



[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office.

FOR THE WEEK ENDING SEPTEMBER 12, 1854.

MACHINES FOR CLEANING WOOL—L. W. Boynton, of South Coventry, Conn. : I claim the combination of the cylinder with the hollow or mandril, when these are combined with the horizontal vat, divided into two or more compartments, and the whole is constructed, arranged, combined, and made to operate as described.

APPARATUS FOR TURNING THE LEAVES OF BOOKS—H. C. Brigham, of New London, Conn., and J. M. Stewart, of Norwich, Conn. : We claim first, the combination and arrangement of the lever, pawl, ratchet wheel, and pin roller, or their equivalents, so constructed and operated as to raise the pawls in succession, and allow the fingers to turn the leaves of a book as required.

Second, the combination and arrangement which operate the fingers separately when the leaves of a book are turned back to repeat a portion of the tune, in combination with the apparatus which operates the fingers successively, as described, the apparatus which operates the fingers separately when used in repeating, being so constructed and arranged as not to change the apparatus which operates the fingers successively.

Third, Making one fork of the fingers elastic, or operating it with a spring so as to grip the leaf of a book when placed between said forks, as described.

SURFACE CONDENSERS FOR MARINE ENGINES—Danl. Carpenter, of Brooklyn, N. Y. : I claim a water cooled condenser guard plate has been used in combination with the ends of the tubes of a surface condenser to distribute the steam entering the tubes; and that a perforated plate has also been placed at the side of a congeries of tubes, to distribute and subdivide the water passing to the outside of the tubes to effect the condensation of the steam inside of them; but in neither case was the plate used for the purpose, and under a combination and arrangement like that which I claim to have invented; and therefore I do not wish to be understood as making claim broadly to the use of a perforated plate in combination with the tubes of a surface condenser.

I am also aware that one series of tubes bent in the form of the letter U have been clamped together by two clamp bars, for heaters or evaporators of liquids, and therefore I do not wish to be understood as making claim broadly to the use of clamp plates for clamping tubes; but I am not aware that several series of tubes have been bound together by outside clamps, and interposed grooved bars to bind all the tubes together in all directions, under an arrangement and combination such as specified.

I claim, in a surface condenser, in which the steam to be condensed is made to pass outside of the tubes, putting the tubes close together by making the two ends of the tubes which pass through holes in the tubes set of a smaller diameter than the body of the tubes and securing them in place by means of nuts tapped on to the ends thus reduced, as specified.

I also claim, in combination with a congeries, or set of tubes, arranged as described, to constitute a steam condenser, which effects the condensation of the steam outside of the said tubes, a guard plate or plates, with apertures as described, and between the exhaust port or inlet for the steam, and the side or sides of the set of tubes, as described, and for the purpose of protecting the tubes from the violent concussions of the steam when entering, as set forth.

And I also claim as a means of resisting shocks and preventing the vibration of the tubes of a condenser constructed and operated as described, the employment, in combination, of the outside clamp bars and interposed bars grooved to embrace the tubes, so that when bound together they shall be firmly held to resist all lateral motion or vibration, whilst at the same time the clamps and interposed bars will further act as diaphragms to direct the steam across the set of tubes, as described.

BOOTS AND SHOES—Nathl. Colver, of Detroit, Mich. : I do not claim the use of wood as soles, or bottoms of boots or shoes, as used by the peasantry of France or Germany, when worn as sandals or shoes made entirely of wood, and I hereby disclaim any such pretension.

I claim the construction of boots and shoes (with uppers as now constructed in the United States) with a wooden instead of a leather sole, or bottom, attached to the leather uppers, as described, or in any equivalent manner, for the purpose set forth.

[What is the difference between these boots and shoes and common English clogs, with uppers of leather and soles of willow wood? Such clogs have been in general use among the Lancashire peasantry for centuries; every person who has traveled in England has noticed them.]

METALLIC SLAT SHUTTERS—John B. Cornell, of New York City : I claim the improved manner of uniting the sheet metal slats of the shutter, viz. by swaging the edges of the slats into frames of corresponding segments of circles and connecting them by means of hinged bars combined with said slats, and arranged in such a manner that the pivots of said hinged bars will be concentric with the segmental curves of the edges of the slats, and also cause the flat portions of said slats, when the shutters are open, to be directly in line with each other, in the manner and for the purposes set forth.

