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LIME KILNS—A. G. Anderson, of Quincy, Ill.: I claim the combination of the perforated arch, C, and escape passages, F, F', holes, g, and supporting and removable bars, h, h', the same being constructed and arranged for joint operation, substantially as and for the purpose set forth.

[A notice will be found on another page.]

FEED WATER PIPE IN THE BED OF A STEAM ENGINE—Henry W. Bill, of Cuyahoga Falls, Ohio: I am aware that steam and water passages have been made through the frame and bed of a steam engine. This I do not claim.

But I claim making the bed of a steam engine hollow, and so as to form a steam chamber, and arranging the feed water pipe in or through said chamber, so that the exhaust steam in the chamber shall heat the feed water in the pipes, as set forth.

MACHINE FOR MAKING BOLTS—Richard H. Cole, of St. Louis, Mo.: I claim pressing the head on the bolt in a moving die box or die, and against a yielding tool or support, as set forth, by the motion of the bolt instead of the tool, as described.

I also claim the combination of the spring, X, the crotch, a, and the jaws, s, so that the crotch, a, or its substitute in pressing the jaw, s, forward, shall act against a yielding medium, for the purpose specified.

I also claim the internal construction of the gripping tools, x, as shown at Z, whereby each of the said tools, in closing, shall form one-fourth of the point on the bolt, thus making half of the point when closed.

I also claim finishing the point on the bolt, that is, completing it by an off-set made on the side of the knife N, having a form in it to correspond with the form in the end of the tools, x, the said off-set to be below the cutting edge of the knife a distance equal to the diameter of the point of the bolt when finished, so as to make the point of the bolt like the frustum of a cone.

CURTAIN FIXTURES—John W. Currier and James M. Thompson, of Holyoke, Mass.: We claim the combination of mechanism for rotating the curtain roller, for the purpose of either winding up or unwinding the curtain, the same consisting of the slider, F, the cords, H, I, and the straight and helical grooves for the slider to work in, one of said grooves being stationary, and the whole being arranged and made to operate as described.

ROSE FOR DOOR KNOBS—Samuel S. Day, of New York City: I make no claim to securing the shank of the rose in the door by means of a screw made upon the outside of it, as this has already been done.

I claim combining the slotted flange, f, the screw threaded flange, e, and the disk flange, d, in the construction of a rose for door knobs, as and for the purpose set forth.

REVERSING THE CHISEL IN MORTISING MACHINES—D. M. Cummings and P. C. Cambridge Jr., of North England, N. H.: We claim rotating the chisel mandrel, D, from the auger mandrel, K, when desired, by means of the lever, I, with pressure roller, m, attached, and spur, n, in connection with the lever, T, operated by the upright, f, as described.

[Full particulars of this invention will be found in another column.]

MIXING AND GRINDING OIL PAINTS—William H. Dolson, of New York City: I claim the combination of the mixer, A, and grinder, F, with an intermediate endless belt, C, and scraper, G, the whole arranged as set forth.

UNLOADING VESSELS—Robert Ferguson, of New Orleans, La.: I claim the combination of swinging platform, c, arm, f, lever, l, and spring, m, with the body of the carriage, operating as and for the purposes set forth.

HOISTING BUCKETS—George Focht, of Reading, Pa.: I claim the catch lever, g, in combination with the lip or roller, b, and the staple, d, the whole being arranged as and for the purposes set forth.

CANDY-TWISTING MACHINE—John Gardner, of Philadelphia, Pa.: I claim the working and twisting of candy by means of a machine constructed substantially as set forth.

[By the use of two conical rollers and a taper screw, the candy is rolled and twisted at one operation, and much more expeditiously than by the methods now in use.]

BENDING METAL PLATES—E. L. Gaylord, of Terryville, Conn.: I am aware that metal plates are bent or swaged in various forms, by means of what are known as drop presses, and I therefore do not claim the drop, K. Nor do I claim, broadly, a drop press, nor any of the parts described separately.

