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Machine for Sweeping the Streets.

For many years past the aid of mechanism has been employed in Europe for cleaning the principal thoroughfares of the larger cities but it is only within a comparatively short period that such apparatuses have been regularly introduced in this country. Indeed, Philadelphia, we believe, is the only city where street sweeping machines have found a permanent employment. Last year an attempt was made to introduce them into New York, and, for a season, one portion of the city was assigned to their use. The locality thus set off soon presented a cleanly appearance previously unknown, which was easily maintained as long as the machines were employed. In our opinion the time is not far distant when hand sweeping in the streets will be wholly superseded by mechanism. Its liberal adoption will contribute greatly to the health and neatness of our towns and cities.

The machines heretofore used in this country are, to a great extent, copied from those employed in London. They consist of large boxed up vehicles, the sweeping being done by a revolving brush, which sweeps the dirt up an inclined plane into the box. Whenever the box fills, the machine is taken away and its load is dumped. The vehicles in question are large, heavy, and clumsy; and in most cases the power necessary for operation is so great as to impose very severe tasks upon the horses.

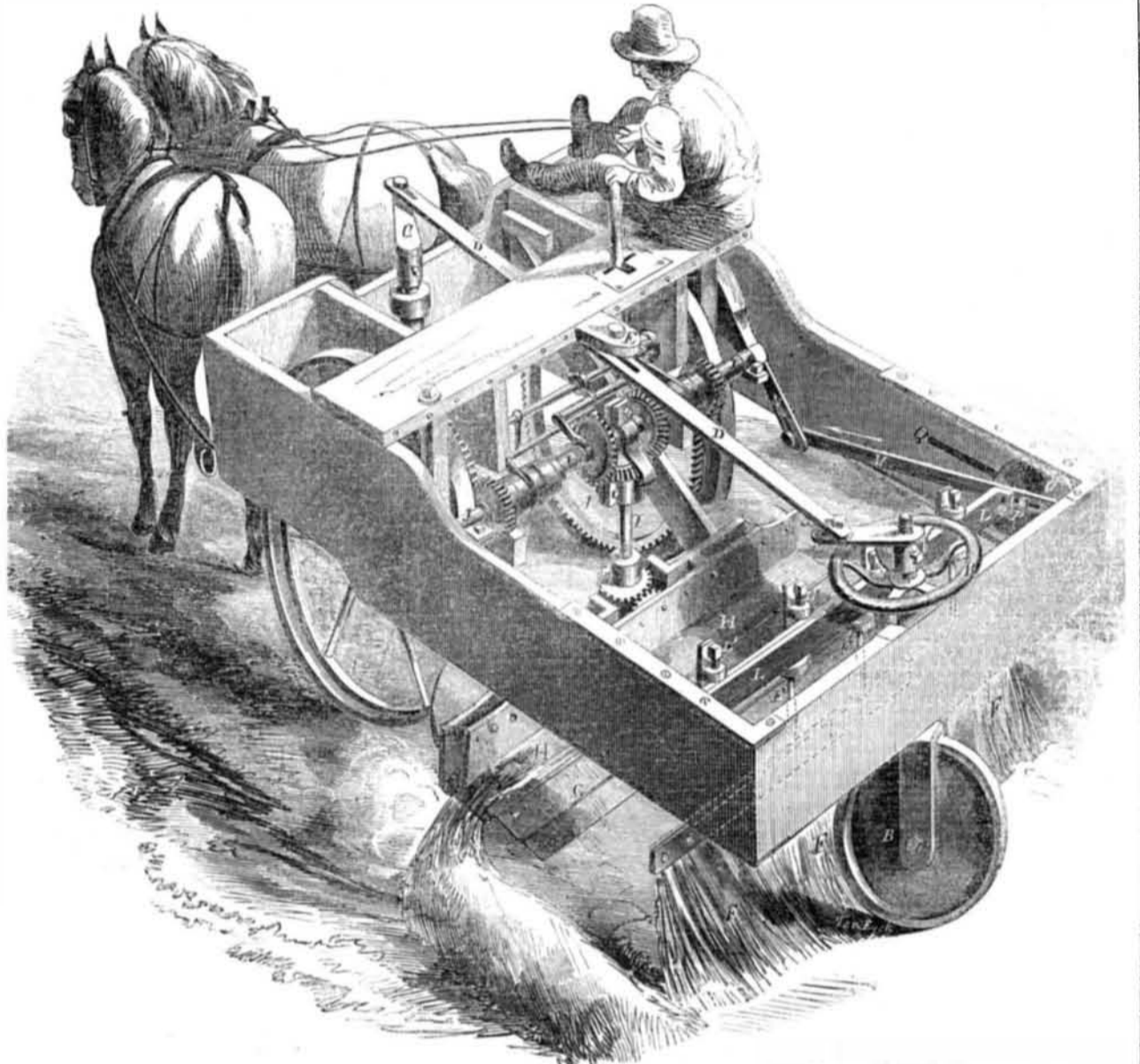
The revolving brush is, to some extent, objectionable, one reason being that it cannot do clean work. Its high velocity carries a portion of the dirt clear over and throws it back upon the ground; this is especially apt to occur when the ground is a little muddy or wet. This kind of machine also creates considerable dust unless the street is well moistened with water.

