



[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office FOR THE WEEK ENDING APRIL 22, 1856.

GAS BURNERS—William F. Shaw, of Boston, Mass.: I claim the interposition of an imperfectly conducting body between the tip and base of gas burners for the purpose of preventing the conduction of heat away from the point where the gas is burned.

WORKING SHEET METAL—Samuel R. Shepard and Orson W. Stow, of Plantsville, Conn.: We claim the adjustable rotating guide, H, attached to either of the rollers, G, constructed and arranged substantially as described for the purpose specified.

PREVENTING NOCTURNAL EMISSIONS—L. D. Sibley, Northampton, Mass.: I claim the combination of an elastic strip or strips with an internally toothed ring in such a manner that the strip or strips shall serve as a protection against the teeth until the distention of the penis takes place when it or they will yield to said distention and allow the teeth of the ring to act substantially as and for the purpose set forth.

CONICAL TENT—Major H. H. Sibley, U. S. Army: I claim, first, so constructing the tripod, or its equivalent device, attached to a single pole as to admit of easily building a fire, for the purposes set forth.

Second, so constructing the tent, as described, with its hood or cowl, in combination with the door and half door or opening to effect ventilation and the escape of smoke.

FASNERING LAMPS TO LANTERNS—Emile Sirret and Wm. H. Scott, of Buffalo, N. Y.: We claim constructing the lamp with the bottom extending so as to form an annular flange, which may be revolved with the lamp independently of the base of the lantern, for the purpose of attaching the lamp to the lantern, in the manner substantially as described.

PROJECTILES FOR FIRE-ARMS—Thomas Smith, of Pittsburg, Pa.: I claim the construction of balls or projectiles for smooth bore or rifle bore fire-arms with a spiral cavity, more or less funnel shaped, passing longitudinally through them for the purpose of giving them a spinning motion on their long axis in their passage through the air.

GRAIN SCALE—Nathan M. Phillips, of New York City: I claim the application of an electro-magnet to open and close the valves of a scale for weighing grain by making a connection between the positive and negative poles of a galvanic battery by means of the tilting or raising of the beam described and for the purposes set forth or any analogous arrangement substantially the same.

MEASURING FAUCETS—Edwin A. Palmer, of Clayville, N. Y.: I do not claim any of the principles involved in the common faucet or stop cock.

But I claim the perforated piston, F, in combination with the valve, b, and knob, E, arranged substantially as described and for the purposes set forth.

RAISING AND LOWERING CARRIAGE TOPS—Alanson Quigley, of Shelldrake, N. Y.: I claim the box, B, cog lever, A, pawl, D, and cog wheel, C, in combination.

CAST-IRON PAVEMENTS—Asa P. Robinson, of New York City: I do not claim the application of cast-iron to the purpose of a street pavement or of a street railway.

Neither do I claim pavement blocks of a cylindrical form or with any particular form of surface.

But I claim the cylindrical form with the tangential flat surfaces raised upon its circumference, as described, for contact between the blocks.

And I also claim the peculiar manner, as described, of keying the blocks together and of keeping the blocks to the rails to prevent vertical motion and to admit of any one block or rail or any number of blocks or rails being moved without disturbing others not required to be moved by means of the triangular formed spaces, I, the rebates, F, and the keys, 4, or by means of the projecting surfaces of the blocks, A, and the flanges or lugs on the rails, D, and the key, or any similar equivalent arrangement, a set forth.

FISHING TACKLE—Julius T. Buel, of Whitehall, N. Y.: I claim, first, a hook with two barbs, A, A', substantially as and for the purpose set forth.

Second, making the hook having two barbs, A, A', in two parts, and uniting said parts loosely together, so that one shall turn free of the other, substantially as and for the purpose set forth.

Third, combining with the barb, A, one or more minor barbs and having one of the barbs turn free of the barb, A, substantially as and for the purpose set forth.