But I claim the block, C, provided with the movable arms, a, a', and cross piece, b, the block or bed piece, H, and adjustable stop, I, arranged as shown, and used in connection with a drop, K, or its equivalent, for the purpose set forth.

[This machine bends metal plates at right angles, such as for the box of locks; it bends them perfectly, and gives a good sharp angular edge.]

VIOLIN ATTACHMENT—Jackson Gorham, of Bairdstown, Ga.: I claim the lever, B, having its fulcrum, d, in a support, c, c', which is movable on a board or piece, A, attached to the head of the violin, and having a screw, C, or its equivalent, applied to it, the whole operating as described.

[This is described on another page.]

PRINTING PRESSES—George P. Gordon, of New York City: I claim, first, the arrangement of a bed, with its form of types, between two distributing tables, so that the impression may be taken while one table is inking the rollers and distributing the ink by passing to and fro upon the distributing table on one side, and at the alternate time, an impression may be taken while the rollers are passing over the opposite distributing table, thus allowing of the reversal of the rollers at the extreme ends of the two tables, meeting and inking the form in its transit from one extreme to the other, and allowing the impression to be taken at each inking of the form without waiting for the return of the rollers.

Second, I claim the arrangement of the variable eccentric, or its equivalent, with the sheet guides or gauges, and friction feed rollers for the purpose of drawing in evenly the sheet or strip any required distance.

And I further claim the arrangement of means described, for feeding, printing, cutting and counting the cards or sheets of paper with the means described, for the inking and alternately distributing the ink, as set forth.

WATER-COOLING PITCHER—Alonzo Hebbard, of New York City: I claim the use of the combination of the woven cloth or felt covering as an elastic, non-conducting packing for a porcelain or glazed water pitcher, with the said porcelain or glazed water pitcher, and external metallic shell or pitcher, for the purpose of making a water-cooling pitcher, as set forth.

OPERATING SCROLL SAWS—John L. Lawton, of Baltimore, Md.: I claim the method of operating the saw by means of the belts and back levers, substantially as described.

IRON TRUSS FRAMES FOR BRIDGES, &c.—Francis C. Lowthorp, of Trenton, N. J.: I do not wish to confine myself to the precise form or size of the parts described.

I claim, first, arranging and constructing the vertical posts of iron truss frame girders for bridges, and other structures, in relation to the upper and lower chord, substantially in the manner set forth, in order that the said posts may be allowed to vibrate on the chords, for the purpose specified.

Second, Allowing the end posts of truss frame bridges to vibrate on the piers or foundation, for the purpose set forth.

CHAMFERING AND CROZING BARRELS—James H. Mattison, of Scriba, N. Y.: I claim the cams, n, n', in combination with the spring, p, and the chamfering and crozing tools, so constructed as to traverse them out gradually to cut the score and chamfer a barrel, and draw them in suddenly to remove the barrel, and save the time of the operator attending the machine.

I claim making the edges of the rims D and D', which hold the end of the barrel by making a rebate, or otherwise, so as to hold the barrel properly in the machine, without removing the truss hoops, substantially as described.

WATER CROZETS—Francis McGhan, of Washington, D. C.: I claim the adjustable communication, d, k, between the supply pipe, D, and the chamber, B, above the valve, b, in combination with the displacing diaphragm, f, or its equivalent, arranged and operating as set forth.

ROTARY EXCAVATOR—Gilbert H. Moore, of Rochester, N. Y.: I claim, first, the construction of the carriers or receivers, as described, viz., the support and hinging of the bodies upon the axle in such a manner that they may be damped by elevating the two extremities.

Second, The construction and mode of attaching the shield, F, by either of the methods substantially as described.

Third, The combination of the digging wheel, the carriers and the shield, for the purposes set forth.

CLEANING AND POLISHING COFFEE—William Newell, of Philadelphia, Pa.: I am aware that a cylinder with a surrounding steam jacket has been used for many purposes. I make no claim to the apparatus described, but merely represent it to better illustrate my process of treating green coffee, and which process constitutes the essence of my invention. Grains, flour and many other articles have been subjected to heat and motion and friction in a cylinder such as I represent. To this I lay no claim; nor to the treatment of anything but coffee; and I am not aware that coffee has ever been cleaned and polished in the way which I have discovered.

