

Official List of Patents.

Issued by the United States Patent Office.

FOR THE WEEK ENDING MAY 25, 1869.

Reported Officially for the Scientific American.

SCHEDULE OF PATENT OFFICE FEES:

Table with 2 columns: Fee description and Amount. Includes fees for filing, issuing, appealing, and extending patents.

For copy of claim of any patent issued within 30 years... \$1. A sketch from the model or drawing... \$1. The full specification of any patent issued since Nov. 20, 1866... \$1.25.

MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

- 90,332.—MODE OF ELECTRO-PLATING WITH NICKEL.—Isaac Adams, Jr., Boston, Mass.
90,333.—COMPOSITION FOR STUFFING LEATHER.—Rob't Andrews, Milwaukee, Wis.
90,334.—PROCESS OF CURING AND PUTTING UP FISH.—John Atwood, Jr., Provincetown, Mass.
90,335.—MODE OF COLORING AND TINTING RUBBER GOODS.—Jos. Beck, Trenton, N. J.
90,336.—RAILWAY HOSE PROTECTOR.—J. H. Bellamy, Charlestown, assignor to himself and L. M. Faxon, Boston, Mass.
90,337.—ALLOY FOR FORMING EYELETS.—G. B. Brayton (assignor to "The Novelty Eyelet Company"), Boston, Mass.
90,338.—CHUCK.—G. F. Bennett, Rochester, N. Y.
90,339.—BRICK PRESS.—T. J. Burke, Sandwich, Ill.
90,340.—TUCK CREASER AND GUIDE FOR SEWING MACHINES.—G. F. Clemons, Springfield, Mass.
90,341.—POTATO DIGGER.—Ira Cooper, Middlefield, Ohio.
90,342.—COOKING STOVE.—E. J. Cridge, Troy, N. Y.
90,343.—FAUCET.—Geo. T. Dalton, New York city.
90,344.—BAG HOLDER.—Geo. Dare, Auburn, N. Y.
90,345.—SLIDING DOOR SHEAVE.—M. L. Deering, New York city.
90,346.—FURNACE FOR STEAM AND OTHER PURPOSES.—C. H. De Lamater, New York city.
90,347.—COMPOUND FOR THE CURE OF DIPHTHERIA, ETC.—A. J. Denison, Paris, Mich.
90,348.—FASTENING FOR GLOVES.—Theodore Deschamps, Paris, France.
90,349.—APPARATUS FOR PRESERVING BEER.—Wm. Dietrichsen, Newark, N. J.
90,350.—BANJO.—G. C. Dobson and Wm. McDonnell, Boston, Mass., assignors to G. C. Dobson.
90,351.—CARRIAGE.—J. L. Dolson, Charlotte, Mich.
90,352.—DEVICE FOR ATTACHING AND DETACHING HORSES.—G. L. Du Laney, Mechanicsburg, Pa.
90,353.—CORSET.—D. H. Fanning, Worcester, Mass.
90,354.—SEWING MACHINE FOR QUILTING.—T. O. Foot, Newburg, Ill.
90,355.—ROAD SCRAPER.—Jas. Gorton, Cohocton, N. Y.
90,356.—LAMP POST.—J. W. Graham, Chillicothe, Ohio.
90,357.—BASE BURNING STOVE.—Wm. Hailes, Albany, N. Y.
90,358.—COOKING STOVE.—Wm. Hailes, Albany, N. Y.
90,359.—MANUFACTURE OF COLORS.—Eberhard Harrsch, New York city.
90,360.—ICE PRESERVER AND WATER COOLER.—Rober Henage, Buffalo, N. Y.
90,361.—FIRE PROOF BUILDING.—R. M. Hoe, New York city.
90,362.—HORSE-RAKE.—Jas. Hollingsworth, Chicago, Ill.
90,363.—GUIDE FOR MEASURING THE PERSON AND CUTTING OUT LADIES' DRESSES.—Louisa L. Jackson, Richmond, Ind.
90,364.—HEDDLE FOR LOOMS.—E. G. Jelley, Pawtucket, R. I.
90,365.—SAW AND SAW TOOTH.—Jno. M. Johnston, Mayfield, Cal.
90,366.—CURTAIN FIXTURE.—A. H. Knapp, Newton Center, Mass.
90,367.—FERTILIZER.—Wm. Lalor, Utica, N. Y.
90,368.—STUFFING FOR MATTRESSES.—F. A. Lane (assignor to himself and L. S. Lane), Swanzy, N. H.
90,369.—FRUIT DRYER.—Minnie E. Lloyd, New York city, Antedated May 8, 1869.
90,370.—MANNER OF APPLYING ROLLERS TO ROCKING CHAIRS.—A. Loeman and M. Desenberg, Kalamazoo, Mich.
90,371.—STEAM-ENGINE LUBRICATOR.—J. A. Lynch (assignor to himself, R. K. Huntton, and C. S. Lynch), Boston, Mass.
90,372.—MANUFACTURE OF IRON.—W. M. Lyon, Pittsburgh, Pa.
90,373.—MANUFACTURE OF WROUGHT IRON.—Wm. M. Lyon, Pittsburgh, Pa.
90,374.—HORSE COLLAR FASTENING.—M. F. McIntyre, Girard, Pa.
90,375.—SPRING FOR WAGON SEATS.—G. H. Mittan, Dewitt, Ill.
90,376.—FENDER FOR CULTIVATOR PLOWS.—W. E. Moore, Crawfordsville, Ind.
90,377.—LOCKING NUT.—Wm. Morehouse, Buffalo, N. Y.
90,378.—ROVING FRAME.—E. P. Morgan, Saco, and J. H. McMullan, Biddeford, Me.
90,379.—LEVELING HYDRAULIC GAS MAINS.—Peter Munzinger, Philadelphia, Pa.
90,380.—CHIMNEY CAP.—Elijah Myrick, Harvard, Mass.
90,381.—BREECH-LOADING FIREARM.—J. D. S. Newell, Tennessee parish, assignor to himself, A. G. Brice, E. Tomatis, and Thos. Pickles, New Orleans, La.
90,382.—DEVICE FOR SETTING BUTTON HOOKS.—J. S. Palmer, Providence, R. I.
90,383.—FILTER.—G. O. Parkman, Lincolnville, and John M. Trussell, Belfast, assignors to themselves, and Ambrose Strout, Belfast, Me.
90,384.—SPRING BED BOTTOM.—J. F. Peck, Springfield, Mass.
90,385.—WIND WHEEL.—Walter Peck, Rockford, Ill.
90,386.—COFFEE ROASTER.—H. W. Persing, Chicago, Ill.
90,387.—APPARATUS FOR MAKING TEA AND COFFEE.—H. W. Persing, and J. F. Pease, Chicago, Ill.
90,388.—DENTAL INSTRUMENT.—W. R. Pomeroy, Millersburg, Ohio.
90,389.—ABDOMINAL SUPPORTER.—J. L. Porter, Kirksville, Mo.
90,390.—CARPET CLEANING MACHINE.—E. S. Poucher, New York city.
90,391.—WASHING MACHINE.—S. G. Rice, Albany, N. Y.
90,392.—APPARATUS FOR TREATING HYDROCARBON OILS.—L. M. Rice, Hartford, Conn., and S. E. Adams, Charlestown, Mass.
90,393.—MANUFACTURE OF FLEXIBLE HOSE, TUBE, OR PIPE FOR CONVEYING FLUIDS UNDER PRESSURE.—J. P. Rider, Brooklyn, N. Y.
90,394.—HORSESHOE.—David Roberge, Mooers, N. Y.
90,395.—PAINT FOR SHIPS' BOTTOMS.—Henry Roundy (assignor to T. M. Cash), San Francisco, Cal.
90,396.—WINDOW.—G. A. Russell, Chicago, Ill.
90,397.—MANUFACTURE OF HOSE, TUBING, AND OTHER RUBBER FABRICS.—Junius Schenck, Brooklyn, N. Y.
90,398.—TREE BOX.—Stephen Scott, Richmond, Ind.
90,399.—REIN HOLDER.—J. L. Shillito, and W. M. Walker, Wellsville, Pa.
90,400.—METALLIC DOOR STRIP.—A. D. Smith, Grafton, Ohio.
90,401.—FLUE STOPPER.—Henry Smith, Southington, Conn.
90,402.—FLY TRAP.—Warren Smith, Alexandria, Ind.
90,403.—TRUSS ROCKER BEAM.—W. B. Snow, and W. A. Elmendorf, Chicago, Ill.
90,404.—POTATO DIGGER.—Simon Soules, Dowagiac, Mich.
90,405.—FILTER.—Thos. Stewart (assignor to himself and W. C. Stiles), Philadelphia, Pa.

