



[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office FOR THE WEEK ENDING NOVEMBER 1, 1853.

PROTECTING BULWARKS FOR WAR VESSELS—By William Ballard, of New York City: I claim the use of the shield board, in combination with the bulwarks of a ship, as set forth.

I also claim the use of the stanchions and panels, in combination with the deck of the vessel, and the shield board, for the purpose and principle of construction and operation, as set forth.

MAGNETO-ELECTRIC MACHINES—By Calvin Carpenter, Jr., of Pawtucket, Mass. Patented in France April 18, 1853: I do not claim the employment of permanent magnets of helical coils of wire of metallic segments upon a cylinder of non-conducting material, or of springs such as I have described, either separately or in combination, for the purpose set forth, otherwise than in the manner in which I have arranged, connected, and combined them.

But I claim the combination of one or more series of permanent magnets radially arranged, the poles of each series being in one plane, and in two concentric circles, with a disc of helices, arranged in three sets, in such manner that the three sets may be acted upon successively at nearly equal intervals of time, one set by the inner circle of poles, and the other two sets by the outer circle of poles; the currents of the several sets of helices being thrown into one constant or intermittent current by means of the current discharges and springs, or their equivalents, as described.

CAR COUPLINGS—By A. P. Chatham, of Canoga, N. Y.: I claim constructing the buffer, A, with a recess to hold the link in the proper position for entering the buffer, B, and the buffer C, with a cavity, and an inclined straight catch extending to nearly the top of its cavity, so that when a link is connected to the buffer, A, and passed over the catch of the buffer, B, it cannot jump up and become detached from the catch while the cars are in motion, whereby the danger of the cars being separated while running is greatly lessened, and the coupling is simpler, cheap, and not liable to get out of order.

PEN AND PENCIL CASE—By G. S. Clark, of New York City: I claim neither the pen or pencil slide separately, for both have been previously used, but I claim the peculiar arrangement of the pen and pencil slides, as described, viz., having the pencil slide with its covering tube placed within the pen slide or the tubes C and D, operating the two slides independently of each other in the manner set forth.

[This improvement is noticed on page 4 of this Vol.]

CANE AND MAIZE CUTTERS—By John W. Cormack, of Quincy, Ill.: I claim in the framing and manner of attaching the knife and arm to the sled.

CONDENSERS FOR STEAM ENGINES—By Benjamin Crawford, of Pittsburgh, Pa.: I claim the arrangement of the tubes or passages in the condenser, with the inlet and outlet openings in the case, as specified, so that a current of cold water is caused to flow round both ends of the tubes, whereby the condenser is prevented from undue heating, and the tubes kept coolest at both ends, and warmest at the middle, whereby the great bulk of the heat is transferred to the condensing water, near the point at which it is discharged into the case.

Second, constructing the case of the condenser with stuffing or other equivalent joints, to render it flexible, and thereby prevent fracture.

MACHINES FOR STICKING PINS—By C. O. Crosby, of New Haven, Conn.: I claim rollers that conical rollers have been used for forming the inclined channel for conducting the pins, and that a screw has been used to separate the pins, and that pliers have been used in the manufacture of pins, and that clamping bars have been used for clamping the paper, after it has been crimped, and that the paper has been drawn through an roller up by a revolving cylinder so arranged as to regulate the quantity of paper, as to folding up. I therefore do not claim either of these, as such.

I claim the method of crimping the paper by means of movable folding blades in combination with the bed plate, while the back and front sides of the paper are sustained by the clamping bars, as described. Second, I also claim the method of crimping the paper by means of moving folding blades descending and ascending between the stationary and moving clamping bars, when the clamping bars serve as a part of the crimping apparatus, whether the paper be sustained by a bed plate or otherwise, when constructed and operating as described.

Third, I also claim the method of lifting the pins from the distributor, and carrying them away and sticking them into the crimped paper, while the distributor is bringing another supply of pins in front of the clamping bars, thereby keeping the lifting pliers or other lifting apparatus continually in operation, when performed by the means and in the manner described.

Fourth, I also claim the lifting apparatus, or any substantial part thereof, when constructed, combined, and made to operate as described.