OSCILLATING ENGINES—William Craig, of New York City. I claim the steam pipe or valve operated by means of the eccentric rod for obtaining a double action in combination with the follower, and the motion of the steam engine for the purpose of admitting steam into the face of the trunnion without regard to the size of parts, substantially in mode of construction of the said parts and application thereof, as described.

I also claim the mode of arranging the eduction and induction ports without regard to size, as set forth.

MILL STONE DRIVES—Perry Dickson, of Woodcock Township, Pa. : I claim the dividing the face of the runner and bed stone into three circular courses of furrows, A, B, C, and D; all the furrows in A, B, C, and D, having the same draught, and having twice that draught in B, C, and D, than in A, B, and C, and giving these furrows the same draught in respect to themselves, but a different draught from the furrows in A, B, in combination with the furrows in the third course, C, D, to operate as conveyors in the manner described, or any other construction substantially the same.

PISTON OR VALVE FOR ROTARY PUMPS, &c.—Joseph Gately, of Rome, N. Y. : I claim the use of a framed fitting with friction rollers to move with the sliding piston, embracing also the method of interlocking, as described.

Also, the modification described, to admit an arrangement, meanwhile maintaining the requisite efficiency to any purpose where motion is to be communicated through the revolution of the arms, wings, or vanes, the two opposite extremities varied in their relative length by means of an eccentric cylinder or ring.

STRAW CUTTERS—Warren Gale, of Troy, N. Y. : I am aware that throats to straw cutters have been made adjustable so as to approach the knife or recede from it, and also so as to contract or expand in order to compress the straw more or less; therefore I do not claim these features, as heretofore used; but I claim the arranging the flange or flanges on one cylinder, so that they will meet the knife or knives on the other cylinder, as the two cylinders rotate, substantially in the manner described.

I also claim in combination with the flanged cylinders, the throat placed in such relative position to said flanged cylinders as to nearly meet the latter at a desired point in their revolution, thus assisting to give a long cut if said throat be expanded, and a short cut when the throat is contracted, as described.

COUPLING FOR CARRIAGES—Abram J. Gibson, of Clinton, Mass. : I claim as new, the employment of a cylindrical bar of iron having a threaded bolt projecting downwards, and working in a threaded cylinder on the forward axle, for the purpose and in the manner and form, as set forth.

I also claim, in combination with the cylindrical bar of iron, the manner of connecting the rear with the forward axle by means of a threaded bolt formed at the connection of the rods or perches, and working in a threaded chamber, cut in the cylindrical bar, as set forth.

VENTILATING SHIP TIMBERS—Joseph L. Harley and Samuel Maxwell, of Baltimore, Md. : We claim constructing a ventilator ship's frames, consisting of the tube and cap fitting thereon, sustained by means of the double acting spring on the stem, by which the cap is kept open or securely closed when down, as set forth.

TRUSSES—Seymour N. Marsh, of New York, N. Y. : I claim, first, the ring pad constructed as described, to close the external and internal abdominal rings, by making pressure specially upon those parts, as herein above set forth, and not over the entire external surface of the canal.

Second, The interior ball pad combined with the ring pad, as described, for the purpose of producing upon the external canal a pressure for the purpose of creating an adhesive inflammation, which pressure is entirely independent of the pressure upon the ring pad, and the consequent resistance of the abdomen of the patient, and which is capable of being regulated by a screw or other equivalent means provided for the purpose.

[This is the best improvement in trusses that we know of.]

APPLYING HEAT TO DILATE GASES FOR THE PURPOSE OF ELEVATING WATER—John W. Middleton, of Philadelphia, Pa. : I make no claim to elevating fluids by the dilation or contraction of gaseous media, whether by natural or artificial heat; but I claim the method described and represented of applying heat to elevate water.

CORN SHELLERS—Gilbert Maynard, of Greenfield, Mass. : I am aware that a roughened and beveled wheel with an adjustable guide, has been previously used in corn shellers. I am also aware that the two wheels have been employed in one machine, one wheel presenting its side, and the other its roughened beveled periphery to the ear of corn. These devices therefore I do not claim.

I claim the arrangement herein described, whereby two shelling wheels with their axes parallel, turning in opposite directions, are made to operate simultaneously upon one ear of corn, the ears being fed in between the said wheels, as set forth.

COOKING STOVES AND RANGES—James MacGreggor, Jr., of New York, N. Y. : I claim having a flue or flues surrounding the oven or ovens for the purpose and in the manner as set forth.

