

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 This is for our information, and not for publication.

(1) W. C. H. writes: 1. About what is the air pressure on a window glass when the weather outside registers zero and temperature inside is at 100° Fah. How hot would it require to be for outdoor air pressure to break common window glass, say 24 by 36 inches? A. The difference in pressure due to difference in weight of air at temperatures given would be slight.

(2) H. J. D. asks (1) what cement to use when joining carbons to top of jar in a bichromate battery, by means of brass plate, so the acid will not ruin it.

(3) L. S. asks: 1. In the induction coil described in No. 160 of the SUPPLEMENT, what is the object in having bare copper wire in the secondary coil, and will not insulated copper wire give as good results?

(4) R. A. writes: Say there are two cable street car companies, A and B, and A puts down his road first, then B wants to cross A's line, how is it done without interference?

(5) E. J. M.—Copper, brass, or iron moulds are used for casting the valves, seats, and stuffing boxes of dry gas meters. Oiling is not necessary. If oiled to prevent sticking, the oil should be very thin put on with a brush.

(6) J. A. P., York Corner, Me., asks: 1. Is there any cement or other method for sticking rubber to brass? A. Fuse together equal parts of gutta percha and pitch. Use hot.

(7) G. S., Ogdensburg, N. Y., asks (1) how to make percussion powder used in gun caps. A. 100 grains of fulminating mercury are triturated with a wooden muller, on marble, with 30 grains of water and 60 grains of gunpowder.

(8) S. S. K. asks: 1. What is the enamel, and how is it baked, on bicycles? A. It is japan varnish made of gums and oil, and is baked in an oven heated to 300°.

for bicycles, but just applied with a brush, cold? A. Air-drying black varnish—ordinary carriage varnish mixed with lampblack.

(9) M. N., Newark, N. J., asks: How can I remove warts? A. Moisten the warts, and rub sal ammoniac well on them every night and morning.

(10) L. G. G. asks: 1. Is alcohol explosive? If so, under what circumstances? A. Alcohol evaporates at a comparatively low heat, and gives off an inflammable vapor. This suddenly lighting sometimes produces a slight explosion; a mixture of this vapor and air is explosive.

(11) E. N. A. asks: Will you please answer in your paper whether the playing of a mouth instrument spoils the voice for singing? A. The question is still undecided.

(12) F. A. B. asks if water has any more attraction than land for a bullet or stone being fired over it, and what that attraction is.

(13) D. N. G. asks whether plaster of Paris will stand more heat than iron. A. Plaster of Paris, when set, will stand very little heat; far less than iron.

(14) D. A. writes: Will you please give me a good prescription through your valuable issue, for a person who has lost considerable flesh and strength. I have no disease of any kind, but still I am very weak.

(15) H. G. H. asks: What is the difference between the British quart and the American quart? A quart of water in England weighs 20 ounces, I believe. What does it weigh here?

(16) B. M. asks: What is an arpent in dimensions? A. The arpent was an old measure for land. It had different values. An arpent by one standard was equal to five-sixths English acre.

(17) J. W. P. says: We are frequently troubled in our press room by paper sticking together, both in feeding and in straightening, which makes it difficult to handle.

(18) T. W. asks: 1. In an electro-magnet, what is the relation between its attractive force and the size of the coils? A. No clear statement of any law can be given, as so many other factors enter into the problem.

(19) A. J. K. asks: 1. Please give me directions for making platinum prints, spoken of in some books on photography. A. Platinum prints are the subject of a patent. Address in reference thereto Wilson Hood & Co., 910 Arch Street, or Thomas H. McCollin, 635 Arch Street, Philadelphia.

- Alkanet root ..... 15 grains.
Aloes ..... 30 "
Dragon's blood powdered ..... 30 "
95 per cent alcohol ..... 500 "

Mix and let stand in a tightly corked bottle some days. Go over the wood with dilute (1 in 10) nitric acid first. This is pretty dark. You may lighten by using more alcohol.

(20) L. W. writes: I noticed in a silver plating works some time since that the platers dip their wares in a solution to clean and take off the tarnish. They claim it is a solution of cyanide of potassium.

acid in 10 water; after rinsing, a solution of 10 nitric acid (36°), 200 salt, and 200 water is used; next 60 nitric acid, 200 sulphuric, and 200 water. To amalgamate, a dilute solution of nitrate of mercury may be used.