Fifth, I also claim the combination of the lifting apparatus described, with the inclined transverse notches in the stationary clamping bar, by which means the pins will always be lifted in an exact line, even though the pins are not straight, when constructed, combined, and made to operate, as described.

Sixth, I also claim the combination of the conical rollers, with the side planes, to form a straight inclined conducting channel, when combined, constructed, and made to operate as described.

Seventh, I also claim the lifting pliers, when constructed and made to operate, as described, either with or without the creeper sliding guide or director.

MACHINES FOR STICKING PINS—By C. O. Crosby, of New Haven, Conn.: I do not claim the channels nor grooves, nor the punches working in the grooves, nor the use of clamping bars, to serve also as crimping bars, because these have all been used before or claimed in my former applications.

I claim the combination of the punches, working in horizontal grooves, with the slide, and the straight inclined channels, when arranged as set forth. I also claim the combination of the punches with the double folding blades, when these are combined with the movable and stationary clamping bars, constructed as described.

I also claim the method of crimping the paper by means of folding blades working between stationary and moving clamping bars, when these clamping bars serve as a part of the crimping apparatus, when constructed and operating as described.

I also claim the bars (forming the side guides to the spaces) to guide the pins while falling down from the separator to the horizontal grooves, in combination with the grooves and punches, when they are constructed and arranged as set forth.

MACHINES FOR STICKING PINS—By C. O. Crosby, of New Haven, Conn.: I claim the use of a slide wheel to connect the lower end of the straight inclined conducting channel with the upper end of the vertical side guides to convey the pins from the former to the latter, while it changes the position of the pins from vertical to horizontal, as described, whether with or without the counter-sinks in the inner edge of the periphery.

I also claim the use of a separating wheel with teeth on its periphery to sustain the column of pins, separate them, and drop them separately into the grooves in the sliding bed, at the proper time by its revolution, as described, whether the wheel be made of two discs or with the periphery grooved out or the periphery be single, and the teeth cut directly across it. I also claim the method of crimping the paper by the use of jaws with a tongue between them to slide across the paper, such a manner that the paper may be crimped by double folding blades forcing the two folds of pa-

per through the space between the tongue and the jaw on each side, so that the pins may be stuck through the crimps over the open edges of the folding blades, while the tongue will be between the pins and the paper, and so that both the bars and tongue, and the double folding blades may be readily withdrawn to release the paper, and this whether the double folding blades are above or below the jaws and tongue, when they are constructed, used, and made to operate as described.

HOSE PROTECTOR—By David Demarest, of New York City: I claim the employment of a portable section of a rail track constructed as described, and with an opening in its center for the hose to fit in, when said section is placed over said hose, the same being employed in the manner described, and for the purpose of covering the hose at certain points, and saving them from the great injury they sustain from carriages and cars passing over them during the time of fires, and as fully set forth.

[This useful invention is noticed on page 230 Vol. 8, Sci. Am.]

CAR WHEELS—Joseph Farnsworth, Jr., of Madison, Ind.: I am aware that P. W. Gates made a cast-iron car wheel in which the rim is connected to the central parts by two sets of short spokes, but this (without admitting its priority to my invention) I do not claim, as my improvement relates exclusively to that class of wheels in which a disc extends from the hub to the rim, my object being to support the rim and strengthen the disc by flexible supports, which will perform their duty without straining and endangering the breaking of the disc, as in the case of the wheels of this class.

I claim a cast-iron car-wheel, constructed as described, but I make no claim to any part of the wheel by itself, nor to any other combination of parts than those set forth.

REGULATING THE SPEED OF STEAM ENGINES—By Luther R. Faught, of Macon, Ga.: I do not confine myself to the employment of a penulium or air-spring, as there may be other devices that would produce analogous effects; neither do I confine myself to the precise methods of producing friction described, as both the methods that I have shown are well known, viz., by the pressure of the steam in the valve chest, and by plates compressed to the rod by a spring; nor do I confine myself to the adjustment of the relation between the penulium, and the device or devices which produce the friction, as it will be evident that the lengthening or shortening of the penulium will produce the same effect.

I claim a cast-iron car-wheel, constructed as described, but I make no claim to any part of the wheel by itself, nor to any other combination of parts than those set forth.

