

THE PROCESS OF MANUFACTURING CAUSTIC ALKALIES—Henry Pemberton, of East Tarentum, Pa.: Having thus described my improvement in the manufacture of caustic soda and other caustic alkalis, what I claim is the mode described of separating the solution of caustic soda, or other caustic alkaline liquid, from an insoluble precipitate, by the use of a filter, constructed substantially in the manner described.

HEEL AND SPOKE SHAVES—Joseph A. Perley, of Lynn, Mass.: I claim the combination and arrangement of the adjustable gage, C, and beveled shanks, A, A, substantially as described, so that the gage may be moved in a plane but slightly inclined to the convex side of the knife toward the edge or from it, for the objects specified.

CARPET-SWEEPER—N. B. Pratt, of Deep River, Conn.: I claim the arrangement of the bearings of the friction driving rollers, e, e, in oblong slots, g, g, of the box, A, and the rollers, d, d', in the specified relation to the ends of the revolving broom or brush, substantially as and for the purposes set forth.

[This invention consists in the use of a rotating brush cylinder, formed in two parts, and placed loosely on a stationary rod within a suitable box or case, the bottom of which is formed of yielding or elastic flaps or aprons, the edges of the aprons bearing upon the floor or carpet at either side of the point of contact of the brush cylinder with the floor or carpet. There is a roller at each end of the box, the axes of which are fitted in vertical slots in the ends of the box or case, so that the upper ends of the rollers will bear against the cylinders and rotate them as the device is moved over the floor or carpet.]

MANUFACTURE OF CHEESE—T. A. Redington and G. McCluer, of Fredonia, N. Y.: We claim the combination of the water box, A, milk vat, B, the reserve water box, C, boiler, E, pipes, g, h, k, and the six-way cocks F, arranged to operate substantially as and for the purpose set forth.

[By a proper arrangement of hot water boxes, a boiler and hot water pipes, and a vat for containing milk, this inventor heats the milk to the proper temperature with great facility, and checks the heat at the proper point for the better production of cheese with a small amount of fuel.]

MACHINES FOR STRETCHING LEATHER—Albert W. Roberts, of Hartford, Conn.: I claim the constructing of the jaws of leather stretchers with ways for the wedges to slide on, so that the wedges may be so relieved from the leather when drawn back that the leather can be put in without removing the wedge from the jaw.

I also claim making the frames of hollow tubes on which the jaws slide, and also the application of steam to said frame, for drying purposes. Also the shaft and gears for throwing back the wedge, all of which is set forth and described.

COBN-HUSKERS—William N. Rowe, of Sharpsburgh, Md.: I claim the combination of the adjustable plate, K, armed with spikes, l, with the endless apron, l, and knives, D, and E, when these several parts are constructed, arranged and operated in the manner described for the purposes specified.

SKATES—N. C. Sanford, of Meriden, Conn.: I claim attaching the runner, B, of the skate to its stock, A, by means of the springs, C, C, substantially as and for the purpose set forth.

[The runner of the skate is, in this invention, attached to the stock by means of elliptic or other shaped springs, whereby a certain degree of elasticity is given to the stock, and a durable connection obtained between the runner and the stock.]

CAST IRON PAVEMENT—S. T. Savage, of Albany, N. Y.: I do not claim, broadly, the connection of the blocks by means of dovetails, nor by the detached locking pieces.

But I claim combining the blocks by the peculiarly arranged dovetails cast on the blocks, and the locking pieces composed of heads and feet fitting between the blocks and into their dovetails, substantially as described.

[This invention consists in a certain method of connecting or combining polygonal blocks to form a continuous cast-iron pavement by means of dovetails on the blocks, and locking pieces of peculiar construction fitting between the blocks and into the dovetail on it.]

REFRIGERATOR—Wm. Sims, of Dayton, Ohio: I claim the described arrangement of the ventilating passages, E and F, communicating with the upper part of a receptacle, C, in the lower part of which are placed ice and articles to be cooled or preserved, and in whose lower part circulation of air is avoided, in the manner and for the purpose set forth.

