

RECENT AMERICAN PATENTS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week. The claims may be found in the official list.

Mode of Disabling Ordnance.—The object of this invention is to provide for the certain disabling of ordnance, whenever it becomes necessary in war, by destroying the trunnions; and to this end it consists in making cavities in the trunnions for the reception of charges of gunpowder, by the explosion of which the trunnions may be entirely blown off or broken to such an extent as to prevent the possibility of mounting the piece for service. This improvement is the invention of P. B. Lawson, of Cold Spring, N. Y., and Alfred Berney, of Jersey City, N. J.

Shaking Machine for Separating Ores.—The object of this invention is to separate the different substances contained in a certain ore, according to their specific gravity, simply by the motion of the water and without any attention on the part of the operator. The invention consists in the arrangement of a tube extending through the sieve a short distance up into a cylindrical jacket, in combination with said sieve, and with a suitable agitator, in such a manner that the heaviest particles contained in the ore, which precipitate first to the sieve, close up the access to the tube within the cylindrical jacket, and only such particles are allowed to escape through said tube, the specific gravity of which is equal to that of the first sediment. The inventor of this improvement is A. W. Schell, of Clausthal, Hanover, who has assigned it to Geo. Asmus, of Houghton, Mich., who may be addressed in relation to it.

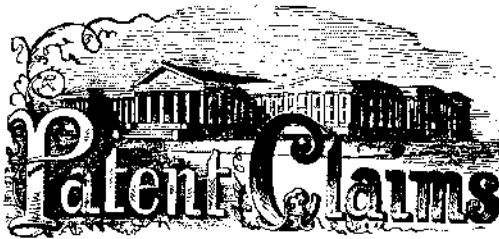
Molds for Castings.—The success of castings depend greatly on the skill of the molder; and in molding the operation of drawing the pattern or lifting it out of the sand constitutes one of the most important and difficult operations. The sand must be moistened in order to give it the required compactness, and even then, if the operation of drawing the pattern is not performed by a skillful and steady hand, the edges of the cavities produced in the sand by the patterns are liable to break off, and a poor casting is the result. The object of this invention is to facilitate the operation of drawing the pattern or patterns, and it consists in the arrangement of movable legs or pins operated by means of a screw and a hinged lever or by other suitable means, in combination with the match-board and flask, in such a manner that by the action of said legs or pins on the flask, the pattern or patterns secured to the match-board are raised up perfectly steady and drawn from the sand with the greatest ease and facility. John R. Davis, of Racine, Wis., is the inventor of this improvement.

Saw-gummer.—The object of this invention is to obtain a device for gumming saws which will admit of a clean, smooth cut of the die without the liability of the saw slipping or springing under the cutting operation, a contingency of frequent occurrence with all saw-gumming devices. To obviate this difficulty the movable die or cutter is fitted within a clamp, which is arranged in such a manner as to operate in connection with the movable die and firmly clamp the saw or hold it in proper position while the movable die is at its work; the clamp, after the cut is made, rising after the die is raised, in order to liberate the saw and admit of its being turned or moved to bring the succeeding space between the teeth in line with the movable and the stationary female die in order to receive the succeeding cut. The inventor of this improvement is T. M. Chapman, of Old Town, Maine.

Breech-loading Fire-arm.—The invention relates to that class of breech-loading fire-arms in which the breech is opened and closed by a movement of the barrel and stock relatively to each other about an axis parallel with the bore of the barrel. It consists of certain improved means of withdrawing the discharged cartridge cases from the barrel in such fire-arms; also in a certain mode of providing for the loading of such fire-arms either by hand or from a cartridge magazine in the stock. The inventor of this improvement is R. F. Cook, of Watertown, N. Y.

Pianoforte Action.—This invention relates to the

application, in combination with that kind of pianoforte action known in this country as the French action, of certain novel and simple devices, thereby rendering it perfect as a repeating action without friction. It consists, first, in inserting a spring having a two-fold effect, viz., that of partially raising the hammer when the key is struck, and also of replacing the point of the jack in its normal position on the least upward motion of the playing end of the key, and so providing for a rapid repetition of the stroke by the hammer on the string. Second, the introduction of a regulating screw and button, for the purpose of graduating the power of said spring to the weight of hammer it may have to sustain. Third, the lengthening of the downward projection of the hammer butt, in order to form a connection, horizontally, with the upper end of the spring, and thus giving leverage for the cumulative power of said spring to act on in raising the hammer. Fourth, in the insertion within a cavity provided for it in a hammer butt (of the so-called French action, under the cushion against which the point of the jack falls on returning to its position after each blow of the hammer) of a second cushion, thus giving great elasticity, by which the percussion of the jack against the first cushion is deadened in a greater degree, and the disagreeable thumping, common in the French action, is obviated. T. C. Faulder, of Albany, N. Y., is the inventor of this improvement.



ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING MARCH 10, 1863.

Reported Officially for the Scientific American.

* * Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

37,846.—Reducing Long-staple Fiber.—Stephen M. Allen, Woburn, Mass. :
I claim, first, The process of treating long-stapled fiber for the purpose of converting the same into a short-stapled fiber by the application to the fiber to be reduced of successive washings in warm water, increasing in temperature as herein described, in combination with the use of alkaline solution, substantially in the manner and for the purposes herein before set forth.
Second, In combination with the treatment of long-stapled fiber by successive washings in warm water and subsequent boiling, I claim the method of reducing the same mechanically, in the manner and purpose herein described.

37,847.—Stove.—Evans Backus, Coxsackie, N. Y. :
I claim the insertion of mica, *i*, in a movable band or rim, *K*, or in an equivalent slide, arranged in relation with the openings, *d*, in the cylinder, *E*, or body of the stove for the purpose set forth.

[This invention consists in a novel application of mica to a stove, whereby the former is rendered capable of being adjusted so as to expose the fire when desired, and also capable of being adjusted so as to be free from the fire or not in contact with the fire chamber. The object of this arrangement is to protect the mica from the smoke in building fires, the former discoloring the mica and soon rendering it opaque and consequently worthless.]

37,848.—Composition for lining Oil Barrels, &c.—Friedrik Becker, Scranton, Pa. :
I claim the application of the above-mentioned composition, to prevent barrels, boxes, &c., from leaking, even kerosene oil barrels.

37,849.—Securing Shutters and Show-windows.—Friedrik Becker, Scranton, Pa. :
I claim the mode of securing the shutters by means of the peculiar constructed catches, *G*, governed by the apparatus as above described and shown in the drawings.

37,850.—Machine for leathering Tacks.—Lewis G. Bradford & Charles O. Churchill, Plymouth, Mass. :
We claim, first, The application of the regulator or stop motion, *M*, by the action of which any obstruction to the free movement of the horizontal reciprocating separator, *K*, is detected and the motion of the separator stopped.
Second, The combination and arrangement of the tack guide substantially as described, by which the tack is taken from the separator and held in a perpendicular position (causing each tack to be centered alike) while being driven through the leather, and a uniform appearance of the washers insured.
Third, The combination with the bottom of the piston, *G*, of the plate, *p*, and elastic piece, *q*, the whole being arranged to operate in connection with the stationary circular cutter, *R*, in a tack-leathering machine as and for the purposes set forth.

37,851.—Floor-warmer.—Clarissa Britain, Saint Joseph, Mich. :
I claim the application to the bottom of a stove of a reflector, *A*, constructed and operating in the manner, and for the purpose specified.

[The object of this invention is to use the heat produced at the bottom of a stove for the purpose of heating the floor around or on the sides and in front of the same, thereby warming the feet of the persons in the room.]

37,852.—Binding Attachment to Harvesters.—H. M. & W. W. Burson, Atkinson, Ill. :

We claim, first, The combination of the arm, *C*, fore-arm, *C'*, handle piece, *D*, lever, *E*, with groove, *g*, acting substantially as and for the purpose set forth.
Second, The combination of the ratchet pulley, *N*, with the spring ratchets, *L* and *M*, acting substantially as described.
Third, Extending the arm, *C*, back of its bearing, *a*, and placing thereon the reel, *G*, and pulley, *k*, for the purposes herein set forth.
Fourth, The combination of the handle-piece, *D*, slide, *F*, lever, *E*, and cord, *I*, acting substantially as and for the purpose set forth.

37,853.—Device for gumming Saws.—T. M. Chapman, Old Town, Maine :

I claim the male die, *C*, clamp, *I*, and female die, *e*, combined and arranged to operate as and for the purpose herein set forth.
I further claim the combination of the levers, *D*, *G*, bar *H*, and screw-rod, *F*, arranged with or applied to the stock, *A*, as a particular means for operating the die, *C*, and clamp, *I*, as herein described.

37,854.—Breech-loading Fire-arm.—Roswell F. Cook, Watertown, N. Y. :

I claim, first, The lever, *k*, spring, *m*, slide, *n*, and spring, *p*, the whole applied in combination with each other and with the hooked slide, *I*, the chamber piece, *E*, or barrel, and the breech, *B*, and operating substantially as and for the purpose herein specified.
Second, In combination with the arrangement of the magazine below the axis about which the barrel and stock move relatively to each other, I claim so constructing the frame, *A*, *B*, that at a certain position between that proper for firing, and that proper for loading from the magazine, the rear end of the barrel or chamber is exposed in an open condition, thereby providing for loading by hand, or from the magazine as may be convenient, substantially as herein described.

