

There are some interesting and valuable tables, details, hand and travelling crane loadings and an exceptionally good abstract of the building laws of fourteen American cities.

W. S.

### PUBLICATIONS RECEIVED.

**Technical Drawing Series.**—By Gardner C. Anthony, A.M., Sc.D. Published by D. Heath & Co., Boston, Mass. Size, 6 x 8; pp. 105; price, \$1.00.

**The Condition of the Steel of the Gillender Building.**—Published by Toch Bros., 320 Fifth Avenue, New York.

**Standard Specifications for Structural Steel, Timber, Concrete, and Reinforced Concrete.**—By John C. Ostrup, C.E. Published by the McGraw-Hill Book Co., 239 West 39th Street, New York. Size, 6 x 9; price, \$1.00.

**Pure Water and the Pollution of Waterways.**—By Chas. A. Hodgetts. Published by the Canadian Conservation Commission. (Pub. doc.) Size, 6 x 9.

**General Specifications for Structural Work of Buildings.**—By C. C. Schneider. Published by The Engineering News Publishing Co., 220 Broadway, New York. Size, 6 x 9; pp. 70; price, 75 cents.

**Construction of Electric Furnaces for the Production of Pig Iron, Steel, and Zinc.**—By Eugene Haanel. Issued by the Department of Mines, Ottawa, Ont. Size, 6 x 9; pp. 80. (Pub. doc.)

**Ores, Non-Metallic Minerals, Fuels, etc.**—Report of analyses from 1906 to 1908 by F. G. Wait, M.A. Issued by the Department of Mines, Ottawa, Ont. Size, 6 x 9; pp. 130. (Pub. doc.)

**Sewage Disposal Works: Their Design and Construction.**—By W. C. Easdale. Published by Spon & Chamberlain, 123 Liberty Street, New York. Size, 6 x 9; pp. 260; price, \$2.50.

**Sewerage: The Designing, Construction, and Maintenance of Sewerage Systems.**—By A. Prescott Folwell. Published by the D. Van Nostrand Co., New York, 23 6 x 9; pp. 500; price, \$3.00.

**Dynamo Electric Machinery: Its Construction, Design, and Operation.**—By Samuel Sheldon. Published by the D. Van Nostrand Co., 23 Murray Street, New York city. Size, 5 x 8; pp. 330; price, \$2.50.

**The Tesla High Frequency Coil: Its Construction and Uses.**—By George F. Haller and Elmer Tiling Cunningham. Published by the D. Van Nostrand Co., New York, 23 Murray Street. Size, 5 x 8; pp. 125; price, \$1.25.

**Geology of the Haliburton and Bancroft Areas.**—By Frank D. Adams and Alfred E. Barlow. Issued by the Department of Mines, Ottawa, Canada. (Pub. doc.) Size, 6 x 9; pp. 410.

**Practical Shaft Sinking.**—By Francis Donaldson. Published by the McGraw-Hill Book Co., 239 West 39th Street, New York City. Size, 6 x 9; pp. 140; price, \$2.00.

**Electricity: Experimentally and Practically Applied.**—By Sydney Whitmore Ashe. Published by the D. Van Nostrand Co., 23 Murray Street, New York city. Size, 5 x 8; pp. 350; price, \$2.00.

**Reinforced Concrete in Sub and Superstructure.**—Vol. VIII., Deinhardt-Schlomann Series, technical dictionary in six languages. Published by the Copp, Clark Co., Limited, Toronto. Size, 4 x 7; pp. 415; price, \$1.80.

**Board of Estimate and Apportionment.**—Report of the City Engineer of the city of New York, 1909. Size, 7 x 10; pp. 390. (Pub. doc.)

**The Effect of Keyways on the Strength of Shafts,** by Herbert F. Moore, has just been issued as Bulletin No. 42 of the Engineering Experiment Station of the University of

Illinois. This bulletin records the results of tests made to determine the relative strength of solid shafts and shafts with keyways. Various sizes of shafts were tested, and for each size of shaft the weakening effect of keyways of several proportions was determined. Tests were made on shafts subjected to twisting only and on shafts subjected to twisting and bending at the same time. The results show that the weakening effect of keyways of the usual proportions upon the strength of shafts is considerable, a square keyway of the usual size causing a reduction of about one-sixth in the strength of the shaft. Formulas and a diagram are given for determining the effect of keyways of various proportions. The effect of keyways for the Woodruff system of keying is discussed. The results of the tests are summarized in a table showing the power which can be transmitted by various sizes of shafts with keyways of usual proportions. Copies of Bulletin No. 42 may be obtained gratis upon application to W. F. M. Goss, Director of the Engineering Experiment Station, University of Illinois, Urbana, Illinois.

**Rock Drills.**—By Eustace M. Weston. Published by the McGraw-Hill Book Co., 239 West 39th Street, New York. Size, 6½ x 9; pp. 370; price, \$4.00.

### CATALOGUES RECEIVED.

**Filters.**—The Roberts Manufacturing Co., of Chestnut Street, Philadelphia, Pa., describe their filters and attachments. These filters have several unusual features.

**Electric Specialties.**—The Verities, Limited, of Aston, Birmingham, England, forward a catalogue describing the large number of special attachments that may be used in connection with electricity. Not only household, but factory specialties are described.

**Incinerators.**—The United States Incinerator Co., 524 White Building, Buffalo, N.Y., describe a sanitary, odorless and economical destructor of garbage. This incinerator is adaptable and portable, and will be of great use in villages, mining and contractors' camps, doing away with the filthy and unhealthy cesspool.

**Automatic Sewage Pumps.**—Merritt & Co., of Philadelphia, Pa., are distributing a special package containing information of their various appliances for the raising of sewage and the control of sewage disposal plants. They will be pleased to forward the same to engineers interested.

**Chimneys.**—H. R. Heinickle, 147 Fourth Avenue, New York, N.Y., forward a catalogue describing and illustrating their design of hollow radial brick type of factory chimneys.

**Sewage Ejectors.**—The Ansonia Manufacturing Co., of 30 Church Street, New York, N.Y., describe their ejectors for sewage disposal plants. In addition to descriptive matter the booklet contains considerable tabular information.

**Sewage Filters.**—F. W. Stoddart, of Bristol, England, describe their continuous filter system in a brief pamphlet.

**Ditchers.**—The St. Paul Ditcher and Carrier Co., of St. Paul, Minn., are distributing an illustrated leaflet describing the Hovland tile ditcher.

**Belting.**—"The Difference between Albeco Laminated and Multi-Lap Leather Belting" is the title of a booklet being distributed by the American Laminated Belting Co., 113 Hudson Street, New York. This booklet is especially interesting in that it gives close comparisons of the operating principles, power transmitting qualities and ultimate economy of both types of belting.

**Sewer Pipe.**—The American Sewer Pipe Co., Akron, Ohio, are distributing an interesting booklet, fully illustrated, and containing detailed information as to their sewer and fittings, their size, dimensions and prices.