[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING MAY 2, 1854.

SEWING MACHINES—I. M. Singer, of New York City: I claim forming seams for stitching and sewing with two threads, the first of which is carried through the cloth at each stitch, and interlaced with the second by forming a loop with the second on one side of a loop formed with the first, and then forming a second loop with the second thread, which is drawn through the loop formed with the first thread, and through the first loop formed with the second thread, as described.

I also claim the needle and looper in combination with the instrument, or its equivalent, for carrying or guiding the second thread within the range of the looper, as described.

DISCHARGING COAL FROM CANAL BOATS—Amos Young, of Georgetown, D. C.: I do not claim the devices named, but the method described of discharging and transferring coal or cargo from canal boats, by causing the boat to free itself of its cargo by the settling or falling of the boat in the dock in drawing off the water from the latter, in such a manner that the cargo contained in one or more cargo boxes or trucks provided with suspension track attachments or devices, as specified, is left suspended at its draught of floating level in the canal on a suspension track or railroad, built on the sides of or over the dock, whereby the cargo may be discharged from the boat with dispatch, and with but little labor, and be run off at a high level, to any distant place of transfer, and there be transferred from one receptacle to another, without inconveniently detaining the boat, and whereby the many other advantages specified are obtained, the said cargo box with its suspension track or railroad being arranged and operating together as set forth, and the whole serving to economize time, labor, and reduce the cost of transit and delivery at a high level, in a practicable manner, as specified.

DEVICES FOR TONGUING AND GROOVING LUMBER—N. G. Norcross, of Lowell, Mass.: I am aware that a rotary planing cylinder has been arranged so as to have its cutter knives rotate in the direction in which a board was moved against it, in such case a bar or the equivalent therefor has been employed to keep the board down upon the bench when the cylinder had been arranged in the bench, or under the surface of the board dressed by it. I therefore lay no claim to any such disposition or operation of a rotary planing cylinder for planing boards, as the function of it is different from that of a rotary saw, the latter being made to cut entirely through a board, while the former only dresses it on one of its surfaces, and cuts but a short distance below the same. The saw cuts into two opposite surfaces or through the board, and in striking out of the board it leaves a ragged edge on the surface, while in striking into it the surface through which it enters is left smooth and without a ragged edge or fin. Now as one of the sides of the board to be tongued and grooved is usually a planed surface, and that surface must be placed downwards on the bench during the operation of making the tongue and groove, it becomes desirable to have it jointed with a smooth edge, and this is done by making the teeth of the saw to run so as to cut into the surface of the board instead of cutting out from the board and such surface.

And I do not claim the improvement of making the tongue with two recesses, the same being accomplished by means of the extension of the teeth of the saws inward beyond the knives so stated, but mean to claim such an arrangement of the teeth of the saws with respect to the outter knives, and for the purpose of making the tongue and such channels or recesses.

I also claim the mode of confining the upper saw, or set of saws of either the tonguing or grooving cutters to its shaft, viz., by the combination of the two right and left threaded screws, and the screw nut, the same being substantially for the purposes of ready adjustment of the saw or saws, as stated.

I also claim the improvement of making one or both of the draught rollers with a groove, when such roller is arranged and made to operate with respect to the tonguing cutters or saws, as specified.

CONSTRUCTING STRAP IRON RAILING—Matthias Lachenmaier, of Philadelphia, Pa.: I claim the manner described of constructing and fitting together crimped wrought metal railing, by constructing the cross bars at the extremities of their crimps or bends with punched or pressed studs, projecting either successive pair in each bar, in opposite directions alternately, to form supports or stops to the bars on either side or edge of their crimps, and on both sides or faces of the railing, to prevent the bars from slipping out of their crimped bearings, and from out of line with them, also to relieve the crimps from injurious strain, and to divide strain, jerk, or pressure applied to the railing to one or more bars over the several bars, whereby time and labor are economized in fitting together the railing, a simple and strong double cross tie of the bars at their several crimps is obtained, and whereby a flatter crimp, without the usual adjuncts of bolts or rivets for tying the bars together, may be used, as specified: the said cross bars at one of their crimps or bends, either being made with or without a center stud, fitting into a corresponding indentation in the adjoining bar, to serve as a starting point or center for fitting the bars together, and to hold them in their crimps, as specified.

