



[Reported Officially for the Scientific American.]

### LIST OF PATENT CLAIMS Issued from the United States Patent Office FOR THE WEEK ENDING SEPTEMBER 23, 1856.

**FLY-TRAP**—Samuel Arnold, of Green Hill, Tenn.: I claim, first, the employment of the revolving perforated and grooved hollow cylinder C, applied in connection with the reticulated piston D, and glass vessel B, substantially as and for the purpose set forth.  
Second, the arrangement for retaining the piston elevated while the flies are being entrapped, in connection with the device for releasing it when necessary, substantially as set forth.

**Ovens**—Hosea Ball, of New-York City: I claim, the perforated interior chamber, in combination with the rotary reel, and the swinging platforms thereon, self-discharging, substantially as set forth.

**REEFING TOPSAILS**—Isaac Boss, of Brooklyn, N. Y.: I claim, first, the running of lines from the reef, between the head of the topsail and the fore part of the yard, thence direct to the top mast head.  
Second, I claim the arrangement of reef tackle beneath the yard, running from the end of the yard to the quarter on deck.  
Third, I also claim the peculiar mode of strengthening the sail by bands and double ropes, as described.

**CORN PLANTERS**—Malender Bates, of C. ton, N. Y.: I do not claim the application of a valve to the bottom of a tube.  
Neither do I claim the construction of a tube for the purpose of conveying seed from the hopper to the ground, for these principles have been variously applied, for the same purpose, in various machines.

**NO. 6** I claim operating an axis by means of a handle, lever, and spring attached to the handle of seed planters, for these also have been used in other machines, to effect different purposes—such as drawing slides, reciprocating plates, and opening apertures.  
But, I claim, the rotating ratchet-wheel, r, provided with feeding apertures, in combination with the wire-screen, w, or its equivalent; the spring pawl, m, guard-pin, i, and wire button, o, acting in the manner and for the purpose described.

**FEEDING AND SAWING SHINGLES**—George Craine, of Fairfield, Iowa: I claim, so arranging the carriage, with regard to the saw, as that the saw shall enter the bolt at or near the center, in length of the shingle, and cut towards both its ends at the same time, in manner, and for the purpose set forth.  
I also claim a device for feeding the bolt to the saw, so as to take the shingles therefrom "but and point," alternately; the worm-wheel, o, working into the double-racks, q, in the manner set forth.  
I also claim the combination of the hinged piece G, with its pin, l, and feeding tooth, e, and the ledge, f, and trigger, g, on the fixed piece, M, for the purpose of connecting and disconnecting, at proper times, the carriage with the feeding shaft, H, so that it may traverse on its ways, as set forth.

**STAVE JOINTER**—A. H. Crozier, of Oswego, N. Y.: I do not claim the wheel, A, for that has been previously used.  
But I claim the wheel A, with cutters, D, attached—in combination with the adjustable gauges or plates, G, arranged as shown and described, for the purpose set forth.  
**ADJUSTING THE SLATS OF WINDOW BLINDS**—Benajah C. English, of Hartford, Conn.: I claim, first, the manner of adjusting the slats of window blinds, by the use of the gear-wheel and rack.  
Second, I claim the method of fastening the slats at any required angle, by the use of the clutch.  
Third, I claim, the whole in combination, as set forth.

**MACHINE FOR PAINTING CARRIAGE WHEELS**—S. B. Tuller, of Worthington, Mass.: I claim, the vibrating and rotating shaft, C, passing into the tub, B, and arranged and operated as shown, or in an equivalent way, for purpose specified.

**EXPLOSIVE SHELL**—A. M. George, of Nashua, N. H.: I claim, the described arrangement and combination of the chambers, D E, and b b, c, to constitute a new projectile, for the scattering of melted metal or other incendiary substances.

**FEED ROLLS FOR STRAW CUTTERS**—Alex. Gordon, of Rochester, N. Y.: I claim, the construction and arrangement of the feed roller, B, and shaft, s, in the manner substantially as described, whereby the advantages set forth, are secured.

