

the latter is retained in position at any point to which it is raised. Common bill-holders press down upon the fingers, and thus hinder an examination of their contents.]

MOP HEAD—E. P. Thompson, of Worcester, Mass.: I do not claim a mop holder or clamp having a movable jaw operated by or secured in place by a screw or a ring and hook.

But I claim the improved self-acting mop-holder, made substantially as described, viz., with a spring a, and two bent legs or bars, b b' c c', applied together and operating in manner and in combination with a socket d, in the handle A, substantially as specified.

STUMP EXTRACTOR—Peter Traxler, of Scottsburg, N. Y.: I claim the combination of the three bars, a b c, with the slotted beam, B, and lever l, said beam B, being free to revolve in the manner described.

I am aware of the construction of the lever of Lagrouse and several modifications thereof, and do not claim the reciprocating lever thus used, but simply my combination substantially as set forth.

MANUFACTURE OF BOOTS—James Scrimgeour, of Brooklyn, N. Y.: I disclaim any form substantially like that described in the patent of Chilcott & Snell, before referred to.

But I claim the cutting out or otherwise forming a piece of leather or other material to the shape substantially as described and represented in fig. 1, and the folding of the same as described and illustrated in figs. 2 and 3, to produce the "upper" of a boot, as fully set forth.

[This improvement relates to cutting out the uppers of boots in such a manner that they do not require to be crimped. The seams or parts that have to be closed are brought together with a lap, and the closing operation can be executed with facility by a sewing machine.]

STEERING APPARATUS FOR SHIPS—Phineas Smith, of Patchogue, N. Y.: I do not claim the individual parts of the described apparatus.

But I claim the arrangement of the movable cog, d, d', plate c, pinion e, and ropes as set forth and shown in the drawings for operating the tiller by the steering wheel, A.

ROAD SCRAPER—Hiram Van Pelt, of Bath, N. Y.: I am aware that a scraper has been made to revolve upon pivots placed within a suitable frame, and therefore I do not claim such.

But I do claim the alternate arrangement of the scoops, II, in combination with the draft rods, D D, substantially in the manner and for the purpose set forth.

GAS BURNERS—John C. Walsh, of Lockport, N. Y.: I am aware of devices having been used for the purpose of retarding the flow of gas through a burner, such as deflectors or circuitous passages. I lay no claim to these things.

But I do claim the arrangement within the burner of two or more hollow pillars, d and g, extending up into the chambers of the burner with holes, K, made obliquely into the upper end of said pillars as represented, for producing counter currents of gas as it flows through the burner to break its force and regulate the supply of gas to the tip of the burner, for the purposes mentioned.

WRENCH—Edward J. Worcester, of Worcester, Mass.: I do not claim the application of a screw and rack to the movable jaw and the stock of a wrench, in order to produce the required movements of the movable jaw with respect to the stationary jaw extended from the stock.

Nor do I claim a wrench having its movable jaw affixed to a tenon or slide made to work through a mortise in the other jaw, and to be clamped in position by the handle, as the same is set forth in the patent of Orin O. Withersell, dated December, 1855.

I claim my adjustable fork jaw wrench as made with its jaws arranged and applied to its handle as described, and with a rack and rotary screw arranged in the handle and applied to the slide of the movable jaw as specified.

SETTING TIRES ON WHEELS—John H. Williams, of Pleasant Hill, O.: I claim hanging the frame, to which the wheel is secured, to a revolving shaft, so that the wheel may be turned up into a horizontal position for the facility of working at it, and then into a vertical position to bring the perimeter of the wheel into the water trough, substantially in the manner and for the purpose as described.

DAMPER REGULATORS FOR STEAM BOILERS—Pat. White, of Brooklyn, N. Y.: I claim securing the ends of the flexible tube by the clamps, D D, and metallic plugs, K M, substantially as described.

NUT MACHINE—Samuel H. Whitaker, of Cincinnati, O.: I do not claim the employment of two punches entering the nut or washer from opposite sides, as I am aware that such a contrivance is described in the patent of Richard Coles, such punches, however, being parallel sided and arranged in line and operating differently to my taper punch and mandrel.

But I claim, first, the employment of a taper punch, p, a hollow plunger, l, or its equivalent, and a taper pointed mandrel, J, combined and arranged to operate substantially as set forth.

