



[Reported officially for the Scientific American.]

LIST OF PATENT CLAIMS
Issued from the United States Patent Office
FOR THE WEEK ENDING JUNE 23, 1857.

GAS GENERATORS—Napoleon Aubin, of Albany, N. Y.: I do not claim the mixing of materials for making gas, nor the introduction of gas making materials into a retort by means of a charger, nor the described method of closing the retort, nor the introduction of highly heated steam into the retort, for such devices have been either known, used or patented before.
I claim the use of a charger arranged and operated substantially as set forth.

PRINTING PRESSES—F. L. Bailey, of Boston, Mass.: I claim the combination and arrangement of the nipper and holding springs applied to the sheet carrier, and made to operate therewith, substantially as described, and whether said springs be made stationary or adjustable laterally on their shaft.

I do not claim a sliding platen or plate moving out from beneath the type form for the purpose of receiving a sheet to be printed.
But I claim the sliding carrier or plate D', when made to move in an inclined or vertical direction for the purpose set forth.

I also claim the combination of the sheet carrier or plate D, with ways placed on the platen or vibrating frame D, on which it slides, so that it may assume the positions for receiving the sheet to be printed, and also for giving the impression to the same.

REDUCING TOPSAILS—Thomas Batty, of Brooklyn, N. Y.: I claim, first, The arrangement of one or more bunt pennants, H, connected with the front of the sail, passing up the front of the reef, and connected with the yard, and of a crane neck piece I, or its equivalent attached to the yard to work up and down said pennant or pennants, substantially as set forth, so that in lowering the yard, the wind may be expelled from the bunt of the sail towards the sides in the manner substantially as represented in fig. 2.

Second, The arrangement of the flat blocks, c, c, through which the reef pennants run on the top of the yard, substantially as and for the purpose set forth.

[In the many reefing devices for sails hitherto employed, they have a tendency to gather the bunt or slack of the sail towards the center, and thus it catches the wind and bulges out, rendering it difficult to tie the reefing cords. By this improvement, as the yard is lowered, the wind is pressed entirely out of the center of the sail towards the edges, causing it to come snug up to the yard, in which condition it is easily held, and the reef points or cords tied round the yard to secure it. It is an excellent improvement.]

POLISHING RAW HIDE WHIPS—Eugene Blattner, of Philadelphia, Pa.: I do not confine myself to the precise means described of driving the nooked spindles, as that may be accomplished in a variety of ways.
But I claim the grinding pulley, I, and spindles d and m, when a simultaneous rotary motion is imparted to the same, and when they are arranged for joint operation, substantially in the manner set forth and for the purpose specified.

HOLDING AND ADJUSTING PLANE IRONS IN THEIR STOCKS—W. W. Chipman, of Lowell, Mass.: I claim the use and application of the apparatus for holding and adjusting the plane iron, substantially as and for the purpose described.

GRINDING MILL—Ezra Coleman, of Philadelphia, Pa.: I am aware that concaves have been adjusted eccentrically in order to grind finer or coarser, but not to grind faster or slower, therefore I do not claim an eccentric adjustment of the concave of a grinder.

I claim having the concave of a cob cutter adjusted in a circular line concentric with its axis and relatively to the mouth of the feed hopper, by means substantially as specified, so that it may be set to grind faster or slower, substantially as and for the purposes set forth.

The means specified for ensuring the rotation of the cob cutter with the grinder and its retention in proper place where the grinder is adjusted longitudinally, substantially as and for the purposes set forth.
[This mill is very peculiar in its construction both as regards the mechanism for cutting up corn stalks into feed, and that for grinding grain so as to produce flour or meal. The ribs of the grinding cylinder are so constructed that they cut for one half their length, and act as mortars or pestles along the other half, and thereby operate more effectually upon the grain. The concave of the cob grinder is made adjustable, concentric with its axis, and can be set to cut faster or slower according to the power at hand. The grinding cylinder and cob cutter are on the same shaft, and both rotate together, but are independent in their longitudinal adjustment, and the two are partially separated by an elastic guard, so that nails cannot pass from the grinding hopper to the knives or stalk cutters. This mill, as a whole, is a very perfect machine, occupying but little space, and with a fanner can cut up feed and grind and bolt flour very rapidly and perfectly.]

