



### Advice to American Patentees Concerning Foreign Patents.

It is generally much better to apply for foreign patents simultaneously with the application here. If this cannot be conveniently done, as little time as possible should be lost after the patent is issued, as the laws in some foreign countries allow patents to any one who first makes the application, and in this way many inventors are deprived of their right to take patents for their own inventions.

Many valuable inventions are yearly introduced into Europe from the United States,—by parties ever on the alert to pick up whatever they can lay their hands upon which may seem useful.

It is a part of our business to secure European patents—in fact three-fourths, and probably more, of all the patents granted in Europe to American citizens, are solicited through this office. We have faithful agents in the chief cities in Great Britain and on the Continent, and through them we can not only solicit patents, but often effect their sale upon advantageous terms. We can give the names of many of our patrons who have realized fortunes out of their European patents through our Agents abroad, if it is desired.

We are prepared at all times to furnish advice in regard to Foreign Patents, and will cheerfully do so on application personally at our office or by letter.

Models are not required in any European country, but the utmost care and experience is necessary in the preparation of the case.

Almost every invention that is of value in this country is of equal value abroad, and we would recommend patentees to pay more attention to securing their inventions in foreign countries than they have heretofore done.

All particulars in regard to the modus operandi of obtaining patents in any country where patent laws exist, may be had by addressing the publishers of this paper.

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[Reported Officially for the Scientific American.]

### LIST OF PATENT CLAIMS

(Issued from the United States Patent Office

FOR THE WEEK ENDING NOVEMBER 18, 1856

**BUMPER BRAKES FOR R. R. CARS**—Francis Armstrong, of New Orleans, La. : I claim the employment of the yielding force, made by the pull on the cars, to adjust the apparatus, and place it in position, that the force acting by the cars coming in contact with each other, will secure that force to act on the brakes, and close them on the wheels, and the force made by the pull on the cars when allowed to re-act, reversing the position of the apparatus in the placing it, so that the pressure of the cars acting against each other, can operate on the apparatus, and have no action on the brakes. This is claimed whether done by the described apparatus, or any other analogous mode producing the same effect.

**ANTI-FROST FAUCET**—F. H. Bartholomew, of New York City : I claim the application of a waste way to draw cocks, arranged and operating substantially as and for the purpose described.

**STEAM DRAG**—George Bradley, of Paterson, N. J. : I claim, first, the arranging of the driving wheels of a steam carriage in a truck frame that can turn independent of the engine frame, and so that the engine frame shall follow or be drawn by the truck frame, instead of the latter being controlled by the former, as has heretofore been done.

I also claim transmitting the power of the engine to the driving wheels in the truck frame, so arranged through the swiveling point or axis of the truck frame, so that there shall be no cramping or twisting of the frames or connecting rods, substantially as set forth.

**STEERING APPARATUS FOR SHIPS**—Thomas Carr, of Liverpool, Eng. : I do not confine myself to the details, as I have shown that they may be variously modified and yet retain the peculiar characteristics of my invention.

I claim the application to the ordinary steering apparatus of vessels, of a crank or its mechanical equivalent, the eccentric working in combination with an entire pulley or its segment, a quadrant on a vertical axis, the whole being interposed as a medium of communication between the wheel, ropes, or chains, and the tiller.

**DRAINING MACHINES**—John Cole & A. L. O. Wall, of De Witt, Ill. : We claim, first, the combination of the brace coupler, E, and rotating coupler, F, with the mole, substantially as set forth.

Second, constructing the mole in sections flexibly connected together.

Third, constructing the mole with a finer knife on its sole, to make a deep furrow in the bottom of the drain to facilitate the entrance of the water from the adjacent soil.

**FASTENING DOOR KNOB SPINDLES**—Almon Cooley, of Hartford, Conn., assignor to Roderick Terry & A. Cooley. I claim the conical side, C, when combined with the spindle, S, and knob, K, and constructed in the manner described for the purposes specified.

