

Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line.

Marine Iron Works. Chicago. Catalogue free. "U. S." Metal Polish. Indianapolis. Samples free.

Yankee Notions. Waterbury Button Co., Waterbury, Ct. Pocket Folding Umbrellas. Grove & Stover, Luray, Va.

Machinery for R. & C. contractors, mines, and quarries, for hoisting, pumping, crushing, excavating, etc.

The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company.

The best book for electricians and beginners in electricity is "Experimental Science" by Geo. M. Hopkins.

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

Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters or no attention will be paid there to. References to former articles or answers should give date of paper and page or number of question.

(7769) A. B. K. asks how emery paste or razorene is made and pressed into cakes. A. Mix fine emery intimately with fat and wax until the proper consistency is obtained in the paste, and then rub it well into the leather strap.

(7770) E. W. B. writes: I have a number of valuable film negatives so curled, and the gelatine so hard, that they cannot be unrolled without injury.

NEW BOOKS, ETC.

FOREIGN PATENT AND TRADEMARK LAWS. A Comparative Study, with Tabular Statements of Essential Features of Such Laws. By Arthur P. Greeley, Assistant Commissioner of Patents.

No one has made a more thorough study of foreign patent and trademark practice than Mr. Arthur P. Greeley, Assistant Commissioner of Patents, whose connection with the Commission appointed under the Act of Congress to revise the patent and trademark laws of the United States and whose progressive spirit with reference to improving the practice within the Patent Office qualifies him especially for the work in hand.

German patent laws resemble, in some respects, the laws of the United States, and in other respects the English system. With the laws of these four countries taken as a standard, the practice of other countries is discussed, and the resemblance of their patent laws to one or more of the systems first presented is set forth.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending NOVEMBER 28, 1899, AND EACH BEARING THAT DATE.