In the improvements herewith illustrated the inventors have endeavored to avoid all of the objections named, and also to obtain additional advantages, unknown in any other apparatus for the same purpose.

The machine consists of a light three wheeled vehicle, of the general form exhibited in the engraving. A A are the driving wheels, by which all the sweeping machinery is put in motion. B is a steering wheel, used to support and guide the back end of the frame. Wheel B is ingeniously connected with an upright crank standard, C, in front, on the draft tongue of the machine. The cranks of B and C are connected by means of rod D, which is slotted, and has a fulcrum at E, as shown, therefore, whenever the tongue on which standard, C, rests is moved, the steering wheel, B, will be correspondently turned; the machine is thus enabled to describe a very short circle, and to turn with great ease.

The sweeping is done by means of reciprocating brooms, F, which move back and forth over the surface of the ground, sweeping the dirt up the small inclined leaf, G, on to the endless revolving belt, H; the latter carries the dirt to one side of the machine, and de-

IMPROVED STREET SWEEPING MACHINE:



posits it on the ground again, in winrows, as shown; thus collected it is easily shovelled up into dumping carts and taken away. I is a shaft, which gives motion, through suitable gearing, to the belt, H. Shaft I receives its power from the main shaft, J, with which it connects, by means of pinions. These pinions are connected with clutches, and the latter are operated by the lever, K. When it is desired to change the direction of belt, H, so as to form the dirt winrows on the other side of the machine, the driver moves lever K. By the same lever the whole machinery may be instantly thrown out of gear and stopped.

The brooms, F, are all separate; their shanks, F', are attached to the cross bar, L, the ends of which fasten to the connecting rod, M. The broom shanks, F', are adjusted by the screws, L', so that if one broom is shorter, or becomes worn, more than another, it may be quickly let down to an even line with the others, or a new broom substituted. The brooms have a spring connection with their bar, L, (not shown) which permits them, when stones or other obstructions happen to be in the way, to spring back, and thus pass over the impediment; each broom being separate acts independently, so that if the obstacle presents itself before only one broom the position of the others will not be altered. The angle at which the brooms are set may be easily varied, so as to cause them to sweep obliquely, if desired. This separate adjustment of each broom is an important and valuable feature.

Bar L receives reciprocating motion from rod M and crank N, the latter being attached to main shaft J. One end of rod M is attached

to wheel O, the pin of which, P, traverses in slot Q. In the forward movement of rod M the broom bar, L, is depressed, and the brooms thus brought in contact with the ground; on the backward movement of M the broom bar, L, is elevated, and the brooms lifted from the earth; this motion is almost exactly the same as that given to a broom by a person sweeping in the common manner. It must be obvious that such an arrangement insures clean and thorough work.

The height of the back end of the machine is regulated by turning the hand nut, R, which is attached to the shank of wheel, B; the pressure of the brooms upon the ground is thus adjusted with great convenience.

If desirable, scrapers may be substituted in place of the brooms, and mud may be thus removed with great facility. The elasticity given to each broom shank would also render the scrapers effective. For some of the Western cities this arrangement might often be valuable; in New York it certainly would.

This machine appears to combine unusual facilities and capabilities. It is simple and strong in all its parts; light and easy of draft; convenient and economical in use; thorough and effective under nearly all circumstances and conditions of the streets; it strikes us as being much superior to any other machines of the same class that we have seen; its merits, we believe, will sooner or later give it a very extensive introduction. Good street sweeping machines are wanted in nearly every city in the country; we shall be disappointed if the present improvement does not carry off the palm.

Messrs. St. John and Brown, of Leonardsville, N. Y., are the inventors and patentees; from them any further information can be obtained. Their patent bears date Nov. 20, 1855.

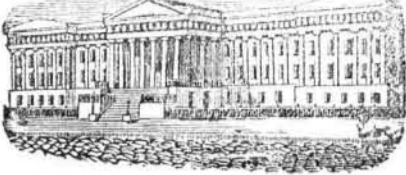
Preserving Fur.