Second, the combination of the hollow sleeve, K, and the plate and cutter, L, with the forming rollers, O O M, substantially as described for the purpose of carrying the nut or washer blanks to and from the id roller.

The holes of nuts and washers are made with this machine without waste of cores or burrs. A heated strip of iron of proper width is fed through an opening in the frame of the machine, and the operations of punching in (not cutting out) the hole, cutting off the nut, and finishing the hole and outside, are all performed automatically, and the nuts are discharged in a very perfect condition.

MACHINES FOR FOLDING PAPER—James F. Weeks, of Columbus, O.: I do not claim the folding of paper by passing the sheets between revolving rollers.

Neither do I claim the arrangement of the rollers in the above described form, as they can easily be arranged to produce any other form of fold desired.

But I claim the manner of operating the feed roller and folders by means of friction rollers or their equivalents revolving upon the flange of a wheel or wheels (N figure 6) striking against fingers or tripping arms or their equivalents, keyed upon the rock shafts to which the feed roller and folders are attached substantially in the manner described, in combination with spiral springs upon said rock shafts, to return the feed roller and folders to their places, substantially in the manner specified, the whole tending to facilitate the rapid, easy and certain operation of the machine.

I also claim making slots in said wheel or wheels in which to fasten said friction rollers or their equivalents at any desired point by means of the thimble, bolt and nut constituting the movable stud, substantially in the manner specified, so that said friction rollers may be moved forwards or backwards to cause the motion of said rock shafts to be sooner or later, as may be desired, in combination with the rock shaft, spiral springs, rollers and tapes, the whole operating substantially in the manner described for the purpose of forming any desired folds in paper, using any number of said slotted wheels, friction rollers, rock shafts, spiral springs, rollers, and tapes, or their equivalents, in combination, necessary for the purpose of producing any number or form of fold required.

CHEESE HOOPS—C. P. S. Wardwell, of Lake Village, N. H.: I claim the combination of the hoops, D, having a bridge or bar, K, at the outer end of its slot arranged as described, with the oblong button, e, the two operating together, substantially in the manner and for the purpose specified.

AUTOMATIC SAW MILL BLOCKS—Hiram Wells, of Florence, Mass.: I claim the devices such as are described, or their equivalents, so constructed as to traverse the log towards the saw simultaneously on each head block, and set it automatically, or permit the workman to set the log on either head block, or on all at the same time, by the lever, g, when put into gear with the rack, k, as described.

METHOD OF INCASING HYDRANTS—Wm. Bramwell, of New York City, (assignor to Samuel P. Ayres, of New Rochelle, N. Y.): I claim the casing or pipe, C, with its seat, e, and elastic washer, f, in combination with the hydrant pipe, g, and screws, p, p, substantially in the manner and for the purposes specified.

VALVULAR ARRANGEMENT FOR BASIN, ETC. COOKS—Edward B. Bunham, (assignor to himself, and Henry A. Chapin,) of Springfield, Mass.: I do not claim operating a valve by means of a cam, as this is found in various faucets.

Nor do I claim a faucet or basin cock as made with a turning bib or nozzle, and a tubular stem having a rotary valve working against a concentric seat, as such is liable to leakage.

But I claim the described new manufacture of basin cock or faucet, as made with a turning bib or nozzle, a sliding valve, and a tubular stem operated by means substantially as described.

FIRE GRATES, OR LINING OF FIRE POTS—Daniel H. Dean, of Lowell, (assignor to Wm. T. Coggeshall, of Fall River, Mass.): I claim arranging the inner surface of each ring of the fire pot, cylindrically or vertically, the edges of the rings inclining inwards in such manner as to bring the upper edge of one ring on or about on a level with the lower edge of the ring directly over it as described, whereby advantages such as are stated are gained.

TONGUEING AND GROOVING HAND PLANE—Porter A. Gladwin, (assignor to himself and Thos. F. Caldwell,) of Boston, Mass.: I do not claim the combination of tongueing and grooving cutters, upright and horizontal guides in one stock, wherein the tongueing and grooving cutters are arranged to slant in opposite directions.

But I claim the tongueing and grooving cutter or cutters in single throat and to slant in one direction, in combination with arranging the vertical guides, so that one shall stand below the other, and the horizontal tongueguide be arranged between as specified.

