

Exhibiting goods, hanging device for, B. F. Zahm 280,434
 Fabrics, apparatus for stretching, J. G. Lindemann 280,489
 Faucet, W. Cassin 280,448
 Feathers, machine for cleaning and sorting, W. Hammerril 280,371
 Feed, boiler, W. B. Culver 280,721
 Feed cup, E. J. Thomas 280,532
 Feeder, boiler, J. S. Du Bois 280,364
 Fence post, metallic, D. B. Oliver 280,505
 Fence wire, machine for barbing, A. Jorgensen 280,629
 Fermenting liquor, apparatus for and process of cooling and condensing the foam of, C. A. Mans 280,385
 Fibers, etc., machine for obtaining or treating, Sanford & Smith 280,671
 Fifth wheel, Clark & Parsons 280,350
 File, etc., bill and letter, J. Smith 280,683
 Fire alarm box lock, Pearce & Jones 280,506
 Fire escape, J. Harper 280,741
 Fire escape, M. E. Moore 280,653
 Fire escape, M. S. Washburn 280,538
 Fire escape ladder, J. H. Heath 280,373
 Fire escape ladder, Wyatt & Holmes 280,433
 Fire escape with an alarm attachment, J. H. Smiley 280,527
 Fire extinguisher, A. F. Spawm 280,410
 Fire extinguisher, automatic, G. W. Horton 280,374
 Fish trap hook, W. N. Green 280,610
 Flange union, T. Corris 280,353
 Flask. See Molding flask.
 Flour bolt, centrifugal, Holcomb & Heine 280,622
 Flue stopper, Williams & Baker 280,700
 Fluxing and protecting molten metals, composition to be used in, Clamer & Hendrickson 280,349
 Fog horns, etc., apparatus for blowing, E. E. Swett 280,686
 Fruit jar, W. A. Williamson 280,701
 Furnace. See Gas generating furnace. Hot air furnace.
 Gauge. See Sewing machine gauge. Weather board gauge.
 Game counter, D. K. Horton 280,375
 Gas burner, P. Keller 280,482
 Gas burning apparatus, J. W. Plunkett 280,666
 Gas generating furnace, H. B. Van Benthuyzen 280,691
 Gas lighter, J. F. Carr 280,573
 Gas lighting apparatus, J. H. Towan 280,689
 Gas, process of and apparatus for manufacturing, T. G. Springer 280,770
 Gate, Landis & Riddel 280,632
 Gate, S. D. Muse 280,754
 Gate, S. Peterson 280,664
 Generator. See Steam generator.
 Glass manufacture, apparatus for, L. E. Pfeiffer 280,597
 Glassware, tool for forming the open ends of hollow, Willetts & Butler 280,546
 Glue heater, W. C. Weatherly 280,540
 Grain binder, E. S. Frost 280,461
 Grain binder, E. W. Jenkins 280,481
 Grain binder, S. A. Jones 280,379
 Grain drill hoe, E. D. Mead 280,496
 Grease trap, S. Wilcox 280,545
 Gun sight, J. C. Kelton 280,484
 Hame fastener, G. Banks 280,554
 Handle. See Saw handle.
 Hanger. See Door hanger.
 Harrow, J. Gerstner 280,602
 Harrow, J. H. & P. Lux 280,751
 Harrow and drill, spring tooth, Williams & Manvel 280,548
 Harrow and stalk cutter, combined, A. Albies 280,551
 Harrow coupling, P. Krier 280,382
