

RECENT AMERICAN INVENTIONS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week. The claims may be found in the official list.

Mode of Heating Gold and Silver.—This invention consists in placing or arranging a steam chest or chamber within the pan of an amalgamator in such a manner that the pulp or crushed ore within the pan will be gently heated while the process of amalgamation is going on, and the steam chest or chamber be capable of being readily removed, when worn by the agitator or mixer, so as to be unserviceable, and a new one adjusted in its place, the pan at the same time not being subjected to any wear, and consequently lasting an indefinite period. The inventor of this improvement is W. A. Palmer, of San Francisco, Cal.

Horse Rake.—The object of this invention is to obtain a simple and efficient horse rake which may be constructed at a small cost and by any one of ordinary ability familiar with mechanics' tools, and, at the same time be capable of being operated, that is to say, have its teeth raised and lowered for the purpose of discharging the load and adjusting them again in proper working position with the greatest facility. This invention is intended as an improvement on a horse rake on which a patent was granted to the same parties on May 13, 1862; and it consists in the arrangement of a double-armed lever in combination with the axle to which the rake teeth are secured and with a clearer suspended by means of staples from said rake teeth in such a manner that by the action of said lever the rake teeth can be raised and at the same time the clearer is made to slide out toward the point of said teeth whenever it is desired to discharge the load gathered up by them. B. Mellinger, S. Mellinger and J. Mellinger, of Mount Pleasant, Pa., are the inventors of this improvement.

Slide Valve for Steam Engines.—This invention relates to that kind of valve which may be termed the oscillating segment valve, that is to say, which is constructed with its face in the form of a portion of the periphery of the cylinder, and is arranged to oscillate about a fixed axis in a seat of corresponding form. The improvement consists principally in combining the valve with the pendulum or oscillating arm to which it is attached by means of a flexible and elastic plate which constitutes a portion of the back of the valve, and which, while it allows the greater portion of the pressure produced by the steam on the back of the valve to be transmitted to a fixed bearing at the axis of oscillation, at the same time permits the valve to be pressed against the seat with sufficient force to counteract the tendency to lift the valve, which is produced by the pressure of the steam in the ports during portions of the stroke of the valve. Alexander Buchanan, of New York city, is the inventor of this improvement.

Air Engines.—The first part of this invention relates to that class of air engines known as Stirling's, in which the air is heated in two vessels connected with opposite ends of the working cylinder, by being transferred from one end to the other of the said vessels alternately by means of plungers working therein; the working cylinder being double-acting. In such engines, as heretofore constructed, the aforesaid plungers have been so connected that one always ascended while the other descended, and *vice versa*, and the time occupied by the stroke of each has been generally equal to that occupied by the stroke of the working piston, and the consequence has been that the pressure of the air has been made effective upon the working piston through but a portion of each stroke. The object of this part of the invention is to render the said pressure effective throughout the whole stroke of the working piston; to this end it consists in so operating the two plungers that the one in either operating vessel is stationary in its uppermost position, with the space below it full of heated air, while the working piston is making the stroke from the end of the cylinder in connection with that vessel; the plunger in the other heating vessel, which is shut off from the cylinder, making both its upward and downward stroke in the meantime, and causing the latter vessel to be filled with heated air to produce the return stroke of the working piston,

by which means a more uniform and greater power is caused to be developed in the operation of the engines and its working is effected with greater economy. The second part of my invention consists in an improvement in the packing of the stuffing boxes, through which the rods of the plungers of the heating vessel work, applicable also to other stuffing boxes, for the purpose of making the oil or other lubricating material employed therein serve, in a novel manner, to aid in preventing leakage. John R. Peters, of New York city, is the inventor of this improvement.

