

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. 1013.—For the manufacturers of the "Kitchen Ice Machine."

TURBINES.—Lefell & Co. Springfield, Ohio, U. S. A.

Inquiry No. 1014.—For manufacturers of tools for repairing pianos, harmoniums and other musical instruments.

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

Inquiry No. 1015.—For a spring motor machine which can be operated by one man.

WATER WHEELS. Alcott & Co., Mt. Holly, N. J.

Inquiry No. 1016.—For deflated toy rubber gas balloons.

Yankee Notions. Waterbury Button Co., Waterbury, Ct.

Inquiry No. 1017.—For the manufacturer of the "Pennsylvania" high-wheel lawn mower.

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

Inquiry No. 1018.—For manufacturers of chemical fire engines.

Sheet Metal Stamping: difficult forms a specialty. The Crosby Company, Buffalo, N. Y.

Inquiry No. 1019.—For manufacturers of specialties in pipe stems or mouthpieces.

Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.

Inquiry No. 1020.—For manufacturers of wind powers for use on a farm for shelling corn, grinding feed, etc.

For Sheet Brass Stamping and small Castings, write Badger Brass Mfg. Co., Kenosha, Wis.

Inquiry No. 1021.—For manufacturers of electrical house goods, such as burglar alarms, bells, short line telephones, etc.

Rigs that Run. Hydrocarbon system. Write St. Louis Motor Carriage Co., St. Louis, Mo.

Inquiry No. 1022.—For manufacturers of acetylene gas generators.

Ten days' trial given on Daus' Tip Top Duplicator. Felix Daus Duplicator Co., 5 Hanover St., N. Y. city.

Inquiry No. 1023.—For manufacturers of wire netting machinery.

SAWMILLS.—With variable friction feed. Send for Catalogue B. Geo. S. Comstock, Mechanicsburg, Pa.

Inquiry No. 1024.—For manufacturers of gas engines in New York City.

We are equipped to manufacture all kinds of specialties. Send samples. Chicago Handle Bar Co., Chicago Ill.

Inquiry No. 1025.—For manufacturers of machines for making wooden pegs for shoes.

Kester Electric Mfg. Co's, Self-fluxing solder saves labor, strong non-corrosive joints, without acid, Chicago, Ill.

Inquiry No. 1026.—For manufacturers of pressed paper goods, such as pie plates, etc.

Manufacturers of Valves, Fittings, Brass and Iron Work. Spindler & Deringer, 18-22 Morris St., Jersey City, N. J.

Inquiry No. 1027.—For a gun to shoot a Winchester 44 shell, 1873 model, with one barrel, the other to be 14 gauge shot.

Special and Automatic Machines built to drawings on contract. The Garvin Machine Co., 149 Varick, cor. Spring Streets, N. Y.

Inquiry No. 1028.—For manufacturers of ice machines.

WANTED.—Party with means to make and test an apparatus in which liquid air can be made. Address H. A. Lasseter, Leander, Texas.

Inquiry No. 1029.—For manufacturers of electric dynamos.

See our Collective Exhibit—Section "S." Electricity Building, Pan-American Exposition. Standard Welding Company, Cleveland, Ohio.

Inquiry No. 1030.—For manufacturers of rag carpet fly shuttles with large wheels and pickers for the same.

FOR SALE.—New process for making oil with fish and fish offal is offered for sale or licenses in United States of America. Address Foreign, Box 773, New York.

Inquiry No. 1031.—For address of parties having Swedish anvils for sale.

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

Inquiry No. 1032.—For dealers in second-hand turning lathes and drill presses in Chicago, if possible.

The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins. By mail, \$4. Munn & Co., publishers, 361 Broadway, N. Y.

Inquiry No. 1033.—For manufacturers of air pumps and compressors.

WANTED.—A thoroughly competent engineer to push in United States of America a new, efficient and economical process, for dealing with large benefit towns' sewage and refuse waters from industry. Address France, Box 773, New York.

Inquiry No. 1034.—For dealers in elevating machinery for elevating grain and feed, and machinery for cleaning oats.

Wanted.—Foreman Repair Department by textile manufacturers, having a first-class plant. Must be a thorough mechanic, good engineer, able to make electrical repairs, etc. Wages, \$4 per day and no time lost. Address giving age, experience and full particulars, to C. & Co., P. O. Box 1816, New York City.

