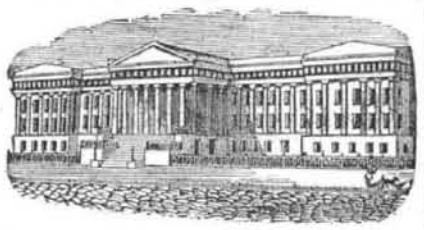

[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING MAY 9, 1854.

SEWING MACHINES—Simeon Coon, of Ithaca, N. Y.: I claim the combination of the slot in the shuttle, and the pin or stud in the raceway, or their equivalents, for the purpose of drawing the thread from the shuttle bobbin, so that there may be an uniform tension upon the shuttle thread when drawing up the stitch, as described.

I also claim in contradistinction from the double-acting dog or pawl and ratchet, which changes the time of feeding forward the cloth, relatively, in regard to the motion of the needle, the separate pawls operated by a cam and levers, or otherwise, so that the feed, whether reversed or not, shall always remain relatively the same with regard to the motion of the needle, or so that the feed shall take place whilst the needle is going down, or towards the cloth, and not when it is leaving the cloth to draw up the stitch, as described.

MACHINERY FOR DRESSING FLAX—E. L. Norfolk, of Salem, Mass.: I do not claim the employment of trunks with movable lids, by the rising and falling of which the rate of feed is regulated.

But I claim governing the movements of the rollers, which supply the material to the machine by means of wedges, which are suspended in such a way as to be caused by the rising and falling of the movable lids, or their equivalents, to rise and fall, and thus regulate the position of bars, which are acted upon by eccentrics or cams for the purpose of transmitting motion to the feed, and thereby regulate the amount of motion which the said bars receive from the said eccentrics or cams, as set forth.

[A notice of this invention is published on page 132, Vol. 8, Sci. Am.]

BEE HIVES—Clark Wheeler, of Little Valley, N. Y.: I do not claim either the box, the pendant valves or reticulated screen, separately or independent of each other; but I claim the drone trap constructed as set forth, and operating in the manner described and shown.

[See notice of this invention on page 124 of this Vol. Sci. Am.]

SEWING MACHINES—Heman Crosby, Jr., of Watertown, Conn.: I claim, first, the adjustable cam, or its mechanical equivalent in combination with the friction brake, for the purpose of intermitting the action of the brake upon the thread during the feed, and thus obviating the danger of sundering the thread in rapid work during that moment of extreme tension, as set forth.

Second, enlarging that portion of the needle, which, having entered the material, is to retire from it before the Pull upon the last loop is commenced, in the manner described.

SEWING MACHINES—Christopher Hodgkins, (assignor to Nehemiah Hunt), of Boston, Mass.: I am aware that there is nothing new in moving the feeding wheel by means of a friction brake knuckle or clamp, and a clamp combined therewith. I am also aware that for the purpose of operating a feed wheel, a combination consisting of a shaft with two arms, a screw regulator, a lever and clamp, have been used: I therefore do not claim such devices.

But I claim the peculiar manner in which the brake clamp is constructed, applied to, and made to operate in the groove of the feed wheel, whereby the bearings of the clamp on the two opposite concentric surfaces of the groove or curved concentric lines or surfaces, running parallel, or about parallel to the plane of the feed wheel, instead of perpendicularly to it, such an arrangement of the bearing lines or parts of the clamp, rendering its hold on the wheel far more certain than when they are made in length only equal to the depth of the groove and to stand perpendicularly to the plane of the feed wheel.

I also claim the mode of operating the brake clamp or lever, or in other words the arrangement and combination of the spring, the slide, two cams, the lever, and the spring, as set forth, such mechanism causing the clamping of the lever brake to the feed wheel to be wholly done by mechanism acting entirely before and separate from and not controlled by that which produces the movement of the clamp, by which corresponding extent of motion is produced in the feed wheel.

SEWING MACHINES—Otis Avery, of Honesdale, Pa.: I claim, first, so arranging the upper needle bar on a pivot, and controlling it by a spring, or their equivalents, as that it may be swung around to remove or replace the cloth or other material to be sewn, as described.

I also claim the arrangement and combined adjustment of the two needles, for the purpose of regulating the relative positions of said needles to each other, and their joint positions in relation to the material to be sewn, as described.