[See notice of this invention on page 388, Vol. 8, Sci. Am.]

GRAIN CRADLES—By C. P. Kelsey, of Livingstonville, N. Y.: I claim, first, the bar or its equivalent, for attaching the fingers of the frame to the snath, for the purpose set forth.

Second, I claim so connecting the braces with the fingers, by means of link or other universal joints, that the snath may be folded close against the fingers, without requiring that the said braces should be loosened in the snath, as set forth.

COATING SHEETS OF METAL—By Edmund Morewood & George Rogers, of London, England: We claim the method described of coating sheets of metal by immersing them in other molten metals, which are more fusible, by means of rollers arranged, as described, so that with the same machine, sheets of metal, varying in thickness, may be coated free from puckers, bends, or indentations on their surfaces, thus rendering unnecessary the subsequent operation of flattening, which heretofore could not be dispensed with.

ADJUSTABLE SPRINGS FOR CARRIAGES—By R. S. Morse, of Dixfield, Me.: I claim the adjustable auxiliary springs in combination with the bed spring or springs as set forth.

BRACE AND BIT FASTENER—By Howard Perkins, of North Bridgewater, Mass.: I claim the manner of constructing and fastening the bit into the socket by the slide lock, as described, having the end of the bit so formed as to fit into the groove in the key, as set forth, and having the end of the bit press down upon the key, so that when the keys slipped back, the bit may be easily removed.

GOLD WASHER—By Henry M. Ritterband, of New York City: I claim the combination of the tube, valve, and lip, consisting of a heavy metal, as described, and an apparatus for forming a coating of auriferous earth, as specified.

SPRAW AND GRAIN SEPARATORS—By John A. Taplin, of Fishkill, N. Y.: I claim the vibrating straw carrier and grain separator, constructed as set forth with a screen and fluted bottom board, for the purpose of separating the grain from the straw, returning the former to the winnowing apparatus, and conveying the straw to the hinder extremity of the machine.

METALLIC PENS—By Wm. H. Towers, of Philadelphia, Pa.: I claim making metallic pens with depressions or cavities for retaining the requisite quantity of ink to supply the same, and making them flat on both surfaces, and tapering the shank or main body of the same, and inserting it in a corresponding socket or opening in the center of the lower end of the pen holder, in the manner set forth.

MACHINE FOR TURNING CYLINDERS OF WOOD—By Increase S. Waite, of Hubbardston, Mass.: I claim the combination composed of the feeding hopper, the series of rotary mandrels and centers, applied to the shaft, the revolving cutter or chisel, and the mechanism for giving to each mandrel an endwise movement backward and forward, as described, mechanism for arresting the rotary movement of the shaft, or the heads, during the time necessary for the cooperation of the cutter or chisel wheel, on each piece of wood, and finally a mechanism for rotating the shaft and its two heads, as described; the mechanism for moving each mandrel endwise, as described, being the spring, the wheel, and cam plate, as described, that for rotating the mandrel being the gear, and the gear on the shaft put in revolution as described, that for arresting the rotation of the shaft during the time necessary to turn down an article, being the stop or stop plate, and the screw applied to each mandrel, and made to operate, as specified; and finally, that for rotating the shaft, being the friction roller made to operate against the periphery of the circular head, and to be rotated and borne against said head, as set forth.

GENERATING AND CONDENSING STEAM—By Peter H. Watson, of Washington, D. C. Ante-dated May 2, 1853: I claim the method of recovering the heat of the exhaust steam, by passing it through the comparatively cool water in the lower portion of the boiler, as set forth. I also claim the arrangement of the upper end of the drop lines, in an inclined plate, to facilitate the entrance of the smoke into the flues, and the passage of the steam from beneath the inclined plate into the upper part of the boiler, as set forth.

[Our cotemporary is becoming a veteran in the field of invention.]

GRAIN SEPARATORS—By J. V. A. Wemple, of Chicago, Ill.: I claim the employment of a cylinder, having tangential, or other suitably projecting parts across or along its periphery, for the purpose of separating the grain and breaking the impinging effect produced by the threshing cylinder on the endless apron, the said cylinder being so situated and operating in rear of the threshing cylinder, as gently to feed over it the straw and headings, as they are delivered from the threshing cylinder.