- Abacus, J. P. Johnson. 637,964
Advertising device, C. T. Dukelow. 637,988
Alarm system and apparatus for testing same, electric, E. F. Woodman. 637,914
Anchor, stockless, P. J. Ryan. 638,147
Animal trap, J. Herfert. 637,783
Automatic brake, A. E. Norris. 638,185
Barrel washing machine, A. Danner. 637,854
Battery. See Primary battery.
Battery compound, H. Blumenberg, Jr. 638,039
Beating, E. D. Woods. 637,842
Beating, ball, F. M. Woods. 638,158
Beating, ball, S. D. Wright. 637,984
Bed brace, J. L. Peacock. 638,028
Bedstead brace, J. D. Earle. 637,770
Bedstead, iron, W. Hess. 637,784
Belt, electric, J. Meyer. 638,148
Belt fastening tool, C. F. Sperry. 637,902
Belt winder, threshing machine, J. B. Bartholomew. 637,760
Bicycle, J. H. Graham. 638,112
Bicycle, E. Roach. 638,067
Bicycle brake, Paulson. 637,821
Bicycle or velocipede, water, A. Marx. 638,132
Bicycle support and lock, J. P. Hoppert. 638,121
Bicycle tandem attachment, T. J. H. Dermody. 637,758
Bicycles, detachable carrying bracket for, Buley & Wragg. 637,762
Bier, J. A. St. John. 638,075
Bin, C. W. Beehler. 638,186
Bit. See Bridle bit.
Blackboard composition, Blacknall & Jordan. 638,003
Block for building moles, dams, piers, etc., N. R. Jeckel. 637,935
Block signal and train stopping device, automatic, S. J. McCart. 638,026
Blotter bath and absorbent material therefor, H. M. Adams. 637,985
Board. See Dough board.
Boat, life, L. W. Myers. 637,940
Boiler. See Sectional boiler. Steam boiler.
Boiler tube cutters, machine for operating, Forsyth & Bell. 637,774
Bolt threading machine, H. P. Eilers. 637,772
Bone black kiln, B. Eba. 638,177
Boot or shoe, W. Burwell. 638,043
Boot or shoe, S. Sanden. 637,948
Boot or shoe attachment, T. Smith. 637,940
Bottle stopper, S. Twitchell. 637,977
Box. See Folding box. Razor box. Telescopic box. Two piece box.
Bracket. See Extension bracket.
Braiding machine spool holder, E. Mundt. 638,059
Brake. See Automatic brake. Bicycle brake. Car brake. Fluid pressure brake. Vehicle brake.
Bread cutter, C. S. Osborn. 638,135
Bread making machine, P. F. & A. F. Bryce. 638,030
Bridle bit, F. Klein. 637,802
Burner. See Gas burner. Water heater burner.
Cab,ansom, Quinsler & McNear. 638,141
Cage, dumping, W. G. Halbert. 638,114
Calculating furnace, Godfrey & Hayes. 637,864
Calculating machine, C. W. & R. L. Cleveland. 638,097
Calculating machine, D. J. T. Hiett. 638,118
Camera, photographic, E. F. Edgcomb. 637,996
Can, H. W. H. Powell. 637,859
Car attachment, cattle, M. A. Eatman. 637,859
Car bolster, railway, J. C. Fortiner. 638,105
Car brake, W. S. G. Baker. 637,845
Car coupling, Lewis & Spates. 637,996
Car coupling, J. J. Ryan. 638,102
Can heading machine, J. Brenzinger. 637,761
Car sign, illuminated, G. F. Bostwick. 638,170
Caransom, J. Hickey. 637,786
Cars, controlling mechanism for brakes and sand distributing apparatus for street, E. B. W. Reichel. 637,829
Card lock rod, D. E. Hunter. 638,017
Carding engine, Gillett & Fogg. 638,111
Carding machine rubbing mechanism, Barber & Cromie. 638,162
Carriage, folding baby, F. M. Courtney. 638,100
Carrier. See Post holder.
Ceilings and floors, construction of, C. Potech. 637,943
Chair. See Dental chair. Nursery chair.
Chair, W. B. McAllister. 637,968
Channeling machine, C. L. Eaton. 637,926
Chimney top, C. E. Burress. 638,172
Churn, B. F. Snyder. 637,956
Churn, J. H. Quinley. 637,944
Circuit closing and interrupting device, Kubio & Becker. 638,020
Clasp, W. B. Page. 637,972
Cleaner. See Knife or fork cleaner. Trolley wire cleaner.
Clip. See Label clip.
Clock, A. M. Lane. 637,876
Clock, electric, H. E. Andersson. 638,160
Clock, globe, G. Jeager. 637,871
Clock, self closing gas, Erickson & Young. 638,178
Collar pad, F. A. Mott. 638,008
Corkscrew and valve for beer pumps, combined, F. Preston. 637,826
Corn sheller, L. E. Gaiser. 637,930
Corrugating machine, A. C. Kronquest. 637,875
Cotton gin roller, D. S. Chapman. 637,922
Coupling. See Car coupling. Pipe coupling. Pump coupling. Rod coupling. Thill coupling.
Cream separator, centrifugal, J. H. Ayers. 637,758
Cue, parlor game, H. C. Lehmann. 637,877
Cultivator, swivel action, F. M. Hizes. 638,119
Currents, system of distributing alternating, E. G. P. DeSchlage. 637,819
Curtain pole, J. Schephardt. 638,159
Cushion. See Spring cushion.
Cuspidor, R. H. Johnson. 637,799
Cuspidor, adjustable, J. C. Meader. 637,822
Cutter. See Bread cutter. Tobacco cutter.
Cutting machine, J. J. Ryan. 638,100
Decorticating machine, A. Price. 638,140
Dental chair, G. T. Higgins. 638,197
Dental saliva ejector and tongue depressor, J. E. Nymann. 637,970
Desk, detachable trunk, W. H. Scully. 638,032
Digger. See Post holder.
Direct acting engine, E. C. Meissner. 637,810
Door lock, E. A. Schmertz. 638,151
Door stop and fastener, J. D. Postle. 638,139
Dough board, E. Sargent, Jr. 638,149
Paught connection, J. D. Hubbell. 638,015
Draught equalizer, J. W. Miller. 637,833
Dredge cutter head, A. W. Robinson. 637,831
Dredgings, method of disposing of, A. G. Rose. 638,145

Advertisements.

ORDINARY RATES. Inside Page, each insertion, - 75 cents a line Back Page, each insertion, - \$1.00 a line For some classes of Advertisements, Special and Higher rates are required.

WOOD or METAL WORKERS without steam power can save time and money by using our Foot and Hand Power Machinery SEND FOR CATALOGUES— A—Wood-working Machinery. B—Lathes, etc. SENECA FALLS MFG. COMPANY. 695 Water St., Seneca Falls, N. Y.

