

RECENTLY PATENTED INVENTIONS.

Railway Appliances.

CAR COUPLING.—Albert N. Hopkins, Duluth, Minn. This is a coupling designed to be entirely automatic and to be readily coupled with the ordinary link and pin coupling...

RAIL JOINT.—Joseph D. Greene, Marshall, Mo. This is a joint of that class which has two sections adapted to grip the opposite edges of the base of the rail...

Agricultural.

HARVESTER.—Herman A. J. Rieckert, New York City. This is a machine in which part of the grain cut is formed into a band to tie the sheaf, the invention being an improvement on a former patented invention of the same inventor...

SELF BINDER.—Herman A. J. Rieckert, New York City. This is a machine designed to use a prepared straw band, and to be an improved self-binder which is simple and durable and very effective in operation...

HUSKING BENCH AND FODDER BINDER.—Parker J. Miller, Mount Gilead, Ohio. This is a combination device, designed to be readily folded up when not in use for storage or transportation...

CULTIVATOR.—Richard Cracraft, Abingdon, Ill. This is a machine especially adapted for use wherever shallow culture is desired, having a diagonal blade for loosening and throwing the earth to one side...

Miscellaneous.

CLOTHES DRIER.—Benjamin F. Fuller, McMinnville, Oregon. This is a rack formed of an extensible bar with sections sliding one upon the other, one of the sections carrying a windlass...

TOY GAME APPARATUS.—Mary P. Stewart, Washington, N. J. This apparatus is made with two intersecting channels, in one of which a plunger is held to slide, while in the other channel is a spring-pressed gate connected with the plunger...

LOCK.—Patrick McMahon, Whitestone, N. Y. This is a cylinder lock containing but one cylinder, and having the tumblers so arranged that by increasing or decreasing its length an indefinite set of combinations may be produced...

GUN RACK FOR TENTS.—Benjamin Watson, Glen Hazel, Pa. This invention consists of two clasps adapted to be attached one above the other to the tent pole, the upper clasp having swinging arms to be retained in horizontal position...

DESIGN FOR WEAR PLATE FOR BOOTS, etc.—Louis N. Beauchemin, Tacoma, Washington. This invention covers a two-part wear plate, a sole part and a heel part, the sole part having the normal shape of a sole...

VEHICLE SEAT.—Thomas J. Kerstetter, Fern, Pa. This invention covers the use of spring arms by which to support the back bar, and a holding frame adapted to secure such arms, made in sections and adjustable...

TRACE CARRIER.—Alexander P. Waddell, Union City, Tenn. This invention covers an improved buckle, the plate or frame work having cross bars at its upper and lower end and having books on its front face...

CHURN.—Columbus Miller, John W. Blue, and Charles S. Miller, Keystone, Mo. This churn has an inner and outer dasher section, the shafts operating which are turned by gearing in opposite directions, the sections being so constructed as to break up every particle of the milk and cream...

FEEDING OIL TO LAMPS.—Vincent Di Marzo, Louisville, Ky. This invention covers an ap-

paratus consisting of pipes connected to an oil reservoir with which a water reservoir is also connected at the bottom, a weighted gravitating plunger being employed for forcing the oil through the pipes to the lamps...

SAWING MACHINE.—Henry C. Green, Anniston, Ala. Combined with a main frame and lever frame secured thereto is a saw blade, the levers being arranged in series and connected at one end to the saw blade and at the other end to the main frame...

INDEX.—Nathan B. Shyer, Hopkinsville, Ky. Combined with a suitable frame or casing are leaves hinged or pivoted therein and arranged to fall forward when released, the leaves being normally held closed by a latch...

ADVERTISING OR DISPLAY DEVICE.—Andrew Dahlstrom, Ashton, Mich. This is a device more especially designed for use in the dining rooms of hotels, etc., to be made in the shape of a caster or to be connected with a revolving table or platform...

POST HOLE DIGGER.—Samuel H. Gregg, Crawfordsville, Ind. This is a device with jaws having back and side plates, the back plates being flat and straight and the side plates projected inwardly from the back plates...

Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in next issue.

For Sale—New and second hand iron-working machinery. Prompt delivery. W. P. Davis, Rochester, N.Y. Acme engine, 1 to 5 H. P. See adv. next issue.

Turk water motors at 12 Cortlandt St., New York. Presses & Dies. Ferracut Mach. Co., Bridgeton, N. J. Hoisting Engines. The D. Frisbie Co., New York city. Platinum scrap, old wire, etc., bought, Willis & Clements, 39 S. 10th St. Philadelphia.

Best Ice and Refrigerating Machines made by David Boyle, Chicago, Ill. 155 machines in satisfactory use. The Improved Hydraulic Jacks, Pumps, and Tube Expanders. R. Dudgeon, 24 Columbia St., New York.

Beach's Improved Pat. Thread Cutting and Diamond Point Lathe Tool. Billings & Spencer Co., Hartford, Ct. Veneer machines, with latest improvements. Farrel Fdry. and Mach. Co., Ansonia, Conn. Send for circular.

Tight and Slack Barrel Machinery a specialty. John Greenwood & Co., Rochester, N.Y. See illus. adv., p. 173. Screw machines, milling machines, and drill presses. The Garvin Mach. Co., Light and Canal Sts., New York.

Guild & Garrison, Brooklyn, N. Y., manufacture steam pumps, vacuum pumps, vacuum apparatus, air pumps, acid blowers, filter press pumps, etc. Linen and rubber hose, all kinds of belting, general mill and factory supplies. Send for catalogue and prices. Greene, Tweed & Co., 83 Chambers St., New York.

The Holly Manufacturing Co., of Lockport, N. Y., will send their pamphlet, describing water works machinery, and containing reports of tests, on application. The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins. By mail, \$4; Munn & Co., publishers, 361 Broadway, N. Y.

Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway, New York. Free on application.

SCIENTIFIC AMERICAN BUILDING EDITION.

JUNE NUMBER.—(No. 56.)

TABLE OF CONTENTS.

- 1. Plate in colors of an elegant residence at Montclair, N. J. Munn & Co., architects, New York. Perspective view, also a plate showing the north and rear sides, floor plans, sheet of details, etc.
2. Elegant colored photographic plate, with floor plans, sheet of details, etc., of a cottage at Blythebourne, L. I. Estimated cost \$3,200.
3. Residence at Yonkers, N. Y. Perspective view and floor plans. D. & J. Jardine, architects, New York. Cost, \$10,950.
4. A residence at Orange, N. J. Perspective views, floor plans, etc. Cost about \$12,000.
5. Perspective view and floor plans of a residence at Holyoke, Mass. L. B. White, Holyoke, Mass., architect. Cost complete, \$6,000.
6. Sketch of two old Bristol houses.
7. Sketch of hotel and Post Office, Dartmouth.
8. A Casino erected at Springfield, Mass. Cost complete \$12,000. Floor plan and perspective.
9. A church recently erected at Greenwich, Conn., at a cost of \$13,000 complete. J. C. Cady, architect, New York. Ground plan and perspective elevation.
10. View of the entrance to the United States Trust Company's building, Wall Street, New York.
11. A dwelling at Yonkers, N. Y. Cost complete \$5,000. Floor plans and perspective elevation.
12. Elegant residence at Stamford, Conn. W. R. Briggs, architect, Stamford, Conn. Cost \$15,000. Floor plans and perspective.
13. View of the iron and wood gate in front of the en-

trance to the Press Pavilion at the recent Paris exposition.
14. Miscellaneous Contents: Fireproofing wooden floors.—"Peach bottom" slate.—The manufacture of granite.—The lien law.—Combustible architecture.—Variety in Gothic architecture.—New No. 9 double cylinder planer and smoother, illustrated.—A sliding Venetian blind, illustrated.—The Holmespurfed slitting machine, illustrated.—Get sound titles to your real estate.—Heating apparatus for a wagon factory.