SAW SET—Jacob Erdle, of West Bloomfield, N. Y.: I do not claim feeding the saw teeth to the punch by means of a pawl or hand, irrespective of the arrangement of the same, for that is a well-known mechanical device, and has been previously used for such purposes.
But I claim the two plates or hands, P M, when connected to the bar H, as shown, the bar H being actuated by the lever J, and the whole arranged substantially as described for the purpose of feeding the saw teeth to the punch in either direction as described.

[The devices claimed are very simple and efficient for the purpose of feeding the saw teeth to the punch both ways, and the punch is so adjusted that a perfect or true bearing action of the punch on the teeth is obtained to give it the proper set.]

BASKET HANDLES—Anthony Fass, of Philadelphia, Pa.: I claim basket handles as above described.

VAPOR BURNERS—Horatio Fairbanks, of South Brookfield, Mass.: I do not claim a burner formed with a vapor reservoir, and one or more secondary jets or jet pipes, for the purpose of vaporizing the liquid of the wick, so that the vapor so produced from said liquid may be burned as they may issue from a gas burner or jet pipe leading out of the upper part of the vapor chamber.
I claim my improved hydro-carbon vapor burner, as constructed with a secondary burner K, pipe H, recess D, formed as described, and a closing slide M, arranged to rotate on the body of the burner concentrically therewith, and constructed so as to be capable of either entirely or partially closing the recess D, so that air may be excluded more or less from the same, and heat be confined therein, substantially in manner and for the purpose as specified, when the said recess is provided with a secondary jet or burner, to operate as explained.

CENTRAL DRAFT JOINT OF CARRIAGES—Luther O. Rice, of Gaistoville, C. W.: I do not wish to confine myself to the precise arrangement and construction herein set forth, but would include all modifications which substantially embrace my invention.
I claim the central draft joint, P, when constructed, arranged and used substantially as described.

VANE GOVERNOR FOR STEAM ENGINES, &c.—Francis Gustine, of Medford, Mass.: I claim the disks of vanes E, operating directly upon the valve rod toes as described, whereby the valve is actuated by the varying deflections of the vanes, as set forth.

VALVULAR ARRANGEMENT FOR FAUCETS, &c.—Edward Hamilton, of Chicago, Ill.: I do not claim broadly the employment of conical valves in water cocks, nor broadly the arrangement of valves in such a manner as that the pressure of the fluid shall keep the valves tight in their seats—an example of both of these features may be seen in C. A. Fautz's patent, 1853.
But I claim the employment of a hollow conical perforated valve, b, in the manner substantially as described.

[This valvular arrangement in faucets, while it secures the keeping of them tight by fluid pressure easily, prevents them from sticking or becoming fast, and enables them to endure much longer than other valves, by obviating much friction.]

PUMPS—W. H. Harrison, of Philadelphia, Pa.: I do not desire to confine myself to the precise form of valve or bucket shown, as the same may be considerably varied without changing the result.

Neither do I claim the employment of two buckets moved simultaneously in different directions.
But I claim the combination of the chamber, A, barrels a and a', valved buckets B and C, rock shaft O, lever E and rods G and F, when the whole are arranged and constructed for joint operation, substantially in the manner and for the purpose specified.

PICKER SAWING MACHINES—John Haw, of Old Church, Va.: I claim as an improvement in picker saw mills the overhanging of the saw between braced guides, d and e, the space between which is adjustable by wedges, i, and slotted braces, l and m, operating as specified.

CONSTRUCTING STORES—W. L. Johnson, of Peytonsville, Tenn.: I am aware that stores or other buildings have been before constructed in such manner as that the fronts could be thrown open, being hinged at their sides as doors, and that the shelves, counters, &c., have been built on trucks running or resting on rails laid in the floor of the building, and do not wish to be understood as laying any claim thereto.

I claim constructing the fronts, A A, with rails, b, corresponding to those on the floor, and hinged or pivoted thereto for the purpose of throwing down the said fronts in the plain of the floor, and forming a continuous road or track on which the trucks containing the counters, goods, &c., may be readily run out or clear of the building as described.

MANUFACTURE OF IRON—Wm. Kelly, of Lyon Co., Ky.: I claim blowing the blast of air, either hot or cold, up and through a mass of liquid iron, the oxygen in the air combining with the carbon in the iron, causing a greatly increased heat and boiling commotion in the fluid mass, and decarbonizing and refining the iron.

