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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 This is for our information and not for publication.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.

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.

INDEX OF NOTES AND QUERIES.

Table with 2 columns: Item, No. Gold, to detect... 4268 Vessel, the largest... 4269 Spunk... 4270 Tempering tools... 4272 Horn, to straighten... 4273

(4268) R. M. asks: 1. I noticed by some of the papers published in this section of the country, a test for gold ore to detect the presence of gold, as follows: If free oxidized ore, pulverize it and place in a cup. Cover with a solution of iodine and let it stand for about two hours, then try filter paper in it. If it gives a purple color after being burned, it contains gold, and the deeper the color of the paper the richer the ore. Is there anything in the above? Is iodine a solvent for gold? What chemical action takes place? A. The iodine dissolves the gold, and the burning forms a species of "purple of Cassius." 2. What other solvent besides aqua regia is there for gold? A. Chlorine, iodine, bromine, and probably fluorine.

(4269) H. B. asks (1) what Salix nigra is and what are its properties. A. The bark or root of Salix nigra, black willow, has been used in medicine as a feebly tonic and anti-periodic. 2. Also is there any such thing as magnetic oil of amber, its properties and where can it be got? A. The name is senseless; it may apply to some proprietary preparation. 3. What is the name of the largest vessel ever afloat, and how much water did it draw? Was it not the Great Eastern? A. The Great Eastern of all modern vessels. See our SUPPLEMENT, Nos. 584, 680, 830, for articles about this ship. She drew 28 feet.

(4270) F. T. M. writes: I want to find out about the preparation of agaricus (spunk or amadon); can you recommend me to an authority? A. It is said to be made from dried mushrooms, Boletus foenestratus and others, and to adapt it for use as tinder it is soaked in solution of potassium nitrate or chlorate. For a very full account we refer you to the United States Dispensatory, ed. 1886, page 1562.

(4271) "Young America" is mistaken when he states that a platinum rod is required in the dry battery described in "Experimental Science."

(4272) A. E. P. asks: I should be glad to know through the medium of your paper if there is any known remedy for "water cracks" in steel tools tempered in water, especially in the case of rock drills. A. There is no remedy for water cracking of steel in hardening by any special application. The trouble generally originates in the work of forging. Rock drills have corners that become overheated by the carelessness or hurry of the blacksmith. When this has been once done to a drill point, the structure of the steel is changed and the only restorative is to cut off a piece and draw to shape again. Great care should also be taken when heating to harden; a slow fire and time for the heat to become even through the metal should be taken. Dip in water or salt water at as low temperature as the steel will harden. This can be readily

known by two or three trials with the quality of steel that you are using. Hardening too high heat is too often the sole cause of water cracking.

(4273) L. M. asks how to straighten horn, not in its entirety, but say a piece seven inches long by 2 1/2 inches wide, for inlaying work, and which glue would be the best to use, as I am making the top of a horn table? A. Small pieces of horn can be straightened by heating in boiling water and flattening in a press or between clamps in a vise. If it does not stay flat the first time, heat the pieces a little hotter than boiling water, over a fire or in a flame, and put quickly into the press. Sometimes hot oil is used to heat the pieces in, which makes the horn very soft; but as you want to glue the pieces to the table top, it is better to flatten by hot water or dry heat. Good strong brown glue is the best. Roughen the under side of the horn with a coarse rasp before gluing.

R. J. McK. asks how the bulbs of incandescent lamps may be tinted.—B. J. C. asks how lamps are charged with diamond dust.—R. L. M. asks: What is the process of etching on steel and copper?—P. W. S. asks: How can I clarify molasses?—A. H. A. asks: Will you give me simple rules for chemical nomenclature?—C. S. asks: Have you a formula for the paste used in making paper into pads?—W. N. E. asks: Can you give me information about a benzine pencil?—H. J. F. asks how dangerous types may be restored.—B. L. P. asks: How is German silver polished?—C. A. W. writes: I am desirous of making a good and cheap boot powder; can you give me a formula for one?—I. T. T. asks: Can you inform me how soap is mottled?—J. D. G. asks for a formula for lacquer for sheet metal, also matt lacquer?—E. B. L. asks a receipt for a first class mayonnaise dressing for salads, etc.—C. E. M. asks: Where can I obtain formulas for the standard perfumes.—R. H. N. asks for formulas of platinum toning baths.—P. C. T. asks: What is the composition of the greasy paints used by the theatrical profession?

Answers to all of the above queries will be found in the "Scientific American Cyclopaedia of Receipts, Notes and Queries," to which our correspondents are referred. The advertisement of this book is printed in another column. A new circular is now ready.

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April 19, 1892,

AND EACH BEARING THAT DATE.

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