



[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office
FOR THE WEEK ENDING FEB. 19, 1856.

SOWING SEED BROAD-CAST—Edward H. Berry, of Hudson, N. H.: I claim the perforated sowing cylinder, C, and the secondary internal perforated distributing cylinder, D, connected with the hopper at its center by the tubes, E, I, with its central portion or tube enlarged so as to distribute the seed evenly to the whole length of the lower portion of the sowing cylinder, in order that the seed may be cast or sown evenly broad-cast over the soil, essentially in the manner and for the purpose set forth.

FORKS—Sherburne C. Blodgett, of Philadelphia, Pa.: I claim the construction of forks with a metal web or sheets between a part of the prongs, as described.

FOUNTAIN PEN—Henry A. Brown and James Wiley, of Brooklyn, N. Y.: We claim the making of the pen, A, with a solid half circular head, B, and arranging it to slide into the pen holder, (having a face plate, E, and a seal, as set forth) so as to operate as a slide valve or cut-off to the flow of ink, when operated substantially as set forth and in form and manner, and for the purposes described.

SAWING MARBLE—Wallis Bull and George Bull, of Towanda, Pa.: We claim securing the saws, H, H, in the frame, D, by means of the boxes, E, provided with rollers, J, and rods, G, having on the inner ends swivel boxes, I, to which the ends of the saws are attached, whereby the saws may be properly strained in the saw frame, and at the same time allowed to move laterally thereon.

COOKING STOVES—Abner Burnham, of Albany, N. Y.: I do not claim the placing of an air chamber or air flues, around the fire chamber nor over the upper fire flues of stoves, nor the carrying of an air passage or radiator through the smoke pipe or chimney as separate and distinct parts of the apparatus, as each of them may be found in some existing stoves.

But I claim the combination of an air chamber surrounding the fire chamber, having inlets for the admission of air from without, with an air flue lying between the top of the fire chamber with its flue and the top plate of the stove, together with an outlet from the same by a pipe or radiator placed within the smoke pipe or flues, substantially as set forth.

ROLLING METAL—G. H. Corliss and E. Harris, of Providence, R. I.: First, we claim the combination of the reciprocating roller carriage, F, with the guides, D D, and a table, E, substantially as described.

Second, we claim raising the roller, G, for the purpose of placing the work between it and the table, C, by fitting the roller carriage, F, to the oblique slots, G, in the sliding boxes, E, E, and providing latches, L, L, operating as described to secure the carriage in the sliding boxes during the rolling operation, but to loosen them and allow them to run up the slots, as set forth, at the termination of the return movement of the roller.

Third, we claim the arrangement of the crank shafts, J, J, relatively to the roller table, G, and roller carriage, F, substantially as described for the purpose set forth.

FORGING THIMBLES—G. H. Corliss and E. Harris, of Providence, R. I.: We claim, first, the employment of forging thimbles of an anvil, O, and hammers, A, A, operating substantially as set forth.

Second, in combination with the arrangement of the shafts of the eccentrics out of the stocks, F, F, which carry the hammers or squeezers, we claim the inclined guides, h, h, to receive the said stocks after the withdrawal of the eccentrics, and the levers, b b b and k, k, for the movement of the stocks up the said guides to withdraw the hammers or squeezers from the interior of the thimble to admit of its removal from the machine, all arranged, operating substantially as set forth.

VAULT COVERS—John B. Cornell, of New York City: I claim the flat faced panes of glass secured in positions that bring their exposed surfaces (or a little above) the upper faces of the bars of the metallic frame, when said bars have grooves between their said upper faces which form gutters around the panes of glass, for the purposes set forth.

GRAPPLE FOR RAISING STONE—Marcus M. Cass and L. R. Bigelow, of Watkins, N. Y.: We claim the combination of the levers, braces, and wedge, substantially as described, for the purpose of making a grapple for raising stone or other heavy bodies, when the power to raise such body is applied to the wedge, and through it to the levers to cause their jaws to tightly grasp and hold the body to be raised, as set forth.

SEWING GUIDES—Seth P. Chapin, of New York, N. Y.: I do not claim a device invented by S. C. Blodgett for cording umbrella covers, in use of which the edge of the cloth in a partially turned state is guided in a slot and a turn over the cord completed by passing under the presser, the parts forming the sides of the slot being neither curved nor crossing, and the one conveying the cord terminating at some distance from the presser.

