

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 This is for our information, and not for publication.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

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.

(1) W. G. R. asks (1) how to make a starch enamel for stiffening collars, cuffs, etc. A. Use a little gum arabic thoroughly dissolved in the starch.

(2) J. W. asks (1) how to oxidize silver. A. For this purpose a pint of sulphide of potassium, made by intimately mixing and heating together 2 parts of thoroughly dried potash and 1 part of sulphur powder, is used.

(3) C. D. F. asks what a sample of wax sent is composed of, and a receipt for moulding wax for artists. A. To determine the composition of the sample would require an analysis.

(4) W. J. W. asks where he can get a light and cheap lapidary's outfit. A. This class of appliances is not on sale. A frame with wheel, shaft and spindle, placed in a vertical position, with two or three lead laps, one for coarse emery, one for fine emery, and one for polishing, also a lap made with end wood on a chuck for polishing, and a leather polisher, desirable for rounded work, are all that is needed.

(5) C. H. F. asks how the conducting power of heat in metals compares with that of glass. A. Glass is a poor conductor of heat for transmission. Iron transmits thirty times more heat than glass under the same conditions.

(6) J. J. P. asks: Would the dynamo described in SUPPLEMENT 161 produce the same amount of current if the layers of wire on the field magnets were wound in parallel circuit? A. With the present armature, no. 2. What size wire would be necessary to wind the armature for plating? A. Armature No. 14, field magnet No. 14, or with two No. 16 wires wound parallel.

(7) J. C. P. writes: At the bottom of page 278 of your last edition (No. 16) there is the following statement: "The outer terminal of the coil is connected with one of the screws, and the inner terminal of the same coil is connected with the screw in the next bar in order in the commutator cylinder."

(8) D. F. F. asks the formula for the paper torpedoes sold on 4th of July. A. The explosive material is fulminate of mercury.

power of heat in metals compares with that of glass. A. Glass is a poor conductor of heat for transmission. Iron transmits thirty times more heat than glass under the same conditions. Brass is about midway between iron and copper, copper being eighty times better as a conductor than glass.

Would the dynamo described in SUPPLEMENT 161 produce the same amount of current if the layers of wire on the field magnets were wound in parallel circuit? A. With the present armature, no. 2. What size wire would be necessary to wind the armature for plating? A. Armature No. 14, field magnet No. 14, or with two No. 16 wires wound parallel.

At the bottom of page 278 of your last edition (No. 16) there is the following statement: "The outer terminal of the coil is connected with one of the screws, and the inner terminal of the same coil is connected with the screw in the next bar in order in the commutator cylinder." If this was done, how is the circuit made through the armature? A. The inner end of one coil is connected with the outer end of the adjacent coil at the screw of the commutator bar, so that the circuit is from one coil to the commutator bar, then back to the outer end of the next coil, then through this coil to the next commutator bar, thus back to the next coil in order and so on, thus completing the closed circuit of the armature. This point is clearly stated in the article referred to.

the formula for the paper torpedoes sold on 4th of July. A. The explosive material is fulminate of mercury.

TO INVENTORS.

An experience of forty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted,

May 10, 1887,

AND EACH BEARING THAT DATE.

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

Table listing inventions with patent numbers, including: Acid, production of a new naphthylamine-mono-sulphonic, Weinberg & Siebert. Aerated beverages, tablet for, S. R. Divine. Aerated waters, producing, S. R. Divine. Air ship, P. C. Campbell. Alarm. See Electric danger alarm. Alphabet case, A. M. Sanford. Anchor, land, T. Nevison. Animal trap, H. J. Seymour. Anvils, horseshoe vice attachment for, J. Dwyer. Armor plates, manufacture of compound, A. Wilson. Ash or garbage can, C. M. Brion. Auger, earth, J. Wells. Axle lubricator, J. L. Yost. Axle, vehicle, J. M. Brosius. Axle, vehicle, T. G. Mandt. Axle, wagon, C. M. Regan. Back band hook, A. Dennis. Bag. See Traveling bag. Bag fastener, Mitchell & Thomas. Bag holder, D. S. Wing. Baling press, W. E. Bradley. Baling press, E. Buttersfeld. Baling press, G. Ertel. Bar. See Cutter bar. Barbed nail or spike, C. Kerrison, Jr. Battery. See Electric battery. Secondary or storage battery. Voltaic battery. Bed, air spring bottom for, J. Patterson. Belt, apparel, S. Bretzfeld. Belting, manufacturing wire, Emerson & Midgley. Belting, wire, Emerson & Midgley. Bicycle, J. W. Emsley. Bicycle wheel, W. S. Kelley. Bicycles, handle bar fastening for, J. B. McCune. Billiard ones, machine for trimming the ends of, W. H. Mueller. Blind or shade, window, M. G. Mitter. Blinds, guide frame for sliding window, G. Poppert. Boat. See Sectional boat. Boats or other vessels, knee for, H. H. Buck. Boiler. See Steam boiler. Wash boiler. Boilers, water cleaner for, J. W. Hyatt. Bookbinding, T. C. Love, Jr. Book holder, T. Hansen. Book, manifold copying, J. L. O'Connor. Bottle, mullage or liquid glue, W. H. Rodden. Box. See Journal box. Paper box. Box fastener, A. H. Gaertner. Box fastener, E. Schandain. Bracket. See Scaffold bracket. Brake. See Car brake. Cornice brake. Gin brake. Bricks, tiles, etc., composition for, M. Marx. Bridle, Sutton & Terry. Broiler, J. Battis. Buckle, A. Wahra. Buckle, belt, L. Sanders. Buckle for saddles, girth, P. J. Pease. Buckle, harness, I. Roraback. Buckle, strap, C. F. Allen. Burner. See Gas burner. Lamp burner. Butter package, S. Bayth. Buttonhole cutter, L. A. Carson. Cable, wire, A. J. Morham. Camera. See Photographic camera. Can. See Ash or garbage can. Creaming can.

