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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 This is for our information and not for publication.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.

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Minerals sent for examination should be distinctly marked or labeled.

(7015) W. J. B. asks: 1. Under separate cover I send a sample of a bug which we found in pearl barley. Please give me its name and a preparation with which to kill them. A. The specimen represents the common granary weevil (Calandra granaria), one of the most injurious enemies of stored grain, both in this country and abroad. It attacks grain of all sorts, and is partial apparently to pearl barley, as it is often reported in this grain. See page 279 of a pamphlet on "The More Important Insects Injurious to Stored Grain," which the Department of Agriculture, Washington, D. C., will send you on application. The best remedy for granary insects is bisulphide of carbon, and you will find an account of how to use it on page 293. Answer by Mr. L. O. Howard, Entomologist, United States Department of Agriculture. 2. What is the best book for beginners in the electrical subject, which gives rules for the calculation of the electric motor, etc.? A. Dr. Sloane's "Arithmetic of Electricity," $1 by mail.

(7016) G. S. A. asks: Please inform me what to use to keep belts from slipping. Is resin injurious to belts? A. Beeswax is the best application for keeping belts from slipping. Rub the pulleys or the inside of the belt with a piece of wax. It needs but very little.

(7017) M. J. S. asks: 1. What is meant by open and closed circuit work in connection with batteries? A. An open circuit battery is one adapted for occasional or intermittent work only. Such a battery must be inactive when the circuit is open, and must have the property of depolarizing itself so as to be ready for use when needed. It may be very quickly polarized in use without detracting from its availability. A closed circuit battery must not be easily polarized when in use, and may, and often does, polarize when not used. 2. What is best form of battery (primary) for electroplating with gold, silver, copper and nickel, and about how many cells of a given size would be required to work five to ten gallons of silver solution? A. There are many batteries which will answer. The copper sulphate, Daniell and gravity and the Smee are often recommended. For full description of batteries see our SUPPLEMENT, Nos. 157, 158, 159, 792; for electroplating see Nos. 310 and 436. 3. Does cyanide in plating solutions attack asphaltum varnish? A. No. 4. How thick can a copper or silver deposit be made? A. As thick as desired.

(7018) Typo asks: 1. How can one tell direction to run a dynamo, of whatever make? A. The commutator cylinder must be turned away from the ends of the brushes if copper ones are used. If carbon brushes are employed, it can be run either way, but proper lead must be given the brushes. 2. Post to attach load wire and return wire, whatever the style of dynamo and position of its posts. A. While dynamo is running immerse the ends of the wires in copper sulphate solution. Copper will at once be deposited on the load wire. 3. What rules govern, if there is any danger to the plating generator in using too small a bath of solution or piece of work, with machine run at highest speed it was built for? A. There is no danger to the machine.

(7019) L. A. B. says: Please give me, through your paper, a recipe for a cement that will stick glass together, and be acid proof, something that will make a good photo. bath tray of clear glass, prisms, etc. A. A cement which, according to Dr. Wagner, is proof against even boiling acids, may be made by a composition of India rubber, tallow, lime, and red lead. The India rubber must first be melted by a gentle heat, and then 6 per cent to 8 per cent by weight of tallow is added to the mixture while it is kept well stirred; next dry slaked lime is applied, until the fluid mass assumes a consistence similar to that of soft paste; lastly, 20 per cent of red lead is added, in order to make it harden and dry. 2. For bisulphide of carbon prisms, Mr. Lewis M. Rutherfurd, who has had much experience in this subject, employs a cement of glue and molasses. The surfaces must be perfectly clean; they are then warmed and dusted with a fine camel's hair brush, and placed in contact. A hot and fluid mixture of glue and molasses is then applied around the edges, and penetrates by capillary attraction. It must be left a day or two to harden, before preparing the next side. A ground stopper was also rendered tight by a little molasses. (See Silliman's American Journal, March, 1865.) Marine glue is also employed, and we suppose that the cement from glycerine and litharge may be.

(7020) L. B. says: Please give me through your valuable paper a remedy to cure asthma. A. The most popular remedies for this disorder are those used by inhalation.

	Drachms.
Grindelia	8
Jaborandi	8
Eucalyptus	4
Digitalis	4
Cubebs	4
Stramonium	16
Potassium nitrate	12
Cascarilla bark	1

The ingredients should be in fine powder, and thoroughly dry before mixing. The composition is used by burning from one-fourth to one-half teaspoonful, and inhaling the smoke. The nitrate of potash is dissolved in water, and the powder moistened with it and dried.

(7021) Dr. H. asks: In what number or numbers of your publications can I find a recipe for a grease-proof cement for glass? It must withstand a considerable degree of heat. A. The hardest cement is produced by triturating 50 grm. (grammes, not grains) of litharge with 5 cubic centimeters of glycerine; if more glycerine is used, the mass hardens much more slowly and imperfectly. The small proportion of glycerine, however, makes it impracticable to prepare large quantities of the cement at a time. For this purpose it will be necessary to take more glycerine. . . . The most favorable results are obtained by adding 2 volumes of water to 5 volumes of glycerine (s. g. 1·240). Six cubic centimeters of this liquid are incorporated with 50 grammes of litharge. This mass requires a shorter time than any other proportions to produce a hard cement, ten minutes only being required to harden moderately, while after two hours it becomes harder than any mixture containing glycerine and litharge alone; but after a few days the latter compound (prepared without water) overtakes the former in hardness, and remains so. If it is desired to produce a cement which rapidly hardens and still have considerable firmness, it is advisable to use water with the glycerine.

TO INVENTORS.

An experience of nearly fifty 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 unequaled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all foreign countries may be had on application and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices, which are low, in accordance with the times and our extensive facilities for conducting the business. Address MUNN & CO., office SCIENTIFIC AMERICAN, 361 Broadway, New York.

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October 27, 1896,

AND EACH BEARING THAT DATE.

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