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\* \* Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 1861, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

34,472.—B. T. Babbitt, of New York City, for Improvement in the Construction of Ordnance:

I claim the construction of a piece of ordnance with a passage, a, winding spirally round the bore, and within the walls thereof, substantially as and for the purpose specified.

34,473.—N. Badger, of Shelbyville, Ky., for Improved Digging Machine:

I claim the combination of the oscillating guide, I, arms, d, and crank, G, with the cylinder, F, as and for the purpose shown and described.

I also claim the combination with the parts of the pulverizing rollers, N, P, as shown and described.

[This invention is designed for spading or digging the ground for agricultural purposes, and also for digging potatoes and other similar crops or roots.]

34,474.—Louis Bail, of New Haven, Conn., for Improvement in Construction of Foundations for Light Houses, Piers, &c.:

I claim constructing the foundations and other portions of light houses, coffer dams and other similar structures of cast-iron segment plates, A, provided at the inner or concave side, with flanges, a', to receive screw bolts, c, for the purpose of securing the plates together to form a cylinder, and then filling the cylinder with concrete, stone, or other suitable material, substantially as set forth.

34,475.—J. L. Beers and Samuel Leonard, of Fayette, Pa., for Improvement in Water Wheels:

We claim the concave chute, F, arranged as described, in combination with the superincumbent penstock, C, and the wheel, A, substantially as and for the purpose set forth.

34,476.—W. H. Bliss, of Newport, R. I., for Improvement in Hose Couplings:

I claim, first, Connecting the nut, D, with the pin, F, by means of the divided collar, E, fitted in the nut and to the pin, substantially as shown and described, when said connection is used in combination with the pin, F, and the groove, g, of the but, B, for the purpose specified. Second, The lug, G, within the nut, A, when used in connection with the pin, F, and the groove, g, of the but, B, substantially as and for the purpose set forth.

[This invention relates to a certain improvement in a hose coupling, for which Letters Patent were granted to Robert B. Lawton and William H. Bliss, the latter being the party to the present application; said original Letters Patent bearing date Feb. 22, 1859. This coupling has been adopted in Brooklyn, and the Chief Engineer of the New York Fire Department has recommended its adoption in this city in place of the old screw coupling now in use. The object of this invention is to obtain a swivel coupling, which will admit of a secure, and water-tight connection.]

34,477.—J. S. Briggs, of South Bend, Ind., for Improvement in Mode of Starting Street Cars:

I claim the application to street cars of friction drums and arms, in combination with spiral springs, for the purpose of acquiring and retaining power, in stopping the car, to start the same again, in the manner described.

34,478.—C. G. Case and J. M. Baker, of Battle Creek, Mich., for Improvement in Automatic Machines for Weighing Grain:

We claim the combination of the boxes, C C', discharge valves, E, E', arms, f, connecting rod, g, with the valve, k, passages, i, j, and spring latches, o, when arranged and operating in the manner and for the purpose set forth.

[This invention relates to that class of grain-weighing machines in which the weight of the machine is made to automatically open and close valves for regulating the supply and discharge of the same.]

34,479.—H. Cassel and W. F. Semple, of Fredricktown, Ohio, for Improvement in Bellows for Blowpipes:

We claim the chamber, D, acted upon by spring, X, in combination with the chambers, B and C, and air-conveying tube or pipe, I.

34,480.—C. T. Chester, of New York City, for Improvement in Alphabetical Telegraphs:

I claim, first, The use in alphabetical telegraphs of a train of wheels actuating an escape wheel, in connection with pallets, actuated by electromotive force, when these parts are combined to operate an indicating needle, substantially in the manner set forth.

Second, The handle or pointer, with its hollow shaft, ratchet wheel, toothed wheel, two springs, with adjustable points, combined substantially as described, and forming the transmitting apparatus.

Third, The arrangement for combination of these two parts of the complete instrument, so that one dial answers for receiving and transmitting apparatus, and the parts may be instantly separated and examined, substantially as described.

34,481.—John Christy, of Baltic, Conn., for Improved Smoothing Iron:

I claim the handle, E, bar, G, gravitating catch, i, latch projection, j, and legs, C D, provided with feet, c, d, in combination with the oblong mortise, B, ledges, a, b, and iron, A, when arranged to operate in the manner and for the purpose set forth.

[The object of this invention is to provide a ready means of detaching the handle from the iron, to enable it to be kept cool while the iron is being heated, and also to make one and the same handle answer for a whole set or a number of irons of different sizes.]

34,482.—C. B. Conant, of Hardwick, Mass., for Improvement in Lifting Jacks:

I claim, first, The combination with the stand, A, and screw, C, of the boss or hub, D, collar, G, and internal projection, a, substantially as and for the purposes set forth.

Second, The combination with the screw, C, and stand-to of top or hub, D, projection, a, nut, E, pawl, J, guide collar, G, holding collar, K, and the pawl frame, H, substantially as and for the purposes set forth.

34,483.—Suspended.

34,484.—E. D. Foss, of Maineville, Ohio, for Improved Evaporating Pans for Saccharine Juices:

I claim, first, The series of small, equidistant apertures, H, when used in the described combination, with separate lever gates, I, I', and all constructed and arranged in the manner described.

Second, The arrangement of draft board, M, rod, N, and tube, O, in the described combination, with the last evaporating pan or compartment, for the purpose of moderating the heat thereto, as explained.

Third, The provision of surface sluices, J, constructed as described for the easy discharge of scum, in the manner described.

Fourth, The combination of the two batteries, A and A', placed side by side, one higher than the other, when, in other respects constructed and arranged in the manner shown and described and for the objects stated.

34,485.—J. G. Fredenburr and J. L. George, of Columbia, Cal., for Improved Water Wheel:

We claim the arrangement of the ledges, h, and the guide plates, l, with the sliding buckets, d, chute, E, and its enlargement, g, as shown and described.

The arrangement of the encompassing bar, F, with the buckets, d, and the chute, E, as shown and described.]

[This invention relates to an improvement in that class of water wheels which are more particularly designed for operation under a small head of water, and are commonly termed undershot wheels. The object of this invention is to apply the water to the wheel in such a manner that the same will act more efficiently on the wheel than hitherto, and to this end there is employed a close-fitting chute to the lower part of the wheel, and the latter is provided with sliding buckets, arranged in a certain relation with an eccentric guide.]

34,486.—J. R. Gill and W. E. Palmer, of Alton, Ill., for Improved Washing Machine:

We claim the combination and arrangement of the two toggles, G I, with the handle, J, bar, H, swinging pressure board, D, stationary inclined board, E, and suds box, A, substantially as and for the purpose set forth.

[The object of this invention is to obtain a clothes-washing machine of simple construction, which will operate in a very efficient manner, and be capable of being manipulated in the most advantageous way, so that the operator while working the machine may have full command over the clothes, and adjust them as may be desired. An engraving of this machine will appear in our next issue.]