Ventilating Apparatus.—This invention relates to the arrangement and construction of a simple automatic apparatus to be fixed in the roofs or ceilings of public halls, churches, dwelling-house apartments, ships' cabins, railroad cars, and other places, for the purpose of securing efficient ventilation therein; that is to say, to provide for a steady influx of pure atmospheric air, and for the discharge of the air which is vitiated by respiration, combustion or other causes. The apparatus consists, essentially of two tubes arranged concentrically, and opening at their lower ends into the space or apartment to be ventilated. These tubes communicate with the external atmosphere at different levels, the vitiated air rising up the central tube and passing off at the higher level, whilst the fresh air enters the annular passage between the inner and outer tubes at a lower level, and descends into the space and apartment below. Both passages are provided with suitable valvular mechanism for regulating the currents, that of the outer passage at the same time serving to deflect the downward current of fresh air, and spread it out horizontally so as to prevent partial draughts. This invention, by John McKinnell, of London, England, is assigned in full to John Hyslop, of Bradford, England, who may be addressed in relation to it at No. 247 Spring street, New York city.

Who to Write To.

As there are many persons who may desire to communicate with the different bureaus of the War Department, a memorandum of the proper persons to address may be useful:—

All letters relating to pay of soldiers on furlough or in hospitals should be addressed to General B. F. Larned, Paymaster General.

Applications for back pay and the \$100 bounty of deceased soldiers should be addressed to Hon. B. B. French, Second Auditor.

Applications for pay of teamsters, employes of the Quartermaster's Department, or for horses killed in service, should be addressed to Hon. R. I. Atkinson, Third Auditor.

Applications relating to pay and bounty in the marine or naval service, should be addressed to Hon. Hobart Berrien, Fourth Auditor.

Letters concerning soldiers in the army should be addressed to Adjutant General Lorenzo Thomas.

Explosion of a Lard Tank.

At the packing house of Pulcifer & Williams, in Chicago, a large iron lard tank exploded recently with a terrific force that threw it from the first floor clear through the other four stories above to the roof, wrecking that portion of the building and descending to nearly its former location. Another full tank stood near, which was thrown from its foundation and its contents spilled. At the time of the explosion there was no one in the building but the engineer, who escaped with his life, but was severely scalded about the face and body. The building was closed at the time, and the effects of the concussion upon it were such that a portion of the west wall sprung out several inches beyond the windows in the upper stories, and the whole edifice—a very large one—was terribly shaken. No satisfactory reason for the explosion can be given at present.

In the valley of Saginaw, Mich., there are 45 saw-mills, which produce annually 90,000,000 feet of lumber. In 1861 there were shipped from East Saginaw 600 cargoes of lumber. The pine of the Saginaw valley, it is stated, cannot be exhausted in fifty years.

The Great Exhibition in London has proved a financial failure. The expenses have been much greater than in 1851—the receipts much less.



ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING NOVEMBER 11, 1862.

Reported Officially for the Scientific American.

* * Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 1861, a peculiar 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.

36,935.—Hugh Barr, of Independence, Iowa, for an Improvement in Churns:

I claim the rotary cream box, I, in combination with the stationary brakes, M M, provided at one side with V-shaped faces, e, and at the opposite side with flat faces, f, when said brakes are placed in an inclined position, as and for the purpose herein set forth.

[This invention relates to an improved churn of that class in which a revolving cream box or receptacle is employed, and consists of a revolving cream box in connection with a stationary brake, constructed in such a manner as to favor the rapid production of butter from the cream and the gathering of the former, when produced, with the greatest facility.]

36,936.—Alexander Beckers, of Hoboken, N. J., for an Improved Steering Apparatus:

I claim the barrels, l and z, on the arms, c c, or tiller, in combination with the ropes or chains, h and i, and sheaves or blocks, f and g, substantially as and for the purposes set forth.

36,937.—Joseph Berthoud, of Paris, France, for an Improvement in Apparatus for Panoramic Advertising:

I claim the loom, l and m, the ratchet wheel, e', and the stop wheel, f, combined with the carrying rolls, d and i, when actuated substantially as described and for the purpose specified.

