

Business and Personal Wants.

READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. In every case it is necessary to give the number of the inquiry.

MUNN & CO.

Marine Iron Works. Chicago. Catalogue free. Inquiry No. 8194.—Wanted, machinery for making wooden toothpicks.

Forming engines. J. S. Mundy, Newark, N. J. Inquiry No. 8195.—Wanted, electric welded wire hoops, galvanized gas pipe crosses large enough to receive 3/8-inch pipe with one end cast heavy enough to turn a full race around the opening to receive the gas pipe and large enough to retain 3/16-inch ball, also steel plate 3/16 inch thick.

“U. S.” Metal Polish. Indianapolis. Samples free. Inquiry No. 8196.—Wanted, manufacturers of chest handles, hinges for washing machine, also gas pipe.

Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chazrin Falls, O.

Inquiry No. 8197.—For manufacturers or dealers in wire for making ornamental novelty.

I sell patents. To buy, or having one to sell, write Chas. A. Scott, 719 Mutual Life Building, Buffalo, N. Y.

Inquiry No. 8198.—Wanted, manufacturers of charcoal burners, for making charcoal out of refuse wood; also for makers of stump pullers.

FOR SALE.—Water front in New York harbor with upland and riparian right. Address X. Y. Z., Box 773, New York.

Inquiry No. 8199.—Wanted, the manufacturer or dealer in the patented device for recording notes of music.

The celebrated “Hornby-Akroyd” Patent Safety Oil Engine is built by the De La Vergne Machine Company, Foot of East 138th Street, New York.

Inquiry No. 8200.—For manufacturers of knuckle-joints or device used in a similar manner.

Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery tools, and wood fiber products. Quadriga Manufacturing Company, 18 South Canal St., Chicago.

Inquiry No. 8201.—Wanted, manufacturers of centrifugal gas-cleaning apparatus, of the Edward Thiessen type, such as used in Europe.

Automobile experts are in constant demand at high salaries. Our seven weeks' course is the most thorough and practical, fitting men to drive, handle and repair Day and evening classes. Special course for owners New York School of Automobile Engineers, 146 West 56th Street, New York.

Inquiry No. 8202.—Wanted, dealers in pearl-bearing mussels, also in asbestos.

Inquiry No. 8203.—Wanted, makers of “hollow wire” such as used for heating and ventilating systems.

Inquiry No. 8204.—Wanted, names of manufacturers of soda fountain globes.

Inquiry No. 8205.—Wanted, manufacturers of filling machines for beer.

Inquiry No. 8206.—Wanted, manufacturers of cash registers.

Inquiry No. 8207.—Wanted, manufacturers of fancy bands and moulding of britannia metal.

RECENTLY PATENTED INVENTIONS.

Of General Interest.

HEADWEAR.—J. U. ADAMS, New Orleans, La. This invention has reference more especially to hats, caps, and the like of the types embodying a sweat-band; and one of the principal objects is to provide the sweat-band of the article with means for enabling the same to be loosened (expanded) or tightened (contracted) within certain limits to thereby adapt the article to fit the head of the wearer thereof.

PAPER-LIFTING DEVICE FOR PAPER-ROLLS.—E. S. BROWN, Washington, D. C. The parts are so arranged that the device may be readily secured to any of the ordinary frames now in common use, it being preferred to place the bracket with its stop or lug against the front edge of the top bar of the frame and to secure the said bracket by screws passing through its top plate. This facilitates the application of the improvement to devices already in use and also enables its ready connection with the frames in course of manufacturing the same.

DOOR CHECK AND CLOSER.—G. T. SHEETS, Salt Lake City, Utah. The object in this instance is to provide a device with special means for regulating the action of the dash-pot and for facilitating the disconnection of the device from the door. Arrangement is made for regulating the tension of the spring which is used in connection with the closer and for attaching the device for operation with or without the dash-pot.

Household Utilities.

FURNITURE.—G. H. ABERCROMBIE, Poughkeepsie, N. Y. The invention relates particularly to combined screens and washstands, the object being to provide a device particularly adapted for use in small rooms or where furniture-space is limited, the device being so constructed that the shelving and other parts will fold closely against the screen convenient for storage or placing closely against a wall.

COOKING UTENSIL.—R. A. W. KRAMPITZ, Valdez, Alaska. In this invention the improvement is in culinary utensils especially designed for use in camping-outfits and the like, but which may be employed whenever desired. The utensil comprises three different camp utensils—one a mixing-pan for mixing bread, etc., a bread-pan in which biscuits and other bread may be baked, and a frying-pan which may co-operate with the mixing-pan and bread-pan.

VENTILATOR.—H. L. MORRILL, Monticello, Maine. In practical use this ventilator is inserted in the corner of a window-pane, a triangular section of glass being removed for reception thereof. The edge of the glass rests against the flange and is maintained in contact therewith by means of the cover on the opposite side. By manipulating the latch on the cover the same may be adjusted to give any desired degree of opening, or the opening may be entirely closed.

Machines and Mechanical Devices.

PRINTING MECHANISM FOR WARP-PRINTING DEVICES.—F. SCHMIDT, 7 Edisonstrasse, Oberschöneweide, near Berlin, Germany. Besides the advantage of using thin liquid color this apparatus offers many others. Printing can be done much quicker than with the old apparatus as lifts or throws are very light. As when printing the drum can make no lateral movements, printing-strips become sharply defined. Much time is saved, engagement being effected by simple movement of a lever. As the color-boxes may be situated on the endless chain below the printing device—the warp-printing drum—and do not require to change position, they do not stop the work and cannot be so easily mistaken one for the other as formerly. Fewer assistants are required for this new apparatus.

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

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued

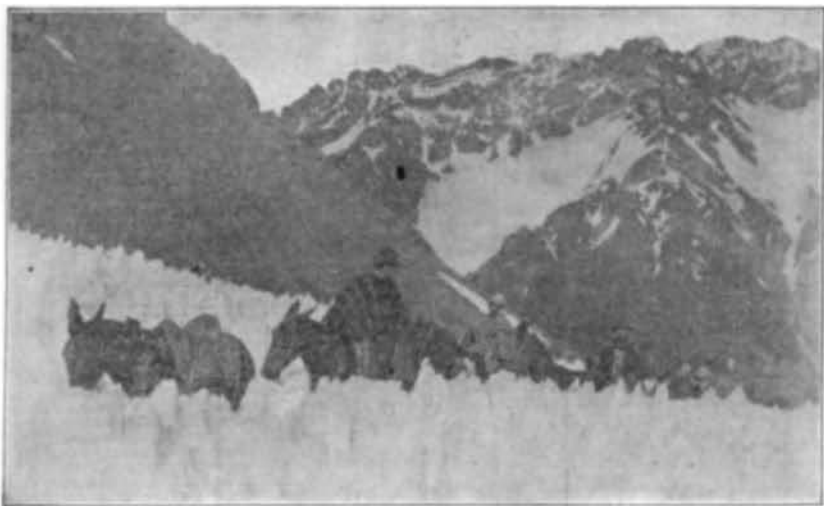
for the Week Ending

June 26, 1906.

AND EACH BEARING THAT DATE

(See note at end of list about copies of these patents.)