 Harvester binder attachment, M. Hedrick 280,619
 Harvester, corn, R. H. Taylor 280,687
 Hay elevator, S. A. Wellman 280,424
 Hay rack, T. L. Vought 280,693
 Heater. See Glue heater.
 Heel nailing machine, F. F. Raymond, 2d 280,396
 Heel trimming machine, J. H. Busell 280,717
 Hides, machine for unhairing, scouring, and fleshing, A. E. Whitney 280,698
 Hinge, lock, A. Gartner 280,462
 Hitching strap, H. S. Dimock 280,363
 Hoisting and conveying earth from sewer trenches, apparatus for, P. H. McCauley 280,645
 Holder. See Necktie holder. Punch holder. Sash holder. Sewing machine spool holder. Towel holder.
 Hook. See Chandelier suspension hook. Fish trap hook. Hop vine hook.
 Hook, P. Miles 280,388
 Hop vine hook, J. Lippe 280,639
 Horseshoe, J. Nester 280,658
 Hot air furnace, C. B. Cutler 280,455
 Hydraulic trap, G. H. Crosby 280,355
 Hydrocarbon liquid to gas or air, metrical regulator for distributing, W. M. Jackson 280,475
 Ice cream freezer, R. W. Furnas 280,734
 Incombustible, rendering manuscripts, etc., G. Meyer 280,500
 Inkstand, I. Brooke 280,568
 Inkstand, S. Ustick 280,418
 Injector, J. Dimelow 280,589
 Insulated electrical conductor, T. H. Dunham 280,366
 Insulating compound for electric wires, R. S. Waring (r) 10,351
 Insulating material for electrical uses, Waring & Hyde (r) 10,350
 Insulating wires for electric uses, process of and apparatus for, Waring & Hyde (r) 10,349
 Iron, hardening, H. J. Burr 280,716
 Iron with lead, covering, J. A. Graham 280,436
 Jar. See Fruit jar.
 Jeweler's show window, Buschor & Zweighaft 280,345
 Joint. See Rail joint. Railway rail joint.
 Journal bearing, F. R. Cargill 280,347
 Journal lubricator, F. Brown 280,569
 Key seats, machine for cutting, L. Cosgrove 280,582
 Knife, J. W. Gardner 280,599
 Knit fabric and constructing the same, S. M. Levy 280,750
 Knob, door, C. Elveena 280,728
 Ladder and truck, extension, D. W. Hoover 280,475
 Ladder, portable, E. E. Swett 280,685
 Ladle stopper rods, covering for, W. H. Haws 280,618
 Lamp, E. B. Regua 280,669
 Lamp carbon, incandescent electric, A. Bernstein 280,341
 Lamp, electric arc, F. Bain 280,709
 Lamp, electric arc, F. Rabl 280,763
 Lamp fixture, D. W. Bennett 280,441
 Lamp, incandescent electric, A. Bernstein 280,340
 Lamp, miner's, Grimes & Fern 280,738
 Lamps, focus regulator for electric arc, W. Wheeler 280,426
 Lamps, light extinguisher for, J. Pohlsen 280,511
 Lantern for railway cars, etc., gas, J. Pintsch 280,761
 Lantern, switch and signal, L. G. Huntington 280,624
 Last, J. W. Denny 280,724
 Latch, door, S. L. Coates 280,581
 Level, spirit, T. W. Wood 280,706
 Leveling instrument, E. A. Bastron 280,713
 Lifter. See Cooking utensil/lifter.