A solution of alum and corrosive sublimate applied to fur, keeps it from coming off. An ounce of corrosive sublimate and an ounce of alum are dissolved in a pint of rain water, and this is applied to the roots of the fur with a sponge; and if possible it should be also applied on the inside of the fur. This solution applied to fur capes, victorines, &c., before they are laid past during warm weather, it is said, will effectually prevent the attacks of moths. Many valuable articles of fur are destroyed every season by moths; if such articles are treated as described, then hung up to dry in a room for a few days; they may be then wrapped in glazed linen, and laid past with perfect safety. The corrosive sublimate being a virulent poison, is the grand protective. It must be kept out of the reach of children and thoughtless persons.

A Good Notice on Both Sides.

A correspondent—J. Gray—writing to us from Dundas, C. W., says: "I got one of Carpenter's Rotary Pumps through a notice I saw in your paper; it is invaluable; has been up six months, pumping hot water every day, and I have never touched a screw about it. It has paid for itself and my paper, long ago."

A little sugar dissolved in any writing ink changes it into a suitable copying ink.



[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office FOR THE WEEK ENDING MARCH 18 1856.

WELDING STEEL—Homer Anderson, of Garrattsville, N. Y. : I am aware that various alkaline substances, both simple and compound, have been used as fluxes and soldering solutions.

But I claim the compound of sulphate of soda and carbonate of soda, made up and used for welding metal surfaces, as set forth.

BENCH PLANE—Lewis C. Ashley, of Troy, N. Y. : I do not broadly claim combining a metallic throat piece with a bench plane, in such a manner that the discharging aperture for the shavings shall not be enlarged or rendered imperfect by the wearing away of the plane stock.

I claim combining a metallic throat-piece with a plane stock in a manner independent of the plane-iron, substantially as described, to keep the mouth of the throat of the plane perfect as the plane stock shall wear away.

HERNIAL TRUSSES—John Broiles, of Madison Co., Ala. : I claim the peculiar adaptation of the steel ribbon to the body of the patient by making its lower edge flared out, the block or circle, and flared out on its upper edge for about two inches, the strap and slightly curved upward and the block end curved downwards and outwards on its upper edge, in combination with a pear-shaped pad having a slice taken off, commencing at the outer edge of the base and continued to about two-thirds its length towards the seam, thus forming a broad plane surface to be applied to the body of the patient.

COOKING BY GAS—James B. Blake, of Worcester, Mass. : I claim the described roaster and boiler, constructed and operating in the manner substantially as set forth.

DUMB JOCKEY—Samuel Blackwell, of Oxford Street, London. Patented in England March 9, 1853. I claim making the cross and saddle-tree of gutta percha, and thus a new article of manufacture, one possessing advantages, as specified.

HERMETICALLY SEALING PRESERVE CANS—Charles Branwhite, of New York City : I claim confining the top of the can, E, between bearing surfaces by means of the collar, A, and screw, B, as described, thereby dispensing with solder or cement in forming a joint.

I also claim the peculiar form given to the internal and external bearing surfaces of the attachments for closing a can, when formed, combined and used as set forth.

GRAIN AND GRASS HARVESTERS—Thomas D. Burrall, of Geneva, N. Y. : I am well aware that single gearing has been used in a variety of forms, therefore I do not claim any such arrangement in itself, but I am not aware that any arrangement of single gearing has ever before been constructed in the manner described and shown, wherein by the use of a shaft with a bent arm on the end the line shaft, L, can be carried close to the main driving wheel, and the pinion, I, be so far removed from the fixed journal, S, that the same can be thrown in or out of gear with ease, and at the same time a small pinion and fast motion can be used, which could not be accomplished without the use of the bent arm to the shaft, L, in the manner set forth.

Ist, I claim the shoe piece, V, and rack, H, to adjust the height of the outer end of the finger-board, substantially as specified.

2d, I claim the arrangement of the shaft, F, in the journal, S, with its pinion, I, taking in the wheel, K, when combined with the bent arm, Z, in the manner and for the purposes specified.

CARRIAGE COUPLING—Thomas Chope, of Detroit, Mich. : I claim attaching the perpendicular axle to a vehicle in a manner which will enable it to turn or rock, by means of a slotted T-shaped bar which is attached to the front axle by means of clips, G, and the sides, O and A, both working in the slots at right angles, as shown, substantially as described.

THRASHING MACHINE—Hiram Clark, of Princeton, Mass. : I do not claim the precise form of any of the parts nor the use of feed rolls and aprons in thrashing machines as I am aware such have been used.

But I claim the use of the pieces, H and F, for separating the grain by an action similar to that of a fall, in connection with the rolls and aprons or similar device, when constructed and operating in the manner and for the purposes set forth and described.