BEE HIVE—By Geo. Calvert, of Upperville, Va.: I claim the combination of the honey boxes with another box and cross-pieces, arranged and operated in the manner set forth.

DEVICES FOR STEERING CULTIVATORS—By Seneca Lapham, of Salem, Ohio: I claim the combination and arrangement of the parts, consisting of the lever and its attachment to the brace, and the connection of the tongue to the lever by the staple. This I claim in its application to the purpose of changing the direction of this and other machines, as specified.

FLUID METERS—By Wm. B. Leonard, of New York City: I claim the combination in fluid meters of mechanism for measuring the volume of a flowing fluid, however variable, mechanism for measuring the velocity of the flowing fluid, however that may vary, mechanism for multiplying these two quantities together, and mechanism for recording the product, in such manner as to show on a register the quantity of fluid that has passed, as set forth.

I also claim the combination of a self-acting guard valve or valves, however constructed or arranged, with the water-wheel or other motor, in a meter, in such manner that the flow of water through the meter, will be arrested whenever its pressure is not sufficient to give motion to the motor the instant it begins, whereby the escape of water through the meter unmeasured is prevented.

[This is a very ingenious and useful invention.]

OPENING AND CLOSING GATES—By Wm. T. Merritt, of Hart's Village, N. Y.: I claim elevating or depressing, or opening and closing the gate, as described, viz., by means of the shaft, having upon it the pulley F, the pulleys, G, G, being attached permanently to said shaft, and having ropes attached to them; and the pulleys, F, F, being placed loosely on the shaft and connected to it at a certain period by means of pins on the shaft working in slots in the bosses or hubs of the pulleys, said pulleys having the chains attached to them and to the upper ends of the gate styles, and also the chains, I, I, with the weights, the chains, I, I, being attached to the lower ends of the styles, the gate being prevented from being casually depressed by means of the pawl, which is freed from the notch in the boss or hub by the dog, substantially as set forth.

[See notice of this invention on page 444, Vol. 8, Sci. Am.]

STRAIGHTENING AND CURVING RAILS—By Geo. Williston, of Brunswick, Me.: I am aware that a machine has been used in Bavaria, which acts by the pressure of a screw upon the bar to be bent, the bearing or platform being placed underneath the bar. This I do not claim.

But I claim the combination of the screw, strap beam, and slides, constructed as described, with the beam placed on the top or side of the rail for the purpose of straightening or curving rails on railroads, without the necessity of removing the same from the sleepers.

NOTE—In the above list of patents, seven were secured through the Scientific American Patent Agency.

DESIGN. PARLOR STOVE—By Winslow Ames, of Nashua, N. H., assignor to Hartshorn, Ames & Co., of Boston, Mass.

[For the Scientific American.] Nova Scotia Patent Laws.

[Synopsis of an Act of the General Assembly of the Province of Nova Scotia, relative to patents for useful inventions; passed in 1851.—Condensed by Peter Stubs, Barrister, Attorney at Law, and Notary Public, of St. John, N. B., B. N. A.]

SEC. 1. A resident of Nova Scotia for one year, may apply to the Governor, alleging that he has discovered any new and useful art, machine, manufacture, or composition of matter, or any new or useful improvement thereon, previously unknown, the Governor may direct Letters Patent to be issued, granting to the person so applying, and his representatives, for a term not exceeding fourteen years, the exclusive right of making, using, and vending his discovery. Letters to be recorded by the Provincial Secretary, in a book to be kept in his office for that purpose.

SEC. 2. Where Letters Patent are thus granted, and another person shall discover any improvement in the principle or process of such invention, and shall obtain Letters Patent for such improvement, the person obtaining the new patent shall not make, use, or vend the original invention, nor shall the original patentee make, use, or vend the improvement.

SEC. 3. Simple change of form or proportions of any machine or composition of matter, not deemed a discovery.

SEC. 4. Applicants for Letters Patent to pay in the Secretary's office, twenty shillings (\$5).

SEC. 5. Any person may obtain copies of Letters Patents at sixpence (10 cents) per folio, and drawings obtainable also at a reasonable fee.

