

Business and Personal.

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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 This is for our information and not for publication.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.

(7689) J. W. B. asks for the composition of the materials used in making the electro-polishing cloth; it is a cloth filled with something, and is used to polish all kinds of metal, silverware and glass. Also the composition of the magical sponge used for the same purpose.

(7690) L. E. T. asks: Why is lightning always visible around the horizon, never being seen directly overhead? A. In answering this question, we should, in the first place, express a doubt of the statement that lightning is never seen directly overhead. It is true that people very rarely look directly overhead; but if they did, we think they would sometimes see the lightning flash across the zenith from one part of a cloud to another part.

(7691) W. S. L. writes: I have read your description of the Jeanty battery. 1. What voltage will each cell give and what amperage on short circuit? How many cells will be required to charge storage battery? A. We have no knowledge of the Jeanty cell beyond what is contained in the SUPPLEMENT, No. 1225, translated from the French journal Cosmos.

which the gravity cell can be used. In charging storage cells, five of these cells will be required for each two storage cells. We do not know whether these cells have been introduced into the United States or not.

(7692) F. A. W. writes: I would like to ask a few questions in regard to the primary battery Jeanty that you illustrate in issue of June 24, 1899. What is the E. M. F. of battery? Are they made in different sizes? If so, what is the size and weight of cells of different capacity?

(7693) C. B. M. writes: In experimenting with electric detonators for blasting, etc., I wish to procure some data regarding same, such as resistance of platinum wire, heat generated, amount of current required, etc.

(7694) W. F. D. asks: 1. Is there any known substance (or substances) through which electricity cannot pass? If so, please name them? A. Any insulator fulfills the requirement of this question. There are many of these. Those in common use are glass, mica, porcelain, slate, India rubber, gutta percha, vulcanized fiber, paraffine, paraffine oil, and various other oils, both of animal and vegetable origin.

(7695) W. P. C. asks: What length of spark must an induction coil give to successfully operate an X-ray tube? A. Coils giving a spark of an inch or even less in length have been used to produce X-ray pictures. This is due to the fact that the effect of the rays upon the plate is cumulative, and by prolonging the exposure a picture can be made with a small tube and small coil.

(7696) J. T. M. asks: Will you oblige me by giving me the address of some house which can furnish all necessary material for making the electric motor which is described in SCIENTIFIC AMERICAN SUPPLEMENT, No. 641? How can this machine be made to produce an electric light, if at all?

(7697) G. B. O. asks: Will two equal waves of light or sound, coming from opposite directions and meeting each other, cause darkness, or stillness, respectively? A. If two waves of any sort meet each other in opposite phases, as, for instance, the crest of one falling into the trough of the other, these waves will destroy each other.

(7698) M. R. M. asks: The way to find the magnifying power of a telescope, field and opera glass, and, so doing, your kindness will be thoroughly appreciated. A. For the magnifying power of telescopes, divide the focal length of the object glass in inches by the focal length of the eye piece in inches, if a single lens.

(7699) G. M. asks: Will you kindly inform me whether the armature can be wrapped with eleven coils instead of twelve in the simple electric motor described in SUPPLEMENT, 641? A. You need not re-wind your armature because you have room for but eleven coils instead of twelve as designed.

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INDEX OF INVENTIONS For which Letters Patent of the United States were Issued for the Week Ending JULY 11, 1899, AND EACH BEARING THAT DATE.

Table with multiple columns listing inventions, names of inventors, and patent numbers. Includes items like Accumulators, Acids of aliphatic cresotesters, Addressing machine, and various agricultural and domestic implements.

Continuation of the patent index table from the previous column, listing more inventions and their details.

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Table listing various machinery items and their prices, including: Mercerizing apparatus, Merry-go-round, Metal bars apparatus, Morgan, Mill, Moisture chamber, Mould, Moulding machine, Motor, Musical instruments, Necktie, Newspaper folder, Numbering punch, Nut lock, Ordnance breech loading, Organs, Oven baker, Packing box, Packing metallic, Packing rod, Paint agitator, Paneling and veneering, Paper apparatus, Paper cutter, Paper machine, Parting fruit, Pen fountain, Percussive tool shield, Perfecting press, Photographic plate holder, Photo printing processes, Picker, Pin, Pipe joining apparatus, Pipe wrench, Pipes, Plating machine, Plow, Plow Mabry & Morgan, Plow, M. J. Seifried, Plow clevis, Pneumatic wheel, Pot, Potato digger, Press, Primary battery, Printing attachment, Printing machine, Prints, Pump or motor, Punch making machine, Puzzle, Radiator, Rail joint, Railway switch, Range boiler, Reclining chair, Refrigerator, Register, Rein holder, Rock drill, Rotary engine, Rudder hinge, Saddle clamping attachment, Safety pin, Sash window, Sausages, Saw filing machine, Saw sharpening machine, Scale, Scale, G. W. Chandler, Scale, combined multiple weight and pendulum, Screw machine, Screw machine speed changing mechanism, Screws, etc., Shading device, Secondary battery, Separator, Sewing machine, Shade cutter, Shaker attachment, Sharpening rotary cutters, Shears, Ship, Ship's rudder frame, Snow case, Signaling apparatus, Signaling device, Signature gatherer, Sled, Sleigh brake, Snap, harness, Soap cutting machine, Solder, Sound recording, Spigot, Spike, Spindle, Spinning frame, Spinning ring holder, Spout and spouted vessel, Spring coupling, Square, steel, Stamp, Stamp mill, Stand pipe and fire escape, Staple, Steam engine, Steam generator, Steam heater, Street sweeper, Sterilizing canned goods, Stovepipe cleaner, Stovepipe coupling, Strainer for liquor barrel faucets, Street sweeper, Sulfo compound, Switch, Tagging plug tobacco, Telephone switch apparatus, Telephone time alarm, Textile fabric, Theater dimmer, Thill coupling, Threshing machine, Tile, Timepiece holder, Tires, Tobacco press, Toe weight, Tool holder, Tool holder for machine tools, Top roll, Toy, Toy, Toy, Trace carrier, Track fastener, Train order delivering mechanism, Trap, Trial frame and optometer, Trolley, Trolley pole, Truck, Truck and ball, Truck, car, Truck side bearing, Tufting device, Turbine.

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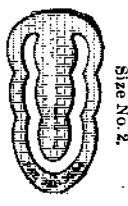
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