

Business and Personal.

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The Knowles Steam Pump Works, 113 Federal St., Boston, and 93 Liberty St., New York, have just issued a new catalogue, in which are many new and improved forms of Pumping Machinery of the single and duplex, steam and power type.

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We are sole manufacturers of the Fibrous Asbestos Removable Pipe and Boiler Coverings. We make pure asbestos goods of all kinds. The Calumers-Spence Co., 419 and 421 East 8th Street, New York.

Curtis Pressure Regulator and Steam Trap. See p. 45.

New Portable & Stationary Centering Chucks for rapid centering. Price list free. Cushman Chuck Co., Hartford, Conn.

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NEW BOOKS AND PUBLICATIONS.

THE DESIGNING OF ORDINARY IRON HIGHWAY BRIDGES. By J. A. L. Waddell. John Wiley & Sons, New York.

The object of this work is mainly to reduce the labor of designing bridges, thus facilitating the work of engineers, and to present the matter with sufficient detail and minutiae of plans and data for estimating cost to form a compendium of information of high value to county commissioners and others who have the responsibility of erecting public bridges.

COMPARATIVE PHYSIOLOGY AND PSYCHOLOGY. By S. V. Clevenger. Janesen, McClurg & Co., Chicago.

This book is a "discussion of the evolution and relations of the mind and body of man and animals." It is the work of a physician, with the object of elaborating, as far as possible, a mental science reconciling the observations of anatomists, psychologists, and pathologists, for the more intelligent treatment of insanity.

\*\* Any of the above books may be purchased through this office. Send for new catalogue just published. Address Munn & Co., 361 Broadway, N. Y.

Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information, and not for publication. References to former articles or answers should give date of paper and page or number of question.

(1) W. G. R. asks (1) how to make a starch enamel for stiffening collars, cuffs, etc. A. Use a little gum arabic thoroughly dissolved in the starch.

(2) J. W. asks (1) how to oxidize silver. A. For this purpose a pint of sulphide of potassium, made by intimately mixing and heating together 2 parts of thoroughly dried potash and 1 part of sulphur powder, is used.

(3) C. D. F. asks what a sample of wax sent is composed of, and a receipt for moulding wax for artists. A. To determine the composition of the sample would require an analysis.

(4) W. J. W. asks where he can get a light and cheap lapidary's outfit. A. This class of appliances is not on sale. A frame with wheel, shaft and spindle, placed in a vertical position, with two or three lead laps, one for coarse emery, one for fine emery, and one for polishing, also a lap made with end wood on a chuck for polishing, and a leather polisher, desirable for rounded work, are all that is needed.

(5) C. H. F. asks how the conducting power of heat in metals compares with that of glass. A. Glass is a poor conductor of heat for transmission. Iron transmits thirty times more heat than glass under the same conditions.

(6) J. J. P. asks: Would the dynamo described in SUPPLEMENT 161 produce the same amount of current if the layers of wire on the field magnets were wound in parallel circuit? A. With the present armature, no. 2. What size wire would be necessary to wind the armature for plating? A. Armature No. 14, field magnet No. 14, or with two No. 16 wires wound parallel.

(7) J. C. P. writes: At the bottom of page 278 of your last edition (No. 18) there is the following statement: "The outer terminal of the coil is connected with one of the screws, and the inner terminal of the same coil is connected with the screw in the next bar in order in the commutator cylinder."

(8) D. F. F. asks the formula for the paper torpedoes sold on 4th of July. A. The explosive material is fulminate of mercury.

TO INVENTORS.

An experience of forty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted,

May 10, 1887,

AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Table listing inventions with patent numbers. Includes items like Acid, production of a new naphthylamine-mono-sulphonic, Weinberg & Siebert; Aerated beverages, tablet for, S. R. Divine; Alarm, See Electric danger alarm.

Table listing inventions with patent numbers. Includes items like Car brake, J. A. Neichter; Car mechanism, cable, T. L. Johnson; Car motor, street, J. P. Sparks; Car seat lock, J. Kirby, Jr.