The Scientific American Architects and Builders Edition is issued monthly. \$2.50 a year. Single copies, 25 cents. Forty large quarto pages, equal to about two hundred ordinary book pages; forming, practically, a large and splendid MAGAZINE OF ARCHITECTURE, richly adorned with elegant plates in colors and with fine engravings, illustrating the most interesting examples of Modern Architectural Construction and allied subjects.
The Fullness, Richness, Cheapness, and Convenience of this work have won for it the LARGEST CIRCULATION of any Architectural publication in the world. Sold by all newsdealers.

MUNN & CO., PUBLISHERS, 361 Broadway, New York.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted June 10, 1890. AND EACH BEARING THAT DATE.

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

- Accordion, E. Kalbe 429,763
Adding machine, H. Cook 430,001
Advertising and discount coupon book, sheet, or card, C. A. Slocum 430,044
Advertising or display device, A. Dahlstrom 429,833
Aging wines, apparatus for, L. Wagoner 429,822
Air brake mechanism, H. S. Hopper 430,024
Alarm. See Burglar alarm.
Amalgamator, C. W. Tremain 429,823
Annealing steel castings and steel forgings, W. Sellers 429,775
Annunciator, electric, J. D. Bishop 429,589
Attrition mill, H. A. Duc, Jr. 429,679
Axle, F. Kruegermann 429,726
Band cutter and feeder, W. H. Alston 429,876
Bandage, medical, J. Wainwright 430,048
Barrel cover, C. Woodworth 429,671
Batteries, porous cell for galvanic, G. H. Felt 429,837
Battery. See Galvanic battery. Secondary battery.
Battery solution, galvanic, G. H. Felt 429,898
Batting, compressing and baling cotton, H. Rembert 429,640
Bed covering, W. T. Doremus 429,894
Bell, door, J. Rocheleau 429,643
Bell mechanism, door, A. F. Rockwell 430,040
Belt and sash, combined, A. Hellenberg 429,910
Belts over their pulleys, apparatus for throwing, H. T. Neszier 429,961
Belts, tension device for, A. G. Anderson 429,877
Bench. See Husking bench.
Binder, self, H. A. J. Rieckert 429,958
Block. See Snatch block.
Board. See Game board. Switch board.
Boat, G. W. Schermernorn 429,649
Boiler water indicator, J. L. Campbell 429,937
Boleter spring, B. C. Seaton 429,651
Bolt. See Flour bolt. King bolt. Spring bolt.
Bolt, W. T. Kenyon 429,630
Bolt holder, E. Baer 429,786
Bolt holder, C. A. Maurer 429,633
Book and binding therefor, W. R. Crawford 429,889
Box. See Express messenger's box. Letter box. Paper box. Stuffing box. Water and gas box.
Brake. See Carriage brake. Header brake. Sled brake. Wagon brake.
Brake shoe and beam attachment, S. A. Bemis 429,674
Brick or tile, Krenig & Eburn 429,925
Bricks, enamel for coating, J. Stiel 429,659
Broom holder, M. J. Shimer 429,761
Brush, J. M. Beissarth 429,839
Brush, O. Jenness 430,077
Brush making machine, C. D. Hughes 429,921
Buckle, E. Latham 430,078
Buckle, J. T. Merritt 429,748
Buggy top, H. W. Timmons 429,822
Buggy top raiser, J. Long 429,728
Bureau, washstand, and writing desk, combination, J. Wippler 429,602
Burglar alarm, G. H. Hodgkins 429,762
Burglar alarm, electric, H. C. Shubert 429,817
Burner. See Gas and air burner. Oil burner. Refuse burner. Straw burner.
Butter moulder, Kinnaman & Dean 429,690
Button fastener, F. E. Stracke 429,821
Button fastener holder, shoe, A. G. Wilkins 429,628
Buttoner, J. M. Sullivan 429,661
Cable grip, E. R. Guerra 429,790
Cable terminal, J. C. Reilly 429,815
Calendar, Y. Paez 430,036
Calendar, L. Palmersten 429,949
Camera. See Photograph camera.
Can. See Oil can.
Can forming and soldering machine, C. W. Sleeper 429,872
Cannon and operating the same, pneumatic, W. A. Bartlett 429,593, 429,594
Cannon, pneumatic, W. A. Bartlett 429,595
Cannon, pneumatic, G. H. Reynolds 429,641
Cap, C. M. De Lacy 430,003
Capsule stripping machine, F. J. Reinhold 429,957
Car chair, reversible, Scarritt & Mosley 429,966, 429,967
Car coupling, M. M. Clarke 429,886
Car coupling, A. N. Hopkins 429,920
Car coupling, M. E. Summers 429,662
Car coupling, H. J. Webb 429,983
Car doorway, bridge, stock, B. C. Hicks 429,915
Car, hand, C. Roberts 429,982
Car, passenger, I. B. Guenzberg 429,619
Car, railway, J. N. Barr 429,834
Car seat, G. W. Cushing 430,071
Car, stock, B. C. Hicks 429,916
Car wheel, C. Roberts 429,963
Cars, bridge for doorways of cattle, B. C. Hicks 429,760
Card fillets, apparatus for covering cylinders with, N. Whitley et al. 429,985
Carriage brake, baby, W. Wilson 429,709
Carriage door, L. F. Hurst 430,026

