Engineering	News Mar	Mar. 16
Mar. 24. Sewer system, Cienfuegos,	Cubs	10.
Advertised, Engineering 1	News Mar	Mar. 3
Mar. 24. Water-works, Cienfuegos,	Cubs	
Advertised, Engineering ?	News Man	Mar. 9
Mar. 24. Sewers, Pontiac. Mich.	tono, mai.	a
Advertised, Engineering	News Man	Mar. 2
Mar. 24. Sewer pipe, Everett, Mass.	and a state of the	Max Du
Mar. 24. Armory huilding work, Sy	Tacuse N V	Mar. 23
Mar. 25. Church huilding, Oshawa,	Ont	Mar. 23
Mar. 25. Electrical machinery, Chi	cago, Itt	Mar. 20
Mar. 25. Sewer pipe, etc., Wheeling	W. Va	Mar. 23
Mar. 25. Brick paving and grading.	Kansas City	Ma Mar. 23
Mar. 25, Pumping engines and hold	ers. Bristol	Eng Mar. 13
Mar. 25. School huilding. Clevelan	d. 0	Mar. 9
Mar. 25. Plate-girder hridge, North	Adams Ma	and Mar. 9
Advertised, Eng. News, I	Mar. 9 and	16
Mar. 25. Equipment electric comm	ission Baltin	DOPO Mon 10.
Mar. 25, Sewerage system, Presco	tt. Ont	More. Mar. 16
Mar. 25. Water-works, Prescott, C	Int.	Mar. 16
Advertised, Engineering 1 Mar. 24. Water-works, Cienfuegos, Advertised, Engineering 1 Advertised, Engineering 1 Advertised, Engineering 1 Mar. 24. Sewer pipe, Everett, Mass, Mar. 25. Church huilding, Oshawa, Mar. 25. Selectrical machinery, Chi Mar. 25. Sewer pipe, etc., Wheeling Mar. 25. Pumping engines and holi Mar. 25. Sever pipe, etc., Wheeling Mar. 25. Pumping engines and holi Mar. 25. Sever pipe, etc., Wheeling Mar. 25. Pumping engines and holi Mar. 25. Sever pipe, etc., Wheeling Mar. 25. Pumping engines and holi Mar. 25. Severage system, Presco Mar. 27. Water pipe, etc., Laporte Advertised, Engineering 1 Mar. 27. Sewerage system, Presco Mar. 27. Water pipe, etc., Laporte Advertised, Engineering 1 Mar. 27. Severage system, Presco Mar. 27. Water pipe, Lo. Mar. 27. Severa and water pipe, Lo Mar. 27. Steam road rolier, St. Loi Mar. 27. Steam road rolier, St. Loi Mar. 28. Bleater at water-works, C Mar. 28. Bleater at water-works, C Mar. 28. Briekt paving, Buffaio, J. Mar. 28. Bredpairing asphait paving, Mar. 28. Bredpairing and dockwork, Advertised, Eng. News, J. Mar. 28. Pipe sewers, Kearney, M. Mar. 29. Pipe sewers, Kearney, M.	Ind	Mar. 16
Advertised, Engineering	News Mar	1e Mar. 16
Mar. 27. School huilding, New Yo	rk N V	10. Mar. 10.
Mar. 27. Bank huilding, Winning	Man	····· Mar. 16
Mar. 27. Electric plant, Santa Fe	N Mer	····. Mar. 16
Mar. 27. Sewer and water pipe. Lo	cknort N V	Mar. 9
Mar. 27. Court house, Leesville, 1	La.	Ion 90
Mar. 27. Paving hrick, Nehraska C	ity. Neh	Mon 10
Mar. 27. Railway, Glasgow, Scotla	nd.	Mar. 16
Mar. 27. Retractile draw, Boston,	Mass	
Mar. 27, Tramway (2% mties), Dul	him Ireland	Mon 11
Mar. 27. Water bonds. Kettle Falls	Wash	Mon ut
Mar. 27. Steam road roller. St. Lou	uls Que	Man in
Mar. 27. Hardware, etc., New Yor	k N Y	Man 02
Mar. 27. General supplies. Toronto	Ont	Man Do
Mar. 28. Water department supplie	s. Reading	Pa Mag 15
Mar. 28, Electric wiring, Kansas	City, Mo	Map 111
Mar. 28. Heater at water-works. C.	amden. N	Mag 05
Mar. 28. Asphait paving, Buffaio, 1	N. Y.	Mar 99
Mar. 28. Repairing asphait paving.	Rochester	N V Mae 19
Mar. 28. Brick paving, Beilefonta	ine. 0	Mor 97
Mar. 28. Dredging and dockwork.	Chicago, iti	Mar 9
Advertised, Eng. News, I	Mar. 2 to 23	·····alar.
Mar. 28. Water-works, Darlington,	Okia	Mor 0
Mar. 28, Pipe sewers, Kearney, N	J	Mar 0
Mar. 29. Water-works pump. South	b Bend, Ind	Mar a
Mar. 29. Sidewalks, Sandusky, O.		Mar 14
Mar. 29. Drainage pipe, etc., Wana	koueta. O	Mar do
Mar. 29, Sewers, Chicago, Ill.		Mar 02
Mar. 29. Paving, Nantucket, Mass		Mar "
Mar. 29, Asphalt paving, Hartford	I. Conn	Mar 00
Mar. 29, Grading, West Hohoken,	N. J.	Mar m
Mar. 29. Laying water mains, Chi	CSEO. III	Mar un
Mar. 30. School building, Brookivy	n. N. Y.	Mar "
Mar. 30, Highway bridges (3), Urb	sna, lii.	Mar ye
Mar. 30. School huliding, Honoluit	I. Hawaii	Mar 22
Mar. 30. Electric lighting. Defiance	e. 0	Mar m
Advertised, Eng. News, 1 Mar. 28. Water-works, Darlington, Mar. 29. Ster-works, Darlington, Mar. 29. Sider-works pump, Souti Mar. 29. Sidewalks, Sandusky, O. Mar. 29. Sewers, Chicago, Ill Mar. 29. Sewers, Chicago, Ill Mar. 29. Sewers, Chicago, Ill Mar. 29. Saphait paving, Hartford Mar. 29. Saphait paving, Hartford Mar. 20. Grading, West Hoboken, Mar. 20. Grading, West Hoboken, Mar. 20. School building, Brookly, Mar. 30. School building, Brookly, Mar. 30. School building, Defianci Mar. 30. School building, Defianci Mar. 30. School building, Defianci Mar. 30. Saphalt paving, Reading,	Pa	Mar "
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Mar. 30. School building, Brookyrn, N. 1.
Mar. 30. School building, Honoluiu, Hawaii.
Mar. 30. School building, Honoluiu, Hawaii.
Mar. 30. Asphalt paving, Reading, Pa.
Mar. 30. Asphalt paving, Reading, Pa.
Mar. 30. Garhage disposal, Providence, R. I.
Mar. 30. Jail building, Uvalde, Tex.
Mar. 31. Garhage disposal, Rochester, N. Y.
Mar. 31. Bridge work, Minneapolis, Minn.
Mar. 31. Sewers, East Cleveland, O.
Mar. 31. Sewers, Minneapolis, Minn.
Mar. 31. Sewers, Minneapolis, Minn.
Mar. 31. Sewers, Minneapolis, Minn.
Mar. 31. Sewers, Bieledontaine, O.
Mar. 31. Plans for sewer system, Aylmer, Que.
Mar. 31. Plans for sewer system, Aylmer, Que.
Mar. 31. Plans for sewer system, Aylmer, Que.
Mar. 31. Plans for sewer system, Aylmer, Gue.
Mar. 31. Plans for sewer system, Aylmer, Que.
Mar. 31. Plans de lectric plant, Cullman, Ala.
Apr. 1. Electric plant, Palo Alto, Cal.
Apr. 1. Brick paving, Thin, O.
Apr. 1. Turnpike honds, Jackson, O.
Apr. 1. Turnpike honds, Jackson, O.
Apr. 1. Opera house, Columhus, Ga.
Apr. 1. Opera house, Columhus, Ga.
Apr. 1. Opera house, Columhus, Ga.
Apr. 1. Drick and pipe sewers, etc., Havans, II.
Advertised, Eng, News, Mar. 9 to 30.
Apr. 1. Brick and Mar. 16 Mar. 16 Mar. 16 Mar. 16 Mar. 16 Mar. 23 Mar. 16 Mar. 16 Mar. 16 Jan

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RAILWAYS.

AFRICA.—Press reports state that arrangements are being made between the German Government and Cecll struction of a telegraph line in German East Africa, and for huilding a railway through the same territory. ATKINSON & NORTHERN.—Contracts have been let to a Chicago construction company, represented by Don J. Barnes, Atkinson, Neb., according to reports, for build-

ENGINEERING NEWS. Ing this proposed line from Atkinson to Perry, about 25 miles; work was to begin at once. A. A. Perry, Gen. BALTIMORE & OHIO.-L. B. McCabe & Bros., Balt-fore, da, are said to have been awarded the contract ine, including the construction of a long double track the improvements on the Wheeling division of this line, including the construction of a long double track to the improvements on the Wheeling division of this ine, including the construction of a long double track to ond earth will have to be plasted out of the biock and earth will have to be removed to provide ap-proches. This is exceedingly heavy work, and a large proce of men will be necessary to carry it on. The tun-net will be lined with brick, and will cost about \$300.000 considerable blasting will be spent. BRAINERD & NORTHERN MINNENTA.-A prelim-middi north towards Nebish, Minn., has just been com-past side of Lake trivine for loading logs on cars to be the work \$150.000 will be spent. BROKFIELD.-This company has been loorporated in his with \$10.000 capital stock, to build a steam or elea-tion on the Mahoning Coal Co.'s line. Jas. V. Rose, Reese. J. Erman and John J. Davis are incorporated. CHURAGO & NORTHIERT.-W ONNERS. Swam, tracks from Covington to Porterdale, Ga., four miles. The diff of way has been obtained and one-half of this in this contracts. The material is also tracks from Covington to Porterdale, Ga., four miles. The diff of way has been obtained and one-half of this his for way has been obtained and one-half of this his for way has been obtained and one-half of this his for way has been obtained and one-half of this his for way has been obtained and one-half of this his for Wall Lake to Demison, La, 25 miles. The adding completed for the Boyer Valley extension of this his for Wall Lake to Demison, La, 26 miles. The date or more small contracts. The material is also whend and grading has begun on the proposed Solder, value Berne, The contractors are. Mitchell Vincent, Onawa

both of Wali Lake, Ia. CHICAGO & WEST WISCONSIN.—This company, for-merly known as the Chicago. Montello & Northwestern, has revived the project of building a line from Princeton to Wautoma, via Germania and Neshkoro, Wis. 50 miles. J. L. Pennifill, Pres., Princeton, Wis.

to waltoma, via Germania and Neshkoro, Wis. about 50 miles. J. L. Pennifill, Pres., Princeton, Wis. CHICAGO, MILWAUKEE & ST. PAUL.-C. A. Good-now, Asst. Gen. Supt., Chicago, Ill., Informs us that this company is changing the grades and cutting down the hills on the Eastern Iowa division between Preston and Marion, I.a., requiring the easement of 900,000 cu. yds. of earth; work to be completed this year. The double track between Savanna, Wis., and Sabula, I.a., the grad-ing for which was done this winter, will be completed about May 1. This will provide a double track from the Mississippi River to Chicago. Extensive improvements are also contemplated on the Dubuque, Minnesota and La Crosse divisions. Forty miles of 75-lb. steel rails will be laid on the Kansas City division this year, and bal-lasting continued. Reports state that the contract for constructing 36 miles of track between Riggs and Marion Junction has been let to Campbell & Ferguson, Chicago. FORT DODGE & OMAHA.-Wickham Bros. are reported to have received the sub-contract for six miles of grading on this extension of the Illios' Central R. R. from Tara to Carnarvon, Ia., 40 miles. C. E. Loss & Co., Pullman Bidg, Chicago, are the general contractors.

Bidg., Chicago, are the general contractors. IOWA CENTRAL.—Balch & Peppard, Minneapolis, Minn., are reported to have been awarded the contract for the grading and bridging of the proposed extension from Belmont to Aigona, Ia. Work will begin as soon as weather is favorable. L. M. Martin, Cb. Engr., Marshali-town, Ia.

from Belmont to Algona, Ia. Work will begin as soon as weather is favorable. L. M. Martin, Cb. Engr., Marshalltown, Ia.
JACKSONVILLE SOUTHWESTERN.—This company was incorporated in Florida, March 15, with \$450,000 capital stock, to build from Cummer's mill, near Jacksonville, through the counties of Duval, Baker, Bradford, Alachua and Levy, to Manatee, Fia., on the Suwannee River, 103 miles. The incorporators are: Jacob Cummer, W. W. Cummer, W. E. Cummer and Arthur G. Cummer.
KANSAS, MISSOURI & NORTHERN.—R. A. Reese, Vice-Pres. and Gen. Mgr., Lincoln Trust Bidg., St. Louis, Mo., informs us that contract will be let about April 15 for the construction of this line from St. Joseph to Council Bluffs, Ia., and Omaha, Neb., via Savannah, Fillmore, Mattiand, Tarkio, Riverton and Sidney. I30 miles. A preliminary survey has been made, a \$50,000 bonus voted and free right of way promised from Savanah to Tarkio. The capital for construction has been arranged for and will be ready when required. Robt. S. Doubleday, Pres.; C. C. Brown, Cb. Engr., St. Louis.
KANSAS, OKLAHOMA CENTRAL & TEXAS.—This company was incorporated in Oklahoma, March 14, with a capital sock of \$50,000,000, to build from Salina, Kan.; G. N. Moses, Great Bend, Kan., and C. A. McBrian, Watonga.
LOUISVILLE & NASHVILLE.—Surveys are under way according to reports. for an extension from Selima to Yaconga.