- Adding machine attachment, C. C. Earnst. 824,416
Advertising device, A. Suesskind. 824,516
Advertising display stand, W. T. Little. 824,126
Aerial tramways and the like, coupling device for, J. A. Gillenber. 824,645
Aethoxy-phenyl-campophoryl imide and making same, Heitmann & Clemmensen. 824,357
Alarm signal, R. J. Zorge. 824,270
Alloy, W. B. Driver. 824,103
Alloy, C. H. Birmingham. 824,618
Alloys, manufacturing zinc, P. & A. Guhrs. 824,644
Ammonia from gases, extracting, R. Brunck. 824,902
Ammonia, regenerating and purifying of, L. Werllin. 824,459
Amusement apparatus, J. H. Maguire. 824,305
Amusement apparatus, aquatic, R. A. Fowden. 824,107
Animal trap, G. A. Jones. 824,246
Arch construction, A. B. Foons. 824,636
Autographic register, A. Krauth. 824,185
Automatic sprinkler, E. L. Thompson. 824,453
Automobiles, change speed and reversing gear for, J. H. Chambers, et al. 824,624
Baling press, J. J. Stopple. 824,600
Band cutter and feeder, S. Dunkelberger. 824,238
Bank, savings, E. Crapper. 824,289
Bath tub, W. Vanderman. 824,454
Bath tub seat, J. P. Eustis, reissue. 12,400
Bearing, B. A. Lawson, reissue. 12,408
Bearing, roller, T. A. Edwards. 824,533
Bed and chair, combination child's, Koening & Vallee. 824,488
Bed and table, combined folding, J. L. Boisvert. 824,404
Bed, davenport, S. A. Mellon. 824,131
Bed spring, F. L. Groff. 824,295
Bell, push button, J. R. Kidney. 824,486
Belt, J. M. Van Orden. 824,605
Belt, waist, W. C. Spittle. 824,598
Belting and preparing and treating the same, textile, G. D. Moore. 824,189
Bin, Hopkins & Canfield. 824,297
Blade, stiffening, W. Webster. 824,608
Blast furnace, W. Kemp. 824,485
Blind, apparatus for producing literature for, J. Bar. 824,938
Blind slate fastener, window, C. P. Ausband. 824,273
Blue, laundry, Griswold & Donovan. 824,294
Boiler cleaning compound, J. R. Greene, Jr. 824,112
Boiler safety attachment, T. Small. 824,214
Bolt and nut lock, combined, O. E. Quitman, Jr. 824,382
Book mark and page holder, E. L. Reynolds. 824,144
Books, papers, or cards, machine for holding, cutting, and ornamenting the edges of, G. Ritchie. 824,671
Bottle, R. Sauer. 824,210
Bottle, W. F. Smart. 824,447
Bottle closure, W. J. McMiller. 824,661
Bottle closure, J. C. Kimsey. 824,278
Bottle, non-refillable, J. Brunette. 824,336
Bottle, non-refillable, P. A. Brock. 824,122
Bottle stopper, H. B. Jones. 824,341
Bottle stopper, A. W. Cordes. 824,341
Bottle stoppers and the like, binder for, F. T. Robinson. 824,507
Boxes from hot forming dies, appliance for stripping pasteboard, J. Godfrey. 824,203
Bracelet, E. A. Phillips. 824,379
Bracelet, slide, E. F. Presbrey. 824,309
Bread and similar cake, mold used in the manufacture of short, S. Scott. 824,497
Breaching brace, harness, W. E. Murray. 824,568
Brick, interlocking, Allen & Schofield. 824,320
Bridge, bascule, R. E. Newton. 824,135
Bridge, ferry, Condict & French. 824,627
Broiler, gas, H. Gandar. 824,477
Brush filling machine, pneumatic, J. Morrison, Jr. 824,503
Brush, fountain, W. I. Ferris. 824,688
Brush holder, C. A. Harris. 824,296
Brush, tooth, S. E. Babcock. 824,087
Buckle, C. A. Brewer. 824,276
Building construction, G. H. Dyer. 824,470
Bung, faucet, D. Beebe. 824,225
Bunsen burner for liquid hydrocarbons, P. Ullmann. 824,268
Burglar alarm, J. Naser, reissue. 12,500
Burglar alarm, J. O. Morris. 824,259
Burglar alarm, detonating, L. W. Wade. 824,161
Butter cutter, G. Ericson. 824,472
Calculating furnace, carbon, P. P. Nungesser. 824,190
Calculating machine, G. E. Schuman. 824,510
Candlestick, miner's, E. L. Weed. 824,609
Car body bolster and draw bar spring pocket, combined, H. M. Pfleger. 824,203
Car brake, P. W. Clark. 824,093
Car brake, H. W. Burke. 824,497
Car coupling, Daniels & Kirkpatrick. 824,097
Car coupling, J. Farlow. 824,239
Car, dumping, D. King. 824,365
Car fender, M. Wick. 824,519
Car fender, Hager & Fintzie. 824,541
Car for railways, etc., removable, P. J. Mitten. 824,188
Car, freight, A. Becker. 824,615
Car, passenger, H. F. Vogel. 824,338
Car, railway, M. Rouns. 824,209
Car roof, metallic, A. Campbell. 824,170
Car unloading apparatus, Buquet & Crochet. 824,621
Car wheel, S. P. Bush. 824,107
Carbureted air burner for heating, cooking, etc., O. M. Hudson. 824,361
Card support, Jacquard, A. J. Lagasse. 824,491
Carpet cleaner, pneumatic, J. L. Chesnut. 824,683
Carriage child's, S. D. Butterworth, Jr. 824,622
Carriage-top stop, W. L. Smith. 824,679
Carving machine, F. H. Richards. 824,146
Case. See Spring case.
Casing spear, F. N. Donaldson. 824,530
Cask support, G. S. Rominger. 824,586
Casket, T. F. Combs. 824,284
Caster, J. M. Harper. 824,422
Caster, T. & A. E. Bourne. 824,619
Cattle guard, E. R. Kerr. 824,247
Cattle guard, J. M. Lee. 824,303
Cell cases, machine for making, W. B. Shepera. 824,155
Cement cisterns, extensible dome form for, F. R. Acker. 824,548
Chair fanning attachment, rocking, B. Heinerich. 824,481
Chart or scale, color, A. H. Munsell. 824,374
Chip sorting apparatus, H. Powers. 824,141
Chisel, hollow mortising, B. C. Rockwell. 824,673
Christmas tree attachment, A. R. Treichel. 824,603
Churn, J. W. Willson. 824,164
Churn dasher, H. A. Bierley. 824,524
Churn operating mechanism, J. L. Hoyle. 824,424
Churning machine, A. Overbay. 824,575
Clinker catcher, H. A. Gibbs. 824,642
Clock, A. D. Gary. 824,537
Clock, intermittent alarm, W. E. Porter. 824,205
Clocks and similar instruments, leveling device for, F. L. Bonny. 824,525
Clutch, friction, H. L. Whitman. 824,610
Coffee apparatus, jacket or hood for use in connection with the exhaust heads of hot water urns of, E. J. Monouse. 824,669
Coffee, refining and cleansing, N. J. H. Weitzmann. 824,320
Coin operated mechanism, Hickey & Brown. 824,543
Coin register tapes, means for keeping records of, W. G. Nagel. 824,196
Coke briquets, manufacture of, L. L. D. Zuidenboek. 824,680
Collar pad, horse, G. A. Reynolds. 824,145
Collar, shirt, F. W. Parsons. 824,577
Compasses, adjusting device in, G. Schoenmer. 824,311
Composition of matter, H. Friedmann. 824,475
Compositions in stick form, receptacle or holder for, G. J. Orange. 824,137
Concrete mixing machine, W. H. Phillips. 824,204
Concrete steel construction, E. M. Scofield. 824,594
Concrete steel construction, supporting device for reinforcing bars of, E. M. Scofield. 824,595
Concrete wall constructions, mold for, B. A. Mueller. 824,192
Concrete wall construction, core for, B. A. Mueller. 824,193
Condenser, W. Schwanhauser. 824,312
Condiment holder, P. J. A. Schnoor. 824,443
Cooking utensil, E. C. Howland. 824,119
Cooler, D. M. Livingston. 824,402
Coop, chicken, C. A. Harp. 824,242
Copy holder, A. Brown. 824,405
Core making machine, J. S. Nicholson. 824,433
Cork fabric and making the same, P. Sechiar. 824,675
Corset, apparel, D. Kops. 824,480
Cotton gin, H. J. Tate. 824,602
Cotton gin, roller, W. L. Crowson. 824,414
Couplings, pivot pin support for, W. E. Coffin. 824,526
Cradle, S. L. Morse. 824,133
Crane, portable traveling, G. R. Cullingworth. 824,342
Crane, shipping, J. F. Moss. 824,566
Cream pasteurizer and cooler, H. N. Rivard. 824,147
Cue holder, R. U. & W. Rudell. 824,149
Cue rack, L. Sevigny. 824,386
Curtain frame, J. C. Kamping. 824,427
Curtain frame, F. A. Justice. 824,434
Curtain roller cap, J. M. Berry. 824,230
Cuspidor attachment for bars, J. F. Heidt. 824,651
Cuspidor, flushing, J. W. Cooper. 824,287
Cut-out, automatic safety, R. Richardson. 824,439
Cutting machine, W. A. Garrigus. 824,641
Dauber, G. B. Kneare. 824,366
Decorticating machine, W. J. Hollier. 824,244
Dental articulator, W. W. Crate. 824,096
Dental devices, making, S. Towle. 824,218
Desk, typewriter & England. 824,462
Desk, typewriter stand, roller top, W. H. O'Keefe. 824,434
Detecting mechanism, G. R. Williams. 824,355
Detector bar clip, J. T. Hambay. 824,460
Die stock, T. R. Leighton. 824,425
Die. See Screw threading die.
Directory device, C. A. Johnson. 824,483
Dish scraper and cleaner, J. T. Foskett. 824,473
Distilling apparatus, water, C. R. Dudley. 824,630
Door and shutter and certain connections therefor, flexible, J. Baum. 824,334
Door closer, W. L. Giersdorf. 824,538
Door lock, emergency exit, H. E. Clark. 824,173
Draft equalizer, W. F. Maas. 824,254
Drawer, desk, S. C. Hodell. 824,653
Dredging and excavating machine, B. H. Coffey. 824,283
Driving gear, roller tooth variable, W. E. Golden. 824,110
Driving mechanism, Driver & Mansmith. 824,102
Duster, feather, J. E. Sneyely. 824,512
Eaves trough, Myser & Ziesenis. 824,570
Ejector mechanism, E. H. Elzer. 824,535
Electric meter, coin feed, J. Allan. 824,522
Electric time signal, J. Powell. 824,622
Electrical machines, brush holder for, Siegfried & Storer. 824,213
Electricity, removing static, W. H. Chapman. 824,339
Elevator device, safety, J. Taylor, et al. 824,452
Elevator driving mechanism, V. W. Mason. 824,129
Elevator safety apparatus, J. G. Babio. 824,523
Elevator safety mechanism, G. Hall. 824,646
Embroidery machines, reader or machine for perforating paper to be used with the jacquards in automatic, F. Pittard. 824,380
Embroidery, alle or net, J. Diem-Beutler. 824,100
Engine, regulating mechanism, gas, G. H. Ellis. 824,105
Eraser tip for lead pencils, penholders, pencil point protectors, and the like, F. McIntyre. 824,375
Excavating machine, A. J. Ducellier. 824,531
Exhibition and amusement apparatus, M. E. Pester. 824,436
Explosion engine, H. D. Dibble. 824,528
Explosive engine, E. J. Woolf. 824,396
Extension table, folding, C. M. Langhorne. 824,186
Eyeglass mounting, C. F. Wall. 824,607
Eyeglasses, E. C. Bernheim. 824,617
Fabric, former for tubular, C. C. Shepard. 824,212
Fanning mill, S. S. Lofberg. 824,666
Faucet, fluid measuring, G. K. Cooke. 824,095
Fence post, E. S. Hiltner. 824,117
Fence post, J. Ludwick. 824,429
Fence post, J. N. Miller. 824,562
Fertilizer, W. B. Chisolm. 824,280
Fertilizing material, making, W. B. Chisolm. 824,281
Fibrous st. lks, treating, W. J. Hollier. 824,243
Filter, W. B. Klein. 824,487
Filter for feed water heaters, O. L. Stump. 824,389
Fire alarm boxes and for other things, guard for keys of, F. W. Cole. 824,411
Fire alarm, annunciator, H. W. Martin. 824,128
Fire, means for protecting ships from, H. W. McKinn. 824,573
Fire, E. E. Neal. 824,197
Fireproof floor construction, A. Jordahl. 824,363
Fireproof safe, M. Mosler. 824,373
Fish line reel, H. H. Richardson. 824,438
Fluid fuel burner, Flager & McGaban. 824,680
Fluid pressure motors, governor for, C. H. Johnson. 824,425
Fly trap, W. E. Thompson. 824,517
Frame structure, E. Molloy. 824,502
Fruit picking bag, J. Utterback. 824,160
Fruit receptacle, V. E. Stine. 824,514
Fuel weighing and packing machine, C. S. Cox. 824,412
Fuel feeding device, E. Harcharick. 824,356
Furnace, J. F. Senter. 824,355
Furnace grate, E. Einfeldt. 824,534
Furnaces, carbon holder for electric, G. O. Seward. 824,153
Furnaces, water cooled door frame for, L. L. Knox. 824,184
Furniture, insecticide holding attachment for, T. Alexander. 824,272
Gage. See Measuring gage.
Game apparatus, J. F. Kieder. 824,600
Game board, E. E. Hille. 824,423
Game device, R. D. Martin. 824,560
Gardening tool, D. L. Kent. 824,123
Garment, J. Walter. 824,456
Garment clasp, H. H. Barnum. 824,332
Gas apparatus for the generation of acetylene, A. Rosenberg. 824,500
Gas burner, H. W. Dowd. 824,308
Gas generating furnace, C. A. Buzzell. 824,337
Gas heating apparatus, A. C. Carey. 824,335
Gas meters, prepayment attachment for, R. U. Fersenheim. 824,419
Gas producer, H. Gerdes. 824,353
Gas producer, R. Hilprecht. 824,359
Gas producer, E. Sandner. 824,384
Gas producer, suction, E. Higgins. 824,358
Gas regulator, G. E. Crookshank. 824,413
Gasket removing tool, J. H. Optenberg. 824,377
Gate, Mock & Menahall. 824,500
Gate, J. W. Reynolds. 824,584
Gear wheel tooth, detachable, F. L. Morse. 824,132
Gong, electric, W. F. Word. 824,307
Governor, engine, P. Mohrleick. 824,564
Grader, road, A. L. Donogh. 824,236
Grain moving apparatus, pneumatic, Rieth & Chamberlain. 824,585
Grain weigher, E. J. Vraalstad. 824,606
Grate, chain, J. P. Barnes. 824,331
Grinding mill, M. F. Abbe. 824,520
Gum from vegetable matter, obtaining, E. Heber. 824,116
Gun firing mechanism, Meigs & Jakobsson. 824,130
Gun, magazine, P. W. Wisewell. 824,165
Gun stock, jointed, H. W. Munson. 824,505
Hand protecting device, R. M. & F. E. Clark. 824,174
Hardware, device for fastening cabinet, C. S. Barnard. 824,330
Hardware, device for fastening cabinet, E. W. Bassick. 824,333
Harvester, beet, N. B. & W. A. Sebring. 824,211
Hasp fastener, S. J. McClung. 824,200
Hat, J. Banks. 824,274
Heating device, electric, Grettum & Young. 824,643
Hinge, flush butt, A. G. Lamb. 824,367
Hog catching device, Betz & Holliday. 824,492
Hoist stop, automatic, F. H. Kohlbriker. 824,540
Hoisting apparatus, W. W. Miller. 824,258
Hook and eye, A. H. Michaelis. 824,257
Horizon, artificial, H. A. Gaudsen. 824,640
Horseshoe calk and fastener, Bogear & Tompkins. 824,000
Hose coupling, J. F. McElroy. 824,670
Hose supporter, E. Johnson. 824,426
Hub, vehicle, M. A. Elliott. 824,345
Hydrocarbon burner, McGaban & Flager. 824,432
Igniter, sparking, C. M. Huey. 824,451
Incubator, C. A. Lingenfelter. 824,605
Injecting needle, C. T. Daniel. 824,686
Insecticide, P. A. Caogon. 824,400
Insulation cutter, W. Chausse. 824,172
Ironing board, W. Bremer. 824,091
Jar opener, H. M. Hartsborn. 824,114
Jar wrench, fruit, E. W. Macauley. 824,360
Jelly press, M. S. Schayer. 824,592
Jig ore concentrator, A. C. Campbell. 824,623
Joints, apparatus for reducing dislocated, R. W. Bartlett. 824,612
Journal bearing, self-lubricating, J. B. Curtis. 824,628
Journal box, H. C. Buboup. 824,406
Journal box, J. S. Patten. 824,578
Journal box dust guard, G. L. Mansfield. 824,127
Journal boxes, apparatus for cooling hot, D. H. Fairbanks. 824,635
Kite which can be taken to pieces, tailless, A. J. Bergeron. 824,616
Knitting machine, M. Boas. 824,403
Knitting machine power mechanism, T. F. Morris. 824,565
Knuckle sleeve, emergency, W. F. Taylor. 824,451
Labeling machine, J. C. Gillette. 824,600
Labeling machine, bottle, N. Muslar. 824,569
Lace cabinet, J. R. Wilson. 824,323
Lamp burners, flame regulator for, H. R. White. 824,395
Lantern holder, J. G. Dittmer. 824,101
Latch, H. H. Engebretson. 824,417
Latch, gate, N. A. McPhail. 824,195
Lathe, C. G. Richardson. 824,207
Leather board making machine, Alvord & Knox. 824,086
Leather stretching machine clutch, E. L. Post. 824,130
Lens drilling machine, E. T. Waite. 824,220
Level, ditching, O. Halvorsen. 824,479
Level, spirit, A. T. Gibson. 824,100
Life preserver, G. Krieger. 824,664
Lifting jack, B. R. Beaver. 824,614
Line connecting device, J. H. Warren. 824,222
Linotype machine, D. S. Kennedy. 824,650
Liquid level apparatus, Reeve & Noyes. 824,143
Loading apparatus, C. M. Watson. 824,162
Loading apparatus, H. T. & S. G. Washburn. 824,457
Lock, door, D. H. Keith. 824,370
Lock, P. Magaro, No. 3. 824,392
Lock, H. P. Townsend. 824,652
Lock, J. Herzog. 824,306
Lock setting implement, B. K. Means. 824,314
Locomotive and means for controlling the same, electric, F. L. Sessions. 824,261
Locomotive cab windows, hood or shield for, E. W. Payne. 824,685
Loom beating-in device, J. K. Dalkranian. 824,226
Loom for weaving tubular fabrics, C. Alvord. 824,226
Loom pattern resetting mechanism, H. W. Owen. 824,200
Loom stop mechanism, J. W. Bridge. 824,335
Lubricating device, W. B. Lowe. 824,187
Mail bag crane, J. Cole. 824,175
Mail catcher, W. W. Sykes. 824,601
Mail catching device, J. Ryan. 824,440
Mail pouch catcher, J. E. Smith. 824,388
Match box and lighter, E. Walder. 824,221
Measuring gage, trousers, W. Leigh. 824,252
Measuring instrument, alternating current electrical, E. E. Lehr. 824,696
Measuring instruments, bearing for electrical, W. E. McCoy. 824,194
Meat cutting or slicing machine attachment, F. W. Margets. 824,496
Meat tenderer, Tolen & Hostetter. 824,319
Mechanical implement, C. F. P. Warner. 824,394
Mechanical lubricator, G. R. Welch. 824,458
Mercerizing, W. Mather, et al. 824,255
Mercury column, MacMahon & Wesler. 824,304
Metal structure, tubular, E. Malloy. 824,501
Metal trimming and slitting machine, W. W. Irwin. 824,694
Metallic leaf, package roll of, W. H. Coe. 824,626
Micrometer gage, C. A. Flisk. 824,620
Microphone, F. Freyer. 824,160
Mine cage, F. N. Wilson. 824,259
Miter box, J. N. House. 824,298
Mitten, J. Gulick. 824,540
Mold, W. H. Lucas. 824,557
Molding machine, H. Tabor. 824,317
Money box, W. E. Cleveland. 824,094
Mop wringer, J. V. Cook. 824,286
Mortise or hinge gage, G. D. McLeod. 824,134
Motor control system, electric, Dean & Tschentscher. 824,620
Motor controller, electric, H. E. Dubois. 824,237
Motor controller, warning signal for electric, W. F. Freyer. 824,223
Motor starter, automatic, A. W. Darby. 824,687
Mud guard, R. Newman. 824,574
Music rolls for self-playing piano attachments, device for perforating, A. Rothermund. 824,208
Music stand, J. A. Smith. 824,596
Musical instrument, self-playing, H. W. Shonnard. 824,315
Musical instrument, stringed, L. C. Smith. 824,316
Musical instruments, expression mechanism for mechanically operated, G. H. Davis. 824,343
Naphtha, etc., from oil or other liquids, apparatus for separating, E. R. Edson. 824,104
Nebulizer, C. Bergers. 824,471
Nut lock, J. W. Gilbert. 824,179
Nut lock, Di Vito & Meyn. 824,219
Ore roasting furnace, C. H. Rider. 824,263
Ores, reduction of, W. Koehler. 824,663
Ornamental material, J. Schurek. 824,444
Oscillation responsive device, L. De Forest. 824,638
Oven stop mechanism, baker's, J. J. Linden. 824,553
Packing, metallic, S. T. Hiatt. 824,692



