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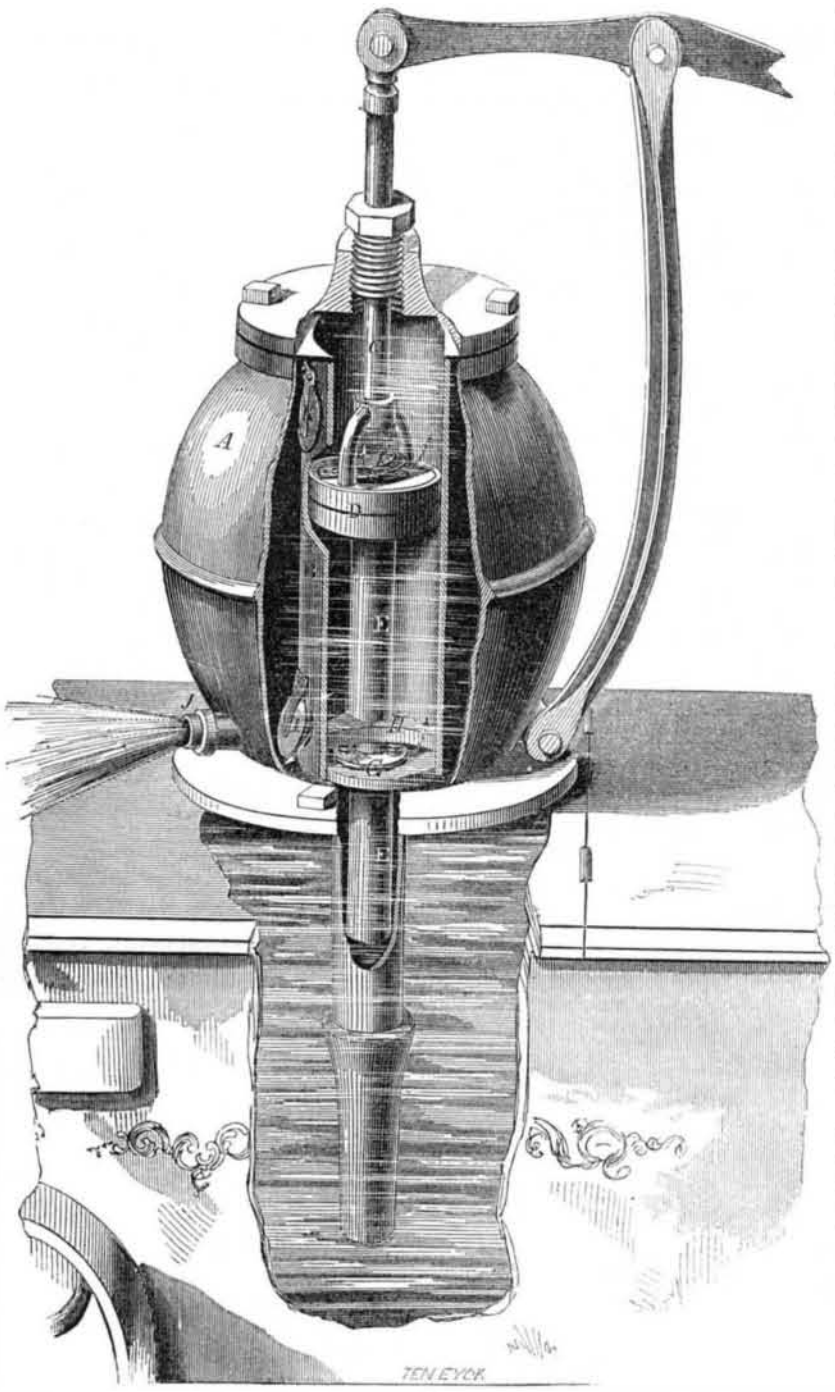
Motion and Heat.

Mons. Foucault, of Paris, the inventor of the famous pendulum experiments which set the world agog a few years ago, has lately constructed an apparatus to demonstrate that motion produces caloric. Arago, while observing the movements of a magnetic needle placed in a case constructed of copper, remarked that the needle oscillated during a lapse of time less than was to be anticipated from its great mobility, and thought that if the copper had no action, *per se*, upon a magnetic needle in a state of rest, it might acquire an influence by the oscillation of the needle.

