

CAROUSEL AND PANORAMIC APPARATUS.—Joseph Darling, Baldwin, Pa. This is a merry-go-round which has a wave motion in addition to the usual rotary motion, and designed to give to the rider the sensation of sailing or flying.

ROOFING COMPOSITION.—John A. Freeze, Mason, Texas. A new compound designed to be used with especial advantage as a roofing paint has been devised by this inventor.

PUZZLE.—Helen E. L. Fisher, Germantown, N. Y. This device has central concentric inclosures having gates for the passage of balls, while extending from the outer wall of the inclosures are channels, each having a dividing longitudinal partition and a receiving chamber at the outer end.

DESIGN FOR PENCIL TIP.—George A. Wieland, Duluth, Minn. This design consists of a hollow cylindrical body with radial imperforate points, as of a five pointed star, in the same plane.

NOTE.—Copies of any of the above patents will be furnished by Munn & Co., for 25 cents each. Please send name of the patentee, title of invention, and date of this paper.

SCIENTIFIC AMERICAN BUILDING EDITION.

APRIL, 1895.—(No. 114.)

TABLE OF CONTENTS.

- 1. An elegant plate in colors, showing a Colonial cottage recently completed for Frank L. Purdy, Esq., at Glen Ridge, N. J. Two perspective elevations and floor plans. An attractive design. Architect, Charles P. Baldwin, Esq., Newark, N. J.
2. Two perspective elevations and floor plans, showing a residence recently completed for George N. Tynor, Esq., at Holyoke, Mass. An elegant design in the Romanesque style of architecture. Mr. II. H. Gridley, Springfield, Mass., architect.
3. A cottage at Nutley, N. J., erected at a cost of about \$4,000. Perspective elevation and floor plans. Architect, Mr. E. R. Sifton, N. Y. A simple but tasteful design.
4. A Colonial residence at Orange, N. J., recently erected for John Hammond Bradshaw, M.D. A pure example of modern Colonial architecture. Two perspective elevations and floor plans. Messrs. Rossiter & Wright, New York City, N. Y., architects.
5. An attractive residence at Indiana, Pa., recently erected for Mr. Harry McCreary, at a cost of \$4,350 complete. Perspective elevation and floor plans. Architect and builder, Mr. E. M. Lockard, Indiana, Pa.
6. Two perspective elevations and floor plans of a handsome residence erected for Samuel S. McClure, at Armour Villa Park, Bronxville, N. Y. A good example of a square rigged house. Cost \$8,000 complete. Mr. Henry S. Rapelyea, architect, Mount Vernon, New York.
7. A cottage at Glen Ridge, N. J. An attractive residence in the Elizabethan style. Two perspective elevations and floor plans.
8. A carriage house at Orange, N. J., recently erected for John Hammond Bradshaw, M.D. The design is treated in the modern Colonial style to correspond with the architecture of his residence. Ground plan and perspective elevation. Messrs. Rossiter & Wright, architects, New York.
9. An elegant residence at Flatbush, L. I., recently erected at a cost of \$11,000 complete. Two perspective elevations and floor plans. Architect, J. G. Richardson, Esq.; builder, J. C. Sawkins, Esq., both of Flatbush, L. I. An attractive design.
10. A house at Park Hill, N. Y., recently erected for Messrs. Loreni & Morrow, at a cost of \$6,500 complete. Perspective elevation and floor plans. Mr. Edmund J. Maurer, architect, New York.
11. Miscellaneous Contents: Moderne Innen-Decoration.—The evolution of an old building, with 4 views.—Wood stains.—Wood finish chemically and microscopically examined.—A tubular frame house.—To destroy moth-eaten insects.—Venetian blinds, illustrated.—An improved spring hinge, illustrated.—Cement mortar.—A blind architect.—Frozen water closets.—An electrical mail box, illustrated.—The anchor fence post, illustrated.—Hardwood matching heads, illustrated.—Porcelain.—The Rider engines, illustrated.—The Security sash balance, illustrated.—Improved woodworking machinery, illustrated.