36,938.—Joseph Bradt, of La Porte, Ind., for an Improvement in Bee-hives:

I claim the construction of the hive or main box, b, with bars, f, flap, d, and inclined bottoms, g, arranged and operating with the entrance, D, box, A, honey boxes, a, and drawer, e, as set forth and described.

36,939.—Abel Brear, of Saugatuck, Conn, for an Improved Apparatus for Raising and Forcing Water:

I claim, the apparatus composed of the vessel, A, pipe or opening, B, pipes, G D, cock, H, or its equivalent, and the two self-acting check valves, C E, the whole combined to operate substantially as herein specified.

[This invention consists in a novel apparatus for raising and forcing water or other liquid, by the pressure of steam, compressed air or gas upon its surface in a suitable vessel, into which it runs by gravitation or is forced by the pressure of the atmosphere after a vacuum has been produced by the condensation of steam.]

36,940.—F. H. Brown, of Chicago, Ill., for an Improved Gas Regulator:

I claim, first, the bi-valve bellows, A, made, constructed, and operated as and for the purposes set forth.

Second, I claim tube, F, in combination with flange, a, and bellows, A, constructed and arranged as and for the purposes specified.

36,941.—Alexander Buchanan, of New York City, for an Improved Slide Valve for Steam Engines:

I claim combining an oscillating segment valve, A, with the pendulum or oscillating arm, I, which suspends it from fixed bearings by means of a flexible and elastic plate, C, or its equivalent, constituting a portion of the back of the valve, substantially as and for the purpose herein specified.

36,942.—E. J. Chapin, of Ottawa, Ill., for an Improvement in Watchmakers' Lathes:

I claim, first, The mode of attaching the bed-piece, I, to the table or bench, A, as shown and described, to wit, by means of the bell-shaped base, H, fitted on the annular way, G, and secured thereto by the screw, K, hook, J, and pin, L, all arranged as shown, to admit of the turning or adjusting of the bed-piece, I, on the table or bench.

Second, The gear-cutting frame, S, provided with the mandrel, T, cutter, U, and set-screw, h, and connected to the sliding plate, f, by center points, g, z, to admit of the rising and falling of said frame and its proper adjustment relatively with the wheel to be cut, as set forth.

Third, The combination of the mandrels, J O, with the bed-piece, I, rests, K N, chuck, M, and gear-cutting frame, S, all arranged as described, to form a new and useful lathe, for the purpose herein specified.

[The object of this invention is to combine a number of parts in such a manner that all the different lathes used by watchmakers may be obtained and used with a single bed-piece and with but one driving mechanism. The device, as a whole, being at the same time extremely simple and capable of being adjusted and operated with as great facility as the ordinary lathes in use.]

36,943.—C. B. Cotter, of Milford, Pa., for an Improvement in Molds for Casting Metals:

I claim the composition substantially as above described, whether the same be of ashes and lye alone, or the same, in combination with the hydraulic or plastic cement, as and for the purposes set forth.

36,944.—John P. Cowing, of Seneca Falls, N. Y., for an Improvement in Bell Yokes and Fastenings:

I claim making the yoke of the bell with a square hole to receive the bolt that holds the bell.

I also claim the bolt with four, more or less, flat sides to fit the corresponding hole in the yoke with the hole in the top of the bell sufficiently large to turn on the corners of said bolt for the purposes above specified.

36,945.—J. L. Ellis, of Concord, Ill., for an Improvement in Cultivators:

I claim the rock shafts, C C, uprights, D D, connected at their upper ends by the bar, E, and the lever, I, said parts being applied to the main frame, A, provided with curved transverse bars, B B', in combination with the supplemental frame, composed of the parallel bars, L L, and curved transverse bars, K K, with the driver's seat, J, attached, the supplemental frame being mounted on wheels connected to the main frame, and all arranged to operate as and for the purpose set forth.