FORGING HORSE SHOE NAILS—Robert Cook, (assignor to himself and Samuel Norton,) of South Abington, Mass.: I claim arranging each striker in a separate guide lever, and operating such striker by a spring and such guide lever, when the latter is actuated by means substantially as described.

I also claim combining with the pitman, M, and the lever, L, carrying the feeder, a catch lever, N, shoulder, w, and spring catch, O, whereby the said feeder may be moved and held up to the cutters and set free therefrom, as circumstances may require.

POWER PRINTING PRESSES—Jedediah Morse, of Canton, (assignor to the S. P. Rugles Power Press Manufacturing Co., of Boston,) Mass.: I claim the combination and arrangement of mechanism or devices for supporting the sheet of paper over the carrier or frisket carriage, and guiding and presenting it to the discharging apparatus, such devices consisting of the cords, n2 n2, the rollers l2 m2, the drum, o2, cord, p2, and the barrel or pulley, q2, provided with a spring or its equivalent as described.

I also claim the combination of the cam, u, and stud, v, with the rocker toggle and its operating cam, the same being for the purpose as specified.

I also claim the combination for regulating the rotary motion of the ink fountain rollers, the same consisting of the adjustable stop lever, m3, the connector rod, h3, the cam, c3, the lever, f3, the weighted plate, K3, and the pawl, l3, and the internal ratchet, s3, constructed and applied together substantially as specified.

I also claim combining with the pile platform and the fly, a mechanism substantially as described, which by the reciprocating movements of the fly, shall lower the platform in correspondence with the increase of thickness of the pile, such mechanism being the cam on the fly shaft, the pawl thereof and the train of gears and racks applied and operating as specified.

I also claim the mechanism or combination for imparting to the ink cylinder, B, endwise motions as described, and the arrangement of the pinion or gear, c, and the inclined gear, p, constructed, arranged, and applied together, so as to operate substantially as specified.

PEGGING BOOTS AND SHOES—Benjamin F. Sturtevant, (assignor to himself and Elizabeth Sturtevant,) of Boston, Mass.: I claim in combination with the feeder wheel, K, and its rotary mechanism, a mechanism for imparting to said feeder wheel, and the last reciprocating intermittent endwise movements whereby the pegging of two ranges of pegs may be effected as described.

I do not claim a toothed or corrugated feeding wheel, nor one made with a series of holes for the pegs to pass through or into.

But I claim constructing the feed wheel, R, with two series of radial holes arranged in it as specified.

I also claim the stop lever, i', and its locking slide, h', in combination with the peg wood feeding mechanism, and made to operate therewith, substantially as explained.

I do not claim a tubular peg carrier, provided with a cutter, as shown in the patent granted to A. C. Gallaher, August 16, 1855.

I also claim the tubular peg carrier, when provided with a cutter for separating the peg from the peg wood, and when arranged and made to operate with the peg wood feeder and the feeder, R, substantially as specified.

I also claim the mechanism of mechanism for producing a reciprocating intermittent endwise movement of the feeder wheel, R, the same consisting of the slider, u, the stud, v, the groove, w, the spring, s, the pin, c', the inclined cam, d', the pin, e', the tripping clutch, f', the lever, g', and the slide rest, o', the whole being applied together, substantially as specified.

I also claim the mechanism for producing the reciprocating endwise movement of the feeder, R, a weighted arm or its equivalent applied to the pegging jack, substantially as above specified, whereby the shoe and last are main aimed in close contact with the feeder, and permitted to move in correspondence therewith, substantially as set forth.

I also claim the method of effecting the feeding of the peg wood, that is by the slider, M, of the peg carrier, the lever, b2, the serrated feeder, Z', and the spring, d2, operating together as specified.

CARPET BAGS—Joseph Zepfel, (assignor to himself and John B. Radley,) of New York City: I claim attaching the half pieces of the divided bottom to the lower corners of the respective frames, at right angles or nearly so to said frames, thereby said divided bottom and frames support the flexible material of which the bags is composed, whether the same is open or shut, as specified.