ENGINE & FOOT TOOLS AND SUPPLIES. LATHES. SEBASTIAN LATHE CO. 120 CINCINNATI ST. CINCINNATI, O.

Foot Power and TURRET LATHES, Planers, Shapers, and Drill Presses. SHEPARD LATHE CO., 133 W. 2d St., Cincinnati, O.

SUCCESSFUL MEN have learned their business "from A to Z" Your future depends upon your ambition. We have prepared thousands who studied "between times" to secure enviable positions through EDUCATION BY MAIL in Electrical, Civil, Mining, Steam and Mechanical Engineering; Metallurgy, Journalism, Machine Design, Mechanical Drawing, Art, Architecture, English Branches, Stenography.

THE FORBES PATENT DIE STOCKS. Two and three inch pipe can be threaded by a boy using only one hand on a crank. Send for illustrated catalogue. CURTIS & CURTIS, No. 30 Hand Machine. Range 4 to 27 R. & L. 6 Garden St., Bridgeport, Conn.

The Coburn Patent Trolley Track Store Ladders. A PAIR OF STAIRS ALL ALONG THE LINE OF SHELVES. Send for Book. The Coburn Trolley Track Mfg. Co. HOLYOKE, MASS.

THE OBER LATHES For Turning Axe, Adze, Pick, Sledge, Hatchet, Hammer, Auger, File, Knife and Chisel Handles, Whiffletrees, Vokes, Spokes, Porch Spindles, Stake Balusters, Table and Chair Legs and other irregular work. Send for Circular A. The Ober Mfg. Co., Chagrin Falls, O., U. S. A.

THE EUREKA CLIP The most useful article ever invented for the purpose. Indispensable to Lawyers, Editors, Students, Bankers, Insurance Companies and business men generally. Book marker and paper clip. Does not mutilate the paper. Can be used repeatedly. In boxes of 100 for 25c. To be had of all booksellers, stationers and notion dealers, or by mail on receipt of price. Sample card, by mail, free. Manufactured by Consolidated Safety Pin Co., Box 121, Bloomfield, N. J.

BARNES' New Friction Disk Drill. FOR LIGHT WORK. Has these Great Advantages: The speed can be instantly changed from 0 to 1600 without stopping or shifting belts. Power applied can be graduated to drive, with equal safety, the smallest or largest drills within its range—a wonderful economy in time and great saving in drill breakage. Send for catalogue. W. F. & JNO. BARNES CO., 1999 Rubt St., - Rockford, Ill.

Van Norman Duplex Milling Machines Perform the combined work of Horizontal Spindle Milling Machines, Vertical Spindle Milling Machines, and in addition, cut at all angles. They are invaluable for all kinds of tool, gauge and fixture work, die work and for general manufacturing. They save time, cutters and fixtures. WALTHAM WATCH TOOL CO., Springfield, Mass.

USE GRINDSTONES? If so, we can supply you. All sizes mounted and unmounted, always kept in stock. Remember, we make a specialty of selecting stones for all special purposes. Ask for catalogue. THE CLEVELAND STONE CO. 2d Floor, Wilshire, Cleveland, O.

You spend thousands on coal bills—but how much to save the steam? Want to know more about it?—Ask for our booklet "H" in the HEINTZ STEAM TRAP. WILLIAM S. HAINES CO., 136 South Fourth St., Philadelphia, Pa.