SAWING MILL—J. G. Kennedy, of Cincinnati, O.: I do not claim any parts of the machinery composing the improvement when taken separately for purposes set forth.

But I claim the arrangement of the several parts of machinery and saw employed in one frame, by which I am enabled to change and run the saw carriage in either direction or sawing both ways, or if desired, saw in one direction, and run the carriage back, as usual, in the other direction, without sawing, all as represented, and for purposes specified.

BORING MACHINES—L. B. Lloyd, of Warwick township, Pa.: I claim the combination of spring draw rod and table, arranged and operating to limit the depth of hole as described.

FINISHING BRUSH HANDLES—Thomas Mitchell, of Lansingburg, N. Y.: I claim the arrangement and combination of mechanical devices set forth and described in the above specification, constituting a machine to be used for the purposes and in the manner set forth, viz., platform D, with revolving cutters shaped and operating as described, crown saw O, with the arms, d, d, and the adjustable platform and cutter wheels, K and M, with their cutters, substantially as set forth in the specifications and drawings.

HYDRANT—G. P. Perrine and J. E. Boyle, of Richmond, Va.: We claim the hollow piston rod and nozzle when so constructed and arranged in combination with cylinders of unequal diameters, and their corresponding pistons or plungers, that they will be elevated by the pressure of the water from the supply pipe upon the under surface of the piston, p, and the water withdrawn therefrom for the purpose specified.

SHIPS' WINDLASSES—J. Peavy and Abraham Sanborn, of Bangor, Me.: We disclaim the mere placing of the pawls above and below the fulcrum of the lever.

But we claim the attachment of the pawls to the slides a, a', operated as and for the purpose specified.

STRAIGHTENING KNIFE BLADES—H. Pierce, of Claremont, N. H.: I do not claim the device for raising and dropping the weight, and I do not wish to confine myself to the rendering of the attachment of the pawls to the slides a, a', permanent, and the lower die self-accommodating to the tapering form of the blade, or both dies may be made adjustable.

But I claim the employment, in conjunction with a drop weight of self-adjusting dies, in the manner and for the purpose set forth.

ENAMELING IRON PIPES AND HOLLOW WARE—Edward Pierce, of Philadelphia: I claim the enameling of the interior surfaces of pipes or cast iron ware by placing a vitrifiable compound on the core before the core is inserted into the mold, in the manner and substantially as described.

SAFETY STEAM BOILERS—W. G. Pike and Isaac R. Scott, of Waltham, Mass.: We do not claim regulating the intensity of furnace fires by closing the dampers in the draft and smoke pipes by means of a float within a water chamber.

But we do claim the described arrangement of the bent mercury tube, D, with its float and the parts immediately connected therewith and the steam pipe, f, whereby the pressure within the boiler is indicated to the eye, the dampers are regulated to suit the pressure required, and when the pressure within the boiler becomes excessive, the fire is extinguished, by the escaping steam, thereby forming a safety regulating apparatus not requiring the supervision of the attendant.

LIGHTING STREET GAS—John Reese and Chas. N. Tyler, of Washington, D. C.: We claim the gas lighter described, consisting of the sliding bar, spring E, and guard, e, arranged and operating in the manner and for the purposes set forth.

HARDENING AXES, &c.—J. N. Rockwell, of Napanock, N. Y.: I do not claim broadly the hardening of axes or other tools by admitting a stream of water upon their surfaces, as such methods have been long known.

I claim in a tempering device, providing the box or holder B, in which the ax is placed with one or more valves, b, arranged and operating substantially as described.
[The ordinary process of hardening axes by plunging them in a highly heated condition into cold water causes some of the water to assume the spheroidal state on the surface of the metal, which prevents it from equal and sudden cooling, thereby causing soft spots in it. The object of this improvement is to obviate this difficulty. The heated ax to be hardened is confined in a close box having one or more valves; this box is lowered into a tank of water to a certain depth; the valves are suddenly opened, and the water rushes in, cooling all parts of the metal suddenly. This is a good improvement, and applicable to various tools.]

CANDLESTICKS—Timothy Rose, of Courtlandville, N. Y.: I claim, first, Making the socket of the candlestick and the sliding cup within it of greater diameter than the candle intended to be used therein, for the purpose set forth.