**METALLIC BRACES FOR HEELS OF BOOTS AND SHOES**. George W. Griswold, of Carbondale, Pa.: I am aware, a metallic plate has been inserted in the heel and counter of an overshoe, for the purpose of forming a bearing, or nut, for a screw to pass through to hold the overshoe to the inner shoe—this I do not claim, as it will not effect the object I have in view.  
But I claim the application to boots, or shoes, of a brace or support, for uniting the heel and counter, and to prevent one from twisting, or running over on the other, substantially as described.

**DEVICE IN MACHINES FOR MANUFACTURING BED PINS**—Henry Gross, of Tiffin, Ohio: I disclaim the throwing out of the finished pin, by a spring, and the employment of a movable cutter for forming the head, when a distinct and separate operation is required to bring it into action, as in W. McBride's patent of Feb. 28th, 1854.  
But I claim, fixing the head forming V cutter to a lever operated by the longitudinal movement of the pin, as described, whereby but one hand of the operator is required for forming the entire pin.

**HAND STAMP**—Chas. W. Hackett, of Elmira, N. Y.: I claim, the arrangement of a rotating printing press with two sets of type alternating with each other, in such manner that at the same time one set of types is leaving its impression, the opposite or corresponding set is being supplied with ink—the whole constructed and arranged, substantially as set forth.

**CORN SHELLERS**—James J. Johnston, of Allegheny, Pa.: I claim, the drum, D, with the two sets of teeth, arranged as described, and its combination with the vertical guide boards, E F, and spring plates, G H, substantially as set forth, and for the purpose described.

**BRICK MACHINES**—Wm. A. Jordan, of Thibodaux, La.: I do not claim the use of double tables or the employment of a rotary scraper, as such devices have been used before.  
But I claim, the tables A and B, and shoving heads, e and f, when arranged to operate in relation to each other in the peculiar manner described, in combination with the rotary scrapers, K K', and curved guards, O O', the whole being constructed and operating in the manner and for the purposes set forth.

**MANUFACTURING INGRAIN CARPETING**—David B. Kerr, of New-York City: I do not claim the invention of a party-colored carpet; nor the manufacture of a carpet composed in part of solid colored yarn, and in part of party-colored yarn, when the two are combined in a manner different from that described as my invention.  
Nor do I claim any particular method of party-coloring yarn for carpets, nor the weaving of carpets in a powerloom. Nor do I limit myself to a carpet in which all the warp threads are party-colored.  
But I claim, a party-colored ingrain carpet in which the warp threads of one or more plies are party-colored, whole or in part, and are combined with solid colored warp threads to form the design, substantially as set forth.

**MACHINE FOR NOTCHING HOOPS**—Daniel Lamson, of East Weymouth, Mass.: I claim the knife, E, attached to the reciprocating frame, B, in combination with the inclined plate, D, attached to the frame, A, substantially as described, for the purpose specified.

**OMNIBUS**—D. O. Macomber, of New-York City: I claim the arrangement, substantially as specified, of two series of independent seats, on each side of the carriage-body; but this I claim only when the backs of the seats are curved, and the front edge set obliquely, as set forth, and for the purpose specified.

I also claim, connecting the body with the frame of the running gear, so that it will rock thereon, substantially as described, in combination with the screw-bolts and adjusting nuts at the ends, or equivalent therefor, for the purpose of setting the body at any desired inclination with the frame of the running gear.

And finally, I claim, connecting the brake levers with the shaft of the stop and foot-wheel, substantially as specified, in combination with the strap which passes into the inside of the carriage-body, to be operated by the passengers if required, substantially as described.

**SECURING SPOKES IN THE HUBS OF WHEELS**—Robert Moor, of Westport, Ind.: I do not claim as my invention, the device of two screw-nuts working on one bush, for the respective purpose of securing the spokes in the hub, and the hub on the axle.