**DOOR FASTENERS**—Legend Crofoot, of Syracuse, N. Y. : I claim combining the two plates, A and B, constructed in the manner described, with the spring bolt of the plate, A, and the eye hook, of the plate B.

**DIAPHRAGM FLUID METER**—J. Henry Darlington and Wm. Piper, of New York City : We do not claim any of the separate elements or devices; nor do we claim any special combination thereof.

But we claim their particular arrangements, as before, and for the purpose set forth.

**SUGAR DRAINING APPARATUS**—Gustavus Fincken, of Brooklyn, N. Y. : I claim the employment for the reception of the molds of a wheel carriage composed of a box or vessel, A, with seats, d, d, to receive the molds and a frame, D, to keep them upright, and with stoppers, h, h, so applied within the box or vessel as to enable several to be inserted in or withdrawn from their respective molds simultaneously by a crank or its equivalent, at one end or side of the carriage, as described.

[By this sugar mold carriage the common severe and tedious labor of carrying the sugar to the molds in ladles is dispensed with; and when the sugar has stood a sufficient length of time in the molds, the stoppers are all removed at once by simply turning cranks on the box of the carriage, by which act the draining of the sugar commences instantaneously. The improvement is an excellent one in fine sugar making, saving a great amount of labor; and thus reducing the expense of its manufacture.]

**WASTE VALVE FOR HYDRANTS**—Robert Lawson, of St. Louis, Mo. : I claim the interior arrangement and combination of water valve and air chamber, as shown and described.

I do not claim the application of an air chamber, to the receiving pipe.

But I claim its peculiar combination with the waste valve, as set forth.

**SLEEVE FASTENER**—J. P. Derby, of Cayendish, Vt. : I claim arranging and combining with a face plate by means of a post or stem, or cross bar or plate, which, with proper construction, admits of the insertion of a stem or stems into the holes of a wristband or cuff, and is then secured in place by means of slots in the plate that revolves until the stems are entered therein.

I also claim the spring which serves to keep said stems in place in the slots, and which prevents the face plate from being turned until its force is overcome.

I also claim combining with the stem of face plate, and the cross bar, in manner substantially as described, two sets of cams, whereby the distance between the stems of cross bar and face plate can be graduated to receive the wristband at pleasure, and whereby the distance that the face plate and cross bar traverse in opposite directions, may also be controlled, the whole making a perfect and safe fastener for the purpose described.

**HARVESTING GRAIN**—Geo. F. Foote, of Buffalo, N. Y. : I claim the peculiar constructed scroll cylinder, A, in combination with the cylinder case, F, and the gathering wheels, M M, when the same are constructed and arranged to operate in relation to each other and the main frame, A, in the manner and for the purpose set forth.

**SPRING HOLDER FOR SLAT BLINDS**—W. L. Gallaudet, of New York City : I claim the combination of the peculiarly shaped spring described, with the rod and with the lower rail, substantially in the manner set forth.

**GAUGES FOR STEAM BOILERS**—J. C. Harris, of Savannah, Ga. : I claim the arrangement of the float chambers, the stock-cocks, and the blow-off cocks to adapt the gauge to the employment of oil, interposed between the float and the water to carry the float, substantially as set forth.

**REGULATING THE DRAFT OF FURNACE FURNACES**—S. L. Hay, of Reading, Mass., and H. B. Osgood, of Dorchester, Mass. : We claim the compound valve, A, with the spring, d, or its equivalent and equivoise, k, in combination with the pipe, C, substantially as described and for the purposes of a compound self-acting regulator, as set forth.

**CANDLE MOLD**—August Hengstenberg, of Muscatine, Iowa : I claim the combination of the spools, as constructed in my patent, with the rollers, and locking; also the securing of the cutter by means of the layer, S, substantially as described and for the purposes specified.

**CUTTING APPARATUS OF GRAIN AND GRASS HARVESTERS**—M. G. Hubbard, of Penn Yan, N. Y. : I claim the combination of a single cutter with a double cutter, when both are constructed substantially in the manner described, and made to reciprocate in directions opposite to each other, substantially in the manner and for the purposes described.