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Notes & Queries

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(6490) W. J. R. asks: 1. I have your SUPPLEMENT, No. 600, with instructions for building an eight light dynamo, and wish to build one equal to four lights; if I reduce everything from full to half size, will that be all right? A. No. Reduce to nine-tenths the size by lineal measurements. 2. What numbers of wire would be best for armature and field magnets? A. It depends on the voltage desired. Use one or two numbers finer wire than those specified.

(6491) S. B. asks: What will be the pressure due to an explosion of gasoline gas mixed with 10 parts of air? How many times will it expand with nominal loss of heat due to working an engine piston? What will the pressure be after it has expanded to 3 volumes and to 6 volumes? What part of the loss of pressure is due to loss of heat? Will the increase in pressure be greater or less if the mixture is compressed? A. Allow for an expansion to about 10 volumes, giving an initial pressure of 150 pounds per square inch. At 3 volumes allow 105 pounds, and at 6 volumes 60 pounds. The loss of pressure is accompanied by loss of heat, and as necessarily accompanied by it, may be said to be due to it. Compression gives a higher initial pressure, and consequently a higher average pressure.

(6492) F. C. W. asks: What is the temperature of the flame of an arc electric light one thousand volts, two thousand candle power? Is there any known material that will not crumble or melt under such a heat, and where can such a material be procured? A. It is questionable if any reliable record of this can be obtained. In the ordinary arc the temperature of the negative carbon is put at 3,000°-3,500° C. and that of the positive carbon at 4,000° C. Carbon neither crumbles nor melts in it.

(6493) G. E. M. says: Please inform me through your columns how I can brighten copper coins, so they will stay bright for a coin collection. A. Coins can be quickly cleaned by immersion in strong nitric acid, and immediate washing in water. If very dirty, or corroded with verdigris, it is better to give them a rubbing with the following: 1/2 ounce pure bichromate of potash; 1 ounce sulphuric acid; 1 ounce nitric acid. Rub over, wash with water, wipe dry, and polish with rottenstone or chalk. To keep them bright permanently they should be lacquered.

(6494) S. S. asks: 1. May an article upon which the patent has expired be made by any person, and by him sold under a name different from the one by which the invention is generally known? A. Yes. 2. May any one freely make and sell perforated maps, etc., which are made by the cheap electric pen, described in SCIENTIFIC AMERICAN of June 4, 1887? A. Yes. 3. What is the lowest temperature yet attained? A. See our SUPPLEMENT, Nos. 990, 996, 948, 973, 967.

(6495) W. M. asks: 1. Will a rifle shoot the same at an object on water as it shoots on land (without changing elevation)? A. It is probable that gravity may be slightly less on the sea than on the land and may cause a very small difference in the range. The amount is too small to appreciate in ordinary practice. 2. Will the accuracy of a rifle be changed by having a ring that is heavier on one side fitted tightly around the barrel near the muzzle. A. A gun barrel unbalanced as described will not recoil in the line of the bore, and will throw a bullet away from the center line of fire toward the light side.

TO INVENTORS.

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INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

April 9, 1895,

AND EACH BEARING THAT DATE.