Light. See Electric light.
 Lock. See Combination lock. Fire alarm box lock. Post office box lock. Seal lock.
 Lock, J. Roche 280,517
 Locomotive, electro magnetic, S. H. Beckwith 280,559
 Lubricant for the cocks and valves of gas apparatus, W. M. Jackson 280,625
 Lubricating cup, Veller & Roesch 280,423
 Lubricating vertical bearings, A. Hatch 280,742
 Lubricator. See Automatic lubricator. Axle lubricator.
 Lubricator, A. Bradford 280,562
 Lumber drier, W. S. Bates 280,440
 Mail bag, W. A. Williams 280,429
 Mail pouches, hinged mouth piece for, Cardwell & Perry 280,572
 Mantel, ceiling, etc., ornamental, J. McCully 280,492
 Mash tun, compound, G. Pfeffer 280,396
 Mat. See Oil press hair mat.
 Match dipping apparatus, Millen, Mantion, La-belle, & Cook 280,650
 Measuring apparatus, electrical, C. S. Bradley 280,563
 Measuring bagging and other fabrics, machine for, J. C. Williams 280,547
 Mechanical movement, D. E. Myers 280,757
 Mechanical power, Davis & Brown 280,357
 Metal pipe, machine for making spirally pointed, J. B. Root 280,403
 Middlings purifier, G. R. Cannefax 280,571
 Milk cooler, J. Deline 280,558
 Milk cooler and heater, H. W. Weiss 280,695
 Mill. See Cane mill.
 Millstone pick, McDonnell & Anderson 280,647
 Mining machine, coal, G. D. Whitcomb 280,544
 Mining machine pick, G. D. Whitcomb 280,541
 Mold. See Candle mold.
 Molding, A. Lyon 280,752
 Molding flask, J. H. Bawden 280,557
 Mortar and building composition, J. A. Shinn 280,679
 Mortar tub, J. P. & D. J. Thomas 280,415
 Mouse trap, J. C. Gould 280,369
 Nails, machine for making shoe and upholsterers' R. Egli 280,458
 Necktie holder, E. B. Warner 280,694
 Needle blanks, machine for swaging, I. T. Smith 280,632
 Nozzle for fire engines, etc., C. Oyston 280,759
 Nut lock, W. P. Tracy 280,690
 Oil, extracting and mixing linseed, Kells & Adams 280,483
 Oil from seeds, etc., percolator for, extracting, H. T. Yaryan 280,550
 Oil press hair mat, E. Moyel 280,393
 Oil press mats, manufacture of, Eskrett & Searle 280,460
 Overalls, W. Carter 280,574
 Overalls and drawers, I. Bush 280,444
 Overshoe, rubber, C. F. Gillet 280,603
 Overstitching machine, J. E. Richard 280,765
 Oxidizable liquids, process of and apparatus for purifying, H. T. Yaryan 280,549
 Paint distributor, J. P. Whipple 280,696
 Pan. See Bed pan.
 Paper making machines, exhausting the air, gases, and water from suction boxes for, H. A. Barber 280,555
 Paper making machines, suction box for, I. Brat-ton 280,564
 Pasting paper boxes, etc., machine for, G. W. Glazier 280,604
 Pen, stylographic fountain, M. H. Kerner 280,630
 Piano sounding board, J. Diehl 280,362
 Piano strings, spinning lathe for winding, F. Ram-acciotti 280,512
 Picture exhibitor, Bassett & Hutchins 280,556
 Pile driver, J. P. Seawell 280,407
 Planing machine feed roller, A. V. Cross 280,720
 Planter check rower, corn, J. Bradley 280,714
 Planter check rower, corn, C. S. Locke 280,641
 Planters, fertilizing attachment for corn, A. C. Evans 280,367
 Plow, G. Simpson 280,680
 Plow and cultivator attachment, J. Harman 280,615
 Plow attachment, J. McDougall 280,493
 Plow moving, P. P. Jacotot 280,479
 Plumb, square, and level, combined, W. H. Delaney 280,358
 Port lid and hawse pipe, combined, A. Alfson 280,552
 Post. See Fence post.
 Post hole digging machine, B. Crawford 280,585
 Post office box lock, W. H. Camp 280,718
 Power. See Mechanical power.
 Precious stones, obtaining artificial, S. Grossiord 280,467
 Press. See Baling press. Cider and wine press.
 Printer's inking and distributing roller, A. Campbell 280,447
 Printing press delivery apparatus, C. B. Cottrell 280,584
 Printing press grippers, tumbler motion for, C. B. Cottrell 280,583
 Protector. See Stocking protector.
 Pulley, belt, A. Wood 280,775
 Pump, J. B. Root 280,402
 Pump bucket, chain, Forney & Stoeber 280,597
 Pump chains, machine for making, E. J. Watson 280,422
 Pump, vacuum, W. F. Garrison 280,630
 Punch holder, C. Gray 280,608
 Pyroxyline, machine for treating compounds of, A. Olszewski 280,659
 Rack. See Hay rack.
 Rail joint, W. Seaton 280,406
 Railway operated by underground ropes, J. B. Low 280,384
 Railway rail coupling, H. Parker 280,760
 Railway rail joint, R. P. Morgan, Jr. 280,654
 Railway switch, safety, D. H. Hoult 280,476
 Reamer, C. R. C. French 280,368
 Reclining chair, M. S. Curtiss 280,356
 Reel. See Bolting reel. Wire reel.
 Reeling yarns, etc., machine for, J. Garsed 280,601
 Rein guide, driving, N. B. Stowers 280,530
 Ring. See Spinning ring.
 Rivet feeding device, J. B. Root 280,404
 Riveting hollow cylinders, device for, J. H. Clinch 280,452
 Rock drill, steam, J. W. V. Rawlins 280,668
 Rod. See Wantage or ullage rod.
 Roofing, Smalstrig & Massey 280,681
 Rotary engine, C. H. Bacon 280,438
 Rotary engine, T. M. Rinehart 280,766
 Saddle, harness, J. T. Gurney 280,739
 Sash cord guide, W. S. Greening 280,609
 Sash fastener, W. E. Rines 280,400
 Sash holder, R. B. Callahan 280,445
 Sash holder, W. C. Mathews 280,643
 Saw, hand, T. U. Mekeel 280,497
 Saw handle, J. Class 280,579
 Saw handles, re-enforcing plate for, Hankin & Tinney 280,612
 Saw teeth, making insertible, W. Hawkins 280,617
 Saw tooth swage, N. L. Gano 280,598
 Sawing machine, crosscut, Doherty & Van Sickle 280,457
 Scale, A. A. Houghton 280,377
 Screen. See Cranberry screen.
 Screen, O. Harley 280,614
 Screw swaging machine, Davis & Blake 280,723
 Scythe the snath fastening, Kretzinger & Stewart 280,486