- 90,406.—NECK YOKE.—Charles E. Sweney, Geneseo, Ill.
90,407.—DEVICE FOR SHARPENING THE CUTTERS OF MOWING MACHINES.—Warren Tanner, Chicago Ill., assignor to himself and Oliver Bascom, White Hall, Vt.
90,408.—TORPEDO FOR OIL WELLS.—Henry H. Thomas, Titusville, Pa.
90,409.—AMALGAMATOR.—James Thompson, Gibsonville, Cal.
90,410.—RAILWAY CAR WHEEL AND AXLE.—Charles D. Tisdale (assignor to himself and Joseph H. Clapp), Boston, Mass.
90,411.—BROOM HOLDER.—L. W. Turner, Yalesville, Conn.
90,412.—ATTACHING HANDLES TO AXES.—T. H. Tyndale, Belleville, Ill.
90,413.—CHURN DASHER.—O. A. White, Norwalk, Ohio.
90,414.—CHURN.—A. G. Wilkins, G. N. Crodle, and F. L. Niner, Cooperstown, Pa.
90,415.—ALE, BEER, AND WATER COOLER.—Lewis John Wolf Port Richmond, Philadelphia, Pa.
90,416.—WASHING MACHINE.—J. B. Woolsey, Bloomfield, Iowa.
90,417.—INK POWDER AND DYE FROM ANILINE COLORS.—John Zengler, Chicago, Ill.
90,418.—POCKET CASE FOR RAILROAD SCHEDULES.—Sidney E. Allen, Company Shops, N. C.
90,419.—TURBINE WHEEL.—V. M. Baker, Preston, Minn.
90,420.—ROSE FOR DOOR KNOBS.—Charles L. Bates, New York city.
90,421.—GATE.—Francis C. Brown and Cyrus Allen, Palmyra, N. Y.
90,422.—DUMB WAITER.—Arnout Cannon, Jr., Poughkeepsie, N. Y.
90,423.—HUNTING ATTACHMENT FOR PORTABLE HORSE POWER.—Peter Cary, Coeymans, N. Y.
90,424.—CREAM PUMP.—T. A. Case, Ellington, N. Y.
90,425.—HAY RAKER AND LOADER.—Albert Clark, Cadiz, Ohio.
90,426.—CORPSE PRESERVER.—J. L. Clark, Providence, R. I.
90,427.—GOVERNOR STOP-VALVE FOR STEAM ENGINES.—Chas. A. Conde, Indianapolis, Ind.
90,428.—LAMP.—Abel Crook, New York city.
90,429.—VEGETABLE CRUSHER.—Reuben Daniels, Woodstock, Vt.
90,430.—HARNES BUCKLE.—F. W. Dean, Tremont, Ill.
90,431.—HAY AND COTTON PRESS.—Levi Dederick, New York city.
90,432.—RAILWAY CAR TRUCK.—Patrick S. Devlan, Jersey city, N. J.
90,433.—NEEDLE SHARPENER.—A. S. Dinsmore, New York city.
90,434.—MINER'S LAMP.—W. G. Dowd, Scranton, Pa.
90,435.—KNITTING MACHINE REGISTER.—William V. Dubois (assignor to himself and W. A. and J. G. Sangster), Covington, La.
90,436.—CARBURETER.—C. F. Dunderdale, New York city.
90,437.—COAL SCUTTLE.—John L. Ellithorp and Peter Sloan, Canajoharie, N. Y.
90,438.—COMPOSITION FOR CLEANING MARBLE, STONE, ETC.—Alpheus C. Ford, Lynn, assignor to himself and Robert B. Swisher, Springfield, Pa., and William C. Larzelair, Blairtown, N. J.
90,439.—COAL BREAKER AND SEPARATOR.—L. P. Garner, Ashland, Pa.
90,440.—APPARATUS FOR COLLECTING AND FORCING GASES FROM BLAST, PUDDLING, AND OTHER FURNACES.—David H. Geiger, St. Clair, Pa.
90,441.—REVOLVING CHRISTMAS TREE.—F. A. Geisler, Bristol, R. I.
90,442.—DETACHABLE CALK FOR HORSESHOES.—Kingston Goodard, Richmond, N. Y.
90,443.—COMPOSITION FOR MAKING IMITATION IVORY, WOOD, HORN, ETC.—Solomon Gradewitz (assignor to B. Ollenkorff), New York city.
90,444.—APPARATUS FOR DISTILLING AND PRODUCING FRESH POTABLE WATER.—William Albert Gray (assignor to J. Howard Wainwright), New York city.
90,445.—GAS MACHINE.—J. W. Groat, Fremont, Ohio.
90,446.—HORSE RAKE.—Stephen J. Halsted, Margaretville, N. Y.
90,447.—COMPOSITION BOWL FOR MANGLES, WASHING MACHINES, ETC.—Thomas Harcastle, of the Bradshaw Works, near Bolton, England.
90,448.—BLANK FOR RAKE AND HOE COMBINED.—Nathan Harper, Philadelphia, Pa.
90,449.—ADJUSTABLE BED BOTTOM.—Elihu Hoag, Coxsackie, N. Y.
90,450.—STEAM GENERATOR.—James Howard and Edward Tenney Bousfield, Bedford, England.
90,451.—CORN SHOCK BINDER.—John E. Hunter, Mechanicsburg, assignor to himself and T. Martin, Catawba, Ohio.
90,452.—DRAWER FOR FURNITURE, ETC.—Enos B. Johnson, Milwaukee, Wis.
90,453.—WATER CLOSET APPARATUS.—John Keane, New York, assignor to himself and George H. Brown, Milbrook, Washington Hollow, N. Y.
90,454.—EAVES PROTECTOR.—Joseph J. Lovell (assignor to himself and George W. Millar), New York city.
90,455.—CRANK AXLE FOR WAGONS.—Thomas E. Lutner, Philadelphia, Pa.
90,456.—DROP PRESS.—Nathan P. Maker, Providence, R. I.
90,457.—MEASURING FUNNEL.—G. B. Massey, New York city.
90,458.—DEVICE FOR SETTING WAGON TIRES.—Francis Mills, Mount Vernon, Ind.
90,459.—STOVEPIPE SHELF AND OVEN.—J. A. Miner, and H. J. Torrey, Wellsville, N. Y.
90,460.—SEWING NEEDLE.—Abel Morrall, Studley, England.
90,461.—MACHING FOR DRESSING MILLSTONES.—Samuel Prettyman Mumford and John Wallis, Greenwich, England.
90,462.—WASHING MACHINE.—Ira A. Newhall, Crooked Creek, Pa.
90,463.—HAY AND MANURE FORK.—L. D. Pitcher, Pitcher-ville, Ill.
90,464.—COAL STOVE.—Francis Raith (assigns one-third to Edmund F. Krellwitz), Calumet, Mich.
90,465.—PADDLE WHEEL.—Wm. C. Rice, Oquawka, Ill.
90,466.—WAGON SEAT.—Andrew Sheline, Edon, Ohio.
90,467.—WASHING MACHINE.—J. M. Shuck, Oskaloosa, Iowa.
90,468.—WATER WHEEL.—J. C. Smith, Mahanoy, Pa.
90,469.—WATER WHEEL.—Wm. H. Snyder, Phelps, N. Y.
90,470.—VELOCIPEDE.—L. H. Soule, Mount Morris, N. Y.
90,471.—AUTOMATIC DOUGH RAISER.—John Stark, Thomasville, Ga.
90,472.—SUBMERGED CENTRIFUGAL PULP-WASHER.—Richard R. Syland (assignor to himself and John S. Reeve), Millburn, N. J.
90,473.—CARRIAGE JACK.—J. Newton Thatcher, Martinsburg, West Va.
90,474.—KNIFE FOR PARING VEGETABLES, ETC.—William Veber, Jr., Shingle Creek, N. Y.
90,475.—PLOW.—Edward Ward, Louisville, Ky.
90,476.—MODE OF MELTING, CASTING AND HARDENING NICKEL.—Isaac Adams, Jr., Boston, Mass.
90,477.—BOOT CRIMPER.—J. B. Aikin, Somerton, Ohio.
90,478.—IRON FRONT FOR BUILDINGS.—John Alexander, Greenpoint, and Nathaniel J. Burchell, New York city.
90,479.—FLUID METER.—C. W. Baldwin, Boston, Mass.
90,480.—STEAM ENGINE.—Edwin P. Ball, Chicopee, Mass.
90,481.—FRICTION CLUTCH.—Darius Banks, New York city.
90,482.—FEED TABLE FOR PRINTING PRESSES.—Henry Barth, Cincinnati, Ohio.
90,483.—AUTOMATIC VALVE.—F. H. Bartholomew, New York city.
90,484.—LAMP CHIMNEY.—J. F. Bartlett, Winstead, Conn.
90,485.—BELT AWH.—S. Y. Beach, Seymour, Conn.
90,486.—HOT CLOSET FOR STOVE PIPES.—Nelson W. Beckwith, McDonough, N. Y.
90,487.—LADIE CHUCK.—Wm. Bellows, Cincinnati, Ohio.
90,488.—PLOW CLEANER.—Andrew C. Black, Kaukauna, Wis.
90,489.—VELOCIPEDE.—P. J. Boris, Boston, Mass.
90,490.—WASHING MACHINE.—Branson Breeden, Lexington, Va.
90,491.—COFFIN.—Webb Broomhall (assignor to himself and Acker King), Circleville, Ohio.
90,492.—MACHINE FOR BENDING METALS EDGEWISE.—Geo. W. Brown, Gatesburg, Ill.