Table listing inventions with patent numbers, including: Car brake, J. A. Neichter. Car mechanism, cable, T. L. Johnson. Car motor, street, J. P. Sparks. Car seat lock, J. Kirby, Jr. Cars, bunk for railway, C. C. Wood. Cars, cuspidor for railway, T. Straker. Cars, grain door fastener for railway, J. H. Heckman. Cars, holder for address cards or labels upon railway, Kellogg & Penrose. Carpet stretcher, W. Sexauer. Carpet stretcher, G. P. Woodworth. Carriage bow spring rest, W. S. Coleman et al. Carrier. See Dental disk carrier. Game carrier. Case. See Alphabet case. Cell case. Cigarette case. Show case. Watch case. Casting plumbers' traps, apparatus for, C. E. Heiss. Cell case, E. C. Bower. Centerboard fitting for boats, E. H. Barney. Chain and lever power, O. H. Smith. Chain attachment, watch, F. W. Brueckner. Chain elevator, endless, C. Chase. Chair, W. C. Tait. Check, baggage, C. M. Drinker. Check hook, harness, P. Penner. Chill mould, J. W. Seigh. Chopper. See Cotton chopper. Churn, A. Haessly. Churn, J. N. Schwalen. Churn motor, G. W. Thomson. Cigarette case, F. S. Kinney. Clocks, circuit controller for self-winding, C. H. Pond. Closet. See rth closet. Clutch, friction, I. G. Hooper. Clutch, friction, J. Kirk. Coal screen heater, F. L. Shallenberger. Coal scuttle, W. Freudenberg. Cock, cylinder, H. R. Whomes. Cock gauge, Shaw & Toole. Coffee and tea pot attachment, G. S. Spring. Coffee pot, J. K. Cummings. Coins therefrom, combined box or chute and means for intermittently discharging, E. W. Furrell. Collar and neck strap coupling, breast, S. F. Smith. Coloring matter, trimethylethylthionin blue, E. Ullrich. Column rest, J. S. Broughton. Comb. See Weaver's comb. Cornice brake, G. C. Keene. Cotton chopper, Sanford & Peavy. Coupling. See Collar and neck strap coupling. Hose coupling. Thill coupling. Cradle, child's, P. E. McDonald. Cradles or chairs, motor for rocking, T. J. Morris. Creaming can, S. G. Baldwin. Cultivator, S. W. Decker. Cultivator, E. M. Kissell. Cupboard catch, I. C. Williams. Curtain fixture, C. Bell. Cut-off and spout, W. Exner. Cut-off, rain water, W. A. Buckton. Cutter. See Buttonhole cutter. Vegetable cutter. Cutter bar, J. H. Daniel. Cyclometer, W. R. Duteuple. Cyclometer, J. G. Pool. Dental disk carrier, H. C. Register. Dental polisher, J. B. Wood. Desk, portable, J. M. Shinn. Direct-acting engine, J. Pracy. Disinfecting sewer, apparatus for, J. J. Powers. Door threshold and weather strip, Woolbridge & Frasure. Drawers, M. C. Yarwood. Dredge and excavator, R. R. Osgood. Dredging machine, J. R. Crockett. Drier. See Fruit drier. Malt drier. Drill. See Grain drill. Rock drill. Drilling machine, A. Gordon. Dyestuff from tetrazo-diphenyl yellow red, F. Bayer. Dyeing, T. Holliday. Dyeing, etc., apparatus for, T. Hauschel. Earh closet, C. D. Lane. Eaves trough, J. L. Holton. Egg beater, C. W. Stanbaugh. Egg case machines, feeding mechanism for, J. H. Batchelder. Electric battery, O. Lugo. Electric battery, D. Misell. Electric danger alarm, automatic, J. J. Ghegan. Electric machine regulator, dynamo, E. T. & D. Higham. Electric resistance, variable, J. M. Stearns, Jr. Electro dynamic motor, C. J. Van Depoele. Elevator. See Chain elevator. Elevator, A. G. Pae. Elevator gates, operating, W. Maus. Engine. See Direct-acting engine. Engine cylinder, water escape device for, A. L. Ide. Engine, etc., device for securing, J. M. Eder. Extension table, F. Hagen. Face register, W. J. Rigney. Fatty bodies, process of and apparatus for saponifying and decomposing, L. Rivier. Faucet hole and stopper combined, W. J. Woodley. Feed water heater, P. Rossiter. Feeder and purifier, boiler, J. W. Hyatt. Feeder, boiler, J. Austin. Felt, actuating wet, R. Smith. Fence post anchor, V. Findling. Fence posts, machine for trimming, J. E. Laycock. Fence, wire, J. M. Vanover. Fences, device for constructing wire and picket, J. J. Doughman. Fiber, machine for cleaning vegetable, T. Villamor. Fifth wheel, W. W. Grier. Filter beds, apparatus for purifying, J. W. Hyatt. Fire escape, Murphy & Lynn. Fire extinguisher, hand, L. Bradley. Floral piece, illuminated, R. E. Wilson. Folding seat, U. L. Collins. Folding table, T. H. Eulass. Folding table, C. A. Main. Fringe, C. Weinberg. Fruit drier, G. A. & C. F. Fleming. Fruit picker, M. H. Murphy. Game apparatus, M. Muringer. Game carrier, P. Cunningham. Game table, W. R. Davis. Gas and preventing its explosion, apparatus for detecting leakage of, Martin & Budd. Gas burner, J. A. Dearborn. Gas burner, C. S. Ford. Gas governor, S. J. Wakeley.

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