- Carrier. See Coin carrier. Egg carrier. Glass carrier. Hay carrier.
Cart, road, H. C. Turner 429,784
Case. See Dressing case.
Cash register and indicator, M. R. Longacre 429,927
Casting machine, type, F. Wicks 430,051
Cement lined pipe, H. B. Nichols 429,947
Chain, Thomas & Beals 429,978
Chair. See Car chair.
Charcoal, apparatus for treating, R. V. F. De Guinon 429,682
Chart for draughting garments, J. S. & M. E. Baughman 430,059
Chimney cowl or ventilator, W. G. Henls 429,911
Churn, H. Westphal 429,707
Chute, coal, W. Claypoole 429,840
Clamp. See Hose clamp.
Clasp. See Pencil clasp. Rope clasp.
Cleaner. See Wire and track cleaner.
Clipper, rotary, W. H. Cogswell 430,070
Clippers, adjustable attachment for hair, W. C. Hatcher 429,722
Closet. See Water closet.
Closet, C. T. Pratt 429,952
Clothes prop attachment, L. E. Friend 430,012
Clutch, friction, L. H. Watson 430,057
Coin carrier, F. T. Camp 429,752
Combination lock, I. Livingston et al. 429,691
Commutators, machine for turning dynamo, H. G. McLean 429,946
Commutators, tool for turning dynamo, A. D. Spencer 430,094
Condenser for steam pumps, E. L. Frost 429,808
Cooler. See Milk cooler.
Copies, re-enforcing press, C. E. Jewell 429,855
Copper when heated, preventing the oxidation and deoxidation of, G. W. Cummins 429,832
Corn cutter, C. G. & S. P. Deming 430,004
Corn splitting machine, R. E. Polindexter 429,794
Corrugated structure, J. Mitchell 429,957
Couch or lounge, O. Alexander 429,750
Coupling. See Car coupling. Thill coupling. Whiffletree coupling.
Cow tail holder, G. W. & A. J. Doore 429,849
Crusher. See Ore crusher.
Cultivator, R. Cracraft 429,883
Cultivator, W. H. Rand 429,955
Cultivator, J. P. Turner 429,824
Cultivator, L. H. Whitman 429,698
Cultivator, lister, A. A. Sawyer 429,364
Currents, means for creating artificial, E. Bantz 429,853
Curtain roll support, S. S. Mackin 429,930
Cutter. See Band cutter. Corn cutter. Slaw or kraut cutter.
Desks, tables, etc., covered top for, W. F. Smith 430,092
Die. See Upsetting machine die.
Digger, F. C. Lovejoy 429,892
Digger. See Post hole digger.
Door or shutter straightener, J. Kaiser 430,083
Dressing case or bureau attachment, W. H. Hall 429,863
Drill. See Ratchet drill.
Drilling machine, F. B. Miles 430,083
Easel, alarm, M. K. Paine 430,084
Easel for the use of china decorators, A. H. Mason 429,858
Egg carrier, S. H. Houghton 429,654
Electric conduit, underground, H. Flad 430,010
Electric connection, C. J. Van Depoele 429,745
Electric cut-out, automatic, M. Waddell 430,066
Electric drill system, H. N. Marvin 429,730, 429,731
Electric machine, dynamo, R. Pfund 429,736
Electric meter, J. H. Barnard 429,751
Electric regulator, E. Wagemann 429,825
Electrical distribution, system of, E. M. Bentley 430,060