But I claim the cleaning and polishing of green coffee by subjecting it to the combined action of heat, friction and motion, as set forth.

EXPANDING TIRES—Samuel Penberthy, of Chicago, Ill.: I do not confine myself to the precise construction of furnace as shown and described, for it is obvious that various modifications of the same may be successfully employed for the purpose, although the described apparatus or contrivance would, probably, be as convenient and as simple as any that could be devised for the purpose.

I claim expanding the tires of locomotive and other heavy wheels while on their axles or shafts, and connected with their vehicles or locomotives, by means of a portable furnace, arranged as shown, or in any proper way, so that the same may be attached to the tire at any desired point, as set forth.

[For more information about the above we refer to a notice on another page.]

IRON SHUTTERS FOR DOORS, WINDOWS, &c.—M. C. Root, of Toledo, Ohio: I do not claim, broadly, the making of metallic shutters in such a manner that the slats shall fold and unfold in a self-acting manner when raised or lowered. Examples of devices of this character may be seen in the rejected case of Richard Murdock, May, 1851, and in King's case, June 10, 1856.

I claim the construction of metallic shutters in the manner described.

[These shutters are much cheaper than the usual iron ones; they fold side by side as they descend, and shut up in a box or recess underneath the window-sill when open.]

CANAL LOCK GATES—Samuel J. Seely, of New York City: I do not wish to be understood as limiting my claim of invention to the special form specified, but claim the privilege of modifying the same so long as I attain the same end by means substantially the same.

I claim the method, substantially as specified, of connecting the upper journals of canal lock gates to the masonry of the lock, by means of adjustable boxes, and for the purpose specified.

I also claim suspending the outer or swing ends of the gate to the upper journals, by diagonal suspension braces, in the manner and for the purpose as specified.

I also claim connecting the top flaps of the gate with each other, so that the two shall move together by means of the joint link and arm, or other equivalent means, substantially as described, in combination with the connection with a capstan at the side of the lock by a jointed rack, or other equivalent means as described, and for the purpose set forth.

SMOOTHING IRON—James Goodin Jr., of Cincinnati, Ohio: I am aware of gas having been used for heating purposes before, and that wire gauze has been employed for distributing the heat, all of which I disclaim when taken separately or together.

But I claim the arrangement of the perforated diaphragm, g, with the air openings, 5 5' and 7 7', when said diaphragm and air openings are arranged with the gas pipe, B, and gauze, C, in the bottom of the iron, as specified, for the purpose of detaining and equally distributing the heat over the surface of the bottom of the iron, as, and for the purposes mentioned in the specification.

TIGHTENING TIRES ON CARRIAGE WHEELS—N. J. Skaggs, of Talladega, Ala.: I do not claim separately connecting the ends of the tire together by means of a screw, for this has been previously done.

But I claim forming the ends of the tire with the heads, a, a', recess, e, and projecting portion, f, as shown, in connection with the screw rod, E, by which the ends are secured together, and the tire contracted as may be desired, and a continuous or perfect joint or connection obtained.

[This invention relates to that class of tires that are not in a continuous band, but are secured by a screw. The inventor causes the ends so to overlap that in any position of the screw they form a good and perfect joint.]

PUMPS—Noah Sutton, of New York City: I am aware that two pistons having a variable movement, and fitted within one cylinder, have been previously used; therefore I do not claim giving a variable movement to the pistons, irrespective of the arrangement shown.

But I claim the peculiar means employed for operating the pistons, or giving them the variable movement as described, viz. the pulleys, Q, Q', R, R', connected with the bars, I, of the pistons, F, G, by means of the chains, S, T, the pulleys, Q, Q', R, R', being placed loosely on their shafts, and connected alternately therewith, by means of the bars, f, connected with the spring, g, the projections, h, on the wheels, P, and the beveled projections, i, j, on the bars, V, the whole being arranged as described.