34,487.—Charles Goldthwait, of South Weymouth, Mass., for Improved Clothes-Drying Apparatus:

I claim the two swinging cranes, C, G, provided with the pins, f, and attached to the dwelling, A, in connection with the connecting rod, D, lines, D', and retaining bar, E, all arranged substantially as and for the purpose set forth.

[This invention consists in the employment or use of two cranes attached to a dwelling, one at each side of a door or window thereof; the cranes being provided with pins and lines, a connecting rod and a stay or retaining bar, whereby the lines may be readily adjusted on the pins of the cranes, and the clothes readily placed on the lines from the door or window.]

34,488.—Ashman Hall and John Faulkner, of Dansville, N. Y., for Improvement in Fanning Mills:

We claim making that portion of the sieves of fanning mill shoes which is exposed to the action of the fan blast, concave longitudinally, as shown, for the purposes set forth.

34,489.—H. Hall, J. Hall, T. Hall and H. Hall, Jr., of Philadelphia, Pa., for Improvement in Metallic Cases for Pictures, Cards, &c.:

We claim the new article of manufacture described, consisting of a metal case, composed of a cast metal frame and sheet metal top and bottom or sides, substantially as set forth.

34,490.—William Hamilton, of West Pittsburgh, Pa., for Improvement in Mode of Securing Wheels to Axles:

I claim the use of a nut for securing wheels to axles, composed of two or more sections of a metallic ring, fitting into a groove in the axle in such manner as to fill the entire circumference of the groove, the sections of the nut being united and held in place independently of and detached from the pipe box or hub of the wheel, substantially in the manner and for the purpose described.

34,491.—A. H. Hastings, of New York City, for a Piano:

I claim, first, The employment of the scale, B, so inclined that I can use the simplest and most effective form of action of the horizontal piano, while I obtain all of the advantages of the upright piano, substantially as set forth.

Second, The employment of the hammer, C, constructed and used as and for the purpose specified.

34,492.—J. P. A. Havard and J. B. Bourgoise, of Paris, France, for Improvement in Portable Filters:

We claim, first, A filtering apparatus, consisting of two receptacles, B C, formed of flexible water-proof fabric, filtering medium, D, and wire gauze or perforated metallic disks, c, d, when combined and arranged, in the manner substantially as described.

Second, The sliding tubes, n o p q, arm, n', and bail, m, arranged in combination with receptacle B, to operate substantially as described.

Third, The flexible sides of the receptacles, B C, sliding tubes, n o p q, case, H, and packing case or bucket, I, combined and arranged in the manner and for the purpose set forth.

34,493.—W. H. Havens, of Paterson, N. J., for Improvement in Projectiles for Rifled Ordnance:

I claim the combination with the conical portion of the part, B, and the part, A, of the independent sliding packing segments, C C, all arranged and operating as shown and described.

[This invention consists in the employment for obtaining the rotary motion of a projectile in its passage along the grooves of a gun of a series of segments, combined with a conical portion of the projectile, whereby they are caused to be expanded into the grooves of the gun, by the act of driving home the projectile in loading, or by the action of the pressure of the gases against its base when the discharge of the gun takes place, but to remain permanently attached to the projectile in its flight. It also consists in certain means whereby a soft metal band applied to a projectile is made to secure to the body of the projectile the follower through which the expansion of the said band is produced.]

34,494.—Paul Heilmann, of Mulhouse, French Empire, for Improvement in Machinery for Submitting Yarns to the Action of Liquids. Patented in England Oct. 15, 1857:

I claim submitting yarns or threads to the action of gaseous and liquid bodies for the several purposes described, by means of a system of reels, operating substantially as set forth.

34,495.—J. N. Hawkins, of Islip, N. Y., for Improved Clam Opener:

I claim, as an improved article of manufacture, a clam-opening instrument, composed of a base plate, A, standard, B, with guide pins, b, b', and a knife, C, pivoted to the standard at a, all as shown and described.

[The object of this invention is to obtain a simple and efficient device for opening clams, round or hard clams, and which require a considerable effort to be opened with an ordinary hand knife, as the shells are quite thick and hard and not readily pried apart. It also consists in pivoting a knife of suitable construction in an upright provided with guides, the uprights being attached to a suitable base or block, and the whole being constructed and arranged as to effect the desired end.]

34,496.—C. F. Hendee, of Waterbury, Conn., for Improvement in Hoop Skirts:

I claim as my invention in fastening metal hoops of hoop skirts, the indented metal fastening, in combination with a metal hoop, of a hoop skirt, provided with a hole to receive the indentation of the fastening, substantially as described, and for the purpose of preventing the fastening frame slipping from the hoop, substantially as set forth.

34,497.—A. B. Hendryx, of Seymour, Conn., for Improvement in Hollow Augers:

I claim, first, The eccentrics, i, for adjusting the cutters of a hollow auger, in combination with the screws, j, cutter heads, f, and dogs, a, when arranged to operate, substantially as described.

Second, The combination of the V-shaped scroll, g, and conical or taper pins, e, with the inner flange, c, of the dogs, slotted face plate, B, and wedge nut, D, when arranged to operate in the manner described.

[This invention consists in an eccentric device for setting up or adjusting the cutters as they wear away by use.]

34,498.—F. Hollen and A. H. Pierce, of Blairsville, Pa., for Improved Screw Wrench:

We claim a burr wrench with two jaws, A A', the inner surfaces of which are provided with ratchet teeth, b b', and which are united by a hinge joint, a, and forced together by a suitable spring, C, in the manner and for the purpose shown and described.

[This invention consists in giving to the inner surfaces of two jaws the form of racks with ratchet teeth pointing in opposite directions, said jaws being connected by means of a hinge joint and forced together by a suitable spring in such a manner that a wrench is obtained which can be readily applied to burrs or small nuts of various sizes, and which can be operated with facility.]

34,499.—John Holmes, of Boston, Mass., for Improvement in Coal Sifters:

I claim the flexible sifter constructed substantially in manner and so as to operate as specified.

34,500.—Nestor Houghton, of New York City, for Improved Spring Bedstead:

I claim, first, The combination and arrangement of the elastic laths made and constructed as described, with spiral springs, substantially as and for the purpose described.

Second, The combination with the laths, 6 6' 6'' 6''' of the oscillating cross pieces, 5, the parts being constructed, arranged and operating substantially as set forth.

34,501.—Solomon Hunt, of Danville, Ind., for Improvement in Foot Stoves:

I claim the combination of the radiator, B, reflectors, g, h, and foot supports, C C, with the lamp, D, when operating in the manner substantially as described for the purpose set forth.