(21) F. H. M. writes: Will you please give the method of solving the following problem: A man has a board ten feet long, which is two feet wide at one end and from that tapers to a width of one foot at the opposite end.

This mean width multiplied by the length, x, will give the area, which by the conditions of the problem must be 7½. This gives us the equation:

(1) (1 + ½x) x = 7.5, which solved gives us x = 5.8110 + or 5 feet 9.32 inches, or the board must be cut at that distance from the narrow end.

(22) N. S. C. writes asking (1) the rate of expansion or contraction of ice. A. 1000 volumes of ice at 32° Fah. contract to 997½ volumes at -4° Fah.

(23) A. F. O. writes: Cooling water begins to expand at 39°, and continues to expand till frozen. Does the resulting ice continue to expand by further reduction in temperature?

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

March 8 1887

AND EACH BEARING THAT DATE.

Table listing various inventions and their patent numbers, including Alarm, Animal trap, Animal trap, W. P. White, Annunciator, Armature and process of and apparatus for forming the same, C. G. Curtis et al., Asbestos, manufacture of hardened, C. Jackson, Axle box, car, C. Mendenhall, Axle boxes from solid stock, manufacture of, W. C. Dazell, Axle, cultivator, L. Braden, Bag, See Traveling bag, Bag frames, fixture for, W. Roemer, Bag or pocketbook frames, fastening for, C. Blust, Bag or satchel, J. Brown, Bag or valise frame, W. Roemer, Baling press, E. C. Sooy, Baling press, J. R. Webster, Bar, See Watch chain bar, Barometer, J. C. Butler, Basket, wooden, T. L. Lee, Bath tub, basin, etc., J. Morrison, Battery, See Galvanic battery, Secondary battery, Bayonet attachment, J. N. W. Wilson, Beehive, S. G. Edwards, Bell, electric, E. A. Wildt, Belt lace guard, W. D. Scott, Bench, See Wash bench, Bicycle, J. Brusele, Bicycles, wheel attachment for, J. Brusele, Billiard ball, G. E. Phelan, Billiard table cushion, G. E. Phelan, Binder, temporary, E. C. Fales, Blind switch, J. McKenna, Block, See Building block, Boiler furnace, steam, Z. T. Reno, Bolt releasing device, electric, G. L. Henzel, Book holder, G. S. Richmond, Jr., Book rest, A. C. Brower, Boots or shoes, inner sole for, C. W. King, Box, See Axle box, Brake, See Car brake, Power brake, Bridle, V. C. Collet, Brush, etc., cleaning, H. J. Nichols, Brush, scrubbing, Chamberla & Lamb, Bucket or pail cover, S. J. T. S. D. Porter, Buckle for razor straps, T. A. Kochs, Buckle, suspender, W. E. Smith, Building block, S. D. Castleman, Bundle carrier, Kennedy & Stewart, Burner, See Gas burner, Lamp burner, Vapor burner, Bustle, A. Alphanab, Bustle, T. P. Taylor