Neither do I claim the dove-tailing of the spoke within the hub; knowing these devices to be old.  
But I claim, first, the described oblique form of spoke-mortise, enabling all the necessary beveling and taper of the spoke to be on that side which is in advance, when the wheel is rotating forward, leaving the rear side straight for its entire length—thus adding to the strength, and reducing the labor of constructing the spoke, as fully explained.

**AIR ENGINES**—Thomas McDonough, of Middletown, Conn.: I am aware that the alternate expansion and contraction of atmospheric air, and other permanent gases, have been employed as a motive agent, in engines of various constructions.  
And I am also aware that the gases so employed, have been made to pass alternately in opposite directions, through a vessel presenting a large amount of metallic surface—so that in passing in one direction, the metallic surfaces should take up caloric from the heated gas when passing in one direction, and transfer it back to the said gas when passing in the opposite direction.

And I am also aware that such metallic surfaces have been composed of a series of metallic disks or sheets of wire-gauze, but so arranged that the air or gas had to pass through the meshes of the wire-gauze which had the effect of impeding the passage. I do not, therefore, wish to be understood as making claim to any of these things.  
I claim, combining the hot and cold cylinder (or cylinders) by an intesposed cylinder, substantially as described, to prevent the one from being affected by the temperature of the other, as set forth.

I also claim, the working piston (or pistons) working in the cold cylinder, in combination with the dummy piston (or pistons), which extends from the cold to the hot cylinder, substantially as and for the purpose specified.

I also claim, the vertical position of the pairs of cylinders, substantially as described, that the heated part of the engine may be above the cold parts, for the purpose set forth, in combination with the means described, for keeping the lower part of the engine cold, substantially as described.

And I also claim, the arrangement of the metallic surfaces through which the air or other gas, passes—by making such metallic surfaces of sheets of wire-gauze, rolled up and placed in a surrounding vessel, so that the air or other gas shall pass in films, between the several coils, substantially as and for the purpose specified, in combination with the means described, for passing through the meshes of wire-gauze, as set forth.

**MAKING BRASS KETTLES**—O. W. Minard, of Waterbury, Conn.: I claim, the use of rotary shears or cutters, having a hinged or sliding piece, constructed and operating as described, to carry one of the shafts and one of the cutters from a cutting position, and to quickly and accurately replace it when desired.

**MACHINE FOR GRINDING SAWS**—Albert S. Nippes, of Lower Merion, Pa.: I claim, in combination with the face-plate of a machine for grinding saws, a guide, pattern, or former, which can be used for giving shape to the saw-plate, by causing the face-plate or some to approach or recede from each other, to vary the bevel or thickness of the saw-plate, or to compensate for the wearing away of the stone, whilst acting on said plate, or both, substantially as described.

**BLOW-PIPES**—Stewart B. Palmer, of Tully, N. Y.: I do not claim, separately, the pump nor the mode of operating the same.  
Nor do I claim the arrangement of the nozzle, for these have been used in similar or analogous devices.

But I claim, the two wind-chests, E F, connected by the pipe, G, provided with the faucet, H, when said chests, thus connected, are arranged and used in connection with the pump, I, reservoir, M, wick-tubes, N N, and nozzle, P, connected with the pipe, O, substantially as described, for the purpose specified.

**LUBRICATOR**—Norman W. Pomeroy, of Meriden, Conn.: I claim, so constructing and connecting the disk which forms the bottom of the oil vessel, that by reason of its curved or waving shape, the central part may be readily pressed inward by the thumb or finger, while its shape will cause it to return to its original position, immediately on removing the pressure, when constructed, connected and made to operate, substantially as described.

**HAY RAKES**—Isaac J. Robbins, of Penn's Manor, Pa.: I do not claim, exclusively, the use of independent teeth for horse-rakes; the same having been described in the patent granted to Calvin Delano, Feb. 7th, 1849.  
Neither do I claim the exclusive use of revolving teeth for horse-rakes.

But I claim, the hinged arms, D D, with their revolving teeth, E E, in combination with the sliding-blocks, a a, the whole being constructed substantially in the manner and for the purpose specified.