[By giving the pistons a variable motion—that is, causing them to descend with greater rapidity than they ascend, and connecting the cylinders by water passages, these pumps give a continuous stream of water which is equal in force in any position of the pistons.]

HAND PRINTING PRESS—Samuel J. Smith, of New York City: I do not claim any one of the parts separately.

But I claim the manner described of adjusting the lever, l, and its inking roller, h, by the screw, s, so that the inking takes correctly on to the edge of the printing surface, 2, as said surface moves in a curved line with, and on the lever, d, as and for the purposes specified.

I also claim arranging the printing surface, 3, and inking table, g, on the lever, h, in such a manner relatively with the inking roller, h, and its lever, l, that said roller shall travel over the printing surface as the lever descends, and then pass up on to the inking table, g, for distributing the ink while the impression is being given, at the same time that the paper or other material being printed is kept from contact with the roller by the foot, 5, substantially as and for the purposes specified.

BAROMETER—T. R. Timby, of Medina, N. Y.: I claim the elastic tube between the stop cock and barometer tube as set forth.

I claim the mechanical arrangement for supporting the barometer tube within the suspension glass case, the same consisting of the bracing rods, t, t', passing through the glass and brass tubes, d and e, and the wooden block w, the inner cap, 2, the blocks, w', the lower cap, 3, and the screw joint, S, all arranged and co-operating as set forth.

HARVESTERS—Hosea Willard and Robert Ross, of Vergennes, Vt.: We do not claim broadly attaching the finger bar to the machine by a joint, for this has been previously done.

But we claim the combination of the hinged finger bar, L, with the adjustable bar, I, lever, P, regulating set screw, f, and wheel, o; the whole being constructed and arranged in relation to the main frame for joint operation, in the manner and for the purpose set forth.

We also claim lever P, and regulating set screws, f, in combination with bar, I, chain or cord, J', pulley, l, and clutch, Q, for the purpose of raising the hinged finger bar, L, as described.

[This improvement consists in forming the cutters, so that they can be raised to suit any inequality of the ground, or elevated bodily, when moved from place to place.]

JOINTS OF CARRIAGE TOPS—Reuben W. Stone, of Solville, N. Y.: I claim the bars, A, A', B, B', connected by the joints, a, and provided with loops or hooks, b, b', arranged substantially as and for the purpose set forth.

[This is a cheap and simple carriage top.]

MACHINERY FOR BURNING WOOL ON THE PELT—John Waterhouse, of Little Falls, N. Y.: I claim, first, The combination of the feeding apparatus, which holds and controls the pelt, with a cleaning cylinder arranged, constructed and operating substantially as set forth.

Second, I claim the combination of the rollers, D, E, one being elastic, and the other non-elastic, for holding and presenting the pelt in a curved or bent form to the action of the cleaning cylinder as described.

Third, I claim, in combination with the holding and presenting rollers, the feeding rollers, F, F', one said rollers, F, being elastic, and the other non-elastic, as described and for the purpose set forth.

Fourth, I claim mounting one of the feed rolls, F, and one of the holding and presenting rolls on the main frame, and their fellows upon a traveling carriage, for the purpose of facilitating the introduction, turning and removal of the pelt, as set forth.

FOLDING IRON BEDSTEADS—H. F. Vandenhove, of New York City: I do not claim broadly a bedstead connected by joints, so that when not in use the parts may be folded together, as such bedsteads are well known and in quite common use.

Nor do I claim separately or in themselves considered the guards or fenders independent of the manner in which they are arranged or applied to the bedstead.

But I claim applying or attaching the guides or fenders to the bedstead, as and for the purpose set forth.

I further claim attaching the buttons, f, to the side pieces, h, and also attaching the pins or stops, f', to the side pieces, b, in connection with the grooves, f', in the inner sides of the posts, D, for the purpose specified.

[This improvement is described on another page.]