CHARGERS FOR FIRE-ARMS—Wm. M. Storm, of New York City: I am well aware there are several chargers already in existence, as Colt's "powder and shot chargers," and others, but I disclaim all interference with these, claiming in my charger the general arrangements of the parts, as described, the same embracing the combination of the devices of a fixed rammer, and moving ball nozzle, and with the latter of a plurality of ball columns or distinct chambers, the whole operated as set forth.

PLATES FOR ARTIFICIAL TEETH—Mahlon Loomis, of Cambridgeport, Mass.: I do not claim the process set forth. In making sets of artificial teeth, I do not claim the spreading of a gum enamel over one side of a metallic roof plate upon which the teeth are fastened; nor the extension of the porcelain gum some way, and not entirely upon the roof.

What I claim is the improved manufacture of whole or half sets of mineral teeth, as described.

REED BOXES FOR MUSICAL INSTRUMENTS—M. T. Lundfeur, of Manchester, Conn.: I claim, first, my method of inserting reed boxes in chambers of graduated length and depth and width, as described.

Second, tubing or chambering the reed boxes, as described and for the purpose set forth.

Third, blocking the reed box and mortising the block when it overlies the locality of the reed, as described, and for the purpose set forth.

PROCESSES FOR DISTILLING ROSIN OIL—Halvor Halvorson, (assignor to H. Halvorson and J. T. Heard) of Boston, Mass.: I am aware that it has been common in the distillation of rosin to mix it with alkalies, alkaline earths, or metallic oxyds: also that rosin and oil have been distilled from bricks and various other insoluble matters; I therefore do not claim any such mixtures of rosin for the purposes of distillation, as they do not have a specific action in the process that results from the employment of clay. I have found that in the use of clay no pitch residuum is left in the retort or distilling vessel after distillation, whereas with any of the other matters alluded to as having been mixed with the rosin, I have found a large residuum of pitch remaining after distillation.

The clay, therefore, I have discovered to have, in some unknown manner, a specific action on the rosin in preventing the formation of the pitch residuum.

What I claim is the combining clay with rosin and subjecting the mixture to distillation, so as to produce therefrom an oily product, as specified.

DISTILLING APPARATUS—Halvor Halvorson (assignor to H. Halvorson and J. T. Heard), of Boston, Mass.: I claim the rotary cup, the rake, and the discharge pipe, (made with a plexure) or their equivalents, in combination with a still, and made to operate therewith as specified.

SPINNING COTTON—John W. Adams, of Thomsonville Conn.: I claim the employment of the thread carrier, as specified, in combination with the central spindle for winding on with or without a bobbin or spool, and with the ring, groove, and traveler, or its equivalent, as specified.

COUPLINGS OF ENDLESS CHAIN HORSE POWERS—W. E. Arnold, of Rochester N. Y.: I claim the lips, the recesses, and the hooks, by which the series of platforms are united into a continuous chain platform, without any other fastenings than those afforded by their own peculiar shape, and thus avoiding the use of links, bolts, rods, or similar fastenings, as described.

OPERATING CATCHES IN TOOL HOLDERS—John Allender, of New London, Conn.: I claim the described socket, the face plate with an eccentric groove or slot, in combination with the sliding catch, with a projection fitted to said groove, and so arranged as to traverse the catch by turning the plate, as described.

MAKING SHIPS' KNEES—Wm. Ballard, of New York City. I claim the formation of ships' knees substantially as described.

HYDRAULIC HEATERS—Wm. H. Churchman, of Philadelphia, Pa.; I claim the attachment of all of the radiating or circulating tubes, in one or more series of rows, directly to the boiler or main receptacle for water, together with any and all equivalents thereof.

ADJUSTING THE PACKING OF PISTONS FOR STEAM ENGINES—John Crabtree, of Philadelphia, Pa.: I do not claim the packing rings concentric with and clasping the inner ring; nor the inner ring and packing rings in combination; nor do I claim adjusting the packing of pistons through a hole in the cylinder head.

But I claim the open conical ring in combination with the lugs or their equivalents, cast on the open inner ring, and the flanged adjusting screw, or its equivalent, the shorter adjusting screw, and follower, arranged and combined as described.

ADJUSTING THE VALVES OF LOCOMOTIVE ENGINES—H. W. Farley, of East Boston, Mass.: I do not claim making use of the power of the locomotive exerted through rollers placed beneath the rails, for the purpose of driving machinery, pumping, sawing, or performing other analogous operations.

I claim the described method of adjusting the valves of a locomotive engine, the drivers being revolved by rollers suitably placed to receive them, which rollers are driven by any suitable power independent of the engine itself.