**HYDRAULIC BRICK PRESS**—Ethan Rogers, of Cleveland, Ohio: I claim, the employment or use of two pumps with the mechanism for working the same under different pressures, when arranged to operate in relation to each other and mold C, for the purpose of pressing and removing the brick, in the manner described.

**SELF-REGULATING DRAUGHT FOR CHIMNEY-TOPS**—Josiah A. Royce, of Lee, Mass.: I claim, the application to the top of a chimney, or draft flue of a frame having one or more turning slats or dampers, hung in it—said frame being provided with a rudder, so as to be always turned to the proper position, by the action of the wind; and the dampers being combined with a spring-mast with sail on top, so as to be closed more or less by the action of the wind, and automatically opened during a calm, substantially as and for the purpose set forth.

**HOOP MACHINE**—Jos. Sawyer, and Sylvester Sawyer, of Fitchburg, Mass.: We claim, the methods described of hanging the knife and connecting it with the feeding-rolls, for the purpose of retaining it midway between the rolls, and parallel with the direction of the hoop-pole.

**CARDING ENGINES**—A. D. Shattuck, of Grafton, Mass.: I claim, the application to the main cylinder of carding-engines, of two or more variable cylinders, in combination with a doffer, operating in the manner and for the purpose, substantially as set forth.

**GRAIN SEPARATORS**—Hamilton E. Smith, of Philadelphia, Pa.: I claim, the arrangement of the vertically vibrating shakers, and horizontally vibrating screens, for the purpose of separating grain or other material—the whole being operated by a combination of mechanism, substantially such as described.

**THRASHING MACHINE**—Isaac S. Spencer, of Guilford, Conn.: I do not confine myself to any precise angle of the ribs or flanches, c, nor to the precise form, as they may be either curved or straight.  
I claim, the cylinders F G H, provided with ribs or flanches, c, placed obliquely or angularly with their axes, substantially as described, for the purpose specified.

**CHURNS**—Franklin Thorpe, of Shelbyville, Ill.: I claim, the described arrangement and combination of the fast and loose buckets—the latter being slackened from the former, in the act of opening, and tightened to it in the act of closing, by the screw upon the spindle, or equivalent devices, for the purposes explained.

**TOOL FOR FORMING GROOVES AROUND THE ORIFICE OF BOTTLES**—Amasa Stone, of Philadelphia, Pa.: I claim, in the described tool for forming the orifices of bottles or other vessels, made from plastic substances, with a groove around the orifice, the revolving flange, F, constructed and arranged to form a groove in the end of the bottle-nose, or other vessel, substantially as described.

**FEATHER-EDGE GAUGES**—G. G. Townsend, of Rochester, N. Y.: I claim, the combination of the knife, K, and feather-guard, F, for the purpose set forth—they being constructed and arranged, substantially as described.

**LANTERNS**—Sinclair Shannon, of Buffalo, N. Y.: I claim, connecting the lamp-pot to the main body of the lantern, by the bail, substantially as set forth.

**LOCK FOR FREIGHT CARS**—Thomas Slaight, of Newark, N. J.: I claim, the hasp G, fitted over the socket F, of the lock, and secured thereon by the plug, or bolt, H, substantially as described.

**CARDING ENGINES**—A. D. Shattuck, of Grafton, Mass.: I claim, the stripper B, in combination with the doffer C, and with the main cylinder of a carding-engine, operating in the manner, substantially as set forth.

**DEVICES IN SAWING MACHINES**—Wm. P. Wood & S. De Vaughn, of Washington, D. C.: We claim, first, the arrangement of the driving-beam, H, in combination with the rocking-beams, E, in the manner substantially as and for the purposes set forth.

Second, We claim the arrangement of the fluted feed-rolls, O and P, in combination with a reciprocating wedge shaped saw-blade, substantially as and for the purposes described.

Third, We claim, the wedge-shaped saw-blade, M, when constructed and operated in the manner, and for the purposes set forth.