REGULATOR FOR GAS BURNERS—Andrew Mayer, of Philadelphia, Pa. : I do not claim the employment of a conical valve to regulate the flow of gas, irrespective of the peculiar construction of the valve adapted to different bores of the same size or to the same boat under various circumstances, as specified.

Secondly, I claim the employment, as described, of a hollow conical valve, perforated at its apex, and having openings around its base, and being arranged with a box which receives the gas through an opening under the valve, as set forth.

DISTRIBUTING FLUIDS—John W. Middleton, of Philadelphia, Pa. : I claim the arrangement of a water reservoir and air vessel between the service pipe and the distributing cocks or near the latter, as set forth.

I also claim the vertical pipe, water, and pressure gauge, substantially, as set forth, to regulate the flow of fluid through pipes.

APPARATUS FOR DETERMINING THE WEIGHT OF CARGOES IN VESSELS—Ephraim Morris, of South Bergen, N. J. : First, I claim determining the level of the water and the consequent weight of the cargo, by means of a plunger, hollow rod, glass tube, and bulb, applied to the tube containing the water, as specified.

Second, I claim the adjustable socket, with an index marked thereon, in combination with the hollow rod and plunger, whereby the apparatus is adapted to different boats of the same size or to the same boat under various circumstances, as specified.

SPOKE MACHINE—Newell North, of Stow Township, Ohio : I claim, first, the index and cam crank in combination with the forked center or holder and the carriage or their equivalents, for the purpose set forth.

Secondly, I claim the combination of the handles, rod, lever, and poppet center, adjustable cross bars, and screws, the same being combined with the carriage frame and guides, as described for the purpose set forth.

Thirdly, I claim the arrangement, or relative position of the cutters, I, with respect to the set of cutters, J, for the purpose set forth.

Fourthly, I claim the support or standard and springs, or their equivalents, combined as described and specified, for the purpose set forth.

Fifthly, I claim the combination of the set of cutters, or any equivalent combination, for the purpose of planing two sides and one edge of the spoke, with the one and the same set of cutters, as described.

BREECH-LOADING CANNON—Wm. E. Osborn, of Milton, N. Y. : First, I claim the eccentric or cam shaped piece set on trunnions, so that the operation of rotating said breech piece on its trunnions by a lever or any suitable means, compresses the curved surface of said breech piece against the rear of the bore or caliber of the gun, as specified.

Second, I claim removing said breech piece from the line of the bore or caliber of said gun by rotating said breech in the reverse direction, causing the cam or projection, or its equivalent to act as a fulcrum, on which said breech is lifted by the one operation of rotating the breech, the trunnions, sliding up in the grooves, as specified.

Third, I claim the construction and arrangement of the hammer and nipple, whereby the hammer is cocked by its own weight, for the purpose and as specified.

TAILORS' SHEARS—Joseph Phares, of Cincinnati, Ohio : I claim, first, the placing of the rivet or tailors' shears, outside of the angle formed by prolonging the directions of the cutting edges for the purpose of giving to the cutting point of the edge an oblique backward motion, thereby increasing the ease of cutting, diminishing the resistance to working the shears and bringing the cutting points nearer the hand.

Second, combining with this the guide, a stud set in one blade working in a stationary groove, and having a screw thread cut on it, on which is placed rivet head nut, or other equivalent device, for the purpose of steadying the motion of the edges and more effectually securing them from spreading in the working.

SEWING MACHINES—Philander Shaw, of Abington, Mass. : I am aware that a cam or wiper operating against a friction roller in one arm of a bent lever, made to work or depress a pawl to a ratchet, is an old invention, also that the length of longitudinal movement of such pawl has been regulated by setting its joint pin nearer or further from the fulcrum of the lever; but I therefore do not claim any such contrivance.

But I claim the described combination applied to the shaft for imparting to it an intermittent rotary motion so as to obtain the length of stitch as specified, such combination consisting of the cam, the wheel, the movable or sliding box (or its mechanical equivalent) and the spring applied together and to the shafts and made to operate as explained.

PORTABLE GRIST MILL—Samuel Sheldon, of Cincinnati, Ohio : I do not claim the securing of the stones in flanged heads or cups, as such has been done before.

But I claim the arrangement, in one stone, of an upright flanged plate, and the adjustment of said plate by means of slotted flanges and bolts, for insuring in a simple and effectual manner the parallelism of the faces of the stones as herein before set forth, when the same is applied to a mill in which the axis of revolution of the running stone is horizontal.