Second, I claim the spur in the bottom of the cup combined with the stays on the inside of the top rim for the purpose of holding the candle in proper position, having space around it for the melted tallow to pass down into the cup, substantially as described.

SECURING AND ADJUSTING PLANE IRONS IN THEIR STOCKS—Wm. Stoddard, of Lowell, Mass.: I claim the grooved stand, I, double headed bolt, H, in combination with the cam, A, and its stand, C, for the purposes set forth and described.

CLEANING RICE—John F. Taylor, of Charleston, S. C.: I do not claim separately the screw, F, for that has been previously used.

Neither do I claim the peculiar form of the vessel, A, for both have been previously used for the same or analogous purposes.

I claim the screw, F, and cylinder, G, placed on the rotatingshaft, C, in combination with the spiral projections or ledges, b, formed on the plate, E, and placed at the bottom of the vessel, A, the whole being arranged so as to operate conjointly, as and for the purpose set forth.

[Under the outer husks, rice has a coarse floury coating, which has to be removed to clean it perfectly. Heretofore this has been done by beetling it in mortars—a slow operation—by which the grains are liable to be bruised and broken. This invention consists in giving motion, by means of a screw cylinder, to a quantity of rice placed in a proper formed vessel, whereby the kernels are made to rub against one another, and are thus rapidly cleaned, without breaking them.]

CALIGRAPHS—Chas. Thurber, of Worcester, Mass.: I do not wish to be understood as making claim broadly to the combination of two pens or markers by levers of equal length and jointed rods, and these features combined with a table or desk by universal joints, as such combination has long been known and used in an instrument described for the purpose of making exact copies simultaneously, and has been entirely superseded by the copying press for taking impression copies, and the mode of operation resulting from the said combination is substantially different from my invention, and could not produce the result for which my said invention was designed.

Nor do I wish to be understood as making claim to the combination of a stylus or tracer with pen or marker by levers of different lengths connected by jointed rods, as such a combination has long been known and employed as a pantograph for copying drawings, so as to reproduce them on an enlarged or reduced scale, and could not alone achieve the purpose for which my invention is designed.

I claim combining a stylus or tracer with a pen or marker, by means of levers of different lengths, connected by jointed rods, substantially as described, that the pen or marker may follow accurately, but on a reduced scale all the movements imparted to the stylus or tracer, in combination with the connection of this mechanism with a desk or table, by means of an universal joint, substantially as described, to give freedom of exact copies in all directions to the stylus or tracer and to the pen or marker, whereby a person can write the usual sized characters by tracing characters of a large size, as set forth.

I also claim the stylus or tracer, and the pen or marker combined, substantially as described, with the apparatus or its equivalent for shifting the paper, whereby the paper is shifted to the distance equal to the space between two lines, by carrying back the stylus or tracer preparatory to tracing another line, substantially as set forth.

STEAM BOILERS—Harry Whitaker, of Buffalo, N. Y.: I do not claim generally surrounding the fire by a water jacket. An example may be seen in E. Andrus' withdrawn application, May 27, 1856.

Nor do I claim annular fire chambers in boilers.
Nor do I claim, irrespective of the arrangement I have described, the employment of ascending and descending fire flues. Examples of such flues may be seen in the withdrawn applications of Thomas Greer, Oct. 1847, and Thomas E. Warren, July 19, 1852; but the arrangement of flues with a series of ascending and descending flues is quite different from mine.

I claim the arrangement in an upright cylindrical boiler of an annular fire chamber, P, a series of descending fire tubes, F, a smoke box, Q, and a series of ascending fire tubes, H, H, substantially as described, to convey the products of combustion from an external fire through the center of the boiler.

[The object of this improvement in steam boilers is to obtain a very large amount of heating surface with a small body of water, and a proper circulation of the water, so that no part subjected to a high heat shall be left uncovered with water.]

PREPARING INDIA RUBBER CLOTH—Chas. Winslow, of Lynn, Mass.: I claim the method of preparing elastic cloth for use by the application thereto of parallel lines in the direction of the shortest diagonal of the meshes formed by the threads of the cloth.

EXCAVATING TUNNELS—Chas. Wilson, of Springfield, Mass.: I do not claim a single set of one or more rotary disk cutters applied to a common revolving shaft, and made to pass across a stone, and to take a succession of chips or cuts from it, essentially as represented and described.