Watonga, Okia, are directors, with general once at Watonga.
LOUISVILLE & NASHVILLE.—Surveys are under way, according to reports, for an extension from Selma to Yolande, Ala., on the Birmingham Terminal, tbus giving this company a straight route from Birmingham, Ala., to Pensacola, Fia. A 40-mile extension, known as the Southern Alabama Ry., from Pineapple to Repton. Ala., is now being constructed by R. M. Quigley & Co., St. Louis, and their sub-contractors. R. Montfort, Ch. Engr., MASSACHUSETTS.—Bids are asked by the Mctropolitan Water Board, Boston, until April 4, for grading a short section of railway in the Wachusett Reservoir, as stated in our advertising columns. F. P. Stearns, Ch. Engr.

Ch. Engr. MISSOURI MIDLAND.-Daniel B. Eiy, Vice-Pres. and Gen. Mgr., St. Louis, Mo., informs us that the contract for the complete construction of this steam railway from Columbia to Kennard, Mo., 9½ miles, was awarded Feb. 25 to Johnson Bros. & Faught, St. Eimo, 111. There will be 13 bridges and considerable rock work and excavation. Charles Wiggins, Pres.; A. G. Kleinbeck, Ch. Engr., 404 Bank of Commerce Bidg., St. Louis.

Bank of Commerce Bidg., St. Louis. NAZARETH & LEHIGH.-Incorporated in Pennsylva-nia, with a capital stock of \$10,000, to build a line of steam railway from the terminal of the Bangor & Port-iand Ry. at Nazareth, Pa., to a point about one mile weat to a siding near the new cement mills. Conrad Miller, Pres., Nazareth; D. C. Biar, New York; G. W. Mackey. PARAGUAY.-Consul John N. Rufin, Asuncion, Para-guay, reports that this country offers a good opportunity for building 300 kilometers (186 miles) of railway be-tween Ignatimi and Rosario, with a 6% guaranty.

SANTA FE TERMINAL OF CALIFORNIA.-Incor-porated in California, with \$1,000,000 capital stock, to build railways, terminals, etc. A. H. Payson, San Mateo, Cal.; W. A. Bisseil, San Francisco, directors.

porated in California, with \$1,000,000 capital stock, to build railways, terminals, etc. A. H. Payson, San Mateo, Cal.; W. A. Bissell, San Francisco, directors.
 SCOTLAND.-Bids are asked until March 27 for the construction of part of the Edinburgh, Leith & Newhaven extension of the Caledonian Ry. George Graham, Ch. Engr., Buchanan St. Statioa, Glasgow. Scotland.
 SIERRA RY. OF CALIFORNIA.-We are informed that all the contracts have been let for extending this line from Sonora to Carters, Cal., 14 miles. The line was originally built from Oakville to Jamestown and an extension from Jamestown to Sonora was completed and opened July 25. Prince A. Poniatowski, Pres., San Francisco, Cal.; W. C. Potts, Ch. Engr., Jamestown, Cal.
 SOUTH CAROLINA & GEORGIA.-Official reports state that surveys are under way for an extension of this line from Gaknier, to be begun this spring. C. S. Phelps, Engr., Charleston, S. C. about 12 miles, and that construction is expected to bave received the contract for grading the cut-offs on the main line of the Union PACIFIC-Kilpatrick Bros. & Collins, Newfort grading the cut-offs on the main line of the Union pacific between Hutton Station and Dana, Wyo, work to be completed by Nov. 1. The work is expected to be used the while will be in three sections, aggregating 47 miles. J. B. WICHITA & SOUTHERN-O. H. Bentley, Pres. Wichita, Kan., Informs us that a preliminary survey has been ande over a portion of this proposed line from Wills, AG, Mill Probable be Unifer and the to mile probable be used of congress and bills are new pending. It. Jackson, Ch. Engr., Wichita.

STREET AND ELECTRIC RAILWAYS.

BOSTON, MASS.-Governor Walcott of Massachusetts has signed the hill extending the time for the construc-tion of the Boston, Quincy & Fall River Bicycle Ry., under which 20 miles of line must be completed before July 1, 1000. E. Moody Boynton, Newburyport, Mass.

July 1, 1900. E. Moody Boynton, Newburyport, Mass. GREENFIELD, MASS.—The Greenfield & Turners Falls St. Ry. Co. has been petitioned by the people of Montague Centre and Turners Falls to assist in the construction of a line from the present terminus at Lake Pleasant to Montague Centre. Frank E. Lowe, Pres. and Mgr. MIDDLETOWN, CONN.—The Middletown St. Ry. has applied to the legislature for a charter granting the power of extending its lines to Meriden. J. A. Kelsey, Pres. BALLSTON, N. Y.—The Saratoga Traction Co. has been granted a franchise by the trustees of this viliage to build on Maita Ave.; work is expected to begin at once, and be completed by July 1. R. E. Dunston, Mgr., Saratoga Springs, N. Y. BROADALBIN, N. Y.—Wallace Cleveland Broadalbin

on Maita Ave.; work is expected to begin at once, and be completed by July 1. R. E. Dunston, Mgr., Saratoga Springs, N. Y.
BROADALBIN, N. Y.--Wailace Cleveland, Broadaibin, and Seymour Husted, Brooklyn, N. Y., are reported to be interested in the construction of an electric railway between Broadaibin and Amsterdam.
GREENBUSH, N. Y.--Reports state that the proposed electric railway between Rensselaer, Nassau, Kinderhook and Hudson, for the construction of which Beiden & Seeley, Syracuse, N. Y., are said to have the contract, will be controlled by the Columbia & Rensselaer Ry., Light & Power Co., formed by the consolidation of the local companies of the towns through which it will pass. Roswell P. Flower, New York, is said to be Interested.
DUNKIKK, N. Y.--Frederick H. Stevens, C. J. Carney and others have petitioned the council for a franchise to construct an electric line to Hickoryburst or Point Gra-tiot P., Little Falls & Herkimer St. Ry. Co., March 11, to build and operate in Herkimer. John V. Quackenbush, Pres., Little Falls & Herkimer, John V. Quackenbush, Pres., Little Falls, N. Y.
MINEOLA, N. Y.--The Nassau Beit Line Traction Co. was incorporated, witb a capital stock of \$300,000, March 20, to operate 30 miles of street railway to be propelled by any other motive power than steam, from Mineola to Long Beach, Nassau county. The directors are: Henry N. N.; M. G. Miller, Freeport, N. Y.; Austin Cornwell, Oceanside, N. Y.
NIAGARA FALLS, N. Y.-The Niagara Falls & Suspension Bridge Ry Co. has applied for a franchise to ina tranchise to ina tranchise to ina tranchise to ina tranchise to ina tranchise. BRIDGETON, N. J.--The Bridgeton & Milivilie Traction Co. is about to award contracts for extending its incompletion.

Iay tracks on various streets in this City. J. T. Jones, Pres. BRIDGETON, N. J.—The Bridgeton & Milivilie Traction Co. Is about to award contracts for extending its line through Cedarville. Work is expected to begin as s.on as the materials can be secured. BETHLEHEM, PA.—The Bethlebem & Freemansburg St. Ry. Co. was incorporated, March 16, with \$21,000 capital stock, to build an electric street rallway from Bethlehem to Butztown, Northampton county, 3½ miles. The incorporators are: M. P. McGrath, Pres., Worcester, Mass.; Thos. A. H. Hay, Easton, Pa.; C. H. Cox, COKEVILLE, PA.—The Coke Belt St. Ry Co. was incorporated March 17, with \$600,000 capital stock, to build 30 miles of electric rallway through Westmoreland and Fayette counties, Pa.; Wm. H. Alien, Pres., Pittsburg, Pa., and F. S. Young, Wilkinsburg, Pa., are incorporators.

corporators. EASTON, PA.-The Northampton Southern St. Ry. Co. was incorporated March 16, with \$36,000 capital stock, to build six miles of electric railway between Easton and Middletown, Nortbampton county. Chas. H. Cox, Pres., Bethlehem, Pa., and M. P. McGrath, Worcester, Mass., are incorporators. NAZARETH, PA.-The Worcester Construction Co., Worcester, Mass., is reported to have been awarded the contract for building the Northampton Central St. Ry., from Nazareth to Farmersville, 4½ miles, to connect at the latter place with the Easton, Palmer & Bethlehem St. Ry. Chas. A. Richardson, Pres., Worcester, Mass., WILMINGTON, DEL.-Tit is reported that the Wilming-

St. Ry. Chas. A. Richardson, Pres., Worcester, Mass. WILMINGTON, DEL.-It is reported that the Wilming-ton & New Castle Electric Ry. Co. has decided to extend its lines to Delaware City, nine miles from New Castle. F. H. Treat, Pres. ARLINGTON, VA.-Gen. Samuel S. Burdett, Gien-cariyn; Joseph E. Willard, Fairfax, and others are said to be interested in the immediate construction of an elec-tric railway from Arlington Junction to Fairfax and Manassas, via Giencariyn and Falls Church. HUNTSVILLE, ALA.-T. W. Pratt has applied to this city for an electric street railway franchise, offering to have three miles of line in operation within 60 days.

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

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

Jeffreys. CLEVELAND, O.--It is reported that the Cleveland & Warren Electric Ry. Co. has been chartered, with \$10,000 expital stock, to build eventually about 50 miles of line in Cuyshoga, Genauga, Portage and Trumhull counties. Martin Dodge, Gen. Mgr., Chagrin Falls, O. CLEVES, O.-Bids are asked by this village until April 6 for the construction and operation of a street railway through Cleves, to be in operation before Jan. 1. V. M. Henderaon, Village Clk.

Henderson, Village Cik.
FINDLAY, O.—The Findlay St. Ry. Co. is said to contemplate extending its lines to Mortimer, Van Buren and possibly to Fostoria; estimated cost, \$50,000. A new 250-11P. bolier has recently been bought from the Turner Bolier Co., Bucyrus, O. C. F. Smith, Mgr.
HOME CITY, O.—Bids are asked by this village until April 8 for the construction and operation of a street railway in Home City. J. O. Falkenhurg, Village Cik.
OXFORD, O.—The Richmond, Oxford. Relly & Cincinnat Electric R. R. Co. has been organized at Oxford by M. T. Morris, Shannon, O.; S. E. Frye, St. Charles, and others. A survey will be made at once.
PHONETON, O.—The National Traction Co. of Phoneton has been incorporated with \$10,000 capital to build along the old National Road from Columbus to the state line. J. O. H. Hooker and O. P. Waymire are incorporators.

porators

Corporators. XENIA, O.-The council has granted a franchise to the Dayton, Spring Valley & Wilmington Traction Co., of which J. M. Wilson is the promoter. KOKOMO. IND.-The Kokomo Rv. & Light Co. was incorporated, March 13, with \$80,000 capital stock. to op-crate in Kokomo. Wm. P. Stevens and H. L. Woolfenden directors

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

banon down the Frankford Road to Lebanon and to the county line.
AURORA, ILL.-The Aurora. Wheaton & Chicago Ry. Co. was incorporated March 11. with \$1500,000 capital stock, to build an electric line from Aurora to Chicago. B. Mahler, M. J. Mandelhaum, L. J. Wolf, directors.
OTTAWA, ILL.-The Ottawa Ry. Light & Power Co. was incorporated March 16, with \$150,000 capital stock, by F. S. Donnell, Louis W. Hess and Jacob I. Warner.
ST. JOSEPH, MO.-W. E. Montague, Surveyor of Platte Couty, has applied to the Buchanan county court for a franchise to hull between St. Joseph and St. Louis.
TACOMA, WASH.-Reports state that the Tacoma Ry. & Power Co. has applied to the country commissioners for a franchise to exite the the outrary commissioners for the equipment of an electric rsilway between Quebee and Ste. Anne de Beaure, via Montmorency Falls and Beaurort. 28 miles, has heen awarded to Abearn & Sover, Ottawa, Ont. The railway has hitherto been operated by steam, and the change will necessitate the manufacture of a number of large cars by the Ottawa Car Co. and the installment of a large electrical plant.
HAVANA, CUBA.-The Havana Electric Ry, Co. of New Jergey has increased its capital stock from \$5,000,000 to \$10,000,000. It is said that 25 miles of additional street railway track will be built. Col. G. B. M. Harvey. New York, is a director.

is a director York.

DUBLIN, IRELAND.-Bids are asked until March 27 for the construction of about 2% miles of tramway through fields, etc., for the Great Northern Ry. Co. T. Morrison, Secy., Dublin.

ELECTRIC LIGHT AND POWER.

ELECTRIC LIGHT AND POWER. KENNEBUNK, ME.-Estimates have been submitted for a new plant to cost about \$5,500. EAST HARTFORD, CONN.-Ex-Mayor Wm. W. Hyde and Percy S. Bryan, Hartford, have been authorized to prepare a new bill permitting the East Hartford fire dis-trict to purchase the plant, water-works, etc. NEW LONDON, CONN.-Wm. T. May. Chn. Com., writes us that the matter of a city electric light plant bas been referred to a committee to report at the next coun-cil meeting. Nothing can be done for two years, as the city would have to get a charter or buy the plant of the present company. C. G. Beckwith, Mayor. SIMSBURY, CONN.-The act granting a charter to the

SIMSBURY, CONN.-The act granting a charter to the imsbury Electric Co. has passed both branches of the

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

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

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

ROCHESTER, N. Y.-Mayor Warner has made an ad-dress, urging the city's ownership of the electric plant. CLAYTON, N. J.-The Pitman, Glassboro & Clayton Electric Light Co. has heen granted a franchise to light this place. It will probably extend the lines to Bridgeport.

NEWARK, N. J.—At the meeting of the People's Light, Heat & Power Co.. March 27, the plans for subways for its wires will be considered. PAULSBORO, N. I.—It is stated that a company will he organized to build a plant here.