He then placed a magnetic needle upon copper disks of different thicknesses, and after allowing it to acquire its natural position, set it in motion. The magnitude of the variations of the needle diminished in proportion to the thickness of the disk. The same phenomenon was remarked with disks of zinc and tin, since the needle in motion acts upon the disk, the same results should be obtained when the disk is put in motion. Thus, if a disk is made to turn above a magnetic needle, the latter will be seen to leave its normal position, change its direction, and deviate therefrom to an angle, which increases in proportion to the augmented rapidity of motion communicated to the disk, until the needle turns upon its pivot, following the motion of the disk in every direction. If the disk be sawn through, following the line of several radii, the action is less energetic. In order that it might not be supposed the movements of the needle were induced by the revolving currents of air created by the rotation of the disk, the needle was separated from the latter by a membrane, and enclosed in a case. From this experiment has been deduced, that if the needle were rendered fixed the disk would meet with a certain resistance to its revolutions. Upon this theory M. Foucault has based his machine. A thick bar of iron, bent into a horse-shoe form, is converted into an electro magnet; between its two extremities is supported a disk of copper, to which a rapid rotary motion—300 or 400 revolutions a second—is communicated by the intervention of toothed gearing. So long as the horse shoe is not electro-magnetized the disk turns with ease, but so soon as the horse shoe is placed in communication with a battery, and thereby converted into an electro-magnet, a great resistance to the further revolution of the disk is made manifest. If, in spite of this resistance, the disk is turned during a minute or so, and a thermometer be placed upon the disk, the mercury will ascend to 60 or 80° (centigrade,) although the toothed gearing axles, &c., remain at the ordinary temperature. There is, however, no point of contact, no friction, and the disk alone is heated.

The Cleveland, O., *Herald* says that over one hundred thousand gallons of stone-ware are annually shipped from that port. It is manufactured near Akron, and is of a superior quality. In addition to this, the clay is in great demand, and is shipped in bulk on board vessels running to Milwaukie, where it is also manufactured.

IMPROVED PUMP.



Improved Force and Lift Pump.

Our engraving illustrates the pump of Mr. Benj. F. Joslyn, Worcester, Mass., which was patented April 3d, 1855. The principal advantages which the invention has over the ordinary force pump is, economy in the manufacture, direct flow of the water, whereby better results are obtained from a given amount of power, simplicity of parts, &c.

A is the air chamber, and B the piston barel, which passes directly through the air, chamber. C is the piston rod, D the piston. Attached to the piston rod and moving with it, is a hollow tube, E. F is a valve placed on the piston, at the top of tube E. When the piston descends a vacuum is produced above D, and the water rushes up through tube, E, and valve, F, to fill the same, as shown by the arrows.

G is a round valve, through which the tube E passes, but the two are not connected; tube E slides through valve G; the valve is kept in place between the partition grate, H, and its seat, by means of small springs. When the piston descends, valve G closes, and the water between the piston and valve G is forced through side valve, I, into the air chamber, whence it escapes through the exit pipe, J; the outward course of the water, it will be observed, is on a direct line.

When the piston rises, valve I shuts; a vacuum is produced below the piston, and the water rushes up, lifts valve G, and fills the vacuum; by this movement the water above the piston is forced into the air chamber through valve K.

It will be observed that this pump is exceedingly compact. All the parts are packed into a small compass, yet, as a whole, it appears to be highly effective, durable, &c. In our cut it is shown applied as a garden or domestic fire-engine—a machine with which every farmer or gardner should be provided. Apply to Mr. Wm. C. Freeman, No. 115 Nassau st., for further information.

Salt.

Although salt forms part of the daily food of nearly the whole of the human race, yet few have any idea of its composition. Salt is a compound of two substances, a metal and gaseous body. The metal is called sodium, and the gas chlorine; and as chemists always endeavor to use such terms as they think will convey a clear idea of the things they describe, salt in chemical language is termed "chloride of sodium." The ocean which flows to every part of the earth affords its inhabitants an inexhaustible supply of salt; and lest it might be thought that nature had not in this respect been sufficiently bountiful, she supplies salt from the "bowels of the earth." We have salt mines yielding "rock salt," and salt springs, which, in many instances, are far away from the ocean, such as those at Syracuse, N. Y., in America. The salt mines in Catalonia, in Hungary, and Poland, are of an enormous extent. A salt mine at Wilisca, near Cracow, in Poland, has been worked for more than six hundred years. Within it is found a kind of subterraneous republic, which has its polity, laws, families, &c. When a traveler has arrived at the bottom of this strange abyss he is surprised at the long series of lofty vaults sustained with huge pillars of rock salt, and which appear by the light of the flambeaux to be so many crystals of precious stones. The most remarkable property of salt is its solubility in water hence it is supposed that the sea washing over beds or strata of salt has in consequeuce become saline, as we now find it. The use of salt with food is obvious from an analysis of the blood and the gastric juice. With the addition of water, and under certain influences, salt changes its composition. Water being composed of hydrogen and oxygen, the change in salt which takes place by means of the vital force produces soda for the blood and hydrochloric acid for the stomach. As soda is invariably found in the blood, and hydrochloric acid in the stomach; and as the blood and the stomach play their part correctly enough in our daily life, we can come to no other conclusion than that salt, which supplies these materials, is absolutely necessary to our well-being. Salt is not only useful to man in its primitive condition, but as it affords soda, its value is manifestly increased. The manufacture of soda from salt in England is one of the most important of our arts, for without soda no hard soaps could be produced; and for a thousand other things are we a debtor to Salt & Co. Besides the soda there is the chlorine. The great supremacy of the Manchester cotton mills in supplying the wide world with fabrics, is owing not only to the application of mechanics to machinery, but also to the multifarious uses of chlorine derived from common salt. SEPTIMUS PIESSE.