[This invention consists in a novel and improved construction of a corn plow or cultivator, whereby the device may be drawn along and made to perform its work without breaking down or injuring the growing plants, and, at the same time be capable of having its shovels or shares operated or adjusted at the will of the driver so as to be elevated above the surface of the ground when necessary, as in turning the work at the ends of rows, and also capable of being moved while at work, toward and from the plants, as circumstances may require.]

36,946.—John Farrel, of New York City, for an Improvement in Locks:

I claim, as an improvement on Hall's lock (patented Aug. 1, 1848), mounting the lever tumblers on an axis at or about the middle of their

lengths, substantially as described, in combination with the placing of the key-hole, so as to act on their back instead of their forward ends, substantially as and for the purpose described.

36,947.—J. W. Foust, of Hammondsburgh, Pa., for an Improvement in Hay-loading Machines :

I claim the revolving rakes formed of the teeth, b, attached to wheels, A, and provided with the arms, d, in combination with the pivot bars, h, pins, i, or their equivalents, and the endless carrier formed of the chains, f, f', the crossbars or slats, q, and the cords, j, all arranged as shown, with the frame, D', to operate as and for the purpose herein set forth.

[The object of this invention is to obtain a device which may be attached to a wagon, and so arranged as to rake and carry off the hay from the windrow and deposit it on the wagon as it is drawn along, thereby greatly facilitating the loading of the wagon and dispensing with considerable labor.]

36,948.—B. and C. Furnas, of Ononwa, Iowa, for an Improvement in Cultivators :

We claim, first, The bars, H H', connected at their front ends to the pendents, F F', and provided at their back ends with the driver's seat, I, in combination with the bars, M M', connected at their back ends with the cross-piece, N, and attached to the plow beams, G G, by the cords or chains, k k, all arranged substantially as and for the purpose herein set forth.

Second, The treadles, K K, when attached to the plow beams, G G, and connected to the cords or bar, L, by the cords or chains, l, as and for the purpose herein set forth.

Third, The uprights, O O, attached to the plow beams, G G, fitted in the guides, m m, of the bar, L, and connected by the bar, P, substantially as and for the purpose specified.

[This invention relates to an improvement in that class of cultivators in which a lateral as well as an up-and-down adjusting movement is allowed the shovels or plows. The invention consists in a novel means which is employed for operating the shovels or plows, whereby the latter are placed under the complete control of the driver or operator and made to follow the sinuosities of the rows of plants and also rendered capable of being raised and lowered with the greatest facility, so as to plow the required depth ; the several parts being also so arranged that they may be adjusted to suit the driver to favor the most convenient operation of them.]

36,949.—P. W. Gates, of Chicago, Ill., for an Improvement in Apparatus for Evaporating Saccharine Liquids :

I claim, first, The combination of the fire arch, damper, evaporating pan and defecating and finishing chambers, arranged in the manner and for the purposes herein set forth.

Second, The combination with the fire arch and damper of steam coils, G G', and evaporating pan, C C', substantially as and for the purposes herein set forth.

Third, The construction of the steam coils with long and short bends, substantially as and for the purpose described.

36,950.—Wm. Hailes, of Albany, N. Y., for an Improvement in Grates for Coal Stoves and Furnaces :

I claim the projections, d, on the outer periphery of the grate in combination with the inner projections, a b, and with the looped bar in operating the grate, substantially as above described.

36,951.—Henry Harper, of Berlin, Wis., for an Improvement in Gages for Carriage Axles :

I claim, first, The method herein described of giving the proper pitch to carriage wheels by means of the bevel, Fig. 1, and the scale, Fig. 2, substantially as set forth.

Second, I claim the use of the bevel, constructed as set forth, for the purpose of giving the proper pitch to carriage wheels, substantially in the manner above set forth.

Third, I claim scale, Fig. 2, when used in the manner above set forth, for the purpose of giving the proper pitch to a carriage wheel.