**FORKS FOR HANDLING HEATED PLATES**—G. W. Hyatt, of Auburn, N. Y. : Disclaiming all other forms or modes of constructing forks, I claim the clamp or spring, F, for the purpose of supporting the tines, and also to allow them to be adjusted to suit articles of different diameters.

**VENTILATING SHIPS**—Rudolph Knecht, of New York City : I do not claim wings to draw in fresh air or to expel the foul air out of a room.

Nor do I claim the ventilating tubes.

I claim the combination and arrangement of two sets of wings on one shaft acting simultaneously, so that while one is expelling the foul air, the other is drawing in fresh air, in the manner substantially as described and for the purpose specified.

**WAGONS**—Henry Kruse, of New Orleans, La. : I claim the application to wagons of wheels made buoyant by the use of floats, that will cause the wagon to be supported in water from such buoyancy, with the application of propelling blades on said wheels to cause the wheels to be available in propelling the wagon in water, and the same wheels, by removing the propelling blades, can change the wheels so that they are available in their uses in the transporting of substances on land similar to common wheels of wagons.

**RECIPROCATING SAWS**—G. D. Lund, of Yonkers, N. Y. : I claim placing or fitting the rod or shaft, C, to which the lower strap or socket, D, is attached loosely in the slides, B B, substantially as described for the purpose specified.

[This is a good improvement. The rod to which the pitman is attached is fitted in slides, so that it can turn in them; the socket in which the lower end of the saw is secured, is attached to the rod so that the saw may be more or less inclined or adjusted, and the necessary rake given to it without causing any additional friction upon the lower slides.]

**PREPARING RATTAN FOR UMBRELLAS**—J. W. Martin, of Philadelphia, Pa. : I claim the combined devices, as described, for forming and tipping the rattans or whale-bone for umbrella ribs, as set forth.

**CUTTING FILES**—Chas. Miller, of New York City : I do not claim the mere employment of a stop to regulate the depth of cut of the chisel.

But I claim fitting the chisel to work in a stock which rests upon the file blank itself, and in which the chisel is moved with it throughout the whole length of the movement of the blank under the chisel, and serves as a stop to the chisel, substantially as and for the purposes described.

[Quite a number of machines for cutting files have been invented, but it has been very difficult to give that uniformity of cut to the file, which is given by hand labor. This invention consists in a certain contrivance which regulates the operation of the cutting chisel to produce a uniform depth of cut from end to end of the file. A result difficult to accomplish has been obtained by this improvement, and it is a very useful one, because, upon the uniform cut of a file its character in a great measure depends.]

**CLOTHES DRIERS**—Saml. Morrill, of Andover, N. H. : I claim arranging the ratchet on the side of the reel, in combination with the pawl, H, and lever, C, in such a manner that the pawl and ratchet are brought into play when the reel is filled; but thrown out of play when in its horizontal position, substantially as described and for the purpose set forth.

[The reel to which the clothes are secured on this drying machine, is attached to an upright post, in such a manner that it (the reel) may be tilted or inclined for the purpose of putting on the clothes to dry, and taking them off the reel when dry. The improvement renders the clothes-drier more convenient to use.]

**MEDICAL RESPIRATOR**—E. M. Murphy, of Lexington, Ill. : I claim the combination with the usual medical inhaler of a fan, A, to be revolved by the act of inhalation, in the manner and for the purposes substantially as specified.

**SLICING APPLES**—E. L. Pratt, of Philadelphia, Pa. : I claim attaching the knives to a reciprocating piece, P, by means of pins or axes on which they can so rotate in combination with the straight rod or guide, O, for the purpose of causing the knives to descend through the apple, in lines parallel to its axis, as set forth.

**WEATHER STRIPS FOR DOORS**—Reuben Wight, of Westfield, N. Y. : I claim the adjustable weather strip, A, operated by the segment lever, E, in connection with the movable button, G, and the cams, J, J, the whole constructed and arranged in the manner and for the purpose fully set forth.