COBN SHELLERS—J. P. Smith, of Hummelstown, Pa.: I claim the arrangement of the groups of short teeth, F, alternating with the smooth spaces, d, d, which are provided with the raised ribs, g, g, in combination with the sharp-edged teeth, h, h, h (with curved or straight edges), when arranged circularly in lines parallel with the axis of the wheel, and operating in connection with the ear-holder, D, so as to act on the ears of corn nearly lengthwise thereof, substantially in the manner and for the purposes specified.

REGULATING THE TWIST IN THROSTLE FRAMES—Joel Smith, of Northbridge, Mass.: I claim the expanding pulley, D, arranged to operate as described, for the purposes set forth in the specification.

GRAIN-WHIGGERS—John B. Stoner, of Bennington, Ill.: I claim, first, The rotary hopper, constructed and operating substantially as described.

Second, I claim suspending the rotary hopper upon the lever or scale arms, as set forth.

Third, I claim the arrangement of means described for operating and controlling the valve or door to the chute of the stationary hopper.

Fourth, I claim operating the indicators by means deriving their motions from the weighted end of the scale arms, in combination with the springs or their equivalents, as described.

Fifth, in combination with the suspending of the rotating hopper as described, I claim the suspending of the weight as described.

SLUICE FOR WATER WHEELS—John Temple (assignor to Temple, Mills & Stout), of Middletown, Ohio: I claim the winged gates, B, C, constructed, arranged and operating in combination with a series of scroll stutes, A, substantially in the manner and for the purpose set forth.

WATER WHEELS—John Temple (assignor to Temple, Mills & Stout), of Middletown, Ohio: I claim the construction and arrangement in a central discharge water wheels of buckets, E, which have the described compound cyma-reversa and downward and outward curve, whereby the water acts on the wheel by percussion, reaction and gravitation, and escapes freely without back action, as set forth.

MACHINE FOR TENONING SPOKES—Webster Thomas, of Oxford, Ohio: I claim the combination of the beds, I and B, constructed as described, with support piece, T, wedge, V, and the double series of cutters, d, e, in the same cutter bearer, the construction and operation being as described.

REVOLVING FIREARMS—John Walsh, of New York City: I claim the revolving chambers or breeches fitted with two ranges of nipples, and firing the respective charges in succession, substantially as specified.

LASTS—Daniel M. True, of Rockland, Maine: I do not claim the use of the bolt and spring to be used for a fastening, as new.

But I claim as a fastening for last blocks, the bolt a, when formed with the notches, f and g, and combined and arranged with the spring, b, the pin, c, and last hook hole, e.

UNDERGROUND GRAIN PLOWS—Augustus Watson, of Walnut Run, Ohio: I claim so hanging a coultter to which a mole is attached as that by revolving a key, or its equivalent, that restrains said coultter, and by advancing the plow, said coultter and mole will run out of the ground, substantially as described and represented.

APPARATUS FOR SUPPLYING HYDRO-CARBONS WITH OXYGEN—A. H. Webster, of Hudson, N. Y.: I do not claim, broadly, and irrespective of the means employed, supplying hydro-carbons with oxygen by mechanical means.

But I claim the bellows, B, actuated by the tappit wheels, D, D, and attached to the chest, C, provided with a cover or weight, d, and an ejection opening, e, combined and arranged to operate as and for the purpose set forth.

[Coal tar, naphtha, benzole, and other hydro-carbons, require a certain amount of oxygen over and above common fluids and oils, for their consumption, and this invention supplies it to them by mechanical means, to support proper combustion in such a regular manner that a steady flame will be produced without the least flicker.]

BEE HIVES—William L. West, of Elmira, N. Y.: I claim the use of the opposing springs, d, d, for the purpose of insuring a contact of the parts contiguous to the passage-way, c, substantially as described.

APPARATUS FOR DRAWING WATER—Sylvanus A. Wheat, of Franklin, N. Y.: I claim giving the barrel a longitudinal motion on the shaft, also connecting the valve to the rope by the rod, substantially for the purpose described.