SEEDING MACHINES—George J. Bitler, of Lancaster, O.: I do not claim a perforated reciprocating slide, H, for it has been previously used.

But I claim the reciprocating slide, H, having different sized holes, c, made through it, in combination with the adjustable bottom, G', and adjustable plate, I, said slide, H, being also arranged in combination with and operated by the pulley, K, substantially as shown for the purpose specified.

SOWING FERTILIZERS—Warren S. Bartle, of Newark, N. Y.: I claim the distributors composed of the radials, r r', in combination with the shaft, k k', and fender u, constructed and arranged substantially as described.

BALANCED SLIDE VALVE—Alexander Buchanan, of New York City: I claim the means of maintaining the differential pressures on two sides of the valve necessary for balancing the same, that is to say, the combination of an apparatus substantially as described with the valve, as set forth.

BRICK MACHINES—Patrick S. Devlan, of Reading Pa.: I claim in combination with a stationary mold and a reciprocating plunger or piston an intermittently rotating feeding and conveying apparatus through which the plunger passes to compress the clay and form the brick, and which remains to receive the brick as it is ejected from the mold and carries it forward out of the way of the succeeding clay box, the whole being operated by an arrangement of devices substantially as described.

CULTIVATORS—George Easterly, of Heart Prairie, Wis.: I claim the hanging of two or more plows to a supporting beam or axle by swiveling joints at each of the ends of their drag bars, so that said plows may be moved either way laterally without affecting the axle and still maintain their parallelism, and this I claim whether the stock to which the plows are connected be adjustable in the drag bars, or the plows be adjustable in the stock or otherwise, substantially as described.

DIGGING PEAT—Abraham Fitts, of Worcester, Mass.: First, I claim the movable knife or fork, M, as described.

Second, I claim the digger, consisting of two or more blades, in combination with a movable knife or fork to cut the third side or sides, constructed and operating as set forth.

Third, I claim the combination of the digger, the crane and the platform or cars to hold them and receive the peat.

PLANKS FOR MOLDING—James J. Johnson, of Alleghany, Va.: I claim the employment of the table, C, follow board, N, and plate, R, constructed and arranged as described the whole when adjusted by the vertical movement in guides being for the purpose of casting smoothing irons, &c.

ELECTRO-MAGNETIC PRINTING TELEGRAPH—Albert J. Partridge, of Southbridge, Mass.: I claim the described method of operating the circuit changer, S, to change the circuit by means of the clutch, x x', and fly wheel, x'', attached to the loose part thereof.

REVOLVING FIRE-ARMS—Gustav A. Blittkowski and Frederick W. Hoffman, of New York City: We claim, first, effecting the ramming of the cartridge by means of the fixed rammer, in combination with the reciprocating breech chamber as described.

Secondly, the arrangement for holding and releasing the cartridges, consisting of the clamp spring the knob upon the axis of the breech chamber or its equivalent, and the magazine for containing a supply of cartridges.

Thirdly, effecting the several motions required for operating the rotating breech by means of an axis rigidly connected thereto and operated from one of the ends of said axis as described.

Fourthly, the combination of the slide, h, with the axis of the breech chamber, with the locking bolt, i, and with the tumbler, n', or the mechanical equivalents of said parts for the purpose set forth.

RECEIVING MAGNETS FOR TELEGRAPHS—Andrew Coleman, of Perth Amboy, N. J.: I claim so constructing or arranging the armature and applying the spring, e, or its equivalent, substantially as described, that the armature constitutes the whole or part of a variable lever, which causes the effective force of the spring, or its equivalent, to increase or diminish as the magnetic force becomes greater or less when this is combined with the so applying the finger, g, by which the local circuit is opened and closed that the said finger is caused to move with the armature by friction only, or its equivalent, and after having moved the slight distance necessary to open or close the circuit, leaves the armature free to move as far as necessary independently of it, substantially as described, thereby obviating the necessity of manual adjustment of the armature to compensate for variations of magnetic force.