34,502.—W. Johnson and Henry Davies, of Brooklyn, N. Y., for Improvement in Bakers' Ovens:

We claim the application to an ordinary baker's oven, wherein the fire heat can pass directly into and through the oven, of the flues, a, A, and B, and dampers, h k f b and c, arranged in the manner and for the purposes set forth.

34,503.—Gilman Joslin, of Boston, Mass., for Improvement in Heaters:

I claim, first, Varying the temperature of the fire just in proportion to the quantity and temperature of the external air supplied to the furnace by means of a rod, plate or bar so arranged as to have the air, so admitted, keep in contact with it and cause the expansion and contraction of the said rod, plate or bar, thereby regulating the draft of the fire, as set forth.

Second, In heating apparatus constructed to operate substantially as set forth, I claim the arrangement of the lever arm, so that it can readily be inserted in or removed from its place by providing said lever with the projections, v and w, to fit into suitable sockets in the pieces which composes its fulcrum, as described.

34,504.—E. M. Judd, of New Britain, Conn., for Improvement in Repeating Firearms:

I claim, first, The loader, G, constructed and applied in combination with the magazine and barrel, as described, and combined with the breech slide, C, by means of a rack and pinion to be operated by the act of opening the slide, substantially as set forth.

Second, Combining the hammer with the breech-slide, C, and the loader, G, by means of a dog, k, tooth, l, and a system of rack and pinion gearing, substantially as and for the purpose specified.

34,505.—W. S. Kelly, of Schenectady, N. Y., for Improvement in Pumps:

I claim, first, The combination with the chambers, A B, of a double-acting pump, of a hollow piston rod, G, and piston, F, the valves, g, of the piston, F, being arranged between upper and lower passages, d, i, and the said valves, g, serving alternately for closing said upper and lower passages, substantially as and for the purposes described.

Second, The combination of an annular spider, H, and screw plate, I, with the hollow piston, F, and ball valves, g, substantially as and for the purposes set forth.

Third, Constructing the annular spider, H, with its arms, f, of greater length than the diameter of the ring or hollow hub, e, substantially as and for the purposes set forth.

Fourth, The combination of the base valve box, D, having a narrow stop bar, a, over the center of each of its valve chambers, with the double-chambered pump, A B, hollow piston, F, and piston rod, G, substantially in the manner and for the purpose described.

Fifth, The combination of the hollow piston, F, and hollow piston rod, G, with the stationary air chamber, J, by a sliding box, j, at the lower end of the chamber, J, substantially as and for the purposes set forth.

34,506.—Gabriel Farner, of Marion, Pa., for Improvement in Apparatus for Bending Tires:

I claim the combination of the middle roller, H, the sliding frame, the guides and central screw, d, with the scale, Fig. 1, and index bar, c, or its equivalent, substantially as specified.

34,507.—C. T. Judkins, of Boston, Mass., for Improvement in Gas Regulators:

I claim the combination and arrangement of the valve, H, with the pivoted or hinged cover, E, the lever, O, and adjustable balance weight, L, substantially as and for the purpose and objects set forth.

34,508.—Hervey Kent, of Lewiston, Maine, for Improvement in Sliver Guides for Carding Engines:

I claim the application of the sliver guide or hole, A, to a carrier, G, or its trough, by means of a circular plate, B, or its equivalent, so as to be capable of being moved across the said carrier or trough, as for the purpose of attaining results, as set forth.

I also claim the combination of the circular ranges of teeth, b b b c c c, or their mechanical equivalents, with the guide plate, B, and the trough thereof, the same being arranged for the purpose and to operate substantially as specified.

34,509.—Edmund Lockwood, of Ulster, Pa., for Improved Shot Hole Stopper:

I claim a shot plug, consisting of a metallic plate or disk the outside of which is convex, the inside lined with an elastic covering having a spindle with bearded side springs and a screw at its end with a cross bar in which the end screw is inserted; the parts being constructed and arranged relatively to each other, substantially as and for the purposes specified.

34,510.—Samuel Loring, of Duxbury, Mass., for Improvement in Machines for Leathering Tacks:

I claim the spiral conveyer, I, in combination with the slotted bar, M, or its equivalent, for the purpose of separating and conveying the tacks, as set forth.

Second, I claim the spring, b, in combination with the cam, g, for the purpose of carrying the tack round to the nipper, as set forth.

Third, I claim the box, h, in combination with the nippers, operating as set forth for the purpose described.

Fourth, I claim the punch, C2, so constructed as to cut out the leather and force it down upon the tack, as set forth.

34,511.—F. X. Manahan, of Utica, N. Y., for Improvement in Cheese Vats:

I claim, first, The perforated pipe, M, placed longitudinally at the bottom of the vat, and communicating with the pipe, K, substantially as shown, for the purpose of equally distributing the ascending hot water from the boiler, I, as set forth.

Second, The arrangement of the pipes, K K', cocks, h h', and pipes, O L, with the boiler, I, water boxes, A C, and milk vat, E, as shown and described.

Third, Securing the cock, F, to the milk vat, E, through the medium of the pipe, G, and screw socket, H, arranged substantially as shown and described.

34,512.—Wm. Mason, of Providence, R. I., for Improvement in Connecting and Disconnecting Shafting:

I claim, first, The two rims united, A, or equivalent, forming the V-shaped recess, when used in combination with the wedge segments, C C, and toggle-jointed connections, as described, substantially as specified.

Second, I claim the wedge segments, C C, when used in combination with the arms, disk and sleeve, as described, for the purposes set forth.

Lastly, I claim the application of the above described mechanism to shafting, gears or other wheels rotating upon the shaft, for a friction coupling, substantially as specified.

34,513.—W. M. Mason, of Polo, Ill., for Improvement in Machines for Stacking Hay:

I claim the combination of the toggles, I, pulleys, l m, and rope, J,

with the fork, H, constructed as described, in the manner and for the purpose shown and set forth.

[The object of this invention is to obtain a portable and simple device which may be readily put up and adjusted in the field for stacking grain, hay, stalks, &c., in a very expeditious manner, far more so than by the usual exclusively manual process.]

34,514.—Ira McDaniel, of Salem, Iowa, for Improved Washing Machine :

I claim the application of the crank, C, and shaft, D, to the lower section of the washboard, A, giving it the vibratory motion in the rectangular tub, R, all arranged and operating substantially as and for the purpose specified.

34,515.—E. B. McCoy, of Winsted, Conn., for Roller Press for Photographs, &c. :

I claim the combination of the reciprocating bed, C, roller, F, and frame, E, when arranged substantially as and for the purpose set forth.

[The object of this invention is to obtain a simple and efficient roller press for pressing and polishing photographs, mangling clothes, printing and analogous purposes for which such presses are generally used.]

34,516.—Nelson McCuen, of South Potsdam, N. Y., for Improvement in Harrows :

I claim a drag having the eveners, E, supported upon adjustable rollers, and having the bars, A, bent at obtuse angles to the bars, B, the teeth being arranged to said bars, as set forth, and the whole constructed otherwise as shown and described.