These people endure their hardships more easily by chewing Cola leaves daily.

# Coca-Cola

TRADE MARK REGISTERED

## Delicious, Refreshing and Necessary—Why?

Did it ever occur to you that there could be something more than mere thirst-slaking and palate-pleasing in a temperance beverage?

If it could be demonstrated that a drink could fulfill several requisites, wouldn't you be disposed to accept it as a marked advance along the right lines of living?

Coca-Cola comes nearer being the ideal beverage than any other known to man.

This is because the hustle and bustle of the life of to-day is much more wearing than ever before in the history of the human race.

Therefore a beverage that is delicious to the taste, with the additional virtues of increasing brain and muscular force, is calculated to be of the greatest benefit to those whose work requires either

### Sustained Brain Effort or Continued Muscular Exertion

The best way to show that this is so is to gain some idea of the why and wherefore of these statements.

#### COCA

The leaf of the Coca shrub as found on the west coast of South America, has held from time immemorial a remarkable place in the religious, social and physical history of the Peruvians and their immediate neighbors. When Pizarro conquered Peru he found the daily use of the Coca leaf as firmly fixed among the natives as the drinking of tea has always been among the Chinese.

We quote herewith the highest authority upon the subject:



THE BRAIN WORKERS' PANACEA.

*"Coca is unquestionably the agent which has enabled the dwellers in the higher Andes not only to withstand the effects of a high elevation, but to become noted for their physical strength and endurance in spite of them. Foreigners going there have found it possible to gain a similar assistance from its use, and to endure without distress physical trials which are otherwise unendurable. The natives chew the leaves regularly several times during the day. A 'coca-habit' may be said to be unknown even among the people, who chew the leaf from youth to old age without ill effect."*—National Standard Dispensary, Edition 1905.

**COLA.**—It is an unusual coincidence that in the nut or fruit of the Cola Tree the natives of tropical Africa should have discovered much the same properties as the Peruvians secure from the Coca leaves. These nuts are chewed or eaten in their fresh or dried state by the natives and have the effect of increasing muscular ability and nervous force. Henry M. Stanley, the famous explorer, stated that on many occasions his native bearers were only able to make their long, fatiguing marches by chewing Cola nuts en route, which wonderfully revived their flagging powers of endurance.

DELICIOUS *Coca-Cola* REFRESHING

is the result of years of experiment and is the perfectly balanced combination of these valuable tonics in the form of a healthful drink, with a very slight proportion of each in every glass, less in fact than the amount of Caffeine in a cup of coffee or tea.

The Tonic Properties of Coca-Cola are approached by no other beverage, and it may well be called the Brain Workers' Panacea.



Cola Gatherers in Equatorial Africa.



|  |         |
|--|---------|
| Padlock, F. W. Schroeder   | 824,593 |
| Pail, dinner, A. J. Smith  | 824,156 |
| Paper box machines, measuring attachment for, A. Bell                      | 824,464 |
| Paper feeding apparatus, M. Baumgartner                                    | 824,401 |
| Paper transmitting and controlling device, W. Scott                        | 824,313 |
| Parer for apples and other fruit, D. F. Hunt                               | 824,300 |
| Photographic plate holder, G. Geiger                                       | 824,352 |
| Piano, G. W. Weser   | 824,224 |
| Pianos, presser bar for, J. E. & J. W. Matthews                            | 824,488 |
| Picture exhibitor, J. J. Todd  | 824,266 |
| Piling, metal sheet, R. H. Stevens   | 824,513 |
| Pin, See Stake pin   |         |
| Pipe hanger, G. Hossege  | 824,544 |
| Pipe or hose and manufacturing the same, P. Sechiari                       | 824,446 |
| Planing machine knife, wood, Ruth & Harden                                 | 824,589 |
| Planter, P. Owen   | 824,576 |
| Planter, corn, J. F. & N. P. Devenney                                      | 824,176 |
| Plow, F. H. Nichols  | 824,136 |
| Plow frame and attachment, J. G. Evans                                     | 824,633 |
| Pocket knife, A. S. Roberts  | 824,148 |
| Pouch, U. D. Ezell   | 824,634 |
| Powder receptacle, toilet, P. A. Toomey                                    | 824,391 |
| Power transmitting device, speed multiplying, J. Stewart                   | 824,216 |
| Power transmitting mechanism, C. A. Dahl                                   | 824,234 |
| Pressure regulator, F. M. Ashley   | 824,681 |
| Price and measure indicator for vessels, H. F. Dunn                        | 824,532 |
| Printing machine, S. L. Morgan   | 824,190 |
| Printing press attachment, platen, W. Mayer                                | 824,256 |
| Printing press inking mechanism, S. L. Morgan                              | 824,191 |
| Printing press registering mechanism, H. A. W. Wood                        | 824,325 |
| Pump, automatic, H. A. Reeve   | 824,312 |
| Pyrrometer, W. W. French   | 824,474 |
| Rail bond, J. P. Clark   | 824,625 |
| Rail joint, E. L. Cook   | 824,285 |
| Rail joint, W. R. Thomas   | 824,390 |
| Rail joint, H. Allen, reissue  | 12,497  |
| Railway cross tie, L. I. Hart  | 824,649 |
| Railway crossover switch, portable, J. E. & A. L. Aldrich                  | 824,271 |
| Railway rail joint, S. S. Deemer   | 824,099 |
| Railway rails, means for supporting and holding, H. Livesey                | 824,555 |
| Railway tender or stringer, W. J. Wilson                                   | 824,324 |
| Razor, safety, D. E. Goe   | 824,691 |
| Recording apparatus, electrical, Kenny & Thordarson                        | 824,364 |
| Reel for strap iron, F. Gerhard  | 824,292 |
| Refrigerator, Sewall & Abbee   | 824,387 |
| Remedy, making an internal, R. Griese                                      | 824,539 |
| Roasting furnace, F. Klepetko  | 824,181 |
| Rock breaker, subaqueous, B. H. Coffey, reissue                            | 12,501  |
| Rotary engine, R. W. Hamann  | 824,647 |
| Rotary explosive engine, H. L. Maillard                                    | 824,559 |
| Rule, combing, H. H. Huey  | 824,099 |
| Saddle attachment for harness, J. Bloedel                                  | 824,231 |
| Safe plate forming machine, Baum & Nutting                                 | 824,613 |
| Safety gate for hoists, Powner & Thompson                                  | 824,381 |
| Sandpapering machine, H. F. Holtmann                                       | 824,482 |
| Sash fastener, G. W. & G. P. Miller  | 824,667 |
| Sash lock, automatic, M. L. Hubermann                                      | 824,545 |
| Sash operating and locking device, W. R. Renard                            | 824,583 |
| Sash weight, window, D. W. Norton  | 824,198 |
| Sawing machine, D. Altemian  | 824,328 |
| Scale, railway track, W. H. Sargent  | 824,581 |
| Scale, extension arm for, P. J. Durbin                                     | 824,344 |
| Screw threading die, T. R. Leighton  | 824,697 |
| Scrubbing machine, floor, J. W. Howe                                       | 824,656 |
| Seat spider, H. W. Bolens  | 824,232 |
| Seeding attachment, W. Fetzer  | 824,106 |
| Selective system, S. A. Reed   | 824,206 |
| Settling tank, J. M. Callow  | 824,279 |
| Shaft, vehicle, F. H. Jacobs   | 824,301 |
| Sheet metal elbows, making, W. H. Klauer                                   | 824,362 |
| Shingle machine, D. F. Baker   | 824,108 |
| Shutter, J. Cahill   | 824,410 |
| Sifter, separator and grader, E. Hartzell                                  | 824,650 |
| Sifting device, A. A. Galloway   | 824,421 |
| Sign, electric, G. R. Macomber   | 824,494 |
| Signal apparatus, F. Muschenheim   | 824,430 |
| Signaling apparatus, tide power, E. B. Cade                                | 824,408 |
| Signaling device, C. C. Phillips   | 824,500 |
| Siphon, liquid dispensing, A. Kleinfeldt                                   | 824,249 |
| Skate, roller, W. S. Fulton  | 824,108 |
| Slag granulating apparatus, E. B. Clark                                    | 824,340 |
| Smelting furnace, J. D. Rivard   | 824,383 |
| Smoke consuming furnace, R. Zeller   | 824,407 |
| Smoke consuming furnace, C. G. Mark  | 824,469 |
| Smoke purifying apparatus, W. Chine  | 824,179 |
| Snap hook, J. Hayes  | 824,152 |
| Soap, cake of, J. Schwechler   | 824,152 |
| Soap, cake of, G. F. Shaver  | 824,154 |
| Soap making apparatus, Alexander & Holsteen                                | 824,167 |
| Speeder cone, J. Heattagen   | 824,115 |
| Spring, See Bed spring   |         |
| Spring, T. Thorp   | 824,318 |
| Spring motor, H. T. Kingsbury  | 824,248 |
| Stake pin, F. Knopf  | 824,182 |
| Stamping mill tappet, W. McDonald  | 824,572 |
| Steam trap, J. T. Lindstrom  | 824,554 |
| Steam trap, automatic, Seales & McElroy                                    | 824,441 |
| Stenciling machine, E. P. Kunath   | 824,695 |
| Stethoscope, T. W. Tallqvist   | 824,450 |
| Stone making mold, artificial, N. L. Damon                                 | 824,235 |
| Stopper and liquid dropper, combination, J. L. Dunnock                     | 824,631 |
| Storage battery, G. A. Ford  | 824,348 |
| Stove, gas, C. H. Hoffstetter  | 824,180 |
| Suit case lock, C. J. Salvio   | 824,590 |
| Swing seats, shelves, etc., support for, C. H. Tesch                       | 824,217 |
| Switch, adjustable, J. F. Green  | 824,354 |
| Syringe case, hypodermic, H. C. Michie, Jr.                                | 824,371 |
| Syrup dispensing jar, E. J. Calley   | 824,468 |
| Tablet counting and filling machine, J. W. & A. M. Ayers                   | 824,463 |
| Talking machine with rotatable horn, F. & W. Lochmann                      | 824,368 |
| Tank indicator, G. W. Roberts  | 824,672 |
| Target sticker, A. Mount   | 824,397 |
| Tee, making, H. A. Gollubin  | 824,111 |
| Teeth, metallic support for artificial, D. N. Booth                        | 824,465 |
| Teletype system, wireless, H. S. Baker                                     | 824,676 |
| Teletype, practicing wireless, A. Blondel                                  | 824,682 |
| Telephone key, automatic, Fuller & Danielson                               | 824,291 |
| Telephone switch book, W. A. Fricke  | 824,351 |
| Telephone switchboard, W. E. McCormick                                     | 824,431 |
| Telephone system, W. Ohnesorge   | 824,376 |
| Telephone system with centrally arranged microphone battery, G. P. Lambert | 824,251 |
| Thermo electric battery and apparatus, G. H. Cove                          | 824,684 |
| Thill and pole support, Brook & Booker                                     | 824,620 |
| Throwing or projecting apparatus, G. Obies                                 | 824,506 |
| Tie plate, A. H. Smith   | 824,678 |
| Tin, producing oxygen compounds of, C. E. Acker                            | 824,398 |
| Tire for vehicle wheels, supplemental, C. H. Goodman                       | 824,240 |
| Tire, pneumatic, C. R. Twitchell   | 824,604 |
| Tire, wheel, T. Furlong  | 824,476 |
| Tobacco cartridge, J. O. Licey   | 824,552 |
| Tool box, F. G. Marbach  | 824,495 |
| Tool combination, J. B. Runner   | 824,264 |
| Tool, cutting and punching, A. J. Lewis                                    | 824,551 |
| Tool holder, B. Bannister  | 824,275 |
| Tool holder, motor, C. B. Hastings   | 824,480 |
| Tool holder, pneumatic, A. E. Knapp  | 824,250 |
| Tool, motor driven, N. W. Fletcher   | 824,347 |
| Tool, rotary, Wilner & Sussman   | 824,322 |
| Trace fastener, H. P. Monserud   | 824,372 |
| Tracing cloth mangle, W. B. Waechter                                       | 824,455 |
| Track cleaner, W. E. Knowlton  | 824,183 |
| Track inspector, automatic, Ellis & Purvis                                 | 824,536 |
| Track sanding device, A. G. Zamel  | 824,461 |
| Track sanding device, street railway, D. Hogan                             | 824,118 |
| Transom, draft sill, and dead wood, combination cast steel, P. M. Kilroy   | 824,124 |
| Trellis, G. D. Basse   | 824,227 |
| Trick device, G. L. Maschin  | 824,561 |
| Trolley for railway vehicles, J. D. Paton                                  | 824,201 |
| Trolley keeper, B. C. Bartlebaugh  | 824,611 |
| Truck side frame, railway car, O. S. Pulham                                | 824,437 |