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

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

lighting.

electric lighting. BRIDGEPORT. PA.—The question of putting in a plant, to cost \$30,000, is being considered, according to reports. CONNEAUTVILLE, PA.—It is stated that plans for re-modeling the power house are being prepared. D. F. Booth, Pres. Council; L. D. Corey, Cik. PHILIPSBURG. PA.—It is stated that work will likely soon be begun on the proposed plant for the Philipshurg Electric Light Co. Capital stock, \$25,000; directors, E. D. Pursel, John Ellenberg and David Gorgas.

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

plant. SAYRE, PA.-Frank C. Roberts & Co., Eners.. Real Estate Trust Bidz.. Philadelnhia, have requested hids on a nower house huliding to be erected at Sayre, for the Pennsylvania & New York Canal & R. Co. This will be steel skeleton, of brick construction, one story high. with truss roof and slate covering. The foundations will be concrete and brick, and machinery and the eculpment to be installed will include four engines, two dynamos, generators, boliers, pumps, condensers, etc. SOUTH BETHLEHEM PA.-Bids were asked until March 20 for furnishing electric lights for five years from June 20. C. C. Boyer, Chn., 404 Wyandotte St. ANNAPOLIS, MD.-Peter J. Carlin & Co., 186 Rem-

March 20 for turnishing electric finites for he years from June 20. C. C. Boyer, Chn., 404 Wyandotte St. ANNAPOLIS, MD.—Peter J. Carlin & Co., 186 Rem-sen St., Brooklyn, N. Y., have been awarded the contract for the power house, etc., at the academy. BALTIMORE MD.—Baldwin & PenIngton, 44 South St., are preparing plans for an annex to the power house of the United Rys. & Electric Co. The addition will be 100 x 100 ft., and will have hollers and a 12,000-HP. engine — Chas F. Cassell, 404 Law Bidg., has completed plans for a combined store and power house, to cast about \$1,000.000, for Posner Bros., Howard and Lexington Sts. It is likely that work may soon be hegun. BALTIMORE MD.—The Wallace Co., West New Brighton, N. Y., has been awarded the contract for a portable railway for the electric subway commission, at \$2,100. The contract for the electric lant at the Mount Royal pumping station has been let to Morton, Reed & Co., Baltimere, at S5,490.

Co., Baltimore, at \$5,490. WILLIAMSPORT MD.-Jos. L. Motter, of the com-mittee, writes us that work will be becaun on the niant as soon as it is possible to do so. Estimated cost, \$6,000. Geo. Thompson, Mayor. PETERSBURC. VA.-The nurchose of the street rail-ways, electric light and water power companies located here was completed March 15, and a syndicate, of which Middendorf. Oliver & Co., German St., Baltimore, Md., are the managers, now own the properties. It is pro-proved to companies are the Virginia Traction Co., the Picterson Co., and the Unner Annomation Co., the latter controlling the water nower on that river for S0 miles. The new corporation will be known as the South-side Railway Co.

MOUNDVILLE. W. VA .- Plans for a plant for the tate prison have been completed; estimated cost, \$6.000. atate RAVENSWOOD, W. VA.-W. S. McKay and T. J. loore have applied for separate franchises.

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

AUSTELL, GA.-Estimates are renorted as wanted for nlant to be operated by water power. C. J. Shelverton,

Mayor

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

again being considered. scoording to renorts ROME, GA.-H. M. Smith, Cy. Engr., writes us that the plant is to be owned and operated by the city. Nothing definite has yet been decided upon. BIRNINGHAM ALA.-The Consolidated Electric Light Co. bas let a contract for two engines of 600 HP. each to the Birmingham Machine & Foundry Co., and that for the boilers to the Birmingham Boiler Works. The im-provements to the Birmingham Boiler Works. The im-provements to the plant will cost about \$50,000. EAUEAULA ALA.-The question of a city plant is re-

EAUFAULA, ALA .- The question of a city plant is re-orted again being considered.

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

writes us that the city will vote April 3 of the question of building a plant to cost \$25,000. JACKSON, O.-Bids are aaked until April 1 for pur-chasing the plant owned by the city and for furnishing the eity with electric lights. The niant is out of recair and gives unsatisfactory service. M. D. Jones, Cy. Cik UHRICHSVILLE, O.-The committee, consisting of Counclimen Greenlee, Cooper and Ross, is securing in-formation for a plant to cost \$16,000. C. A. Greenlee, Chn. Com., writes us that the question of issuing bonds will be voted upon in April. CRAWFORDSVILLE, IND.-F. Hoffman, Cy. Engr., writes us that the council is considering the question of enlarging the plant. J. C. Hutton, Chn. Com. EVANSVILLE, IND.-The Frank B. Rae Engineering Co., Fort Dearborn Bidg., Chicago, has been engaged to prepare plans for the proposed plant. FORT WAYNE, IND.-The Jenney Electric Light & Power Co. has asked for a 50-year franchise. SCHOOLCRAFT, MICH.-G. M. Hudson, Mayor, writes

Power Co. has asked for a 50-year franchise. SCHOOLCRAFT, MICH.-G. M. Hudson, Mayor, writes us that this place has voted against the proposition to put in a plant. The board wishes to grant a franchise and contract for lighting the town for 10 years with 25 arc lights.

DETROIT, MICH.—The public lighting commission has asked for an additional appropriation to put up 100 new are lights and for new machinery to operate the plant ASHTON, ILL.—Geo. Schmidt, Mayor, writes us that nothing has been done towards securing a plant. CHICAGO, ILL.—Bids are asked until 11 a m. March 25. for supplying the department of electricity with the fullowing: Two vertical high speed compound entities, direct connected to shaft: 1.000 are lamps series shunt, and 15 150-light are belt driven dynamos. Edward B. El-licott, Cy. Electrician.

EDWARDSVILLE, ILL.-J. H. Tun and B H. Rich, ards have been awarded the contracts for building the new power house for the Edwardsville Electric Light Co. ELROY, WIS .- This place will soon vote on the ques-tion of a city plant or for a franchise.

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

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

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

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

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

SPARTA, MINN.—The question of hullding a plant is being considered, according to reports. NORTHBEND, NEB.—This place will yote April 14 on the question of issuing bonds for a plant and water-works. Population, 1,300, J. H. Johnson, Mayor.

Population, 1.300. J. H. Johnson, Mayor. WYMORE, NEB.—A number of clilzens propose to pur-chase the blant and property of the Wabaska Electric Co., which furnishes lights to this place and Blue Springs. If the plant is purchased the new owners will build a new power house at Holmesville, about five miles up the rive. power house at Holmesville, about nve miles up the river. MAYUILLE, N. DAK.—Bids are asked until April 5 for constructing a plant and water-works, according to re-ports. Samuel Torgerson, Cy. Audr. ABERDEEN, S. DAK.—The city auditor writes us that nothing definite has been done towards securing a plant.

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

KANSAS CITY, MO.-Bids are asked until March 28 for a system of conduits, wiring, etc., for the post office. O. L. Spaulding, Acting Secy. Treasury Dept., Wash-Ington, D. C.

LITTLE ROCK, ARK.—The Little Rock Light & Power Co. has been absorbed by the Consumers' Light & Power Co. G. B. Rose, Pres.; W. A. Badger, Gen. Mgr. HILLSBORO, TEX.-It is stated that the council has granted a franchise for a plant.

granted a franchise for a plant. SHERMAN, TEX.--Wm. Tolson, Supt., writes us that this city has sold \$44,000 of bonds, \$24,000 of which will be for extending the plant and water-works. WAXAHACHIE, TEX.--It is stated that the Waxa-hacble Electric Light Co. has decided to use aluminum line wire in making its extensions, and has ordered 540 jbs. of aluminum wire. It will need several thousand pounds more for extensions in the spring. SILVERTON, COLO.--John Casey, Mayor, writes us that a proposition to put in a plant will be submitted to the voters at the election next month. Population, 3,000.

SILVERTON, COLO.-John Casey. Mayor, writes us that a proposition to put in a plant will be submitted to the voters at the election next month. Population, 3,000. SPOKANE, WASH.-D. L. Huntington, Secy. and Gen Mgr. Washington Water Power Co., writes us as follows regarding the proposed addition to the plant: The com-pany has let contracts for almost the entire work with the exception of the building. The enlargement consists in two 750-K-W. direct current generators, running at a speed of 300 revolutions per minute, connected directly to the shaft of the turbines. One of these machines will be connected across the outside wires of the Edison three-wire system. The generators are being manufactured by the General Electric Co., and will be delivered in July. The water-wheels are two pairs of special McCormick turbines, manufactured by the S. Morgan Smith Co., York, Pa., and operated under a working head of 68 ft. It has not yet been decided what water power governor will be used, but the Lombard governor is receiving considerable attention. The new installation will be glaced directly alongside of the present plant, and is designed in a man-ner to allow for enlargement along the same line of three or four times the capacity which is now being installed. The building will not be extended accept as noted to core the generating apparatus Installed. This work will neces-sitate the lengthening of the dam and head gates, and the placing in position of a 10-tt. diameter steel flume, about 600 ft. long. It is boped to have the plant in operation before the middle of next summer. It is proposed to install a 25-ton traveling crane. The switchbard appliances will be mouthed on standard General Electric CO. panels, of Tennessee or Italian marble, and will consist of standard instruments, etc. In addition to this it is proposed to install total station wat: meters and total station ammeters, as the added machines will give an output in excess of the capacity of the instruments now in position. The engineering work head non

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

begin in about 15 days. **LAKEPORT**, CAL.—The Clear Lake Electric Power Ca-has made application for a franchise permitting it to ereci-a line of poles and wire for the transmission of power along the county roads. Bids for the purchase of the franchise are asked by the county clerk until May 1. NAPA, CAL.—Bids are asked until April 17 for the pur-chase of a 50-year franchise. H. H. Thompson, Cy. Clk. CAN. PEDNAPDING CAL.—It is stated that the Lytile

cbase of a 50-year franchise. H. H. Thompson, Cy. Clk. SAN BERNARDINO, CAL.-It is stated that the Lytle Creek Light & Power Ca., headed by Judge J. L. Camp-bell, proposes to develop 3,9%0-HP. In Lytle Creek Canyon this summer. The company has already expended over \$8,000 in tunnels, surveys and preliminary work. The water will be taken from the main channel at Miller's Narrowa to a point near the Parrish Place, where the drop will be sufficient to develop 1,500-HP. Judge Camp-

bell Nort dle thre Lytl Maio Yuci The fied UI vest (00).

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bell has relocated for power 1,000 Ins. of water in the North Fork of Lytle Creek, and a like amount in the Mid-die Fork of Lytle Creek. The construction of the three systems, it is claimed, will develop 3,000-HP. In Lytle Creek.—The supervisors have granted to H. C. Maione a franchise to lay and maintain a pipe line from Yucalpe to Crafton, on the northern border of Redlands. The line will be fourteen miles long, and a 14-in. vitri-fed pipe will be used.

ted pipe will be used. UKIAH, CAL.—A committee has been app-intel to in-vestigate the question of a municipal plant to cost \$18,-on. R. L. Crane and J. H. Smith are on the committee. vestigate ti 100. R. L.

(60) R. L. Crane and J. H. Smith are on the committee. SPRINGVILLE, UTAH.-Jas. E. Hall, Mayor, writes us that it is proposed to submit the question of issuing bonds for a plant to the voters in the fall. OTTAWA. ONT.-John Aylen, Ch. Engr., 7 Carleton OTTAWA. ONT.-John Aylen, Ch. Engr., 7 Carleton Chambers. Sparks St., writes us that the Metropolitan Electrical Co. of Ottawa (Ltd.), has let a contract for the construction of a power canal to develop 5,000 HP. at Iritannia, Ont., about five miles above this city. Bids have not yet heen called for the turbines and machinery, but will be before long. convWall. ONT.-It is stated that Mr. Snetzinger.

but will be before long. CORWALL, ONT.-It is stated that Mr. Snetzinger, M. P., of Cornwall, has asked the Minister of Railways and Canals that in the improvements now heing made to the Farran's Point Canal, provision he made for a head-way of water to be utilized for generating electricity.

RTAGE, ONT.-The question of the town pur-be plant of the Citizens' Electric Co. is being Councilman Belyea may he addressed. RAT P chasing

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BRIDGES.

BRIDGES. BOSTON, MASS.-Bids are asked until 12 m., March 27, for constructing a retractile draw for the Malden hridge over the Mystic River. Wm. Jackson, Cy. Engr. CHARLESTOWN, MASS.-A hili appropriating \$200,000 for the reconstruction of the Malden bridge over the Mystic River was reported to the legislature March 13 by the committee on metropolitan affairs. FITCHBURG, MASS.-Fred. W. Bateman, of Parker & Bateman, Engrs., Clinton, Mass., is preparing plana for an overhead trestle 400 ft. long, to be constructed by the Fitchburg & Suburhan St. Ry. Co. on Putnam St. Harry L. Pierce, Pres.

The province of the tracks at Washington St., to be constructed by the Suburhan St. Ry. Co. on Putnam St. Harry L. Pierce, Pres. MALDEN, MASS.-The Boston & Maine R. R. Co. has made an agreement with the council to construct a new iron bridge over the tracks at Washington St., to cost shout \$30,000.

NEW PORT, R. I.-Wm. H. Lawton, Engr., Informs us that a contract has been awarded to J. K. Sullivan, at \$10,970, for approaches and abutments, and, at \$4,470, for filling the approaches, of the Van Zandt Ave. bridge.

MARTFORD, CONN.-Bids are asked by the board of commissioners of the Connecticut River bridge and high-way district, 64 Ætna Life Insurance Ridg., until April 15, for furnishing the material and for constructing a bridge over a portion of the East Hartford meadows, as stated in our advertising columns. Edwin D. Graves, Ener. Engr

NEW HAVEN, CONN.—The Berlin Iron Bridge Co., East Berlin, has been awarded a contract by the street board for an iron hridge. SCHENECTADY, N. Y.—It is reported that the N. Y. C. & H. R. R. R. Co. intends to build a bridge over the Mobawk River at Hoffmans Ferry to connect lis line with the West Shore R. R., and also to place a yard there.