**WARM AIR FURNACES**—Wm. M. Wright, of Pittsburgh, Pa.: I do not claim radiating or projecting surfaces, which are cast with the fire-pot or upper section of the furnace, as used in James Miller's patent of Oct. 16, 1838.

But I claim, first, the manner of increasing the radiating surface by the use of the movable plates, all in the manner and for the purpose set forth.

Second, The manner of constructing the ash-box, with its rim, m, to receive the fire-pot, and projecting arms or supports, o o o, substantially in the manner and for the purpose specified.

**MACHINES FOR SAWING MARBLE**—Alonzo Webster & D. K. Bennett, of Montpelier, Vt.: We do not claim, giving to the saws a lateral motion, by means of horizontal shafts, having right and left-hand screws thereon.

But, we claim, the combination and arrangement of the movable stirrups, D, cross-bars, H, and the arbors, I, in the reciprocating frame B, as set forth.

**BOAT OARS**—Rufus Rode, of Manchester Township, Pa. (assignor to John Denig, of York, Pa.): I claim, the combination of the oscillating plate and double-jointed arms, forming a double-jointed boat oar, operating on an ear or rower-box, as described, or in any manner substantially the same, for the purpose of enabling the oarsman to row forward with his face fronting the bow of the boat.

**BELT PUNCH**—Augustus Simpson, of Worcester, Mass. (assignor to Samuel E. Bingham, of Weston, Mass.): I claim, the punches and dies for various purposes have been used, wherein the one enters the other, but mine differs from all those heretofore used, in causing the cut to open as the cutter passes through, as shown in fig. 2, making an entirely different principle of cutting, from those which is the principle of action that I claim, or, in other words—

I claim, the combination and arrangement of the tit, D, and the cutter, A, when constructed and operating as described, whereby the conical form is given to the article punched, the cutting facilitated, and performed with the edge of the cutter free, as set forth and described.

**READING AND MOWING MACHINES**—Wm. P. Wood, of Washington, D. C. (assignor to Samuel DeVaughn & W. P. Wood, of same place): I do not claim a balance frame supported and turning upon an axis of motion, independent of the axis of motion of the driving-wheel, of itself.

But I claim a balance-frame, A, supported and turning upon an axis of motion back of the axis of the driving-wheel, when used in connection with angular or oval shaped gearing, or its equivalent, and a bifurcated stanchion-brace, Q, in combination with a main frame, H, rigidly supported at its forward end upon a truck carriage, I, or wheels; the whole being constructed, arranged and operated, in the manner substantially as described.

**CAST-IRON PAVEMENTS**—Geo. M. Ramsay, of New-York City: I am aware that cast-iron voussoirs have been made into an arch for bridges and other purposes, and that the bond of connection between has been effected by means of lugs on the voussoirs, and wrought-iron clips or bands, passing over the lugs of the adjoining voussoirs. I, therefore, wish to be distinctly understood, as not claiming broadly this mode of connection of cast-iron blocks by means of lugs and clips.

But I claim, the iron hexagonal paving-blocks, with legs or lugs below, as described, when united and secured by the iron clips or bands, so as to form the flexible pavement, as described.

#### DESIGNS.

**PARLOR STOVES**—Samuel F. Pratt, of Boston, Mass. (assignor to W. & J. Treadwell, and Perry & Norton, of Albany, N. Y.)

**OVEN STOVES**—Samuel F. Pratt, of Boston, Mass. (assignor to W. & J. Treadwell, and Perry & Norton, of Albany, N. Y.)

#### Burning Water.

It is said that when this discovery was first made by Sir Humphrey Davy, the large laboratory of the Royal Institute could not contain the concourse of people who came daily to witness its effect. It caused more astonishment than any other substance which science has revealed, excepting, perhaps, phosphorus, which was exhibited in every court in Europe. It is only necessary to drop a piece of potassium into a basin of water, which, though quite cold, instantly bursts into a beautiful and brilliant flame wherever the metal is in contact with it, and continues to burn until the potassium is quite dissolved.