**"Star" Lathes**  
Automatic Feed  
FOR FINE, ACCURATE WORK  
Send for Catalogue B.  
SENECA FALLS MFG. CO.  
695 Water Street,  
Seneca Falls, N. Y., U. S. A.

**Engine and Foot Lathes**  
MACHINE SHOP OUTFITS, TOOLS AND SUPPLIES. BEST MATERIALS. BEST WORKMANSHIP. CATALOGUE FREE  
SEBASTIAN LATHE CO., 120 Culvert St., Cincinnati, O.

**1 1/2 H. P. MARINE ENGINE**  
\$33.50 Only  
Engine and Engine Fittings \$37.50  
For your Row Boat, Sail Boat or Launch  
No cranks to start—No cans, valves, gears, springs or sprockets. All working parts in full view. We build all sizes Boat Engines.  
DETROIT ENGINE WORKS,  
1425 JEFFERSON AVE. DETROIT, MICH.

**Keystone Well Drills**  
for Artesian and Ordinary Water Wells; Mineral Prospecting and Placer Testing for Druggers; Deep Drilling for Oil and Gas; Contractor's Blast Hole Drilling, River and Harbor Exploration, etc. Our five catalogs are text-books in these lines.  
KEYSTONE WELL WORKS  
Beaver Falls, Pa.

**FRICITION 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.  
W. F. & JNO. BARNES CO.,  
Established 1872.  
1999 Ruby Street, Rockford, Ill.

**Asbestos and Magnesia Products**  
STEAM PIPE AND BOILER COVERINGS.  
ASBESTOS PACKING (For all purposes).  
ASBESTOS FIRE-RESISTING CEMENTS.  
ASBESTOS BUILDING MATERIALS.  
"J-M" ASBESTOS ROOFING.  
ASBESTOS FABRICS.  
KEYSTONE HAIR INSULATOR.  
ELECTRICAL SUPPLIES.  
H. W. JOHNS-MANVILLE CO.  
New York, Milwaukee, Chicago, Boston, Philadelphia, St. Louis, Pittsburg, Cleveland, New Orleans, Kansas City, Minneapolis, Little Rock, San Francisco, Los Angeles, Seattle, London.

**PORTABLE CONCRETE Block Machine**  
Ambitious young men can start fine business, immediately profitable, easily expanded.  
Blocks cost 6 cents to make, sell for 18 cents. One man can make 200 blocks per day. Whole outfit costs \$125.00.  
Sand, water and Portland cement only materials required.  
Sent on trial.  
THE PETTYJOHN CO.  
615 N. 6th St., Terre Haute, Ind.

**PATENTS**  
Our Hand Book on Patents, Trade-Marks, etc., sent free. Patents procured through Munn & Co. receive free notice in the SCIENTIFIC AMERICAN  
MUNN & CO., 361 Broadway, N. Y.  
BRANCH OFFICE: 625 F St., Washington, D.C.

**16 FOOT LAUNCH COMPLETE WITH ENGINE \$96**  
WE ARE THE LARGEST BUILDERS OF BOATS & LAUNCHES IN THE WORLD.  
SEND FOR FREE ILLUSTRATED CATALOG. ALL BOATS FITTED WITH WATER TIGHT COMPARTMENTS. WE CARRY A FULL LINE OF BOATS READY TO SHIP.  
MICHIGAN STEEL BOAT CO., 112 JEFFERSON AVE. DETROIT, MICH.

**Make Your Own Wireless Telegraph**  
Anyone can make a thoroughly practical wireless apparatus for very little money and can listen to the messages exchanged across the Atlantic. You can quickly become an experienced operator. We will send you, for one dollar, full descriptions and plans to make the modern instruments of Marconi for sending and receiving five miles and upward. Every part clearly described, easy and cheap to make. Individual help by correspondence given to each purchaser. The Wireless Information Bureau, Room 422, 18 Broadway, New York.

**How To Increase Your Business**  
READ carefully, every week, the Business and Personal Wants column in the Scientific American  
This week it will be found on page 14.  
Some week you will be likely to find an inquiry for something that you manufacture or deal in. A prompt reply may bring an order.  
Watch it Carefully

**Reduced Rates for Telephone Service**  
CONTRACTS NOW BEING TAKEN  
Call nearest Contract Office for full information.  
NEW YORK TELEPHONE COMPANY  
CONTRACT OFFICES:  
15 Dey Street  
115 West 38th Street  
220 West 124th Street  
616 East 150th Street  
TELEPHONE NO.:  
9010 Cortlandt  
9040-38th  
9000 Morningside  
9020 Melrose

**Screw Machine Products**  
in HIGH BRASS, LOW BRASS and STERLING SILVER from 1 inch down.  
Quotations Made From Model or Working Drawings  
GEORGE W. DOVER CO.  
Factory B Providence, R. I.

**Motion Picture MACHINES and FILMS**  
STEREOPTICONS and SLIDES  
For Public Entertainments, in Theatres, Halls, Show Tents, etc.  
Catalogue No 9 Free  
KLEINE OPTICAL CO., 52 State St., Chicago, Ill.

**THE MIETZ & WEISS OIL ENGINES**  
Stationary 1 1/2 to 80 H. P.  
Marine 3/4 to 100 H. P.  
Use KEROSENE and FUEL OILS. Direct connected Generators, Pumps, Air Compressors, Hoists, etc. Thousands in use all parts of the world.  
AUGUST MIETZ  
128-128 Mott St., New York, U.S.A.

**Battery Current is Best**  
for sparking your automobile  
or motor boat. Keep your storage battery always full of "juice" and ready to furnish fat, hot sparks by installing an Apple Battery Charger. A perfect dynamo that charges your storage battery right on your car while it is running. Write for full information to-day.  
The Dayton Electrical Mfg. Co.  
98 St. Clair St., Dayton, O.

**Miracle Concrete Blocks**  
THE GREATEST BUILDING MATERIAL  
FRONT AND MOISTURE PROOF  
1 1/2 Opportunities and Big Profits in manufacturing Miracle Double Staggered Air Space Blocks. Miracle Concrete Brick and Concrete Blocks. See how they are superior to other. They are made of concrete. Our catalog shows complete details of this Concrete Industry. It is the largest book of its kind ever published. Ask for Catalog No. 10.  
MIRACLE PRESSED STONE CO., Minneapolis, Minn.

Used by forty of the leading Automobile and motor boat manufacturers. Suitable for any gas or gasoline engine using make and break or jump spark ignition.  
EVERY BATTERY GUARANTEED to give satisfaction or purchase money refunded.  
WITHERBEE IGNITER CO.  
27-31 Thames St. - NEW YORK

**American Homes and Gardens**  
BOUND—VOLUME ONE  
Profusely Illustrated, Large Quarto. 426 Pages. Green Cloth Covers Produced in Several Colors. A Beautiful Book. Price \$3.50  
This volume, containing house plans, many suggestions for the decoration and furnishing of the home; also for the improvement of the grounds and the gardens, is indispensable to those requiring such information.  
MUNN & CO., Publishers of the Scientific American  
361 Broadway, New York

|  |         |
|--|---------|
| Truss rod stand and anchor bracket, combined, P. M. Kilroy           | 824,125 |
| Tunnel calking apparatus, F. M. Moir                                 | 824,668 |
| Turbine engine, J. A. Groshon  | 824,113 |
| Turbine engine, C. J. Stuart   | 824,449 |
| Turbine governing mechanism, O. Junggren                             | 824,546 |
| Turbines, bucket for elastic fluid, K. Ahlquist                      | 824,521 |
| Turbines, governing valve mechanism for, O. Junggren                 | 824,658 |
| Turn table, C. K. Brust  | 824,632 |
| Twist drill, P. W. Fawcett   | 824,346 |
| Typewriter, J. W. Paul   | 824,579 |
| Typewriting machine, G. H. Smith                                     | 824,157 |
| Typewriting machine, W. C. Farum                                     | 824,118 |
| Typewriting machine, M. W. Pool                                      | 824,581 |
| Typewriting machine, R. von Sothen                                   | 824,587 |
| Typewriting machine paper guide, E. M. Ingersoll                     | 824,362 |
| Umbrella, P. M. & J. R. Guiou  | 824,178 |
| Umbrella, D. L. Osborn   | 824,378 |
| Undergarment, C. A. Powell   | 824,140 |
| Universal mill, P. M. Weber  | 824,518 |
| Valve, W. Collina  | 824,527 |
| Valve gear, reversible, H. W. Jones                                  | 824,657 |
| Valve indicator, E. H. Whitney                                       | 824,163 |
| Valve reseating machine, H. B. Williams                              | 824,191 |
| Valve, reversing, H. Aiken   | 824,168 |
| Valve, stop, G. Schlemmer  | 824,442 |
| Vegetable and fat cutting machine, Ruehs & Weiss                     | 824,587 |
| Vehicle attachment, J. E. Blake                                      | 824,089 |
| Vehicle brake, R. D. Baker   | 824,400 |
| Vehicle brake, motor, C. Schmidt                                     | 824,151 |
| Vehicle frame, motor, L. Lazerges                                    | 824,550 |
| Vehicle, milk and cream, C. E. Austin                                | 824,389 |
| Vehicle storm front, C. M. Stone                                     | 824,515 |
| Vehicle wheel, W. E. Greer   | 824,241 |
| Vehicle wheel, J. R. McAlister                                       | 824,571 |
| Vehicles, brake rigging for self-propelled, C. O. Snyder             | 824,215 |
| Vending machine, coin controlled, J. L. Simmons                      | 824,677 |
| Vine divider attachment, H. Climer                                   | 824,282 |
| Vise, J. Hornby  | 824,360 |
| Voltage regulator, R. Wikander                                       | 824,225 |
| Voting machine shutter closing mechanism, W. I. T. Fosdick           | 824,349 |
| Wafer machine, sugar, F. M. Peters                                   | 824,290 |
| Wagon, dumping, H. S. Long   | 824,253 |
| Wall bracket, A. de Saint Chamas                                     | 824,150 |
| Wall construction, Smythe & Ayres                                    | 824,511 |
| Wall structure, L. Millet  | 824,563 |
| Warp supporting and guiding means, O. W. Schaum                      | 824,310 |
| Washing machine, J. S. Parrish                                       | 824,435 |
| Washing machine, C. Dietz  | 824,529 |
| Washing machine, E. Rue  | 824,674 |
| Watch regulator, J. Brun   | 824,466 |
| Watchman's outfit for temporary routes, G. M. Gest                   | 824,478 |
| Water and feed trough for fowls, M. C. Rogers                        | 824,508 |
| Water level indicator, J. T. Dawes                                   | 824,998 |
| Water wheel, F. Kirchbach  | 824,662 |
| Watering trough for cattle and horses, automatic, Ruge & Katzenstein | 824,588 |
| Wedge, Denison & Blake   | 824,415 |
| Wheel, See Car wheel   |         |
| Whetstone, blotter, and paper weight, combined, E. B. Pike           | 824,138 |
| Whiffletree connection, J. I. Shaw                                   | 824,265 |
| Window frame and sash, metallic, W. B. Yeager                        | 824,326 |
| Window lock, self-acting, J. I. Moss                                 | 824,507 |
| Window screen, A. J. Dapron  | 824,448 |
| Window screen, W. S. Hood  | 824,693 |
| Wire drawing machine, J. A. Horton                                   | 824,654 |
| Wire drawing machine, A. G. Champlin                                 | 824,655 |
| Wire reel, W. E. Eichhoff  | 824,290 |
| Wire stretcher, J. A. Hoyt   | 824,120 |
| Wire stretcher, Lowry & Arters                                       | 824,556 |
| Wire wrapping machine, A. G. Champlin                                | 824,171 |
| Wood ornamenting machine, W. H. Broadway                             | 824,277 |
| Wool treating device, T. F. Johnson                                  | 824,121 |
| Woven fabric, W. T. Smith  | 824,148 |
| Woven fabric, multicolored, J. Szecepanik                            | 824,158 |
| Wrench, J. W. B. Turk  | 824,267 |
| Wrench, Matusak & Slaine   | 824,499 |
| Wrench, L. Maier   | 824,558 |