The west Snore R. R., and also to place a yard there. STILES STATION, N. Y.-It is reported that the Syra-cuse, Lakeside & Baldwinsville R. R. Co. has awarded a contract to the Berlin Iron Bridge Co., at \$6,500, for a bridge over the D., L. & W. R. R. SYRACUSE, N. Y.-W. H. H. Gere, Div. Engr. of the Eric Canal Co., has received plans for a hoist bridge to be constructed over the canal at Catharine and Al-mond Sts.

TROY, N. Y.—The highway commissioners have re enmedded the awarding of a contract to the Massilli Bridge Co., at \$2,750, for an iron bridge of 80 ft. spa and two 20-ft. girder spans, in Geer Hollow.

WATERFORD, N. Y.--A hill has passed the legislature appropriating \$3,000 for a foot bridge over the canal. WATERPORT, N.Y.--F. M. Harris writes us that bids are asked at once by John Rockham, Waterport, for constructing an arch, 560-ft. span and 18 ft. wide; estimated cost, \$14,000.

HOBOKEN, N. J.-Assemblyman Abbett has lutroduced bill in the legislature to authorize the construction of viaduct from Eighth St., Hoboken, to Jersey City leights, at a cost of about \$50,000.

KEARNEY, N. J.-The Erie R. R. Co. has agreed to construct a steel and iron bridge, 60 ft. wide, over its tracks at Lower Kearney Ave., at a cost of \$12,000.

CARLISLE, PA.-A contract has been awarded to the Pittsburg Bridge Co., at \$4,190, for an iron bridge, 130 ft. long, over the creek at Cralghead Station.

NEW KENSINGTON, PA.-A contract was awarded March 13 to the Schultz Bridge & Iron Co., McKees Rocks, at \$89,000, for a bridge over the Allegheny River from Ninth St. to Boquet Station, on the West Penn R. R.

PHILADELPHIA, PA.—The Southwestern Tract Co. will strengthen the Penrose Ferry bridge with truss at a cost of \$60,000.

at a cost of \$60,000. TOWANDA, PA.—Hiram E. Bull, County Surveyor, in-forms us that three county bridges are in contemplation this season, the construction of which has not yet been approved by the court and commissioners. RALEIGHI, N. C.—Bids are asked by the county su-pervisors until April 23 for a steel bridge over the river at the Falls of Neuse, according to reports.

JACKSONVILLE, FLA.-The Atlantic, Valdosta & Western Ry. Co. has been authorized to construct a via-duct over Duval St. MOUNTAINBORO, ALA.-The Nashville, Chattanooga & St. Louis Ry, Co. has had two bridges washed away, according to reports. H. McDonald, Ch. Engr., Nash-ville, Tenn.

ville, Tenn. HARRISON, 0. — The commissioners of Hamilton county, Cincinnati, O., and Dearborn county, Lawrencehurg. Ind., have completed arrangements for the repair of the Whitewater River bridge. The engineers of both counties are to prepare plans and cstimates of the cost of a new abutment.

abutment. IRONTON, O.-John F. Hager and A. C. Camphell, of Ashland; E. W. Bixby, of Ironton, and others, propose to incorporate the Ironton & Kentucky Bridge Co., with a capital stock of \$1,000, to combine with the Asbland & Ohio Bridge Co. to construct a bridge over the Ohio River.

SIDNEY, O.-Bids are asked until April 4 for furnish-ing the material, plans, etc., and for constructing the superstructure of a pin connected Pratt truss hridge, 125 ft., of 2,400 hs. capacity per lin. ft. J. S. Laughlin, County Audr. CLINTON, IND.-The county commissioners are pre-paring to construct a new steel hridge over the Wabash River, at this place.

RIVER, at this place. RICHMOND, IND.—Petitions have been presented it the county commissioners for the construction of a bridg over Frazers' Branch, two bridgea over streams in Fran lin townsbip, two over Symons Creek in Jackson town ship, one over Morgans' Creek in Greene township an one over the Greensfork on the Wayne and Randoin county line. In Frank

county line. TERRE HAUTE, IND.-F. T. Hatch, Ch. Engr., Terre Haute & Indiana R. R. Co., Terre Haute, writes us that bids will aoon be asked, probably next week, for con-structing two medium steel deck plate girder bridges on stone foundation. One, consisting of three spans, 75 ft, each, width 6 ft. 6 ins., c. to c., at Wainut Fork, near Crawfordsville, and the other, of four spana, 60 ft. each, width 6 ft. 6 ins., c. to c., over Sugar Creek, near Dar-lington, Ind.

lington, Iud. CHICAGO, ILL.—Bids are asked by the board of sanl-tary trustees, 1110 Security Bidg., until May 10, for fur-nishing the material and for constructing the sub and superstructure of a four-track swing bridge having a span of 334 ft. 6 lns. J. F. Haas, Clk.

JOLIET, ILL. -The hoard of sanitary district trustees has received the following bids for the Cass St. and Jefferson St. bridges, respectively, over the canal: J. G. Wagner & Co., \$29,476 and \$23,160; Chicago Bridge & Iron Co., \$30,732 and \$24,834; Toiedo Bridge Co., \$31,20) and \$25,000.

and \$25,000. URBANA, ILL.-Bids are asked at the court house until 10 a. m., March 30, for constructing three highway bridges on masonry. Ira O. Baker, Engr., 702 West University Ave, Champaign, III. BUTTERFIELD, MINN.-J. H. Keith & Co., 919 New York Life Bidg., Minnesota, have been awarded a con-tract hy Winston Bros., Minneapolis, for the construction of hridges on the Chicago & Northwestern Ry. from Burt, Ia., via Wekome, Butterfield, Springfield, Sanborn, Minn., to Redwood Falls.

DAKOTAH, IA.-Bids are asked until April 5 for eon-tructing hoth wooden and steel bridges for the year 899. Harwood Sharp, County Audr. struc 1899.

of Keeper & DES MOINES, IA.—Edward Thatcher, of Keeper & Thatcher, Des Molnea, is preparing plans for a Melar arch bridge for North Sixth St., at no expense to the city

arch bridge for North Sixth St., at no expense to the clty. GRAND FORKS, N. DAK.—Bids are asked until April 3 for furnishing all bridge iron and for constructing wooden bridges during 1899. J. W. Scott, County Audr. KEARNEY, NEB.—Reports atate that seven spans of the bridge over the Platte River at this place were car-ried away by high water March 16. OMAHA, NEB.—The Omaha & Council Bluffa Ry. & Bridge Co. is planning to replace its wooden trestle bridge over Indian Creek with a steel structure, according to reports.

TOPEKA, KAN.—The Topeka Commercial Club has rec-ommended that a proposition to construct a Melan arch bridge be aubmitted to a vote.

ANACONDA, MONT.-The county commissioners have awarded a contract to J. M. Luke, Des Moines, Ia., for a riveted Pratt truss bridge of three spans, 95 ft. each and 16 ft. wide, on cylinder piers.

DENVER, COLO.-The board of public works has rec-ommended the hid of M. J. Patterson, at \$2,644, for the stone abutments of the Stout St. bridge.

ELI-ENSBURG, WASH.—Bids are asked until April for widening and strengthening the south approach the Durr bridge. Simon P. Fogarty, County Audr. GOLD BEACH, ORE.—Bids are asked until April 5 for reconstructing a bridge over Elk River. C. V. Woodru: County Clk.

County Cik.

County CIN. HAYWARDS, CAL.-Bids are asked until 11 a m. March 27, for constructing a concrete cuivert. Frank C. Jordan, CIk. Bd. of Supervisors, Oakland. KESWICK, CAL.-A petition will be presented to the board of supervisors, at Reading, for the construction of a bridge over the Sacramento River at Spring Creek. SUISUN, CAL.-The hoard of supervisors has awarded a contract to the San Francisco Bridge Co., at \$1,033, for a bridge over Pleasants Valley Creek. ALBUQUERQUE, N. MEX.-It is reported that an iron bridge will be constructed about 30 miles from this place. Edward A. Pearson, County Surveyor.--The legislature has passed a law authorizing the counties to levy special taxes to the amount of \$15,000 for the construction of bridges, according to reports.

bridges, according to reports. KINGSTON, ONT.-Reports state that the residents of Howe Island have offered to contribute \$10,000 toward the construction of a bridge over the channel, 1,300 ft. across; estimated cost, \$30,000. VICTORIA, B. C.-Edward Maliandaine has submitted plans to the council for a permanent roadway and hridge tn replace the present structure at James Bay, accord-ing to reports.

BUILDINGS

AMESBURY, MASS.-A fire in this city, March 18, de-stroved the opera house block, St. James' Church, and other buildings; reported ioss, \$250,000.

other bulldings; reported loss, \$250,000. BOSTON, MASS.--Preliminary blans have been prepared for a new music hali, 150 × 210 ft., to be erected at Huntington and Massachusetts Aves., to have a seating capacity of 2,630 people. McKim, Mcad & White, Archa., 160 5th Ave., New York.---An S-story hotel building for women, to be known as "Homestead Court," will soon be huilt at Warren Ave. and Clarendon St., to cost about \$400,000. Josephine Wright Chapman, Arch. SALEW MASS.--The city has appearing effect of 25,000 c

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SYRACUSE, N. Y.—Bids are askd by the state armory commissioners, Alhany, until March 24 for constructing a rifle range, repairing roof, plumbing, etc., at the State armory building in this city.—Gee & Murphy are re-ported to have been awarded the contract for the erection of a new building on James St., for Plerce, Butler & Plerce, to cost \$25,000.

Plerce, to cost \$20,000, IRVINGTON, N. J.-Bids are asked until April 4 for erecting a 4-room brick school building. E. D. Harrison, Clk. Bd. of Education; William Moll, Arch., Park Ave.,

Irvington. Numerical without and a solt, Arch., Fark Ave., NEWARK, N. J.-Plans are being prepared for the alter-ation of the dwelling house of Campbell N. Clark, 1010 Broad St., to cost about \$30,000. Howard, Cauldwell & Morgan, Archs., 10 East 234 St., New York. CLIFTON HEIGHTS, PA.-Bids are asked until April 3, acording to reports, for a hot water heating apparatus for the borough school building. J. H. Wise, Secy. LANCASTER, PA.-The following bids have been re-ceived by the school hoard for erecting an S-room school building on North Mary St.: Henry Burger, \$24,989; G. Samuel Flick, \$23,943; George H. Oster, \$24,790; Jacob Stumpf, \$29,992; Herman Wohlsen, \$23,945; Hergenrother & Ewing, \$27,895; H. N. Breneman & Son, \$24,400; Frank McLaughlin, \$25,205.

Chinpi, \$20,302; Herman Wohlsen, \$23,145; Hergenröther & Ewing, \$27,805; H. N. Breneman & Son, \$24,499; Frank McLaughlin, \$25,205.
PHILADELPHIA, PA.—Plans have been prepared for a lu-story brick, stone and iron hathbouse to be built for the city in the 21st Ward. Frank G. Caidwell, Arch., 110 Walnut St.—Allen B. Rorke, Philadelphia Bourse, has received the contract for erecting the buildings for the exposition to be held in this eity between Sept. 14 and Nov. 30, 1859, at \$298,000, work to be completed by Aug. 15. G. W. & W. D. Hewitt, Built Bidg, have been appointed as architects of the permanent buildings to be crected for the Philadelphia Museum, and Wilson Bros.
& Co., Drexi Bidge, architects of the exposition buildings. JACKSON, N. C.—Bids are being saked for the building sud equipment of a fireproof record building for Northampton county. Plans may be obtained from the architect, Room 5d. Metzerott Hidg., Washington, D. C.
WILMINGTON, N. C.—Zachary & Zachary, Raleigh, N. C., have been awreded the contract for erecting the new 3-story store building in this city for S. & B. Solomon.— It is reported that Morris Bear & Bros. have received the contract for erecting a large brick office building, 42 x 58 ft., for the Messenger Publishing Co.
CLEVELAND, O.—G. H. Matchett has been granted a permit to erect a 5-story brick apartment building on Willson Ave., user Quinby St., to cost about \$50,000. F. C. Bate, Arch.—M. A. Bradley is reported to be about to erect three new buildings in this city or for King & More. to cost \$50,000. F. C. Bate, Arch.—M. A. Bradley is reported to be about to erect three new buildings in this city offece building on Evel of a for contract will soon be let for erecting a new 6-story offece building on Evel for King & More. to cost \$50,000. F. C. Bate, Arch.—M. A. Bradley is reported to be about to erect three new buildings in this city offece building on Evel for erecting a new 6-story offece building on Evel for erecting a new 6-story offec

CHICAGO, II.I. -- A 3-story store and apartment building will be erected by Courad Bristie at Evanston and Bryn Mawr Aves., according to reports, to cost about \$35,000.

JACKSONVILLE, ILL.-IL is announced that the F. W. Menke Stone & Lime Co., Quincy, Ill., has been awarded the contract for ercering the new high school building in this city, to cost \$55,000.

MILWAUKEE, WIS.-A new 12-story office building will be erected for Henry Herman at Broadway and Wia-consin St., to cost about \$150,000. W. A. Holbrook, Arch., Camp Bidg.