MOWING MACHINES—Samuel Comfort, Jr., of Morrisville, Pa. : I am aware that endless chains of knives have been heretofore used in connection with mowing machines, arranged, however, to traverse horizontally and confined to the cutter bar, which involves the necessity of having the latter of inconvenient width. By my arrangement the cutter bar is advantageously narrowed and by a simple and light system of gearing I am enabled to operate the chain at a most effective speed.

I do not claim the use of endless chains of cutters for mowing machines, or any particular method of constructing such chains.

But I claim the employment in mowing machines of an endless chain of cutters, which shall traverse along the cutter bar, and at a sufficient distance above the same to allow the mown grass to drop between the said chain, being operated substantially in the manner set forth.

CORKING BOTTLES—Henry N. Degraw, of Piermont, N. Y. : I do not claim the precise form of the holder of the cork holder, T, for other devices may be employed for the same purpose and operated in the same manner.

I do not claim the piston, H, and cylinder, G, operating as shown, for the purpose of placing the corks in the bottles, for they have been previously used.

But I claim securing corks in bottles or other vessels containing liquids charged or impregnated mechanically with carbonic acid gas, by having proper cork holders, T, attached to the bottles or vessels, and closing the jaws of the same by the levers, R, H, and jaws, P, P, or other analogous devices immediately after the corks are forced into the bottles by the piston, H, so that the holders will secure the corks in the bottles as soon as the piston is withdrawn from them, whereby the corks are secured in the bottles without removing the bottles from the bed or platform of the apparatus and consequently the operation of charging the bottles with gas, placing the corks therein, and securing them in the bottles performed at one operation, as described.

FIREPLACES—Calvin Dodge, of Pittsburgh, Pa. : I do not claim the contracting the throat or vent of the chimney, as that is well known as a device.

But I claim the use of a deep recess or chamber placed back of the fire basket of the grate and out of the reach of the draft, in combination with the horizontal covering over the recess and fire basket extending down below the mouth of the chimney, constructed and arranged substantially as described, for the purpose of consuming the smoke and causing the ignition of the gas, which would otherwise be lost and thus increasing the amount of heat thrown into the room and by the slow combustion of the fire, effecting a great saving of fuel.

SOWING MACHINES—John German and C. B. Hoyt, of Oriskany Falls, N. Y. : We do not claim the reciprocatory slide, D, nor operating said slide by an elbow lever and pins attached to the wheels, B.

But we claim having the elbow lever, G, upon a screw rod, H, so that said lever may be moved in and out of line with a portion or all the pins, A, on the wheel, B, for the purpose of causing the slide, D, to be operated faster or slower, or remain stationary, as described.

INKSTAND—R. Gleason, of Dorchester, Mass. : I claim the use of the hollow elastic body operating in the manner set forth, in combination with the peculiar valve employed for the purpose of retaining the ink within the cup, as set forth.

HARVESTERS—Eliakim B. Forbush, of Buffalo, N. Y. : First, I claim the adjustable shoe, E, for the purpose of leveling the platform, constructed and arranged substantially as described.

Second, I claim suspending the pole to which the team attaches, from a hinged journal upon the axle of the driving wheel in order that the draft of the team when moving forward may be directly from the axle of the driving wheel (leaving the frame, finger bar, and cutters free to oscillate and independent of the pole and the draft of the team) and also when backing; the power of the team may be exerted upon the frame in the rear of and below the axle of the driving wheel, substantially as described.

STEAM BOILERS—Jacob Frick, of Philadelphia, Pa. : I do not claim the combining of a check valve and stopcock in one instrument, the same being in common use.

But I claim, first, arranging, substantially in the manner set forth a check valve and stop and blow off valve in one instrument, for steam boilers, for the purpose of avoiding the attachment of the separate and distinct connections hitherto employed for the same purpose.

Second, I claim the pressure valve, M, with its weighted lever as connected with the alarm valve and as arranged with the check and stop valve, the whole being constructed and operating in the manner and for the purposes set forth.

NUT MACHINE—Robert Griffiths, of Allegheny City, Pa. : I claim the use of the compressors, M, punchers, P, saws, H, cams, N and G, levers, O and E, cranked and traveling head, I, constructed, arranged, and operating as described, for the purpose of making nuts from heated bars, as set forth.

HARVESTERS' CUTTERS—Horace L. Hervey, of Quincy Ill. : I claim furnishing the cutter bar with a series of inclined blades or knives, in combination with the inclined blocks and roller, D, or their equivalents, for giving to said cutters or cutter bar an oblique cut.

MORTISING TOOL—A. C. Hitchcock and C. H. Amidon, of Greenfield, Mass. : We are aware that tools similarly constructed have been previously used for the same purpose, screw auger bits have been employed and the tools consequently operated imperfectly, as the hollow chisels would soon become clogged with chips, the auger bits cutting off large chips. By our improvement this difficulty is obviated.