Seal lock, J. Menzies 280,649
 Seat. See Carriage seat.
 Seat, H. S. Hale 280,740
 Seeding machine, McSherry & Myers 280,337
 Sewing machine, C. Chabot 280,577
 Sewing machine, M. P. Smith 280,409
 Sewing machine, T. D. Tully 280,773
 Sewing machine garge, R. S. Norton 280,758
 Sewing machine spool holder and unwinder, T. R. Nichols 280,504
 Sewing machine, vertical feed, E. D. Fel-lows 280,731
 Shade pull, C. F. Pease 280,732
 Shaft support, vehicle, J. J. Ellsworth 280,459
 Shingle machine, J. E. M. Crawford 280,354
 Ships, etc., device for increasing the speed of, M. C. McDonald 280,646
 Shirt, A. Borchardt 280,712
 Shoe clasp, J. L. Thomson 280,533
 Silk tester, MacKay & Armstrong 280,491
 Skate, roller, L. J. Baker 280,338
 Sled brake, O. Pelkey 280,508
 Sleigh, C. Mette 280,499
 Snow plow, F. Snedigar 280,528
 Sole channeling machine, C. Chabot 280,576
 Sole, in, J. Jenkins 280,627
 Sower attachment, seed, W. T. Armstrong 280,437
 Speaking tube mouth piece, M. Heldelmeler 280,374
 Spinning frame kink catcher, F. Broadbent 280,567
 Spinning ring, G. Jaquith 280,626
 Sport turning and boring machine, J. W. Murray 280,755
 Spring. See Vehicle spring.
 Springs, machine for coiling and tempering, G. Sities 280,539
 Square, carpenter's, E. Prescott 280,398
 Square, sliding hook, P. Delany 280,583
 Stalk cutter, L. S. & M. J. B. Early 280,590
 Stamps, type holding attachment for hand, L. H. Moise 280,652
 Steam boiler covering, E. A. Hayes 280,470
 Steam engine, W. T. Baker 280,710
 Steam engine, J. C. Wilson 280,703
 Steam generator, C. Gorton 280,605
 Stencil plate for graining, J. J. Callow 280,446
 Stocking protector, C. A. Schleier 280,522
 Stopper. See Bottle stopper. Flue stopper.
 Store service apparatus, H. H. Hayden 280,469
 Store service apparatus, carrier for, H. H. Hayden 280,468
 Strap. See Hitching strap.
 Straw stacker, L. W. Hassemau (r) 10,347
 Sulky, D. Berry 280,561
 Table. See Card table.
 Table legs, device for securing, A. S. Robinson 280,401
 Tapping steam, gas, and water fittings, machine for, L. D. Castle 280,575
 Telegraph, fire alarm or district, W. B. Vansize 280,536
 Telegraph lines, automatic roll call for, W. P. Harris 280,616
 Telegraphy, duplex and quadruplex, A. Muirhead 280,753
 Telephone call bell, H. Clay 280,451
 Telephone central office switchboard, T. J. Perrin 280,662
 Telephone switch board, H. Clay 280,351
 Telephone switch board, T. J. Perrin 280,663
 Telephone systems, automatic indicator switch for, G. L. Anders 280,707
 Telephonetransmitter, H. Clay 280,580
 Telephonic communication, apparatus and system for, A. Dunand 280,365
 Theatrical appliance, F. Seymour 280,525
 Tobacco jars, porous cover for, C. B. Hull 280,477
 Towel holder, G. S. Gifford 280,469
 Traction engine, W. N. Rumely 280,514
 Traction engine, W. Wilkinson 280,428
 Trap. See Animal trap. Grease trap. Hydraul-ic trap. Mouse trap.
 Tree box, B. Lensing 280,637
 Trimmer. See Wick trimmer.
 Trough. See Eaves trough.
 Truck, car, J. McLachlan 280,386
 Truck, safety car, S. Brown 280,442
 Tub. See Mortar tub.
 Turning wrist pins, device for, F. M. Hazleton 280,471
 Type making and arranging machinery, F. Wicks 280,699
 Umbrella or parasol, R. P. Knapp 280,485
 Valve, balanced, W. S. Canaday 280,346
 Valve gear, steam engine, C. Schinke 280,672
 Valve, stop, Swank & Thornley 280,413
 Vapor bath, medicinal, L. Schnlze 280,348
 Vapor bath, medicated, L. Schnlze 280,675
 Vehicle, G. J. Dickson 280,361
 Vehicle shifting rail, F. Schreldt 280,674
 Vehicle spring, J. Hanser 280,613
 Vehicle spring, W. J. Moran 280,391
 Vehicle, two wheeled, H. C. Sears 280,524
 Vehicle wheel, E. Lawson 280,634
 Velocipede, Z. Hendrickson 280,473
 Ventilating apparatus, J. Fernie 280,594
 Ventilating apartments, apparatus for, J. Fernie 280,595
 Ventilator. See Car ventilator.
 Ventilator, G. Smart 280,526
 Wagon dump, A. K. Ersland 280,592
 Wantage or ullage rod, J. David 28,586
 Watch case, T. Mueller 280,394
 Watch, stem winding, D. H. Church 280,719
 Water closet, W. H. Umpleby 280,417
 Water closet valve, T. McHugh 280,643
 Weaner, calf, G. A. Marvin 280,642
 Weather board gauge, J. C. McEwen 280,494
 Wheel. See Car wheel. Fifth wheel. Vehicle wheel.
 Wick trimmer, A. J. Phipps 280,510
 Window bead fastener, C. H. Myers 280,756
 Window shade weight and pull, combined, J. H. Russ 280,768
 Wire reel, L. P. Johnson 280,628
 Wire barbing machine, H. B. Scutt 280,676
 Wood splitting machine, Mors & Cross 280,657
 Woodturning machine, J. D. Craig 280,453
 Wooden rings, polishing, T. J. Sammons 280,520
 Wrench, C. Schinke 280,673