- Dredgings, means for disposing of, A. G. Rose. 637,947
Drill. See Grain drill. Reciprocating drill. 638,184
Driving apparatus, A. E. Norris. 637,803
Drying wheat, etc., apparatus for, J. C. W. Stanley. 638,127
Dust pan, A. J. Vromant. 637,908
Dye, black azo, G. Koerner. 637,908
Dynamo from car axles, means for driving, J. L. Creveling. 637,766
Electric heater, E. E. Gold. 638,050
Electric light and making same, incandescent, W. L. Colwell. 637,979
Electric machine, dynamo, W. B. Sayers. 638,070
Electric meter, E. S. Halsey. 638,011
Electric switch, F. A. Merrick. 638,129
Electric switch, Perkins & Tregoning. 637,882
Electric switch, H. F. White. 638,036
Electrical cut out, C. G. Perkins. 637,838
Electrical cut out apparatus, L. Andrews. 638,064
Electrical distribution system, L. Andrews. 638,085
Electrical distribution system, E. B. W. Reichel. 637,828
Electrical distribution system, Wilson & Cater. 638,157
Electrically moved apparatus, means for controlling, G. Sautter. 638,150
Electricity, chemical generator of, E. L. Anderson. 638,083
Electrohygienic apparatus, A. & A. Schneider. 637,833
Electrolytic or kindred apparatus, liquid feed device for, H. Carmichael. 637,851
Electromagnetic instrument, G. E. L. Grabe. 637,778
Engine. See Carding engine. Direct acting engine. Gas engine. Rotary engine.
Excavating machine, J. F. Kazimir. 637,993
Exhibition and musical apparatus, Swaab & De Lamprecht. 637,904
Extension bracket, A. Nordyke. 637,969
Feeding mechanism, C. Letter. 637,838
Felt, plastic, A. Gentsch. 637,776
Fence, flood, Waldran & Willey. 638,055
Fibrous plants, machine for treating, J. G. Pratt. 637,824
Filter, Benjamin & Jackson. 638,167
Fire escape, F. M. Lepore. 637,878
Fire escape, O. A. Treadway. 638,080
Fireproof partition wall, V. Venezia. 637,906
Fireproof window, Voigtmann & Pomeroy. 637,907
Fitting or draping stand, J. A. Ondrak. 637,871
Flagstaff truck, D. P. Chesebro. 638,065
Flashlight device, C. W. King. 637,800
Floor mat, C. Schmitt. 638,038
Floors, means for securing ceilings, floorings, etc., to solid, A. Katz. 637,936
Flower pot, adjustable, R. E. Burke. 637,763
Fluid heating and sterilizing apparatus, Waterhouse & Forbes. 638,192
Fluid pressure brake, H. O. Munsier. 638,025
Fluid pressure regulating mechanism, E. H. Weatherhead. 637,980
Flushing apparatus, J. W. Berry. 638,002
Folding box, F. R. Vernon. 637,838
Forging, drop, W. R. Howe. 637,792
Fruit package and method of packing fruits for shipment, A. M. Augustine. 637,844
Furnace. See Calcining furnace. Ore reducing furnace. Smokeless furnace.
Furnace, Brown & Tanner. 638,089
Furnace for burning pulverized fuel or the like, J. B. Arce. 638,161
Fuse wire holder, A. Peterson. 637,941
Fusible plug, C. G. Perkins. 637,891
Gage. See Pressure gage. Tympen gage.
Game apparatus, E. L. Williams. 637,982
Garment edge protector, A. M. Weber. 638,145
Garment stiffener, P. McGraw. 637,845
Gas, apparatus for manufacturing, L. S. Davis. 637,856
Gas burner, A. Buerkle. 637,849
Gas burner, P. R. Curran. 638,044
Gas engine, E. Rappe. 637,975
Gas generating acetylene, E. J. Dolan. 638,175
Gas generator, acetylene, W. E. Roles. 637,848
Gas generator, acetylene, Ruttenberg. 637,988
Gas generator for stoves, oil, L. Yancey. 637,835
Gas generators, carbid container for acetylene, C. W. Iden. 637,934
Gas washing or scrubbing apparatus, S. & J. Chandler. 638,005
Gate. See Railway gate. Spring gate.
Gate, T. P. Gallup. 638,009
Gate opening device, M. E. Fassett. 637,927
Generator. See Gas generator. Steam generator.
Glass articles, manufacture of, P. T. Sievert. 637,899
Glass grinding and polishing machine, G. A. Marsh. 637,981
Gold washing apparatus, J. H. Fellows. 637,961
Governor, automatic, O. Hughes. 638,016
