Business and Personal Wants.

READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. **In every case it is necessary to give the number of the inquiry.**

MUNN & CO.

Marine Iron Works. Chicago. Catalogue free.

Inquiry No. 7893.—Wanted, an electric wood floor surfacer.

"U. S." Metal Polish. Indianapolis. Samples free.

Inquiry No. 7894.—For manufacturers of a device for indicating steam engines known as the Schultz Manograph.

Handle & Spoke Mchy. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.

Inquiry No. 7895.—Wanted, modern machinery for opening large slate quarries where from 10 feet to 20 feet of stripping is to be removed; material, dirt and slate to be carried ¼ mile.

WANTED.—Partner for new invented current motor. Must furnish capital. Address Partner, Box 773, N. Y.

Inquiry No. 7896.—Wanted, channeling machinery, for use in slate quarries; enameling ovens, to enamel slate slabs; electric, hand, portable drilling machines; also air drills.

I sell patents. To buy, or having one to sell, write Chas. A. Scott, 719 Mutual Life Building, Buffalo, N. Y.

Inquiry No. 7897.—Wanted, makers of bottling machinery for soda and mineral waters.

The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Machine Company. Foot of East 138th Street, New York.

Inquiry No. 7898.—Wanted, makers of patent railroad spikes or similar devices for fastening rails to ties.

Fine Lithographed Letter Heads, Bill Heads, Envelopes and Checks, gives standing. Stilwell, 709 Pine St., St. Louis.

Inquiry No. 7899.—Wanted, a flexible shaft fitted with sand paper disk or cutter, for cleaning hulls of row-boats and motor launches.

WANTED.—To arrange with manufacturer for introduction of new bicycle. References. R. M. F., 2303 Strand, Galveston, Tex.

Inquiry No. 7900.—For manufacturers of pillow or feather ventilators.

FOR SALE.—Self-swinging gate, great improvement. Sell or lease on royalty. Patented November 21, 1905. Claude Siebring, George, Iowa.

Inquiry No. 7901.—Wanted, the name and address of the manufacturers of "reap hooks."

Metal Novelty Works Co., manufacturers of all kinds of light Metal Goods, Dies and Metal Stampings our Specialty. 43-47 S. Canal Street, Chicago.

Inquiry No. 7902.—Wanted, manufacturers of Franklin metal.

Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery tools, and wood fiber products. Quadriga Manufacturing Company, 18 South Canal St., Chicago.

Inquiry No. 7903.—Wanted, a small press for extracting oil from nuts.

WANTED.—To secure a party to manufacture a patent Ratchet Drill. Address Drill, Box 773, New York.

Inquiry No. 7904.—Wanted, the name and address of the manufacturer of the white metal finished casting, which requires no filing or other finishing.

Bates & Peard furnace for bright annealing all nonferrous metals. Without oxidation. No pickling or cleaning required. C. M. Dally, Agent, 29 Broadway, New York.

Inquiry No. 7905.—For manufacturers of magnets suitable for water meters.

Inquiry No. 7906.—For manufacturers of small turbines, such as the Francis or Gonval type.

Inquiry No. 7907.—For parties engaged in installing appliances for consuming oil for fuel under boilers.

Inquiry No. 7908.—Wanted, small wood grooved pulleys ¾ inch diameter by ½ inch wide; also non-elastic fancy cord ⅛ or ¼ inch diameter.

Inquiry No. 7909.—Wanted, makers of flour mill machinery.

Inquiry No. 7910.—Wanted, complete mints for copper and silver coins in different sizes.

Inquiry No. 7911.—Wanted, double shears to cut ¾ to 1¼-inch boiler plates, with and without steam power, also one shear on one side and a punch on the other.

Inquiry No. 7912.—Wanted, cotton-spinning machinery for hand, foot and steam power.

NEW BOOKS, ETC.

FORTY YEARS AN ADVERTISING AGENT. 1865-1905. By George Presbury Rowell. New York: Printers' Ink Publishing Company, 1906. 12mo,; pp. 517. Price, $2.

Mr. George P. Rowell is the dean of advertising agents, and his work has left an indelible impress upon the great business of publicity. During a long and diversified life, Mr. Rowell has seen vast agencies grow up from a single desk in a tiny office. While the earlier agents handled hundreds, the great agents of to-day handle appropriations which sometimes amount to a million dollars annually. The whole history of the advertising field is admirably portrayed in the fifty-two chapters, or papers, which make up the contents of this volume, which is illustrated with a number of interesting portraits and groups. The book will prove of great interest, even to those who are not especially interested in advertising proper. Some of the reminiscences are most interesting.