- 90,493.—MACHINE FOR DISTRIBUTING GUANO.—Hiram L. Brown and Calvin P. Brown, Manchester, N. Y.
90,494.—MANUFACTURE OF IRON.—John Burt, Detroit, Mich.
90,495.—DITCHING MACHINE.—M. E. Burtless, Seneca Falls, N. Y.
90,496.—FARM GATE.—J. W. Byers, Mechanicsburg, Pa.
90,497.—COMPOSITE PAPER FOR HANGINGS AND FOR OTHER PURPOSES.—Wellington Campbell, Millburn, N. J.
90,498.—HANDLE FOR UMBRELLAS AND CANES.—Levi Chapman, New York city.
90,499.—INSOLE FOR BOOTS AND SHOES.—Edwin Chesterman, Tremont, N. Y.
90,500.—BLIND HINGE.—C. B. Clark, Buffalo, N. Y.
90,501.—BELT BUCKLE.—Francis Clausen, San Francisco, Cal.
90,502.—WATER CLOSET.—B. R. Cole, Buffalo, N. Y.
90,503.—SPRING WHIFFLETREE.—G. N. Compton, Canton, O.
90,504.—HINGE AND SPRING COMBINED.—J. J. Cowell, Newark, N. J.
90,505.—PROCESS OF MAKING ORNAMENTAL SIGNS, ETC.—J. H. Crane and C. W. Crane, Charlestown, Mass.
90,506.—STEAM GENERATOR.—Benjamin Crawford, Allegheny city, Pa.
90,507.—SEWING MACHINE FOR MAKING BOOTS AND SHOES.—C. O. Crosby, New Haven, Conn.
90,508.—MACHINE FOR MAKING TATTING.—C. O. Crosby, New Haven, Conn.
90,509.—DOUGH-MIXING MACHINE.—Joseph Davidson, Xenia, Ohio.
90,510.—ORE CRUSHER.—M. B. Dodge, Brooklyn, N. Y.
90,511.—SADIRON.—David Donalds, New York city.
90,512.—COMPOUND MOLDBOARD FOR PLOWS.—S. H. Dwight Decatur, Ill., and Calvin Wells, Pittsburgh, Pa.
90,513.—RUNNING GEAR OF STREET CARS.—Zelina Eastman, Chicago, Ill.
90,514.—PHOTOGRAPHIC PRINTING.—Ernest Edwards, First Willesden, Great Britain.
90,515.—CONSTRUCTION OF REVERBERATORY AND MELTING FURNACES.—Abial Elliott, South Wolfborough, N. H.
90,516.—HORN COMB.—M. H. Fairchild, Newtown, Conn.
90,517.—DITCHING MACHINE.—Henry Felthoff and L. D. Tingler, Prince William, Ind.
90,518.—PRINTERS' SHEARS.—C. E. Fisk, New York city.
90,519.—APPARATUS FOR LIGHTING GAS.—Henry G. Fisk, Springfield, Mass.
90,520.—MOP HEAD.—Samuel Gantz, Beaver Creek, Md.
90,521.—MACHINERY FOR BRONZING PRINTED WORK.—B. G. George, London, England.
90,522.—IMPLEMENT FOR CUTTING GREEN CORN FROM THE COB.—W. L. Gilroy, Philadelphia, Pa.
90,523.—FILTERING FUNNEL.—J. H. Goodfellow, Troy, N. Y.
90,524.—COAL STOVE.—J. H. Goodfellow (assignor to himself and R. S. Goodfellow), Troy, N. Y.
90,525.—METAL PULLEY BLOCK.—G. W. Gregory, Watertown, N. Y.
90,526.—MANURE HOOK OR DRAG.—Henry Gross, Middletown, Pa.
90,527.—MANURE HOOK OR DRAG.—Henry Gross, Middletown, Pa.
90,528.—SEWING MACHINE.—Julius Gutmann, Berlin, Prussia.
90,529.—TIME LOCK.—L. A. Haines, Wakefield, Md.
90,530.—SKATING ROD AND STROOL.—Wm. Hall, Jr., North Adams, Mass.
90,531.—IRON GRINDING PLATE.—Daniel Halladay and B. H. Ruggles, Batavia, Ill.
90,532.—ORE CRUSHER.—John Hamilton, L. E. Hanson, G. W. Hamilton, and Joseph Hamilton, Wheeling, W. Va.
90,533.—MACHINE FOR THREADING RODS, BOLTS, ETC.—Wm. Harris, Washington, Mo.
90,534.—SAWING MACHINE.—J. J. Harris, St. Louis, Mo., assignor to himself, Richard Morgan, and John Gayso.
90,535.—WATER METER.—T. C. Hargrave, Boston, Mass.
90,536.—MACHINE FOR FINISHING GALVANIZED TACKS.—Russell Hathaway Jr. and J. D. Stetson (assignors to the American Tack Co.), Fair Haven, Mass.
90,537.—COAL STOVE.—J. H. Helm, Pittsburgh, Pa.
90,538.—SAWSET.—Charles Herrmann, Evansville, Ind.
