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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 This is for our information and not for publication.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 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.

(7502) C. V. F. asks: 1. Will you please tell me if the moon gives any heat? A. Certainly; the moon gives off heat. You will find a statement on this point in "The New Astronomy," by Prof. Todd, price by mail, \$1.50.

(7503) E. D. B. writes: In a recent Notes and Queries column you gave the ingredients of a polarity tester that discolors at the positive pole. Will you please let me know what is used in the testers that give a purple discoloration at the negative poles?

- 1. Alcohol..... 10 parts. Phenolphthalein..... 1 " Dissolve and add Water distilled..... 110 " 2. Water distilled..... 10 parts. Sodium sulphate..... 1 "

Soak blotting paper in No. 1. Drain and soak in No. 2. After this let it dry. To test pole of open circuit, moisten a strip of the paper and place the ends of the wires about an inch apart upon it.

(7504) J. L. C. writes: I should like to know if there is anything about new hay to attract the lightning, as a number of barns have been burned by lightning this year after the hay was in. A. We have no explanation to offer for the belief prevalent among farmers that barns are more frequently struck by lightning when full of hay.

NEW BOOKS, ETC.

THE TELEPHONE. Outlines of the Development of Transmitters and Receivers. By William J. Hopkins. New York, London, and Bombay: Longmans, Green & Company, 1898. Pp. 83. Price \$1.

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INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

SEPTEMBER 20, 1898,

AND EACH BEARING THAT DATE.

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

Table listing various inventions such as Acid, making salicylo-acetic, L. Limpach; Advertising device, G. A. Stout; Air brake, H. S. Park; Alarm clock, E. N. Case; Alloy, aluminum, W. A. McAdams; Auger twisting machine, W. M. Hamilton; Axes, hammers, etc., to their handles, means for securing blades of, E. Barber; Back pedaling brake, A. P. Morrow; Back pedaling brake, S. A. Randall; Back pedaling brake, H. Symes; Bail attachment for stone jars, J. T. Gill; Barrel, J. C. Estabrook; Bars, etc., rolling shoe for coal, J. F. Schmad-cke; Basin and sewer trap, catch, G. H. Mower; Bath tub, D. D. Buick; Bath valve, shower, Demarest & Cunningham; Beam, girder and post, combination structural metal, C. M. Horton; Bearing, anti-friction, P. R. Gardner; Bearing, ball, P. Davies; Bearing, ball, J. McAlpine; Bearing, bicycle crank shaft, J. Morrison; Bed, extension, Furnival & Martin; Bed, folding, B. Krellenstein; Bed, H. H. Long; Bed springs to cross wire bases, machine for attaching, J. P. Leggett; Bevel tool, F. Lafferty; Bicycle driving gear, J. Howard; Bicycle frame, Nies & Dunn; Bicycle gear case, Nies & Dunn; Bicycle saddle, J. B. McManus; Bicycle umbrella support, H. J. Abernathy; Bicycles, etc., propelling mechanism for, Z. T. Ubil; Boat, life, A. F. Pendleton; Boiler, Meier & Tidemann; Boiler setting, steam, Kennedy & Williamson; Bootjack, C. F. Spaid; Bottle or ice compress, hot water, J. F. Morrill; Bottles, etc., machine for manufacturing, J. B. Vernay; Box, See Display box; Hat box. Paper box. Box cover brace and support, N. S. Nissen; Brush, D. B. Forward; Bung, M. W. Shannon; Calculator and rule, A. Mathews; Camera, panoramic, F. L. Gregory; Can cover, milk, T. R. Hetland; Cane from cars, etc., apparatus for unloading sugar, J. W. Bodley; Car brake handle, E. C. Collins; Car construction, P. Lamont; Car coupling, A. Dougherty; Car coupling, Hopkins & Evans; Car coupling, H. H. Warner; Car door, W. R. Ellis; Car doors and sides, means for protecting, Jones & Hedge; Car fender or guard, P. J. Postman; Car heating apparatus, J. F. McElroy; Car replacer, H. Miller; Cars, seat recording device for passenger, N. M. Powell; Carpet fastener, E. R. Webb; Carrier, See Carriage carrier; Luggage carrier; Carriage carrier, T. E. Jackson; Cash register, J. H. McCormick; Chair, See Folding chair. Reclining chair; Chemical engine, T. Down; Churn powers, means for regulating, Moore & Hubbard; Cigar machine, J. Reuse (reissue); Circuit breaker for three wire systems, E. M. Hewlett; Circuit breaking switch, automatic, Bossert & Pomeroy; Circuit interrupter, D. M. Moore; Clevis, plow, C. A. Johnson; Closure cap, cover, stopper, etc., T. Sloper; Clothes line, pinless, J. W. Jackson; Clothes wringer, W. Aab; Coating upper surfaces, forming integral metallic; E. T. Thomas; Coin controlled machine, J. G. MacPherson; Coin holder, D. J. Cable; Column, metallic, A. Nurick; Comb, See Curlycomb; Contact finger for controllers or electric switches; Controller, T. Von Zweigbergk; Cooker, heat retaining starch, J. E. Dann; Corkscrew, E. Walker; Corset, T. S. Gilbert; Corset attachment, E. Young; Corset, bustle, E. Kops; Cow tail holder, E. J. & L. M. Trapp; Cradle, self rocking, R. D. King; Cultivator, Head & Register; Cultivator, cotton, J. E. Barron; Cultivator, rapeseed, A. O. Butler; Curtain, J. D. Babin; Curtain fixture, window, W. W. Phillips; Cuspidor bowls, supporting attachment for, G. E. Johnson; Cutter, See Hog nose cutter; Cycle parts, housing for screw threaded, C. P. Birt; Cycles with adjustable gearing, driving mechanism for, F. H. Vagt; Damper operating mechanism, chimney, F. M. Clotworthy; Dental tool, Hendrickson's Head; Display box, counter, C. E. Hicks; Distiller, domestic water, J. E. Hicks; Door spring, O. Voigtlander; Door stop, Bortman & Munkwitz; Drawing supporter, T. S. James; Dye and making it, blue black, E. Eisasser; Dye and making it, blue black, E. Eisasser; Electric battery, V. Jeanty; Electric brake, J. B. Linn; Electric controller, S. Harris; Electric coupling, J. F. McElroy; Electric fan, Pignatielli et al.; Electric heater, J. F. McElroy; Electric machine safety device, dynamo, E. M. Hewlett; Electric meter, C. D. Haskins; Electric motor controller, F. E. Case; Electric motors, method of and means for controlling and cutting out, T. Von Zweigbergk; Electrical distribution system, C. F. Swett; Electroplating apparatus, H. R. Boissier; Electroplating articles in bulk, apparatus for, G. Langbein; Elevator, See Elevator; Elevator, H. J. Herren; Elevator, E. A. Trapp; Embroidering machine, G. Baum; Embroidering machine jacquard mechanism, H. Hill; Excelsior mat, W. H. Brown; Fabric, See Plush fabric; Farm gate, swinging and sliding, J. Pratt; Faucet for cans, etc., vented, G. W. Banker; Feed regulator, boiler, C. B. Mitchell; Fence, M. Steffe; Fence, wire, T. B. & T. 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