We do not claim a hollow chisel having a bit placed in it, irrespective of the form of bit used, and the slotted chisel.

We claim the combination of the bit, C, constructed as described, with the hollow slotted chisel, A, for the purposes set forth.

ROTARY PLANING KNIVES—Daniel L. Hurlbut, of Utica, N. Y. : I claim the arrangement of the cutters and the manner of securing them to the cutter rim of the wheel, substantially as set forth.

ILLUMINATING GRATING—Joshua K. Ingalls, of Brooklyn, N. Y. : I claim, first, the apertured plates of wood or metal, set forth.

Second, the grating of wood or metal with tapering apertures and glazed with lens or panes of the form, and in the method and for the purposes set forth.

WINDOW SHADES—Edward R. Korman, of Pittsburgh, Pa. : I claim the making of flexible or pliable and semi-transparent oil cloth for window shades and other similar purposes by the series of processes described.

CHURNS—Lucius Leavenworth, of Trumansburg, N. Y. : I claim the arrangement of the cords or bands attached to the pulley and also to the staff, being wound on the staff, to give a required rotary motion, as described.

SELF-REGULATING WIND WHEEL—A. Lempecke, of Pleasant Mount, Pa. : I do not claim the use of a spring, I, attached to the sails or wings, for that has been previously used.

But I claim the spiral spring, I, or its equivalent, in combination with the weighted levers, J, arranged substantially as shown for the purpose specified.

PERCUSSION PROJECTILES—John Lippincott, of Pittsburgh, Pa. : I claim the combination of the cylindrical chamber, piston, spiral spring, cap and nose piece, constructed and arranged as described, forming an improved percussion apparatus to be inserted into the powder chamber of bombshells, either in combination with or without a shallow slot of lead of the shape described, the whole being constructed and arranged substantially in the manner and for the purposes set forth.

STOVES—James B. Mabury, of Jeffersonville, Ind. : I claim surrounding the fireplace of a stove of any size or form with a shell of metal or other material, which shall communicate in each other, admitting no currents of heated air to circulate through them, and each of them provided with only one valve, constructed and operated as described, for the purpose of controlling the radiation of heat from the outermost shell of the stove, without interfering with the fire in the interior thereof.

MACHINE FOR FELLING TREES—Ebenezer Mathers, of Morgantown, Va. : I claim the method of straining the saw by means of the curved elastic arms, C, C, and the adjustable bar, D, as above.

CONCRETE—John McCrone, of Thompsonville, Conn. : I claim the use of the crystal as a material for the cones or trumpets used for shaping and consolidating yarn of woolen, cotton, or other materials on bobbins.

MAKING ELASTIC RUBBER CLOTH—Richard McMullin, of New Brunswick, N. J. : I claim rendering vulcanized india rubber, for the manufacture of shirred goods, adhesive, by boiling it in a solution of potash to remove the sulphur from its surface, thus fitting the sheet of rubber to receive a coat of cement, whereby it is caused to adhere firmly to the cloth or other fabric between which it is placed, in the manner and for the purposes substantially as set forth.

SEED PLANTERS—Elijah Morgan, of Morgantown, Va. : I claim in combination the dead hoppers, E, E, the chattering or beveling of the ends of the seeding bar and the scolloping of the shield, so that any grain that may be carried to the ends of the seeding bar may be forced by it into said dead hopper, substantially as described.

MACHINE FOR MAKING CLOTHES PINS—George W. Parker, of Fitzwilliam, N. H. : I claim, first, the use of holes in a wheel or of tubes secured to a wheel, and into which the pieces of wood are fed, and thus retained in and carried forward to the proper position to be acted on by the lathe saw or bit.

Second, I claim a sliding or vibrating lathe and tail block, whereby the pieces of wood to be turned are carried forward to the action of the cutters or chisels.

Third, I claim the cutters or chisels in combination with the lathe and holes.

Fourth, I claim in combination with the holes a saw or bit and a sliding or vibrating carriage or holder or its equivalent, to convey the pieces from the holes of the saw or bit.

SECTIONAL FIRE-POTS—Merritt Peckham, of Utica, N. Y. : I do not claim forming a fire-pot of sections of parts irrespective of the construction and arrangement, as shown.

But I claim forming the fire-pot of stoves, furnaces, etc. of sections, A, when said sections are constructed and secured together, substantially as shown and described.

BOXES OF RAILROAD CAR AXLES—David R. Perkins, of Philadelphia, Pa. : I do not claim, in connection with axle boxes, a movable reservoir with lubricating substances, or the method of constructing the box with a loose bottom.

But I claim the movable piece, B, the vertical portion of which forms the front, and the horizontal portion of the bottom of the box, in combination with the preparations, a and b, and groove, c, on the latter, for the purpose of quickly exposing the whole interior of the box for examination or cleansing, and as quickly covering the same.