**DESIGNS.**

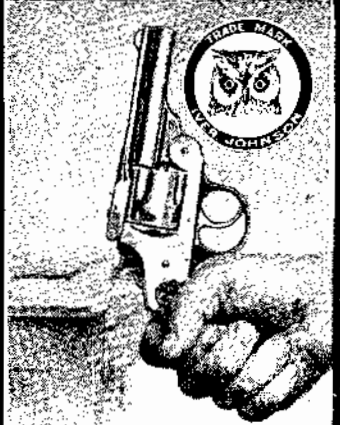
|  |        |
|--|--------|
| Automobile front casing, R. C. Lewis                             | 38,108 |
| Fabric, textile, A. F. Pappin                                    | 38,109 |
| Humidifier casing, J. J. Smith                                   | 38,107 |
| Inkstand, C. H. Numan  | 38,102 |
| Plate, H. Ehrlich  | 38,104 |
| Spoons, forks, or similar articles, handle for, H. W. Hirschfeld | 38,103 |
| Talking machine horn, H. Sheble                                  | 38,106 |
| Transfer sheet, F. Markert                                       | 38,105 |

**TRADE MARKS**

|  |        |
|--|--------|
| Agricultural machines, certain named, Fetzer & Co.   | 54,746 |
| Ale, New England Brewing Co.   | 54,435 |
| Ale, ginger, Holmes & Barber   | 54,551 |
| Analgesic and sedative, Dr. Miles Medical Co.  | 54,274 |
| Analgesics, El Zernac Co.  | 54,615 |
| Antiseptic compound, Hylin & Co. Fabriks Aktiebolag  | 54,332 |
| Antiseptics and washes for the mouth and teeth, F. A. Schulz   | 54,583 |
| Automobile vehicles, Reo Car Co.   | 54,722 |
| Automobiles, Hol-Tan Co.   | 54,281 |
| Automobiles, St. Louis Motor Carriage Co.  | 54,431 |
| Baking powder, Howell Mfg. Co.   | 54,552 |
| Beer, Curran and Joyce Co.   | 54,594 |
| Beer, Hoster-Columbus Associated Breweries Co.   | 54,602 |
| Beer, Minneapolis Brewing Co.  | 54,642 |
| Beer, lager, Peter Schoenhofen Brewing Co.   | 54,644 |
| Beer, root beer extract, and dry ingredients for making root beer, root, Charles E. Hires Co.          | 54,465 |
| Belting, leather, Republic Belting & Supply Co.  | 54,581 |
| Bicycles, velocipedes and parts thereof, Hibbard, Spencer, Bartlett & Co.                              | 54,247 |
| Biscuits, crackers, and cakes, Crescent Macaroni & Cracker Co.   | 54,545 |
| Biscuits, crackers and cakes, A. J. Medlar Co.   | 54,634 |
| Bitters, peach, H. Klas  | 54,605 |
| Boilers for heating purposes, Kellogg-Mackay-Cameron Co.   | 54,714 |
| Books for railway employees, educational, Railway Educational Association                              | 54,251 |
| Boots and shoes and leather used in their manufacture, leather, Rice & Hutchins                        | 54,526 |
| Boots and shoes, leather, Lynchburg Shoe Co.   | 54,285 |
| Boots and shoes, leather, William Eastwood and Son Co.   | 54,369 |
| Boots and shoes, leather, Cambior, Muntaner & Co.  | 54,613 |
| Boots and shoes, leather, White-Dunham Shoe Co.  | 54,728 |
| Boots and shoes, men's, women's, and children's leather, Thomas G. Plant Co.                           | 54,315 |
| Boots, shoes, and slippers and leather therefor, leather, Fred F. Field Co.                            | 54,707 |
| Boots, shoes, and slippers and soles therefor, Morse & Rogers  | 54,360 |
| Boots, shoes, and slippers of leather or textile material, or both, and soles therefor, Morse & Rogers | 54,312 |
| Boots, shoes, oxfords, sandals, and slippers, leather, Moore-Shafer Shoe Mfg. Co.                      | 54,287 |
| Boots, shoes, slippers, and insoles, leather, H. H. Roosa  | 54,367 |
| Brakes and parts thereof, back pedaling coaster, Eclipse Machine Co.                                   | 54,705 |
| Brandy, J. Hennessy & Co.  | 54,440 |
| Bread, H. S. Levy  | 54,433 |
| Bread and biscuits, Callard, Stewart & Watt  | 54,377 |
| Brooms, American Broom & Brush Co.   | 54,563 |
| Brushes, hair, H. L. Hughes  | 54,282 |
| Butter, Scott & Co.  | 54,390 |
| Butter, Fox River Butter Co.   | 54,426 |
| Butter, H. C. Christians Co.   | 54,495 |
| Butter, cocoanut, Oil Seeds Co.  | 54,624 |
| Calcimine, Tripod Paint Co.  | 54,486 |
| Candy, Hiller Confectionery Co.  | 54,469 |

Candy, Lipps-Murbach Co. of Baltimore 54,500  
 Candy, Pepper Co. 54,522  
 Candy, Reymer & Brothers 54,524  
 Canned corn, Burnham & Morrill Co. 54,372  
 Canned corn and sauerkraut, P. Hebenadel, Jr. 54,513  
 Canned corn and succotash, Saco Valley Canning Co. 54,436  
 Canned fruits, California Canneries Co. 54,402  
 Canned fruits and vegetables, Sprague, Warner & Co. 54,394  
 Canned fruits and vegetables, Wayne County Preserving Co. 54,399  
 Canned fruits and vegetables, Abbott Grocery Co. 54,400  
 Canned fruits and vegetables, Booth Packing Co. 54,410  
 Canned fruits and vegetables, Platt & Co. 54,523  
 Canned succotash, Burnham & Morrill Co. 54,482  
 Capsules, J. M. Grosvenor & Co. 54,599  
 Cards and posters, pictorial post, congratsulatory and fancy, Chronolithographische Kunstanstalt Paul Finkenrath, Gesellschaft mit beschränkter Haftung 54,853  
 Cards, playing, New York Consolidated Card Co. 54,451, 54,452, 54,623  
 Carriages and wagons, I. S. Remson Mfg. Co. 54,711  
 Cassimeres, James Irving & Son 54,335  
 Catheters, stomach-tubes, and bougies, Johnson & Johnson 54,309  
 Catsup, relish, and chili sauce, tomato, E. Fritchard 54,628  
 Cement, hydraulic, Utica Hydraulic Cement Co. 54,487  
 Cement plaster, J. B. King & Co. 54,517  
 Cement, Portland, Thomas Millen Co. 54,437  
 Cement, Portland, Pacific Portland Cement Co. 54,476  
 Cement, Portland, Vulcanite Portland Cement Co. 54,537  
 Cement, Portland, Whitehall Portland Cement Co. 54,538  
 Ceresin, Ernst Schlemm's Export Ceresin Fabrik, Gesellschaft m. b. Haftung 54,858  
 Chain repair links, Diamond Chain & Manufacturing Co. 54,703  
 Chains, ornamental watch and neck, O. M. Draper 54,355  
 Chemical preparations, La-Lo Manufacturing Co. 54,672  
 Chemicals, certain named, Brunner, Mond & Co. 54,612  
 Chisels and punches, Whitman & Barnes Manufacturing Co. 54,730  
 Chlorids and formaldehyde, compounds of, Shoemaker & Busch 54,631  
 Chocolate, chocolate candies, and preparations of chocolate and cocoas, Russ-Suchard & Cie 54,527  
 Chocolate, cocoa, and chocolate preparations, M. S. Hershey 54,497  
 Chocolates and cocoas, Russ-Suchard & Cie 54,480  
 Cigarettes, Butler-Butler 54,442  
 Cigarettes, H. P. Strause 54,484  
 Cigarettes, Butler-Butler 54,493  
 Cigars, C. B. Perkins 54,478  
 Cigars, S. Spiegel 54,483  
 Cigars, Carreras Limited 54,507  
 Cigars, cheroots, and cigarettes made of cigar tobacco, Cayey-Cagnas Tobacco Co. 54,508  
 Cigars, Havana, Havana Commercial Co. 54,496  
 Closet seat attachment, Specialties Sales Co. 54,726  
 Coal, E. J. Cummings 54,509  
 Coal, A. Y. Malcomson 54,640  
 Coats, vests, overcoats, and trousers, Schwab Clothing Co. 54,237  
 Coats, vests, trousers, and overcoats, Brokaw Bros. 54,542  
 Cocoa and chocolate, preparations of, Chas. H. Phillips Chemical Co. 54,423  
 Coffee, W. E. Sibley 54,391  
 Coffee, Sprague, Warner & Co. 54,392  
 Coffee, Chase & Sanborn 54,403  
 Coffee, Merchants Coffee Company of New Orleans 54,520  
 Coffee, roasted and roasted and ground, Enterprise Coffee Company of Baltimore City 54,547  
 Collars, Cluett Peabody & Co. 54,225 to 54,233, 54,267 to 54,272  
 Condensers, surface and jet, Wheeler Condenser & Engineering Co. 54,316  
 Containers for oysters, clams, fish, and other sea foods, National Oyster Carrier Co. 54,719  
 Cordial, Societe Anonyme de la Distillerie de la Liqueur Benedictine de l'Abbaye de Fecamp 54,405, 54,406, 54,416 to 54,418  
 Cordial, blackberry, H. R. Myers 54,756  
 Corn cure, Elgin Chemical Co. 54,326  
 Corn huskers, adjustable, F. D. Kees Manufacturing Co. 54,755  
 Corsets, Fellheimer and Co. 54,548  
 Cotters, spring, Whitman & Barnes Manufacturing Co. 54,260  
 Cotton and cotton and silk piece goods, Austin, Poor & Co. 54,319  
 Cotton piece goods, Tremont & Suffolk Mills 54,296  
 Cotton piece goods, York Manufacturing Co. 54,301  
 Cotton piece goods, Massachusetts Cotton Mills 54,558  
 Cough cure, F. L. Gray 54,598  
 Cream separators, centrifugal, International Harvester Company of America 54,515  
 Creamers, gravity, J. S. Barth 54,371  
 Cutlery, certain named, A. J. Jordan 54,754  
 Damasks, bleached, gray, printed, and fancy, Neuss Hessein & Co. 54,560  
 Depilatory powders, F. T. Hopkins 54,683  
 Dress shields, Kora Co. 54,555  
 Earthenware vessels, E. J. Samson & Co. 54,611  
 Egg whites, chemical and vegetable substitute for, Frostlene Manufacturing Co. 54,375  
 Electric switches, push buttons, and fittings for electric circuits and lights, R. A. Schoenberg 54,725  
 Engines, center crank steam, A. L. Ide & Sons 54,334  
 Engines, gasoline, Deere & Webber Co. 54,740  
 Engines, slide crank steam, A. L. Ide & Sons 54,333  
 Engines, steam hoisting, mining, stationary, and dredging, J. S. Mundy 54,718  
 Exhibiting advertising and display matter, machines for, F. E. Van Deusen 54,298  
 Explosives, Masurite Explosive Co. 54,310  
 Fabrics, bleached, unbleached, dyed, and printed textile, A. G. Hyde & Sons 54,261  
 Fabrics, certain named dress, O. Seyd 54,562  
 Faucets, E. Stebbins Manufacturing Co. 54,742  
 Feed water heaters, Wheeler Condenser & Engineering Co. 54,300  
 Ferruginous preparation, Nicolay & Co. 54,341  
 Fertilizers, Virginia-Carolina Chemical Co. 54,407, 54,408  
 Fertilizers, Georgia Chemical Works 54,411  
 Fertilizers, Navassa Guano Company of Wilmington 54,434  
 Fertilizers, Virginia-Carolina Chemical Co. 54,438, 54,439, 54,455 to 54,457, 54,488, 54,505, 54,648  
 Fertilizers, artificial, Cloverine Fertilizer Co. 54,466  
 Fiber ware, incured, United Incured Fibre Co. of New Jersey 54,688  
 Figs, dried, Fratelli Brothers 54,580  
 Finger nail polish, Dr. J. Parker Frazer Co. 54,273  
 Fireworks, hand stick, E. H. Wagner 54,760  
 Fireworks, torpedo, E. H. Wagner 54,347  
 Fish, salted and boneless, J. W. Beardley's Sons 54,554  
 Flavoring extracts, Oklahoma Wholesale Grocer Co. 54,625  
 Flour, self-rising, E. G. Richards 54,388  
 Flour, wheat, Mohns-Frese Commercial Co. 54,381  
 Flour, wheat, Monarch Milling Co. 54,382  
 Flour, wheat, Rea-Patterson Milling Co. 54,386  
 Flour, wheat, Topeka Milling Co. 54,396  
 Flour, wheat, Falk Mercantile Co. 54,404  
 Flour, wheat, Lawrenceburg Roller Mills Co. 54,470  
 Flour, wheat, New London Milling Co. 54,502  
 Flour, wheat, Northwestern Consolidated Milling Co. 54,503  
 Flour, wheat, John F. Meyer & Sons Milling Co. 54,516  
 Flours and meals, American Cereal Co. 54,635  
 Fluid meters, Hersey Manufacturing Co. 54,749  
 Food for infants and invalids, prepared, Wells & Richardson Co. 54,587  
 Food, infants, H. Taylor 54,396  
 Food, wheat breakfast, Pillsbury-Washburn Flour Mills Co. 54,627