**HEATING FEED WATER OF LOCOMOTIVE ENGINES**—John R. Sees, of New York City : I do not claim heating the feed water of a steam boiler in its passage from the feed pump to the boiler; nor heating it by the waste or escape heat from the boiler; nor placing the heating pipes in the smoke box of the boiler, as they are known and used; neither do I claim the use of the circulating pipe and double-acting check valve; nor placing the heating pipes and their connections below the water line of the boiler, as secured to me by letters patented dated August 5th, 1856.

But I claim the construction of the duplicate cylindrical coils, G and I, and their arrangement in relation to the smoke box, A, the exhaust pipes, K K, the tubes, C, and the base, N, of the smoke stack of a locomotive boiler, as and for the purposes set forth.

**CLEANING INDIA RUBBER**—T. Sault, of Seymour, Ct. : I claim the cleaning of india rubber by means of the serrated sided bars, D D, constructed and arranged to operate in combination with each other, substantially as described.

[The pulp engine for grinding rags into pulp for paper, with but little or no modification, has been heretofore used in cleaning india rubber. This improvement consists in providing the cylinder of the pulp engine with peculiar serrated-sided teeth to work between stationary serrated-sided bars on the concave bed below the cylinder, for the purpose of tearing up the rubber by a peculiar rubbing and stretching action which is more effective in extracting the impurities than the action of the cutters and teeth heretofore employed. Pieces of wood and bark come mixed with india rubber, these have all to be removed, and this has been very difficult to accomplish by the common machinery. This improvement removes these impurities very effectually.]

**BREECH LOADING GUNS**—Christian Sharps, of Philadelphia, Pa. : I am aware that the breech of a fire arm has heretofore been closed by a plug-breech-pin, connected therewith by a bayonet attachment, and that beveled or spoon-formed piercers have been used to pierce cartridges.

I am also aware that a bush has been used in that part of the breech which is liable to burn by continued use, I therefore lay no claim to the invention of such devices of themselves.

But I claim the combination and arrangement of a spoon formed cartridge piercer with the turning breech pin of a breech loading fire arm, whereby the powder is more effectually worked into the chamber leading to the primer by the operation of locking the breech pin in its place.

I also claim the combination of a removable bush and elastic packing ring with the breech of a fire arm, substantially as set forth.

**WASHING MACHINES**—Ira Reynolds, of Republic, O. : I claim the arrangement and combination in washing machines of the reciprocating pulleys, l, springs, p, and plungers, b, constructed and operating substantially in the manner set forth.

**BREECH-LOADING FIRE ARMS**—Gustave Scharffe, of New York City : I claim, first, the manner of cocking the hammer by the opening of the breech, substantially as described.

Second, I claim the arrangement and construction of the hammer, operated in the manner specified.

Third, I claim securing the breech cap, E, either upon or into the gun barrel, said breech cap being provided with a hole corresponding with a hole in the gun barrel, by the unscrewing of which breech cap, the hammer is cocked, and both holes are brought above each other, so as to admit the cartridge, while, by the screwing up of said breech cap, the hole in the gun barrel is closed up again, substantially as described.

**GAS REGULATOR**—W. G. Sterling, of Bridgeport, Ct. : I am aware that two chambers connected at the bottom have been used by means of a float in one chamber attached to a valve as a regulator; and while mercury has been found too heavy, other fluids, by their evaporation, constantly derange the operation of the machine, but by means of the vibrating balance in both chambers, my apparatus is extremely sensitive to the slightest pressure, and not subject to this difficulty.

I claim the vibrating balance, D, with the partition, B, forming two chambers and extending into said balance, D, which is so adjusted that it vibrates in the two chambers, and is connected with a valve in any suitable form, as described, or any other mode equivalent thereto.

**MILL STONE DRESS**—T. B. Stout, of Keyport, N. J. : I do not claim making the furrows of different depths, nor simply terminating deep furrows with shallower ones at the periphery, as I am aware that the equivalents of such have before been used.