I also claim the arrangement of an adjustable table or support for the cloth, with regard to two needles which have a fixed center, at which the stitch is formed, as that by raising and lowering said table or the cloth, the stitch may be thrown to one side or the other, or in the center thereof, as described.

SEED PLANTERS—G. S. Enoch, and Daniel Wissinger, of Springfield, Ohio: We claim the mode of adjusting the tappet wheel, in combination with the peculiar form of the sliding bar, to suit the nicest differences in any desired quantity of seed to be sown, as described.

HUB BORER—Wm. J. Casselman, of Vernon, N. Y.: I claim boring taper holes through hubs by means of a lever secured by a pivot to a rod, which is drawn through the mandrel hole of the hub, said lever having a cutter at one end and a pin at the opposite end, which pin fits in an oblique slot in an adjustable plate, the slot giving the proper movement to the cutters as it passes through the hub, as described.

[A notice of this useful improvement is published on page 268 of this Vol. Sci. Am.]

BIT GUARD KEY FOR DOOR LOCKS—Wm. Damarel, of Brooklyn, N. Y.: I am aware that the key hole has before been plugged on the outside by the key from within, by means of an additional or swivel guard bit in front of the ordinary or main bit which operates the bolt, such therefore I do not claim.

But I claim so arranging and connecting the main bit of the key, or that portion which operates the bolt with the shank of the same, as that the main bit may be thrown in or out of gear at pleasure with the shank, and extended so as to plug the key hole, or be moved inwards to form a firm connection with the shank to operate the bolt, as set forth, and whereby the many advantages specified are obtained.

[This is an ingenious key, and is proof against being turned by the burglar from the outside of the door.]

FELLOE MACHINE—H. H. Dean, of Adrian, Mich.: I do not claim the cutters, clamps, or guides: but I claim the combination of mechanism operating the guide, viz., the lever, rod, and springs, arranged and operating as set forth.

PUMP—Jacob Edson, of Boston, Mass.: I claim, first, the tube, in combination with the air chamber, constructed and operating as set forth.

Second, the cup, in combination with the holes and the packing, constructed and applied to a force pump, as described, and for the purpose set forth.

Third, the inclined partition in the rear of the spout, operating as set forth.

CULTIVATORS—C. K. Farr, Hinds Co., Miss.: I claim the bed with inclined sides, as described, which, following the trace of the coulter, renders the sides of the furrow compact, and prevents the falling in of the earth, as set forth.

BRIDGES—Albert Fink, of Baltimore, Md.: I do not claim as new the manner in which the central post is supported: nor do I claim the combination of a series of triangular bracings, in such a manner that one system of triangles is supported by and dependent on the other, merely, as I am aware that this has been done before, both in trusses for bridges and roofs.

But I claim, as different from any other method of bracing and strengthening bridge trusses heretofore known, the method of combining the different systems of triangular bracings described, so that a weight coming on one of the systems of the truss, is not only transferred over one or more other systems before it is carried back to the abutments; but the foot of the post in each triangle being unconnected with the tension rods of the other triangular bracings, can settle vertically as well as move to the side, so that the tension rods of each system of the triangular bracings will be strained equally when the bridge settles under a superincumbent weight.

This would not be the case if the foot of the post in the second system of triangular bracings rested on the tension chord of the post, in the first system, as heretofore used, and herein consists my improvement.

JOURNAL BOX FOR SAW MILL CARRIAGE—Chas. R. Fox, of Chicago, Ill.: I claim the construction of the boxes, with the opposite inclined inner faces, for giving the requisite set-off to the carriage when gigging back, and again setting up when moving forward for the cut, as set forth.

MACHINERY FOR CUTTING PAPER—Nelson Gavitt, of Philadelphia, Pa.: I am aware that conical rolls encircled by a shifting belt, as a device for varying the relative velocity of different parts of a machine has long been known, and I do not claim it.

But I claim the method described of adjusting the cuttings of sheets from a web of paper, whereby the length of the sheets can be varied by any required proportionate amount of the whole range of variation to which the machine is adapted, however small or however large the same may be, thus rendering it possible, with a continuous feed of the web of paper under an intermittent cutter to sever the sheets half way, or thereabouts, between water marks nearer together at one part of the web than at another.