Arch., Camp Bidg. ELLSWORTH, MINN.-Bids are asked until April 4 for erecting a public achool building for district No. 40, Nobles county, in Elisworth, F. W. Stanton, Cik. of School Bd.; H. C. Geriach, Arch., Mankato, Minn. ST. PAUL, MINN.-Bids are asked by the supervising architect, Washington, D. C., until April 13, for the low pressure and exhaust steam heating, mechanical venti-lating apparatus, etc., for the U. S. building in this city. COUNCUL BY UPER 14. The secole of this city have COUNCIL BLUFFS. IA.—The people of this city have ored to issue honds for the erection of a new high school uliding, to cost \$65,000.

building, to WAYNE, NEB .- Reports state that plans have been ac-outed for a new court house for Wayne county, to cost

S20,000. CANTON, S. DAK.-W. E. Bush. Des Molnew. Ia., has received the contract for erecting a new court house for Lincoln county, at \$16,436. YANKTON, S. DAK.-Plans have been prepared by W. I. Dow, Sloux Fails, S. Dak., for a new dining hall for the state insane asylum, to be erected by day labor at a cost of about \$50,000.

FARGO, N. DAK.—The trustees of the Scottish Rite of his State have decided to erect a new \$30,000 Masonic empile building.

ANACONDA. MONT.—Bids are asked by the commis-sioners of Deerlodge county until April 11 for constructing the jall cells in the new jail building, estimated to cost 83.000. H. M. Patterson, Arch.

S1.000 H. M. Patterson, Arch. JOPLIN, MO.-P. J. Bratley, of Joplin, has been award-ed the contract for erecting the Schifferdecker-Spencer block, at \$13.200. FORT WORTH, TEX.-R. W. Thompson, St. Louis, Mo., is reported to have received the contract for erecting a new station for the Texas & Pacific R. R. Co., exclusive of the train shed, heating, etc.; estimated cost, \$77,000. B. S. Wathen, Ch. Engr., Dallas, Tex. GREENVILLE, TEX.-King's Opera House, the City Library and other buildings were burned March 17; re-ported ions, \$125,000.

ported loss, \$125,000. SHERMAN, TEX.-William Tolson informs us that this city has sold \$44,000 of bonds, of which \$20,000 will be used in creeting a new school building. GRAND JUNCTION, COLO.-Bids are asked by the of-fice of Indian affairs, Washington, D. C., until April 13, for constructing a steam heating plant at the Indian In-dustrial School in this city. W. A. Jones, Comr. ALTURAS, CAL. Bids are subd until April 3 for creat-

ALTURAS, CAL.-Bids are asked until April 3 for erect-ing a brick or stone jail for Modoc county, at Alturas. L. S. Smith, Cik.

S. Smith, Clk. AUBURN. CAL.—Plans and specifications are asked by the supervisors of Placer county until April 5, for a new county hospital to be built at Auburn; also for six burglar proof steel jail cells, with corridor and partition screen, to cost about \$4,000. J. B. Landis, County Clk.

to cost about \$4,000. J. B. Landis, County Cik. SAN FRANCISCO. CAL.—A 4-story brick buainess building is to be erected at First and Jessie Sts.. to cost about \$50,000. Sylvain Schnalttacher, Arch.—The fol-lowing bids fere received by the navy department. Wash-ington, D. C. March 15, for the construction of a barracks aud bolier house at the U. S. naval training station at Yerva Buena Island. Cal.; S89,470; Moore & Cameron, San Francisco. \$80,289; for ending sewer in channel deduct, \$4,000. Phil Sheridan, Berkeley, Cal., \$40,463. M. C. Lynch. San Francisco. \$85,385; ending sewer in channel, \$55,580; time, 5 months. J. W. Smith, San Francisco,

\$01,455; ending sewer in channel, \$88,325; time 6 montha.
W. W. Anderson, San Francisco, \$80,705. Frank H. Mason, San Francisco, \$80,705. Frank H. Mason, San Francisco, \$83,409. \$4 ft. additional for every foot of sewer over 80 ft. John H. McCoy, San Francisco, \$74,400. Charles Alsup, San Francisco, \$83,603. Peacock & Halliday. San Francisco, \$74,400. Charles Alsup, San Francisco, \$83,608. Peacock & Halliday. San Francisco, \$83,609. M. Hansbrough, San Francisco, \$83,900. Wm, M. Constable, San Francisco, \$84,500. Edwin L. Brooks, San Francisco, \$80,989. Sinnot & McCann, San Francisco, \$81,981. F. A. Williams, San Francisco, \$84,605. Victor Hoffman & Wm. F. Ambroae, San Francisco, \$84,606. Williams Bros., Oakland, Cal., \$90,882. ——J. W. Hansbrough, San Francisco, \$81,080. Williams Bros., Oakland, Cal., \$90,882. ——J. W. Hansbrough, San Francisco, Sa

struction. OSHAWA, ONT.-Bids are asked until March 25 for erecting a huliding for the Presbyterian Church at Oshawa. Address W. J. Hare, Oshawa. LHEGE, BELGIUM.-Work will begin early next year, according to reports, on the construction of the buildings for the Liege International Exposition to be held in May, 1903, under the patronage of the government of Belgium.

WATER-WORKS.

AUBURN, ME.-Local papers state that the water com-missioners will soon begin to bay pipe and to bul'd a por-tion of the Merrill Hill reservoir, the latter to be done by contract.

contract. BLUEHILL, ME.-It is proposed to get a water supply from the springs on the mountains. A reservoir of 200,-000 gallons capacity will be built. LISBON, ME.-The incorporators of the Lisbon & Top-sham Water Co. are Edward Plummer, H. A. Christopher, W. H. Newell, Frank C. Whitehouse, J. A. Fisher, Geo. E. Stinson, Chas. S. Whitney and others; capital stock, \$200,000. The company will furnish water to all the vil-lages in the towns of Topsham and Lisbon.

lages in the towns of Topsham and Lisbon. CLAREMONT, N. H.—The question of the town own-ing the works is being sonaldered. F. F. Haskeil, Clk. EPPING, N. H.—A. M. Mitchell writes us that nothing water Co., newly incorporated. PLYMOUTH, N. H.—The town has decided to offer the Plymouth Aqueduct & Water Co. \$35,000 for its works. E. F. St. Clair and Geo. H. Colby may be addressed. Comparison of the town has decided to Strength and the second states and the

BELMONT, MASS.-The town has appropriated \$4,000 r purchase of water meters and \$3,000 for new mains. ton

for purchase of water meters and \$3,000 for new mains. BOSTON, MASS.—Bids are asked until April 4 for ex-cavating soil from Section 4 of the Wachusett Reservoir, and excavating and refiling at the casterly portion of the North Dike at Clinton. The work to be done includes the clearing and grubbing of 245 acres, and the excavation of 315,000 cu. yds. of material, and also for laying water pipe, as stated in our advertising columns. Wm. M. Davenport, Secy., Metropolitan Water Board, 3 Mt. Ver-non St.

HANOVER, MASS.—The question of putting in works for fire protection is heing considered. E. C. Waterman and J. F. Simmons may be addressed.

and J. F. Simmons may be addressed. MEDDWAY, MASS.—The bill authorizing the town of Medway to put in works has been favorably acted upon by the legislative water committee. It provides for the is-suance of \$75,000 of 6% 30-year honds. SALEM, MASS.—The council has appropriated \$25,000 for replacing a portion of the cement-lined water pipe with cast-iron pipe. PASCOAG, R. I.—It is stated that a company has been organized to build works.

rganized to build works. KENSINGTON. CONN.-The N. Y., N. H. & H. R. R. Co, has offered Wooding Bros. \$15,000 for their pond, from which it is proposed to furnish water by gravity to the allway engines, etc., according to reports. which i

RIDGEPFIELD, CONN.-The Ridgefield Water Supply Co. has let the contract for building the works to the Sanitary Construction Co. Work will begin April 1. Frederick Siebert, Waterbury, Conn., is interested.

Frederick Slebert, Waterbury, Conn., is Interested. WILLIMANTIC, CONN.-Oscar O. Tanner, Mayor, writes us that the city proposes to put in a new set of water power pumps at the pumping station and would like to hear from mechanical engineers about preparing specifications. W. D. Grant, Chn. Water Com. HEEMPSTEAD, N. Y.-M. A. Driscoil, Supt. Hempstead Water Co., writes us that it bas been decided to lay about 14 miles of mains, requiring six 6-in, and 12 4-in, gates. The pipe and most of the material is on band.

HUME, N. Y.-C. E. Ingham writes us that nothing has been done towards securing works. yet NEWBURG, N. Y.-This city voted March 14 by a ma-prity of 506 against securing a new supply at a cost of

Jorlty of 506 against secting a low supply the section of the S2T4.000.
OLEAN, N. Y.-A contract has been awarded to the Snow steam Pump Works, Buffalo, and 126 Liberty St., New York, by the water commissioners for a vertical acting Corliss pumping engine to be controlled by a governor.
CAMDEN, N. J.-Bids are asked until March 28 for furnishing a new heater at the new works. It is to condense exhaust from compressor and independent air pumps and increase heat in water from the Holly engines which have surface condensers and bolier feed pumps on main engines. L. E. Farnham, Cy. Engr.
NEW BRUNSWICK, N. J.-The board has decided to increase the capacity of the present pumping station by the purchase of a new pumping engine, and \$25,000 has been set aside for this purpose.
PENNNSGROVE, N. J.-It is stated that a local company

PENNSGROVE, N. J.-It is stated that a local may be organized to build works, the town being to municipal works.

to municipal works. EASTON, PA.—Press reports state that a deal has been consummated, whereby Boston men secure a control of the Easton Water Co. The works will be enlarged and improved, and the system extended over Greater Easton. The purchasers are believed to be the same who recently built the Easton, Palmer & Bethlehem Electric Railway, and are also interested in the new electric light and gas companies organized in this city. LINDEEY PA —Press renorms state as follows: Dr. L

companies organized in this city. LINDSEY, PA.-Press reports state as follows: Dr. J. L. Wentz, and five others, of Scranton, Pa., of the Lind-scy Water Co., have consolidated their interests with the Punsutawney Water Co., and a corporation to be known as the Clover Run Water Co., capitalized at \$150,000, has been organized. The new concern will build gravity works and a 10,000,000-gailon reservoir will be built on Clover Run, 11 miles from town, and the water will be conducted through an 18-in. main to Big Run, Punxautawney, Lind-sey and Walston, supplying 15,000 people.

MEADVILLE, PA.-W. A. Doane, Cy. Engr., writes us that bids are about to be asked for furnishing 10 tons of 6-in. cast-from water pipe. 13 tons of 4-in. pipe. 9 drants, five 6-in. valves, 14 4-in. valves, etc. G. S. Cullen upt

Supt. POTTSVILLE, PA.—The county commissioners are pre-paring plans for improving the works at the county house. A new reservoir with a capacity of \$000.000 gal-lons is to be built at the almahouse to replace the presen-one, which has a capacity of 250,000 gallons. Mal H. S. Thompson may be addressed. READING, PA.—Bids are asked until March 28 for fur-nishing cast-iron water pipe, specials, gate bates, by-drants, laying mains for the year. F. P. Heller, Pres. Water Comrs.

Water Comrs. SEAFORD, DEL.-I. E. Wallace writes us that on ac-count of the lack of the required legislation no action to-wards works will likely be taken this year. BALTINGRE, MD.-The following contracts have been let: Auxiliary piping for Mount Royal Pumping Station of the water department, Crook, Horner & Co. 813 Mid. check valves, Frank W. Dilks; 24-in., \$155; 25-in., \$29 ton, Reed & Co., \$5,490.

CoLQUITT, GA.—An Atlants company has been awarded the contract for works for this place.
 ROME, GA.—H. M. Smith, Cy. Engr., writes us that the question of building either a water filter or settling basins at the works log their considered.
 SAVANNAH, GA.—The aldermen are considering an ordinance authorizing the placing of meters in huises connected with the mains. Alderman Bacon, Chn. Com.
 ABBEVILLE, ALA.—H. W. Owens, Cy. Cik., writes us that on work towards securing works have the taken.
 MONTGOMERY, ALA.—Hids are asked until Arril 15 for constructing a 5000,000-gailon pumping crafte as stated in our advertising columns. Geo. A Ellis, Consult. Engr., 114 Monroe 81; R. H. Sommerville, Treas.

sult. Engr., 114 Monroe St.; R. H. Sommerville, Treas.
 BASTROP, LA.-J. B. Lenz, Chn. Water Com., writes us that an election is about to be ordered to vote on the question of issung bonds for works. There will be wanted a tower and tank of 50,000 gallons, I,800 ft. of pipe, etc.
 SHIDIBYVILLE, TENN.-A. A. McCorkle, Supt. Na-tional Water-Works & Construction Co., writes us that a standpipe and 1,200 ft. of 6-in. pipe will be built at once.
 R. J. Cunningham, Treas., Hamilton Bidg., Pittsburg, Pa.
 NEWPORT, KY.-Bid are asked until April 6 for fur-nishing a 300-HP, water tube bolier for the water-works.
 BERERA, O.-Bids are asked until April 4 for furnish-ing materials and for constructing a stand-pipe 16 (100 ft and for laying 570 tons of cast-iron water pipe. L. E. Chapin, Canton; T. J. Quayle, Mayor.