I claim the combined arrangement of furrows upon the grinding plates; viz., the inner furrows, d, d, having their abrupt edges on the two grinders meeting by the revolution of the runner deep at the central ends, but running out to the surface at the outer ends, while the peripheral furrows are arranged oblique to the inner furrows, their edges inclined in the opposite direction, and having a considerable proportion of plane surface between them, substantially in the manner and for the purposes described.

**CUTTING VEGETABLES**—Jacob Geiss and Jacob Brosius, of Belleville, Ill. : We claim the cone C, provided with slots, d, d, and secured upon the shaft, B, as shown, in combination with the knives, g, attached to the arms, e, e, and disk, f, arranged as shown and described, for the purpose specified, and in doing so we do not claim the use of a hollow revolving cone armed with knives for slicing vegetables, as that is not new; but only the mode of construction specified for effecting the adjustment for the thickness of the slices.

[This vegetable cutter has a rotating transverse hollow slotted cone on it, with a cutting shaft capable of adjustment, to cut fine and coarse. A hopper is placed over the hollow cone, and the vegetables fed down an incline plate, and cut into slices, which pass through slots into the hollow cone, and from it out at its larger end. This machine is very simple and well adapted for cutting various kinds of vegetables, potatoes, &c., for animals or for culinary purposes. It is also admirably adapted for cutting apples for cider mills; and by simply putting pressure rollers under the cone to express the sliced apples, it is rendered into an effective complete cider mill.]

**GAS RETORT FASTENING**—W. H. St. John, of New York City : I am aware that lead has been used for tightening the joints of boilers; this I do not claim.

But, first, the tightening with copper of the joints of doors of gas retort heads, when the said joint is effected by the otherwise usual groove inserted in the flange of the retort piece, to meet a corresponding projection on the door in the manner and for the purposes specified.

I further claim the placing a hot air chamber beneath the mouth piece to consume the tar and oil collecting on the bottom of the latter.

**PARING APPLES, POTATOES, &c.**—E. L. Pratt, of Philadelphia, Pa., assignor to Leonard Harrington, of Worcester, Mass. : I claim, first, moving the apple, potato, or other object, in a direct line past the knife, or the knife past the object, during the revolution of said apple, potato, or other object, by means of the screw shaft and cogged rack or other device substantially the same, whereby the operation of paring is performed by the turning of the screw shaft without any other movement of the knife than that occasioned by the curvature, size, and inequality of the surface or form of the article being pared, to which the said knife is accommodated by the action of the spring, as fully set forth.

Second, I claim the peculiar form of the knife, that is to say, shaping the portion nearest the shaft of the form of a segment of a circle of a given radius, and the remaining portion furthest from the shaft of such curvature as will form a segment of a cycloid of a circle combined with the first portion, and correspond or nearly so, with the spiral curve of the screw, when the end of the apple, potato, or other object, is being pared, in such a manner as to enable its edge to assume at all points of contact with the potato, or other object, a convex curve the reverse of the convex part of said apple, potato, or other object with which it is in contact, and thereby enable its end, and every inequality of its surface to be pared by thus accommodating the edge of the knife to these parts, substantially as set forth.

**MANUFACTURE OF IRON AND STEEL**—Henry Bessemer, of London, Eng. Patented in England Feb. 12, 1856; I do not confine myself to the precise details specified, provided that the peculiar character of my invention be retained.

I do not claim injecting streams of air or steam into molten iron, for the purpose of refining iron, that being a process known and used before.

I claim the conversion of molten crude iron or of re-melted pig, or fiery iron into steel or into malleable iron, without the use of fuel for reheating or continuing the crude molten metal, such conversion being effected by forcing into and among the particles of a mass of molten iron currents of air or gaseous matter containing or capable of evolving sufficient oxygen to keep up the combustion of the carbon contained in the iron till the conversion is accomplished.

**HARVESTERS**—Alvin Bullock, of Busti, N. Y. : I claim operating the sickle bar, H, by means of the right angle lever, G, on the shaft, E, in combination with the lever, T, bar, c, and flanch D, when the same are constructed and arranged to operate in relation to the main frame, A, drive wheel B, and adjustable finger bar, I, in the manner and for the purpose set forth.