If the Owl's Head trade-mark is on the Stock, you may "HAMMER THE HAMMER"



# IVER JOHNSON

without fear of discharge, because the revolver hammer never touches the firing pin. This Safety principle, found only in the Iver Johnson Safety Automatic Revolver, is due to the fact that the lever which transmits the blow from the hammer to the firing pin is never in position to do so except when the trigger is pulled all the way back.

**SEND FOR BOOKLET "SHOTS"**  
It's full of firearm lore; gives important facts that every owner of firearms should know, and goes into details and illustrates by sectional views the peculiar construction of the Iver Johnson.

**Iver Johnson Safety Hammer Revolver**  
3-in. barrel, nickel-plated finish, 22 rim fire cartridge, 82-38 center fire cartridge - \$5.00  
**Iver Johnson Safety Hammerless Revolver**  
3-inch barrel, nickel-plated finish, 82-38 center fire cartridge - \$6.00

For sale by Hardware and Sporting Goods dealers everywhere, or will be sent prepaid on receipt of price if your dealer will not supply.

**Iver Johnson's Arms and Cycle Works**  
170 River Street, Fitchburg, Mass.

New York Office: 99 Chambers St. Pacific Coast Branch: P. O. Box 200, Alameda Ave., Alameda, Cal. European Office: Pichhuden 3, Hamburg, Germany.

In CONGRESS, JULY 4, 1776  
The unanimous Declaration of the thirteen united States of America.

THE PRUDENTIAL  
INSURANCE COMPANY

THE PRUDENTIAL  
IS THE STRENGTH OF  
GIBRALTAR

NATIONAL INDEPENDENCE 1776

INDIVIDUAL INDEPENDENCE 1906

**Life Insurance is Freedom**  
From Present Anxiety and Future Worry

**THE PRUDENTIAL**

Policy Provides Family Independence for the future.  
Fund for Education of Children.  
Freedom in use of present Income and Capital.  
Cash for later needs, and many other advantages.

**You Want the Best in Life Insurance**  
The Prudential Has the Best for You.

Write now, tell us how much you can afford to invest every year in Life Insurance, how much insurance you would like to obtain, and your age, and we will help you to a decision to your advantage. Address Dept. 121

**The Prudential Insurance Company of America**  
Incorporating as a Stock Company by the State of New Jersey  
JOHN F. DRYDEN, President Home Office: NEWARK, N. J.

**AIR-COOLED MOTOR CO., Lansing, Mich.**

Largest Air-Cooled Stationary Engine made.  
Bore 6 x 6 inches.  
Cools perfectly.  
No engine ever constructed with so few working parts.  
Weight 900 lbs.  
5 H. P. Gasoline.

**To Book Buyers**

We have just issued a new 48-page catalogue of recently published Scientific and Mechanical Books, which we will mail free to any address on application.

**MUNN & COMPANY**  
Publishers of SCIENTIFIC AMERICAN  
361 Broadway, New York

**Wilford's Waterproof Cloth**

light, strong, soft and durable. Made of twisted pure flax thread. It is pliable—will not crack, and is much stronger than cotton. It is positively salt and fresh water proof. The proper goods for Hatch Covers, Boat Covers, Sail Covers, Tarpaulins, Side Cloth, etc. Ten years of success—Every piece stamped. Test its merits with a trial order.

**EDWARD A. BUNKER**  
Sole Agent for the United States and Canada  
P. O. Box 1579 NEW YORK

**GAS ENGINE DETAILS.—A VALUABLE** and fully illustrated article on this subject is contained in SUPPLEMENT No. 1292. Price 10 cents. For sale by Munn & Co. and all newsdealers.

**THE BARKER MOTOR**  
has from the first shown itself to be of superior design. Mechanical ideas of proven worth, combined with the best materials and careful attention to details make it

**THE LEADER OF ITS CLASS.**  
C. L. BARKER, NORWALK, CONN.

Foods, certain named cereal, American Cereal Co. 54,541, 54,568  
 Foods made from oats, cereal, American Cereal Co. 54,401  
 Foods, poultry, A. E. Tate 54,584  
 Foods, prepared cereal breakfast, Hygienic Food Co. 54,376  
 Fruits, dried, L. Otzen & Co. 54,378  
 Fruits, dried, G. Frank 54,427  
 Garments, sleeping, Goodwin Durrell Co. 54,330  
 Gas burners, H. Adler Co. 54,574  
 Gin, Straus Gunst & Co. 54,736  
 Gin, Chicago Distilling Co. 54,738  
 Glass, cut, R. Murr 54,609  
 Glass cutters, W. L. Barrett 54,240  
 Gloves, kid, C. Perrin & Cie 54,504  
 Glue, American Glue Co. 54,462  
 Glue cement, L. W. Ferdinand 54,467  
 Golf clubs, metal heads of, T. Stewart 54,645  
 Graphite, pulverized, United States Graphite Co. 54,454  
 Guitars and zithers, Lyon & Healy 54,518  
 Gum, chewing, American Chicle Co. 54,461  
 Gum, chewing, Ban-Bon Company 54,463  
 Gum, chewing, American Chicle Co. 54,508  
 Hair dressing, J. B. C. Balme 54,283  
 Hair pins, G. Littleford 54,715  
 Hair pins, S. Beaumont & Fils 54,734  
 Hair tonic, Weindorf & Co. 54,633  
 Hats, men's, women's, and children's, Youmans 54,694  
 Heating and cooling appliances, H. Adler Co. 54,278  
 Holes, certain named, J. P. Eustis Mfg. Co. 54,753  
 Hops, Chas. L. Kiewert Co. 54,424  
 Hose, New Jersey Car Spring & Rubber Co. 54,340  
 Hosiery, Rice, Stix Dry Goods Co. 54,290  
 Hosiery, Marshall Field & Co. 54,641  
 Hosiery for both ladies and gentlemen, Wayne Knitting Mills 54,649  
 Hydrogen peroxid, American Peroxide and Chemical Co. 54,651  
 Illusion apparatus, mechanical, E. Renton 54,344  
 Ink eradicators, E. R. Thomas 54,586  
 Inks and printing ink varnishes and dry colors, printing and lithographing, Jaencke Printing Ink Co. 54,604  
 Inks, copying, indelible, and writing, S. S. Stafford, Inc. 54,294  
 Insecticides, B. G. Pratt Co. 54,343  
 Knitted underwear and hosiery, Marshall Field & Co. 54,674  
 Knives and razors, Hibbard, Spencer, Bartlett & Co. 54,246  
 Knives and razors, Western Bros. 54,458  
 Knives and razors, A. Baldwin & Co. 54,696  
 Lamps and lanterns and parts thereof, R. E. Dietz Co. 54,289  
 Lard, Golden and Co. 54,510  
 Lard, J. F. Schroth Packing Co. 54,377  
 Leather, cut and uncut sole, A. F. Schenkelberger 54,683  
 Leather for boots and shoes, A. C. Lawrence Leather Co. 54,317  
 Leather, harness, Chas. F. Stifel Co. 54,352  
 Leather, sole, Wm. F. Mosser & Co. 54,608  
 Leather writing sets, blotting and writing pads, Gorham Mfg. Co. 54,597  
 Lime, chlorid of, A. Mendelson's Sons 54,675  
 Liniment, F. A. Richter 54,292  
 Liniment, E. S. Sloan 54,295  
 Liniment, W. P. Ward 54,690  
 Lotion, E. J. M. Hart 54,659  
 Lotion or emulsion for the skin, liquid, A. S. Hines 54,680  
 Macaroni and spaghetti, Gennerich & Von Bremen 54,549  
 Matches, Aktiebolaget Soderstje Tandsticksfabrik 54,699  
 Mattresses and pillows, Chittenden & Eastman Co. 54,592  
 Measures of all kinds, lineal, C. Bube 54,702  
 Measuring tapes, Lufkin Rule Co. 54,338  
 Medals and badges, C. W. Little 54,358  
 Medical and surgical plasters, Johnson & Johnson 54,308  
 Medical compound, certain named, O. P. G. Conley 54,655  
 Medicated stock and poultry food, Medicura Food Co. 54,339  
 Medicinal pills, tablets, and capsules containing medicine, Laboratory Co. 54,671  
 Medicinal plasters, Alcock Manufacturing Co. 54,302  
 Medicinal plasters, J. Ellwood Lee Co. 54,712  
 Medicinal preparation, Ferry Drug Co. 54,744  
 Medicine, antiseptic and emollient, Ince & Cofpho Co. 54,620  
 Medicine, diuretic, Actien-Gesellschaft fur Anilin-Fabrikation 54,566  
 Medicine for appendicitis, C. Weschcke 54,589  
 Medicine for epilepsy, A. K. Mandis 54,286  
 Medicine, proprietary, Wilcox & Gooding 54,691  
 Metal polish, P. H. Solomon 54,482  
 Metals, antifriction or bearing, William A. Hardy & Son's Co. 54,762  
 Metals, babbit and antifriction bearing, Palmite Metal Co. 54,342  
 Metals or alloys, antifriction, Magnolia Metal Co. 54,717  
 Milk and dry milk products in powder form, dry, G. Kammermann & Co. Schweizerische Trockenmilchgesellschaft 54,708  
 Milk, condensed, Michigan Condensed Milk Co. 54,380  
 Milk, condensed, Pacific Coast Condensed Milk Co. 54,383  
 Milk, condensed, Vermont Condensed Milk Co. 54,398  
 Motors and motor machinery and parts thereof, gasoline, W. H. Barron 54,733  
 Mouth and face wash, H. K. Mulford Co. 54,618  
 Mower, binder, harvester, and header guards, Whitman & Barnes Manufacturing Co. 54,257  
 Mower, reaper, harvester, and header guard plates, Whitman & Barnes Manufacturing Co. 54,729  
 Mowers, lawn, Supplee Hardware Co. 54,238, 54,254, 54,255  
 Mowers, lawn, Whitman & Barnes Manufacturing Co. 54,258  
 Mucilage, paste, and sealing wax, S. S. Stafford, Inc. 54,582  
 Music boxes, F. A. Richter 54,582  
 Music, instruction books, and opera scores sheet, Gus Edwards Music Publishing Co. 54,277  
 Musical instrument supplies, Lyon & Healy 54,359  
 Musical instrument supply packages, Lyon & Healy 54,519  
 Nails, finish, A. J. Chase 54,638  
 Nails, horse, Capewell Horse Nail Co. 54,637  
 Neckscarfs, Weber and Heilbronner 54,348  
 Needles, machine, Union Special Machine Co. 54,759  
 Newspaper comic sections or pages, New York Herald Co. 54,720  
 Nuts, track bolt, American Iron & Steel Mfg. Co. 54,732  
 Oats, rolled, Wilkinson, Gadsis & Co. 54,591  
 Oil, castor, Lamar & Rankin Drug Co. 54,357  
 Oil, castor, C. Delacre & Cie 54,656  
 Oil of orange, bergamot, and lemon, George Lueders & Co. 54,276  
 Oil, olive, T. Martindale & Co. 54,622  
 Oils, machine, E. R. Durkee & Co. 54,614  
 Ointment for the complexion, J. Rowell 54,293  
 Ointments, P. Poritschnner 54,337  
 Paint in dry powder and in oil, metallic, Prince Mfg. Co. 54,414  
 Paint, marine, H. Lunderbough 54,432, 54,433  
 Paint, roofing, Asbestos Manufacturing and Roofing Co. 54,409  
 Paints, fresco, Toch Brothers 54,420  
 Paints, mixed, Hibbard, Spencer, Bartlett & Co. 54,468  
 Paints, mixed, Patterson Sargent Co. 54,521  
 Paper bags, Union Bag & Paper Co. 54,297  
 Paper, carbon, Carter's Ink Co. 54,571  
 Paper for process printing, E. Dietzgen Co. 54,706  
 Paper makers' felts, J. Porritt & Sons 54,579  
 Paper or press board, Rogers Paper Mfg. Co. 54,629, 54,682  
 Paper, toilet, Scott Paper Co. 54,364 to 54,366  
 Papers, carbon, J. R. Keatinge 54,668  
 Pastry with a filling of cream or ices, Albagli & Avayon 54,370  
 Pencils, E. Faber 54,354  
 Pencils, lead, A. W. Faber 54,595  
 Peptone, non alcoholic solutions of iron manganese, Chemische Fabrik Helfenberg, A. G. vorm. E. Dietrich 54,266



Inexpensive Classified Advertisements

Advertising in this column is 50 cents a line. No less than four nor more than ten lines accepted.