PALATE FOR ARTIFICIAL TEETH—Lorenzo Simonds, of Boston, Mass. : I claim attaching to an artificial palate, or to any plate to be secured in the mouth, an air chamber constructed with a flexible elastic diaphragm, for more effectually exhausting the air between the artificial palate and the roof of the mouth, as set forth.

CURTAIN FIXTURES—Don Carlos Smart, of Cambridgeport, Mass. : I am aware that a center pin inserted in a socket made in the end of a roller, and resting against a coiled spring placed in said socket, has been employed in curtain fixtures, I therefore do not claim such, nor is it to be considered in any respect as a contrivance equivalent or analogous to my invention either in construction or operation; for with my improvement applied to a curtain roller I am enabled to dispense with a balancing weight to the curtain, and to obtain any amount of friction on the centers or bearings that may be necessary to overcome the weight of the curtain, and sustain it at any desirable height or position between the limits of its movements.

I am also enabled, by means of my improvement, to dispense with the usual socket piece or bearings for the journals, that become necessary in other fixtures for curtain rollers and particularly where one of the journals is made movable against a spring, as set forth.

I therefore claim the combining the center pin of the curtain roller with the roller, by means of a screw and making the pin with a head by which it may be revolved, the same enabling me not only to dispense with the usual counterbalancing weight necessary for the window shade or curtain, but to form in the window frame the female centers or bearing holes by the pressure of the screw, and thereby I dispense with the usual socket pieces generally applied to the window frame for supporting the roller, the whole being essentially as specified.

OPERATING FIRE ENGINES—F. G. Smith, of Columbia,

Tenn. : I claim constructing fire engines with springs, in any manner substantially the same as set forth, and for the purposes specified.

RE-ISSUE.

PUMPS FOR ELEVATING WATER MIXED WITH MINERAL SUBSTANCES—Wm. Ball, of Chicopee, Mass. Original patent dated Dec. 23, 1851 : I claim the improvement by which the waste auriferous or earthy water that leaks out of the shaft hole of the case is saved and returned into the body of the case, and the wear of the shaft hole of the chamber prevented, the said improvement consisting in the chamber, the collar, and the passage, as combined together, connected with the case, and the shaft of the fan wheel, and made to operate, as specified.

Second, I claim the rings, as constructed and applied to the interior of the pump, for the purpose set forth.

DESIGN.

MOLE TRAP—Henry Fry, of Cincinnati, Ohio, assignor to Saml. Maxwell.

Foreign Items of Science and Art.

PURIFICATION OF FIXED OILS, ESPECIALLY OLIVE OIL FOR WATCHMAKERS.—The colorless olive oil which is used by watchmakers is exceedingly dear, and yet the process of its purification appears to be so simple that any watchmaker may prepare it himself. If common olive oil be mixed with an equal quantity of very strong spirits of wine (sp. gr. 0.853) and allowed to stand for about fourteen or fifteen days, during which time it must be repeatedly shaken; already, in the course of a few days, the yellow color of the oil begins to disappear, and then gradually fades, until, at the end of the period mentioned, the oil becomes colorless. If the mixture be exposed to the direct action of the sun, this change takes place much more rapidly. The under layer of oil is separated from the spirit, which floats upon it, and is preserved in well-closed bottles (stoppered, or with plugs of wood or gutta-percha); the spirit may also be preserved for another operation—or if large quantities be employed, it may be distilled after each operation. The removal of color is not the only advantage which is gained by treating olive oil with alcohol, for a considerable quantity of the margarine which it contains is also dissolved out, and hence oil so treated will not solidify so readily as the raw oil. The process just described, and which is undoubtedly better than treatment, first with sugar of lead, then with sulphuric acid, washing with boiling water, and drying with chloride of calcium, or any other of the processes in common use, is applicable, more or less, to all other oils, even to coarse fish oils. It may be of importance to painters in oil, who are anxious not to injure the delicate tints of ultramarine, rose, scarlet, and other delicate shades of red, and in fact of all pure tones, that linseed oil, even the darkest and muddiest, may be so far bleached as to become bright and clear, and have only a slight yellow tinge; a good deal of oil is now purified in this manner in Great Britain.—[Polytechnisches Journal.]

PROCESS OF WHITENING PINS AND NEEDLES MADE OF IRON AND STEEL. BY MM. VANTILLARD AND LEBLOND.—It is well known that pins made of brass wire are deficient of strength and elasticity, and accordingly they have been replaced by pins made of iron or steel; but it is necessary to tin them over.—This operation, however, cannot be performed equally well with iron as with brass; the pins have a rough, uneven surface, which renders them inconvenient to use, as they are liable to tear the cloth.