SEWING MACHINES—C. H. Andrus, (assignor to Squire Lee) of Goshen, N. Y.: I am aware that in the sewing machine of A. B. Wilson, patented 1854, a tri-pronged spring pressure pad is employed. The central prong of this pad presses or holds the cloth against the periphery of the feed wheel. I disclaim the spring pressure pad, and also the holding of the cloth against the feed wheel by a spring. In the device of said Wilson, the pressure pad is stationary, the feeding of the cloth being accomplished by a serrated wheel.

I am also aware that in the device of E. H. Smith, 1857, the pressure pad is slotted, and has a separate spring within the slot which presses the cloth upon a horizontally moving dog. The cloth is fed by said dog which is below the table.

I do not claim the employment of two foot pieces or feeding plates in any other way than as described.

But I claim the employment of a supplementary serrated feeding plate, B, fitted within a slot in the principal feeding plate, and provided with shoulders, b, b', and being controlled entirely by springs, d, d', applied between it and the principal feeding plate, so as to operate as described.

[This is a useful little improvement in the feed motion of sewing machines, and is applicable to any machine.]

PRINTING PRESSES—Merwin Davis, of New York, N. Y., assignor to P. G. Bergen, of Brooklyn, N. Y.: I do not claim separately or in itself considered the reciprocating carriage, O, provided with fingers or nippers for feeding the blank sheets to the form, nor do I claim the "fly" separately or independent of its arrangement and connection with the parts as shown.

But I claim, first, The reciprocating rolling pressure segment, J, provided with a weight box, h, or any suitable or equivalent device by which the counterpoise of the segment may be varied or graduated to be commensurate with the speed of the segment. I also claim the reciprocating rolling pressure segment, when arranged to operate as shown, irrespective of the variable counterpoise.

Second, I claim the reciprocating carriage, O, provided with the fingers or nippers, w, in combination with the segment, J, for feeding the sheets to the form. I also claim, in combination with said segment, J, the "fly" or device formed of the rods or shafts, S, T, e, arms d, d', j, and the hinged ledge or plate, d, 4, the above feeding and flying devices being arranged and operating conjointly with the segment, J, as described.

Third, I claim the rails, m, m, applied to the machine, and operated substantially as shown, or in any equivalent way so as to raise or elevate the face, k, of the segment above the form during one movement, and allowing it to descend and rest upon the bed during the other movement in order to give the impression to the sheets. And I also claim the bar, Z, when used in connection with the rails, m, and the bar, Z', connected with it as shown, whereby the segment may be raised at any time, and the sheets also prevented from being fed to the form.

Fourth, I claim operating the lateral vibrating ink rollers, W, X, by means of the T-shaped lever, Y, as described.

[For information about this invention we refer to page 75.]

MACHINES FOR FOLDING PAPER—Cyrus Chambers, Jr., of Philadelphia, Pa.: I do not desire to confine myself to the precise form or method of operating the various parts of the machine, as they may be considerably modified without altering the result.

I claim, first, Forcing the edges of the sheet between the folding rollers, in advance of the middle of the said sheet for the purpose specified.

Second, Temporarily arresting the motion of the first pair of folding rollers, in the manner described, or any equivalent to the same.

Third, The register pins, q, in combination with the tubes, r, when the same are arranged for joint operation, substantially in the manner and for the purpose set forth.

Fourth, The combination of the first pair of folding rollers, N and N', with the register pins, q, when the latter operate between the former, in the manner described, or any equivalent to the same.

Fifth, Preventing the rebounding of the folded sheet during its passage through the machine, previous to the descent of any of the folding blades, by means of the arresting rollers described, the same operating in combination with the tapes, in the manner set forth.

Sixth, Dividing the printed sheet into two halves by means of shears, arranged, actuated and constructed as set forth.

Seventh, Discharging free from the machine the strip cut from the folded edge of the sheet by means of a revolving disk, arranged and operating in the manner set forth.

Eighth, So constructing and arranging machines for folding sheets of paper, that the two halves of one sheet (said sheets having been printed on both sides from the same form) may be separated from each other, and folded in succession.