Disinfecting Agents.

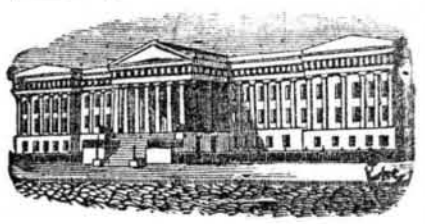
The best and most simple disinfecting agent known is the chloride of zinc. It is made by dissolving zinc in muriatic acid, and is applied in a diluted state, to foul and offensive drains cesspools, &c. The sulphate of zinc, however, is nearly as good, is cheaper, and is more easily managed. It can be purchased at any druggists in the form of a salt. A pound of it dissolved in two pails of warm water and thrown into an offensive cesspool, will soon deodorize it. During hot weather this disinfecting agent should be applied pretty freely in thousands of places in New York and other cities. Copperas (sulphate of iron) may be applied in the same manner and for the same purpose. It is not such a good disinfectant as the chloride of zinc, but it is much cheaper.

Gold Quartz Factories.

There are at present 63 factories situated in different parts of California in which quartz grinding and extracting the gold by machinery is carried on. Thirty of these are driven by steam engines, the others by water wheels. The gold quartz mining and crushing is rapidly on the increase in California.

Sharpe's Rifles for England.

The British Government, it is said, lately made large contracts for Sharpe's rifles with some of our manufacturers, and the manufacture of them by American mechanics at Edgefield, England, is now being carried on under a tremendous press of steam, to supply the army as soon as possible.



[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING JUNE 4, 1856.

UTERINE SUPPORTERS—Wm. Alley, of Columbus, Ga.: I claim the circular rings, perpendicular springs, and the hinges to the rings.

GAS BURNING LAMPS—Solomon Andrews, of Perth Amboy, N. J.: I claim the wick tube surrounded by an outer tube or cylinder, in the manner and for the purpose described.

MARBLE SAWING MACHINES—Josiah Ashenfelder, o Philadelphia, Pa.: I claim operating the saws by means of pins, K, and shaft, L, attached to the drums, A A', in combination with connecting rods, M M, and slotted guide bars, S S, when these parts are constructed, arranged and operated, substantially in the manner and for the purpose set forth.

FEEDING APPARATUS FOR GAS RETORTS—N. Aubin, of Albany, N. Y.: I claim the vessel, H, to contain the materials from which the gas is to be made, in combination with the inner vessel or weight, J, arranged so as to gradually expel the contents of the vessel, H, as they are melted or rendered more fluid by the heat of the retort, and thereby afford a regular supply of said materials to the gas making process going on in the retort, substantially as described.

REGULATING WINDMILLS—Jesse Battey, of Honeoye Falls, N. Y.: I do not claim the wind wheel in itself considered. Neither do I claim the regulator, D, separately, as similar ones have been used before.

I claim the regulator, E, either with a perpendicular or inclined wing, or with the shaft, H, standing upright, and the wing turning horizontally, and its combination with the regulator, D, also the rotary vane, C, and its arrangement, and the connection o' the combined regulators, E and D, or either of them separately therewith, for the purpose of securing uniformity of speed in any manner substantially the same as described.

And lastly, I claim the entire arrangement for starting and stopping the mill, as specified, or any arrangement substantially the same.

PIANOFORTE ACTION—Joseph Beeker, of New York City: I claim the double broken action as shown in plate 1, fig. 3, namely as follows, G2 and G3 I12 F2 J2 K2 J3 J3 N1 Z Z B4 A4 X B3 Q K3 Q X4 X5 X3 X2, the said part or parts being combined and acting together completely, the whole arrangement of the double broken arrangements, as described and set forth.

RELIEVING SLIDE VALVES—Wm. Burdon, of Brooklyn, N. Y.: I claim the employment of a hollow cylinder, E, with a closed head, B, supported upon wheels to run back and forth on the valve seat, or on ways parallel thereto, and receiving a piston, C, attached rigidly to the valve, and thereby being caused to travel with the valve and relieve it of all pressure of steam beyond what is necessary to confine the valve to its seat.

WINDOW FRAMES—John Casey, of New York City: I do not claim having a portion of one of the stiles made adjustable or movable, irrespective of the arrangement of the same, or the manner in which said portion is operated.

I claim having the portion, C, of one of the stiles, e, of the casing provided with curved slots, h, at its upper and lower ends, and having lugs, i, which are attached to the stile fit in the slots, h, whereby the part or portion C is rendered adjustable as shown, for the purpose specified.