CUTTER FOR METALLIC BARS AND RODS—John Gallagher, of New York City: I claim the arrangement of the movable cutting die, in the eccentric lever operating in connection with the fixed cutter, as described.

MACHINE FOR MAKING BED PINS—Curtis Goddard, of Edinburgh, Ohio: I claim the combination of cutters in the hollow mandrel with the movable cutter operated by the pin pressing the cutter, or by a disk of metal moved by the pin or other means, as set forth.

STRAW CUTTERS—Robert Hodgin, of Barnesville, Ohio. I disclaim the use of an endless belt for the purpose of feeding the straw or other material to the knife.

But I claim the straw rest for supplying the straw to the knife, said straw rest or rack being carried the entire length from rear to front end of the cutter box by an intermittent forward motion, as set forth.

CAR TRUCKS WITH ADJUSTABLE AXLES—A. C. Ketchum, of New York City: I claim the combination of the sliding side pieces, the transverse sliding bar, and the lever, as described, for the purpose of causing the axle boxes to move in such a way as to make the axles assume the form of radii, or normals, to the curves, and thereby keep the wheels in line with the track.

[A notice of this improvement is published on page 300, Vol. 8, Sci. Am.]

TRUNK LOCK HASPS—Conrad Liebrich, of Philadelphia, Pa.: I claim so combining a spring with a hinged hasp, as that the lower or hinged portion thereof shall stand off from the trunk, in the manner and for the purpose described.

Second, the placing of the hasp catch in a solid projection which enters the lock with the hasp catch, and takes all the strain incident upon the tendency of the lid to open and thus protect the catch itself, as described.

HARROWS—W. F. Pagett, of Stone Bridge Va.: I claim, first, the constructing harrow beams of sections of iron with the teeth wrought solid upon and with them.

Second, the combination therewith and arrangement of cross rods with screw and taps, and pipes or tubes, or their equivalents, to keep the beams and sections in their places.

ARRANGEMENT OF SPRING DIES IN MACHINES FOR MAKING CLINCH RINGS—G. M. Patten, of Bath, Me.: I am aware that a lower die having a spring seat for discharging the manufactured article, has before been used, also that a spring clearer differently arranged or operating in combination, has been employed in various eyelet machines for removing the eyelets from the punch or upper die, as it ascends: such I do not claim.

But I claim the spring seat of the lower die and elastic clearer, when arranged and operating together, as specified, so that not only is the finished clinch ring forced upwards out of the lower die, and detached from the upper one to permit of its easy removal by the bar in feeding forward, but, also whereby the spring seat and clearer are made to act as elastic grippers to the ring, to hold or keep it in its seat till removed by the bar to avoid the breaking of the machine, and whereby the clearer serves as an elastic guide to the bar to facilitate the entry of feed to the bar and to keep it in a fair or flat position for the operation of the punch upon it, as specified: the said clearer and spring seat being hung and operated so as to exert a continual tendency to approach each other both during the up and down stroke of the punch, as set forth.

FLEXIBLE HARROWS—W. B. & M. Ramsay, of South Strabane, Pa.: We claim the peculiar arrangement described, of the three parts of the harrow and the three flexuous joints connecting the same together, in combination with the construction of said joints, which allows of the several parts very freely and perfectly adjusting themselves up and down, independent of each other in passing over the undulating surface of the soil, as described.

By thus arranging and combining the several parts of the harrow, we are enabled to simplify its construction, lessen its cost, and render it capable of making ten more movements than any other flexible harrow known, and consequently performing the harrowing operation more perfectly and speedily, as set forth.

[An engraving of this improved harrow is published on page 180, Vol. 8, Sci. Am.]

MACHINERY FOR MAKING ROPE—Wm. Robinson, Jr., of Warsaw, N. Y.: I claim, first, the employment of the cogged ring, arranged and operating as described, for giving the fliers their independent rotation for twisting the strands, and by its own revolution regulating the amplitude of that twist, as set forth.

Second, the employment of the rotary clamps, in combination with the cams and openings, for grasping, conveying, and releasing the rope, as set forth.

VIOLINS—Sewall Short, of New London, Ct.: I claim the application of a trumpet or horn to violins, bass viols, and other similar instruments, in the manner and for the purpose set forth.