ARRANGEMENT OF THE PESTLE WITH THE MORTAR: P. C. Ingersoll, of Elmira, N. Y.: I claim the manner of arranging and combining the pestle with the mortar by means of the ball on the handle of the pestle fitted to a corresponding cavity in a spring bar, for the purpose specified.

UNLOADING CANAL BOATS AND OTHER VESSELS—Wm. Loughridge, of Weyorton, Md.: I am aware that vessels have been made with valves or traps in their bottoms, for the discharge of their loads of earth, mud, &c., as in the case of J. R. Putnam's patent of May 6, 1841, and the withdrawn case of Sophia Putnam, of June 28, 1847. I am also aware that vessels have been floated in dry dock, and the water drawn off through valves, leaving the vessel dry and supported upon blocks or upon trucks.

I claim the method or process of unloading vessels described, by means of the combined arrangement of the vessel with valves in the bottom, the dry dock with valves immediately below those in the vessel, and the shutes to carry off the loads into boats or other receptacles placed below, but not immediately under the elevated dry dock, as described, thereby expediting the discharge of cargoes and economizing labor, time and money.

MANURE AND SAND LOADER—H. G. Marchant, of Annisquam, Mass.: I claim the transportable manure loader, consisting essentially of the following elements in combination, viz., the body or box, the trough, and the rake, constructed, and arranged, as described.

REDUCING WOOD TO SLIVERS—Jonathan Prescott, and G. W. Prescott, of Boston, Mass.: We claim the arrangement of the planes, so that each shall cut not only with a drawing stroke, but shall curl the shavings in helices, as specified.

And in combination with the feeding carriage and the feeding screw, we claim the movable straddle or sliding block, and the scroll cam of the screw, the same being made to operate together, as specified.

And we claim the tripping rest, as combined with the weighted lever and the feeding carriage, as specified.

BLEACHING APPARATUS—J. A. Roth, and Joseph Lea, of Philadelphia, Pa.: We do not claim the arrangement of rollers in a vat generally; but we claim the arrangement of the series of graduated and compensating upper and lower rollers in combination with the vat for the purpose of treating simultaneously a series of parallel layers of woven fabrics as described.

MACHINE FOR MARKING OUT SASH—James Rogers, of Poultney, Vt.: I claim the movable knives or markers, movable stops, and slides, or their equivalent, and manner of adjusting the top, and of causing markers in the top to correspond with the bottom markers, and manner of applying the scales to the machine, as set forth.

WEIGHING AND PRINTING BUTTER—Wm. S. Reinert, of Spring Garden, Pa.: I claim the combination of the mold or vessel for containing the butter, suspended to the lever or scale beam and its attachments, plunger or piston, having the desired configuration on its lower surface, and upright rod and button for raising the circular plate or piston in the bottom of the said vessel or mold, together with the levers for operating the same for weighing, forming, and branding or imprinting with any desired configuration, the butter in parcels, and discharging the same from the vessel or mold, as set forth.

ADJUSTABLE FLUE BOTTOM OF STEAM BOILERS—A. M. Sprague, of Mobile, Ala.: I claim the movable adjustable bottom of the flue space under the boiler or boilers, so constructed and arranged that it may be raised and lowered, or adjusted, to graduate the size of the flue under the boiler or boilers, and adapt such flue to the kind of fuel used, as described and for the purposes set forth.

I also claim, in connection with the above mentioned movable adjustable bottom, the inclined vibrating piece or bridge, or its equivalent, so constructed and arranged that it will operate with the bottom, and conduct the flame from the furnace into the flue under the boilers, as described.

PISTONS FOR STEAM ENGINES—A. M. Sprague, of Mobile, Ala.: I claim making the body of the piston in two parts, as described, so that the hub and disk, or body or center portion of the piston can be removed with the piston rod in the same direction that the follower cap is taken off, and replaced without removing the outer portion, or barrel and flange that supports the packing.

THE CONSTRUCTION OF HATCHES—Daniel Tallcot, of New York City: I claim causing the doors of the hatch to be elevated or raised, as the carriage descends, by attaching to one of the pivots of each door, a half pulley, which is connected by a cord, to a lever, said levers having curved arms which project a short distance beyond the edge of one of the uprights, so that they may be operated upon by one of the rollers, the doors being counterpoised by the spiral springs, or their equivalents, as set forth.