[The object of this invention is to obtain an implement which will open up the soil and work the ground into a perfect tilth by being passed over it simply once.]

34,517.—J. Vaughan Merrick, of Philadelphia, Pa., for Improved Slide Valves for Steam Engines :

I claim a slide valve and balancing plate in combination with a double-ported cylinder face, when said valve is provided with such openings, and the said balancing plate with such chambers and ports as to permit the steam to pass to and from the cylinder, substantially in the manner set forth.

34,518.—O. E. Miles, of Aurora, Ill., for Improvement in Construction of Wheeled Vehicles :

I claim the arms, C C, having the wheels, B B, permanently attached to them, and their inner journals fitted in boxes, F, suspended on trunnions, I, and their outer journals fitted in boxes, D, placed in frames, E, attached to the axles, when said parts are used in combination with the rods, G, arranged substantially as shown for bracing the frames, E, and with the frame, M, in which the trunnions, I, are placed and also with the levers, R, arranged substantially as shown, for securing the trunnions, I, on frame, M, as and for the purpose set forth.

[This invention relates to a new and improved manner of hanging the wheels of the vehicle and arranging the same, whereby many advantages are obtained over the old mode of construction.]

34,519.—Jehiel Munson, of Burlington, Vt., and J. R. Lyon, of Shelburne, Vt., for Improvement in Potato Diggers :

We claim the arrangement of the adjustable separating rods, F, in combination with the perforated flange or lip, G, the perforated frame, D, and separator clasp, E, substantially in the manner, and for the purpose specified.

34,520.—David O'Flanagan, of Charlestown, Mass., for Improved Fruit Strainer :

I claim the box, A, provided with a concave perforated bottom, a, in combination with the curved rotating bar, or stirrer, E, when suspended from the cover, B, and constructed, arranged and operated as and for the purpose set forth.

34,521.—W. J. Palmer, of Flushing, N. Y., for Improvement in Lamps, &c. :

I claim the combination with the cold air or draught chamber, C, of the cone-shaped gas-condensing channel, c, as and for the purpose shown and described.

[This invention relates to an improved lamp for burning coal oil without a chimney, and has, for its object the supplying of the flame with a requisite amount of oxygen to support proper combustion by a very simple means, and one by which the vapor or gas in the upper part of the lamp will be condensed as it ascends, thereby preventing not only explosions which are liable to occur in burning the lighter grades of oil, but also preventing the escape of the vapor or gas from the lamp and the consequent waste of the oil. The invention also relates to an improvement in the wick-elevating device whereby the same may be actuated without burning the fingers. This very useful burner may be seen at Jas. Quarterman's, 114 John street, and applications for purchasing or right to manufacture, may be sent to W. S. Palmer, Flushing, N. Y.]

34,522.—Suspended.

34,523.—Joseph Reichman and Heinrich Kriete, of Chicago, Ill., for Improved Governor Valve :

We claim, first, The use of the steam of the boiler and that of the engine acting against each other, to operate the governor valve or its equivalent of a steam engine.  
Second, The peculiar construction and combination of the whole governor, as described.

34,524.—John Revere, of Roston, Mass., for Improvement in Preparing Metallic Molds for Casting Metals. Antedated Nov. 22, 1861 :

I claim, in preparing a metallic mold for casting ordnance or articles of bronze, not only heating the mold so as to anneal it and burn and oxidize its inner surface, but in afterward applying to the said surface, the earthy wash, and to the latter a resinous coating, substantially as specified.

34,525.—R. A. Riley, of Greenfield, Ind., for Improved Mode of Preventing Jarring and Jolting Railroad Cars and Locomotives :

I claim the faced flange on the car wheels of uniform depth. The low rail on the chair on the inside of the track lapping the head joints of the rails to support the car on the flange of the wheel while passing over the same. The face on the frog and the face on the switch to receive and support the car on the flange of the wheels while passing over the head joints and open spaces thereon, and all these in combination fitted and adapted to each other, by which all open spaces in the track of railroads are practically closed, and the even plane of the cars in motion upon the track at all points maintained.

34,526.—Thomas Rogers, of Montgomery Square, Pa., for Improvement in Liquid Measures :

I claim the measure, A, with its piston, G, and the movable cap, D, with its tube, C, the whole being constructed and arranged substantially as and for the purpose set forth.

34,527.—Daniel Sager, of Albany, N. Y., for Improvement in Self-Acting Brakes for Wheel Vehicles :

I claim the combination of the curved links, C C, with the pole, A and levers, D, as shown and described. The arrangement of the levers, D D, to slide longitudinally as well as turn circularly upon the axis pin, as shown and described.

[The object of this invention is to obtain a brake for wheel vehicles which will be self-acting, that is to say, operate under the draught movement of the team and the gravity of the vehicle and its load, so as to require no special manipulation on the part of the driver.]

34,528.—Andrew Sawyer and Henry Barnes, of Burlington, Wis., for Improvement in Cultivators :

We claim the arrangement of the pendulous suspended frame, C, attached draft pole, F, shares, E, rods, D, and chains, D' D', with the segments, K K, rock shaft, I, and lever, J, in the manner shown and described.

[This invention relates to an improved cultivator which may be applied to the axle of an ordinary wagon. It presents many advantages over the ordinary ones in use.]

34,529.—E. S. Scripture, of New York City, for Improvement in Oil Cans :

I claim, first, the use or employment of the protecting ring, C, provided with the spring rests, D D, arranged and operating as shown for the purpose specified.

Second, The bottom, B, regulating screw, H, and spring, F, supported upon the rests, D D, or their equivalents, when the same shall be combined and operated in the manner and for the purpose specified.

34,530.—Melvin Shaw, of Abington, Mass., for Improved Composition for Dressing Leather :

I claim a dressing for leather, consisting of an alkaline solution of shellac, in combination with a solution of logwood.

34,531.—S. J. Sherman, of Brooklyn, N. Y., for Improvement in Springs for Ladies Dresses :

I claim a spring or bask for clothing, having the ends covered by a soft metal applied and secured substantially in the manner specified and for the purposes set forth.

34,532.—D. H. Shirley, of Boston, Mass., for Improved Railroad Switch :

I claim a portable switch having as its essential elements a curved inclined way or groove, in combination with a suitable locking or clutching device for securely holding the switch firmly upon the rail, substantially as described.

34,533.—S. J. Taylor, of Rome, N. Y., for Improved Convertible Straw Cutter and Corn Shelter :

I claim the bed piece, B, gear wheel, D, pinion, F, spiral ribs, b, and drum, A, combined, arranged and adapted for the attachment of the spirally-ribbed feed plates, j, or spiral knives, G, all as and for the purposes substantially as described.