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

Table listing inventions and their patent numbers. Includes items like Advertising article, C. A. Montgomery; Aerator for distilled water, F. H. Moore; Air brake, A. P. Massey; Amalgamating and separating metals, H. M. Baker; Animal elevating and suspending apparatus, J. E. Penell; Arc rupturing device, E. Sperry; Auer, earth, H. & L. Iwan; Autographic register, Remson & Sboettel; Automatic gate, W. V. Salmon; Baz. See Toilet powder bag; Ballast feeding machine for making, J. Stubbs; Bandage machine, J. E. Lee; Battery system, electric, Powell & Hall; Bearing for vehicle wheels, ball, M. J. Herbert; Bed, folding, P. H. & G. A. Mellon; Bicycle, J. M. Bell; Bicycle saddle, Wright & Crane; Bicycle shoe, T. O'Brien; Bicycle supporting brace, J. B. Gathright; Bicycle wheel rim, A. C. Fairbanks; Binder, J. C. Scheller; Boat, See Submergible boat; Boiler. See Sectional boiler. Steam boiler; Boilers, device for preventing incrustation of, A. C. Bragonier; Bolt. See Nut locking bolt; Book duplicating memorandum or copying, W. H. Rodden; Bottle, J. H. Heslin; Bottle or egg carrier, C. M. Kimball; Box. See Fare box. Knockdown box. Patrol box. Street gate box; Box staying, C. J. White; Brake, See Vehicle brake. Wheel and rail brake; Brake beam, H. B. Robischung; Brush machine, L. Strickel; Bullion sampler, T. Krauss; Burner. See Kerosene burner; Burner, A. A. Hutchins; Bushing valve and faucet attachment for casks, W. W. Jackson; Button book attachment for shoes, gloves, etc., J. K. Rogers; Button, C. J. White; Cable grip and lock, combined, C. H. Notter; Can. See Sheet metal can; Can or box bead crimping machine, R. Ansell; Car attachment, P. M. A. Stemmler; Car bolster, C. T. Schenck; Carbolizing apparatus, H. Torchiani; Car coupling, Easton & Dawson; Car coupling, C. S. Elliott; Car coupling, J. Timms; Car coupling, B. M. Whitlock; Car coupling, J. Feiser; Car coupling, M. M. Pettis; Car draw bar, J. Timms; Car fender, E. D. Abbott; Car fender, G. Blakistone; Car fender, A. P. Cadden; Car fender, A. H. Koeller; Car fender, J. H. Knapp; Car, self-discharging and convertible freight, J. W. Morse; Carding engine, E. Asbworth; Carding engine condensing roll, A. Hardwick; Carpenter's bench, E. M. Brown; Carriage starting device, H. S. Turrent; Carriage, adjustable time fuse, Judge & Chapman; Case. See Display case; Cash register, L. E. Allen; Cash register, Howell & Humiston; Cash register, key stop for, C. S. Traub; Cash receiving apparatus, H. Torchiani; Caster, W. T. Smith; Casting metals, L. J. Creelias; Casts, moulding with molten wax for reproduction of, Le Bourc & Cosse; Cementing minerals, Oils, C. Lossen; Cheese making device, H. Ohl; Chenille fabric, apparatus for cutting, H. Lees; Chopper. See Meat chopper; Cigarette machine, J. N. Wood; Cistern cleaner, H. H. Gray; Clip. See Spring clip; Clock, alarm, F. Sharpe; Clock, electric, F. L. Gregory; Coal drill, M. Hardsong; Coal hod, S. B. Moody; Cook, half, C. Birken; Coin assorter and deliverer, S. D. Reynolds; Coin controlled apparatus, G. H. Eaton; Combination lock, H. C. Wayman; Commutator traversing apparatus, J. Pease; Conduit sections, method of and apparatus for making, See O'Hearan; Connecting rod, F. Maag; Core spindle, J. McAdams; Corn shucker, J. A. Shimp; Corroding pot, H. M. Gabel; Corset fastener, J. Landfield et al.; Cot or bed bottom, folding, Page & Cruzen; Coupling. See Car coupling. Thill coupling. Water closet coupling; Cover lifter, J. J. Vernier; Cultivator, R. H. Avery; Cultivator, M. Sattley; Cultivator, tonnageless, R. H. Avery; Cup. See Eye cup; Curbing, metallic, L. L. Landis; Curtain pole, A. J. Kull; Curtain ring, M. Gair; Damper regulator, F. L. T. Carlman; Demagnetizer, Gooding & Seovil; Deodorizing mineral oils, C. Lossen; Derailing switch, O. J. Travis; Desk, school, W. L. Starkey; Die for manufacture of moulded articles, A. C. Estabrook; Dish cleaner, J. N. Moody; Display case, See Case; Door check, W. J. Tynon; Door check and closer, pneumatic, J. S. Strawder; Door, folding, A. Jorzenzen; Door hanger, L. Coburn; Door hanger, W. J. Sumner; Door handle, C. Birken; Door, metallic, A. H. Bobb; Drawers supporter, T. J. Moore; Dredging and conveying apparatus, C. Upton; Drill. See Coal drill; Drills, spring break for hoe, W. F. Hoyt; Electric machine, ventilating apparatus for dynamo, Burton & Angell; Electrical conductors, cut-off or safety attachment for, J. Parkinson et al.; Electrical indicator, E. H. Johnson; Electrode, H. T. Barnet; Electrolytic H. Blumenberg, Jr.; Elevator, S. B. Williams; Elevator guard, H. Walbaum, Jr.; End gate and shoveling board, combined, S. Fackler; End gate and shoveling board, combined, T. G. Mandel; Engine. See Garding engine. Gas engine or similar motor engine. Road engine; Engine cab, traction, J. J. Moore