Messrs. Vantillard and Leblond, wishing to avoid this defect, formed the idea of first covering the iron with a thin coating of copper or other metal having a greater affinity for tin than iron has; but in order that this result should be satisfactorily attained, it is necessary to polish and pickle the pins before coppering them. The above-named manufacturers have most ingeniously effected the polishing, the pickling, and the coppering, by one single operation. To treat, for example, 2 kilogrammes (a little more than 4 lbs. 6½ oz.), 4 litres (about 7 pints) of water, 300 grammes (10 ounces 9 drachms, avoirdupois, by weight) of oil of vitriol, 30 grammes (15 ounces, 13 grains, avoirdupois) of salt of tin, 40 grammes (1 ounce 4 drachms 17 grains) of crystallized sulphate of zinc (white copperas) and seven grammes (about 108 grains avoirdupois) of sulphate of copper, are mixed together; this mixture is allowed to dissolve during twenty-four hours. The bath being thus prepared, it is to be introduced into a barrel of wood, made pitcher-like, and mounted upon an axis. Into this barrel, which has

a capacity of about thirty-five pints, the pins are now to be put; it is then turned rapidly during half an hour, when the pins will be found to have received a pickling, a polishing, and a slight coppering. After the lapse of this time, 20 grammes (about 10 drachms 8 grains, avoirdupois) of sulphate of copper, in crystals (blue stone), are to be added, and the barrel again turned during 1 minutes, when a solid coppering will be effected, with a finely-polished surface. This done, the liquid in the barrel is to be decanted off, and may be used repeatedly for the same purpose; the pins are washed in cold water, then put in a tray containing a hot solution of soap, and agitated for about two minutes. The soap lye is decanted off, and the pins put into a bag with some fine sawdust and shaken, by which means the coppered surface assumes a brilliant appearance. The pins thus prepared may be tinned in the ordinary way. The articles made in this way are far more beautiful and useful than those made in the ordinary way. This process is the more deserving of attention at present, quite independent of the superior quality of the pins, in consequence of the exceedingly high price of brass wire.—[Bulletin de la Societe d'Encouragement.]

Remedy for Yellow Fever.

We have felt deeply for those Southern cities which have been—and still are—so greatly afflicted with yellow fever. Savannah, Ga., has suffered severely, so has Charleston, S. C., and New Orleans. But from the reports of the deaths, as published, it appears that the mortality is chiefly confined to the foreign population, and strangers. In the Savannah *Republican* of the 5th inst., of ten deaths from yellow fever, only one was a native of Savannah, the others were four Germans, four Irish, one New Yorker, and one North Carolinian. In the same paper there is a letter from Dr. S. H. Harris, in which he agrees with Dr. Wildman in reference to the efficacy of the muriated tincture of iron as the best remedy ever applied for this terrible disease.

Camphor Insanity.

We have noticed in a number of our contemporaries, accounts of various persons who had been deprived of their reason by swallowing large doses of camphor, for pain in the bowels, during the recent cholera excitement. We do not know personally of a single case of insanity caused by camphor, but from the great quantities of this drug so imprudently used by many persons, we have no doubt but the statements are true. A very few drops of the spirits of camphor, in water, is a sufficient dose for a grown up person.

Great Subterranean Road.

The Mariposa, Cal., *Chronicle* gives an account of a wonderful cave which has been discovered by some person whose name is not given, by which a person can pass from the one side to the other through the Sierra Nevada Mountain. The entrance was discovered behind a waterfall, and had been long known to the Indians. We are inclined to doubt the truth of the alleged discovery; it has too much the air of a romance about it.

Roofs of Houses.

MESSRS. EDITORS—Can you advise me of the best composition to cover the roofs of houses and other buildings, that will be cheaper and as good as shingles to turn water, and fire-proof? You, or some of your correspondents may know of something, and may make it known through your valuable paper.

C. C. P. OLNEY.

Providence, Sept. 8, 1854.

[We have had more than one inquiry of the same nature as the above. We do not know of any material possessing the qualities desired, that is as cheap as shingles.]

Gore's Patent Butter Worker.

We noticed this improvement on page 410 of our last volume, and stated that steps had been taken to secure a patent. We should have stated that a patent was granted for it July 25, 1854.

The Patentee resides in Bennington,