

**SCROLL-SAWING MACHINE**—E. Sirtet, Jr., of Buffalo, N. Y. : I am aware that revolving cranks have been directly connected to the upper and lower ends of reciprocating saws, for the purpose of driving the saws without a frame or sash, but I am not aware that reciprocating bent levers or bell cranks have been employed and arranged as shown and described, for the purpose of operating the saw, and also allowing it to be kept perfectly strained while at work, and readily relaxed when it is to be removed from the machine.

I claim, first, The bent levers or bell cranks, H I, attached to the crossheads, e m, of the saw, k, and operated by the eccentric, E F, or their equivalents.

Second, Having the upper lever of bell crank, I, attached to an adjustable plate, c, operated by a screw, h, or its equivalent, for the purpose of readily and properly straining the saw and allowing the same to be relaxed and removed with facility from the machine.

[This invention relates to an improvement in that class of sawing machines in which no saw frame or sash is employed, and which are generally known as mule saws. The invention consists in the peculiar manner of hanging and driving the saw, so that it may be readily strained and kept while in operation at a proper degree of tension, and readily removed from the machine when necessary.]

**ROLLING RAILWAY CHAIRS**—J. H. Snyder, of Troy, N. Y. : I claim forming or turning the tip or lips, A, of the chairs, upon the collar or collars, O, of a roller, E, by means of another roller, D, substantially as set forth.

**BUTTER COOLER**—James H. Stimpson, of Baltimore, Md. : I do not claim, broadly, the placing of the ice above the butter.

But I claim as an improved article of manufacture a butter cooler made substantially as shown and described, to wit, with an ice receptacle, D, suspended over the dish, B, in the manner and for the purposes set forth.

[A notice of this improvement is given in another column.]

**ATTACHING SLEIGH RUNNERS**—Wm. W. St. John, of Lima, N. Y. : I do not claim allowing motion to the hind runner at the bolsters, said runner being drawn along by a connection at its forward end.

But I claim the combination of the T-shaped slide, 5, cap, 3, and joint, 4, for attaching the hind runner of sleighs to the body, when said runner is drawn by a connection to its forward end, substantially as and for the purposes specified.

**COTTON GINS**—Joshua Tetlow, of Taunton, Mass. : I claim the rollers, D, one or more, grooved as shown, namely, longitudinally and radially with their shafts, and grooved also in a zig-zag manner in connection with the adjustable stationary plates, S, and vibrating plates, b, arranged to operate as and for the purpose set forth.

[The gins in which this improvement is made are those such as are used for ginning Sea Island or long staple cotton, and the intention is to produce a machine which will gin long staple cotton more expeditiously, and at the same time work in a thorough manner without injuring the fiber in the least. Grooved rollers are used in connection with vibrating plates and adjustable feed boards, arranged so as to operate together and produce the effect desired.]

**APPARATUS AS AIDS IN EXTRACTING TEETH**—Chas. C. Thomas, of Natchez, Miss. : I claim a dental instrument having the adjustments, substantially as stated and adaptable to the purposes specified.

**EARTHENWARE DISHES**—Alison Vail and Tracy Vail, of Berlin, Wis. : We claim a new article of manufacture, to wit, a covered dish with an absorbent lining, perforated or unperforated, as specified, for the purposes set forth.

[This invention consists in making dishes porous on their inner surface, so that the moisture shall be absorbed from hot eatables, and the same kept in a dry and palatable condition. To accomplish this result the dishes formed of some porous argillaceous substance and only glazed on its exterior, or if the dish is of china-ware it may be rendered capable of absorbing moisture by being lined with a porous perforated substance. We regard this as a capital improvement; it avoids the deposit of condensed vapor upon vegetables confined, and saves the same from becoming sweaty and having a watery taste.]

**REFRIGERATORS**—Nathaniel Waterman, of Boston, Mass. : I claim the arrangement of the air supply and discharge pipes with respect to the case and its refrigerating chamber, in which arrangement the supply pipe or pipes are disposed within the refrigerating chamber, while the discharge pipe or pipes are disposed outside of the same in manner as specified.