MAKING CHILLED CASTINGS—Wm. Butler, of Little Falls, N. Y. : I claim the combination of the hollow chill cores, C No. 1 and C No. 2, with the sand core, B, for the purposes of obviating the difficulty of warping and springing attending the casting of cast-iron boxes on chills and thereby forming a chamber in the box in the manner and for the purposes described.

SEWING MACHINES—I. M. Singer, of New York City : I claim the method, substantially as described of distending or gathering up the cloth or other substance, when the needle operates upon it to form the seam by combining in a sewing machine two distinct feeding wheels, or their equivalents, moving with a differential motion, substantially as described.

HARNESSE BUCKLES—Nathan Post, of East Cleveland, O. : I claim attaching to a three barred buckle, first, the flanges N N N, which keep the trace or strap in the center of the buckle.

Second, the tube, O, on the center bar, made loose so as to revolve thereon, for the purposes described.

Third, the block or foundation, B, with its stationary tongue, C, made, constructed, and applied to the buckle in the manner set forth.

OMNIBUS REGISTERS—James Rodgers, of New York City : I do not claim the general plan of an omnibus register acted on by a strap to the conductor or driver, or fitted with any other means for moving the register. Neither do I claim the indicating dials or hands, nor any arrangement of the same. Neither do I limit my invention to use with the peculiar arrangement of dials or other indicating parts.

But I claim the mode of locking the ratchet wheel, K, making the operating pawl, D, pass at the end of its motion, beneath or against the ratchet teeth, so as to lock the wheel in place, substantially as specified.

SAWING MARBLE IN TAPER FORM—C. A. Schultz, of Chicago, Ill. : I claim adjusting the said saw by means of the swinging pulleys acting laterally upon it, combined as described, with the pulley regulating the tension, the several parts being arranged and operating substantially as described.

PRODUCING DESIGNS ON WOOD—Philipp Schwickard, of Brooklyn, N. Y. : I do not claim the production of raised designs, but of veins, streaks, drawings, pictures and designs on the plane surface of the woods by means of pressure, the forms or dies described, and of the application of the same for the production of veins, streaks, drawings, pictures, and designs, the exclusive use of the design produced through the body of woods, when compared with the design produced on the surface of the wood, or two or more kinds of woods, to produce the mosaic or inlaid work, by compressing, joining and separating them as described.

BRASSES OF CONNECTING RODS—J. R. Sees, of New York City : I claim the combination of the brass piece, E, and the wedges, D, D, as described, for the purpose set forth.

NAIL PLATE FEEDING MACHINE—J. P. Sherwood, of Fort Edward, N. Y. : I claim the use of the grooved cam with its friction roller and bar, in combination with the slotted or cylindrical cam, nipper handle, and female screw, constructed and arranged as described, and operating to produce the peculiar movements necessary for feeding the nail plate of nail machines, in the manner and for the purposes set forth.

HAT BODIES—A. B. Taylor, of Newark, N. J. : I claim the arrangement of the hat body in a dry state, by machinery operating substantially as set forth.

I also claim the method of facilitating the removal of the bat from the perforated cone, by means of a blast of air forced through the cone.

HARNESSES FOR SHOEING HORSES—W. P. Thomas, of Hillsboro, Ind. : I claim, first, the combination of the windlass, M, with the traces, e, e, the tugs, t, t, and tail lever, or singletree, k, these or their equivalents, by means of which the horse is brought to his place, and secured from lateral motion, substantially as set forth.

Second, I claim the combination of the windlass, L, with the ropes, o, o, and the harness, b, these or their equivalents, by means of which the horse is prevented from rearing or moving backward, in substance as set forth.

Third, I claim the combination of the cords, g, g, with the pulleys, m, m, n, the breeching, d, and the traces, c, c, such an arrangement of the parts that the breeching, d, is firmly held in its place by the weight of the horse, substantially as described.

Fourth, I claim the combination of the back band, f, with the pawl, L, the pulley, v, the rope, x, the breeching, d, these or equivalents, by means of which the horse is prevented from raising his hinder parts, and the breeching, d, is prevented from rising up.

Fifth, I also claim the sliding bars, z, by which the horse is prevented from pulling his foot away, while the traces are being driven on, substantially as represented.

ARGAND LAMPS FOR BURNING ROSIN OIL—Isaac Von Bunschoten, of New York City : I claim, first, deflecting a portion of any passing draft, or current of air, up the exterior air tube, and through the wings, F, F, into their equivalents, to counteract the suction or partial vacuum produced at the other portion of the lamp, by said passing draft or current of air, as specified.