[See notice of this improvement on page 244, Vol. 8, Sci. Am.]

ARRANGEMENT OF FRICTION ROLLER IN INCLINED PLANE HINGES—Enoch Woolman, of Damascoville, Ohio: I claim in the described hinge making and arranging the roller, so that it can be traversed towards and from the pivot of the hinge in combination with the scores in the inclined places, so that it can be used either as a self-shutting or self-retaining hinge when open or partially so, as set forth.

LOCOMOTIVE FIRE BOX—Ross Winans and Thos. Winans, of Baltimore, Md.: We claim the downward and rearward inclination of the top or roof, when this is connected with the flat grate surface, and the usual feeding hole or door, and with or without the fuel feeding boxes through the roof, as set forth.

SCREW JACKS—Francis Davis, of Keene, N. H. (assignor to J. M. Reed, of Swanzey, N. H.): I do not claim the use of a right and left screw, as that has been made use of before: neither do I claim constructing a screw jack entirely of iron.

But I claim as a new tool or instrument for the purpose of raising heavy bodies, the jack, constructed and operating as set forth.

RE-ISSUE.

CUTTING BOOTS—Daniel Lynahon, of Buffalo, N. Y. Patented originally Oct. 18, 1853: I claim the tongue which gives the vamp a more exact crimped curve, covers the same from being seen, and secures it from ripping, and keeps the seam permanent by receiving the strain which comes on them when drawing on the boot, which improvements may be applied to any material whatever of which boots may be made.

DESIGNS.

DOORS OF GAS OVENS OR SUMMER RANGE—S. W. Gibbs, of Albany, N. Y.: (assignor to North, Chase, & North, of Philadelphia, Pa.)

Recent Foreign Inventions.

Although gas made from coals is coming into more general use, in our cities, &c., thus doing away with the necessity of using oil, still, the demand for oil is becoming greater every day. Enormous quantities of it are now being used on all our railroads for lubrication, thus entailing a great working expense on such systems of travel. Any improvement therefore, to increase the quantity, improve it, or render it cheaper, becomes of great importance to the community—for the people pay for all these things. We have therefore selected the two following specifications of recent foreign patents, granted for manufacturing oil, and lubricating materials:—

TREATING OIL MATTERS—G. F. Wilson, of London, patentee.—This invention consists in diminishing or removing the smell and color from the oily matters that are produced by the destructive distillation of resin, and in combining them with the olein of palm and other neutral oils. The resin oily matters are distilled, or repeatedly distilled, with the air excluded,—the matters, in some cases, being treated with powerful agents, such as sulphuric acid, before this distillation; or they are exposed to heat, to drive off their more volatile part.—The purified resin oily matters are mixed with the other oily matters, by means of agitation or boiling up with free steam.

In carrying out his invention the patentee has recourse to a preparation for mixing the resin oil with the olein of palm oil and other neutral oils. The resin oil is first caused to be heated for about four hours, in a close vessel, by means of heated steam,—keeping the temperature to about 350° Fahr.; and it is then to be distilled with the air excluded. According to the state of purity desired to be obtained, the distillation is to be performed again and again; and, for this purpose, steam, heated to a high degree after it leaves the steam-boiler, is employed, as is well understood. If the resin oil be very impure, about 2 lbs. of sulphuric acid are stirred in to 112 lbs. of resin oil. The same is then to be washed in water, and submitted to the process of heat.

Having thus prepared the resin oil, it is to be mixed with a neutral oil; and, for this purpose, the oleine of palm oil is preferred. The best mixture will be found to be in about equal quantities,—but this may be varied; and, in order intimately to mix these matters or oils, they are boiled by the aid of free steam, by which a most intimate admixture is effected; and such combined oils will be found very useful for lubricating heavy machinery.

LUBRICATING MATERIALS—Francois Monfrant, of Paris, Patentee.—This invention consists in the employment, for the manufacture of lubricating materials, of all fatty oils, (with the exception of coleseed oil), which are dis-acidified by means of milk, and are then caused to blend and intermix with fat or a fatty body, by means of resin or a resinous composition.