[The object of this invention is to so combine a straw cutter and corn shelter in one machine as to require but little, if any, more machinery for both than is usually required for either alone, the machine being adapted to work in either capacity and with equal efficiency by a simple substitution of some of its parts.]

34,534.—W. H. Van Gieson, of New York City, for Improvement in Nails for Sheathing :

I claim a sheathing nail made with converging flanges and with grooves between the flanges, said flanges converging at the point of the nail and the grooves terminating a short distance below the head, as shown and described.

[The object of this invention is to obtain a sheathing nail which will hold better than those of ordinary construction, that is to say, be more difficult to draw out from the under siding of the vessel, and consequently be more efficient in securing the sheathing thereto, and the nail at the same time require less force in being driven into the vessel's bottom, be equally as strong as the ordinary sheathing nails and still have considerable less weight of metal.]

34,535.—David Walker, of Newark, N. J., for Improved Self-Rocking Cradle :

I claim, first, The construction and arrangement, substantially as described, of the relief guides, c, in combination with pallets, a, and escapement wheel, b, in the manner set forth and for the purpose specified, when used in a self-rocking cradle, constructed as described.  
Second, In combination with a self-rocking cradle, constructed as described.

Third, In combination with a self-rocking cradle, constructed as described, the automatic fan, k n m r, constructed and arranged as described and shown, and operated by the movement of the cradle, in the manner specified.

34,536.—G. W. Walker, of Boston, Mass., for Improvement in Sliding Grates :

I claim the arrangement and combination of the movable dog, C, with the sliding grate, A, and its supporting frame, B, the whole being operated together as specified.

34,537.—J. H. Walker, of Worcester, Mass., for Improved Machine for Pricking Leather :

I claim, first, The combination of the holding plate, F, and pricking plate, E, with the table, G, and its overhanging side, stands or projections, E' E' E', as and for the purposes set forth.

Second, The combination and arrangement of plates, F F', and tables, A C, with forked levers, H J, and springs, G G', substantially as set forth.

Third, The combination in the same machine of a perforated stationary table, having a holding plate above and a pricking plate below, with the mechanism so combined with said plates that leather placed on the table and under the holding plate can be held by the upper plate while it is pricked by the points or awls in the lower plate, by simply depressing a foot lever, substantially as set forth.

34,538.—W. F. Warburton, of Philadelphia, Pa., for Improvement in Military Hats :

I claim the cape or curtain, D, and movable sweat band, C, when so combined and arranged that the sweat band shall serve to retain the cape in an elevated position and when moved shall permit the cape to fall, as set forth, for the purpose specified.

34,539.—H. H. Warden, of New York City, for Improved Ships' Armor Plates :

I claim an armor plate for ships composed of a wrought-iron frame imbedded within a cast-iron body, substantially as shown and described.

[The object of this invention is to obtain plates of cast iron for covering ships of war which, while they are liable to fracture like other cast-iron plates, do not fall off and leave a bare spot on the side of the ship.]

34,540.—Emanuel Wassenich, of Cincinnati, Ohio, for Improvement in Portable Ovens :

I claim constructing a portable army oven, A, of boiler iron, of the shape described, viz., semielliptical prismoidal, with arched ends, a, and strengthened by ribs, B, embracing hooks, H, and beams, C C, substantially as and for the purpose set forth.

34,541.—John Weldy, of Dayton, Ohio, for Improved Machine for Sawing Wood :

I claim the combination and arrangement of the rock shaft, G, arm, H, links, h h, and saw beam, J, constructed to operate substantially as described, for the purpose set forth.

And in combination with the links which support the saw beam, I claim the guide bar, I, substantially as described, for the purpose set forth.

34,542.—Anthony Werné, of Pittston, Pa., for Improved Apparatus for Making Vinegar by the Quick Process :

I claim the employment of the distributing shield, C, in combination with the tubes, b, and tub, B, as and for the purpose shown and described.

Having the bottom of the tub, B, provided with small tubes, a, as and for the purposes shown and described.

The tube, F, arranged and operating with the generator, A, as shown and described.

The combination with the generator of the condenser, J, constructed substantially as shown, and tube, I, as and for the purpose shown and described.

[This invention consists in a novel arrangement of air tubes for the escape of air, gases, and vapors from the aceticifying vat in combination with the contrivances for distributing the liquid in the vat, whereby the distribution is effected very perfectly and efficient provision is afforded for the escape of the air gases and vapors. It also consists in a certain arrangement of a pipe for cooling the interior of the vat whenever it becomes necessary also in the employment, in connection with the apparatus of a condenser for the condensation of the vapors evolved in the process of manufacture, and the collection of the products of such condensation.]

34,543.—W. H. White, of Dubuque, Iowa, for Improved Roofing :

I claim, first, The roof constructed of the materials, and in the manner, substantially as described.  
Second, The dovetail fastening, as described, for the purpose set forth.

Third, The combination of common salt, sand, coal, coal tar and coal ashes, to form a roof, in the manner specified.

34,544.—Thomas Wilson, of Silver Creek, Ill., for Improvement in Running Gear of Railroad Cars :

I claim the employment of tension springs between the trucks and their connecting rods, in combination with independent wheels, substantially as shown and described.

[This invention consists in the manner of connecting a set of car trucks together, in combination with the independent movement of the car wheels, whereby the friction in turning curves and switches, and the consequent wear and tear of the rails is greatly reduced, and a gentle and easy motion given to the cars, which neither alone will effect.]

34,545.—S. S. Bartlett, of Providence, R. I., assignor to himself and T. H. Dodge, of Washington, D. C., for Improvement in Harvesters :

I claim, first, Supporting the rear end of a drag bar, arranged to rise on the ground at the side of the machine, with its rear end free to rise and fall, by means of an adjustable arm or lever, whose front end is supported by the axle or journal of the main wheels, and on the outside of the inner wheel, substantially as described.

Second, The combination with the inner end of the axle or journal of the main supporting wheels of a grass harvester, of an elevating arm or lever, whereby the rear end of its hinged drag bar can be raised and lowered together with the heel of the finger beam by the driver, from his seat on the machine, while the elevating arm or lever has a firm support, independent of the frame, substantially as described.

Third, The combination of the drag bar and compound lever arrangement with the main frame and finger beam of the machine, substantially as and for the purposes set forth.

34,546.—Frederick Chandler, of Charlestown, Mass., assignor to himself and C. A. Consens, of Newton, Mass., for Improvement in Camp Stoves :

I claim, first, Forming a sectional stovepipe in such a manner that the sectional pieces, whether of straight or tapering shape, shall be held together, and to the stove by flanges or other positive mechanical devices, to prevent their dismemberment from each other or from the stove.

Second, So combining a sectional stovepipe, constructed in the manner described, with a stove, as to permit the said sectional stovepipe to be packed and inclosed by the stove, as described.