Second, I claim the wings, F, F, or their equivalents applied around the wick tube, 3, to cause any sudden draft or current of air to be deflected with equal force up, into the exterior air tube, and to draw down into the wick cup, c, and internal draft, in the manner and for the purposes specified.

Third, I claim the separate transparent cone, c, within the chimney, d, rising only to about the height of the button, 7, for the purposes specified.

Fourth, I claim the sleeve or cups combined with the perforated wick tube, and including said perforations, in the manner and for the purpose specified.

BORING MACHINES—I. W. Ward, of Birmingham, Pa. : I am aware that augers have been so arranged as to be made to approach or recede from each other, and still remain in gear with the driving cylinder, but in practice, as he retractor arranged, they are too expensive and troublesome to go into general use. This I do not therefore claim.

But I claim having the cylinder, D, in the curved arcs, c, and the shaft, F, in the straight slots, b, cut in the pillar blocks, B, and uniting the journals of D and F, by the braces, P, so that they may be adjustable, but always be held in gear with each other, substantially as described.

Second, I claim the hollow auger shafts, F, F, so arranged as to slide over the stationary shafts, F, M, as they are forced out or drawn back, substantially as described.

CIRCULAR SAW SPINDLES—Hiram Wells, of Florence, Mass. : I claim the arrangement and location of the eccentrics with respect to the shaft boxes, B, B, and their stationary and adjusting screw pins, substantially in the manner and for the purpose described.

STRIPPING TOP FLATS OF CARDING MACHINES—Geo. Wilman, of Lowell, Mass. : Patented in England Nov. 25, 1853. I claim, first, the combination of the segmental gear, L, with its projecting rim, Q, and the pinions, O and P, with their attached notched plate wheels, all as applied to the shafts, K M N, for the purpose of giving the alternate intermittent movements to the shafts, M N, as specified.

Second, the arrangement of the mangle pins, Z, Z, &c., in the arc of a circle, upon the center of which the frame carrying the stripping apparatus vibrates, for the purpose of avoiding intermediate gearing and consequent back lash, as described.

Third, I claim the combination of the cams, X X, with the chain belt, Q, the chain pulleys, R, and shaft, M, arranged and made to operate together, as described.

Fourth, the combination of the cams, X X, with the levers, Y, Y, carrying and operating the stripper card, in the manner specified.

Fifth, the combination of the cams, X X, with the lifting rods, Z, Z, and the levers, Y, Y, arranged and made to operate in connection, as described.

Sixth, the combination of the springs, F' F', and the pins, E' E', and their application to the frame, S, for the purpose specified.

Seventh, I claim a mechanism for cleaning the stripper card, arranged and applied substantially as described.

Eighth, I claim the segmental gear, L, and its rim, Q, as applied and operated for the purpose of giving motion both to the mechanism for raising, stripping, and depressing the top card, and to the mechanism the moving and stopping mechanism from one top card, to another, not moving both at the same time, but alternately first one and then the other.

RECIPROCATING SAWS—J. Z. A. Wagner, of Philadelphia, Pa. : I claim, first, having the saws, H H, within the saw sash or gate, E, on or to nuts, c, which work or are fitted on right and left screw rods, I, substantially as shown and for the purpose specified.

Second, I claim operating or adjusting the saws, H H, laterally in the saw sash, or gate, E, by means of the pinion, K, placed loosely on the shaft, J, so that said shaft may work freely through it, the shaft, J, having bevel pinions, e, at its ends, which pinions gear into corresponding pinions, e', at the outer ends of two of the screw rods, I.

Third, I claim connecting and disconnecting the screw rods, I, by means of the levers, O O P, and arm, Q, arranged, substantially as shown and described, for the purpose specified.

SPINNING WHEELS—Lyman Wright, of Benton, Pa. : I claim attaching the spindle of a band spinning wheel to a vibrating pendulum, and operating the same substantially in the manner and for the purpose set forth.

TUNNELING ROCKS—Charles Wilson, of Springfield, Mass. : I claim, first, the circular formed as a short hollow truncated cone for acting on stone or other material, substantially as and for the purposes specified.

Second, I claim a continuously revolving wheel, provided with circular rolling discs, or cutters, the axis of which cutters stand alternately in opposite directions, or nearly at an angle of 45 degrees, with the shaft of said cutter wheel, thereby acting to excavate the rock or other material, substantially as specified.

Third, I claim the arrangement of the alternating inclined tapering planes, o, o, and stocks, p, for the purpose of sustaining and adjusting the alternate rolling cutters, as specified.

Fourth, I claim the construction of the shaft's cylinder, q, and parts attached, when used in connection with the socket, 29, set screw, 30, and binding strap, 31, for the purpose and as specified.