90,539.—COVER FOR DRINKING VESSEL.—John Heuermann, Davenport, Iowa.
90,540.—FIRE PLUG.—R. A. Hill, Washington, D. C.
90,541.—BRANCH STOP-COCK FOR MAINS.—R. A. Hill, Washington, D. C.
90,542.—STEAM-ENGINE CONDENSER.—John Houpt, Springtown, Pa.
90,543.—RACKET BASKET FOR RAILROAD CARS.—J. L. Howard, Hartford, Conn.
90,544.—CHURN.—J. S. Huffman, Brownsburg, Va.
90,545.—PROCESS OF DRYING MALT.—W. W. Hughes, Philadelphia, Pa.
90,546.—VELOCIPEDE.—Elon Huntington, New York city.
90,547.—RATCHET DRILL.—Geo. Hutchins, New York city.
90,548.—PROPAGATING TREES AND SHRUBS.—Sullivan Hutchin-son, Bristol, N. H.
90,549.—APPARATUS FOR DRYING SUGAR AND COOLING CHARCOAL, ETC.—G. A. Jasper, Charlestown, Mass.
90,550.—CASK-WASHING MACHINE.—William Johnson, Milwaukee, Wis.
90,551.—BOOT AND SHOE.—William F. Jobbins, New York city.
90,552.—SEWING MACHINE.—J. T. Jones, New York city.
90,553.—LADIES' WORK BASKET.—R. V. Jones, Canton, Ohio.
90,554.—SMOKING PIPE.—F. J. Kaldenberg, New York city.
90,555.—BRICK MACHINE.—John Keller (assignor to himself, F. J. Fairbank, and J. W. Cole), Paducah, Ky.
90,556.—COMBINED SEED DRILL AND FERTILIZER.—John F. Keller, Hagerstown, assignor to Hagerstown Agricultural Implement Manufacturing Co., Hagerstown, Md.
90,557.—RAILWAY STOCK CAR.—John S. Kendall, Northfield, Minn., assignor to himself, Ralph Emerson, and William A. Talcott, Rockford, Ill.
90,558.—SASH LOCK.—Geo. King, Frederick, Md.
90,559.—STAKE PULLER.—Richard Knott, Suisun City, Cal.
90,560.—DOOR FOR GRAIN CARS.—S. E. Knott, Chicago, Ill.
90,561.—MACHINE FOR REAPING AND THRASHING GRAIN.—L. B. Lathrop, San Jose, Cal.
90,562.—MOP.—Joseph Law, New York city.
90,563.—VELOCIPEDE.—B. S. Lawson, New York.
90,564.—COMPOSITION FOR RENDERING FABRICS WATER REPELLENT, AND FOR FIXING THEIR COLORS.—R. O. Lowrey, Salem, N. Y.
90,565.—PROCESS FOR SEPARATING IRON AND OTHER METALS FROM POTTERS' CLAY.—William John Lynn, Golden City, Colorado Territory.
90,566.—PREPARATION OF PAPER STOCK.—G. E. Marshall, Louisville, Ky.
90,567.—NUT LOCK.—Harvey McCown, Enon Valley, Pa.
90,568.—BEDSTEAD FASTENING.—Peter McIntyre, Norwich, Conn.
90,569.—AUTOMATIC CAR COUPLING.—John McLain and Jared Kelsey (assignors to themselves and Snyder Filson), St. Mary's, Ohio.
90,570.—FANNING MILL.—Ellis Michael, La Porte, Ind.
90,571.—CURTAIN FIXTURE.—Benjamin Moser, Philadelphia, Pa. Antedated May 19, 1869.
90,572.—LAMP EXTINGUISHER.—Carlton Newman, San Francisco, Cal.
90,573.—CAR COUPLING.—W. B. Parsons, Short Tract, N. Y.
90,574.—CORN HUSKER.—O. S. Perkins and L. A. Crandall, New Haven, Conn.
90,575.—SPRING BURGLAR ALARM FOR DOORS.—Geo. W. R. Pollock, Boston, Mass.
90,576.—PUMP.—A. J. Pritchard, Liverpool, Ohio.
90,577.—CAKE MACHINE.—Joseph Repetti, Philadelphia, Pa.
90,578.—LIGHTNING ROD COUPLING.—W. S. Reyburn and E. A. V. Hunter, Philadelphia, Pa.
90,579.—VELOCIPEDE.—James Reynolds, Brooklyn, N. Y., assignor to himself and J. J. Marshall, New York city.
90,580.—VENTILATOR.—M. M. Reily, New Haven, Conn.
90,581.—WASHING MACHINE.—M. W. Riker and D. T. Torrey, Hastings, Mich., assignors, by mesne assignments, to D. T. Torrey.
90,582.—GRAIN DRILL.—J. L. Riter, Brownsville, Ind. Antedated Nov. 25, 1868.