ELLIPSOGRAPH—Thomas Williams and William C. Joslin, of Fisherville, Conn.: We claim the slotted bar, A, provided with the slide, B, the arbor, c, passing through the slide, B, with the disk, C, and a slotted bar, D, attached, and the elastic bar, G, pivoted to the bar, A, and connected eccentrically with the disk, C, the bar, D, having the pencil stock, E, attached, and the whole arranged substantially as and for the purpose set forth.

[This invention consists in having a slotted bar supported by legs, and a slide fitted into the slot, the slide having the axis of a circular disk passing through it, to the lower end of which axis a bar is attached carrying an adjustable pencil stock. The disk is perforated with holes, in any of which the pin of an arm which is pivoted to the slotted bar may be fitted, the whole being arranged to draw ovals with great facility.]

BURGLAR'S ALARM—John P. Wilson, of Frankfort, and John F. Thomas, of Iliou, N. Y.: We do not claim securing the alarm by means of a screw to the casing of the door, or the use of firearms, a, as a means of alarm and defense in cases of attempted robbery.

But we claim first, The employment in connection with the described gun alarm, of an adjustable gimblet screw, D, which is secured in a dovetailed groove in the body while in use, and which is secured in the barrel or bore by a screw when not in use, substantially as is set forth.

Second, The employment of the two sides, A' A', between which the hammer falls, which serve to prevent particles of the cap from flying off, and at the same time forming a snug protection for the hammer, and causing a louder report of the cap, as is fully set forth.

ODOMETER—Thomas K. Work, of Hartford, Conn.: I claim the curved or segment weight, m, pivoted to the arm, l, which is attached to the pinion, e', and fitted between the annular ledges, n, o, substantially as and for the purpose set forth.

[This improvement in the odometer is intended to prevent any inaccuracy in the registration of the distance, by the jolting of the weight, when the vehicle passes over uneven roads.]

INSTRUMENT FOR TAKING ALTITUDES OF THE SUN—Frederick Yeiser, of Lexington, Ky.: I claim the arrangement of the spirally slotted cylinder, L, on a rotary frame, E, in such relation to a pin, G, and to a strongly defined line, 3, 4, that it operates substantially as and for the purposes specified.

And in combination with the rotary frame, E, I also claim operating the cylinder, L, by means of a toothed sector, J, which gears into cog, J, which are attached to the stationary disk, C, in the manner and for the purpose substantially as described.

[By this instrument, the plane of the meridian can be determined at any time in the forenoon or afternoon, so that observations can be taken with it at any time in the day when the sun shines, and not at noon only, as is the plan now adopted.]

MECHANISM FOR STOPPING WATCHES—John K. Bigelow (assignor to Appleton, Tracy & Co.), of Waltham, Mass.: I claim the peculiar mode of making the ratchet, viz., with trapezoidal teeth, and with a notch in each of them, as described and represented.

I also claim the arrangement or application of the stop lever, E, with respect to the stopping stud and the ratchet, or so as to serve not only as a carrier and actuator of the former, but as a stop to the latter under circumstances as specified.

SEED DRILLS—Michael Boyer (assignor to Charles S. Rohner and William Gunckel), of Germantown, Ohio: I claim arranging the spring, C, ratchet wheel, b, ratchet, a, link, D, drag bar, A, arm, E, and discharge spout, B, substantially in the manner and for the purpose specified.

STEAM CONDENSERS—John N. Dennison, (assignor to himself, Joseph Dennison and David Baker), of Newark, N. J.: I claim a feed-pump with its attachments and connections, substantially as described, in combination with a condenser, constructed and arranged as set forth.

STUMP-EXTRACTORS—E. B. Hall, of Woodbury, N. J., (assignor to himself and Joseph C. Farley, of Pine Grove, N. J.): I am aware that in the stump extractor for which letters patent were granted to Jason S. Wood, on the 3d February, 1857, cams, in conjunction with other appliances, are used. I therefore, do not claim broadly, such a device, but I claim, as an improvement on the patent of J. S. Wood.

The cam, J, when constructed in the peculiar manner herein described, in combination with the rods G and G', their rejective rollers and hooks, K and K', the whole of the above parts being arranged in respect to each other for joint action, substantially, as set forth.