Ninth, Packing the folded sheets by means of a reciprocating plunger against a frictional plate in a trough, so that the backs and heads of the folded sheet coincide with each other.

Tenth, The employment of the devices described, or any equivalent to the same, whereby the operator can separate the imperfect from the perfect sheets.

Eleventh, Preventing the return of the packed sheets of paper, by means of the catches situated above, and in the corner of the trough.

Twelfth, The combination and arrangement by which the operations described are performed simultaneously or in succession to each other in the same machine.

ROCK DRILLS—G. H. Wood, of Green Bay, Wis.: I claim the employment, in combination with a drill raised, turned, and operated as above described, of the supplementary spring, R, for the purpose of controlling the re-bounding of the drill, G, in the manner as set forth.

[See notice of this improvement on another page.]

VALVE GOVERNOR FOR STEAM ENGINES—C. Whittier, of Roxbury, Mass.: I claim suspending the fans or vanes D, on the crank (or its equivalent) attached to the spindle of the regulator valve, whereby the resistance of the atmosphere causes them to operate the valve in the manner as set forth.

RE-ISSUES.

CORRAGE MACHINERY—Henry Pearce, of Cincinnati, O. Patented May 27, 1855: I claim, first, The method described of equalizing the paying out of the strands from the bobbins for the purpose set forth.

Second, The arrangement of a friction or rubbing collar, m, operated by a plunger, o, passing upward within the supporting stem, b, and the weighted lever, p, as described, or equivalent devices for regulating the degree of facility of the rotation of the bobbin spindles.

MANUFACTURE OF IRON—Wm. Kelly, of Eddyville, Ky. Patented June 23, 1857: I do not wish to be understood as claiming broadly the act of blowing blasts of air into molten iron, as that has been done in processes dissimilar to mine.

But I claim blowing blasts of air, either hot or cold, up and through a mass of liquid iron (the oxygen in the air combining with the carbon in the iron, causing a greatly increased heat and ebullition in the fluid mass, and decarbonizing and refining said iron without the use of fuel.

ADDITIONAL IMPROVEMENT.

INSTANDS—Kingston Goddard, of Philadelphia, Pa. Patented April 28, 1857: I claim as new and useful, the straight tube, d, in combination with a simple cup or receptacle, E, substantially as and for the purposes described.

DESIGNS.

STOVES—Wm. T. Coggeshall, of Fall River, Mass.

NOTE—In the above list of claims we recognize FIFTEEN cases which were prepared at this office. Under the present efficient and liberal management of the Patent Office, there has never been in our opinion so good a time to present applications for patents as now. Cases are early taken up for examination, and a liberality is shown by the Examiners which is truly commendable. Mechanics who are out of employment cannot devote their time more profitably than to an effort to invent something new, or make some improvement on machinery used in their respective trades.

Charcoal.

As the result of experiments with charcoal, an English chemist avers that for the reduction of metallic oxyds, the charcoal of the heavier woods (as that of oak and the beech) is preferable; and that, for common fuel, such charcoal gives the greatest heat, and requires the most plentiful supply of air to keep it burning, while those of the lighter woods preserve a glowing heat with much less draft of air; and that for purposes where it is desirable to have a steady and a still fire, charcoal should be employed which has been made from wood previously divested of its bark, since it is the cortical part which flies off in sparks during the combustion, while the coal of the wood itself seldom does.

Statistics of Consumption.

Medical statistics appear to prove that consumption, where prevalent, originates as often in summer as in winter, and the best authorities declare that it is more common in hot than in cold climates. There is more consumption in the Tropical Indies, both East and West, than in the almost arctic Canadas. The number of the British troops attacked with this disease in Jamaica is annually twelve in one thousand, while in Canada it is only about six. The British government have accordingly resolved upon sending their consumptive soldiers to a cold climate in preference to a warm one.

CHEAP CORN—South of Springfield, Ill., on the railroads, some of the farmers are offering corn at 15 cents per bushel in the field; others at \$5 per acre.