36,952.—Ebenezer Harrington, of Boston, Mass., for an Improvement in Stove Grates :

I claim my improved grate, B, or sifter or sliding frame, C, as not only having their series of pokers, i i', arranged with respect to the guide bars, as described, but as having the supporting trunnions, d e, extended from the frame, C, and applied to the fire-place, A, in manner and so as to operate the said frame, C, and the grate relatively to each other, as well as with respect to the fire-place, substantially as specified.

36,953.—Wm. Harris, of Jersey City, N. J., for an Improvement in Machines for Rolling Tires :

I claim the combination and arrangement of the rollers, G E and F, in the adjustable carriage, e, substantially as and for the purpose herein described.

36,954.—James Jenkins, of Elizabeth, N. J., and Henry Weissenborn, of Newark, N. J., for an Improved Furnace for Roasting Ores and for other Purposes :

We claim a furnace constructed substantially as herein specified, for the purposes herein named, or for any other, where, from its properties it may be used.

36,955.—W. W. Huse, of Brooklyn, N. Y., for an Improved Method of Preparing Chewing Tobacco :

I claim in the manufacture of plug chewing tobacco, arranging the filling tobacco between two layers of filling, in long troughs of the width of the intended plugs, and in that condition compacting and pressing it into a long strip of uniform thickness, substantially in the manner described.

I also claim, in the process of compressing the plugs in the cells of the long trough, provided with sliding partitions, separating the several cells so that the partitions shall yield to the pressure as the plugs are compressed, substantially as described.

36,956.—W. W. Huse, of Brooklyn, N. Y., for an Improvement in the Process of Stripping Tobacco Leaves :

I claim the process of stripping tobacco leaves while under the influence of steam, substantially as and for the purpose described.

36,957.—James Hopkins, of New York City, for an Improvement in Metal Screens :

I claim the screen formed of square wires woven up or laid together, as specified with the sides of the said wire at right angles to the plane of the screen, for the purposes and as specified.

36,958.—Thomas Joyce, of Brooklyn, N. Y., for an Improvement in Coffee-Roasters :

I claim the combined coffee-roaster and revolving griddle, herein described, consisting of the two flat shallow vessels, B C, in combination with the trunnions and frame, A, so arranged as to admit of being opened and of rotating, substantially in the manner and for the purpose above set forth.

36,959.—H. K. Kenyon, of Steubenville, Ohio, for an Improvement in giving Rotation to Ordnance Projectiles :

I claim, first, The specified relative arrangement of the corners of the respective sections of the punch point of the projectile, for the purpose set forth.

Second, Constructing that part of the projectile in rear of the compound punch point with crossed or other similar shaped oblique recesses, g m, when the parts, m, of said recesses rise on an incline, in combination with sliding, rising and descending rollers, f, substantially as and for the purpose set forth.

36,960.—J. A. McCreary, of Brooklyn, N. Y., for an Improvement in Devices for Holding Blind Slats :

I claim the arrangement of the swivel rod, f, in combination with the spring slide, c, frame, A, and slat bar, C, all constructed and operating substantially as and for the purpose shown and described.

[This invention consists in the arrangement of a hinged swivel rod, in combination with a friction slide and with the slat bar and frame of a blind, in such a manner that said friction slide is permitted to accommodate itself fully to the position of the slat bar, and the slats are retained in any position in which they may be brought, and at the same time the slats can be set to any desired angle by moving the slat bar in the ordinary manner.]

36,961.—B. Mellinger, S. Mellinger, Jr., and J. Mellinger, of Mount Pleasant, Pa., for an Improvement in Horse Rakes :

I claim the arrangement of the double armed lever, E, and connecting rods, f, h, in combination with the axle, A, rake teeth, G, and clearer, F, all constructed and operating as and for the purpose shown and described.

36,962.—W. H. Miles, Jr., of Brooklyn, N. Y., for an Improved Paint Brush :

I claim the employment of a shoulder, o, in the handles of paint brushes to prevent the handle from slipping back into the brush after the same has been driven into the brush, as specified.