WASTE DEVICE FOR HYDRANTS—John Culver, of Baltimore, Md.: I claim the described arrangement of the plunger relative to the discharge pipe, and capable of elevation proportional to the capacity of said pipe for forming a chamber in the lower portion of the hydrant for the reception of the contents of the discharge pipe, substantially as and for the purposes specified.

DOOR LOCKS—John B. Erb, of Strasburg, Pa.: I claim the devices of the knob, H, oval slot, K, and semi-circular slide, G, as they operate upon the bolt, 5, all in combination substantially as described.

SUGAR EVAPORATORS—Samuel H. Gilman, of New Orleans, La.: I claim, first, the treble bottom, g h i, forming the steam chamber, p, below and the condensed water chamber, q, above, in connection with the steam pipes, c, open at both ends and fixed into the division plate, h, and the evaporating pipes, b, closed at the top and open at the bottom and fixed into the tube plate, g, all combined substantially as described and for the purposes set forth.

Second, the compensating condensed water syphon pipe, d d', with one leg, d', starting from the reservoir, m, in the steam chamber, and passing up through the division, h, and the tube plate, g, into the pan to about one-half of the height of the evaporating pipes, b, then turning down through the tube plate, g, and in the same vertical plane with and terminating in and near the lower end of the condensed water pipe, n, of the condensed water chamber, q, substantially as described and set forth.

DRIVING SPOKES—Christian Haas and John C. Noll, of Chicago, Ill.: We make no claim to the driving arrangement separately considered.

But we claim the adjustable hub bed and spoke guide in combination with the driving apparatus, the several parts being constructed and arranged substantially as and for the purposes set forth.

HOTEL ANNUNCIATORS—Wm. H. Hale, of Worcester, Mass.: I do not claim the device of tilting number plates to denote which number is wanted, as it is not new.

But I claim the combination of the number plate with a hammer, whereby I am enabled to show the number and strike the bell with the same piece.

Also I claim the arrangement of said tilting number plates or number hammers, or their equivalents, in racks, upon racks of wires, reciprocatingly operating them, the wires passing through slots in the hammer levers substantially as described.

DAMPERS OF COOKING STOVES—Wm. E. Hayes, of Geneva, N. Y.: I claim the dampers J and K, connected and operated by the lever, N, and damper rod, M, in the manner and for the purposes specified.

STEAM BOILERS—C. B. Hoard, of Watertown, N. Y.: I claim closing the openings or man holes in one or both heads of boilers by the insertion of a flue which may be conveniently removed and replaced, substantially as described.

PHOSPHORIC ACID AS A SUBSTITUTE FOR OTHER SOLID ACIDS—Eben N. Horsford, of Cambridge, Mass.: I claim the pulverulent phosphoric acid for neutralizing alkaline bases, and for neutralizing the action of lime on a mixture of this pulverulent acid with alkaline carbonates upon the addition of moisture or heat or both.

SUSPENDING EXTRA TOPSAIL YARDS—George Hubbard, of Stonington, Conn.: I claim in the application of the extra yard, and its connection with the topmast, with the mast above the cap of the lower mast-head and applying said extra yard to the topmast and suspending it from or near the tresseltree by means essentially as described, whereby said yard may not only be raised up to wards said tresseltree but be supported in the manner set forth and be capable of being braced around as occasion may require, and this without danger of injury to the cap of the lower mast-head.

COAL BREAKERS—Thomas Petherick, of Pottsville, Pa.: I claim the described mode of breaking coal by causing it to fall from a suitable height and between projecting guards or guides upon sharp pointed teeth and chisels placed in ribs, the whole being arranged and constructed substantially in the manner and for the purposes set forth.