SEC. 6. Applicant for Letters Patent to make oath that he believes that he is the true inventor or discoverer, and that his use, invention, or discovery was not previously known in the Province.

SEC. 7. Before Letters Patent are granted, applicant to deliver a full description of his invention or discovery, and the manner of using, or process of compounding the same, and in case of a machine, to deliver a model, and explain the principles by which it may be distinguished from other inventions, and shall accompany the same with drawings, when the case admits of drawings, or with specimens of ingredients sufficient for the purpose of experimentation. The whole to be filed or lodged in the Secretary's office, and copies of description are evidence in a court of Justice, when certified by the Provincial Secretary, where matters concerning such patents may come in question. Governor may dispense with the delivery of a model at the Secretary's Office.

SEC. 8. The patentee may assign Letters Patent, and assignee then stands in the stead of the patentee, as well as regards his rights as his liabilities. Assignment to be recorded in Secretary's Office.

SEC. 9. Actions maintainable for pirating patents, and damages recoverable.

SEC. 10. Defendant may plead the general issue, and give this act in evidence, and every special matter, to prove that the specification does not contain the whole truth, or contains more than is necessary to produce the described effect, and upon further proof that concealment or addition is fraudulently made, or that the invention or discovery is not original, or that such patentee had surreptitiously obtained his Letters Patent, then the verdict and judgment shall be for the defendant, with costs, and such Letters Patent shall be declared void.

N. B. It would appear that any person, whether a British subject or not, can take out Letters Patent in Nova Scotia, and all applicants are liable to the same expense; but in any case, the applicant must have resided in Nova Scotia for twelve months prior to the date of his application. This was formerly the case in New Brunswick.

Gum Arabic Solutions. MESSRS. EDITORS—Your correspondent, "S. A. C.," of Hartford, I think, is very much mistaken in his article on gum arabic solutions, if he intends to convey the idea that they can be kept a considerable length of time without changing, by use of the means he has cited. An aqueous solution of gum arabic remains but a certain length of time unchanged, and that term is as conditions for fermentation are avoided, viz., an elevated temperature and exposure to air; when these occur the introduction of so small a quantity of alcohol or volatile oil will not prevent a change, while the former would rather tend to facilitate acetous fermentation particularly if the solution be fluid. Therefore for the better preservation of gum pastes, they should be made of a good consistence and kept in closed vessels in a cool place when not wanted for immediate use. Tragacanth paste (which is not strictly a solution of the gum in water) undergoes change much sooner than gum arabic, probably owing to the presence of a small proportion of starch which it contains, and acquires a more foetid odor, particularly if not of a fine quality. Essential oils may serve to cover this foetor and render it tolerable for a longer time, but the most advisable plan is to prepare these pastes in quantities to serve but for a short time as they are so readily made, and it would be well to observe cleaning the vessels thoroughly before preparing a new batch. Nothing, I believe, is known that will preserve gum solutions unless added in such quantities to make them less valuable as pastes or cements. Gum arabic and tragacanth are preservable only in the dry state.

JNO. H. KASER. Reading Pa., Nov. 1, 1853.

Arresting for Infringement of a Patent. MESSRS. EDITORS—Can a resident of one State be arrested in any one of the United States for the alleged infringement of a patent and be required to give bail and stand trial in such State as the plaintiff may please to arrest him?

M. C. H. [Yes he can, if in accordance with the laws of the State wherein he is arrested, not otherwise. If the resident of one State goes to another, and infringes a patent, he is surely amenable to the laws as they exist in that State with respect to arrest and bail. The practice of the U. S. Courts in preliminary matters is to be guided by the local laws of the States. In one case, that of Sherman versus Cook, for the unlawful use of Woodworth's planing machines in Vermont, a bill was filed on the 27th June, 1850, and the suit brought in New York before Judge Nelson. An objection was taken by the defendant's counsel to the jurisdiction of the Court, on the ground that the use of the machines complained of was in another judicial district, viz., in Vermont. It was urged that the proceedings should have been instituted in that District. Judge Nelson, however, decided that the party concerned in the infringement was responsible, and it was enough if the offending machine was reached through him, who was accountable for the wrong, and without whose agency there would have been no room for complaint. The United States' Courts have the jurisdiction of patent matters.]