Inquiry No. 1035.—For manufacturers of electrical heating apparatus.

For sheet metal stamping, metal spinning, nickel plating, punch and die work, Press work, and manufacture of all kinds of specialties write The Admiral Lamp Company, Marysville, Ohio.

Inquiry No. 1036.—For manufacturers of portable houses.

McGILL UNIVERSITY, MONTREAL.—Chair of Metallurgy. The Governors of McGill University, invite applications for the Professorship of Metallurgy. Candidates for the appointment are requested to send their testimonials, with a statement of age, qualifications, etc., to the Secretary of the University, before September 1. The duties of the post will commence on October 1. Full particulars of the work, salary, etc., may be obtained from the Secretary.

Inquiry No. 1037.—For manufacturers of models of locomotives, made of cardboard.

Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway, New York. Free on application.

Inquiry No. 1038.—For manufacturers of a contrivance for burning petroleum in ordinary heating and cooking stoves.

Inquiry No. 1039.—For manufacturers of coffee roasters of about 150 pounds capacity and a cooler for same.

Inquiry No. 1040.—For manufacturers of small rubber balloons made of thin, white rubber.

Inquiry No. 1041.—For parties to make a metallic device for holding rubbers on when walking in mud.

Inquiry No. 1042.—For parties to manufacture a metallic device for checking and unchecking horses attached to vehicles without leaving the seat.

Inquiry No. 1043.—For parties to make a combined bicycle pump and seat post.

Inquiry No. 1044.—For the present address of the Farmers' Handy Wagon Co.

Inquiry No. 1045.—For manufacturers of aluminum springs 8 inches long, 3 inches wide and 1-32 or 1-8 inch thick.

Inquiry No. 1046.—For the manufacturers of a mechanical apparatus used for loading coal inside the pits, in the United States.

Inquiry No. 1047.—For manufacturers of machines for making tarred paper felts for roofing.

Inquiry No. 1048.—For builders of special machinery for weaving wire fences, etc.

Inquiry No. 1049.—For manufacturers of hot air engines with exhausts.

Inquiry No. 1050.—For manufacturers of cork-grinding machinery.

Inquiry No. 1051.—For manufacturers of stone-crushing machinery.

Inquiry No. 1052.—For manufacturers of small tin boxes with screw lid suitable for mailing samples of sand, three-quarters of an inch in depth and two inches in diameter.

Inquiry No. 1053.—For a machine to rivet 3-16 inch to 1-4 inch soft steel rivets 1-2 inch long, to secure 14 gauge plates to wood.

Inquiry No. 1054.—For manufacturers of strong metal cement.

Inquiry No. 1055.—Wanted, British agency for duplicating machines, office devices of all kinds, also hardware specialties.

Inquiry No. 1056.—For manufacturers of type-writer supplies.

Inquiry No. 1057.—For manufacturers of photographic goods.

Inquiry No. 1058.—For manufacturers of automobiles.

Inquiry No. 1059.—For manufacturers of bicycles and sundries.

Inquiry No. 1060.—For manufacturers of gramophones and gramophone dictation supplies.

Inquiry No. 1061.—For manufacturers of electrical novelties.

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.

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.

(8269) W. B. H. writes: I was given a question in a recent examination that the examiner stated was proved in a copy of your magazine; but he could not state the date the example appeared nor prove it himself. The problem read: "Do the amperes or volts increase when the electricity passes through an ordinary spark coil for gas lighting?" I said volts, yet my examiner says the answer is amperes, which I doubt. A. The volts are raised in the action of the ordinary spark coil in gas lighting. This coil has but one winding, no secondary. It is not an induction coil in the usual sense. The spark is produced by the self-induction of the current in the turns of the primary upon itself. This produces a higher E. M. F., which causes a considerable spark. There can be no more amperes in the circuit than the generator can produce.