Fifth, I claim the general arrangement of the cylinder and shafts, d, g, h, i, l and k, k, and gearing attached for rotating the drum, C, and pressing the same forward in the manner and substantially as specified.

SAFETY APPARATUS TO HARNESSE AND THILLS—Jon. H. Wilson, Jr., of Nashville, Tenn. : I claim attaching the horse directly to the shafts, C, of one horse vehicle, by means of the boxes, A, and the axle, secured to the harness, as shown, a box at each side of the horse, the boxes being constructed as shown, with the two hinged or jointed sides, so that they may be opened, when necessary, by the driver, for the purpose specified.

CUT-OFF GEAR FOR STEAM ENGINES—Orville Leonard, of Somerville, Mass. (assigned to himself and G. K. Reynolds, of Medford Co., Mass.) : I claim the rockers, d, the toe, g, and the bar, G, constructed and arranged as described, and operating substantially as set forth.

RE-ISSUES
R. R. CARS—B. J. La Mothe, of New York City. Issued originally April 4, 1854. I claim the construction of the frames of railroad cars, substantially in the manner and for the purposes specified.

NUTS, WASHERS, &c.—Wm. Kenyon, of Steubenville, O. (assignor to Haigh Hartuppe & Morrow.) Patented originally Oct. 4, 1851. I claim, first, the use of the die, T, and die box, M, for severing the blank, the die box in combination with the wristed bracket, Q, the rollers, R, and the punch, L, for perforating the same during the pressure, the whole operating conjointly as described, for making nuts or washers at one operation.

Second, the manner substantially as described, of so arranging the dies, in relation to the punch, that any excess of iron in the blank shall be forced into the path of the punch, thus securing the compression of the nuts without risking the breaking of the machine.

FORMING WEBS WITHOUT WEAVING OR SPINNING—Union Manufacturing Co., of New York, Ct. (assignees of the legal representatives of John Arnold, deceased.) Patented originally July 15, 1852, extended by Congress 14 years from March 23, 1854. I do not claim the carding machines or any parts thereof in common use.

But I claim the combined use of them as described, for the purpose of crossing the fibers of the material of which cloth may be made, in the manner and on the principle described, and the new machinery necessary to effect that object, particularly the comb carrier, the means described for severing the warp, and the rollers for placing the warp upon the web, operated substantially as described.

I also claim the depositing of the web in separate sheets, edge to edge, upon the continuous sheet of warp, substantially in the manner and for the purpose described.

ADDITIONAL IMPROVEMENT
MASH MACHINES—Adolph Hammer, of Philadelphia, Pa. : Patented Jan. 9, 1855. I claim the construction, application, and use of the inclined curved teeth, A and B, substantially and for the purpose as set forth and described.

GAS BURNERS—C. H. Johnson, of Boston, Mass. : Patented dated June 26, 1855. I claim extending up into the gas distributor and purifier, and among the wires of the latter, as specified, a cone having at its apex, the inlet opening for the passage of gas into the purifier, the same serving to attain advantages, as explained.

DESIGNS
ELEVATED OVEN STOVES—S. W. Gibbs, (assignor to W. & J. Treadwell, Perry & Norton,) of Albany, N. Y.

New York Railroads.
The Annual Report of the Railroad Commissioners—J. T. Clark, Wm. J. McAlpine, and James B. Swain—of New York, for the year 1855, has just been published. The object of this Board of Commissioners is to exercise a supervisory control over all the railroads in the State. No new railroad can be opened to the public without an examination, by the Board, and a certificate from it authorizing its opening. That part of the Utica and Black River Railroad from Trenton to Boonville was to be opened for public use on the 5th of December last, but after an examination the Commissioners forbid its opening until certain defects in it were remedied, after which the Board granted a qualified certificate, restraining the speed of the cars to ten miles an hour over certain portions of it.

It seems that some of our railroads are managed in a very disreputable manner. The report states that some companies instead of promptly furnishing correct reports of their condition and affairs, exhibited great unwillingness to do so; and some companies furnished careless and deceptive statements. The books of some companies are kept in such an imperfect manner that it is difficult to obtain important information. Nearly all the reports furnished contained errors. This is really degrading to the character of our railroad companies.

There are two great railroad corporations in New York, "the New York Central," and the "New York and Erie." The former has over 862 miles of track, including side tracks and branches, costing over \$24,000,000. It has 188 locomotives in use; the express trains run at the rate of 35 miles per hour, and passengers are carried for 2 cents per mile. The New York and Erie has 729 miles of track, including branches and double tracks. It has 203 locomotives. The total cost of equipment, &c., was \$33,742,317. These two railroads overshadow all the others.

A condensed compendium of the accidents, experiments made on the different roads, and the examinations had, has yet to be prepared.