Electrically reciprocated tools, generator for, H. N. Marvin 429,729, 429,732
Electrode, galvanic battery, G. H. Felt 429,836
Elevator, Fogarty & Buchanan 430,011
Elevator safety attachment, F. Haudel 430,017
Engine. See Marine engine. Traction engine.
Envelope machine, S. W. Balch 430,067
Eraser, ink, O. M. Solberg 429,704
Etching, machine for preparing the surface of steel for, G. J. B. Rodwell 429,644
Exhaust, utilizing, W. Schmidt 429,744
Express messenger's box, T. S. Spivey 429,667
Extractor. See Stump extractor.
Fabric. See Roofing fabric.
Fabrics, renovating, A. Mautner 429,791
Fan, H. S. Carley 429,884
Fence, C. C. Carpenter 430,061
Fence, H. & D. S. Hartwell 429,685
Fence, J. W. Roberts 429,773
Fence making machine, W. H. Smith 429,655
Fence post, H. J. Howser 429,627
Fertilizer distributor, J. R. McCord 429,859
Fibrous substances, disintegrating, G. M. Rose 429,647
File, paper, E. H. & C. Moran 429,838
Firearm, magazine, J. H. Brown 430,061
Fire lighter, C. P. Heal 429,908
Fishing reel, J. Vom Hofe 430,029
Floor, fireproof, O. W. Norcross 429,770
Flour bolt, J. M. Case 429,998
Flour, meal, or bran packer, C. Roehl 429,645
Flue stopper, W. Chase 429,718
Forging machine, W. H. Johnson 430,029
Frame. See Stove frame. Umbrella frame.
Friction surface, J. V. Beekman 429,981
Fruit assorting or sizing machine, J. A. Jones 430,031
Fumigator, C. Q. Hayes 430,018
Furnace, W. Horsfall 429,626
Furnace for heating metals, W. Sellers 429,776
Furnace grate, W. R. Reaney 429,797
Fuses without exposing flames or sparks, means for igniting, W. B. & G. J. Smith 429,597, 429,598
Galvanic battery, J. Beattie, Jr. 429,586
Galvanic battery, G. H. Felt 429,836
Galvanic battery, C. A. Hitchcock 430,075
Galvanic battery, J. Slicco, Jr. 429,703
Galvanometer, A. E. Colgate 429,987
Game, G. N. Thompson 429,800
Game board, N. Reiz 429,639
Garment supporter, C. C. Shelby 429,778, 429,779
Gas and air burner, O. M. Shannon 429,798
Gas generating apparatus, oil, M. C. Burt 429,675
Gate. See Hatchway gate.
Gate, Day & Handy 430,103
Gate fastening, L. E. Bradford 429,965
Gearing, double intermittent grip, P. Hockett 430,020
Gearing, reversible grip, P. Hockett 430,021
Generator. See Steam and gas generator. Steam generator.
Glass carrier, Dickey & Duster 429,847
Glass, handling and laying, Dickey & Duster 429,846
Glove donning implement, I. D. Crispell 429,800
Glove, husking, L. H. Sholder 429,653
Grain and seed separator and grader, W. S. Wood 429,749
Grain binder packer, O. O. Storie 429,706
Grain scourer and cleaner, D. M. McKinnon 429,945
Grain separator, W. L. Gilson 429,616
Grain separator, O. M. Morse 429,634
Graphophone, J. H. White 429,827
Grater, G. H. Thomas 429,826