

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 This is for our information and not for publication.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 remneration.

Scientific American Supplements referred

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

Books referred to promptly supplied on receipt of

Minerals sent for examination should be distinctly marked or labeled.

(7389) E. A. L. asks: Will you pub lish a formula and directions for making library paste? A. 1. Tragacanth, 1 ounce; gum arabic, 4 ounces; water, 1 pint. Dissolve, strain, and add thymol, 14 grains; glycerine, 4 ounces; and water to make 2 pints. Shake or stir before using it. Swell the tragacanth in cold water. 2. Rye flour, 4 ounces; alum, 1/2 ounce; water, 8 ounces. Rub to a smooth paste, pour into a pint of boiling water, heat until thick, and finally add glycerine, 1 ounce; and oil of cloves, 30 drops. 3. Rye flour, 4 ounces; water, 1 pint. Mix, strain, add nitric acid, 1 drachm, heat until thickened, and finally add carbolic acid, 10 minims; oil of cloves, 10 minims; and glycerine, 1 ounce. 4. Dextrin, 8 parts; water, 10 parts; acetic acid, 2 parts. Mix to a smooth paste, and add alcohol, 2 parts. This is suitable for bottles of wood, but not for tin, for which the first three are likewise adapted.

(7390) F. H. B. writes: I am trying to make dynamo out of the simple electric motor 641, also in "Experimental Science," and would like you to inform me what size wire and how many turns will I wind on each coil of magnet. I have made the armature the same as the eight light dynamo described in one of your papers It has 12 coils, 28 turns on each coil, size of wire No. 20 double cotton. I would like to get the best results pos sible, that is 110 or 50 volts, and as many amperes possi ble. Kindly let me know the size wire, the voltage and amperes, also at what speed it is to run. A. Wind on the armature as many turns of No. 24 wife as you can put on, keeping the same number in each coil. Wind on each field 400 feet of No. 20 wire, 1,600 feet in all, connect in series with the armature. The speed should be abou 2,000 per minute; the voltage, 40.

(7391) A. S. asks: 1. Where can I get the eighty feet of tin foil 6 inches wide for the condenser of the coil described in Supplement, No. 160, also the glass tubes and egg shaped vessels described in SUPPLEMENT, No. 166? A. Address any dealer in electric supplies or physical apparatus. Our advertising columns will furnish this information. 2. Does it make any difference which side I start the secondary? A. No. 3. In regard to the spring of vibrator, drawings in Sur-PLEMENT are one half size. Then the spring would be 1-16 thick, 1/2 wide and 21/2 long, which would be much too heavy for a spring. Please state thickness of Brown & Sharpe gage if possible. A. The thickness of brass is not a guide to its elasticity. Use a moderately stiff piece of spring brass and file it till it works properly. Use judgment and experiment till you have what you want. 4. Would it be better to shellac the wires in the core? Each wire, I mean. A. The layer of oxide which forms on the wires when they are heated to soften them will protect them sufficiently.

(7392) G. N. M. asks: Is black considered a color by itself, generally speaking? In what relation does it stand to other colors? A. In a strict sense black is not a color. It denotes the absence of light and therefore of color. It absorbs all serts of light which falls upon it and gives none back again. Yetin ordinary speech black is used as an attribute of the word color, as a black color. See the Century Dictionary under this word.

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INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

MARCH 20, 1808,

AND EACH BEARING THAT DATE

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

| | - |
|--|-----------------|
| Acids, apparatus for concentrating, E. Hart | 601,466 |
| Acids, apparatus for manufacturing, G. P. Adam- | |
| sen | CO1.457 |
| Air brake, W. O. Gunckel | |
| Alloy, metallic, G. R. Evans | 601,338 |
| Ancher for securing jetties, etc., G. S. Baillie | |
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| Atomizer, I. O. Gurnee | |
| Atomizer, I. Q. Gurnee | |
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| Bars or girders, machine for cutting, W. Werner. | CO1.CO6 |
| Bath tub, G. Booth | c 01,236 |
| Bathing suit, J. W. D. Davis | |
| Rottong San Storago bottong | ,000 |

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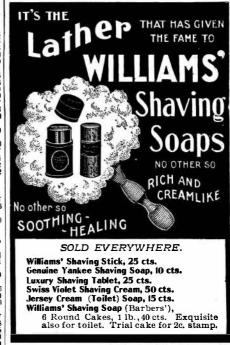
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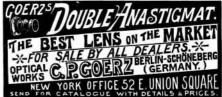
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