NUT MACHINES—Richard H. Cole, of St. Louis, Mo.: I claim the arrangement of the round, f', within an aperture in the angular punch, d, at the same time that a round punch, e, is arranged within an aperture in the bottom, i, of nut box, when the said round punches are combined with movements which cause them to act jointly in perforating holes in the nuts formed in said nut box, substantially as set forth.

I also claim the joint arrangement of the angular punch, d, or its interior round punch, f', with the bottom, i, of the nut box, and the interior round punch, e, when the said bottom of the nut box is combined with a spring or its equivalent, in such a manner in relation to the said angular punch, d, and the round punches, e and f', that the action of the said parts in forming a nut will cause the completed nut to be thicker than the bar from which the blank was cut, substantially as set forth.

WALLS OF BUILDINGS—Thomas Estlack, of Philadelphia, Pa.: I disclaim all discharge shutes where a continuous and connected surface is employed, such as is shown in the arrangements for relieving from surface water the decks of vessels and flat roofs of houses.

But I claim the combination of the receiver, C, in the masonry of the wall, as described, with the shute, D, extending over and into the receiver, secured to the floor to be relieved, and altogether detached from the aforesaid receiver, as and for preventing damage to goods by water in cases of fires.

POLISHING METALLIC NUTS—Richard H. and John C. Cole, of St. Louis, Mo.: We claim the arrangement of the planing wheel, D, and the nut carrying endless chain with the partially inclined and partially horizontal groove, f, the sustaining plates, e e, and the edge guiding plates, d d, or their equivalents, subtantially in the manner and for the purpose set forth.

ROTARY BRICK MACAINES—George Crangle, of Philadelphia, Pa.: I do not claim a rotary double cylinder brick machine, as such machines have been used before; nor do I claim arranging the molds around the cylinder so as to alternate with two plungers on one actuating shaft.

But I claim the apparatus for rotating and stopping the cylinders of rotary brick machines, as described, the said apparatus consisting of the armed disk, I, the branched lever, M, the bent lever, T, pawl, U, and the ratchet wheels, Q and R, the same being constructed, arranged, combined and operating substantially in the manner and for the purpose set forth,

NEEDLES FOR KNITTING MACHINES—Rufus Ellis, of Boston, Mass.: I claim making the journals, c d, or connecting rod of the hinge fast to the male or entering projections thereof, in combination with so constructing the female socket of the hinge so as to enable the male part of its journals to be moved downwards and laterally, in order to detach the same from the female part with a spring stop or its equivalent, whereby, when the male and female parts of the hinge of two links are connected together, they may be prevented from accidental disengagement, as explained.

SAW SET—Benjamin Gilpatrick, of Lowell, Mass.: I claim the pedestal, F, the screw, H, attached thereto, and the check nut, I, and truncated cone, J, or their mechanical equivalents, arranged and operated essentially in the manner and for the purposes set forth.

FELTING HAT BODIES—Sylvester H. Gray, of Bridgeport, Conn.: I am aware that hat bodies have been felted or sized by being rolled between a bed and pressure plate by the action of a compound, continuous and reciprocating motion, and therefore I do not wish to be understood as claiming the method of giving the felting action by such compound motion.

But I claim the manner, substantially as described, in which the compound, continuous, and vibratory motion is imparted to the endless bed.

GAS RETORT BENCH—John G. Hock, of Newark, N. J.: I claim the described arrangement of flues by which the flame and heated products of combustion are caused to pass first under the bottom retorts, A A, next under the top retort, A2, then under the retorts, A A', and over A A, and finally over A' A' and A2, as set forth.

GAS CONSUMING FURNACES—Jacob Green, of Philadelphia, Pa.: I am aware that the mere introduction of air into furnaces by union pipes for the purpose of furnishing a portion through the grate bars and a part to the upper side or behind the fuel is not new, I therefore do not claim that as the point of novelty, but I believe that the means I have presented for simultaneously operating the controlling valves of such union pipes are new.

I am aware that E. Ingalls proposed an improvement in smoke consuming furnaces, wherein a mere circulation of the smoke or gases from the fire space or flue with the underside of the grate bars is effected by the use of a fan or blower situated in said circulation pipe, and that he also provided inlet valves to supply a vacuum if occurring, as well as an exit valve in the smoke stack for excess of pressure, all of said valves operating independent of and uncontrolled by each other; I therefore do not claim such as my improvement.

But I claim the mode of regulating the admission of air to furnaces so that such admission shall be controlled by the furnace itself by means of lever, H, and valve, D, in connection with the rod, n, and valve, b, and rod, o, and valve, e, operating substantially in the manner described.

COPYING PRESS—Christian Knauer, of Pittsburgh, Pa.: I claim adjusting the plates of a copying press to suit different sized books, by means of a regulating cam, C, which carries the top plate, D, so arranged that it shall be the bearing of the pressure cam, either directly or by the intervention of the friction piece, J, substantially as described.