90,583.—COOKING RANGE.—H. R. Robbins (assignor to himself and J. J. Moran), Baltimore, Md.

90,584.—STEP COVER AND WHEEL FENDER FOR CARRIAGES.—John Roberts, Cincinnati, Ohio.

90,585.—VELOCIPÈDE.—P. C. Rowe, Boston, Mass.

90,586.—NON-CORROSIVE CAST-IRON PUMP.—J. A. Rumsey, Seneca Falls, N. Y.

90,587.—SKATE.—R. J. Russell, Wheeling, West Va.

90,588.—MEAT CUTTER.—F. S. Rutschman (assignor to himself, John Rutschman, and Wm. Rutschman), Philadelphia, Pa.

90,589.—METALLIC HOOPING.—David Saunders, St. Louis, assigns one-half his right to A. B. M. Thompson, Webster Groves, Mo.

90,590.—PROPELLER.—Christian Sharps, Philadelphia, Pa.

90,591.—APPARATUS FOR MOLDING PIPE.—Frederick Shickle (assignor to Shickle, Harrison & Co.), St. Louis, Mo.

90,592.—HORSE RAKE.—A. J. Shunk, Millersburg, Ohio.

90,593.—METHOD OF MAKING SERRATED SICKLE SECTIONS.—G. F. Simons (assignor to the Simons Manufacturing Co.), Fitchburg, Mass.

90,594.—ICE CREAM FREEZER.—Joseph Sissons, Horncastle, England.

90,595.—VELOCIPÈDE.—Joseph Simpson, Newark, Ohio.

90,596.—DIE FOR RAISING AND TRIMMING METAL.—Samuel Simpson, Wallingford, Conn., assignor to Simpson, Hall, Miller & Co.

90,597.—RAILWAY RAIL.—A. F. Smith, Norwich, Conn.

90,598.—WASHING MACHINE.—C. P. Snow, Freeport, Ill.

90,599.—PAPER CUFF.—G. K. Snow, Watertown, Mass.

90,600.—CHIMNEY COWL.—T. S. Speakman, Camden, N. J.

90,601.—VELOCIPÈDE.—Charles Spring, Hyde Park, and Andrew Spring, Weston, Mass.

90,602.—MACHINE FOR POINTING BOLTS OR RIVETS.—John Stacker (assignor to Franklin Moore and Edward Clark), West Winsted, Conn.

90,603.—ROLLER SKATE.—G. K. Stillman, Cincinnati, Ohio.

90,604.—PLOW POINT.—O. O. Storle, Norway, Wis.

90,605.—BAND CUTTER FOR THRASHING MACHINES.—Levi Sumner, Oskaloosa, Iowa.

90,606.—CAP FOR FEEDING BOTTLES FOR INFANTS AND INVALIDS.—John Thompson and J. G. Ingram, London, England; said Ingram assigns his right to John Thompson.

90,607.—METALLIC CARTRIDGE.—Wm. Tibbals, South Coventry, Conn.

90,608.—TOILET PIN CASE.—T. R. Timby, Saratoga Springs, N. Y.

90,609.—GAS-LIGHT GOVERNOR CASE.—Nathaniel Tufts, Boston, Mass.

90,610.—HARNES ORNAMENT.—Wm. Ulrich and Chas. Hachmeister, Newark, N. J.

90,611.—FENCE POST SOCKET.—George Unger, Danville, Pa.

90,612.—BRIDLE BIT.—Adrien Viridet, Glasgow, Ky.

90,613.—PIANO STOOL.—Hugo Vogel and Victor Vogel, St. Louis, Mo., assignors to Hugo Vogel and Frank Justin.

90,614.—BREACH-LOADING FIREARM.—Friedrich Von Martini, Frauenfeld, Switzerland.

90,615.—STEAM BOILER FURNACE.—L. R. Wallace, Adrian, Mich.

90,616.—REFINING SUGAR.—C. F. L. Wandel, Waldau, near Bernburg, North German Confederation, assignor to F. O. Matthiessen and W. A. Wiechers, New York City.

90,617.—PURIFICATION OF ANIMAL CHARCOAL.—Carl F. L. Wandel, Waldau, near Bernburg, North German Confederation, assignor to F. O. Matthiessen and W. A. Wiechers, New York City.

90,618.—PRUNING IMPLEMENT.—G. F. Waters, Boston, Mass.

90,619.—BIRD CAGE.—J. H. Williams, New York City.

90,620.—LATHE FOR GRINDING AND POLISHING PIVOTS OF WATCH WORK.—C. V. Woerd, Waltham, assignor to American Watch Company, Boston, Mass.

90,621.—HARVESTER.—Geo. W. N. Yost (assignor to Corry Machine Co.), Corry, Pa.

90,622.—MACHINE FOR BORING PORTS AND POINTING RAILS.—John Young of C. Fair View, and C. I. Grumbine, Frederick, Md.

31,084.—MACHINE FOR SOWING FERTILIZERS.—Dated January 8, 1861; reissue 1,718, dated July 5, 1864; reissue 3,461.—J. F. Keller (assignor to Abraham Miller, W. H. Protzman, A. R. Appleman, and Wm. H. Crafts), Sagartown, Md.

62,697.—STRAINER FOR COFFEE AND TEA-POTS.—Dated March 5, 1867; reissue 3,462.—G. A. Lawrence, Springfield, Mass., assignee, by mesne assignments, of Michael Simons.