34,547.—J. F. Drummond (assignor to C. T. Reynolds, F. W. Devoe and Charles Pratt), of New York City, for Improvement in Packing Cans for Transportation :

I claim the method of preventing the indentation leakage, and weakening of paint cans, shown and described.

[The object of this invention is to pack ordinary cylindrical sheet-metal cans, such as are used for holding turpentine, oil, varnishes, &c., in such a manner that they may be securely held in position within their box, and at the same time admit of being very expeditiously packed, the filling originally used, such as sawdust, paper, &c., between the cans being avoided.]

34,548.—James Easterly (assignor to himself and Dennis G. Littlefield), of Albany, N. Y., for Improvement in Stoves :

I claim a window or door for stoves, furnaces, and every character of heater, combining the properties of metallic gauze and of mica, or other transparent material, for the purpose specified.

34,549.—G. W. La Baw (assignor to himself and P. F. Campbell), of Jersey City, N. J., for Improvement in Springs for Carriages, Wagons, &c. :

I claim, first, The toggle joint bars, b b, in combination with the boxes, c c, containing the springs of India rubber, as and for the purposes specified.

Second, I claim the cushions or buffers, f f, of india rubber, applied to take the toggle joint bars, b b, in the manner and for the purposes set forth.

34,550.—T. S. Lambert (assignor to H. W. Hunt), of Peekskill, N. Y., for Improvement in Double Windows :

I claim the combination of light sash doors, hung to the inside stops of a window, with the movable stops, K K L, so that when the door is closed it will abut upon the outer window sash, making in effect a double window, as and for the purposes set forth and described.

34,551.—W. T. Pogue, of Vienna, Ind., assignor to George Hely, of Richmond, Ind., for Improvement in Apparatus for Holding Wagon Wheels while Loading :

I claim the arrangement of the rods, B E F, swivel, C, clevises, D D D, in combination with the wheels, A A, the better to effect the purpose described, the whole being constructed substantially as described.

34,552.—A. J. Scoville and A. H. De Clerq, of Bloomington, Ill., for Improvement in Pistons for Steam Engines :

We claim the valve ring, with the holes opening against it through the flange of the piston head, and through the follower, constructed and operating substantially as described.

We also claim as our invention, the combination of the small holes through the flange of the piston head, and through the follower, against the edge of the outside rings, with the inside and outside piston rings, and the valve ring, and holes opening against it through flange of the piston head, and through the follower, the whole arranged and operating substantially as described.

34,553.—E. W. Seymour, of Centre Lisle, New York, assignor to himself and G. W. Gregory, of Binghamton, N. Y., for Improvement in Shifting Hinge, Joint or Congling Shafts of Wagons :

I claim a shifting hinge, joint or coupling, constructed in the following manner, to wit, the combination of the barrel, A, with the pivot, C, and slot, D, with the arm, H, and its shoulder, G, as and for the purposes described.

34,554.—J. L. Treat (assignor to Yale and Curtis), of New York City, for Improvement in Drawing Apparatus for Portable Vessels :

I claim the vessel, A, having an inner shell, B, fitted loosely within it and suspended from the cover of the same by a vertical spring, 4, the said shell being open at the bottom and provided with an aperture, c, in the top, which is closed when liquor is drawn from the vessel, by a valve, j, actuated by the same pressure that forces the shell down and causes the liquor to flow from the spout of the vessel, when arranged to operate in the manner substantially as described.

RE-ISSUES.

1,277.—Henry Knight, of Jersey City, N. J., for Improvement in Mold for Molding Cement Pipes. Patented May 3, 1860 :

I claim, first, The use of a vertical stationary central core or its equivalent, substantially as and for the purpose set forth.

Second, The combination of the detachable collar, G, or its equivalent, and a flask or exterior mold, F d e, constructed with two different diameters, and with a shoulder, f, or its equivalent, for the purpose set forth.

Third, The use of the shouldered detachable base or bottom, E, substantially as and for the purposes set forth.

Fourth, The use of a detachable collar or tool, G, or its equivalent, for forming a right angle or nearly right angle joint, within one end of the cement pipe, substantially as and for the purposes set forth.

Fifth, The use of an adjustable perforated centering table, in combination with a cement pipe machine, substantially as and for the purposes set forth.

Sixth, Producing by vertical molding, with means substantially such as described, sections of cement pipe, with external collars, and right angle or nearly right angle joints, as set forth.

Seventh, Removing the mold and cement pipe from the machine, by raising it vertically, substantially as set forth.

1,278.—J. G. Perry, of South Kingston, R. I., for Improvement in Meat-Cutting Apparatus. Patented Feb. 26, 1850.

I claim, first, The use and employment of the studs, s s s, Fig. 3, with one or both of the discharge elements, L L, substantially as described and for the purpose set forth.

Second, I claim combining the knives and space blocks with the case of a meat cutter in the manner substantially as described and for the purposes set forth.

1,279.—Sanford, Harroun & Co. (assignees by mesne assignments of G. F. Hebard, G. J. Hill and S. D. Rockwell), of Buffalo, N. Y., for Improvement in Printing Presses. Patented Aug. 7, 1860.

We claim, first, The combination of the spool or roller, C, or the equivalent thereof, which carries a roll of printing paper, or thin card board, which may be wound into a roll with feeding rollers, which have an intermittent feed movement, and the printing and numbering mechanism of a printing and numbering machine, substantially as described, so that the paper or card board may be run off from the roller and fed in by an intermittent movement of the feed rollers, and properly presented for printing and numbering coupon tickets from a continuous sheet of printing paper or card board, substantially as set forth.

Second, The combination and arrangement of the cutting mechanism with a roller or equivalent, carrying a roll of paper or card board, and the printing and numbering mechanism of a printing and numbering machine, so that coupon and other tickets may be printed, numbered and cut simultaneously from such printing paper or card board, substantially as described.

Third, In a machine for printing and numbering coupon tickets we claim, in combination with the printing mechanism for printing the tickets, making the numbering wheels adjustable horizontally, substantially as described, whereby the machine can be readily adapted to numbering tickets of different widths.

Fourth, In a machine for printing tickets from a roll or continuous sheet of printing paper or thin card board, we claim making the feed roller so as to act upon a portion of the width of the sheet instead of the whole width, whereby we are enabled to feed in thin sheets of printing paper or thin card board, in a smooth and even manner.

1,280.—Alexander Swift, of Cincinnati, Ohio, assignee by mesne assignments of Issachar Frost and James Monroe, of Albion, Mich., for Improvement in Mode of Separating Flour from Bran. Patented Feb. 27, 1849. Re-issued March 13, 1855. Again re-issued May 11, 1858.

We claim, first, The combination of the essential features severally described and severally numbered, 1 2 3 and 4 or their equivalents, substantially as described and for the purposes specified in the several numbers.