(8270) F. B. asks: Please answer the following through your columns. I have a vessel containing 16 parts of pure whisky. If I take one part out and fill it with water, so the vessel is still full, and so continue until I have taken 16 parts out of it, how much whisky is there in the sixteenth or last part? How can this be calculated? A. You must excuse us from answering this very interesting question. Life is too short. We will, however, give you the method of finding the answer and you can employ your leisure time upon it. When the vessel is filled with water the first time the mixture is 15-16 whisky. One-sixteenth of this is drawn out and replaced with water. The mixture thus becomes 15-16 as strong as it was the time before, or 15-16 x 15-16 whisky. This is (15-16)², or 225-256 of the whole. The next time there will be (15-16)³ whisky left; and so on to the sixteenth filling, when there will be (15-16)¹⁶ of whisky, and the rest will be water. The last state of this is strong enough for health. Multiply the fraction 15-16 by itself fifteen times, and you will have the answer. Buy a lot of large-sized sheets of paper before you begin.

(8271) W. A. L. asks: Is there any other metal that can be used in a gravity battery besides zinc that will not dissolve? A. There is no way of obtaining electricity without using up some material. In the dynamo steam or water power is employed. In the battery we usually burn up zinc. It is just as impossible to produce electricity without a disappearance of some other form of energy as it is to heat a house and still have the coal, or cool a refrigerator and still have the ice.

(8272) J. K. asks: Please inform me why two telegraphic instruments will not work when set up in series. One of the instruments is a 4-ohm, and the other I think is larger. The larger one can be heard from another room, while the small one can barely be heard at all. A. The smaller of the two instruments does not get current enough to work the magnet. In order to work together, they should have nearly the same resistance.

(8273) E. B. asks: 1. Have you any SUPPLEMENTS containing articles relating to the care and maintenance of the sal ammoniac battery used in telephone work? A. Carhart's "Primary Batteries" gives considerable space to the sal ammoniac battery. Price \$1.50 by mail. 2. Can you recommend a book suitable for one who has to look after the repair of a telephone line? A. Hopkins' "Telephone Lines and Their Properties," price \$1.50 by mail.

(8274) J. S. T. writes: I have been fitted with glasses to correct astigmatism. Without glasses the rays of an ordinary street lamp appear extended perpendicularly; with the glasses they appear longer the opposite way. If glasses were properly ground, should not the rays radiating from light appear of uniform length? A. If your astigmatism were perfectly corrected by the glasses, objects would be seen in their correct outlines.

(8275) W. M. S. asks: 1. Whether a patent has ever been taken out in this country or abroad for a wireless telephone? If so, will you explain briefly the principle of its operation? A. The waves set up by the transmitter of a telephone can be transmitted into the space around the line and to a certain distance from the wire in the same way as is done in wireless telegraphy. No one knows to what extent this may be developed in the future. 2. Whether a patent has ever been granted for an optical transmitter of pictures by electricity? By that I mean an instrument which will transmit a scene before a camera-like sender and reproduce it on a screen, or otherwise impress the transmitted picture on the eye, either with or without their natural colors. If so, will you explain the bare principle? A. We do not know of any such process in a practical form, though it has often been the subject of speculation and somewhat of experiment. See SCIENTIFIC AMERICAN SUPPLEMENT, No. 1178. 3. Is there any solid, reasonably good conductor of electricity which can be applied with a brush when liquid? A. Almost any bronze or aluminum powder may be applied by a brush so as to be a conductor.

(8276) W. A. P. asks: 1. Should an ammeter be placed in the positive or negative terminal of a direct-current 110-volt dynamo? A. The ammeter may be placed at any point whatever in an electric circuit, since the same current flows through every part of a circuit. This is just like the flow of water through a pipe. If you had a pipe 1,000 feet long from a reservoir to your house, the same water and just as much would flow through every foot of the pipe, and a meter might be put into the pipe at any point in its length and the quantity of water flowing through the meter to be measured. 2. How much more would it register in the former than in the latter? A. It would register the same in either side of the circuit. It makes no difference where the ammeter is placed.

(8277) B. A. T. asks: 1. How many pounds of wire are used to wind the armature of the electric motor described in the issues of the SCIENTIFIC AMERICAN for December 8 and 15, 1900? Also the field magnet? A. About a half-pound for the armature and the same for the field. 2. How many watts are necessary to run it at its utmost power? A. We do not know. Somewhere from 12 to 24. Four cells of 2-volt battery, put two on series, should run it. 3. Cannot other journal boxes than the brass balls mentioned be used, such as a block of iron smoothly bored? A. Yes, of course; any kind of bearings can be used.

INDEX OF INVENTIONS

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July 9, 1901,

AND EACH BEARING THAT DATE.

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