87,948.—BED BOTTOM.—Dated March 16, 1869; reissue 3,463.—R. O. Lowrey, Salem, N. Y.

95,443.—SEEDING MACHINE.—Dated September 13, 1859; reissue 3,464.—S. G. Randall, New Braintree, Mass.

84,370.—EXHAUST NOZZLES FOR STEAM ENGINES.—Dated November 24, 1863; reissue 3,465.—John Sanders, Harrisburgh, Pa., administrator of the estate of Richard Norris, deceased.

16,337.—MACHINE FOR PRESSING THE LOCKS OF SHEET-METAL PLATES.—Dated January 6, 1857; reissue 3,466.—The S. Stow Manufacturing Company, Plantsville, Conn., assignees of J. J. Lumbach.

15,701.—HARVESTER.—Dated September 9, 1856; reissue 3,467.—C. Wheeler, Jr., Auburn, N. Y., assignee of W. P. Maxson.

20,108.—PIPE FOR RAILWAY WATER TANK.—Dated April 27, 1858; reissue 3,468.—John Wilkeson, Buffalo, N. Y., assignee, by mesne assignments, of Benjamin M. Van Derveer.

DESIGNS.

3,507.—DOOR OF A BOOK CASE.—Simeon Taylor, Worcester, Mass.

EXTENSIONS.

MACHINE FOR SPLITTING WOOD.—J. A. Conover, of New York City.—Letters Patent No. 12,857, dated May 15, 1855.

SEED PLANTER.—E. M. Stevens, J. B. Crosby, and J. W. Pearson, of Boston, Mass.—Letters Patent No. 12,924, dated May 22, 1855; reissue No. 3,278, dated January 26, 1866.

MACHINERY FOR SPINNING.—T. J. Silsby, of Boston, Mass., administrator of Arad Woodworth, 34.—Letters Patent No. 12,889, dated May 15, 1855.

TENONING TOOL.—T. J. Knapp, of Philadelphia, Pa.—Letters Patent No. 12,854, dated May 15, 1855.

Facts for the Ladies.

I have used my Wheeler & Wilson Sewing Machine over ten years without repairs, and without breaking a needle, although I commenced the use of it without any instruction. Have used it constantly for family sewing; have quilted whole quilts of the largest size, and it is still in complete order, runs like a top, and bids fair to be willed to those who come after me, with better powers of production than an unbroken prairie farm.

MRS. H. E. G. ARBY.

Whitewater, Wis.

## PATENT OFFICES, American and European, OF MUNN & CO., No. 37 Park Row, New York.

For a period of nearly twenty-five years MUNN & Co. have occupied the position of leading Solicitors of American and European Patents, and during this extended experience of nearly a quarter of a century, they have examined not less than fifty thousand alleged new inventions, and have prosecuted upwards of thirty thousand applications for patents, and in addition to this, they have made at the Patent Office over twenty thousand Preliminary Examinations into the novelty of inventions, with a careful report on the same.

This wide experience has not been confined to any single class of inventions but has embraced the whole range of classification, such as Steam and Air Engines, Sewing Machines, Looms and Spinning Machinery, Textile Manufactures, Agricultural and Agricultural Implements, Builders' Hardware, Carriages, Carriages, Chemical Processes, Civil Engineering, Brick making, Compositions, Felting and Hat Making, Fine Arts, Fire-arms, Glass Manufacture, Grinding Mills, Harvesters, Household Furniture, Hydraulics and Pneumatics, Illumination, Leather Manufactures, Mechanical Engineering, Metallurgy, Metal Working, Navigation, Paper Making, Philosophical Instruments, Presses, Printing and Stationery, Railroads and Cars, Sports, Games, and Toys, Stone Working, Surgical Apparatus, Wearing Apparel, Wood Working.

MUNN & Co. deem it safe to say that nearly one-third of the whole number of applications made for patents during the past fifteen years has passed through their Agency.

CONSULTATIONS AND OPINIONS FREE.

Those who have made inventions and desire to consult with us are cordially invited to do so. We shall be happy to see them in person, at our office, or to advise them by letter. In all cases they may expect from us an honest opinion. For such consultation, opinion, and advice, we make no charge. A pen-and-ink sketch and a description of the invention should be sent. Write plainly, do not use pencil or pale ink.

If a SPECIAL SEARCH at the Patent Office is required, which embraces a personal examination of all patented inventions and a report in writing, a fee of \$5 is charged. This examination is only advised in doubtful cases.

To Apply for a Patent, a model must be furnished, not over a foot in any dimension. Send model to Munn & Co., 37 Park Row, New York, by express, charges paid, also a description of the improvement, and remit \$16 to cover first Government fee, revenue and postage stamps.

The model should be neatly made of any suitable materials, strongly fastened, without glue, and neatly painted. The name of the inventor should be engraved or painted upon it. When the invention consists of an improvement upon some other machine, full working model of the whole machine will not be necessary. But the model must be sufficiently perfect to show with clearness, the nature and operation of the improvement.

THE GREAT ADVANTAGES

OF MUNN & CO.'S AGENCY are that their practice has been ten-fold greater than any other Agency in existence, with the additional advantage of having the assistance of the best professional skill in every department, and a Branch Office at Washington, which watches and supervises all their cases as they pass through official examination. If a case is rejected for any cause, or objections made to a claim, the reasons are inquired into and communicated to the applicant, with sketches and explanations of the references; and should it appear that the reasons given are in sufficient, the claims are prosecuted immediately and the rejection set aside and usually

WITHOUT EXTRA CHARGE.

MUNN & Co. are determined to place within the reach of those who confide to them their business the highest professional skill and experience.

Cauteurs are desirable if an inventor is not fully prepared to apply for Patent. A Caveat affords protection for one year against the issue of a patent to another for the same invention. Caveat papers should be carefully prepared.

REISSUES. A patent, when discovered to be defective, may be reissued, by the surrender of the original patent and the filing of amended papers. This proceeding should be taken with great care.

Patents can be Extended.—All patents issued prior to 1861, and now in force, may be extended for a period of seven years upon the presentation of proper testimony. The extended term of a patent is frequently of much greater value than the first term, but an application for an extension, to be successful, must be carefully prepared. MUNN & Co. have had a large experience in obtaining extensions, and are prepared to give reliable advice. Interferences between pending applications before the Commissioners are managed and testimony taken; also Assignments, Agreements and Licenses prepared. In fact there is no branch of the Patent Business which MUNN & Co. are not fully prepared to undertake and manage with fidelity and dispatch.

Designs, Trade Marks, and Compositions can be patented for a term of years; also new medicines or medical compounds, and useful mixtures of all kinds.

When the invention consists of a medicine or compound, or a new article of manufacture or a new composition, samples of the article must be furnished, neatly put up. Also, send us a full statement of the ingredients, proportions, mode of preparation, uses, and merits.