SALE AND EXCHANGE.

IF YOU WANT to buy a machine, engine, boiler, power equipment, electrical, steam, pneumatic or other machinery—anything in the machine line—Tell Us and we will see that you get full descriptions, prices, catalogs, etc., from all the first-class manufacturers.

FOR SALE.—Patent No. 817,480, issued April 10. The best Wire Snow Guard ever made.

NEW ENGLAND FARMS, summer homes, hunting camps and country real estate of every description.

MOTION PICTURE MACHINES, Film Views, Magic Lanterns, Slides and similar Wonders For Sale.

STATE RIGHTS FOR SALE in new valuable Registering and Canceling Ballot Box patent.

WOULD LIKE NAMES of parties who will manufacture and sell on royalty a trousers creaser.

MANLOVE AUTOMATIC DRIVEWAY GATE.—Always in order: operated by any wheel.

BUSINESS OPPORTUNITIES.

WANTED.—Buyers for our one and two-seated business and pleasure Concord spring wagons.

HIGH-CLASS PROPOSITION for capital or partner. Several patents and inventions.

AGENTS EARN \$75 to \$250 a Month Selling "Novelty Knives."

WOULD LIKE TO BUY OUTRIGHT, or on royalty, good patented article which would not require much capital to manufacture.

WANTED.—Names of parties making leather board. Also of manufacturers of cloth made from plantain tree pulp.

WANTED.—Foreman for die sinking and drop forge work, experienced in both lines.

BARGAIN for one wishing to engage in Sawmill Machinery Manufacturing Business.

THE CONTROLLING INTEREST in Rivet Forge used by the largest Bridge and Structural Companies.

SIGNAL ALARM, pat. Dec., 1905. The simplest device for refrigerators.

LET US BE YOUR FACTORY. Hardware specialties manufactured under contract.

AGENTS WANTED.—Rubber Grip Burner fits any kerosene lamp, prevents breaking of chimneys.

POSITION WANTED.

DRAUGHTSMAN. Good positions for first-class architectural, mechanical and structural men.

MACHINERY FOR SALE.

BARNES' LATHE FOR SALE.—Swing, 4 1/2 inches; length, 32 inches.

FOR SALE.—At Taunton, Mass., patterns, patents, drawings; 4 to 25 horse-power gas or oil engines.

FINE LITHOGRAPHED LETTER HEADS, Bill Heads, Envelopes and Checks, gives standing.

PATENTS FOR SALE.

I HAVE FOR SALE the U. S. and all foreign rights of new patent improvements in Water Tube Types of Boilers.

PATENTS.—European Rights. I want sole agency for Europe for good-selling patents.

PARTNERS WANTED.

WANTED, A PARTNER. I have a complete plan for making an apparatus to be driven by gravity.

SITUATIONS AND PROFESSIONAL OPENINGS.

WANTED.—Experienced and Responsible Patent Rights Salesman to sell territory for a new gasoline saw-iron.

HOTELS AND RESORTS.

JAMESTOWN, OPPOSITE NEWPORT. Thorn-dyke Hotel and 8 new cottages, furnished.

PROFESSIONAL CARDS.

LANDSCAPE ARCHITECTS. J. H. Shepard & Son, 302 Euclid Ave., Syracuse, N. Y.

LANDSCAPE ARCHITECT. Wm. Webster, 560 North St., Rochester, N. Y.

BUILD AT COST. Town or Country. W. H. A. Horsfall, Architect, 18 and 20 East 42d St., New York, N. Y.

Table listing various products and prices, including perfumes, pianos, razors, and machinery. Items include 'Perfumes and toilet waters, Lazell, Dalley & Co.', 'Pianos, W. W. Kimball Co.', 'Razors, Smith & Hemenway Co.', etc.

Quality Counts for Everything in a Revolver. H. & R. REVOLVERS. will stand the closest scrutiny. Investigate them and you will try no other.

Your Vacation. may be spent in one of Nature's playgrounds, where buoyant, clear air, 1,200 closely linked lakes and streams, genial sunshine, virgin woods and highlands.

It's Easy to Keep Cool! The simplest, smallest, safest, neatest and most successful Motor Fan made is the Rawlings Patent High-Speed Water Motor Fan.

Wonder Lighting Outfits FOR FARM, SHOP, COTTAGE or PRIVATE RESIDENCE. We manufacture the only small outfit for this purpose.

BRENNAN MOTOR CO., Syracuse, N. Y. BRENNAN STANDARD MOTOR. Mounted with Individual Clutch Gear, also Furnish Sliding Gear Transmission.

DETROIT BOAT CO. Just \$94.50 for this complete launch. This is not a small rowboat with an engine, but a full sized modern power boat.

ELECTRICITY. Oldest and best school in world teaching ELECTRICITY exclusively. Course complete IN ONE YEAR.

Scientific Color Printing. We have added to our large printing establishment, and now have in successful operation, a most complete Photographic Color Department.

ELECTRICAL APPARATUS REPRESENTED by Conventional Diagrams in Drawings.—Fifty diagrams showing the usual method of illustrating electrical apparatus in drawings.

Concrete, Reinforced Concrete AND Concrete Building Blocks. Scientific American Supplement 1543 contains an article on Concrete, by Brysson Cunningham.

MUNN & CO. 361 Broadway, New York City. Order from your newsdealer or from MUNN & CO. 361 Broadway, New York City.

# Dixon's MOTOR Graphite

Smooths every bearing—every difficulty. If your car loses compression use Dixon's Motor Graphite. If you would develop more power and greater speed; if you would preserve the life of your machine and multiply the pleasures of motor-ing lubricate with Dixon's Motor Graphite.

We have a special booklet on motor lubrication which all motorists should have. Address Dept. W.

**JOSEPH DIXON CRUCIBLE CO.**  
Jersey City, N. J.

**\$30**

**SWIFT SAFE DETROIT CANOES STRONG DURABLE**


"The kind you always thought would be built some day"

Write to-day for our Free Illustr'd Catalog.

We are the **WORLD'S LARGEST BUILDERS** of canoes and launches

**DETROIT BOAT CO.** 1110 JEFFERSON AVE DETROIT MICH

**Andrew Carnegie, Thomas A. Edison** and many other successful men began their careers at Telegraph Operating. Why don't you learn? For \$1.75 we will send you a complete N. D. outfit with book of instructions, by express (not pre-paid). Send for catalog of electric apparatus, supplies and novelties.



**J. H. BUNNELL & Co., Inc.**, 20 Park Place, New York

## The Thousand Islands

are more attractive than ever this season. The New York Central Lines Four-Track Series No. 10, "The St. Lawrence River from the Thousand Islands to the Saguenay," contains the finest map ever made of this region. Copy will be sent free, postpaid, on receipt of a two-cent stamp by George H. Daniels, Manager, General Advertising Department, Room 26, Grand Central Station, New York. THE



**"AMERICA'S GREATEST RAILROAD"**

REACH THE THOUSAND ISLANDS FROM EVERY DIRECTION.

C. F. DALY, Passenger Traffic Manager, New York.

## 60 YEARS' EXPERIENCE PATENTS

TRADE MARKS DESIGNS COPYRIGHTS & C.

Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. **HANDBOOK** on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the

**Scientific American.**

A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, \$3 a year; four months, \$1. Sold by all newsdealers.

**MUNN & Co.**, 361 Broadway, New York  
Branch Office, 625 F St., Washington, D. C.

|  |                |
|--|----------------|
| Thread, cotton, Jonas Brook & Bros.  | 54,236         |
| Thread, cotton, Clark Mile-End Spool Cotton Co.  | 54,443         |
| Thread, cotton, Jonas Brook & Bros.  | 54,666         |
| Threads of all kinds, cotton, Clark Thread Co.   | 54,654         |
| Tobacco, chewing and smoking, Smith & Scott Tobacco Co.                                  | 54,532         |
| Tobacco "in the hand," leaf, J. M. Buckner, Jr., & Co.                                   | 54,543         |
| Tobacco, leaf, smoking, and chewing, Independent Tobacco Manufacturers Promoting Company | 54,447         |
| Tobacco, smoking, Blackwell's Durham Tobacco Co.   | 54,491         |
| Tobacco, smoking and chewing long cut, Hansen-Schmitt Co.                                | 54,445         |
| Tobacco, smoking, chewing, and cigarette, A. A. Kohary                                   | 54,499         |
| Tobacco, smoking or chewing, Nashville Tobacco Works                                     | 54,474         |
| Toilet articles, certain named, J. C. Dowd & Co.   | 54,325         |
| Tonic beverage, carbonated, Boonville Mineral Spring Co.                                 | 54,464         |
| Tonic beverage, carbonated, J. Rier  | 54,610         |
| Tonic beverage, carbonated, non-intoxicating, Heinzelner & Co.                           | 54,511, 54,512 |
| Tonic for rheumatism, Feeney & Pallotto.   | 54,328         |
| Tooth paste, C. M. Dunne   | 54,704         |
| Trees, peach, M. E. Fowler   | 54,573         |
| Turpentine, Standard Oil Co. of New York.  | 54,533         |
| Turpentine, spirits of, Georgetown Chemical Works  | 54,428         |
| Typewriter ribbons, Carter's Ink Co.   | 54,670         |
| Typewriters, inked pads for, J. R. Keatinge  | 54,713         |
| Typewriters, for women and children, T. B. Fitzpatrick                                   | 54,234         |
| Underwear, dressed skin, T. Jones  | 54,667         |
| Underwear, woven and knitted, G. W. Schlichten   | 54,253         |
| Varnish hardeners, Tousey Varnish Co.  | 54,485         |
| Veterinary gall ointments, healing powders and liniments, C. L. Rea                      | 54,362         |
| Wagons, Eagle Wagon Works  | 54,743         |
| Waists, ladies' dress, Juda Bros.  | 54,498         |
| Wall coating, Toch Brothers  | 54,534         |
| Wall ties, Braun Manufacturing Co.   | 54,701         |
| Washbasins, stationary, Cahill Iron Works  | 54,265         |
| Watches, W. C. Ball  | 54,239         |
| Watches and parts thereof, A. Schwalbe   | 54,530, 54,331 |
| W. F. Doll   | 54,353         |
| Whiskies, pure rye and malt, Meadville, Pennsylvania Distilling Co.                      | 54,450         |
| Whisky, J. F. Sinnott  | 54,419         |
| Whisky, M. Lange   | 54,448         |
| Whisky, J. & E. Mahoney  | 54,449         |
| Whisky, T. E. O'Keefe  | 54,453         |
| Whisky, William H. Lee & Co.   | 54,460         |
| Whisky, Brown-Furman Co.   | 54,650         |
| Whisky, E. Oppenheimer   | 54,676         |
| Whisky, Richardson Brunsing Co.  | 54,681         |
| Whisky, Straus Gunst & Co.   | 54,685         |
| Whisky, M. S. Lowenthal  | 54,716         |
| Whisky, C. H. Ross & Co.   | 54,723         |
| Whisky, T. J. Ryan   | 54,724         |
| Whisky, C. Bruml   | 54,735         |
| Whisky, Clover Leaf Wine Co.   | 54,738         |
| Whisky, Four Oaks Distilling Co.   | 54,747         |
| Whisky, S. Hirschhorn  | 54,750         |
| Whisky, E. Hirschhorn  | 54,751         |
| Whisky, E. Hymn & Son  | 54,752         |
| Whisky, Weiss & Nichols, Liquor Co.  | 54,761         |
| Wine, J. Wolfe Sons & Co.  | 54,459         |
| Wine, I. Goloff  | 54,616         |
| Wire hat frames made without tie wires, ladies', Totem Machine Co.                       | 54,646         |
| Woolen dress goods, bolted, J. Lonke   | 54,556         |
| Woolen piece goods, Beebe-Webber Co.   | 54,489         |
| Wrenches, Whitman & Barnes Manufacturing Co.   | 54,259         |
| Yarn, sewing and crochet cotton, cotton, Jonas Brook & Bros.                             | 54,336         |
| Yarns, woolen and worsted, R. Blankenburg & Co.  | 54,321         |