Table listing inventions and their patent numbers. Includes items like Envelope, L. A. Rosett; Eye cup, T. H. Froehlich; Fan, fly, G. B. Smith; Fan, lawn, C. L. Travis; Fan, ventilating, D. Bennett; Fanning mill, B. M. Wood; Fare box and register, Wagner & Kramer; Feedwater heater, W. E. Mottatt; Feedwater heater and purifier, J. E. Crawley; Feedwater heater and purifier, M. Robinson; Feedwater heater attachment, W. Webster; Feedwater heaters, steam jacket attachment for, W. Webster; Feedwater purifier, S. L. Bailey; Fence post, W. Powell; Fence post, R. Toennes; Fence stay, wire, Furry & Hershey; Fence, wire, W. J. Baker; Fence, wire, L. T. Ves; Fender. See Car fender; File, account, S. L. Welsh; Filtering device, J. E. Crawley; Fire escape, G. Buckelew; Fire extinguisher, portable, Miller & Thomas; Fireplace, gas burning, H. G. & W. R. Dawson; Fishing rod joint, G. I. Varney; Flouring rolls, etc., gear for, J. S. Cameron; Fly paper, sticky, C. H. Mitchamore; Footbag, F. C. White; Fork. See Hay fork; Fountain, L. Gompner; Furnace. See Garbage furnace. Iron heating furnace. Roasting furnace; Furnaces, apparatus for automatically controlling motive power for supplying air to, J. E. Beckman; Furnacer, coal dust feeder for, A. Friedberg; Furnaces, valve for regenerative or other, F. Mills; Gage. See Heel gage; Galvanizing strips, apparatus for, T. V. Allis; Garbage crematory, R. Boulter; Garbage furnace, A. Brownlee; Garment fastening, C. S. Franke; Garment protector, M. J. Foxworthy; Garment stretching frame, F. W. Gilroy; Gas burner regulator, Independent, J. Kraker; Gas engine, gas burning, T. M. Dyrart; Gas engine, C. V. Walls; Gas meter, H. H. Sprague; Gas meter, prepayment, D. Orme; Gas or similar motor engine, A. R. Bellamy; Gate. See Automatic gate. End gate; Gear, sprinckle, T. M. Dyrart; Gears, machine for hobbing worm, V. W. Mason, Jr.; Generator. See Steam generator; Glass articles and apparatus therefor, cutting, L. Havaux; Glass, decoloring, J. M. Stowe; Glassware, means for ornamenting, J. Rovensky; Gold saving apparatus, B. M. Whiting; Gold separator, J. J. Payne; Governor, steam engine, H. C. Nichols; Grain cleaning and dust collecting apparatus, H. Simon; Grate, vertically adjustable, McNamara & Cotton; Grinding and polishing parabolic or analogous curvilinear surfaces, machine for, Schuckert & Munker; Guns, cocking and ejecting mechanism for break-down, J. H. H. H. H. H.; Hammer guide, steam, W. H. Wood; Hammock, T. C. McPherson; Handle. See Wrench handle; Harrow, J. J. Callender; Harrow, O. K. Oppen; Harrow and roller, combined, J. R. Willey; Harvester, corn, E. A. Boehler; Harvester, corn, E. E. Witter; Hay carrier, H. H. Durr; Hay fork, M. G. Grosscup; Hay loader and rake, combined, J. Hallaban; Heater. See Feedwater heater. Steam and hot water heater; Heel gage for making heels, F. M. Goss; Heel or sole plate, E. W. Alsop; Hinge, coach, F. P. Pfeigbar; Hinged joint link for boxes or