Chapin, Canton; T. J. Quayle, Mayor. CINCINNATI, O.-Bids are asked until April 12 for fur-nishing for the year ending April 30, 1000, machine shop castings in loam and green sand. furnaces, grates and linings, street valves and boxes, iron pipe and pipe spe-cials, brass castings, brass ferrules, etc. G. H. Spellmire, Cik. Bd.-Bids are asked until April 2N be the commissioners for constructing three reservoirs at Cal-fornia and for laying pipe to the to the top of the hill from the river; estimated cost, \$1,000,000, G. Bouscaren, Ch. Zngr.; August Herrmann, Pres. SCIO, O.-Bids were asked until March 20 by W. F. Stewart & Co., contractors, for subletting the construction of the brick pumping station, for setting two pumps, ball-ers, drilling three wells, etc., for the new works. YOUNGSTOWN. O.-City Engineer Lillie is making one

YOUNGSTOWN, O.-City Engineer Lillie is making sur-eys for making a reservoir of Lake Cohasset

NORTH DRW, O.—Oty Engineer Lille is making surveys for making a reservoir of Lake Cohasset.
 ANDERSON, IND.—It is proposed to extend the mains in Shadeland. S. A. Towell, Supt.
 BLOOMFIELD, IND.—Surveys, it is stated, are being made for works and a light plant.
 NORTH BEND, IND.—J. H. Johnson, Mayor, writes us that an election will be held April 14 to vote on the question of issuing honds for works and an electric plant. Bids will probably he asked in April if the brits are voted. Population, 1,300.
 PENDLETON, IND.—It is stated that the council has granted a franchise to the Pendleton Water-Works & Electric Light Co. to put in works and an electric light plant, to cost \$34,500. Under the terms of the franchise and fire hydrants, and after a term of years the plant belongs to the city.
 VINCENNES, IND.—The Continental Filter Co. 44

belongs to the city. VINCENNES, IND.—The Continental Filter Co. 44 Wall St., New York, has closed a contract with the Vin-cennes Water Supply Co. for a filter plant. The plant will consist of 10 filtering and settling tanks, each filter being of 500,000 gailons capacity per 24 hours, and will embody the Continental Filter Co.'s complete system of aedimentation and coagulation, and will be constructed and operated in conformity with the conclusions reached in the experiments at Louisville and Cincinnati.

SAGINAW, MICH.-We are informed that there has een no move as yet in regard to filtering the water. J. Weale, Supt.

SPARTA, MICH.-This place voted March 14 against the city's purchase of the works owned by L. W. Welch Wailace Burtch, Pres. Village.

CHICAGO, ILL.-The committee has recommended that an appropriation of \$50,000 be made for high-pressure water mains for the use of the fire department.

CHICAGO, LLL—Bids are asked until March 29 for lay-ing water pipe in several streets. L. E. McGann, Pres. Ed. Local Improvements. KENOSHA, WIS.—The Sanitary Construction Co. Green Bay, Wis., bas submitted the lowest bid for con-structing works at the Menominee Indian schools, at about \$10,000.

about \$10,000. OREGON, WIS.-C. H. Netherwood, Chn. Village Ed., writes us that this place has voted to issue \$7,000 in bonds for works, the supply to be secured from artesian wells. The board will buy about two miles of second hand pipes, hydrants, etc. Bids are wanted for a steel tower, wooden tank, casoline engine, pumps, etc. John Nader, Engr. Madi-son, Wis.

son, wis. SUN PRAIRIE, WIS.-R. W. Davis, Pres., writes us that nothing in regard to works will be known definitely until after the election. WHITEWATER, WIS.-Artingstall & Keeler, Rialio Bidg., Chicago, bave appraised the works of the White-water Works Co., with a view to the city's buy-ing the works.

Ing the works. DUBUQUE, IA.-W. W. Bonson, Secy. Dubuque Watei Co., writes us that the contracts have been let and that work will soon be begun for the following improve-ments to the works: Holly Affg. Co., Lockport. N. T. two Holly-Gaskill 5,000,000-gallon pumps: O. H. Jewel Filter Co., 40 West Quincy St., Chicago, 2,500,000-gallon gravity filter plant; E. P. Allis Co., Miwaukee, electrical pumping engine, etc.: two 1,000,000-gallon reservoirs.

3,000 tons of 8 to 24-in. pipe, with necessary specials, etc. pumping station, dynamos, etc. The new supply will be from artesian wells and the Mississippi River. J. A. Cole, Engr., 1385 Oid Colony Bidg., Chicago. GARWIN, IA.-C. Christensen, Mayor, writes us that the town will probably put in works in about three months. Population, 700.

months. Population, 700. KEOTA, IA.-Bida are asked until April 2 for furnish-ing a pump of 200 or 250 gailons of water a minute capacity, boilers, etc., for the Star Oat Meal Co. Wm. J. Push, Muscaline, Ia., may be addressed. BOCK WELL. IA.-We are informed that an election will be di March 27 to vote on the question of build-big works. Bids will probably be asked in May. A tank on a steel tower 80 ft. high will be wanted. Population. 1000 Jackson & Moss, Engrs., Des Moines, Ia.; C. W. Harris, Mayor.

1.000. Increase a larger of the second se

onas for works. FRAZEE, MiNN.-This place is reported to have voted onds for works.

mode for works. MOBTON, MINN.-G. W. Welch, Pres., writes ns that the preliminary vote at the last election was in favor f works. Population, 700. MOUNTAIN LAKE, MINN.-H. P. Goetz writes us that he proposition to build works was defeated at the last the prelli

WALKER, MINN.-This place has voted in favor of orks. Chas. Kinkle, Pres. WYKOFF, MINN.-J. R. Murrel, Pres. Council, writes a that this place has voted to issue \$7,000 in bonds for orks. Everything is required.

GOTHENBURG, NEB.-An election will probably be eld in April to vote on the question of either granting franchise or of huilding works. Geo. F. Anderson may a addressed.

e addressed. HUMPHREY, NEB.-R. P. Drake, Village Cik., writes is that the water supply will be secured from a deep well. Population, 1,000. MATVILLE, N. DAK.-Bids are asked until April 5 for constructing works and an electric plant. Sam'l Torconstructing worl gerson, Cy. Andr.

erson, Cy. Andr. SIOUX FALLS, S. DAK.—An election will be held spiril 4 to vote on the question of issuing \$130,000 in 20-year bonds for purchasing or constructing works. MANKATO, KAN.—Bids are ssked until April 12 for constructing works, and until April 5 for the purchase of 20,000 of water bonds. J. B. Dill, Cy.Cik.; H.V. Hinckiey,

eka

g., Topeka. T. JOSEPH, MO.—The Citizens' Water Co. was incor-sted March 14 to build new works in St. Joseph at a t of \$800,000. A. W. Brewster, St. Joseph [L. W. od, Laclede, Mo.; and John H. Brown and John P. ler, Chicago, are interested. It is announced that struction on the new works will begin at once. This spany was recently granted a franchise. The contract i let to the Seckner Contracting Co., Unity Bidg., caro. Ill. let to tago, Ill.

Chicago, III. AUSTIN, TEX.—Superintendent of Water-Works Pat-terson has been authorized to purchase 50 well points for the new fittering trench, and was instructed to fur-nish the commission with the cost of an auxiliary steam plant to assist the water power in case of drouth, suffi-cient to guarantee against shortage in electrical power.

BAIRD, TEX.-it is stated that the council has voted bissue bonds for works.

ROEEBUD, TEX.-A company with \$10,000 capital took has been organized to sink an artesian well and to upply this place with water, P. B. Waters, Pres.; S. J. lade, Gen. Mgr.

Siade, Gen. Mgr. CRIPPLE CREEK, COLO.—The Citizens' Water Co. has been incorporated with \$3,000,000 capital stock by Geo. McLear, Belfast, Ireland; Henry Levers, Quebec, Can; Louis E. Carr, of New York and F. C. Whitney, of Elizabeth, N. J.

f Enzabeth, N. J. LEADVILLE, COLO.—John Nowland and Alfred Thie-m, Leadville, and C. P. Allen, Ch. Engr. Denver Union Nater-Works Co., and Harvey C. Lowrie, Civil Engr., Neaver, and D. H. Dougan, Cashier National Bank of Kommerce, are appraising the works of the Leadville Vater Co., with a view to the city's purchase.

SILVERTON, COLO.-John Casey, Mayor, writes us that the council will submit the question of municipal ownership of the works to a vote of the people next month. It is proposed to either purchase the works of the Silvertou Water-Works Co. or to build a new plant.

ETTLE FALLS, WASH-J. J. Fuller, Clk., writes that bids are asked until March 27 for the purchase bonds for the proposed works. After the bonds are 4 arrangements will be made for huilding the works. COMA, WASH.--Water Commissioner Hacker has mended the extension of the main supply pipe from to 56th St., at a cost of \$6,500. TACOMA. 45th to

Asth to Sich St, at a cost of \$\$5,500.
WARBENTON, ORE.-N. J. Crain, Audr., writes us that the commission organized March 13, but nothing definite towards securing works was taken. D. K. Warres, Chn; C. F. Lester, Secy.
LAKEPORT, CAL.-Bids are asked until April 17 for furnishing the materials, etc., and for constructing the works, pumping plant, reservoir, etc., as described in our advertising columns. H. V. Keeling, Town Clk.
LAKEVIEW, CAL.-The Lakeview Domestic Water Co. has been incorporated with a capital stock of \$\$35,000 hy G. H. Cofin and W. J. Shields, Pasadena, Cal.
SACKAMENTO, CAL.-Wm. Mullenney, Cy. Surv., writes us that a proposition to issue bonds for extending the works and for completing the aewerage system, will be voted upon in a few months.

SAN DIEGO, CAL.—The San Diego Land & Tower Co. has submitted a proposition to supply 3,000,000 gallons of water a day to the people of Chula Vista. J. E. Boal, Engr.; F. B. Merriam, Pres. Town Meeting.

HINTONBURG, ONT.--Press reports state that con-truction of the proposed works will be begun about April 15. C. H. Keefer, Engr., Ottawa; F. J. Merrili, April 15. C. Deputy Reeve.

ROSSLAND, B. C .- This place is reported to have bee granted permission to issue \$150,000 in bonds for works.

ASUNCION, PARAGUAY, S. AMERICA.-U. S. Consul J. N. Ruffin, Asuncion, has written that there is an op-portunity for American capital to invest in the construc-tion of works, sewerage system and electric light plant.

SEWERAGE

SEWLMAGE. EVERETT. MASS.-Bids are asked until 5 p. m., March 24. for furnishing the following sewer pipe: 6-in., 1.000 ft., straight; 8-in., 5.000 ft., straight; 200 branches, 8-6, 5-ft. lengths; 10-in., 1.000 ft., straight; 200 branches, 12:5, 3-ft. lengths; 12-in., 1.000 ft., straight; 200 branches, 12:5, 3-ft. lengths; 15-in., 1.500 ft., straight; 200 branches, 12:5, 3-ft. lengths; 5-in., 1.500 ft., straight; 200 branches, 12:5, 3-ft. lengths; 5-500 ft. straight; 100 branches. Pipes 0:ver 6 ins. in dismeter shail be 3 ft. in length if required. Robt H. Jenkins, Chn. Com.; Christopher Harrison, Cy. Engr.

Engr. FRANKLIN, MASS.-A committee, consisting of Jos. G. Ray, J. C. Gallison and Geo. W. Wiggin, has been ap-pointed to engage an engineer to prepare plans for a system.

MIDDLEBORO, MASS -- Plans for a system of se disposal sre to be prepared. Jared F. Alden and Jn Millis are on the committee.

tills are on the committee. WESTBORO, MASS.—The question of a better method of isposing of the sewage is being considered. BRANFORD, CONN.—A hearing will be given in Hart-ord March 29 on the question of constructing a system. ielectman Besch and F. E. Peckham may be addressed. diar

Selectman Beach and F. E. Peckham may be addressed. NEW BRITAIN, CONN.-Local papers state that the commissioners and the advisory board expect to have their report on the disposition of the sewage of this city ready by April I. They estimate that the cost of separating the storm water from the regular sewage, requiring 12 miles of additional sewers, would be from \$175,000 to \$250,000, required for whichever system is adopted. To this must be added the cost of the system adopted. The cost of constructing a sewer to the Connecticut River would be between \$500,000 at least. ISLIP (L I) N Y-We are informed that this place

Norma be between \$500,000 and \$600,000 at least. ISLIP (L. I.), N. Y.-We are informed that this pisce will vote April 4 on the question of raising \$3,000 by tax for a surface water drain 2,000 ft. long. The drain may be partly of brick sud tile, with some iron pipe. Eugene R. Smith, Engr., Islip; F. S. Whitman, Highway Comr.

MOUNT HOLLY, N. J .- This town has decided to ex-

tend the White St. sewer. In source the other to be NEWBURG, N. Y.-It is proposed to huild a sewer in North St. and a system in the West End. City Surveyor Coldwell may be addressed. NEWARK, N. J.-Vice-Chancellor Reed has granted an injunction eujoining Newark from constructing a sewer into the Passaic River, north of the Centre St. bridge. The injunction was issued on application of Marcus Sayre, owner of the land sdjoining Centre St. bridge, upon which the Marcus Sayre Co. works are located. PASSAIC, N. J.-The United States Water & Sewsge Purifying Co. has been organized in Passaic. The com-pany controls the Pridham patents for filtering sewage. Smith Hill, Pres.

mith HHI, Fres. BRADDOCK, PA.-The question of North Braddock onstructing a 6-ft. brick sewer, to cost about \$25,000, is eing considered, according to reports.

being considered, according to reports. McKEESPORT, PA.-Keeling, Ridge & Co., Forbes Ave., Pittsburg, have been awarded the contract for con-structing a sewer in Irwin St. at \$30,492. PITTSBURG, PA.-Bids sre asked until March 24 for constructing 30 to S-in. pipe sewers in a number of streets. E. M. Bigelow, Dir. Dept. Pub. Was.

Constructing 300 to 301 to pept Fub. Was. Streets. E. M. Bigelow, Dir. Dept Fub. Wks. WILLIAMSPORT, PA.-it is proposed to construct a 10⁵2-ft. brick sewer to drain the district around Grafiu's Run. Estimated cost, \$100,000. G. D. Snyder, Cy.Engr., writes us tant no definite action has yet beeu taken. WHEELING, W. VA.-Bids are asked until March 25 for furnishing and hauling brick and sewer pipe, curbing, etc., for the year. W. H. Horuish, Cik. SPARTANBURG, S. C.-J. M. Elford, Cy. Treas., writes us that no hids were opened Feb 3 for furnishing the ma-terials and for laying 16 miles of sewer pipe, as fran-chises, etc., were so difficult and not specific that all bids were declined. A new advertisement will be prepared. TYBEE, GA.-W. H. Stair, of the quartermaster-gen-erai's department, U. S. A., has been directed to prepare plans for disposing of the sewage at the Tybee garrison. JACKSON. MISS--It is stated that the council has

JACKSON, MISS.—It is stated that the council has ordered the issuance of \$100,000 in bouds for sewerage sys-tem. Construction of the system will be commenced as soon as possible.