36,963.—W. A. Palmer, of San Francisco, Cal., for an Improvement in Amalgamators for Gold and Silver :

I claim in combination with an amalgamating pan, A, a steam-chest or chamber, E, formed of a removable plate or falsebottom, B, provided with one or more flanches at its under side, substantially as and for the purpose herein set forth.

36,964.—J. R. Peters, of New York City, for an Improvement in Air Engines :

First, I claim the operation of the plungers of the heating vessels, in connection with the working cylinder, substantially in the manner herein shown and described, so that the plungers will alternately remain at rest at the top of the heating vessels, while the other plunger makes a downward and an upward stroke, as set forth.

Second, The construction of the stuffing box gland with an oil cup, l, and flexible collar, n, combined substantially as herein described for the purpose set forth.

36,965.—Pascal Plant, of Washington, D. C., for an Improved Apparatus for Discharging Torpedoes under Water :

I claim the tube placed above the water line, with its ball and socket joint and otherwise substantially as and for the purpose described.

36,966.—D. J. Powers, of Madison, Wis., for an Improvement in Grain Drills :

I claim the suspended adjustable foot-board, F, arranged substantially as and for the purpose herein specified.

I also claim the combined application of a spring and friction surface to sustain the drill-teeth, M M', upon their bars, H H', firmly and rigidly, while in operation, but so as to yield with sufficient readiness when they meet obstructions, substantially as herein specified.

I also claim the roller, G, arranged in combination with the operating gearing of the machine, so that the drill-teeth may be raised together by the automatic action of the machine itself in its forward movement, without stopping or halting, substantially as herein specified.

I also claim the continuous zig-zag seeding apertures, y y, adjustable in width, substantially as and for the purpose herein set forth.

36,937.—Edward Precht and Victor Toepken, of New York City, for an Improvement in the Manufacture and Packing of Friction Matches. Ante-dated May 18, 1862 :

We claim making the match splints of thin strips of wood, in double sets or combs, those of each comb adhering together at the upper ends, substantially as and for the purposes herein specified. We also claim the application of the matches in a band of paper, which is prepared with a composition or substance on its upper edge, whereby the match tips (correspondingly prepared), are ignited on coming in contact therewith, in the act of drawing out of the package, substantially as herein specified.

36,968.—Reuben Shaler, of Madison, Conn., for a Centrifugal Spring Gun :

I claim the combination in the manner described of the stock, l, spring, 6, barrel, 8, and trigger, 3, by which the bullet is discharged by centrifugal force, as above set forth.

36,969.—Jonathan Smith, of Tiffin, Ohio, for an Improvement in Grain Drills :

I claim, first, Suspending the frame or bars that support the driver's seat from the under side of the main frame of the machine, substantially as and for the purposes described.

Second, The treadles or levers arranged as described, when combined with the separate lever drums for elevating a part or all of the teeth, substantially as set forth.

Third, In combination with the treadles or levers and lever drums, I claim the ratchet wheels and spring pawls, as and for the purposes specified.

Fourth, I claim the slide when constructed with the rectangular projections, and the means described for transverse adjustment, for the purposes and substantially as set forth.

36,970.—G. S. G. Spence, of Salem, Mass., for an Improvement in Preserving Jars and Cans :

I claim making the cover of fruit jars with a bottom projecting downward into the neck of the jar, so as entirely to exclude the air therefrom, substantially in the manner and for the purpose set forth.

I also claim the sealing iron, constructed and used substantially as set forth to aid in expelling the air as described.

36,971.—John Taylor and R. W. Brown, of Westerly, R. I., for an Improvement in the Dohersiner Hydrogen Lighter :

We claim, first, The arrangement of the two openings, e1 and e2, and the surrounding lip, e3, or its equivalent, with the elastic valve, G, as and for the purpose herein set forth.

Second, The employment of the adjustable spring, H, in combination with the above or the purpose described.