SAWING MACHINE—Wm. D. Leavitt, of Cincinnati, Ohio: I disclaim moving the saw laterally for gauging the thickness of the board to be cut, as such is not new.

But I claim the specified arrangement of devices for effecting that purpose, when combined with the mechanism described for setting the saw forward in its own plane, as set forth.

HARVESTER FRAMES—Henry F. Mann, of Westville, Ind.: I claim inclining the rear portions of the side pieces, B C, so that the shaft, b, may lie upon and have the same dip with the one, C, on which it is supported, for the double purpose of giving said shaft a firm support, and to bring its drive wheel, J, close down to the pinion on the crank shaft, substantially in the manner and for the purposes set forth.

MELODEONS—Wm. N. Manning, of Rockport, Mass.: I claim the reed box, S, made in the manner described, with the perpendicular valves, M, in the manner and for the purpose set forth.

MARBLE SAWING MACHINE—Robt. Myers, of Factory Point, Vt.: Disclaiming the method of adjusting the crank shafts around the driving shafts, and of adjustable guides to govern the saws.

I claim the arrangement of the shafts, B and C, relative to the driving shaft, and to each other as described, in combination with the saws, P, and varying pitmans, K, for effecting the simultaneous cutting of three or more taper blocks at a single operation, as described.

WOOL CARDING MACHINES—Foster Nowell, of Lowell Mass.: I claim the use in carding machines of two surfaces for conducting and rubbing the sliver from the ring doffers, one of which is cylindrical and of permanent form, and the other a belt or apron of flexible material, and capable of adjusting itself to the shape of the cylindrical rubber and the sliver, or roving between itself and the cylindrical rubber, as described.

MAKING NUTS—Richard H. Cole, of St. Louis, Mo.: I claim the manufacture of metallic nuts by forcing a portion or the whole of the metal displaced in forming the holes in the nuts into the bodies of the nuts, by which I am enabled to make the nuts thicker and more compact than the bar from which they are cut, all substantially as set forth.

GLASS FURNACES—Samuel Richards, of Philadelphia, Pa.: I claim the preparatory deposit of the batch in the cone of an ordinary glass furnaces for utilizing the waste heat, in the manner and for the purpose as described.

Second, the car, P Q, arranged and used in combination with said shelves, for the purpose as described.

Third, the movable spout for conveying the heated batch from the heating shelves into the crucibles.

MELODEONS—Josiah A. Rollins, of Buffalo, N. Y.: I claim, first, the extension of the wind receiver towards the back and front of the case by forming cavities, a a, between the frame, C, and the tube board, D, substantially as described, thereby obtaining room under the tube board for the operation of two sets of valves, one behind the other, to operate on four sets of reeds without increasing the usual size of the case.

Second, the arrangement of the two sets of valves, E and E', to bring their movable ends together, and the fitting of the two ends together so that by the depression of the valves of one set to open them, the corresponding valves of the other set are depressed and opened, thereby effecting the opening of the two sets of valves by a single set of push down pins, and the keys of ordinary construction,

Third, supporting the front set of valves at their hinges by a strip, K, of wood or other material, substantially as and for the purposes set forth.

SEWING MACHINES FOR BINDING HATS—Isaac M. Singer, of New York City: I claim the method of turning the hat by the action of the spring or its equivalent, substantially as described, in combination with the feed motion acting on the rim, and the gauge against which the edge of the rim bears, as described.

And I also claim the mode of regulating the tension of the binding and smoothing out the plaits and links by passing it around the several folds of a spring such as described.

ELASTIC BOTTOMS FOR CHAIRS AND OTHER ARTICLES—Lysander Spooner, of Boston, Mass.: I claim in the construction of an elastic rest or support the employment of a series of elastic coils, B B, substantially in the manner and for the purposes described.

BORING MACHINE—Wm. Samuels & G. L. Stanbury. of Jackson, Ind. We claim the power boring machine, constructed as and for the purposes described.

COOKING STOVES—Wm. B. Treadwell, of Albany, N. Y.; I claim connecting the flue in front of the oven with the exit pipe by means of a tubular flue or flues at top, and forming part of the top of the oven, substantially as specified, in combination with the plate which forms the residue of the top of the oven, substantially as and for the purpose specified.

MARBLE SAWING—J. A. Toll, of Sugar Ridge, Ohio: I claim the combination of sawgates, adjustable fenders, and pair of actuating rollers, f f, having simultaneous vibration, the rollers, f f, being secured in bearings in the top of rockers, g g, so as to permit of being easily removed when it is desired to take out or replace a gate, the whole being arranged and operated substantially in the manner and for the purpose set forth.

OPERATING VALVES OF STEAM ENGINES—Otis Tufts, of Boston, Mass.: I claim, first, the oscillating plate with its attachments, carrying the adjustable cut-off cams acting with their sliding rolls. for cutting off the steam variably, substantially as described.