But I claim the method of forming hems on the edge of flexible materials by means of folding guides made to turn the edge 180° or more, substantially as described.

And in combination with guides substantially as described, I also claim the employment of a spring, F, or analogous device, 1st, to hold and guide a piece of cloth by an edge or plait, 2d, to cause the cloth to follow the guides placed between it and the needle with certainty, 3d to keep the cloth on a stretch while the stitch is being drawn.

SEEDING MACHINES—Stephen Gorsuch, of Altona, Pa.: I do not claim the distributing device, for the same plan is in common use.

But I claim placing the screws, I, J, in the conveying tube or spout, G, the front and back sides of the tube or spout being open substantially as described for the purpose specified.

POWER LOOMS—John Johnson, of Troy, N. Y.: I do not claim a double shed.

But I claim inserting the wires at the same instant the shuttle is thrown, by which I save a pick by the employment thereof of a double shed, in the manner set forth.

I also claim the vibrating belt or its equivalent, to which the wires are connected, arranged, and combined, substantially as set forth.

FLEXIBLE PEN HOLDER—F. J. Klein, of New York City: I claim a pen holder, constructed in two distinct and separate pieces or sections, so that the lower section, b, shall be a lever having the metallic rivet, C, as a fulcrum.

I also claim the peculiar formation of the chamber in section, a, and of the arm of the lever, by means of which formation and adaptedness each to the other, the holder is rendered more symmetrical, compact, and a movement of the aforesaid levers permitted only in one direction, and for a limited distance, and a motion in any other direction is absolutely prevented.

MOLE OF DRAINING PLOWS—A. Marquis, E. Marquis, and C. Marquis, of Monticello, Ill., and Charles Emerson, of Decatur, Ill.: We are aware that mole plows for forming subterranean drains have been used, therefore we do not claim the principle of forming underground drains by the use of such.

But we claim the peculiar shape of the mole, A, which enables its forward movement to form a subterranean perforation whose top and sides will be densely and smoothly compressed, and whose bottom will be left almost entirely uncompressed, substantially in the manner and for the purpose set forth.

I also claim the giving the tail, a, of the mole such a shape and position that it will serve to close up the slit cut by the mole shank, B, in forming a perforation, and also serve to lead the mole upwards to the surface of the ground as soon as the beam, E, is allowed to turn on its axis, substantially as set forth.

PLOWS—J. B. Mell, of Riceboro, Georgia: I claim the standard, A, with the braces, B, in combination with braces, L C, and beam, D, constructed in the manner and for the purpose set forth.

TENONING WINDOW BLINDS—J. H. Palmer, of Elmira, N. Y.: I do not claim the disks, J, J, and carriage, M, in themselves considered, nor when operating conjointly, irrespective of the peculiar manner of operating the disks, as described.

I claim operating the disks, J, J, to which the cutters, K, are attached by means of the cams, G, G, arranged substantially as shown and for the purpose specified.

BILLIARD TABLE CUSHIONS—Michael Phelan, of New York City: I claim a billiard table cushion, composed of a block of india rubber, C, a layer of cork, D, and strap of leather, E, arranged, combined, and applied, and operating substantially as and for the purpose set forth.

[Several engravings illustrative of the above excellent invention will be found in No. 15, of our present volume.]

APPLYING SHAFTS TO AXLES—Charles S. Pitman, of Swampscot, Mass.: I do not claim the mere use of rubber either to act as a spring, or to prevent wear and noise.

But I claim the manner in which I have applied such shaft and axle, namely, consisting in extending the india rubber bolt protector each way beyond the holding strap, in combination with extending it entirely around the bolt, as specified, whereby under any upward or downward movement of the shaft, not only the bolt but the connection fork will be protected from wear and liability to make a noise, while under the sudden starting or stopping of the draft animal connected to the shaft, and the strain on the bolt and fork will be eased by the spring or elasticity of the bolt protector.

TEMPLES FOR LOOMS—Rensselaer Reynolds, of Stockport, N. Y.: I claim the arrangement and gear, substantially as shown and described, of the shank, D, of the opening and closing arm, with the stop, B, B, in combination with the closing and receding spring, E, for the operation together, essentially as specified.

CONSTRUCTION OF PESSARIES—F. Roesler, of New York City: I claim an instrument composed of a ring, A, and two supporting pieces, B, B, hinged thereto by springtop hinges, substantially as described, either with or without a front or back supporting piece, a.