Third, The valve herein described, composed of india-rubber and coated with fine bronze powder or its equivalent, for the purpose set forth.

36,972.—W. H. Towers, of New York City, for an Improvement in Pen-holders :

I claim forming said tube, B, of blotting paper, felt, or other absorbent material, so as to enable it to act in the double capacity of a pen-holder and preventive to the soiling of the fingers of the person using it, substantially as herein set forth.

36,973.—F. A. Trant, of New Britain, Conn., for an Improved Carpenter's Bench Gage :

I claim, as an improved article of manufacture, a carpenter's bench gage with the above or the purpose described, in combination with a single head, c, and set screws, d, d, substantially in the manner as described.

36,974.—W. B. Treadwell, of Albany, N. Y., for an Improvement in Stoves :

I claim, first, The bed piece, F, constructed as described, and operating in the manner set forth.

Second, The combination and arrangement of the bed piece, F, with the fire pot, C, illuminating chamber, D, and supply chamber, G H, substantially as herein set forth.

Third, The supply cylinder, G H, constructed and operating substantially as herein set forth.

36,975.—G. W. Wilson, of Galesburg, Ill., for an Improvement in the Mode of Tightening Followers to Mill Spindles :

I claim the re-curved spring, A, constructed as described, in combination with an adjusting nut, E, and follower, B, when arranged and operated as and for the purposes set forth.

36,976.—Abram Acker, of Ramapo, N. Y., assignor to J. S. Wanamaker & Co., of Hoboken, N. J., for an Improvement in Spring Butt Hinges :

I claim the device for adjusting the spring, c, consisting of the enlarged cap, a2, reduced toothed or perforated portion, g, pin, i, and shoulder, p, arranged as and for the purposes herein set forth.

36,977.—T. W. Wisner, of Osceola, Mich., for an Improvement in Trying Squares :

I claim the adjustable face plate, C, applied to the stock, B, of the square, substantially as shown, and operated by the screw, D, or its equivalent, for the purpose specified.

[This invention relates to a new and useful improvement in trying squares, such as are used by joiners and other workers in wood, for testing surfaces which are designed to be at right angles with each other. The object of the invention is to obtain a simple means for

keeping the square perfectly true, so that the blade of the square will always be at right angles with the face-plate of the stock.]

36,978.—Benjamin Horn (assignor to himself and J. P. Rittenhouse), of Flemington, N. J., for an Improved Washing Machine :

I claim, first, The combination and arrangement of the rods, K, and weight box, L, with the shaft, C, arms, E, rocking pieces, F, and duted rollers, G, substantially as and for the purpose herein set forth.

Second, I also claim the arrangement of inclines, o and b, brake, I, shaft, C, rollers, G, and treadle, M, substantially as and for the purpose herein set forth.

36,979.—C. S. Hutchinson, of Burlington, N. J., assignor to W. T. Hopkins for an Improvement in Hooped Skirts :

I claim the pad, H, and straps, G and G', or the equivalents to the same, when connected to the waist belt and front tapes, B and B', and arranged for application to the wearer's person, substantially as set forth.

36,980.—T. W. Irvin, of Indianapolis, Ind., assignor to W. C. Holmes and Edward Dunn, both of Marion county, Ind., for an Improvement in Grain Separators :

I claim the combination of the corrugated hopper, K, with the angular tube, F E D, and valve, H H O a and b, all arranged and operating substantially as and for the purpose shown and described.

36,981.—John McKinnell, of London, England, assignor to John Hyslop, of 10 St. Jude's Square, Bradford, for an Improvement in Ventilating Apparatuses :

I claim, first, A ventilator for apartments or other enclosed spaces, composed of two concentric tubes or passages opening below in the ceiling or top of the apartment or inclosed space, and communicating with the external atmosphere at different levels, when used in connection with a deflecting flange, I, (adjustable or otherwise), to distribute the pure air within the apartment, substantially as set forth.