DIES FOR CUTTING SCREWS—Peter Hoffman, of Rising Sun, Ind., (assignor to himself and Samuel F. Covington, of Indianapolis, Ind.): I claim the construction of a solid die, in which the bottom of the groove is so thrown up in the rear of the cutting-point or edge of the same, as to avoid the friction occasioned by the rubbing upon the top of the thread, of the bit cut or threaded.

KNIFE-SHARPENERS—Geo. Himman, (assignor to himself and Charles Monson, of New Haven, Conn.): I am aware that the cutting edges set at different angles have been used for knife-sharpener, for many years, but in all such cases the angle varied as the

cutting edges were more or less separated at the upper ends.) I therefore do not claim a knife-sharpener made of two pieces of steel, with the edges fitted to abrade the sides of the edge of the knife, as such, as my invention.

But I claim the use of the two cutters (Band C) when made susceptible of being adjusted to any desired angle, by means of a slot (as at a) while using any portion of the length of the cutting edges, and the whole is constructed and made to operate, substantially, as described.

Second, I also claim the rest, D, in combination with the adjustable cutters, B and C, when the whole is constructed and fitted for use, substantially as described.

SELF-ACTING CHEESE-PRESS—William Leach, of Clarkson, N. Y., (assignor to himself and George P. Tisdale), of Chili, N. Y.: I do not claim simply a self-acting press, but I claim the pitman, D, D, arranged substantially, as described, in combination with the pairs of cross levers, B, B, so as to keep said cross-levers at equal heights at opposite ends of the press, and consequently at the same relative angle to the table, A, in all positions, for the purpose of securing uniformity of pressure upon all parts of the articles pressed.

I also claim the combination of the rod, l, handle, r, and pawls, m, m, mounted in one pair of cross-levers, B, B, with the notches, o, o, o, or their equivalents, in the other pair of cross-levers, arranged and operating substantially, in the manner and for the purpose set forth.

MOLDING PARAFFINE CANDLES—Horatio Leonard, (assignor to himself and H. Ryder), of New Bedford, Mass.: I do not claim manufacturing candles by means of molds; but I claim in molding paraffine candles, the improved process, substantially, as described, the same involving the employment of a heated mold and water and air-baths at temperatures and in the manner substantially as mentioned.

METHOD OF COVERING WITH FINOUS MATERIAL SUBMERGED SPIRAL ELECTRODES FOR SHORT DISTANCES—Edward Maynard, (assignor to himself, N. K. Slaughter and Thomas K. Purdy), of Brooklyn, N. Y.: I claim constructing submarine telegraph cables of metallic conductors, twisted in helical form, in combination with layers of cords or strings, parallel, or nearly so, with the axis of the cable, that are confined together, by serving or winding, and are saturated with waterproof non-conducting material, as set forth.

BOOT-JACK—L. J. Wicks (assignor to himself and T. Burbeck), of Racine, Wis.: I claim the described boot-jack as a new article of manufacture, with the tools formed on the rear or front of its arms, said arms being made to open or shut together, substantially in the manner specified.

RE-ISSUES.

IMPROVED STEAM VALVE—George Rieseck, of Pittsburgh, Pa. Patented Aug. 15, 1855: I claim, first, The valve, D, with a projecting hollow stem, E, which is reduced so that it end presents an area only equal, or nearly so, to the receiving ports in the face of the valve in combination with the main steam chest, or chamber, J, and an auxiliary steam chest, or casing, I, furnished with a stuffing-box, d, and constructed so as to cover the whole of the valve, excepting the end of the stem or a portion of the back equal or nearly equal to the receiving ports in its face, substantially as and for the purposes set forth.

Second, In combination with the above, the peculiar manner specified of making the face of the valve, with six ports, F, F, F, G, G, G, three for receiving and three for exhausting, said ports being arranged in such relation to each other, that when the valve is applied to an oscillating engine, one receiving port always stands in line with the exhaust port, and that only four of the ports shall be in use when the engine is working, the other two being kept in reserve so that by shifting the valve the engine will be instantaneously reversed under a full pressure of steam, without shutting off the steam between the engine and the boiler, as described and set forth.