Statistics of the system will be commenced as soon as possible.
 AKRON, O.-Jho. W. Payne, Cy. Engr., writes us that it is proposed to construct a 20 and 15-in. hrick sewer 3% miles long; estimated cost, \$50,000. It is also proposed to build two other truths sewers.
 AKRON, O.-Bid will soon be asked by the city commissioners for Maple and Crosby Sts. improvement, and the Little Cuyahoga Valley sewer.
 BELLEFONTAINE, O.-The question of building a system to cost \$30,000 will probably soon be voted upon. Commissioner Lamb may be addressed.
 CLEVELAND, O.-Bramley & Gribben, 41 Central Ave., Cleveland, submitted the lowest bid March 15 for constructing section No. 4 of the Waiworth Run sewer at \$133,450. Bids for the fifth and last section will be short, but a difficult one to construct. It will run under the Eric tracks to an outlet in the river.
 COLUMBUS, O.-We are informed that nothing has been done in the way of constructing the new South Side severs upon which Julian Griggs, Ch. Engr., reported with plans and estimates on March 3.

anu esumates on March 3. LAKEWOOD, O.-The question of a system is being con-sidered. V. H. Burke may he addressed. MARION, O.-J. W. Scott, Cy. Eugr., writes us that it is proposed to huild a sewage disposal farm, two sewers, pavements, etc.

avenents, etc. TOLEDO, O.-An ordinance prepared by the city en-ineer, establishing main sewer district 31 at Air Line unction, has passed the board of aldermen.

Junction, has passed the hoard of aidermen. WARREN, O.-The state board of health is reported to have approved plans for a sewage disposal plant for the Trumbuil county infirmary, prepared by Snow & Bar-bour, Boston, Mass., and Columbus, O. It is stated that work will be begun at once.

LAURIUM, MICH.-Jos. R. Murphy, Vilisge Clk., writes us that the following hids were received March 14 for con-structing a system, as advertised in Engineering News:

CHICAGO, ILL.—Bids are asked until March 29 for con-structing brick and pipe sewers in a number of streets. L. E. McGann, Pres. Bd. Local Improvements.

KANSAS CITY, MO --City Engineer Wise has suggested that the O. K. intercepting sewer be extended 1,200 ft. along the O. K. Creek to the Memphis bridge, to cost about \$25,000.

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about \$25,000. THE DALLAS, ORE.—The council has decided to build new pipe sewers in the streets below the hiuff and on Union St. above the bluff. SACRAMENTO. CAL.—Wm. Mullenney, Cy. Surv., writes ns that the proposition to issue bonds for ex-tending the system and water-works will be voted for in a few months.

AYLMER, QUE.-Propositions are wanted fro neers until March 31 for preparing plans for a J. J. E. Woods, Mayor.

GARBAGE DISPOSAL-STREET CLEANING

BRADDOCK, PA.-The council, it is stated, has voted to bermit the construction of a plant by private capital, and a desirous of receiving propositions. GREENVILLE, MISS.-The mayor is reported to have been directed to purchase a crematory. LOUISVILLE, KY.-Bids are saked by the board of pub-le works until April 17 for furnishing a garbage crema-ory with a capacity of not less than 250 tons a day, ac-ording to reports.

cording to reports. LAFAYETTE, IND.—The committee has recommended that the proposition to put in a garbage disposal plant, submitted by the Dixon Garbage Crematory Co., Toledo, O., be rejected. It is stated that propositions are being re-ceived by other companies. The committee consists of Councilmen S. J. Hanagan, Johnson and Rankin. ST. JOSEPH, MO.—Local papers state that Street Com-missioner Furst will soon put into operation uew plans for cleaning the streets.

ST. LOUIS, MO.-Bids are asked until April 7 for sprink ing S¹₄ miles of streets, from May 1 to Dec. 1. E. S. foster, Secy. Bd. Pub. Improvements.

GAINESVILLE, TEX .- This place, it is stated, is making efforts to have its streets cleaned. ing

STREETS AND ROADS

HIRAM, ME--It has been voted to purchase two road rollers. Chas. Cotton, Cik.; Geo. W. Clifford, Selectman. BRISTOL, N. H.-At the annual town meeting, March 14, it was voted to mscadamize Lake St., at a cost of \$2, 000. Chas. E. Davis, Selectman. MIDDLETOWN, VT.-The question of macadamizing the streets at an estimated cost of about \$75,000 is being con-sidered by the council. Joseph Merriam and Walter B. Hubbard are on the committee.

ANDOVER, MASS.—The town has voted to appropriate \$4,000 for macadamizing. BOSTON, MASS.—The metropolitan park commissioners have filed plans with the registry of deeds for the pro-posed new boulevard through Chelsea and Revere.

posed new boulevard through Cheises and Revere. CLINTON, MASS.-Bids are asked by the Metropolitan Water Board, Boston, until April 4 for surfacing Boyle-ston St., in Clinton and Boyleston, with stone, as stated in our advertising columns. METHUEN, MASS.-It has been voted to macadamize four streets at a cost of \$6,700. four

NANTUCKET, MASS.-Bids are asked until March 20 for paving sbout 2,163 sq. yds. of granite block, setting of 1,660 ft. of granite curb, relaying 3,560 sq. yds. of cobble paving, and for 1,900 lin. ft. of macadam. Rollin M. Al-ien, becy. Bd. Selectmen.

ien, Secy. Bd. Selectmen. NORTH ANDOVER, MASS.—At the town meeting March 10 an appropriation of \$3,000 was voted for streets and bridges, and \$2,500 for macadamizing. WESTPORT, MASS.—An appropriation of \$3,500 has been made for a macadam road. HARTFORD, CONN.—Bids are asked by the board of street commissioners until March 29 for furnishing the material and for reising about 43,975 se, yds. of Trinidad sheat asphalt. Chas. H. Northam, Pres.

ALBANY, N. Y.-Blds are asked by the board of con-tract until April 3 for paving William and Howsrd Sts. with brick and granite.

BUFFALO, N. Y.-Bids are asked by the board of public works until March 28 for paving with Trinidad sheet as-phalt and repairing asphalt pavements. R. G. Parsons,

Seep. PEEKSKILL, N. Y.-City Clerk Swain informs us the proposition to issue \$100,000 of bonds for paving voted down March 7.

voted down March A. ROCHESTER, N. Y.-Bids are asked until March 28 for repairing asphase pavements, not under guarantee, during 1890. Chas. M. Beattie, Cik. Executive Bd.

1889. Chas. M. Beattie, Cik. Executive Ed. SCARSDALE, N.Y.-Chauncey T. Secor, Chn. Towu Ed., was to apply to the board of supervisors March 17 to ap-propriate \$35,000 for macadamizing the White Plains road. SCHENECTADY, N. Y.-Bids are asked by the council until April 11 for brick paving on Clinton and Upper State Sts.; also for grading and for constructing a cuivert on McClelian St.

SING SING, N. Y .- At the coming town election the lestion of appropriating \$4,000 for highways will be ted up

SYRACUSE, N. Y .- The West End Business Men's Asso-iation is considering the question of improving Hisciatiou is watha St.

are on Huntington and Canai Sts. Designations will be Dav e April 7.

made April 7. BLOOMFIELD, N. J.-A petition was presented to the township committee March 20 requesting that the town be bonded for \$.5,900,10 construct about 10 miles of macadam roads. It was decided to submit the question to the voters at the election in April. CAMDEN, N. J.-An ordinance has been passed to re-pave a portion of Fifth St. with sheet asphalt. H. C. Aramer, Cy. Cik.

ELIZABETH, N. J.-Press reports state that the city voted on Marca 15 to spend \$250,000 for asphalt paving.

JERSEY CITY, N. J.-A petition has been presented to the mayor for the reparing of Seventh St.-A bill pro-viding for walks on the boulevard loop has passed the legislature. One-half of the cost to be paid by the

NEWARK, N. J.—A petition will soon be presented to the Essex county park commission for a speedway 200 ft. wide in Branch Brook Park.

wide in Branch Brook Fark. PATERSON, N. J.-Bids are asked until April 3 for asphalt and brick paving in certain streets, as stated in our advertising columns. Thos. McLean, Cy. St. Comr. TRENTON, N. J.-Bids are asked by the board of chosen freeholders until April 5 for macadamizing three miles of the Asylum Road and one mile of the Upper Perry Road. Josiah Jones, Dir.

egisia. unty.

WEST HOBOKEN, N. J .-- Bids are asked until March 29 for grading, etc., on Shippen St. J. P. McMabon, Clk. WOODBURY, N. J.-The board of freeholders have ap-pointed a committee to prepare plans for a road through Harrison and South Harrison township. Wm. M. Carter,

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

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

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

READING, PA.-Bids are asked until March 30 for 1,650 sq. yds. of asphalt paving. S. Hoff, Cy. Engr. SHARON, PA.-Francis F. Davis, Burgess, informs us that an ordinance will probably be passed to pave East State St., at a cost of about \$15,000. It is expected to have money enough from the regular taxes to pay the bor-ough's share of \$5,000.

ough's share of \$5,000. UNION CITY, PA.-Bids are asked until April 3 for brick paving on Main St. J. E. Giliette, Borough Seey. STATESVILLE, N. C.-C. H. Armfield, County Atty., writes us that the measure allowing iredeil county to issue \$100,000 of bonds for improvements to public roads failed to pass the legislature. Lack of time to get the measure through hefore adjournment of the legislature is the reason assigned. The proposed improvement is post-poned uutil a hill can be passed authorizing issue of bonds, by the next legislature.

WHEELING, W. VA.—Bids are asked by the board of ubic works nutli March 25 for furnishing paving brick, arbing and sewer pipe during 1899. W. In. Hornish, Cik.

ATHENS, GA.-Bids are asked until April 1 for furnish-ing Beigiau blocks, brick, stone curbing, terra cotta piping, sewer castiugs and cement. J. W. Barnett, Cy.

Bergind Döcks, Dick, sement. J. W. Barnett, Cr. Engr.
 BOR, Sewer castiugs and cement. J. W. Barnett, Cr. Engr.
 ROME, GA.-H. M. Smitb, Cy. Engr., informs us that the city is now in the market for a rock crushing outfl, and engine for uncadamizing, etc.
 GREENVILLE, MISS.-Au election will be held April 4 to vote on the question of issuing \$50,000 of 5% honds for paving, according to reports.
 NEW ORLEANS, LA.-The council proposes to pave the sidewaiks on portions of 17 streets. W. R. Brashear, Clk.
 BARBOURSVILLE, KY.-The Commercial Club has asked the councit to cail an election to vote on the question of issuing \$10,000 of bonds for macadamizing. The proposition will probably carry, according to reports.
 LOUISVILLE, KY.-Bids are asked by the board of public works nutil 12 m., Marcu 24, for brick paving and corbing on five alleys. Thos. P. Craig, Secy.
 AKRON, O.-Bids are asked until April 1 for 1,600 sq. yds. and crosuy 8t. witu orick or aspnait, 0,400 sq. yds. and crosuy 8t. witu orick or aspnait, 0,400 sq. yds. and crosuy 8t. witu orick or aspnait, 0,400 sq. yds. and crosuy 8t. witu orick or algonait, 0,400 sq. yds. and crosuy 8t. witu orick with brick, 11,000 sq. yds.
 BELLEFONTAINE, O.-Bids are asked until 12 m., Marcu 24, for brick 14,200 sq. yds.

Fay St., Kirkwood St., Bickeye St., and Soundon St. BELLEPONTAINS, O.-Bids are asked until 12 m., March 28, for 1,970 sq. yds. of brick paving, and 4,888 lin. 11. of curo and gutter, on three streets. We are informed that the advertisement stating that bids were asked until April 28 was a mistake. M. J. Nichols, Cy. Cik.

April 28 was a mistake. M. J. Nichols, Cy. Cik. BRIDGEPORT, O.-Bids are asked by the village clerk nutil April 17 for paving with brick, for furnishing brick, for paving with asphait, for curbing and for pillug; ap-propriation, \$70,778. Hoge, Hix & Hearue, Engrs., 1400 Chapline SL, Wheeling, W. Va. CAMBRIDGE, O.-O. M. Hoge, Cy. Engr., bas been di-rected to prepare plans for the paving of portions of Stubenville Ave., East and West Eighth Sts., Fourth and Fifth Sts.; estimated quantity, 18,000 sq. yds. CANTON, O.-Lawrence and Mahoning Aves. will be paved with brick.

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

SALEM, O.-Bids are ssked until April 12 for brick paving in seven streets and asphalt in two streets; also until April 10 for the purchase of \$144,483 of bonds, ac-cording to reports. Geo. Holmes, Cy. Clk.

TIFFIN, O.-Bids are asked until April 1 for furnish-ig the material and for brick paving in three alleys. J. Ehrenfried, Cy. Cik.

TOLEDO, O.-Bids are asked until April 17 for furnish-ig the material aud for block paving on Broadway. Wm. . Holst, Cy Clk.

VAN WERT, O.-It is proposed to pave the main busi-ess street with brick, a distance of three-fourths of a mess

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

YOUNGSTOWN, O.-Bids are asked until April 8 furnishing the material and for laying sidewaiks crosswaiks. H. W. Calvlu, Clk.

BEDFOILD, IND.-Bids are asked until April 10 for con-structing three gravei roads. John M. Gainey, County Audr.