AIR ENGINES—Philander Shaw, of East Abington, Mass.: I claim the described auxiliary heater, constructed and arranged as set forth. The exhaust air and the products of combustion being passed through in one direction, while the cold air from the force pump is passed through in the other, by which means the heat is extracted from the heated air and smoke, and transferred to the cold air on its way to the engine, the latter being pumped in against a pressure much less than that at which it is worked off from the main heater, as explained.

Second, I do not claim the use of cold water for the purpose of refrigerating the cylinder or piston of hot air or other engines, but I claim the arrangement herein described of the tubes within the piston rod, the reservoir, and the india rubber tubes, for the purpose set forth.

HYDRODYNAMIC ENGINE—LeGrand C. St. John, of Buffalo, N. Y.: I claim the described arrangement of mechanism for operating the tube, so that it shall produce the alternate opening and closing of the ingress and egress passages for letting water to the float and drawing off the same, as set forth.

I also claim the arrangement of three wheels with their ratchets and pawls, for causing a continued rotary motion of the wheels from the alternate motion of the float, as specified.

MILKERS' PROTECTOR—John M. Weare, of Seabrook, N. H.: I claim the "Milkers' Protector," constructed, as specified, viz., of a combination of ham string and tail nippers applied together, and made to operate, as described.

ROTARY PLANING KNIFE—Elbridge Webber, of Gardiner, Me.: I claim the combination of the knives with the stock, constructed, arranged, and operated, as set forth.

EXPANSION BIT—Asa Weeks, of South Boston, Mass.: I do not claim an expanding bit, neither do I claim making both of the cutters capable of motion independent of each other.

But I claim the method herein described of connecting the two cutters with each other, so that they shall move out and in simultaneously and equally, as set forth.

SLOTTING MACHINE—Parley Williams, 2nd, of Barre, Mass.: I claim, first, the mandrel, secured in the top of the column which supports the hub, serving, with the aid of a key, to hold the hub in place, and containing a slot on the side, in close contact with the hub which serves as a guide for the tool while cutting the slot in the hub or other similar article, as described.

Second, the combination of the wedge, the screw, and the spring, the wedge being placed in a recess in the mandrel behind the tool, and serving to feed and hold the tool to its work, the screw being attached to the wedge, so as to bear on the top of the mandrel and control the descent of the wedge, and the spring being attached to the tool, so as to bear on the hub and hold the tool back, against the wedge, and thus prevent it overloading itself, as set forth.

Third, attaching the tool to its stock by a button or knob at the bottom of the tool, fitting loosely into a slot in the top of the tool stock, which has a mouth narrower than the button, but which extends only partly across from the front of the stock, said slot being arranged in such a direction, and its narrow mouth being of such length as to allow the tool, while attached to the stock, to move back and forth as far as is required for the feeding operation, but to allow the tool to be withdrawn by moving it back beyond its most backward operative position, as set forth.

[See notice of this improvement on page 158, Vol. 8 Sci. Am.]

HAY KNIVES—Seth Whalen, of West Milton, N. Y.: I claim attaching a blade made of sheet steel and bent at its upper extremity so as to stand out from the handle, directly to and in the center of the handle, and between the arms, whereby a great saving in time, labor, and expense in making hay knives can be effected, and an equal distribution of the power of the operator exerted in a perfect manner upon the edges of the knife, and it consequently caused to act more effectually upon the hay than the ordinary knife, as set forth.

[This is the best improvement in hay knives we have ever seen.]

DESIGNS.

COOKING STOVE OR SUMMER RANGE—John Abendroth, of Port Chester, N. Y.

FRAMES AND HANDLES OF HAIR BRUSHES—Hugh Rock, (assignor to H. Rock and Francis McLaughlin), of Boston, Mass.

COOKING STOVES—N. P. Richardson, of Portland, Me.

[NOTE.—Five of the above patents were applied for through the Scientific American Patent Agency. Inventors can at all times consult us in regard to their improvements, and circulars of information will be supplied free of cost upon application to Munn & Co., 128 Fulton street, New York.

Recent Foreign Inventions.

NEW PLASTIC COMPOSITION.—H. B. Hustwayte, and R. I. Gibson, of London, patentees. This cement is formed of clean washed river sand, blue lias lime, and common cement, in about equal proportions. This composition is molded into the form of bricks or slabs, and without firing it, dries quickly, and resists the action of the atmosphere.