Second, The employment or use, in the ventilator described, of an adjustable flange or angular plate, which serves to close the passage either wholly or partially, when required, and which when open acts as a deflector to direct and spread out the current in a horizontal direction, as hereinbefore described.

Third, A ventilator for apartments, composed of two concentric tubes or passages, opening below in the ceiling or top of the apartment or inclosed space, and communicating with the external air at different levels, when used in combination with a horizontal tube or tubes, Q, for the ingress of pure air, substantially as and for the purposes set forth.

36,982.—Daniel Sherwood (assignor to himself and E. P. Woods), of Lowell, Mass., for an Improved Wire-gauze Strainer :

I claim, as an improved article of manufacture, a strainer for liquids made of corrugated or twilled wire cloth, substantially as described.

36,983.—Sidney Squires (assignor to C. B. Boyce & Co.), of Boston, Mass., for an Improved Clothes-Wringing Machine :

I claim the combination of the levers, L and H, constructed in the manner substantially as described, for the purpose specified.

36,984.—S. W. Wood, of Cornwall, N. Y., for an Improvement in Revolving Fire-arms :

I claim, first, Hollowing or cupping the stationary or fixed breech secured to or forming part of the frame or stock of a revolving pistol, and receiving and incasing the end of the cylinder and heads of the cartridges, having a fixed or stationary inclined plane, the whole arranged and constructed as herein described.

Second, In a self-cocking and discharging pistol, I claim revolving the cylinder and operating the hammer by means of a forked spring pawl in one piece, arranged as set forth.

RE-ISSUES.

1,354.—J. L. Booth, of Rochester, N. Y., for an Improvement in Grain Separators. Patented April 8, 1851 :

First, I claim the combination of a vertical upward blast, with a shaking or chaffing sieve which receives a portion of the blast, substantially as and for the purposes herein specified.

Second, The combination of the combination of the double bend (or bends), G, in the blast tube, and the open spout (or spouts), H, for the purpose specified.

Third, I also claim a valve, J, or its equivalent, in combination with a vertical, upward, separating blast and chaffing sieve, which receives a divided portion of the blast, for the purpose specified.

1,355.—John Magee, of Chelsea, and W. J. Towne, of Newton, Mass., assignees of said John Magee, for an Improvement in Ventilating Dampers for Stoves. Patented May 20, 1856 :

We claim the new combination of the damper, d, (Fig. 3), smoke pipe, i, and air inlet, c, so that the movement of the damper which diminishes the air inlet will increase the opening of the smoke passage, and that which increases the opening for the smoke will diminish the inlet for air, substantially in the manner and for the purposes above specified.

1,356.—John Magee, of Chelsea, and W. J. Towne, of Newton, Mass., for an Improvement in Stoves. Patented August 14, 1860 :

We claim the new arrangements of the smoke pipes and air valve, and mouth of the furnace, or their equivalents, so that they are brought into proximity on the same side of the furnace, substantially in the manner and for the purpose hereinbefore described.

EXTENSION.

C. B. Turner, of Buffalo, N. Y., for an Improvement in Brakes for Railroad Cars. Patented November 14, 1848 :

I claim, first, Constructing the brake so as to act simultaneously on all the wheels of the car or cars of the train, on opposite sides, by the momentum and resistance of the several cars, and the consequent contact of the bumpers, which actuate the rubbers, and by which the motion of the cars is arrested ; that is to say, I claim the combination of the rubbers, K, levers, D, shafts, C, G, bars, I, and rods, O E, arranged and operated in the manner and for the purpose above set forth, or other modes, substantially the same, or operated by manual power applied through the agency of the windlasses, e, chains, f, levers, b, rods, d, or other similar contrivances.

Second, I claim the manner of constructing the sliding spring bumper for operating the brake by the momentum and resistance of the cars, as described ; that is to say, I claim the combination of the slide, P, with the bumper, X, and spring, S, constructed, arranged and operating in the manner described, or other mode which may be substantially the same.

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