Second, We also claim the combination of the essential features severally described, and severally numbered 1 2 and 5, or their equivalents, substantially as they are described; the purpose of the combination being substantially as set forth in number 5.

Third, We also claim the combination of the essential features severally described, and severally numbered 1 2 and 6, or their equivalents, substantially as they are described; the purpose of the combination being substantially as set forth in number 6.

Fourth, We also claim the combination of the essential features severally described, and severally numbered 1 2 6 and 7, or their equivalents, substantially as they are described; the purpose of the combination being substantially as set forth.

Fifth, We also claim the combination of the essential features severally described, and severally numbered 1 2 4 5 6 and 7, or their equivalents, substantially as specified; the purpose of the combination being substantially as severally set forth.

1,281.—J. E. Brown and S. S. Bartlett, of Woonsocket, R. I., and T. H. Dodge, of Washington, D. C., assignees to said Brown and Bartlett, for Improvement in Grain and Grass Harvesters. Patented Jan. 2, 1855. Re-issued Jan. 1, 1861.

We claim, first, The combination of a hinged or yielding drag bar, I, or its equivalent, with the main frame or cutter stock of a harvesting machine, in such a manner that as the frame is advanced the drag bar or its equivalent will be advanced, and that in its turn will draw forward the finger bar which supports the cutting apparatus, which is left free to rise or fall bodily, or at the heel end, while the outer end rests on a lower surface, without affecting the motions of the main frame.

Second, The use and employment in a harvesting machine of a yielding drag bar, or its equivalent, arranged on the inner side of the machine, in combination with hinging the heel of the finger bar to said drag bar, whereby the entire cutting apparatus is left free to rise or fall bodily, or either end thereof, independent of the other, and without affecting the motions of the main frame.

Third, Hinging the front elevated end of a drag bar to which the heel of the finger bar is connected in a harvesting machine, to the front inner side of the main frame, in combination with giving said drag bar a lateral support in rear of the axis of the main wheels, whereby the strain on the frame is divided, while the rear end of the drag bar is retained in proper position but left free to rise and fall independently of the main frame, for the purpose stated.

Fourth, Fastening the heel end of the finger bar which supports the cutting apparatus in a recess in the end of a yielding drag bar, whereby the cutting apparatus is properly supported and kept in position at the side of the machine, and yet left free to conform to the inequalities of the ground without affecting the motions of the main frame.

Fifth, The combination of the drag bar, I, with rock shaft, H', and the front of the main frame, substantially as set forth.

Sixth, The use of a single draw or drag bar, attached at its forward and elevated end to the machine by a connection, so that its rear end can rise and fall, as specified, in combination with a hinged or rigidly connected cutter stock or finger bar, for the purposes specified.

Seventh, Hinging the finger bar in a grass harvesting machine to a vibrating drag bar, or equivalent device, when said drag bar or equivalent device is used for the purpose of sustaining and supporting the cutting apparatus to the right of the path of the main wheel of the machine, and of allowing it to conform freely to the uneven surface of the ground while the machine is in operation.

1,282.—J. E. Brown, S. S. Bartlett, of Woonsocket, R. I., T. H. Dodge, of Washington, D. C., assignees of said Brown and Bartlett, for Improvement in Grain and Grass Harvesters. Patented January 2, 1855. Re-issued January 1, 1861.

We claim, first, The combination of a floating folding finger bar with the frame of a grass harvesting machine, whereby when the machine is in operation the cutting apparatus is left free to conform to the inequalities of the ground without affecting the motion of the main frame and is also capable of being raised and turned or folded up so as to facilitate the passage of the machine from place to place, or over fields of cut grass.

Second, The arrangement of a floating folding finger bar with the frame of a grass harvesting machine in such a manner that the attachment can freely approach said finger bar from the rear and turn up the outer end thereof with facility to pass stumps, stones, or through gates, without tipping up or raising the carriage when the main weight of the finger bar is allowed to rest on the ground at the side of the machine, for the purposes stated.

Third, The combination of a stop, V, or any equivalent device for the purpose stated, with the heel of a floating folding finger bar and the frame of a grass harvester.

1,283.—J. E. Brown, S. S. Bartlett, of Woonsocket, R. I., and T. H. Dodge, of Washington, D. C., assignees of said Brown and Bartlett, for Improvement in Grain and Grass Harvesters. Patented January 2, 1855. Re-issued January 1, 1861.

We claim, first, The combination of the following elements in a grass harvesting machine, viz., a main frame, two supporting wheels to sustain said frame laterally and at the proper height above the ground, a rigid tongue to draw and steady the machine by and a floating finger bar for the purposes stated.

Second, So combining, in a grass harvester, a floating finger bar, a frame to support the driver, and the tongue or draft beam by which the machine is drawn forward as that the finger bar which supports the cutting apparatus can rise and fall freely at either or both ends without affecting the motion of said frame or tongue.

Third, The combination and arrangement in a grass harvesting machine of a frame to carry the driver, two wheels to support said frame, one at each side thereof, a tongue to draw the machine by and a double-jointed finger bar attachment, substantially as and for the purposes stated.

Fourth, Combining the floating finger bar with the frame of a grass harvesting machine so that said floating finger bar shall project entirely from the right side of the machine, substantially as and for the purposes stated.

DESIGNS.

1,542.—E. J. Ney (assignor to the Lowell Manufacturing Company), of Lowell, Mass., for five Designs for Carpet Patterns.

1,547.—I. B. Woodruff, of Winchester, Conn., for Design for a Clock Case.

NOTE.—In the above list of patents, issued on the 25th ult., we recognize the names of THIRTY-TWO patentees whose specifications and drawings were prepared at this office.—Ers.

PATENTS FOR SEVENTEEN YEARS.



The new Patent Laws enacted by Congress on the 2d of March, 1861, are now in full force, and prove to be of great benefit to all parties who are concerned in new inventions.

The duration of patents granted under the new act is prolonged to SEVENTEEN years, and the government fee required on filing an application for a patent is reduced from \$30 down to \$15. Other changes in the fees are also made as follows:—

On filing each Caveat.....	\$10
On filing each application for a Patent, except for a design.....	\$15
On issuing each original Patent.....	\$20
On appeal to Commissioner of Patents.....	\$20
On application for Re-issue.....	\$30
On application for Extension of Patent.....	\$50
On granting the Extension.....	\$50
On filing Disclaimer.....	\$10
On filing application for Design, three and a half years.....	\$10
On filing application for Design, seven years.....	\$10
On filing application for Design, fourteen years.....	\$30

The law abolishes discrimination in fees required of foreigners, excepting reference to such countries as discriminate against citizens of the United States—thus allowing English, French, Belgian, Austrian, Russian, Spanish, and all other foreigners except the Canadians, to enjoy all the privileges of our patent system (except in cases of designs) on the above terms.