BRICK PRESSES—R. B. Harbour, of Oskaloosa, Iowa: I claim the employment in combination with the wheel, L, of the two sets of levers, H H' and K K', arranged eccentrically within a circle, and on a revolving circle plate, and connected with the tops of the molds of said plate, and with the followers of the same, substantially as and for the purpose set forth.

In this machine two sets of levers are used with a revolving circle plate. They are employed for opening and closing the top of the molds, and for exerting pressure on the "followers" of the molds. These levers are formed to act on the principle of a wedge, and to exert a gradually increasing pressure. One set have their fulcrum slightly in advance of the other, so that when one set has finished acting, the other set has commenced operating. It is a very ingenious and compact brick press.

RE-ISSUES.

CAST IRON CAR WHEEL—Anson Atwood, of Troy, N. Y. Patented May 15, 1847: I claim the connecting of the rim of the wheel with the hub in cast iron car wheels by means of two curved plates, starting from near the ends of the hub, and joining at a part of the distance between it and the rim, thus forming a hollow ring or arch around the hub, and joining said ring with the rim by a single plate or its equivalents.

SHIPS BLOCKS—Cornelia Waterman, administratrix of Stephen Waterman, deceased, and Isaac D. Russell, of New York City. Patented January 31, 1844: We claim passing the straps through grooves in the inner faces of the cheeks of the blocks as described.

DESIGNS.

BUSTS OF NAPOLEON BONAPARTE—Thos. Ball, of Boston, Mass.

ADDITIONAL IMPROVEMENTS.

FARM GATE—Chas. N. Coode, of Pleasant Valley, N. Y. Patented May 13, 1856: I claim the arrangement and combination of the levers, B and C, with the ropes or chains, F F, and platform, A, A, they forming a self-acting or balance gate, as fully set forth.

SPRING BED BOTTOMS—Hiram Tucker, of Cambridgeport, Mass. Patented July 3, 1855: I claim arranging and combining with such bars and springs, substantially as specified, flexible bands or strips, g, g, or analogous devices, so that the several bars and springs may be connected and made to operate together, substantially as specified.

To Prevent Scale in Boilers.—Native Mother of Pearl.

MESSRS. EDITORS—I have noticed various remarks in your paper on the subject of incrustation of boilers from the use of limestone water. I was some years ago engaged in an establishment where steam power was used, and frequently spent leisure hours in conversation with the old engineer. He told me the best, most simple, and at the same time the most safe remedy, was the application of a few pieces of shell-bark hickory wood. The virtue, it appears, is in the inner bark, which could be easily taken off and thrown in the boiler without the wood.

Is there any method by which the pearl part of the muscle shell can be softened, or in any way managed, otherwise than sawing, so that it can be worked to advantage?

Our western waters abound with muscle shells from six to eight inches in length, and from 1-4 to 5-8 inch thickness, and some of it as firm as most of the pearl now used. I have frequently examined them, and wondered that some of our geniuses could not contrive some method to bring them into market. Steamboats could be loaded on some of the tributaries of the Ohio with this shell, that could be used for thousands of different purposes; and I have no doubt that in time they will be made useful and profitable.

T. W. POWELL.

Louisville, Ky., June, 1857.

[The effect is due to the tannic acid in the bark, and is analogous to that produced by the use, in the same manner, of oak or mahogany sawdust. All such materials, however, only keep the lime in suspension until the water can be blown off. It is better to purify the water by heating and allowing it to deposit its earthy matter, as is practiced in Wiessenborn's patent, see page 113, Vol. 11, before allowing it to enter the boiler.

Pearl shells cannot be softened without injuring their beautiful lustre.

An Electric Locomotive.

The Detroit Free Press relates the following rather tough story:—

"A locomotive was being moved from the manufactory to the Central depot, in that city, and had arrived in the middle of the street, when suddenly all hands dropped the bars which they were moving the machine, and fell back in amazement. Resuming them at the order of the man in charge, they applied them again to the wheels, and again fell back paralyzed the instant they touched the iron. The director of the job caught up one of the bars, and making a savage thrust, planted it under a wheel, preparatory to giving a huge lift. No sooner had it touched, however, than he saw it fall from his grasp to the ground, as it had done in every case before. Such singular occurrences excited attention, and an examination was made as to the cause, when it was found that the locomotive, in passing under the telegraph line, had come in contact with a broken wire that hung sufficiently low to reach it. The whole mass of iron comprising the locomotive had thus become charged with electricity, which had communicated itself to the bars that the men held in their hands, and caused the effect above described. The wire was then removed, and the difficulty obviated in a moment."