I do not claim the drill, W' Y' Y', as the same might be used by hand, in any other machine, and becomes a separate invention, that may hereafter be secured by Letters Patent.

I claim first, Forming grooves in stone or other mineral substance by means of rolling disk cutters on axis, set in alternate opposite directions, and acting substantially as and for the purposes specified.

Second, I claim arranging a series of rolling disk cutters revolving in such a manner as to cut a deep annular groove into the rock, substantially as specified.

Third, I claim the arrangement of the scoops, A2, and buckets, B2, in combination with the cylindrical wheel, I, and rotary cutters, to free the annular groove of the chips and dirt abraded by said cutters, substantially as and for the purposes specified.

Fourth, I claim a bed plate secured in place by the jack screws, L2 M2, or their equivalents, in combination with a sliding frame, or its equivalent, projected as the cutting progresses by means of a screw acting the fixed and moving parts, substantially as and for the purposes specified.

BACKGROUND FOR PHOTOGRAPHS ON GLASS—J. W. Wykes, of Wheeling, Va.: I do not claim the blacking of the glass behind the image.

Neither do I claim the reflecting background, such being well known.
But I claim the application of the described enamel to collodion and albumen pictures on glass, substantially in the manner and for the purposes specified.

ATTACHING AIR CHAMBERS TO PUMPS—Charles N. Lewis, (assignor to Geo. C. King), of Seneca Falls, N. Y.: I do not claim arranging the air chamber, C, so that it may be turned on the cylinder, in the manner brought in any desired position, for that has been previously done.

But I claim connecting the air chamber, C, with the cylinder, A, by means of the stuffing box G, and follower H, applied to the pump, and arranged relatively with the several parts as shown and described, for the purpose set forth.

[This improvement relates to single-acting cast iron pumps with air chambers, whereby their construction is greatly simplified. The parts are so made relatively that by screwing the follower in the stuffing box, the air chamber is fastened to the cylinder and the spout turned in any direction.]

WATER METER—Peter H. Niles, (assignor to himself and Abel Douglas, Jr.), of Boston, Mass.: I claim the two pistons operating in a single cylinder, in the manner substantially as set forth, in combination with the differential piston as described.

Second, I claim the air chamber, F, between the pistons, C' C', operating in the manner substantially as set forth.
Third, I claim float valve, w, in combination with the two-way-cock, U, whereby, when the water is shut off, all the chambers of the meter are emptied, as set forth.

But I claim making the chamber to receive the charge in the form of a cartridge partly in the barrel and partly in the breech, and so much larger than the general bore of the barrel as to have a shoulder in front to retain the cartridge case thereon till after the discharge, whereby the joint between the breech and the barrel is brought near the middle of the chamber, and not in a corner at the extreme rear or in front thereof, and is caused to be packed by the lateral expansion of an elastic cartridge case.

And though I do not claim the clamping lever represented, for securing the barrel to the breech, I claim furnishing the said clamping lever with a projection, l, so arranged as to be acted upon by the hammer in the act of cocking the latter, for the purpose of insuring locking the breech and barrel together before the discharge, and effecting the operation of cocking the hammer and locking the breech and barrel by one movement.

I further claim the sight, m, constructed with a round stem, n, flattened on one side, and having a spring, p, applied to it, substantially as described, for the purpose of enabling it to be adjusted and secured at various elevations, as set forth.

[It is difficult to construct breech-loading firearms so as to make the breech joint tight; after a few shots the joint is liable to leak. This improvement provides a cartridge case, which serves as a packing to keep the breech joint always tight when the charge is exploded. A device is also employed which insures the locking of the barrel and breech together at the time of discharge.]

TAPS AND DIES FOR CUTTING SCREWS—Ira A. Richards, (assignor to Silas Stevens), of East Brookfield, Mass.: I claim first, Cutting away the teeth of taps and dies on one side, substantially as and for the purposes set forth.

Second, Making the opposite scores, which are parallel with the slides in which the two parts of a die work, or at right angles to the partition of the die, both on the same side of the line drawn through the center of the die, substantially as and for the purposes set forth.