Grain drill, Denyes & Schutt. 637,767
Graphophone cylinders, holder or support for, W. B. Howell. 637,933
Grinder, sickle, A. L. Heiner. 637,946
Grinding machine, cutlery, T. J. Tellefsen. 638,204
Grinding mill, W. F. Davis. 638,205
Grinding process, grain, P. & H. Theiss. 637,837
Grinding process, Bloodgood & O'Donnell. 638,169
Gun sight attachment, D. H. Darling. 638,007
Guns, recoil mechanism for automatic machine, Dawson & Silverman. 638,045
Hair crimper, F. W. Schroeder. 638,031
Hammer, power, J. A. Morris. 638,058
Hammock support and ejection, B. Diggins. 638,174
Handle. See Saw handle.
Handle bar and post adjustment, J. Wiggins. 638,137
Harrow, J. Ashcraft. 637,999
Harrow, wheeled, W. O. Phillips. 638,139
Harvester elevator, grain, G. W. Beam. 637,916
Harvester sickle, C. S. Borton. 638,148
Hat and coat holder, G. W. Chuter. 638,198
Hat conformator, Mayer & Altland. 638,023
Hay and stock rack, combined, S. H. Petro. 638,201
Hay rake, J. Macphail. 637,907
Heater. See Electric heater. Submerged heater. Water heater.
Heater, P. F. McAffrey. 637,887
Hinge, spring, G. W. Chandler. 637,852
Hitching device, C. Jacobs. 637,716
Hoisting or cultivating machine, J. F. Carroll. 638,063
Horseshoe, elastic tread, W. R. Howe. 637,911
Horseshoe, soft tread, W. E. Williams. 637,931
Hubs from tubular blanks, machine for forming wheel, F. L. Moore. 638,183
Ice cream freezer, J. P. Perkins. 637,863
Ice creper, G. W. Rush. 638,082
Incandescent mantle support, F. W. Poland. 637,942
Incandescent mantles, machine for inserting shining rings into blanks of, B. Von Baltz. 638,004
Incandescent mantle support, F. W. Poland. 638,082
Inhaling apparatus, J. Weibmann. 637,950
Jack. See Track jack.
Jack, W. F. Reed. 637,945
Jar. See Preserve jar.
Jars, bottles, etc., closure for, A. L. Weissentbamer. 637,981
Journal box, car axle, F. Thompson. 638,076
Keyboard rail protector, L. Bernard. 638,086
Kiln. See Bone black kiln.
Knife or fork cleaner, Pantala. 637,974
Knitting machine, H. Clarke. 638,066
Knitting machine stop motion, circular, W. J. Ferris. 637,929
Label clip, T. Boville. 638,171
Lamp, acetylene, Sunderland & Marshall. 638,153
Lamp, arc, J. R. Prentiss. 637,825
Lamp, electric, arc, Johnson & Wunderlich. 638,125
Lamp, electric arc, G. L. Moyer. 637,886
Lamp for signaling purposes, H. G. G. Wilkins. 637,912
Lamp, gasolene, J. W. Hile. 638,198
Lamp, hydrocarbon incandescent, D. S. Wilkins. 637,952
Lamps, carbon holder for electric arc, F. S. Worsley. 638,159
Lampholder, time, A. Johnson. 638,018
Lathes, etc., compound rest for engine, E. Earle. 637,769
Lawn trimmer, B. F. Martz. 638,056
Letter press, M. G. Lewis. 637,829
Life preserver, F. W. Jurgschat. 637,872
Light. See Electric light.
Lightning arrester, T. B. Hughes. 637,794
Linoleum apparatus for use in manufacturing inlaid, C. H. Scott. 638,071
Lip turning machine, J. B. Hawley. 638,010
Liquid descending apparatus, W. H. Rice. 638,120
Lock. See Door lock. Seal lock. Window lock.
Locomotive with coupled bogie, C. Hagan. 638,113
Log recorder, electric, L. T. Jones, Jr. 637,992
Loom and filling carrier therefor, J. H. Northrop. 638,200
Loom picker motion, D. B. Syme. 638,203
Lubricator, J. A. McLaughlin. 638,061
Man head, F. C. Darley. 637,855
Mat. See Floor mat.
Match box filling machine, A. Paulson. 638,116
Measure, rotary lumber, R. J. Cleveland. 638,088
Measuring vessel draining stand, A. D. Howard. 637,863
Meat mixer, E. Cowin. 637,765
Meter. See Electric meter. Oscillating meter. Rotary meter.
Milk urn, N. Muslar. 637,815
Mill. See Grinding mill.
Mixer. See Meat mixer.
Motor. See Electric motor.
Motors, apparatus for indicating direction or rotation of, H. Kahler. 637,873
Mowers, adjustable ball-bearing for lawn, H. Deck. 637,987

(Continued on page 382)