Removing and Preventing Rust.

Some persons employ an acid to remove rust from knives; this should never be done under any circumstances. Nothing surpasses rotten stone and oil for scouring knives and forks. To prevent stoves and grates from rusting during summer if placed in damp situations, give them a thin coat of lard and resin melted together, in the proportions of three parts of the former to one of the latter.

Notes on Science and Foreign Inventions.

Parian Statuary.—Those who visited the New York Crystal Palace in 1853 will not readily forget the beautiful display of figures made of a composition called "Parian marble." They were arranged in the South Gallery, and were manufactured at Stoke-upon-Trent, England, in the factory of Alderman Copeland, of London. Such figures are

also common in the windows of some of our stores, and are generally of a diminutive size, but of a soft and agreeable tint, resembling that of ancient marble statues. "Parian" is a kind of porcelain prepared with great care, and from the difficulty of baking it, a great number of the figures come out of the kilns as waste. Owing to this feature in its character, it has hitherto been impossible to execute large figures of such material; but this difficulty, we understand, has been overcome, or rather removed, by the discovery of a new material called "porcelain ivory," which is of equal beauty with parian in point of tint, and stands the action of fire without distortion. Alderman Copeland has recently opened a large new show room in his manufactory, in which he displays figures of life size made of this material. Parian figures sell at very high prices, and we hope this new discovery will be the means of reducing the price of such beautiful works of art.

Gas Light in Railroad Cars.—A "first class" carriage on the Great Northern Railway, England, has been fitted with a gas meter, capable of holding sufficient gas for eight hours' consumption with three burners. The experiments with it are stated to have been perfectly successful. The gas meter is fitted into the bottom of the carriage, and is filled by a flexible tube from any of the main pipes at the railroad stations.

Navigating the Shallow Rivers of India.—The Manchester Chamber of Commerce has petitioned Lord Palmerston in very forcible terms to carry out a system of steam navigation for the shallow internal rivers of India, "proposed," it is stated, "by J. Bourne, C. E." The main difficulty to the navigation of these rivers by steam is the low state of their waters at certain seasons every year. The plan proposed by Mr. Bourne is "to employ steamers of shallow draught, and divide the cargoes among a number of shallow barges to be towed by the steamers." This is an old American plan, which any of the Manchester merchants can witness any day during the summer season by a trip to this city, thence up the Hudson river to Albany.

A Great Blast.—In a quarry at Holyhead, not far from Liverpool, where supplies of stone are being obtained for a large breakwater, 2000 pounds of powder were recently exploded simultaneously, by a galvanic battery consisting of forty-eight cups. It was situated 750 feet from the chamber where the powder was tamped. The explosion detached 160,000 tons of the rock, and shook the whole neighborhood like an earthquake.

Steam Cultivation.—Five different methods of steam plowing are now in the course of trial this season to England, and we hope the question of its economy in comparison with animal power will soon be fairly solved. It is not now a question of practicability, for steam plows do operate well, but hitherto their expense has been more in plowing per acre than by horses. The five systems embrace the traction engine, the stationary engine and stationary windlass, stationary engine and traveling windlass, rotary cultivator and a digging and forking steam plow. With regard to the traction engine, (which moves over the field dragging the plow,) the London Engineer says: "A vast amount of opposition has been advanced to the traveling of portable engines over arable land, but having got them in the field, apparently doing their work as economically as any of the other systems, and even more so, the more philosophical course is to leave the great practical questions at issue to be settled at the bar of experiment." This is a sensible advice. The traction system will yet be the one adopted, because it is the most simple.

A Great Railroad Enterprise.—A line of railroad is projected through Turkey to pass through the valley of the Euphrates, thence to India, which will be 3000 miles long. When completed, passengers can get into a train on the shore of the Mediterranean, and travel without a change of cars to Calcutta.

A great trial of agricultural machines took place at Vienna on the 11th of last month. We have not received full particulars, but our British exchanges state that the first prize medal for thrashing machines was awarded to Messrs. Davy, of Sheffield, England.