[This invention consists in cutting away every tooth of a tap or die on one side, or cutting away the successive teeth on opposite sides alternately, by which means each tooth cuts on one side only, clears itself better, and in cutting screws the stripping of the thread is prevented, should the dies continue to be turned after a full thread is obtained. By forming the opposite scores of a two part die, as set forth in the second claim, the die cuts the bolt much easier in the screwing operation.]

STEAM WHISTLES—Sylvester W. Warren, (assignor to himself and Dexter N. Force), of Brooklyn, N. Y.: I claim the cap, d, and whistling mouth or mouths, e, connected to the steam pipe, substantially as specified.

I also claim placing two or more whistling mouths or edges in the whistle at different distances from the orifice, for the escape of steam, so as to adapt one whistle to different pressures, without changing the position of any of the parts, substantially as specified.

BENCH PLANE—Thos. D. Worrall, of Lowell, Mass., (assignor to Thos. F. Caldwell, of Charlestown, Mass.): I claim the improved manufacture of carpenters bench plane or jointer, as made with its handle, its wooden stock to which said handle is affixed, and a separate metallic cutter holder and cutter clamping devices arranged together, substantially as specified.

CYLINDRICAL THROTTLE VALVES—James H. Simmons, of Erwin, N. Y.: I claim the arrangement of the latch, h, upon the stem of the valve, playing in the recess, k, within the interior of the head of the cylinder as set forth.

BORING MILLS—Wm. Sellers, of Philadelphia, Pa.: I claim revolving the face plate of boring or turning mills in a support, as near as convenient to the periphery thereof, substantially as described.

I also claim the adjustable step or center bearing, when this is combined with an outer support, substantially as described.

BREECH-LOADING FIREARMS—John Sheenkl, of Boston, Mass.: I claim first, The method described of stopping the hammer at half cock, by the pressure of the thumb, as set forth.

Second, I claim the bar, K, constructed as described, and operated by the pin, n, and lever, l, for the purpose of cocking the gun and of returning the barrel into line with the thimble, C, and locking it therewith, substantially as set forth.

ADDITIONAL IMPROVEMENTS.
SPOKE AND AX HELVE MACHINE—Owen Redmond, of Rochester, N. Y. Patented Oct. 30, 1855; I claim the jointed guides having slots, c d e, in combination with the slots having the relative position, as set forth.

SAWING MACHINE—Wm. P. Wood, of Washington, D. C. Patented Feb. 26, 1856. Re-issued March 25, 1856; I claim the vertical guides, D, and guide rollers, m and n, in combination with the swivel link saw bearings, I, arranged and operating in the manner set forth.

DESIGNS.
COAL COOKING STOVES—Conrad Harris and Paul W. Zoimer, of Cincinnati, O.

WOOD PARLOR STOVES—Conrad Harris and Paul W. Zoimer, of Cincinnati, O.

DINING ROOM STOVES—Conrad Harris and Paul W. Zoimer, of Cincinnati, O.

COOKING STOVES—S. W. Gibbs, of Albany, N. Y., (assignor to North, Chase & North, of Philadelphia, Pa.)

STOVES—N. S. Vedder, of Troy, N. Y., (assignor to North, Chase & North, of Philadelphia, Pa.)

STOVES—Jacob Beesley & E. J. Delaney, (assignors to Cresson, Stuart & Peterson), of Philadelphia, Pa.

Enormous Gold Boulder Found.
The *Marysville Herald* says that the Downville Tunnel Co., at Centerville, have found the largest boulder containing gold perhaps ever struck in California. Up to last accounts they had extracted \$17,000, and had not yet ascertained its full value. They estimate the amount of gold it contains at not less than \$100,000. This boulder is a fair set-off to one from Australia, which the English papers have recently mentioned as being on exhibition in London, and which weighs—quartz and gold—four hundred pounds, and is valued by some sanguine individual at \$100,000. It is very rich in gold, but not near so large as the one found at Centerville.

Antidote to Mosquitoes.

A certain preventive to attacks of mosquitoes, black flies, &c., is said to be: glycerine 4 ounces, oil of peppermint 2 1-2 drachms, oil of turpentine 4 drachms. The face, neck, hands, in fact, all parts exposed, to be rubbed with the mixture. This was given me by an eminent American physician, previous to going into the State of Maine on a hunting expedition. I never knew it used without perfect success.—*Correspondence of Philadelphia Ledger.*