MACHINE FOR THREADING BOLTS—Wm. Sellers, of Philadelphia, Pa. Patented Dec. 1, 1857: I claim the use of rotating dies in combination with cams, or their equivalent, when both are so arranged as to be capable of revolving about a common center at different velocities, for the purpose of opening and closing the dies, substantially as described.

I claim the arrangement of came, with the open space between them, in combination with the die box and dies, substantially as described, to facilitate the changing of the dies.

I also claim the mode of attaching the top-holder to the revolving die box, substantially as described.

BOXES FOR PRESERVING ALKALIES—George Thompson, of East Tarentum, Pa. Patented Sept. 15, 1857: I claim the use of metallic boxes constructed as described, and united with cement infusible at the degree of heat at which the caustic alkalis of soda and potassa remain fluid for the purpose of putting up those caustic alkalis in small quantities, as described.

SELF-DUMPING COAL BUCKET—John Wust, of Philadelphia, Pa. Patented July 13, 1858: I claim the combination of a bucket suspended by the handle at points below its center of gravity, in combination with a self-acting detachable latch operated by the bucket touching the ground.

LAMPS—Wm. W. Batchelder, of New York City. Patented Dec. 28, 1858: I claim the arrangement of small tapers or wick tubes below and on both sides of the main or illuminating burner, in combination with a suitable cap, for the purpose of producing a more complete combustion, substantially as set forth.

MACHINE FOR FOLDING PAPER—S. T. Bacon, of Boston, Mass., assignee of E. N. Smith, of Springfield, Mass. Patented May 17, 1858—Re-issued Feb. 8, 1859: I claim, first, The employment of adjustable pointers, or their equivalents, for the purpose of correctly presenting printed sheets to a passer folding machine, substantially in the manner and for the purpose set forth.

Second, The combination of a registering apparatus with a paper-folding machine, substantially in the manner described.

Third, The combination of the register pins with the fingers, reciprocating carriage, and slotted bar, for the purpose specified.

Fourth, The combination of the slotted reciprocating carriage, with the knife, d, as described.

Fifth, The combination of the slotted reciprocating carriage with the first pair of folding rolls and knife, d, as specified.

Sixth, The combination of a folding knife, the edge of which is smooth, with one or more needle points projecting beyond and in a line with the edge thereof, as shown.

Seventh, Securing the needle point or points to the folding knife in such a manner as that they shall have their main support back of the edge of said knife, as specified.

Eighth, So constructing paper folding machines, as that the sheet while being folded shall occupy the same time or nearly so, while passing from the position for receiving its first folds to that of the next and succeeding folds, as specified.

MACHINE FOR FOLDING PAPER—Steuhen T. Bacon, of Boston, Mass., (assignee through mesne assignment of John North, of Middleton, Conn. Patented, April 15, 1858—Re-issued, July 27, 1858: I claim the use of a stationary folding-knife in a machine for folding printed sheets of paper, substantially, as described, and as the invention of the said North.

I also claim the combination of the folding-knives, k, k, with the reciprocating carriage, as set forth, and as the invention of said North.

I also claim giving the reciprocating carriage its proper motion by means of the crank, k, and slotted connecting-rod, M, in combination with the lever, N,

and link, P, substantially as described, and as the invention of said North.

I also claim the device for raising and depressing the fingers, as fully shown in Fig. 6, and as the invention of said North.

I also claim the combination of the folding and carrying nippers, with the stationary folding-knife; substantially, as described, and as the invention of said North.

I also claim releasing the sheet from the nippers by means substantially, as described, and as the invention of the said North.

I also claim the circular knives, c', c', for separating the sheets, when operated substantially, in the manner described, and as the invention of the said North.

I also claim the combination of the levers, T and T', with double concentric rock-shafts, D and E, substantially, in the manner and for the purposes set forth, and as the invention of said North.

I also claim the adjustable check, and the mode of releasing it hold by the advance of the nippers, as set forth.

MACHINE FOR FOLDING PAPER—Steuhen T. Bacon, of Boston, Mass., (assignee through mesne assignment of Edward Smith, formerly of West Brookfield, Mass. Patented Nov. 27, 1849—Re-issued, January 7, 1851: I claim, first, Forcing the paper required to be folded between the first set of folding rolls by the knife, while the sheet is on the run.