And I also claim fitting the supporting pieces, A, A, to their hinge with a pin and socket, G, or the equivalent thereof, as described, to allow of one or both of the supporting pieces being set obliquely to the ring or extended lengthwise.

HUBS FOR CARRIAGES—Joseph Smith, of Sunbury, Delaware Co., Pa.: I am aware that friction rollers have been used for relieving the friction on the hubs of vehicles, this I do not claim.

But I claim the combination with the axle of vehicles of a segmental box, c, c, slotted cylinder, d, and friction rollers, r, r', all arranged and operated substantially as set forth.

PRINTING FROM ENGRAVED PLATES—J. F. Starratt, of New York City: I claim, first, one or more traveling platforms attached to revolving arms, and carrying engraved plates from linking to wiping, and then to printing apparatus in succession, or to any two such such apparatus being so arranged that the last and first of the series are next in succession, and the arms revolve in the same direction continuously, substantially in the manner and for the purposes specified.

Second, I claim causing engraved plates which are carried around in the circumference of a circle to be submitted to a printing cylinder, in a line parallel to its own axis, in succession, or to any two such such apparatus, the plates are carried, and then permitting them to pass in contact with said cylinder in lines perpendicular thereto, and not in the arc of a circle, substantially in the manner described.

Third, I claim imparting to a plate or plates thus handed, a zig-zag or devious progressive motion, while they are passing in contact with certain cloths or rollers, substantially in the manner and for the purposes specified.

Fourth, I claim the flexible connection between the plates or their beds, and the handing or carrying arms, as also grooved tracks, or their equivalents, acting upon beds so attached, and also these two in combination, substantially in the manner and for the purposes specified.

Fifth, I claim such flexible connection in combination with a stop whereby an engraved plate is carried up a revolving arm, is properly presented to the action of the impression cylinder, substantially as specified.

Sixth, I claim wet wiping an engraved plate by means of a traveling cloth acting in combination with a plate having a zig-zag progressive motion, substantially in the manner described.

Seventh, I claim an automatic oscillating receiving table in connection with a printing apparatus, wherein are printed in succession, sheets having different matter printed thereon, so that similar sheets may be laid in the same pile, substantially as specified.

Eighth, I claim vibrating choppers or fingers in combination with the tapes for completing the delivery of a printed sheet, and depositing it upon a table, substantially as specified.

SAWING MARBLE IN OBELISK FORM—Philip Scrag and W. J. Von Kammerhueber, of Washington City, D. C.: I do not limit ourselves to the material, or form, of the different parts of our machine, as long as the peculiar character of the said parts is retained, and we do not limit ourselves to the material which shall be sawn by this machine.

We do not claim the use of pulleys, belts, or their equivalents and guides for the sole purpose of converting the direction of the motive power into the direction of the saws; nor do we claim the straining of saws by means of belts or chains, as these all have been done prior to our invention.

But we claim, first, the described use of belts, or their equivalents, adjustable in their length, substantially as described, in combination with the saw frames in which the saws are suspended, of said belts, whose adjustability is solely for the purpose of permitting change in the distance, or in the angle of the saws.

Second, we claim the saw supports adjustable both horizontally and vertically, substantially as described, whereby they are enabled, when cutting parallel or inclined grooves, to place the saws in the same plane, that they may commence and end their work simultaneously, and also when it is desired to cut cross-wise, or to a point, to place the saws in different planes, the one above the other.

Third, we claim the vertical adjustability of the roller, O, upon the shaft, r', of the straining apparatus, which permits the retention of the belts in a horizontal plane, whether the saws and their frames are placed in the same or in different horizontal planes, as described.

PREPARING VEGETABLES FOR PRESERVATION—M. B. Southwick, of St. Hilaire, C. E. Patented in England, Sept. 15, 1855: I claim the improved mode described of separating the skins or peels of potatoes, onions, and other vegetable matter from the pulp and skins together, against the articulation or serrated edges of pieces of metal, or other material, whether such pieces be aquiline shapes or otherwise, provided the skins are caught by the teeth and are thereby separated and taken from the pulp, whether the teeth be shaped like saw teeth or otherwise, or whether the working table be of circular form and revolving, or be made of any other shape, and caused to vibrate and move from side to side, to produce the effect of the circular trough or table described.

FURNACES FOR HEATING SLUGS FOR HATTERS AND TAILORS—Russeid Wildman, of Charleston, Mass.: I claim the plate, k, in combination with the fire box, and lifting arrangement, substantially in the manner and for the purpose described.