### LABELS.

|  |        |
|--|--------|
| "A No. 1," for coffee, A. & G. Meyer.  | 12,947 |
| "Cushion Corn Cure," for corn cure, C. Amann   | 12,959 |
| "Harvesta," for prepared cooked wheat, Igleheart Brot., Barrett & Stillwell Co.                | 12,949 |
| "Hawaiian Pineapple (Dice)," for pineapple, Tropic Fruit Co.                                   | 12,950 |
| "Iron-Clad and Medicated" Gloves," for gloves, Mound City Dishwasher Co.                       | 12,964 |
| "Its Mighty Easy to Spot Hilton Clothes," for clothing, Hilton Co.                             | 12,966 |
| "Jeffries' No. 1 Cough Mixture," for medicine, T. T. Jeffries                                  | 12,954 |
| "Jeffries' Reliable Headache Powders," for medicine, T. T. Jeffries                            | 12,953 |
| "Klonoyke Blue Plaster Board," for plaster board, Wright, Barrett & Stillwell Co.              | 12,972 |
| "Liqueseptol," for medicine, T. T. Jeffries  | 12,955 |
| "Lowney's Milk Chocolate," for chocolate, Lowney Chocolate Co.                                 | 12,948 |
| "Martha Darzie Dlabanon," for a skin preparation, M. J. Brannon                                | 12,957 |
| "Mault-Ayle," for a light beer, Marshall Bottling Co.  | 12,946 |
| "McGee's Corn Cure," for corn cure, Star Chemical Co.  | 12,958 |
| "Mosquitone," for a liquid solution, T. T. Jeffries  | 12,952 |
| "Purity Sealless Nipples, Non-Collapsible," for nipples, American Lithographic Co.             | 12,970 |
| "Sublime," for linen thread, Societe Anme, Filature & Filteries Reunies.                       | 12,963 |
| "Teaderfoot," for hosiery, Carson, Pirie, Scott and Co.  | 12,965 |
| "The Aetna Self-Heating," for self-heating cans containing food, Aetna Self-Heating Food Co.   | 12,962 |
| "The Medina County Creamery Co.," for butter, Medina County Creamery Co.                       | 12,951 |
| "Theform," for a medical preparation for the scalp and hair, A. Blaw                           | 12,961 |
| "Tin Pan Coal," for receptacles, for coal, St. Louis Rocky Mountain & Pacific Co.              | 12,971 |
| "Tiz for Tender Feet," for foot bath tablets, W. L. Dodge                                      | 12,960 |
| "Victor Auxetophone," for talking machines and parts thereof, Victor Talking Machine Co.       | 12,968 |
| "Victor Junior Gramophone," for talking machines and parts thereof, Victor Talking Machine Co. | 12,969 |
| "Victor Victrola," for talking machines and parts thereof, Victor Talking Machine Co.          | 12,967 |
| "Violet Talc Powder," for talc powder, Colgate & Co.   | 12,956 |

### PRINTS.

|   |       |
|---|-------|
| "Good Morning," for puffed rice, American Cereal Co.  | 1,709 |
| "Men's Apparel," for men's apparel, L. Adler Bro. & Co.   | 1,711 |
| "Noodles, Moonlight, Pocahontas, Colonial Girl, Knuckle-down, and in Old Madrid backs, Congress Playing Cards," for playing cards, United States Playing Card Co. | 1,714 |
| "The Continental Garter," for garters, W. Heymann   | 1,710 |
| "The Handicraft Doll Furniture," for doll furniture, A. M. Spinney  | 1,713 |
| "The 'Kismet' Holder," for glass and bottle holders, A. Hering  | 1,712 |
| "The Model Flour Mill," for flour, Washburn-Crosby Co.  | 1,708 |

A printed copy of the specification and drawing of any patent in the foregoing list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, provided the name and number of the patent desired and the date be given. Address Munn & Co., 361 Broadway, New York.

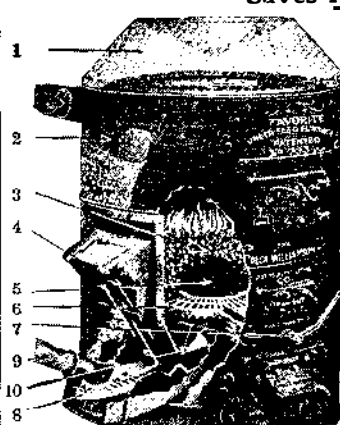
Canadian patents may now be obtained by the inventors for any of the inventions named in the foregoing list. For terms and further particulars address Munn & Co., 361 Broadway, New York.

## ANATOMY OF THE UNDERFEED FURNACE

Get acquainted with the Peck-Williamson Underfeed Furnace. We want you to know this heating marvel. A moment's study of the illustration will enable you to understand what Scientific Furnace Construction really means, and why

### THE PECK-WILLIAMSON UNDERFEED FURNACE

Saves 1-2 to 2-3 on Coal Bills



You will see how it burns and extracts as much heat from a ton of the cheapest grade coal as you have ever been able to obtain from a ton of high grade coal with an Overfeed Furnace. You will appreciate how it soon pays for itself and then begins a handsome annual saving for you. The arrows in illustration point to leading features of Underfeed Furnace construction.

1. X-Ray view showing galvanized casing.
2. Cast iron radiator.
3. Fire burning on top of the coal—the Underfeed's exclusive way. Smoke and gases, which go up the chimney and are wasted in Overfeed furnaces, are released below the fire in the Underfeed and must pass through the fire and are thus converted into heat units.
4. Sectional view of the feed hopper, in which coal is placed.
5. Coal as it is forced up under the fire.
6. The revolving grate through which coal is forced.
7. Grate bar which causes the grate to revolve and drop ashes into the ash pit below.
8. Plunger operated by lever, which forces coal from the hopper into the fire chamber.
9. Wood lever operating the plunger.
10. Automatic valve which prevents coal from dropping back when the plunger is released.

The Underfeed is not an experiment. Every claim made for it has been fully established by hundreds of voluntary letters received from those who have subjected it to the severest tests. New Illustrated Underfeed booklet FREE. It gives full description of furnace and fac-simile letters from happy users. Heating plans and services of our Engineering Department are yours—absolutely free. Write to-day. Please give name of local dealer with whom you prefer to deal.

**THE PECK-WILLIAMSON CO., 351 W. 5th St., Cincinnati, O.**  
It will PAY Dealers to Write for our very attractive proposition.

## Eureka Machine Co.

Manufacturers of

### CONCRETE MIXERS

and

### Block Machines

Write for Catalog A

420 N Jackson St., Jackson, Mich., U.S.A.

## THE "LEADER."

1 1/2 H. P. Gasoline Auto-Marine Engine

Built like a watch. Beautifully finished. Accurately constructed. Light, strong, reliable, and noiseless in operation. Suitable for launches from 15 to 19 feet in length. Price complete, \$75 net, no discount. Thoroughly guaranteed. Perfect Speed Control. Complete descriptive Catalog upon application. Manufactured by

**CLAUDE SINTZ,**  
292 S. Front St., Grand Rapids, Mich.

## The Genuine Armstrong's STOCKS and DIES

Acknowledged to be the best. Different sizes and capacities. Write for catalog.

**THE ARMSTRONG MFG. CO., Bridgeport, Conn.**  
New York Office, 139 Centre Street

**HOW TO MAKE AN ELECTRICAL FURNACE** for Amateurs Use.—The utilization of 110 volt electric circuits for small furnace work. By N. Murray Hopkins. This valuable article is accompanied by detailed working drawings on a large scale, and the furnace can be made by any amateur who is versed in the use of tools. This article is contained in **SCIENTIFIC AMERICAN SUPPLEMENT, No. 11842**. Price 10 cents. For sale by MUNS & CO., 361 Broadway, New York City, or by any bookseller or newsdealer.

## Stallman's Dresser Trunk

Easy to get at everything without disturbing anything. No fatigue in packing and unpacking. Light, strong, roomy drawers. Holds as much and costs no more than a good box trunk. Hand-riveted; strongest trunk made. In small room serves as chiffonier. C.O.D. with privilege of examination.

For stamp for Catalog, P. A. STALLMAN, 61 W. Spring St., Columbus, O.

## AUTOMOBILES

BOUGHT, SOLD AND EXCHANGED

The largest dealers and brokers in New and Second-hand Automobiles in the world. Complete Bargain Sheet sent on request.

**TIMES SQUARE AUTOMOBILE CO.**  
217 West 43rd Street New York City

SETS OF CASTINGS OF MODEL ENGINES

SEND 10¢ FOR 128 PAGE ILL. CATALOGUE.

ALSO TOOLS GEAR WHEELS & PARTS OF MODELS

**GOODNOW & NIGHTMAN** BOSTON

Removed to 169 Milk Street.

## I KNOW

Where to locate you on the

### LEHIGH VALLEY RAILROAD

if you want to establish a new industry or re-locate one already established.

**P. H. BURNETT, Industrial Agent**  
143 Liberty St., N. Y.

## LET US BE YOUR FACTORY

WRITE FOR ESTIMATE ON ANY ARTICLE YOU WANT MANUFACTURED

**STAMPINGS, MODELS, EXPER. WORK**

WRITE FOR FREE BOOKLET

**THE GLOBE MACHINE & STAMPING CO.**  
970 Hamilton St., Cleveland, O.

## ICE MACHINES

Corliss Engines, Brewers and Bottlers Machinery. THE VILTER MFG. CO., 889 Clinton St., Milwaukee, Wis.

## MODELS & EXPERIMENTAL WORK.

Inventions developed. Special Machinery

**E. V. BAILLARD, 24 Parkfort Street, New York.**

## RUBBER

Expert Manufacturers

Fine Jobbing Work

**PARKER, STEARNS & CO., 228-229 South Street, New York**

## OLD GOLD, SILVER AND PLATINUM BOUGHT

Ship to us and we will remit cash immediately.

**ASHER KLEINMAN, 250 8th Ave., N. Y. City, N. Y.**

## Model and Experimental Work.

Years of experience. M. P. Schell, 1759 Union St., San Francisco.

## MODELS & INVENTIONS PERFECTED

UNION MODEL WORKS 192 30 CLARK ST. CHICAGO, ILL.

## BE A WATCHMAKER

Send for our free book, How to be a Watchmaker. Stone School of Watchmaking, 804 Globe Bldg., St. Paul, Minn.

## STEEL TYPEWRITER TYPE

We make, or will furnish complete outfit for making, all styles. **NEW YORK STENCIL WORKS, 100 Nassau Street, New York.**

## MODEL AND EXPERIMENTAL WORK.

Electrical and Mechanical Instruments. Small Mach'y

**EDWARD KLEINSCHMIDT, 82 W. Broadway, New York**

## SHOP ROOM TO LET

FULLY EQUIPPED MACHINE SHOP

**S. A. NICHOLAS, 30 Greenwich Avenue**

## W. B. KNIGHT MACHINERY CO.

Mrs. of Special Machinery and Tools

2019 to 2025 Lucas Ave., ST. LOUIS

## WE MAKE GOOD

models. We do experimental work, and do it good. We manufacture and sell electrical and mechanical apparatus at the correct prices. Agents wanted everywhere.

**United Electrical Mfg. Co., 33 Vesey Street, New York.**

## Telegraphy

Circular free. Wonderful automatic teacher. 5 styles \$2 up. **OMNIGRAPH CO., Dept. 52, 89 Cortlandt St., New York.**

## ROSE POLYTECHNIC INSTITUTE

Terre Haute, Ind. A College of Engineering, Mechanical, Electrical and Civil Engineering, Chemistry and Architecture. Entrance easy. Laboratory equipment, modern. Expenses low. For catalogue and Professional Register of Alumni, address

**G. L. MEES, President.**

Men and boys wanted to learn plumbing, plastering, bricklaying, special offer life scholarship fifty dollars, easy payments. Position guaranteed. Free catalogue. **Hyge Bros., Trade School, 239 Tenth Avenue, New York, Chicago, St. Louis.**

## STUDY ELECTRICITY

at home, with your own laboratory. Write for our Electrical Manual of directions for 100 experiments. Let us tell you the low price of our Laboratory.

**COLUMBIA SCHOOL SUPPLY CO. Indianapolis, Ind.**