TRADE MARKS.
 Articles for nursery use, certain, H. S. Evans 10,398
 Baking powder and yeast, A. S. Bush 10,383
 Canned or preserved oysters and fish, Tillman & Bendel 10,391
 Carpets and rugs, body Brussels and Wilton, Scho-field, Mason & Co. 10,400
 Chains, ornamental, Davidson Bros. 10,384
 Cutting and drilling tools, Morse Twist Drill and Machine Company 10,389
 Flour, T. G. Bush & Co. 10,398
 Flour, wheat, E. G. O. Starnard & Co. 10,397
 Garters, Minor & Haley 10,388
 Nets, A. G. Jennings & Sons 10,395
 Oil, petroleum or kerosene, Tillmann & Bendel 10,392
 Petroleum, refined, Meissner, Ackermann & Co. 10,387
 Preserved fruits, jellies, jams, and canned vege-tables, Tillmann & Bendel 10,390
 Shingles, W. Meyer & Bro. 10,396
 Stones or brilliants, artificial, E. E. Kipling 10,385, 10,386
 Surgical instruments and appliances, certain, H. S. Evans 10,394
 Tobacco, manufactured chewing, Hornthal & Deiches 10,399
 Yarns, cotton and half woolen, Tetzner & Sohn 10,401

A printed copy of the specification and drawing of any patent in the foregoing list, also of any patent issued since 1866, will be furnished from this office for 25 cents. In ordering please state the number and date of the patent desired, and remit to Munn & Co., 261 Broadway, New York. We also furnish copies of patents granted prior to 1866; but at increased cost, as the specifications, not being printed, must be copied by hand.