#### Shola.

This is a singular substance manufactured in India from the cellar pith-like stems of the plant *hedysarum lagenarium*. It resembles in appearance the Chinese rice-paper, and is well adapted for some purposes in the arts. It is made, in India, into life-buoys, boxes, bottles-cases, hats, and other articles. It has a loose cellular texture, which makes it an excellent non-conductor of heat, and this with its great lightness admirably fits it for making hats, for which purpose it is much employed in that warm climate. It can be so manufactured as to present the appearance of ivory, and is thus also well adapted for making ornaments.

#### Plenty of Wheat.

The Cincinnati *Price Current* estimates the quantity of wheat raised in the United States this year to be 142,836,000 bushels. Pennsylvania is our greatest wheat State, raising 18,250,000 bushels; Ohio is the next, raising 16,800,000; New York next, raising 16,200,000; Illinois next, raising 14,600,000; and Virginia raises 12,500,000.

#### Economy of Fuel in Manufacturing Iron.

No less than two tons of coal and about half a ton of limestone are used in making a ton of pig iron. The manufacture of 500,000 tons of pig iron requires no less than the enormous quantity of a million tons of coal and a quarter of a million tons of lime. If the amount of coal thus required at present could be reduced to one half by some new improvement, a clean saving of at least three million of dollars would be the result to the country. It is believed by many metallurgists that such a saving will yet be effected. Who is the lucky man that will make the improvement?

#### Silver of California.

An editorial article in the *Sacramento Union* expresses the opinion that as fast as the mountains of that State are explored, silver ore will be found in large quantities, as rich as the mines of Guanajuato, in Mexico, or of Cerro Passo, in Peru, and that in a few years we may see this interest, under the guidance and direction of enterprising capitalists and practical miners, grow to be one of the most valuable mineral interests in the United States.

#### To Destroy Cockroaches, Rats and Mice.

The following is stated to be a sure method of destroying the above-named varmints.—Take a stale loaf of bread, reduce it to crumbs, and throw them into a vessel of water containing two tea-spoonfuls of cayenne pepper and pulverized annis seed, half a drachm of saltpeter, the same of white lead, and a wineglass full of the extract of hops. All these ingredients are well stirred and steeped together at a moderate heat for six hours, when they are strained through a cloth, and 30 drops of the tincture of quassia added to the clear liquor, which is bottled up for use. Some lumps of loaf sugar saturated in this liquor will destroy cockroaches when laid down for them, and some bread saturated in it will destroy rats and mice.

We have found that loaf sugar steeped in a solution of sugar of lead, and laid in the haunts of cockroaches, soon destroys them—the lead is poison. It is our opinion that an old rat is too knowing to be taken in by the above bait.

#### Another Steamboat Burned.

The steamboat *Niagara* was consumed by fire on Lake Michigan, near Port Washington, on the evening of the 24th ult., and no less than 60 lives are reported as lost. The fire is stated to have originated in the boiler-room, and in a very few minutes the boat was in a sheet of flame. The burning of a steamboat is a terrible accident. We insist upon it that all steamers should be constructed with fire-proof boiler-rooms. It seems to us, owing to the great number of steamboat explosions and burnings which have occurred this year, that the Inspectors have become more careless and inefficient.

#### Coal Smoke on Railways.

Common bituminous coal has been used for some time on the North British Railway, but the engines make such a smoke that the company has been threatened with a suit unless they use coke or burn their smoke. If they do not burn their smoke they deserve to be sued.

Picture-frames, and other like articles of art, are now manufactured in England from a cement composed of brick dust and coal tar. The articles are compressed in molds and dried.

We see paragraphs every week, in some of our cotemporaries, describing the successful manufacture of gas from wood. Why, this is nothing new nor wonderful; it is half a century old; but can such gas be manufactured as cheap as that from coal? It cannot; nor why continually harp upon a comparatively worthless invention.

An iron bridge is nearly completed, connecting Goat Island with the main land at Niagara Falls. It has five spans supported on stone piers.