I also claim the combination of a series of grooves or an auxiliary space or spaces, and a discharge pipe or their equivalents with the metallic bottom or lining of the refrigerating chamber, and arranged under the same and with in the case or the stopping or bottom part of such case.

I also claim the arrangement of a space, H, within the cover of the refrigerator, as described, and around the odor discharge pipe, G, the same being to operate in manner and for the purpose set forth.

**AUTOMATIC MECHANISM FOR OPERATING THE SURVEYOR'S GRAPHOMETER**—J. M. Wampler, of Baltimore, Md. : I claim the combination with a moving strip of paper, or other proper material, arranged on any suitable vehicle of automatic mechanism for taking and recording distances and courses or distances and levels, or distances courses and levels substantially as described and shown.

**SNOKE STACK FOR STEAM VESSELS**—Wm. Webster, of Jefferson county, Washington Territory : I claim, first, The arrangement of two or more pipes, D D D, &c., within an outer shell, B, as described.

Second, The application to a double shell smoke stack, of the registers, L L, &c., as and for the purpose described.

**SAWMILL BLOCK**—Hiram Wells, of Florence, Mass. : I claim operating the dog bar, L, of the block C, by means of the lever, K, fitted in the underside of said bar, the ribbed plate, D, constructed with the bar, F, by the obliquely slotted plate, E, and pin, b, the whole being arranged and applied to the carriage, substantially as and for the purpose set forth.

[This is an improvement on a former patent granted to this inventor, June 9, 1857. In that invention the dogs of both the head and tail blocks were operated simultaneously by means of a rack bar connected to the dog bars by means of levers, racks, pawls, &c., arranged so as to form a comparatively complicated device. The object of the present invention is to attain the same ends by a simpler arrangement of parts less liable to get out of repair, and more economical to construct.]

**TRIPOD-HEAD FOR SURVEYORS**—Wm. J. Young, of Philadelphia, Pa. : I claim constructing the head of a surveyor's tripod in such a manner that the portion to which the instrument and plumbline are attached may be adjustable in any direction horizontally to the portion to which the legs are jointed, when the usual leveling screws serve the purpose of binding the two portions of the head together after adjustment, as set forth and for the purpose specified.

**LEATHER SHAVING KNIFE**—J. B. Wentworth, of Lynn, Mass. : I claim the described leather shaving knife, consisting of a stock, C C', with a bevel only on one edge, extending beyond the center from Y to Z, and provided with screws, e, combined with a blade, D, having slots, d, operating as and for the purpose specified.

**SELF-DUMPING COAL BUCKET**—John Wust, of Philadelphia, Pa. : I claim the employment of the handle, B B', attached by pivots below the center of gravity of the bucket, in combination with the sliding rod, G H, and the spring bolt, L, or their equivalents, arranged and operating substantially as described.

**FLOOR CLAMPS**—H. C. Wight, of Worcester, Mass. : I do not claim, broadly, the employment or use of a toggle, for that is a well-known mechanical device.

But I claim the toggle formed of the levers, C D, connected with a screw, B, which passes over works through a pivoted nut, c, in combination with the claw-plate, E, and head or jaw, G, attached respectively to the levers, C D, the whole being arranged and connected with the frame, A, substantially as and for the purpose set forth.

[In this invention a toggle is employed in connection with a power screw, claw plate and jaw or pressure plate, the whole being fitted or attached to a proper framing or support, so as to form a powerful, portable and economical clamp suitable for laying floors, or other work in which clamps are usually employed.]

**ROOT TREES**—A. J. Wisner, of Homer, N. Y. : I claim the combination of shaft, G, bevel wheels, W W', screw, H, nut, I, screw, F, and yoke, b, with the thin shaft, E, and hinged sole, D, the whole constructed and arranged for joint operation, substantially as and for the purpose set forth.

**DEVICE FOR SECURING LIGHTNING RODS**—Victor Schrage, of Cincinnati, Ohio : I am aware of other attachments being made for the same purpose, and therefore do not broadly claim attaching and detaching rods after this manner.