During the last sixteen years, the business of procuring Patents for new inventions in the United States and all foreign countries has been conducted by Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN; and as an evidence of the confidence reposed in our Agency by the Inventors throughout the country, we would state that we have acted as agents for more than FIFTEEN THOUSAND Inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of Inventors and Patentees at home and abroad. Thousands of Inventors for whom we have taken out Patents have addressed to us most flattering testimonials for the services we have rendered them, and the wealth which has inured to the Inventors whose Patents were secured through this Office, and afterward illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! We would state that we never had a more efficient corps of Draughtsmen and Specification Writers than are employed at present in our extensive Offices, and we are prepared to attend to Patent business of all kinds in the quickest time and on the most liberal terms.

The Examination of Inventions.

Persons having conceived an idea which they think may be patentable, are advised to make a sketch or model of their invention, and submit to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with the facts, free of charge. Address MUNN & CO., No. 37 Park-row, New York.

Preliminary Examinations at the Patent Office.

The advice we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from the records in our Home Office. But for a fee of \$5, accompanied with a model or drawing and description, we have a special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a Patent &c., made up and mailed to the inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through our Branch Office, corner of F and Seventh-streets, Washington, by experienced and competent persons. More than 5,000 such examinations have been made through this office during the past three years. Address MUNN & CO., No. 37 Park-row, N. Y.

How to Make an Application for a Patent.

Every applicant for a Patent must furnish a model of his invention. If susceptible of one; or if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office. These should be securely packed, the inventor's name marked on them, and sent, with the government fees by express. The express charge should be prepaid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to the order of Munn & Co. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but, if not convenient to do so, there is but little risk in sending bank bills by mail, having the letter registered by the postmaster. Address MUNN & Co. No. 37 Park-row, New York.

Caveats.

Persons desiring to file a Caveat can have the papers prepared in the shortest time by sending a sketch and description of the invention. The government fee for a Caveat, under the new law, is \$10. A pamphlet of advice regarding applications for Patents and Caveats, in English and German, furnished gratis on application by mail. Address MUNN & CO., No. 37 Park-row, New York.

Foreign Patents.

We are very extensively engaged in the preparation and securing of Patents in the various European countries. For the transaction of this business, we have offices at Nos. 66 Chancery-lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. We think we can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through our Agency. Inventors will do well to bear in mind that the English law does not

limit the issue of Patents to Inventors. Any one can take out a Patent there.

Circulars of information concerning the proper course to be pursued in obtaining Patents in foreign countries through our Agency, the requirements of different Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park-row, New York, or either of our Branch Offices.

Rejected Applications.

We are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Our success in the prosecution of rejected cases has been very great. The principal portion of our charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted are invited to correspond with us on the subject, giving a brief history of the case, inclosing the official letters, &c.

Assignments of Patents.

The assignment of Patents, and agreements between Patentees and manufacturers, carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park-row, New York.

It would require many columns to detail all the ways in which the Inventor or Patentee may be served at our offices. We cordially invite all who have anything to do with Patent property or inventions to call at our extensive offices, No. 37 Park-row, New York, where any questions regarding the rights of Patentees, will be cheerfully answered.

Communications and remittances by mail, and models by express (prepaid), should be addressed to MUNN & CO., No. 37 Park-row, New York.



W. F. Q., of Del.—Though the velocity of the earth's surface at the equator is greater than that of a cannon ball, it does not follow that the centrifugal force is sufficient to stop the ball.

J. H. S., of Nevada Ter.—For your high fall of 100 feet, we think a turbine would be the best kind of wheel. The wheel of J. E. Stevenson yielded the best results at the Philadelphia trial. Address him at the Novelty Iron Works, New York, for all the information you need. 33,000 lbs. of water falling one foot per minute yields one horse power; a cubic foot of water weighs 62½ lbs. Consequently, to find the horse power of your fall, multiply the number of cubic feet running in your stream per minute, by the fall in feet, and the product by 62½, and divide by 33,000. It is impossible to obtain the whole power for use on machinery as some of the water will leak, and the power is wasted in other ways. Mr. Stevenson's wheel yielded 87 per cent, which we believe is the largest proportion that has ever been obtained.

A. L., of Conn.—We do not engage in the business of procuring copyrights. When you are in this city you had better apply to some leading book publishers for information on the subject.

J. V. R., of N. Y.—You will find ore of gold described on page 200 Vol. IV., (new series) SCIENTIFIC AMERICAN.

H. L., of N. J.—Morrison & Carr, of the New York city pottery, Thirteenth street, manufacture porous cups for galvanic batteries, and have done so in large quantities for the past three years.

D. W. B., of N. Y.—So far as we know, neither pot nor pearl ash are manufactured by boiling in a vacuum pan. We do not see what advantage could be secured by such a method of evaporation, as no saving of fuel is effected by the use of a vacuum pump in concentrating fluid.

W. S. P., of Mass.—The best method of removing grease from the leather of pulleys, is to soak it for a short period in cold, strong soap suds, then squeeze and dry it.

D. G. W., of Vt.—Sheet copper will be more durable for your chimney top, than galvanized sheet-iron.

S. B. W., of N. Y.—It is not supposed that all flint is composed of the coprolites of whales, only that the nodules in chalk are.

D. S., of Wis.—You say there is a prevalent idea in your neighborhood that fence posts set in the ground with the little end down, will last longer than with the large end in the ground, and you ask our opinion in regard to its correctness. We have no opinion on the subject, because we have no grounds for forming one. We attach very little weight indeed to the fact that such a notion prevails in your community, from the disposition of people to take such notions one from another, without any examination. If you will set 100 posts, one half of them with the large end in the ground, and the other half in a reversed position, and will repeat the experiment with various kinds of wood, cut at different seasons of the year, and set in different kinds of soil, and will write a plain account of the investigation, we shall be pleased to publish it in the SCIENTIFIC AMERICAN.

W. S., of C. W.—We have had a great deal of trouble from air accumulating in lead pipes where the pipes passed over an elevation. We think your best plan would be to attach a suction pump to the lower end of your pipe. You would generally be able to draw the air out from the bend in your siphon.

SPECIAL NOTICE—FOREIGN PATENT.—The population of Great Britain, is 30,000,000; of France, 35,000,000; Belgium, 5,000,000; Austria, 40,000,000; Prussia, 20,000,000; and Russia, 60,000,000. Patents may be secured by American citizens in all of these countries. Now is the time, while business is dull at home, to take advantage of these immense foreign fields. Mechanical improvements of all kinds are always in demand in Europe. There will never be a better time than the present to take patents abroad. We have reliable business connections with the principal capitals of Europe. Nearly all of the patents secured in foreign countries by Americans are obtained through our agency. Address Munn & Co., 37 Park row, New York. Circulars about foreign patents furnished free,