EUROPEAN PATENTS.

American inventors should bear in mind that, as a general rule any invention that is valuable to the patentee in this country is worth equally as much in England and some other foreign countries. Five Patents—American, English, French, Belgian and Prussian—will secure an inventor exclusive monopoly to his discovery among ONE HUNDRED AND THIRTY MILLIONS of the most intelligent people in the world. The facilities of business and steam communication are such that patents can be obtained abroad by our citizens almost as easily as at home. MUNN & Co. have prepared and taken a larger number of European patents than any other American Agency. They have Agents of great experience in London, Paris, Berlin, and other cities.

For instructions concerning Foreign Patents, Reissues, Interferences, Hints on Selling Patents, Rules and Proceedings at the Patent Office, the Patent Laws, etc., see our Instruction Book. Sent free by mail on application. Those who receive more than one copy thereof will oblige by presenting it to their friends.

Address all communications to  
**MUNN & Co.,**  
No. 37 Park Row, New York City  
Office in Washington, corner of F and 7th streets.

REISSUES.

25,632.—HANGING RECIPROCATING SAWS.—Dated October 4, 1859; reissue 3,454.—Thomas Bakewell and John Lippincott, Pittsburgh, Pa., assignees, by mesne assignments, of Pearson Crosby.

88,845.—PICKER FOR LOOMS.—Dated April 13, 1869; reissue 3,455.—A. H. Carroll, Baltimore, Md.

87,025.—FOLDING DESK.—Dated February 16, 1869; reissue 3,456.—Aaron Chandler, Davenport, Iowa, and S. F. Estell, Richmond, Ind.

88,288.—HORSE RAKE.—Dated August 27, 1867; reissue 3,457.—A. W. Coates, Alliance, Ohio.

48,632.—LAMP SHADE.—Dated July 4, 1865; reissue 3,458.—C. B. Curtis, Bridgeport, Conn., assignee, by mesne assignments, of C. St. John.

29,281.—GAS AND WATER-PIPE JOINT.—Dated July 24, 1860; reissue 3,459.—Edward Gwyn, Tiffin, Ohio, assignee of C. W. Isbell.

18,975.—MOWING MACHINE.—Dated December 29, 1857; reissue 3,460.—S. E. Jackson and M. P. Jackson, Booneville, N. Y.

CITY SUBSCRIBERS.—The SCIENTIFIC AMERICAN will be delivered in every part of the city at \$350 a year. Single copies for sale at all the News Stands in this city, Brooklyn, Jersey City, and Williamsburg, and by most of the News Dealers in the United States.

RECEIPTS.—When money is paid at the office for subscriptions, a receipt for it will be given; but when subscribers remit their money by mail, they may consider the arrival of the first paper a *bona-fide* acknowledgment of their funds.

Advertisements.

The value of the SCIENTIFIC AMERICAN as an advertising medium cannot be over estimated. Its circulation is ten times greater than that of any similar journal now published. It goes into all the States and Territories, and is read in all the principal libraries and reading-rooms of the world. We invite the attention of those who wish to make their business known to the annexed rates. A business man wants something more than to see his advertisement in a printed newspaper. He wants circulation. If it is worth 25 cents per line to advertise in a paper of three thousand circulation, it is worth \$250 per line to advertise in one of thirty thousand.

RATES OF ADVERTISING.

Back Page.....\$100 a line.  
Inside Page.....75 cents a line.  
Engravings may head advertisements at the same rate per line, by measurement, as the letter-press.

WANTED—ACTIVE MEN TO SELL PURINGTON'S Patent Alarm Drawer. Great inducements to good business men. Address  
24 13 A. S. TURNER, Williamstown, Conn.

VINEGAR FABRICATION.—Prof. H. DuSauce, Chemist, is ready to furnish the most recent European methods to manufacture vinegar by the slow and quick processes. Address New Lebanon, N. Y. 1\*

MANUFACTURERS' AGENCY FOR THE Sale of Patents, Rights, and Patented Articles, in the New England States. Address  
24 4 C. A. GRIFFIN, Hartford, Conn.

For Sale.

THE JERSEY CITY LOCOMOTIVE WORKS CO. in order to close their concern, offer for sale all the Machinery, Tools, and Engineering Plant, situated at their Works, corner of Morgan and Steuben sts., Jersey City. The machinery was procured from the best Manufacturers, and is in perfect order. A descriptive catalogue with price list will be forwarded upon application to the Company's Agents.



Only office in United States. Address

\$100 TO \$250 Per Month Guaranteed.—Sure Pay.—Salaries paid weekly to Agents everywhere, selling our pat. everlasting white wire clothes line. Call at or write for particulars to the GIRARD WIRE WORKS, 261 North 4th st., Philadelphia, Pa. 24 4\*

HINCKLEY KNITTING MACHINE.—The Wonder of the Age.—With single eye-point needle. Simple, Cheap, Reliable, for Family Use. Agents Wanted everywhere to introduce them. Address  
24 4 HINCKLEY KNITTING MACHINE CO., Bath Maine.

PATENT RIGHTS SOLD ON COMMISSION.—And Valuable Inventions introduced by the most experienced Patent Salesmen in the Union. Can refer to over one hundred inventors for whom we have acted.  
E. E. ROBERTS & Co.,  
1\* Consulting Engineers, 15 Wall st., New York.

PUMPING AND BLAST ENGINES, manufactured under Shaw & Justice's recent Patents. The cheapest, most simple, and efficient engines yet made.  
PHILIP S. JUSTICE,  
Offices—No. 14 N. 5th st., Philadelphia, and 42 Cliff st., New York. Shops—17th and Coates sts., Philadelphia. 24 5eow

FOR SALE.—In Brooklyn, near APPLETON'S Printing Establishment, a plot, containing about two city lots, fronting about 134 feet on three streets, and 100 feet deep. A constant spring delivering about six barrels of water per day. Price \$3,000.  
1\* R. W. LEAVER & CO., Wall st., New York.

To Inventors.