casings, O. Heintzel; Hoisting apparatus, C. W. Hunt; Hook. See Snap hook; Hook and eye, J. Berkey; Hop picker, M. Mursa; Horseshoe, J. J. Moloney; Horseshoe toe calks, machine for making, J. A. Trudeau; Hose and making same, B. L. Stowe; Hose bridge, adjustable truss, S. F. Sullivan; Ice pick, C. B. Darling et al.; Impact tool, T. H. Phillips; Indicator. See Electrical indicator. Station indicator; Injector, Eynon & Gamble; Insulating compound, A. C. Thompson; Iron heating furnace, sheet, W. E. Harris; Journal and box, L. Metzger; Journal bearing, self-adjusting, E. F. Van Houten; Journal bearing, self-oiling, H. S. Albrecht; Kerosene burner, F. P. Boland; Knit belts, forming, B. L. Stowe; Knob attachment, A. E. White; Knockdown box, H. Hawley; Ladder, store, J. Ebert; Ladders, etc., trolley support and guide for step, W. J. Sumner; Lamp, J. Kirby, Jr.; Lamp base, incandescent, W. C. Bryant; Lamp, incandescent, C. A. Merritt; Last block fastener, G. M. Huntington; Latch, A. A. Mandell; Latch, sliding door, C. C. Abbe; Lathing, metallic, G. Hayes; Leg, artificial, J. H. H. H.; Lifter. See Cover lifter; Liquid mixing machine, A. F. Cook; Lock. See Combination lock; Locking device, J. Schade; Locomotive bellringer, J. L. Baker; Locomotive traction means for increasing C. Seiden; Loom double lift Jacquard mechanism, Briggs & Denton; Loom fly shuttle attachment, carpet, W. H. Kynett; Loom fly shuttle attachment, compound knit and woven gear, circular, B. L. & N. Stowe; Loom pile wire, R. E. Murphy; Loom shuttle, carpet, W. H. Kynett; Loom shuttle tension device, M. & F. Camagni; Lubricator, J. H. Smith; Mail bag catcher, A. Kimball; Mail pouches or bags, locking mechanism for, O. M. Chesney; Maps, manufacturing relief geographical, F. T. Burel; Measure, indicating tape, C. Stuart; Measure, tailor's, S. M. Griffon; Measure, tailor's, H. W. Scott; Measure, tailor's, J. R. Storey; Measuring apparatus, coal, C. W. Hunt; Measuring instrument, electrical, Hartmann & Braun; Meat chopper, J. H. Stiel; Metal, apparatus for electrically heating, G. D. Burton; Metal heating apparatus, electric, Burton & Angell; Metal heating apparatus, electric bath, G. D. Burton; Metal heating apparatus, electric bath, Burton & Angell; Metal heating, electric, G. D. Burton; Metal heating, method of and apparatus for electric, Burton & Angell; Metal, method of an apparatus for electrically heating, G. D. Burton; Metals by electricity, apparatus for brazing, Burton & Angell; Meter. See Gas meter. Water meter; Milk tester, D. W. Curtis; Milking machine, E. H. Hobe; Mill. See Fanning mill. Rolling mill; Milling and felling machine, S. & B. Preston; Mine trap door, G. J. Hotchkiss; Moisture absorbing device, A. I. Dexter; Moulding, building, A. M. Beinke; Motor, W. H. D. Ludlow; Musical box case, H. & W. J. Riley; Nailing apparatus, M. Brock; Nailing machine filing apparatus, M. Brock; Non arcing switch, A. 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