

let on a hard wood block. Although the steel when cold would break like glass with this treatment, when slightly warmed it will yield to moderately heavy blows un injured.

(5164) W. S. writes: 1. I hear that it costs \$2 a day to take cameras into the World's Fair grounds.

camera taking a picture over 4x5 in the grounds? A. They do not, except in the case of photographers representing illustrated journals. Such photographers must obtain a special permit from the official photographer.

(5165) W. S. P. writes: 1. In regard to the induction coil in the home medical battery, what kind of wire is used in the primary coil, and how many feet? A. It will probably require 5 or 6 feet of No. 36 wire.

(5166) C. T. V. asks: 1. What kind of electricity is that generated by the dynamo? A. Dynamic. 2. Why is so much precaution exercised in the stringing of fire alarm wires when only one wire is exposed to the dampness?

(5167) D. C. B. asks: 1. What is the E. M. F. of a nickel-plating dynamo of 40 gallons capacity? A. 7 or 8 volts. 2. About what size wire should I use on an electro-magnet to be used with this machine?

(5168) W. E. S. asks: 1. Will you give me the formula for charging a Bunsen battery? A. Make a saturated solution of bichromate of sodium in water; to this slowly add one-fifth its bulk of commercial sulphuric acid.

(5169) H. W. B., Jr., writes: I have seen described in the Notes and Queries of your paper a battery composed of sheets of zinc and copper with blotting paper in between; will you tell me what the paper is wet with, how thick should the zincs and coppers and the paper be to secure the best results?

(5170) G. R. asks the cause of holes about the size of a tackhead and larger on the sides of a stereotype plate, such as used on newspapers, after the tails are cut off. These holes form whether metal is poured hot or cold.

(5171) A. Z. writes: 1. In Wimshurst electric machine described in "Experimental Science," could vulcanite be used for rotary disks? Would they be better than glass?

or window glass that will retain the electricity. What kind of glass or how prepared will answer the purpose? A. Use soda glass. Leadglass is a conductor of electricity, although a very poor one.

(5172) O. C. C. asks: 1. Please tell me the gross weight, charged, of a primary battery maintaining (for motor power) after a fifteen minutes' run about 1/4 horse power. A. 50 to 60 pounds.

(5173) T. T. writes: Recently during a thunder storm here a church was struck by lightning. The steeple was struck first, then the interior was visited, leaving a long streak where it had scorched the wall paper.

(5174) M. C. P. writes: I wish to ask you a question in regard to my wood saw that I have just rigged up. It has a balance wheel weighing from 100 to 125 pounds, 26 inches in diameter, is a web wheel.

(5175) T. D. McC. asks: 1. In the Blake transmitter, is the fine wire wound next to core or on the outside?

(5176) T. D. McC. asks: 1. In the Blake transmitter, is the fine wire wound next to core or on the outside? A. In the Blake transmitter the fine wire of the induction coil is wound upon the coarse wire.

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INDEX OF INVENTIONS For which Letters Patent of the United States were Granted June 27, 1893

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