But I claim the spiral spring, d, as constructed, and arranged to the insulator, a, in the manner and with the means represented for the purposes described.

**RADIATOR FOR HEATING BUILDINGS, &c.**, BY COMBUSTION OF GAS OR ALCOHOL.—I. H. Chester, (assignor to Wm. A. Chester), of Cincinnati, Ohio : I claim the radiator constructed with a central opening, C C, in its bottom to receive the flame and heated products of combustion from the burner, and with the surface of said bottom inclining downwards from said opening towards two openings, d, d, at the ends and with the wire gauze cylinders or their equivalent, l, l, k, k, between the slides, by which means combined, provision is made for the condensation and free escape of the water of condensation, together with such carbonic acid as may be absorbed by it.

[The principal object of this invention is to provide for the condensation within the radiator of the water evolved by the combustion of the gas or alcohol, and its escape therefrom, together with a considerable portion of the carbonic acid evolved, which is absorbed by the water, and at the same time to provide for the construction of the radiator in such a manner as to provide for the equal distribution of heat therein.]

**MANUFACTURING CHAIR BACKS**—S. E. Foster, of Fitchburg, Mass., assignor to Walter Heywood Chair Company : I claim the described rest, consisting of two jaws, which are moved an equal amount on each side of a vertical plane passing through the center of the cutters, as the thickness of the stuff varies in the manner and for the purpose substantially as set forth.

**ATMOSPHERIC REGULATOR FOR STOVES, FURNACES, &c.**—B. Holly (assignor to himself, and J. T. Edwards) of Seneca Falls, N. Y. : I claim the employment of a pendulum or balance having a movable axis connected with the valve or damper, A, by the levers, G and D, or their equivalents, in such a manner that the gravitating force shall increase as the damper closes, and diminish as it opens, for the purpose of regulating the admission of air to the fuel, substantially in the manner set forth.

I also claim the method of hanging the damper, A, by means of the convex pivot bearing, C, arm, f, and sliding pivot, d, substantially as and for the purpose described.

**SPINNING FRAMES**—Amasa Houghton, of Putnam, Conn., assignor to himself, E. D. Draper and George Draper, of Milford, Mass. : I claim the application of the cap to the upright spindle and the holster so as to operate therewith, substantially in manner as specified.

**WATERWHEELS**—D. K. Kraatz, of Ephrata, Pa., assignor to himself and I. S. Roland, of Bareville, Pa. : I claim the perforated finch, a', which closes the spaces, between the upper ends of the series of buckets, d d, when the perforations in the said finch are made to open into a close air chamber, substantially in the manner and for the purpose set forth.

**HAND STAMPS**—Wm. Morse and John Hughes, of Boston, Mass., assignors to G. H. Devereux, A. F. Devereux, O. W. Barrett and E. E. Barrett, of Salem, Mass. : We claim combining with the stamping mechanism, a cast off mechanism for discharging the letter or article to be stamped from the bed or the cast off over the same.

We also claim combining the pad or cushion, h, with or arranging it directly upon the cast off or plate, K, thereof, substantially as specified.

We also claim the combination for operating the cast off, the same consisting of the arm, r, the tripper, l, the arm, the shaft, L, and the spring, k, the same being arranged and made to act together essentially as specified.

**MACHINES FOR CLEANING GRAIN**—Wm. H. Ott (assignor to Wm. Griffiths), of Martin's Ferry, Ohio : I claim the application of the sliding bar, k, as constructed in the manner and employed for the purpose described and set forth.

**COOLING CAR WHEELS**—Robert Poole (assignor to himself and G. H. Hunt), of Baltimore, Md. : I claim the described process of regularly cooling car wheels, whereby all strain within the wheel is avoided, the chill uninjured, and the web of the wheel is without curve or corrugation, substantially as described.