HOW TO MIX PAINTS. By G. Godfrey. Chicago: Press of the Western Painter, 1905. 12mo.; pp. 72. Price, 50 cents.

This is a practical treatise prepared for the needs of the practical painter. It is intended to aid the painter in mixing his colors when he desires to match a given shade. Chapter X on "Color Harmony" contains much that is helpful to the house painter and decorator.

DIAGNOSIS ON THE EYE. By Henry Edward Lane, M.D. Chicago: Cosmos Publishing Company, 1905. 8vo.; pp. 156. Price, $2.

Notes and 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.

Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn.

Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same.

Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

Books referred to promptly supplied on receipt of price.

Minerals sent for examination should be distinctly marked or labeled.

(9890) C. V. asks: In a dry room, more especially during the winter season on account of the drier atmosphere indoors, a person can electrify himself by shuffling in his shoes over the carpet. While doing this, if he hold his hand flat on a piece of paper placed against the wall, the paper will be found to adhere (or be attracted to) the wall, even for a few seconds after the hand has been removed from contact with it. This is, of course, an experiment, but what does actually take place, and how is the attraction of the paper to wall electrically explained? I understand the body gets charged positively (or overcharged) by the shuffling of feet on the carpet. Would then the paper, becoming positively electrified by contact with the hand, decompose by induction the neutral (electrical) state of the wall, and by attracting inductively the negative of the latter to itself, thus explain its adherence to the wall? Or does the paper only act here as a dielectric (or non-conductor between two attracting surfaces), thus explaining again the temporary adherence to the wall? Can you offer in a concise, yet detailed way, the real explanation for this adherence? A. The sticking of a piece of paper to a wall by an electrified hand pressing against it is due to electrical induction. The paper is a dielectric, the hand has a certain charge, perhaps positive on one side of the paper, and the other side of the paper becomes negative by induction and the surface of the wall is made positive, thus attracting the paper to itself.

(9891) A. W. B. asks: I write for a bit of information in regard to the Northern Lights. Have not seen them for years. They were always so bright in spring and fall, but as I say, have not seen them for years. I was inquiring of different ones around here, and they seem to know nothing about them, and so I was advised to write to you. A. We are not aware that there is any difference in the frequency of the Aurora from year to year, excepting as the sunspot period possibly may influence their numbers. If you will address an inquiry to the Weather Bureau, Washington, D. C., the observers there will doubtless be able to give you the figures on the subject, since records of the Aurora are usually kept as a part of the regular observations of the Bureau.

(9892) F. A. asks concerning a spring which broke while immersed in hydrochloric acid in order to clean it of rust. A. There is no probable connection between the action of the acid and the breaking of a spring, unless the spring has been in the acid for a very long time, in which case the acid would be destroyed, and the liquid would be a solution of chloride of iron in water. This would rust the iron by forming oxide of iron. Hydrochloric acid has only a slow action upon iron, and loses its acid qualities by contact with iron. It is impossible to break a spring by simple contact with an acid. Why then did the spring break? If you will refer to Kent's "Engineer's Pocket Book," page 238, Relation of Elastic Limit to Endurance under Repeated Stresses, and on page 240, Resistance of Metals to Repeated Shocks, the true explanation will be found. A bar of metal will break by the repeated application of a stress much below the breaking strength of the metal. Thus a bar of steel which would hold 40 tons per square inch broke by the application of 28.6 tons per square inch without shock for 170,000 times. The same result follows repeated shocks to a metal. Thus the firing of a gun will finally burst the gun, although the gun easily withstood the pressure at first. The bending of a spring is a similar case to the repeated application and removal of a weight. By and by the spring breaks. The spring in your case had been used for fifteen years, under strain all the time. It is not necessary to suppose any occult power of an acid, which it does not possess, to see why the spring broke.

(9893) A. M. G. asks: Please state in Notes and Queries column the number of vibrations per second for each note of the octave in the natural key from middle C of an organ or piano, for the first octave both above and below the middle C, at the recognized standard pitch as used in this country. A. The International Standard Pitch is for A above middle C, 435 vibrations a second. This gives for that octave of a piano or organ by the method of Equal Temperament, which is in universal use, C, 258.6; C sharp, 274.0; D, 290.3; D sharp, 307.5; E, 325.8; F, 345.2; F sharp, 365.8; G, 387.5; G sharp, 410.6; A, 435; A sharp, 460.9; B, 488.3; C, 517.3. For the octave below middle C, divide these numbers by 2. All octaves up and down are found by multiplying successively by 2 for upper octaves and dividing by 2 for lower octaves. Any octave has twice as many vibrations as the notes of the octave next below it had.

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