REGULATING APPARATUS FOR STEAM HEATING BOILERS—S. G. Spence, of Boston, Mass.: I claim the described peculiar arrangement of the steam generator or boiler, B, the stand pipe, H, the condensing apparatus, composed of the receiver, F, the cover, M, and the refrigerating vessel, G, the safety valve and its pipe, I, the whole operating together, substantially as specified.

WEATHER STRIP AND LOCK FOR WINDOWS, &c.—Alfred Spear, of Passaic, N. J.: I am aware that hinged flanges have been attached to doors and door frames, so as to operate by the door knob, and to produce the double effect of a weather strip and lock; I therefore do not claim all contrivances that produce this double effect.

I claim the combination and arrangement of the devices for operating a weather strip or strips, as described, to effect the double purpose of a weather guard and lock at the same time, as set forth.

COTTON CLEANERS—J. H. Kinyon and James Hollingsworth, of Chicago, Ill.: We are aware that Alex. Jones has represented to U. S. Patent Office of April 22, 1837, two machines united in one frame, but they have no necessary connection with each other, nor is there any part of the operation of cleaning or feeding that is common to both machines, as in ours. We do not therefore claim the uniting together of two machines.

But we claim so arranging the hopper, R, feed rolls, F, P, and brushes, S S, as they shall be, that the material, divided into nearly equal parts, and thrown one half in one direction, and the remaining half in a contrary direction, to be acted upon by other rolls and brushes, as set forth.

SUBSOIL PLOWS—Pells Manny, of Waddam's Grove, Ill.: I claim the combination of the circular rotating coupler, G, separating wing, H, model board, D, and bar F, arranged substantially as shown and described.

HOOP MACHINE—Geo. W. Holmes, of Buckfield, Me., (assignor to S. C. Marsh, of Paris, Mass.): I claim the arrangement and combination of the pressure rollers, the saw, and the stand guard, as specified, and so as to operate together and for the purpose as set forth, the said rollers being pressed towards the saw with variable degrees of pressure, as explained.

And under the arrangement of the saw and pressure rollers, as described, I claim making the saw dishing or concavo-convex by which advantages are gained, as stated.

CORN HARVESTERS—R. C. Mauck, of Conrado Store Va., and W. T. McGahey, of McGaheysville, Va.: We claim, first, the rotary arm, P, in combination with the packing guides, q, for effecting the filling of the body, substantially as specified.

Second, the employment of a double series of cutters for cutting the stalk and stump, as described, and thereby admitting of the delivery of the cut product without elevation.

HYDRO-CARBON VAPOR LAMPS—Alonzo M. Mace, of Springfield, Mass.: I am aware that it is not new to provide a wick tube with a retort, and to heat such by a separate burner or a separate wick tube.

And I am aware that it is not new to provide the wick tube with a bulb or retort to extend the wick into it, so as to fill it, and to have jets or holes made in the tube or bottom of the retort or bulb, so that the flame thereof would only impinge against the bottom of the retort, the same being described in a patent granted Aug. 27, 1850, to Clayton and Bailey.

I do not claim any such devices; but I claim the particular arrangement of the bottom of the retort, and the jet holes, e e, with respect to the wick tube, whereby the enflamed jets of vapor issuing from the jet holes, e e, are driven downward against the wick tube, and their currents of heat made to ascend against the concave bottom of the retort, as specified, the same serving to greatly facilitate the generation of vapor, as well as the heating of the same.

I also claim combining with the retort the bell-shaped cap or heat retainer, G, made of transparent or other proper material, the same being arranged substantially in the manner and for the purpose as set forth.

SAWING MARBLE—James Miller, of Buffalo, N. Y.: I claim the combination of the crank shaft mounted above the saw frame, the loosely jointed pitman, and the rocking bars vibrating on fulcrum upon the adjustable frames which guide the saws, operating substantially and for the purpose set forth.