CRAWFORDSVILLE, IND.-Bids are asked until April 0 for about 30,000 sq. ft. of cemeut sidowaik. F. Hoff-nan, Cy. Engr. ulan,

unan, Cy. Engr.
LAFAYETTE, IND.-Bids are asked until March 27 for improving one alley, and until April 10 for 40,000 sq. yds. of sheet asphait or asphalt block paving and stoue curbing, on four streets. W. K. Eidridge, Cy. Eugr.; Jas. K. Risk, Cy. Cik.
MICHIGAN CITY, IND.-About three miles of brick and asphalt paving will be constructed this season, ac-cording to reports. H. M. Miles, Cy. Engr.
PORTLAND, IND.-Bids are asked until April 17 for constructing 25,000 sq. yds. of brick paving. A. J. Frost, Engr. and Cy. Cik.

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

SAGINAW, MICH.-City Clerk Davis has been instructed by the board of public works to ask bids for macadamising on Genesee Ave. PBKIN, ILL.-Reports state that 4,000 sq. yds. of pav-g is contemplated. I. R. Siebert, Cy. Engr.

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

BELOIT, WIS.—It is reported that the city is contem-lating the construction of about 8,000 sq. yds. of brick aving. F. E. Swope, Cy. Engr. MARIETTA, WIS.—Bids are asked by the board of pub-ic works until April 7 for cedar block paving, grading ad stone retaining wall; estimated cost, \$5,000. Harry icCalhum, Cy. Engr.

DES MOINES, IA.-Blds are asked hy the board of pub-te works until April 10 for brick paving and Portland ement curbing on certain streets.

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

OMAHA, NEB.-Orlinances have been passed to pave four blocks of Capitol Ave. WAUKESHA, WIS.-Bids are ssked by the board of pub-lic works until April 14 for furnishing the material and for constructing about 14,000 sq. yds. of brick paving, 4,850 cu. yds. of grading and 5,750 lin. ft. of limestone curb-ing, as stated in our advertising columns. KANSAS CITY MO-Bids see osted until 1 c.

KANSAS CITY, MO.-Bids are asked until 11 a. m., March 25, for furnishing the material and for grading and brick paving on certain streets. Henry A. Wise, Cy. Engr.—Park Engineer Kessler has submitted to the park board a plan of the proposed Oak St. Boulevard. ST. LOUIS, MO.-Bids are asked until March 31 for re-constructing 27 alleys, and until April 7 for improving 25 alleys. Root. E. McMath, Pres. Bd. Pub. Improvements. PUEBLO. COLO.-A bill has been passed by the legis.

PUEBLO, COLO.-A bill has been passed by the legis-lature to permit the city to pave certain streets.

COLFAX, WASH.-Bids are asked until April 4 for fur-isbing six road machines. John F. Corner, County Audr. nd Clk.

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

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

MANUFACTURING PLANTS.

FORESTVILLE, CONN.-The movement shop of the E. N. Welch Clock Co. was destroyed by fire Marcb 7. Re-ported loss, about \$100,000; Insurance, \$60,000, MOUNT JOY, PA.-The works of the Grey Iron Casting Co. were destroyed by fire March 11. Reported loss, \$65,-000; partly insured.

PHILADELPHIA, PA.-The workshops of the Charles Scott Spring Co. were destroyed by nre March 13. Ke-ported loss, \$150,000; insurance, about \$100,000. JACKSONVILLE, FLA.-The piant of the Cumner Lun ber Co. was destroyed by fire March 13. Reported lo \$200,000; partially insured.

Bids Received at Washington, 1

Bidder.

B. J. Coyle, Washington, D. C.
H. B. Quinn, Pottsviile, Pa.
J. K. Murphy, Washington, D. C.
E. H. Poet, Wilkeebarre, Pa.
Lyons Bros., Washington, D. C.
J. F. Kilieen, Washington, D. C.
Am. Artificial Stone Pavemt. & Const'n Co., Philadelphia
W. F. Breneyer, Washington, D. C.
Andrew Gieason, Washington, D. C.
J. H. Jones & Co., Baltimore, Md.
T. M. Leshure, Easton, Pa.
McGuire & Hail, New York, N. Y.
Cranford Faving Co., Washington, D. C.
Johan Jacoby, Wilmington, Del.

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

CHICAGO, ILL.—It is reported that the Link Beit Ma-chinery Co., which has recently increased its capital stock from \$250,000 to \$375,000, will erect a new wrought iron foundry.—Reports state that the Schwarzschild & Sulz-berger Co., of Kansas City and New York, will erect a new packing-house in Chicago. The new bonse will be of the most modern design and will he operated by electricity; estimated cost, \$2,000,000. MARYSVILLE, CAL.—The Marysville woolen mill has been damaged by fire. Reported loss, \$125,000; insurance, \$71,400.

\$71.400.

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

ioss, about \$25,000. MANILA, PHILIPPINES.—Bids are asked until Marcb 30 for the erection of a large refrigerating plant and ice-making machine at Manila, capable of turning out 140 tons of ice a day. Estimated cost, \$200,000. Col. J. G. C. Lee, Q. M., 415 Puiiman Bidg., Chicago, Iii.

MISCELLANEOUS CONTRACTS.

SUPPLIES.-Toronto, Ont.-Bids are asked until March for general supplies. John Shaw, Chn. Bd. of Controi. 07 7 for general supplies. John Shaw, Chn. Bd. of Control. FIRE ALARM SYSTEM.—Flemington, N. J.—It is re-orted that the town authorities are considering the ques-tion of installing a new fire alarm system. HARDWARE, ETC.—New York, N. Y.—Bide are asked y the department of public charities, East 26th St., until narch 27, for furnishing hardware, oils, etz.

March 27, for furnishing hardware, oils, etc. WHARF,-Monteclto, Cal.-The Santa Barbara County Club has awarded a contract to John Williams, at \$2,750, for a footpath wharf 288 ft. long on iron piles. STORAGE WHARF.-Boston, Mass.-The utate Las awarded a contract to Geo. A. Cahili, at \$131,000, for constructing a storage wharf at South Bostoa. DREDGES.-Petersburg. Va.-The Viscinic, Dradow

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

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

\$500,000 of 4% park bonds, according to reports. EXCAVATING.-New Orleans, La.-Bids are asked until April 22 for excavating the main outfall canal; bond, \$5,000. A. Schreiber, Secy. Drainage Comn., City Hall. EXTENDING TUNNEL, ETC.-Ontario, Cal.-Bids are asked by the San Antonio Water Co. until April 8 for constructing an extension to the Bodenhamer tunnel, a bulkhead in the tunnei and a shaft near 21st St. B. C. Sbepherd, Secy.

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WHARF.-Martinez, Cal.-Patrick Manlan will apply to the board of supervisors, May 1, for permission to con-struct a wharf in the straits of Carquinez. PIER.-Atlantic City, N. J.-Geo. O. Rehfuss & Spencer Roberts, Arcbs., 1017 Harrison Bidg., Philadelphia, hare torium Pier Co.

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

PIERS.-Norfolk, Va.-It is reported that the Norfolk. Hampton Roads Co. has awarded a contract, at 375,000, to Sanford & Brooks, Baltimore, Md., for constructing piers on 15,000 ft. ot water front.

on 15,000 ft, of water front. DOCK AND DREDGING.—Sarnia, Ont.—The Eric Huron Steamboat Co. has awarded a contract to Joi Ginzel, Wyandot, Mich., for a slip dock, and to Ge Lackerble, Detroit, Mich., for dredging.

CULVERT AND CEMENT, --Pittsburg Landing, Ten.-Bids are asked by the Shiloh Battlefield Commission until April 6 for furnishing about 1,700 ft. of 24 to 12-in. cul-vert pipe and 100 bits. of Louisville cement. PIPE CULVERTS.--Chicago, lli.--Bids are asked until April 18 for constructing aline pipe culverts under the feeder of the lillnois & Mississippi Canal. Maj. W. L. Marshall, U. S. Engr., 1637 Indiana Ave.

feeder of the Illinois & Mississippi Canal. Mal. W. L.
 Marshall, U. S. Engr., 1637 Indiana Ave.
 BOLTS, NUTS, BOILER, ETC.-New York, N. Y. Bids are asked by the department of correction, 145 East
 Suth St., until April 14, for furnishing a hot water pressure tank, boits, nuts, flat iron, etc., and for iustalling:
 a new boiler in the steamer 'Wm. L. Strong.'
 CONCRETE WORK, ETC.-Marquette, Mich.-Bids are asked until April 17 for furnishing natural cement, Portand cement, broken stone, iron and hardware supplies, etc., for the concrete superstruer of the breakwater, as u. S. Engr., Duiuth, Mina.
 DOCKS AND WHARVES.-Tacoma, Wash.-It is remoted that the Great Northern Ry. Co. will calarge its wharfage facilities, extend the tea sheds north 600 ft. othe wat. C. S. Bibler, Div. Engr., Tacoma.
 DITCH.-Wapakoneta, O.-Bids are asked until March 20 for constructing about 30,000 cu. yds., at a cost of about 30,000 cu. yds., at a cost of about 30,000 cu. yds., at a cost of about synew.

CONTRACT PRICES.

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

D. C., March 11,							1	11	•	Subj	ect to reter	near Brightwood. Not subject to retention				
										Exca			Two		-of 10%. Concrete	
										va-	ma-		gate-	Va-		
										tion.	sonry.	Coping.	houses.		ma-	<i>a</i>
										Q11 (1977	\$8.75	\$2.10	\$8,257		sonry.	Coping.
										40	7.37	2.00	8.975	.27	\$8.24	\$2.00
										3 4 5		1.42	9.073		7.34	1.97
										.27	7.80	1.60-1.90		.141/2		1.42
										.24	7.87	1.70-2.65		.23	7.50	1.60 - 1.90
				-				-						.23	7.51	1.70-2.65
										.181		2.25	11,000	.17	8.00	2.00
C	0., 1	PI	hI.	la	d	ei	₽	b	a	.35	7.75	2.75	10,965	.30	7.00	2.75
			• •					• •		.29	7.76	1.15-1.80		.29	7.76	1.15 - 1.80
					• •			• 1				1.37-1.81		.17%	8.29	1.25-1.60
								• •			8.63	1.43-1.81	8,166	.19	7.86	1.25-1.65
										.40	8.70	1.50 - 2.00	8,982	.35	8.00	1.35-1.87
								• •		.50	9.95	1.38	10.245	.47%	9.40	1.32
										.40	7.20	1.00	7.300	.35	7.00	1.00
											9.70	1.90	10,000	.47	9.24	
												1.20	7.790	.23		1.85
										.40	8.25	1.90	8,000	.40	$\frac{8.12}{8.10}$	1.17 1.90

WATER PIPE.—Washington, D.C.—The district commis-sioners received the following bids March 11, 1889, for furnishing cast-iron water pipe: National Foundry & Pipe Works, \$23.30 a ton; Camden Iron Works (accepted), \$21.08; McNeal Pipe & Foundry Co., \$24.40. PAVING.—Saginaw, Mich.—H. E. Terry, Cy. Engr., in-forms us that the following bids were received March 17, 1899, for aspbsit and brick paving; the paving is on Court St., from M. C. R. R. to Bay St.;

Quantities.	tarber Asp. Paving Co., New York.	Jcatraz Con- st'n Co., New York.	Toledo, O.
xcavation 9,200 cu. yds.	\$0.15	\$0.20	\$0.15
rick paving 6.700 so, vds.	1.55	1.57	1.57
sphait paving 19.750 "	1.70	1.78	I.89
urb, fur. & set. 100 lin. ft	.60	.65	.60
lew curbstone 8,600 " "	.12	.17	.12
ile draln 520 rods	.60	.70	.60
rotection timber. 6,200 ft. B.M.	16.50	18.00	16.50

EBAC

Total \$46,846 \$49,517 \$50,733 The same submitted bids for paying in Hamilton St., from Court to Mackinaw St., at the same prices. The quantities are 2,000 cu. yds. of excavation; 1,840 yds. of brick paving; 3,860 yds. asphalt paving; 2,200 ft. curb-stone, reset, 135 rods of tile drain; 1,600 ft. of protection timber. Totals: Barber company, \$10,085; Alcatraz com-pany, \$10,657; F. E. Cole, \$10,856.

timber. Totals: Barber company, \$10,085; Alcatraz com-pany, \$10,657; F. E. Cole, \$10,856. SUPPLIES.-Detroit, Mich.-The following hids were re-ceived by the board of public works March 13, I806, for furnishing supplies for the year: Lumber-Salilotte & Per-gason, 2-in. Norway pine, \$18,64 a M. ft.; 2½-in. Norway pine, \$10,64; common lumber, \$14.36; white pine, \$24,86; hemiock plant, \$14.24; hemiock scantling, \$13,864. C. M. Restrick: 2-in. Norway pine, \$12,24; J-in. Norway pine, \$18,87; common lumber, \$12,25; J-in. Norway pine, \$18,87; common lumber, \$12; hemiock plank, \$12,33; hemiock scantling \$11.33; resurface sides, 50 cts. each Cement-Milwaukee Cement Co., 60 cts. a bbl., S cts. to be bbl., 5 cts. for empty sacks; H. Houghton, 53%, cts. a bbl., 10 cts. for empty sacks; F. B. Stevens, 56% cts. a bbl., 6 cts. for sacks. Receiving hasin stone-E. J. Delehanty, \$19 each, complete; Ortman & Co., Eucli \$19.84; Elyria \$21.04 each. Iron castings and fountains-The Co-opera-tive Foundry Co., \$1.30 rougd lock covers, \$2.25 round lock gates, \$1.40 Iron castings, \$29 Iron borse-fountalsa. This company will allow \$15 a to for the city's scrap Iron. Last year \$26,000 was expended for lumber, \$22,000 for cement, \$4,200 for sewer gates, \$7,800 for hasins.

NEWS Nearly Every Prominent Contractor and Manufacturer of Contractors' Supplies READS ENGINEERING AVAIL VOUDGELE OF THIS DADED WHEN DIDE ADE WANTED