Second, Forcing the paper from the first fold between two converging and continuously moving, flexible, yielding surfaces.

Third, Forcing the sheet of paper required to be folded, upwards, for the purpose specified.

Fourth, The use of a cord, or curved edged knife, for the purpose of forcing the sheet between folding rolls.

Fifth, The stop for determining the proper position of the sheet for receiving its second and succeeding folds.

Sixth, The combination of the carrying ban is with a stop for regulating the sheet in proper position to receive its second and succeeding folds, as specified.

Seventh, The combination of the rolls and endless or bands with the guides, substantially as described.

Eighth, So arranging the knives, aprons and rolls, in a paper-folding machine, as that the sheet may receive two or more parallel folds in succession.

Ninth, So arranging the carrying and folding rolls in a paper-folding machine as that only a single series of endless aprons or bands shall remain in contact with the sheet, to conduct it while it is receiving more than one fold.

Tenth, The lightening pulleys and cords or bands hung upon the moving bar, for the purpose of giving proper direction to the sheet receiving the next fold, after having received a parallel fold as described.

Eleventh, So conducting a machine for folding paper, as that one or more folds may be omitted at pleasure, and the folded sheet delivered outside of the frame and working parts of the machine, by simply detaching the knives and removing the stops as described.

Twelfth, Supporting the folding rolls in adjustable boxes, bearings or frames, for the purpose of squaring them with the print or register of the sheet to be folded, and providing for the construction and expansion of the endless aprons or bands.

Thirteenth, The movable guides for the purpose of squaring the knives to correspond with the print or register of the sheet.

Fourteenth, Conveying motion to any pair of folding rolls, running at right angles to the preceding pair by means of level gears placed at or near the center of a roll, and between the aprons or bands, substantially as shown, whereby the machine is rendered more simple and perfect in its operation.

Fifteenth, Pressing the folding sheet previous to its delivery, by passing it between two conveying and continuously moving yielding surfaces.

DISTILLATION OF OILS FROM COAL—David Alter and Samuel A. Hill, of Freeport, Pa., assignors to themselves, John T. Johnson, of said Freeport, William F. Johnson, George S. Sellers, and John L. Russell, of Pittsburgh, Pa. Patented April 27th, 1858: We claim the destructive distillation of coal, or other bituminous substances, for the obtaining the liquid products thereof, in the form of what is known as coal oils, by the process described, viz., combining the use of a low temperature not exceeding a low red heat, say about 550° Fah., with the use of retorts so constructed as to have a rotary, or other equivalent motion, for the purpose of agitating their contents, substantially in the manner and for the purposes set forth.

INVENTIONS EXAMINED at the Patent Office, and advice given as to the patentability of inventions, before the expense of an application is incurred. This service is carefully performed by Editors of this Journal, through their Branch Office at Washington, for the small fee of \$5. A sketch and description of the invention only are wanted to enable them to make the examination. Address MUNN & COMPANY, No. 37 Park-row, New York.

Agricultural Implements.

MESSRS. EDITORS—In answer to the communication of T. Waters, of Shopping, Tenn., in the SCIENTIFIC AMERICAN for January 8th, I have to state that the invention of a harrow such as he described is as plain as the arithmetical axiom, 2x2=4. I do not think, however, that it can be made so as to last very long, for \$25. Twice that sum would insure an article out of which he could "get his money's worth."

In this connection let me state that farmers are altogether too close-fisted in bargaining for tools. Instead of considering the value of the improvement in their land which a good tool is sure to effect, they lose sight of everything but the money they pay out, or are apt to look on the transaction of buying an agricultural machine as paying forty or fifty dollars for so many pounds of iron, steel, and wood. With this idea, they offer, in nine cases out of ten, a price which compels the manufacturer to offer an almost worthless article, in order to get a fair living price. The fate of cobbled-up articles in the hands of farm laborers is not hard to tell: rough usage till it breaks (generally not very long), and then an energetic denunciation, with a shove into a corner.

J. H. B. JENKINS.
Philadelphia, February, 1859.