STAVE MACHINE—G. W. Livermore, (assignor to Livermore Manufacturing Co.) of Cambridgeport, Mass.: I claim the described machine for cutting the framing and chamfering staves, consisting essentially of the clamp for holding the staves, the jointers, D, and the crozing chamfering cutters, combined and operating in the manner substantially as set forth.

PHOTOGRAPHIC PICTURES ON JAPANED SURFACES—H. L. Smith, of Gambier, O. (assignor to Wm. & Peter Neff, Jr., of Cincinnati, Ohio): I claim the obtaining of positive impressions upon a japanned surface previously prepared upon an iron or other metallic or mineral sheet or plate, by means of collodion, and a solution of a salt of silver, and a camera, substantially as described.

RE-ISSUES.
TICKET REGISTER FOR R. R. CARS—Wm. Aperly, of New York City. Patented originally May 1st, 1855: I claim providing a suitable box, A, for holding the tickets and employing and arranging a distributing lipped slide, c, d, upon the bottom of said box, or underneath the tickets, in combination with the employment and arrangement on top of the tickets, of a spring, or weighted follower, D, substantially as and for the purpose set forth.

I also claim providing the extension or small box, E, and inclined way, n, substantially as and for the purpose set forth.

[For engravings and explanations of this invention, see Vol. 10, Sci. Am., page 316.]

HARVESTING MACHINES—J. H. Manny, of Rockford, Ill. (assignor to P. H. Watson, of Washington, D. C.) Patented originally Oct. 17, 1854. Ante-dated June 15, 1854: In machines for reaping and mowing, where the joint by which the tongue or draft bar is connected to the platform, is situated at or near the front of the frame, I claim a draft bar or tongue constructed and extending backward over the main frame, and connecting it with a suitable device for supporting it at various heights, whereby the cutter can be conveniently adjusted to different heights by an attendant on the main frame, substantially as set forth.

ADDITIONAL IMPROVEMENT.

DAGUERRETYPE CASES—J. F. Mascher, of Philadelphia, Pa.: Patented originally March 9, 1853: I claim the combination and arrangement of a series of leaves of any suitable material, containing photographic or other pictorial representations (interspersed or not with blank or printed leaves) with the supplementary lid or adjustable flap, containing a lens or lenses, as described, the same being united or bound together so as to form a book, as described.

DESIGN.

PARLOR STOVE—Wm. T. Coggeshall, of Fall River, Mass.

NOTE—More than one-third of all the patents granted as above were obtained through the Scientific American Agency. Quite a number of highly important and valuable inventions are embraced among the number. The opening spring promises to be an unusually favorable season for inventors. Business of all kinds appears to be reviving; money is becoming more plenty; speculative investments are in demand; holders of patent rights will therefore enjoy better chances of realizing from their patents than ever before.

[For the Scientific American.]

Pressure of the Wind.

On page 103, present Vol. SCIENTIFIC AMERICAN, in answer to your correspondent "M. P., of Md.," you say, "The data of Mr. Conger and ourselves respecting the amount of atmospheric pressure on a square foot, was obtained from tables of experiments, with apparatus measuring the wind's velocity."

As regards myself, you were not wholly correct. I have met with notable of experiments giving the pressure per square foot of the wind impinging on a surface. All that have come under my notice were obtained by causing the body to revolve against the air, which were, necessarily, attended with uncertainty.

The data were the immutable principles of nature which govern matter in motion, and the result was obtained by calculation based on them.

When matter is acted on by a force it will tend to move with a velocity, directly, as the intensity and duration of the action of the force, and inversely as the mass of matter acted on.

When a unit of matter is acted on by a unit of force during a unit of time, it will, if free to move, acquire a unit of velocity.

When moving matter has its motion arrested, it imparts a force to the obstacle arresting its motion, equal to the force that gave it motion.

The truth of these premises has been proven by observation of the heavenly bodies, demonstrated by investigation, and verified by experiments; and it flows immediately from them, and experiments have also verified the fact, that fluids, when impinging perpendicularly on a plane, impart a force as the mass impinging and the velocity with which they impinge. Hence, by putting p =the pressure, v =the velocity, m =the weight of fluid impinging per unit of time, and g =the velocity imparted to a unit of matter by a unit of force in a unit of time, we have $v=g+mp$, from which, to determine the value of p , we obtain $p=v+gm$.