Table listing various inventions and their patent numbers, including Button or stud, F. W. Richards, Cable crossing, Leiby & Baittinger, Jr., Camera, See Photographic camera, Can, See Oiling can, Can stopper, C. Bopp, Car brake, P. W. Reinsbagen, Car brake, A. A. St. Clair, Car brake and starter, H. Hansen, Car brake, automatic, A. P. Massey, Car brake lever, J. S. Whitworth, Car brake, railway, W. E. Maultby, Car coupling, J. S. Andrews, Car coupling, J. Hill, Car coupling, G. R. Mavis, Car coupling, A. S. Neal, Car coupling, F. Zedler, Car heater, W. C. Dunn, Car seat, U. C. Smith, Car starter, J. M. Ertz, Car starter, L. H. Wilson, Car wheel, G. Peacock, Car wheel, S. W. Tanner, Cars, transfer float for railway, W. Hord, Cards, support for picture, W. Hagelberg, Carrier, See Bundle carrier, Cash carrier, Cartridge extracting implement, C. R. Hart, Carts, thill equalizer for road, J. Percy, Cash carrier, J. Starr, Casks, tap valve and tapper for, R. Teichmann, Casting apparatus, pipe, D. Giles, Casting printers' leads and small furniture, mould for, G. F. Kimball, Chain bar, watch, H. M. Herring, Chain, drive, W. J. Perkins, Chain, wire, R. A. Breul, Chuck, S. B. Ardrey, Churn dasher, mechanism for operating, J. M. Flack, Cider mill, G. W. Sanor, Clinker stand, N. Kohler, Clamp, See Mail bag clamp, Clip, See Vehicle gear clip, Clock, J. Pallweber, Clock winding mechanism, A. F. Valon, Closet, See Water closet, Clothes line stay, C. E. McDonald, Clothes rack, J. S. Marsh, Coat sleeve, J. C. Bolen, Coatings surfaces, apparatus for, A. Edwards, Cock, ball, J. Clifford, Cockle separator, J. A. Lacey, Collar, horse, S. B. Davis, Collar, horse, F. Hays, Collar pad, horse, J. G. Egbertson, Coloring matter, production of mixed azo, C. A. Martius, Colters, making plow, J. G. Bailey, Concentrator, C. W. Joy, Concrete under water, laying, J. G. Goodridge, Jr., Conveyor for grain, ore, coal, or earth, L. D. Howard, Cooker, food, S. E. Robinson, Copying apparatus, letter, W. Zimmerman, Corset, G. D. Nichols, Corset stiffener, C. W. Firmhaber, Coupling, See Car coupling, Thill coupling, Whiffletree coupling, Crematory, M. L. Davis, Cross tie, W. Wharton, Jr., Cushion, See Billiard table cushion, Cutting double pile fabrics, mechanism for, A. Bacon, Decorticating machine, J. B. Vogel, Delivering prepaid articles, automatic apparatus for, F. M. Leavitt, Desk, E. W. Sackett, Digger, See Potato digger, Distance instrument, R. R. Gurley, Door check, J. E. Carr, Door check, J. Merredith, Door hanger, Nickel & Zattan, Dowels, machine for making, A. J. Curtis, Draught equalizer, M. N. & W. B. Drake, Draught equalizer, A. Sellers, Dress lamp shades, making, Stonehill & Kilsheimer, Drier, See Grain drier, Drill, See Rock drill, Dust pan, H. J. Vogel, Earring, L. F. Brooks, Eaves trough, J. Krueger, Electric regulator, O. B. Shallenberger, Engine, See Locomotive engine, Portable engine, Steam engine, Engine governing device, F. H. Ball, Envelope or paper bag, D. Dalziel, Envelope, reversible sample, G. Doutney, Eraser, fluid ink, J. W. Tallmudge, Exhibiting apparatus, W. T. Smith, Expansion wheel, A. A. Rose, Eyeglass or spectacle frame, D. O'Hara, Fabric, See Ornamental fabric, Fan attachment, P. Murray, Jr. (r), Feed water trap, steam, H. Creamer, Fence post, McEwen & Lawrence, Fence, wire, S. P. Etter, Fencing, barbed metallic, B. F. Randall, File, letter and bill, E. C. McVay, Fire alarm, F. G. Lyon, Firearm, W. F. Alston, Fire engine heater connection, J. J. Meyrick, Fishing rod, E. Horton, Flatiron stand, Crommer & Phillips, Flaxseed separator, Welker & Kiffe, Folding gate or door, A. Bataille, Folding table, M. C. Bullock, Forging hammers, mechanism for, H. H. Warren, Forging shifting rails, die for, J. M. Davidson, Fountain, See Wash boiler fountain, Frame, See Bag and valise frame, Eyeglass or spectacle frame, Spectacle frame, Fruit gatherer, J. Honecker, Furnace, See Boiler furnace, Furnace door opener and closer, Joyner & Petesch, Furnace for smelting and reducing metals from minerals, R. Bonehill, Furnace grate, L. M. Woodcock, Galley and proof press, combined multiple, J. Henry, Galvanic battery, H. J. Brewer, Galvanic battery, L. A. W. Desruelles, Gas lighting apparatus, electric, C. B. Bosworth, Gas pipes, apparatus for detecting leaks in, W. A. Stern, Gas regulator for boilers, T. J. Kleley, Gases, apparatus for automatically testing mine, T. Shaw, Gate, See Folding gate, Railway crossing gate, Gearing, adjustable, L. P. Hoyt, Generator, See Steam generator, Glass, machinery for the manufacture of sheets of rippled, W. E. Chance