**MACHINERY FOR POLISHING THREAD**—Britton Richardson (assignor to himself and the Hayden Manufacturing Company), of Haydensville, Mass. : I claim the construction of the dressing and polishing rollers, with ribs, a, covered with flannel, felt or material of similar character and arranged relatively to each other, substantially as described to produce elasticity of surface.

[A notice of this improvement is given in another column.]

**FURNACES FOR MANUFACTURING ZINC OXYD**—Joseph Wharton, of Philadelphia, Pa., and Nathan Bartlett, of Bethlehem, Pa., assignors to Joseph Wharton, of Philadelphia, Pa., for said. I claim, first, The construction and arrangement of the furnaces, of double the usual length, without any separating end wall, and with a charging door to each extremity, in the manner and for the purposes set forth.

Second, The construction and combined arrangement of the conduit, L L', the damper or valves, d and e', and the chimneys, g g', in the manner and for the purposes substantially as set forth.

Third, The series of twyers, opening into the conduit, L L', arranged and operating as described.

RE-ISSUES.

**SEWING MACHINES**—John A. Ruckman (assignee of J. E. A. Gibbs), of Millpoint, Va. Dated June 2, 1857—Re-issued July 15, 1858 : First, In the single thread sewing machine, I claim a hook or looper, revolving in one direction only, being so constructed as to make a series of chain stitches, when operating in connection with a reciprocating needle.

Secondly, I claim the peculiar construction, substantially as described, of a revolving hook, whereby, while one loop is taken from the needle by the hook, spread, twisted and held in the path of the needle until another or fresh loop is taken, the former loop shall be released and drawn up during the retreat of the needle.

DESIGNS.

**BEDSTEADS**—Heinrich Neidig, of New York City. Two cases.

**COOKING STOVES**—E. J. Delany, of Philadelphia, Pa., assignor to H. E. Marsh, and Jos. Johnson, of Lawrenceville, Pa.

**STOVES**—N. S. Velder, of Troy, N. Y., assignor to G. W. Eddy, of Waterford, N. Y.

Pressure upon Fish.

Mr. Pell, in his late address to the American Institute on the subject of fish, says that at ninety-three feet below the surface of the water a shad would be compelled to bear about the weight of sixty pounds to every square inch of surface on its body; at three hundred and sixty-one feet, one hundred and eighty-one pounds; at six hundred and six feet, two hundred and eighty-six pounds; at four thousand two hundred and six feet, eighteen hundred and thirty-one pounds to the square inch; at six thousand feet, over one tun. Whales sometimes descend into the depths of the ocean four thousand nine hundred feet, when they sustain considerably over the enormous weight of two hundred thousand tons—nearly, if not quite, one hundred and thirty-eight tons to each square foot of surface exposed. The fish do not, of course, feel this pressure, as it is exerted on all portions of their bodies alike.

How to make Soda Ash.

In an article on this subject a few weeks ago, we did not give credit to Leblanc, the French chemist, who first proposed the method at present adopted in manufacturing that substance. This has aroused the honest patriotism of a French correspondent, who requests us to do this justice to his countrymen. We never had any idea of ignoring the fact, which is so well known, that Leblanc's plan was the one adopted, but he cannot strictly be called "the father of modern alkali making," as the system now carried out by the practical makers is the result of many men's discoveries and inventions, and we still think that Tennant deserves some credit for his genius in adapting and bending to suit Leblanc's process, the resources of Britain, and making it the fountain of alkali for the world.

Recent Patented Improvements.

The following inventions have been patented this week, as will be found by referring to our List of Claims :—

**MACHINERY FOR POLISHING THREAD**—B. Richardson, of Haydensville, Mass., has invented an improved machine for dressing and polishing sewing thread and yarn. The invention consists in a peculiar construction and arrangement of flannel covered or felt covered rollers for rubbing down the fibres of, and polishing the thread or yarn after it has been sized.

**BUTTER COOLER**—This is an improved article for the table, designed for keeping butter in a cool hard state during meal times in warm weather, and so is especially applicable to the present season. The invention consists in having an ice receptacle supported over a butter dish, so that the butter will be cooled by the cold air which descends upon it, in consequence of being of greater specific gravity than the surrounding atmosphere. James H. Stimpson, of Baltimore, Md., the inventor of the ice pitcher illustrated in our columns two weeks ago, is the patentee.