Second, the self-adjusting arrester and its parts acting on the closing edge of the adjustable cut-off cam, for easing off the motion of the cut-off valve and its gear, substantially as described.

Third, the adjusted arrangement in combination of the cut-off and exhaust cams, to work the cut-off and exhaust valves united, substantially as described.

Fourth, the double arm, with its sliding and other roll acting alternately on the cut-off and exhaust cams, substantially as described.

Fifth, the gear joint connection between the regulator shaft and the adjusting screw for working them together while one is fixed and the other oscillates, substantially as described.

Sixth, the sliding carrier with its attachments and friction-held nut for adjusting the variable cut-off cams on the oscillating plate by the regulator, substantially as described.

Seventh, the arrangement of the adjustable coil springs, in combination with their shaft and lever for forcing the rolls to the cams, substantially as described.

GAS REGULATORS—Marshal Wheeler, of Honesdale, Pa.: I claim the combination of the gasometer and its goose-neck with the fluid receptacle, and with the graduated lever, i, and the weighing poise, j, substantially as set forth.

GRAIN AND GRASS HARVESTERS—Allen B. Wilson, of Waterbury, Conn.: I claim the elastic strips, a, fitted in the fingers, C, and arranged substantially as described, for the purpose specified.

SAWING MACHINE—Henry S. Vrooman, of Logansport, Ind.: I do not claim giving saws a lateral movement in their sashes for sawing curved or irregular formed articles, for this has been previously done.

But I claim, first, the combination of the frame, F G, and sashes, H, when connected and arranged, as shown, so that the sashes, H, and frame, G, may be turned within or upon the frame, F, and thereby allow the saw to be operated in oblique positions, for the purpose specified.

Second, I claim the employment or use of two patterns, J. M, when said patterns are so arranged or connected with the frames, F G, and saw sashes, H H, that one pattern, J, will give the saw its lateral movement, and also turn the saw in the sashes, so that their teeth will face the intended direction of the cuts or kerfs, while the other pattern, M, will move the saw when necessary more or less obliquely, to give the winding or beveled side to the work or stuff, as described.

FILTER—Chapman Warner, of Green Point, N. Y.: I do not claim withdrawing the fluid in the opposite direction from that by which it entered, for the purpose of cleaning the material; nor do I claim combining two vessels so as to allow the fluid to descend from the one below the filtering material, and thence upwards through it into the other vessel, irrespective of the method described.

I claim, first, constructing the cistern, vessel, or reservoir, A, with an inner well, or vessel, B, the lower part of which projects below the bottom of the cistern or vessel, A, and is provided with any proper filtering material, the lower part of the well or vessel, B, communicating with the lower part of the vessel, A, by a tube, C, provided with the lower part of the well or vessel, B, substantially as described, for the purpose specified.

Second, I claim the flanch, G, attached to the inner side of the well or vessel, B, between the layers, F H, of charcoal and sand, substantially as shown for the purpose specified.

ATTACHING STEM TO A CONICAL VALVE—Henry R. Worthington, of Brooklyn, N. Y.: I disclaim the invention of a cone or plug, lifted by means of a screw in the direction of its axis.

But I claim the use of the hollow conical plug with the apparatus for opening and closing the same attached at the bottom of said plug, in the manner and for the purposes set forth.

LOCK—Linus Yale, Jr., of Newport, N. Y.: I claim, first, the peculiar form of the tumbler, A, or an equivalent form, in combination with a changeable key, for the purpose described.

Second, the rib or wing, c', used in any manner for the purpose described.

FIRE-ARMS—F. B. C. Beaumont, of Upper Woodhall, Barnsley, Eng. Patented in England, Feb. 20, 1855: I do not claim to raise and discharge the hammer of a revolver by the action of the trigger when separately considered. Neither do I claim to arrange the lock of a revolver in such manner that the hammer may be cocked by hand, when separately considered.

Nor do I claim to rotate the magazine of barrels of a revolver, by a mechanism so connected either with the trigger or a hammer, that a pull on either of them shall effect such turning of the said mechanism, but when the hammer has a mechanism by which said hammer may be set to cock by a direct pull upon it, and when the trigger, hammer, and rotary series of barrels are so combined that by a backward pull on the trigger the hammer shall be elevated, the series of barrels turned, and the hammer set free or discharged, I claim combining with the hammer and trigger a mechanism (vide licet the hook, l, and slot, x, or their mechanical equivalents) whereby the trigger shall be drawn backward and the series of barrels turned while the hammer is being drawn back by a direct pull on it, as specified.

WASHING MACHINES—Solon Bishop, of Homer, N. Y. I claim the use of the yoke, G, in combination with the spindle, B, and uprights, E E, for giving steadiness to the disk, D, substantially as described.

WASHING MACHINES—John T. Bever, of Haynesville, Mo.: I claim the lever, D, stem, E, and rubber, F, when used in combination with the arm, G, cord, h, and spring, H, for producing a vertical and partial rotary movement of said rubber, F, substantially as described.