Canadian Patents may now be obtained by the inventors for any of the inventions named in the foregoing list, at a cost of \$40 each. For full instructions address Munn & Co., 261 Broadway, New York. Other foreign patents may also be obtained.


Advertisements.
 Inside Page, each insertion - - - 75 cents a line.
 Back Page, each insertion - - - \$1.00 a line.
 (About eight words to a line.)
 Engravings may be had at the same rate as the letter press. Advertisements must be received at publication office as early as Thursday morning to appear in next issue.

GET THE BEST AND CHEAPEST.
 TRADE MARK.

Silver Finish.
 J. A. FAY & CO.,
 (Cincinnati, Ohio, U. S. A.)
 Exclusive Agents and Importers for the United States, of the
CELEBRATED
PERIN BAND SAW BLADES,
 Warranted superior to all others in quality, finish, uniformity of temper, and general durability. One Perin Saw outwears three ordinary saws.

NOW READY.
 A practical treatise on the
STRENGTH OF MATERIALS.
 Including their Elasticity and Resistance to Impact. By Thomas Box. Containing 536 Pages, upward of 150 Tables, and illustrated by 27 Lithographic Plates. Svo. cloth, \$7.25. The author's name so well known to the leading Engineers, is sufficient to draw their attention to this important work.
 E. & F. N. SPON, 35 MURRAY ST., NEW YORK.

GRAY'S GRINDSTONE DRESSER.
 KEPT IN STOCK BY
 Hill, Clarke & Co., Boston.
 Hill, Clarke & Co., St. Louis.
 Manning, Maxwell & Moore, New York.
 John A. Roche, Chicago.
 J. Baird Machinery Co., Pittsburg.
 Niles Tool Works, Philadelphia.
 G. A. Gray, Jr. & Co., Cincinnati.

DEAFENING

 FIRE AND VERMIN
PROOF
 Sample and Circular Free by mail.
 U. S. MINERAL WOOL CO., 22 Courtlandt St., N. Y.

PATENTS.
 MESSRS. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN, continue to examine Improvements, and to act as Solicitors of Patents for Inventors.
 In this line of business they have had thirty-eight years' experience, and now have unequalled facilities for the preparation of Patent Drawings, Specifications, and the prosecution of Applications for Patents in the United States, Canada, and Foreign Countries. Messrs. Munn & Co. also attend to the preparation of Caveats, Copyrights for Books, Labels, Reissues, Assignments, and Reports on Infringements of Patents. All business entrusted to them is done with special care and promptness, on very reasonable terms.
 A pamphlet sent free of charge, on application, containing full information about Patents and how to procure them; directions concerning Labels, Copyrights, Designs, Patents, Appeals, Reissues, Infringements, Assignments, Rejected Cases, Hints on the Sale of Patents, etc.
 We also send, free of charge, a Synopsis of Foreign Patent Laws, showing the cost and method of securing patents in all the principal countries of the world.
MUNN & CO., Solicitors of Patents,
 261 Broadway, New York.
 BRANCH OFFICE - Corner of F and 7th Streets, Washington, D. C.