**SHINGLE MACHINE**—E. Hall and J. F. Stewart, of East Randolph, N. Y., have produced an improvement in that class of shingle machines in which a circular saw is used to cut the shingles from the bolt. A peculiar means is employed for feeding and setting the bolt to the saw, whereby the machine is rendered automatic in its operation, or in other words, the bolt when applied or adjusted to the carriage and the machine put into action, is by a continuous operation, without attendance, sawed into shingles of proper taper form.

**PILE DRIVER**—This pile driver is constructed in such a manner that the monkey guides may be adjusted in a vertical position in case the ground on which the machine rests

is not horizontal, thereby allowing the machine to be expeditiously applied to its work without the trouble of grading. The invention is chiefly designed for driving small piles, fence posts, and the like, but it may be used for heavier work if constructed of proper size. T. W. Loveless, of Corning, N. Y., is the inventor.

**IMPROVEMENT IN WATCHES**—In this improved watch the escapement consists of a single escape wheel and two geared balances, with cylinders or cylindrical segments, engaging with the escape wheels on opposite sides of its axis. There is also a compensating device, and the chain is arranged relatively to the barrel and fusee, so that the drag of the chain is on the same side of the axis of the fusee as the resistance to the transmission of the power from the latter, so that the friction on the fusee pivot is much reduced. The two ends of the fusee are arranged in a position the reverse of that heretofore adopted, for the purpose of equalizing, as nearly as possible, the friction in both ends of the barrel and on the two pivots of the fusee arbor when the watch is fully wound. Jacob Muma, of Hanover, Pa., is the inventor.

**STOP-MOTION FOR ROTATING KNITTING MACHINES**—This invention consists in a certain mode of combining the sinker wheel or any toothed wheel gearing into and deriving motion from the needles with a movable stop, which is applied to the belt shipper to lock it in a position to hold the driving belt on the driving pulley of the machine as long as the knitting progresses properly, whereby, as soon as the thread breaks, or any of the loops miss, the shipper is caused to be unlocked, and allowed to be moved by a spring, or its equivalent, applied for the purpose, to a position to slip the belt on to a loose pulley, and thus stop the machine. It is the invention of N. P. Aiken, of Troy, N. Y.

**GOVERNOR FOR STEAM ENGINES**—C. F. Porter, of New York City, has invented an improved centrifugal governor for steam engines and other motors, the object of which is to obtain the great requisites necessary for a perfect governor, which are as follows: Firstly, that it shall effect the whole of the movement necessary to enable it to open wide and close the regulating valve, or give the full range of variation which the regulator is capable of, with but an unappreciable variation in the speed of the engine or motor; and secondly, that it shall commence to effect the said movement instantaneously, upon the slightest variation of speed, and effect it very rapidly. Neither of these requisites are possessed by the centrifugal governor as ordinarily applied, although, notwithstanding its serious defects, it is generally admitted to be, on the whole, superior to any of the various governors hitherto devised. To obtain these results a centrifugal governor is constructed on any of the usual plans, with balls and arms, but made very much lighter, and instead of giving it only about the number of revolutions in a given time that would be natural to it, considered as a conical pendulum, as has hitherto been customary in the application of centrifugal governors. It is driven at a much higher velocity; and at the slide of the governor which connects it with the regulator, a weight much greater than the weight of the balls and arms is placed, and sufficient to balance, as nearly as possible, the great amount of centrifugal force developed by the revolution of the latter; and it is in the employment of this counterpoise, in combination with the arms and balls rotating at a velocity much higher than their natural one, that the invention principally consists. The invention also consists in so applying this counterpoise to the governor that its effective load on the governor shall be lessened in such a degree as the balls and arms of the governor expand, as to render constant, or as nearly so as desired, relatively to the power of the governor to sustain it. The counterpoise is also employed as a means of controlling the exact speed of the engine or motor.