HAND CORN PLANTER—S. L. Denney, of Pennington-ville, Pa.: I claim the combination of the planting cylinder, C, the pistons, a a, and the funnel, F, substantially in the manner and for the purpose set forth.

ELASTIC BEARINGS FOR R. R. CHAIRS—D. L. Davis, of Dedham, Mass.: I claim covering the india rubber or other elastic substance with the metallic cap, E, constructed and applied to the chair, so as to be independent of the control of the spikes which secure the chair to the sleeper, that the plate may be left free to vibrate in a vertical direction independent of the chair.

AMALGAMATOR—J. W. Evans, of New York City: I claim the use of the rake, supported and operated as set forth, in combination with the rocker supported and operated as set forth, whereby a compound agitating motion is obtained for the purposes described.

R. R. CAR BRAKES—M. S. Frost, of Detroit, Mich.: I claim the arrangement of the sliding blocks, D D N N, at the ends of the car platforms for engaging and operating simultaneously a set of through bumper and traction rods, for applying the brakes, the said sliding blocks being under the control of the engineer and capable of acting upon both sets of rods or either separately, as may be desired.

SELF-REGISTERING SHIPS' COMPASSES—R. H. Peverly, of Chelsea, Mass.: I do not claim the described devices separately considered; and I am aware that various electro-magnetic and other instruments have been made to record automatically their indications and periods of such on a clock-fed continuous fillet or strip: this, therefore, as a principle or system of automatic registration I do not claim.

But I claim regulating permanently and automatically the ship courses on a continuous strip of paper or other material at known or fixed intervals of time for a part or the whole of the voyage, substantially as specified, by means of the continuous clock-feed to the fillet or strip in combination with the ships' compass and marker, arranged and operating together essentially as set forth.

SUBSOIL PLOWS—Cyrus Garrett and Thomas Cottman, of Cincinnati, Ohio: We claim the arrangement of the standard, 3, flange, 4, share, I, and mold-board, 5, and these arranged with the brace bar, 9, and stay bar, 6, for purposes mentioned.

PARALACTIC INSTRUMENTS FOR MEASURING DISTANCES—H. L. Hervey, of Quincy, Ill.: I do not claim to have been the first to measure distances by means of a base line within the instrument, several different forms of instruments having been long since contrived for this purpose. In some of these two telescopes are used at the ends of a fixed or invariable base. In the patented instrument of Wm. Wurdeman, a single telescope is mounted on pivots in such manner as to take two paralax positions at the ends of snch a base, and the paaallel is measured by a micrometer. Another instrument consists of a single telescope and a pair of mirrors, of which one slides over a variable base, which thus furnishes a scale of distances. I do not therefore claim as new the use of either a fixed or variable base line in the instrument.

But I claim combining the traversing or sliding telescope with the fixed one, in such a manner as to measure distances, by means of a constant angle between them, and a variable base, substantially as set forth.

WASHING MACHINES—John McChesney, of Louisville, Ky.: I am aware that in the patent granted Joel Haines, for a washing machine, Feb. 5, 1850, the disk is made with a hinged segment (to admit the clothes beneath the same) being so arranged as to rise and fall vertically as it is turned horizontally over the clothes, by turning the vertical rock shaft to the right and left. This feature I do not claim, my invention consisting only in an improvement upon the machine of said Joel Haines.

I claim the adjustable suspension of the rubber disk, by cords, ratchet and pawl, as described, in combination with the rotary, radial, fluted frustums of cones in the rubbing face of said disk, operating substantially as and for the purposes set forth.

REVOLVING LAST HOLDERS.—Josiah Mumford, of Clarksburg, Ohio: I am aware a revolving last holder has been patented; this I do not claim. Nor do I claim arranging two revolving arms on one standard, as this has been done.

But I claim so arranging the two arms carrying each a last to one revolving plate, having two inclined planes upon it, as that both arms shall revolve at once, and when the last on one shall be up the other shall be down, and vice versa, for the purpose of bringing one last into convenient position for the operator, and removing the other one entirely out of his way and in the manner set forth.

FIRE ARMS—George Gesling, of Lebanon, Ohio; I am aware that a series of charges have been used in fire-arms, in which the balls were perforated and furnished with a fuse, for the purpose of igniting the rear charge, by the discharge of the one in advance of it, by means of said fuse; but no provision had been made for the escape of the air, in driving the balls home, whilst the ball and patching must be air-tight, to prevent the fire from driving past the ball. I do not therefore claim such a fire-arm.

But I claim the constructing of a gun or fire-arm, as described, for firing a succession of shots, thus forming a new article of manufacture superior for practicable purposes to any now in use, as set forth.

HANDLING BARRELS, &c.—Servetus Longley, of Cincinnati, Ohio: I claim the levers, 2 and 3, in combination with the spring, 6, chains, 8, cam attachment, 9, clutches, 10 and 11, working freely upon wrists and the handle, 4, all substantially as described and for the purposes set forth.