[A zig-zag projecting flanch is attached to the outside of the driving wheel; the flanch, as the machine is drawn along, operates (through two levers) the cutter bar, and gives it a reciprocating motion. The method of thus operating the sickle bar without gearing is very simple, causing little friction in working, and operating smoothly on rough and level ground.]

**PROJECTILE FOR FIRE ARMS**—William Taggart, of Haverhill, Mass. : I do not claim the central aperture, nor communicating a revolving motion to the ball, by spiral ridges, or projections on the inner surface around such an aperture.

But I claim the spiral partition, C, arranged and operating substantially as specified.

I also claim the wings, a, a, arranged in the manner and for the purpose described.

**EXCAVATORS**—John F. Willey, of Fredonia, N. Y., assignor to B. Merrill and Thos. Phillips, of Cassadaga, N. Y., and John F. Willey, I claim forming the scoop of two parts, D E, connected by joints or links, d, d, the bottom of the scoop being formed of slots, a, which are allowed to turn the scoop being suspended to the cart, and the whole arranged as shown and described for the purpose specified.

[This improvement relates to road excavators; the scoop is formed of two parts connected by a joint, and the bottom of the two formed of slats which are allowed to turn. The scoop is suspended by chains to a cart, so that it may be raised bodily. As the cart moves along, the scoop may be readily filled and as easily discharged. As the scoop is formed of two parts jointed together, each part is filled separately, therefore there is not such a large quantity of earth to be forced backward, at once, while filling the scoop. The power required to work common excavators is great, because of the great amount of earth to be forced back in the scoop. This improvement remedies this evil.]

**DESIGN.**  
**PARLOR STOVES**—Elisha Smith, of Albany, N. Y.

[Now that the Presidential Election is over, we expect to see the weekly list of claims gradually augmenting in numbers. In the above list we recognize about one-third of the cases as having been prepared at this office.—Ed.]

### Complimentary.

The editor of the *Ladies Companion*, published in Boston, thus speaks of the *SCIENTIFIC AMERICAN* :—

"We have had the pleasure of perusing this invaluable paper for the last five years, and we candidly confess that we do not know of another paper in the world for which we should be willing to exchange. It presents a complete record of all the various improvements in the means of human civilization, but is more especially devoted to scientific and mechanical progress. No person should fail to take this paper who wishes to keep posted-up in such matters. Its editors are men of sense and ability, who are not afraid to express an opinion when based on science, though it may be in opposition to the popular notions of the day. We have never read a paper from which we get so much 'value received' for so low a price."

### Candle Wicks.

The wicks of tallow candles that require no snuffing, are made in a peculiar manner. One thread of the wick is first impregnated with subnitrate of bismuth ground up in oil, and the strand is bound round with this thread spirally. The several strands—one, two, or three—are then spirally wound round a very thin wire, which is placed in the center of the mold, and the tallow is poured in; when cold the rod is withdrawn. On burning such candle, the wicks uncurl and form so many separate flames, while their ends, coming into contact with the air at the edge of the flame, are consumed. Any plan, however, by which the wicks can be made to uncurl during combustion, will obviate the necessity of using snuff-ers: such wicks, however, are liable to make candles gutter, or, to use a common expression, "run."

### Enduring Cold.

It is wonderful how much cold a man can be inured to withstand. In Dr. Kane's Journal it is stated that one of his party, George Riley, who was of a robust constitution and cheerful temper, could sleep in the open air on a sledge, with the thermometer at 30°, without experiencing any ill effects from the cold.

### A Sugar Cane Expedition.

The U. S. storeship *Release*, one of the vessels of the Hartstein Expedition in pursuit of Dr. Kane, has been selected by the government for the purpose of visiting the shores of the South Atlantic, to procure cane and seeds, under the appropriation of \$75,000, which was made for that object at the last session of Congress. It is expected that she will visit the shores of Central and South America, as well as many of the West India Islands, and return early next spring.