In preparing the said lubricating materials, the patentee employs a large boiler or heating vessel, heated either by fire, or by steam, or hot air, or otherwise. In this vessel, the oil to be operated on is placed, and heated to such a temperature that the hand can just bear it when immersed. The lard or other solid fatty body is then added (care being taken to stir the mixture well with a spatula from this time to the end of the operation), and also resin of the ordinary description, or resinous body, in the proportions necessary, to produce the several compositions hereinafter specified, or other like proportions. When these two bodies are perfectly melted, and an intimate commixture has taken place, pure fresh milk is added, in the proportion of at least two pints for every 100 kilogrammes (220 lbs. about) of oil; and the greater the impurity of the oil, the larger must be the proportion of milk added to it. In the event of milk not being procurable, the same proportion of albumenized water (prepared by adding the white of one egg to a pint of water), or of alkaline water (containing 5 grammes) (3¼ dwts. of crystals of sub scarbonate of soda to a pint of water), or even water alone may be used; but milk is, in all cases, to be preferred. The mixture is allowed to be heated to boiling, or until the bubbling, produced by the evaporation of the aqueous matters has ceased; and, in order to ascertain when the operation has been carried on to a sufficient extent, a slice of new bread is placed in the heating vessel; and, when this is well browned, the operation is complete. It must be observed, that the stirring should be continued throughout the operation; and, in the case of the more solid compounds, even after the boiling is completely finished. When the operation is terminated, as has just been described, the mixture is allowed to repose for several hours, and is then drawn off, before packing it for storage or use, by means of a hand-pump, or a common syphon. The results of the different operations described are, that, by the boiling, all the moisture of the milk, and other foreign bodies, is entirely dissipated as vapor; and that the acid principles of these substances, combined with the casein of the milk, are rendered insoluble and precipitated, while the oil, separated from the deposit which they form, contains no acid, and the deposit itself is, in some measure, carbonized, and is easily removed from the vessel. All the products, by being boiled together, are thoroughly incorporated; so that there is no danger of the lard and oil becoming separated,—a result to which the resin or resinous body undoubtedly contributes. If the operation is to be carried on continuously, it will be needful to have tinned iron vessels, into which the clear contents of the boiler can be transferred, to cool and settle before being packed away.

No. 1.—Compound for the finer carriage-work, &c.—Resin, 2½ per cent. of the quantity of oil. Lard, 50 to 75 per cent. of the quantity of oil, according to the degree of solidity required.

No. 2.—Compound for copper, steel, fire-arms, the more delicate kinds of machinery, &c.—Resin, none; but, instead of it, 2 per cent. of common yellow wax. Lard, 25 to 50 per cent. of the oil employed.

No. 3.—Compound for lubricating oil for machinery.—Resin, 2½ per cent. of the oil employed. Lard, 5 per cent.

No. 4.—Compound for the woolen manufacture, &c.—Resin, none. Lard, 3 per cent. of the oil employed; but, for this purpose, it is indispensable that the lard should be quite fresh.

No. 5.—Compound for paint, oil, &c.—Resin, 1 per cent. of the oil employed. Lard, 2 per cent.

As before observed, these proportions may be greatly varied. The more lard used, the harder will be the compound. The weather also affects the proportions to be used, and more lard must be employed in summer than in winter, to produce a like effect. The lard may be composed of half hog's lard and half mutton or other suet or fatty matter. The lard should be freed from all skin, &c., and cut into small pieces; and it is better also to remove from it any portions of fleshy matter that may be mixed with it; and if the fatty bodies employed, whether lard, mutton suet, beef suet, or other fatty matter, are used in the raw state, they should be first partly melted before being added to the mixture in the heating vessel, by any of the means ordinarily adopted for such purpose. The products, obtained as before mentioned, can be employed with advantage to replace all the oils employed as lubricators, such as animal oils, lard oil, olive oil, &c.—They possess, moreover, the merit of being perfectly unctuous, and of containing no kind of acid; they do not act prejudicially on metals, nor form any residuum through friction; they neither turn rancid from age, nor do they harden from contact with the air; and, lastly, their component parts do not separate from each other, but continue always in intimate commixture.—[Newton's London Journal.