By assuming the first and second as units of space and time, and a mass weighing one pound, and the action of gravity on it as the units of matter and force, the unit of velocity is found to be 32.1598 feet per second. And, as the number of cubic feet of fluid which impinge on a foot area per second, will equal the velocity, by putting w =the weight of a cubic foot of fluid, we have $m=uv$; and the pressure per square foot= $p=v+guv$, from which we obtain $p=w+v^2$.

Atmospheric air weighing about .07358 lbs. per cubic foot, when air is considered $w+g=$.002288, which may be represented by a , for the expression takes the simple form $p=av^2$. That is, the square of the velocity of a current of air multiplied by .002288, gives the constant pressure per square foot.

One mile per hour is 1.46666 feet per second; and one hundred miles per hour is 146.666 feet per second. And by the rule .002288 \times 146.666 2 = 49.2 lbs. per square foot, pressure. At 30 miles per hour, equal to 44 feet per second, the pressure will amount to but 4.43 lbs. per square foot; whilst at 200 miles per hour it will be 196.6 lbs.

Of course, no more than a close approximation to the truth is intended by the above, as the pressure will vary with circumstances—the form of the body, etc.—but the pressure will generally be greater than that indicated by the formula.

These calculations may be useful to persons attempting to make a flying machine, for it is demonstrable that no balloon can be constructed to carry an engine powerful enough to impel it, even at a moderate rate, through the air, and that no machine can be made to sustain itself in the air by mere sails or wings.

J. B. CONGER.

Jackson, Tenn., February 1856.

[The tables of experiments referred to by us, of which there are not a few, agree exactly with the calculations of Mr. Conger.

(For the Scientific American.)

Stalk Cutters and Husk Splitters.

MESSRS. EDITORS—I noticed recently a communication signed "Farmer," and hailing from Chicago, Ill., the writer whereof offers to assure any man a fortune who will put in that market a cutting box, simple enough, as I understand him, to be easily understood and worked by common farm hands, and firm enough of construction to cut corn stalks as an every-day business, and not get "out of kilter." If he will put his proposition in the shape of an offer to pay a definite and sufficient sum, either for a certain number of machines or for a territorial right to make and sell the same, said offer to be accompanied with proper vouchers that the "root of all evil" shall be forthcoming I will engage to furnish the machines or right, payment for either to be conditional on the satisfactory working of the cutter, to be tested by disinterested parties.

Another correspondent earlier in the season was calling from the South for a "Corn Husk Splitter;" to prepare husks for mattresses. If made sure of the pay and enough of it to pay, provided the machine works, I will furnish one that shall be simple, not liable to get out of repair, and not require beyond a two-boy power to prepare at least 500 lbs. of husks per day ready for use or for the market.

INNOMINATA.

Fairmount, Marion Co., Va., Jan. 30, 1856.

Cowrie Gum.

MESSRS. EDITORS—I noticed an article in a recent number of the SCIENTIFIC AMERICAN, on "Cowdee Gum," which no doubt is the same as the article sold in this market as New Zealand gum copal in contradistinction to the African, and is sold in London under the name of "Cowrie Gum." It is found buried to the depth of some feet in the sand hills of Australia, where it has probably lain, the Lord only knows how long, like the Zanzibar copal, which is supposed to be the gum of a tree long since extinct, as no vestige of a tree now remains in the vicinity. In Australia it is supposed to have come from the Cowrie pine, hence its name. The whale ship Robert Pulsford brought a cargo of it into Lynn more than ten years ago, and cargoes of it have since been imported into Boston and Salem, and there is now over five hundred tons in the two places for sale. I imported hundreds of tons from England years ago, at a price which did not pay the expenses of transportation, &c., from Australia, when they could not give it away in England, and the consumption of it in this country was considerable before it was used in England. It was sold at one time as low as three or four cents per pound, and afterwards went up to 25 cts., and is now selling at 10 a 12 cts. in the rough state. M. F. F.

Boston, Feb., 1856.

Growth of Western Towns.

Oshkosh is a city of about 5500 inhabitants, and is built upon the western shore of Lake Winnebago, below the junction or union of the Fox and Wolf rivers in Wisconsin, and has, in a few years, from a state of wilderness, become an active and flourishing city. Its prospects for agricultural and mechanical pursuits are very bright, though at present lumbering is its leading business. It is but little known. Its recent growth accounts for this. A. V. P.

A correspondent suggests that the brittle iron described on page 184, was never annealed and had been sent by mistake for malleable iron. We were assured that the case was not a singular one.