GEOGRAPHICAL CLOCKS.—J. Radford, of Chittenham, Eng., patentee.—This invention consists in constructing a geographical clock in which is the usual dial or clock face marked with figures from 1 to 12, and immediately below this a band having a series of numeral figures. Under this band is the map plate on which is a space for engraving the names of cities towns, or other, designations, as may be desired, and below this space is engraved (on Mercator's projection) the map of the whole or any part of the world. As the usual wheel work moves, giving on the dial the correct time of any given place, the band mentioned, having the hours and minutes engraved thereon, is moved or carried by suitable works, so as to indicate the time at all other places.

NEW BLEACHING PROCESS.—C. M. Motay, and E. L. Daflos, of Paris, France, patentees.—This invention is for bleaching fibrous and other substances by means of a current of oxygen in an allotropic form, or by bleaching fibrous substances by means of a liquid in which oxygen in an allotropic form is liberated.

SULPHURIC ACID.—J. L. Bell, of New-Castle-upon-Tyne, patentee.—This process is the manufacturing of sulphuric acid from factitious pyrites, by making the same into a paste, then drying it to form thin cakes, and afterwards burning them in suitable kilns in which the acid is gathered.

SHIPS' RIGGING.—E. Finch and C. Lamport, of London, patentees.—The claims of the improvements are, 1st. A mode of forming and strengthening ships' masts by introducing vertical and T-angle irons and of increasing the strength of these again by introducing vertical webs, either attached to the angle or T-irons alone or attached to these, and attached also to each other. 2nd. The application of an elastic cushion of vulcanized india rubber or cork in the mast. 3rd. The use of a plate at the head of the mast for facilitating its construction, and for supporting the trestle-trees and the foot of the top mast.

SHIPS HULLS.—R. Clough, of Liverpool, patentee.—This invention consists in constructing ships or vessels with true bilges, instead of the usual form, to give depth and stiffness to ships, especially those made of iron.

(For the Scientific American.)

Upward Stroke of Lightning.

Be the nature of the agent electricity what it may, its effects, on substances exposed to its action, often present marks of a transfer in a determinate direction. This transfer in case of strokes of lightning, sometimes, though perhaps rarely, appears to be upward, or from the ground to the clouds. A building at Stillwater, Minnesota, was stricken by an upward stroke of lightning (if we may use the expression) on the morning of the 27th of July, 1852, which I had the opportunity of examining within a few minutes of the occurrence. It was a store, standing nearly alone by the shore of the lake upon which the town is situated, and surrounded by a bed of coarse gravely sand, well moistened at the time, which had been deposited there a few weeks previously by a disrupting flood of water. Regarding it as an ascending current, the electricity escaped from the sand close to the side of the building, passed beneath the siding and along up a scantling, pressing the siding which was nailed to the scantling outwards convexly, and throwing the wall of the room inwards in a similar manner, pierced the plastered wall of the chamber near its floors, proceeded along the floor of this apartment to a plate of sheet iron, upon which sat a stove, and thence up the stove pipe and chimney, parting the bricks asunder along the side of the chimney, throwing its top—which was capped or arched over—into the street. The point of its path which more particularly denoted an upward course, was its passage through the plastered wall into the chamber. It passed through the middle of a lath into the room, making an aperture somewhat more than half an inch in diameter, with a ragged contour, and protuberant. The shattered splinters of the lath were protruded into the apartment, just as if a bullet had been fired in from below. The dry plastering was likewise projected almost to their iron plate, along either side of the electric path on the floor, a distance of nearly three feet. This clearly showed that the electric disturbance proceeded from the ground upwards into the room. Also the bricks were thrown from the top of the chimney, in precisely the manner that we should suppose they would have been by a force acting upward.

Two windows in the hall leading to the chamber room were remarkably shattered, the glass being projected into the hall, evidently from an inward pressure of the external air. Two circular apertures, each about 2 inches in diameter, were made in the glass of the upper part of one window, and what was remarkable, the lower part of the window was raised up at the time, so that the broken panes were covered by it on the side next the room, and those panes coming against the broken ones, were left entire. The pieces of glass were lodged between the sashes. Two other windows opening into the chamber, having their sashes raised up at the time were not harmed.

Several gentlemen examined the building soon after the occurrence, and all were of opinion that the shock was upward.

STILLMAN MASTERMAN.

Weld, Me., May 1st, 1854.

The Portland "State of Maine" estimates the number of passengers entering that city by Railroad at 520,000, and the number by steamboat at 80,000 during the past year. Portland is growing fast into a large city.

The London "Lancet" records two cases of serious illness among physicians, occasioned by the inhalation of poisonous gas, the escape from decaying corpses in a grave-yard that required to be inspected.