CORN SHELLERS—A. H. Stevens, of Warsaw, N. Y.: I claim, in combination with the shelling surfaces, the wings, z, openings, y, and spiral flanges or ribs, d, for the purpose of creating and driving through the machine a blast or current of air, for separating the grain from the other impurities, substantially in the manner and for the purpose set forth.

R. R. CAR AXLES—Richard Vose, of New York City: I do not claim the use of an embracing tube, for holding the inner ends of a divided axle, as that has been similarly used before.

But I claim the connecting segments, c c, when combined with the inner ends of a divided axle, and the embracing tube, d, substantially as set forth.

COFFEE POTS—C. B. Waite and J. W. Sener, of Fredericksburg, Va.: We do not claim a condensing coffee boiler.

But we claim the arrangement described, whereby the steam from the boiler is discharged into the water in the condenser which absorbs the aroma, in combination, for returning the contents of the condenser into the boiler, substantially as set forth.

LINK GEARING FOR HORSE POWERS—T. D. Burk, of Chicago, Ill. (assignor to J. C. Miller and C. A. Fowler): I do not claim the horse power consisting of the roller moving in a circular path about a center, as that is old; neither do I claim the universal joint swivel or other parts by themselves.

But I claim the described mode of converting the motion of an axis rolling around a center into an alternating motion at right angles to the plane described by the rolling axle, by means of the combination of the crank, E F, connecting link, G, universal joint, H, and swiveling bolt of the same, substantially as set forth.

WIRE FENCES—T. D. Burk, of Chicago, Ill. (assignor to James Garrett, of Ogle County, Ill.): I claim the application of the key, the lever, the weight, and the stay to a wire fence, as and for the purposes and uses specified.

AUGER—Kelsey Curtis (assignor to Winsted Auger Co.) of Winchester, Conn.: I claim the making of an extension bar, connecting the small screw on the end of the auger or bit, with the lips or cutters of the auger proper.

COMPLETING THE THROW OF THE VALVES OF DIRECT-ACTING ENGINES—Henry B. Worthington, of Brooklyn, N. Y.: I claim completing the throw of steam valves of direct-acting engines, by the steam already within the cylinder on its way to the open air or to a condenser, as set forth.

SHOVEL AND TONGS—Samuel Huffman, (assignor to Samuel Huffman and J. D. Brown), of Richmond, Va.: I claim the flange, b' and the plate, a, when combined with a pair of tongs, in the manner described, for the purpose of forming an instrument capable of being used either as a shovel or tongs, as specified.

TUNNELING AND QUARRYING—Ira Merrill, (assignor to Ira Merrill and Arthur Maxwell), of Shelburne Falls, Mass.: I do not claim the working of rock in quarries or tunneled avenues, by means of serial grooving, nor the construction of a machine for such purpose, nor the cutting of delicate grooves by the arrangement of the working parts of such machine upon each side of its principal frame, as set forth.

I only claim the arrangement of the proportionate levers, as and for the purpose mentioned.

STUDS FOR WEARING APPAREL—Lucius Paige, of Cavendish, Vt. (assignor to himself and A. L. Lincoln, of Boston, Mass.): I am fully aware that it is not new to make a shirt stud or button, with a wire shank extending from its center and bent around in a helix or spiral form.

I do not claim the same, nor the principle of the screw contained therein.

But I claim constructing the back disk holder of an ordinary shirt stud or button, with the slit, d, extending from the center of the shank, and having one of its edges raised with respect to the other, substantially as specified.

LOOMS FOR WEAVING BAGS—S. F. Thomas, of Lawrence, Mass.: I claim, in combination with the compound cam, K, the endless chain or belt, P, and the mechanism for moving the switch, r, the whole being arranged substantially as described, and for the purpose of determining the length of the sides or when to form the bottom of the bags, as specified.

I also claim the arrangement by which uniform tension of the warps is secured during the movements of the harnesses, or in other words, I claim combining with the great roller or beam, mechanism, arranged substantially as described, by which the breast roller or beam may be moved with respect to the lay or harnesses, and during the movements of the latter, as specified.