REAPING MACHINES—Jacob J. and H. F. Mann, of Westville, Ind.: We claim no part of the general construction of the machine; and we are well aware that we have been anticipated in the use of an endless apron passing horizontally across the space otherwise occupied by the platform, whence it ascends in an angle to deposit the grain in a reservoir, which retains it until a sufficient amount has accumulated to form a gavel when it is separated from the ascending grain by a raking attachment, and discharged upon the ground. We are also aware that in such elevating endless aprons, slots or cleets have been used to retain the grain thereon.

We claim the combination of the bar or plate, H, or of other equivalent device at the back of the apron, with the strip, e, beneath the apron and the bar or plate, G, upon the finger bar, under which the said strip, e, and over which the apron extends, or with other equivalent device, substantially as and for the purpose above set forth.

RAKING AND LOADING HAY—Jos. Smith of Condit, Ohio: I claim the spring guard plate, s, operated by the rake, for the purposes set forth.

HUSKING CORN—Oren Stoddard, of Busti, N. Y.: I claim the two stripping rollers, constructed and arranged as shown, in combination with the cutting device formed of the gate or frame, M, with knife, P, attached and the stationary knife, Q, on the platform, N, the frame, M, being operated substantially as shown, whereby the husks are stripped from the ears, and the ears cut from the stalks. I further claim, in combination with the stripping rollers and cutting device, the rollers, W W, by which the ears are fed or guided into the inclined spout, Y, as described.

LATTICE BRIDGES—L. E. Truesdell, of Warren, Mass.: I claim the braces, C D, in combination with the rafters, A, when arranged in the manner substantially as and for the purposes described.

DRIVING WHEELS FOR STEAM DRAGS—Geo. W. N' Yost, of Pittsburg, Pa.: I do not claim the combined arrangement and construction of devices, as set forth in the case of Huermann & Reeves, for alleged improvements in grain and grass harvesters, as this could not answer my purpose.

Neither do I claim the devices described in the case of J. H. Babcock, for a similar purpose.

I claim, first, the combination of the double angular flanges, b b, with the surface of a driving wheel for the purposes specified.

Second, I also claim, in combination with the flanges, b b, the clearers arranged and operating substantially in the manner set forth.

STEAM LAND PROPELLER—G. W. N. Yost, of Pittsburg, Pa.: I do not broadly claim the combination of the rotary engine with the driving wheels by means of cogged gearing.

Neither do I claim my arrangement of cogged gearing separately.

But I claim the combination and arrangement of a rotary engine with the driving wheels of a land propeller by means of the described combination and arrangement of cogged gearing in the manner and for the purposes substantially as set forth.

VISE—Samuel Fahrney, of Boonsboro, Md, (assignor to Abraham Huffer & Benj. Fahrney, of Washington Co., Md.): I claim the use of the sectors, D D, in combination with the studs, G, constructed and operated as described, for the purpose of rendering the jaws of the vise parallel to each other.

SCREWS—Cullen Whipple, (assignor to the New England Screw Co.) of Providence, R. I.: I claim the combination of the feeding slot, a a, moving series of discharging grooves, c, and guard plate, M, but I make no claim to either of these elements of the combination by itself.

MITER BOX—Wm. P. Wood (assignor to Samuel De Vaughan and Wm. P. P. Wood,) of Washington, D. C.: I claim the arms, C, when operated in the manner substantially as and for the purposes described.

NAIL MACHINES—Daniel Dodge. of Keeseville, N. Y. I claim the use of the roller, F, the anvil, D, and the hammers, G G, constructed and operating substantially in the manner and for the purposes described, either in combination with the spring, L, or without it.

DESIGNS.

COOKING STOVES—Wm. Resor, of Cincinnati, Ohio. Two Designs.

Lake Phenomena.

During a thunder storm which took place at Oswego, N. Y., on the 4th inst., Lake Ontario suddenly rose to three feet above its usual hight, and as suddenly fell and rose again several times in succession. The vessels in Oswego harbor were tossed about like corks. This lake is subject to such phenomena. Sudden thunder storms appear to rise from its bosom and convulse its entire waters. Some have supposed that its bed was once the crater of a huge volcano, and that volcanic agencies are still at work beneath its blue waves.

The Great Yacht Race.

The Annual Regetta of the New York Yacht Club took place in the Bay on the 5th inst. and was the best ever witnessed. The breeze was stiff and constant, and brought out all the qualities of the several vessels for fair sailing, and beating against the wind. The first prize was won by the yacht *Julia*, and the second by the *Una*, both built by George Steers; thus adding to the already well-earned reputation of this young and eminent nautical architect.

A monument is about to be erected to Alex. Wilson, author of the first work on American ornithology, at his native place—Paisley Scotland.

Within the past three weeks they have had unparalleled floods in Lincoln Co., Tennessee, many lives and much property having been destroyed.