INVENTORS' Models made, either from Drawings or Patterns. As we employ the Best of Mechanics, we can guarantee our work in every respect.  
EDWARD K. TRYON, JR. & Co.,  
No. 19 N. 6th st., Philadelphia, Pa.  
24 2

J. F. GROSVENOR, OF LOWELL, MASS., Inventor of the Obler, and also of the new Recent Improvements in Variety Mangle Machines, consisting of the Variety Mangles, Universal and Double Serpentine Mangle and Flange Machines, and my Adjustable Cylinder Saw Blades. I am prepared to furnish these articles to be used in any and all parts of the United States, and the Best of the Goods with them, at my best prices. Also, the various kinds of Wood-working Machinery. Address, for information and application,  
J. F. GROSVENOR,  
15 Liberty st., New York City, or at Lowell, Mass. 24 2

WATCHES. Genuine Imp'd Orloids. Gold Ladies' and Gents', with fine Movement, \$10 & \$12. Ladies' and Gents', full jeweled pat. levers, hunting cases, \$15. Fac Simile Waltham, chronometer bal., double cases, \$24. Fac Simile Elgin, chronometer expansion bal., 25. Steam winders, fine movements, heavy double cases, \$20 and \$25. Watches made by us are genuine improved Orloids Gold Hunting Cases, Warranted for time, for style, durability, and finish. Equal to Gold, costing \$300. Chains of every style from \$2 to \$8. Clubs ordering 6 watches at once can have an extra watch and chain free. Factory in Switzerland.  
●ROLIDE WATCH CO., 38 Washington st., Boston.

PRACTICAL APPLICATION OF THE SLIDE VALVE AND LINK MOTION to Stationary, Portable, Locomotive, and Marine Engines, with new, rapid and simple methods for proportioning the parts. By W. S. Auchincloss, C. E. Illustrated by 37 wood cuts, 21 lithographic drawings, and a copperplate engraving of the Travel Scale. 1 vol. 8vo, cloth.....\$3.  
For sale by  
D. VAN NOSTRAND,  
23 Murray st., and 27 Warren st., (up stairs.)  
24 2 Copies sent free by mail on receipt of price.

FISH-PLATE DRILLING MACHINES, with 4 spindles; 3 drill 40 Railway Plates per hour, furnished at short notice for \$750. Crank Planers; Gear Planer, to plane 16 to 30 in. in width and height, and 3 to 10 ft. in length; Engine Lathes, 15, 19, 24-in. swing, 6 to 13-ft. beds; Hand Lathes, 12 and 15-in. swing, 3 1/2 to 8-ft. beds; Screw Machines; Milling Machines; 3 and 4-Spindle Drills, and Hydraulic Engines ready for delivery. Designs of all the machinery excellent, and workmanship of the finest description. Wood Cuts or Photographs furnished on application to  
PRATT, WHITNEY & Co., Hartford, Conn.  
24 2

TO INVENTORS AND MANUFACTURERS.—We can put into the hands of 500 agents and 20 drummers, New Goods in the following lines:  
HARDWARE, FANCY GOODS, AND NOTIONS, HOUSEHOLD.—Including every article that can be sold by agents from house to house. Send full description to Postoffice box 444 Springfield, Mass. Parties not receiving an answer will understand that their inventions cannot be worked profitably by us.  
1\*

HOFFMANN'S PATENT PERPETUAL KILN, For Bricks, Lime, Cement, etc., saves at least two thirds the fuel required in ordinary kilns. Either wood or coal may be used. A Kiln, turning out daily 20,000 bricks, may be seen in operation by applying to the Agents  
WEDEKIND & DULBERG,  
127 N. Broadway, Baltimore. Or,  
CALEB HUSE,  
17 Broad street, New York.  
24 2

Excelsior Lubricator. PATENTED AUG. 25th, 1868.—For Cylinders of Engines. A very superior and durable article manufactured by B. L. FELLAS,  
High Valley Brass Works, Buffalo, Pa.  
Lubricates every kind of steam and gas engines.  
24 2

VALUABLE SCIENTIFIC WORKS.—Recently Published by  
**JOHN WILEY & SON, Astor Place.**  
KERL'S METALLURGY—Gold, Silver, Lead, etc., 1 vol. \$3 00  
KERL'S METALLURGY—Iron and Copper, 1 vol. 8vo, cloth.....\$9 00  
MILLER'S INORGANIC CHEMISTRY—1 vol. 8vo, cloth.....\$10 50  
THE LATHE AND ITS USES—Numerous plates, 1 vol., 8vo, cloth.....\$4 00  
THE HANDBOOK OF ANILINES—1 vol. 8vo, cloth.....\$5 50  
DANA'S MINERALOGY—1 vol. 8vo, cloth.....\$10 00  
KNIGHT'S MECHANICAL AND CONSTRUCTOR FOR ENGINEERS—4to, plates.....\$20 00  
COLBURN'S LOCOMOTIVE ENGINEERING—Part 1, cloth.....\$11 00  
COLBURN'S LOCOMOTIVE ENGINEERING; NOS. 11, 12, 13, and 14—each.....\$1 00  
WARREN'S SHADES AND SHADOWS—1 vol. 8vo, cloth.....\$3 00  
WARREN'S HIGHER PERSPECTIVE—1 vol., 8vo, cloth.....\$3 00  
NORTON'S ASTROLOGY—Revised edition, cloth.....\$4 00  
LEED'S LECTURES ON VENTILATION, 8vo.....\$1 00  
RANKINE, NAPIER, etc., ON PRACTICAL SHIPBUILDING—folio, cloth.....\$40 00  
BOURNE'S SCREW PROPELLER—Enlarged edition, 4to, cloth.....\$18 00  
MAHANY'S CIVIL ENGINEERING—With additions—1 vol., 8vo, cloth.....\$4 00  
24 2 Prepaid by mail on receipt of Price.

BOILER FELTING SAVES TWENTY-FIVE per cent of Fuel. JOHN ASHCROFT, 16 ft 50 John st., New York.

FOR STEAM ENGINES, BOILERS, SAW MILLS, Cotton Gins, address the ALBERTSON AND DOUGLASS MACHINE CO., New London, Conn. 14 ft

WANTED—AGENTS—To sell the AMERICAN KNITTING MACHINE. Price \$25. The simplest, cheapest, and best Knitting Machine ever invented. Will knit 20,000 stitches per minute. Liberal inducements to Agents. Address AMERICAN KNITTING MACHINE CO., Boston, Mass., or St. Louis Mo. 16

H. BOARDMAN, Lancaster, Pa.—Superior Patent Cork-cutting Machinery, Hard-laid Twine, Cord, and Rope Machinery, with Pat. Stop & Condenser  
24 1\*

VELOCIPÈDES.

FOR A NICE SPRING MACHINE, particularly adapted for out-door use fully licensed under the Smith's Patent, and other patents. Address  
24 1\* EXETER MACHINE WORKS, Exeter, N. H.

PRACTICAL, Substantial, Durable, Cheap. Warranted as represented. Hand Slicing Saw Machine, self-feeding, thousands in use; one man with case rip board 8 in. thick, 13 ft. inch plank, 1 minute. Wm. H. Hoag, Manfr., 214 Pearl st., N. Y. P. O. Box 4245. Agts wanted.  
22 10

HAIR AND WOOL Felt for sale by the square foot of better quality covered by contract.  
HENRY L. DAVIS, 27 Broadway, New York.