ADDITIONAL IMPROVEMENTS.

GRASS HARVESTERS—George Esterly, of Heart Prairie, Wis. Patent dated originally June 27, 1854: I claim the projections, A, which are on alternate sections of the sickle to the bar, L, so that said bar may be on top of said sections, as set forth.

DESIGNS.

CASTERS—Wm. H. Green, of Meriden, Conn.

STOVE PLATES—Harvey Smith and F. A. Sheldon, of Troy, N. Y.

engine. The latter failed to work satisfactorily, was taken out, and one of Watts' put in, with which the little boat made several trips on the North river, running at the rate of from four to six miles an hour; but it had many defects.

Under the education of such a father was Robert L. Stevens reared. He was 19 years of age when Fulton's first steamer, the *Clermont*, made her first trip to Albany, and he followed in the footsteps of his father by devoting his energies to improvements in American steam navigation.

He made a number of valuable improvements, but, as has happened with all inventors, many of his plans also resulted in failure, owing to their defective character. He was the first person, it is said, who improved the models of our river steamers by extending their bows—giving them a fine sharp entrance and a clean run aft—thereby nearly doubling their speed, without much increasing their engine power.

In 1812 he invented a destructive bombshell, which was bought by government, and for which he received a pension. When the Erie Canal was proposed to be built, he suggested, at that early date, a railroad through the center of the State.

He always owned a number of steamboats, which were kept running on various routes, especially on the Delaware and Hudson rivers, and he was the owner of the famous yacht *Maria*, on which he worked with his own hands, and which beat the *America* before the latter was sent over to Europe to vanquish the whole of the Royal Yacht Squadron.

For a number of years, lately, he has devoted himself, under the government, to the construction of a famous ball-proof floating battery, for the defence of New York Harbor. The amount expended upon it is stated to be \$1,000,000, and an application for \$250,000 more is now pending before Congress.

The outer shell of this battery consists of nine plates of iron, with spaces between them, making a wall twenty-seven inches thick. It is to be so constructed that its ends may be driven into an ordinary ship, and cut it in two. It will be of 700 feet in length, and 70 in width, with a rudder at each end. The work on this battery was conducted with secrecy in an inclosed yard, admittance to which was not permitted.

It is designed to carry thirty guns of heavy caliber upon each side, and on deck four Paixhan guns. There will be furnaces in it for heating shot; it is designed to be propelled by engines, so as to be capable of moving its position rapidly.

This famous floating battery, that has cost government so much, will not—so far as we have been able to judge,—add to his reputation. His father was the original proprietor of the Hoboken and New York Ferries, and ran horse boats on them up to 1817.

After he died, Robert put on a small ferry steamboat—the first on the North River. He owned much property in New Jersey and in this city, and at his death was supposed to be worth as much as \$2,000,000.

Few inventors have had the same means to make experiments. He inherited wealth, and thus had many advantages over others in carrying out his inventions to success.

Death of a Distinguished Mechanic.

Thomas Rogers, of the firm of Rogers, Ketchum & Grosvenor, Paterson, N. J., so well known as locomotive builders, died in this city on Saturday the 19th ult. The Paterson *Guardian* states that he came to that place about half a century ago, and was at that time a carpenter in poor circumstances. He afterwards became associated with Godwin, Clark & Co. in building cotton and woolen machinery. About 1830 he dissolved partnership with these persons and became one of the firm of Rogers, Ketchum & Grosvenor.

Mr. Rogers was one of the best calculators and most industrious of men. In 1837 he started the building of locomotives. This Company employs about 700 men, and its engines have a very high reputation. Mr. Rogers had been ill for several months, and at the time of his death was 65 years of age. The city of Paterson owes him a debt of gratitude.

A new guano island is stated to have been discovered in the Pacific, from which this valuable manure may be obtained without paying a tax to the Peruvian government.