37,855.—Wagon Body.—N. B. Cooper, Gratis, Ohio :
I claim the end of the wagon body as herein fully set forth and described, in combination with the frame, *D*, and the side pieces, *H*, and *O*, as and for the purpose specified.

37,856.—Jointed Scull Propeller.—C. Dann, Rushford, Minn. :

I claim, first, The arrangement of the jointed blades, *A*, *A'*, in combination with the beams, *C*, suspended eccentrically from a pivot, *c*, in the loose ends of oscillating arms, *D*, all constructed and operating substantially as and for the purpose shown and described.
Second, The arrangement of the slots, *c'*, in the beams, *C*, in combination with the pivot, *c*, on the oscillating arms, *D*, and with the sculling blades, *A*, *A'*, constructed and operating substantially in the manner and for the purpose herein specified.

[The object of this invention is an improvement in that class of propellers, in which an oscillating blade, suspended from a rising and falling rod and operating within a tube or channel or submerged under water, is employed, and which are commonly designated scull propellers.]

37,857.—Mold for Castings.—John R. Davis, Racine, Wis.

I claim the application of movable legs, *H*, operated by means of a screw, *D*, and hinged levers, *F*, or their equivalents, in combination with the match-board or pattern, *A*, and flask, *B*, substantially as and for the purpose herein shown and described.

37,858.—Saw Stave-jointer.—William H. Doane, Cincinnati, Ohio :

I claim, first, Springing or bending the stave in the carriage during any stage of its progress between the saws or at any point on the bedplate, by the actuation of simply a lever connected with bending mechanism, and without adjusting the carriage to a certain position relatively to a bending bar, substantially as set forth.
Second, The cam gear and rack, or their equivalents, arranged to move with the carriage and operating substantially as herein described, for the purpose set forth.
Third, The combination of the curved spring stop, hand lever, sliding rack and bevel, substantially as and for the purposes described.

Fourth, Adjusting the pitch of the saws by means of a combination of a horizontal axis, with a vertical sliding post, substantially as and for the purpose described.
Fifth, The combination of the horizontal lever, vertical double hinged post and saw arbor frames or yokes substantially as described.
Sixth, The angular slotted spring lever, *R*, curved stop-plate and vertically acting lever, *Q*, in combination with the double hinged vertical post for maintaining the desired pitch of the saws, substantially as described.

37,859.—Pulley Block.—Joseph M. Drake, Amityville, N. Y. :

I claim as an improved article of manufacture, a pulley block made with its wheel, *B*, grooved centrally and provided with balls, *C*, all as herein shown and described.

[This invention relates to a new and improved anti-friction device applied to the wheel or pulley of the block in such a manner as to greatly diminish friction in the rotation of the wheel or pulley on its axle and at the same time form a strong and durable bushing for the same.]

37,860.—Piano-forte Action.—T. C. Faulder, Albany, N. Y. :

I claim, first, The spring, *b*, attached to the jack, and connected with the lower part of the hammer butt substantially as and for the purpose herein specified.
Second, The regulating screw, *d*, applied in combination with the jack, and with the spring, *b*, substantially as and for the purpose herein specified.

Third, Arranging the connection of the spring, *b*, and the hammer butt between the top of the spring and an elongation of the lower portion of the hammer butt substantially as herein set forth.
Fourth, I claim the second cushion, *g*, applied at the back of the cushion, *h*, within a hole bored for its reception in the hammer butt as shown in Figure 2, and herein described for the purpose set forth.

37,861.—Straw-cutter.—Wm. B. Frederick, Pontiac, Mich. :

I claim the arrangement together of the apron, *f*, knife, *F*, gate, *D*, box, *A*, treadle, *E*, weight, *G*, spring, *J*, pulley, *I*, and connecting cord, *H*, all in the manner herein shown and described.

I also claim in the combination of the weight, *G*, with the spring, *J*, for the purpose described.

[This invention relates to an improvement in that class of straw, hay and stalk cutters in which a reciprocating knife is used and arranged to operate over the mouth of the feed-box. The invention consists in applying a weight and spring to the knife-frame, whereby the knife-frame is counterpoised and an impetus given it at the commencement of its upward movement, thereby greatly facilitating the operation of the knife and admitting of the machine being operated with ease by the foot of the operator.]

37,862.—Railroad Car Spring.—Perry G. Gardiner, New York City :

I claim, first, The manner of applying the wool (or other fibrous materials), within a spiral or circular steel-spring, so as to hold the wool in a columnar form and compressed to a sufficient degree of compactness to act as a spring itself, and also to aid and strengthen the spiral spring at the same time and hold it in a straight line.
Second, I claim the peculiar construction of the followers, *b'*, *b'*, in being composed of a wooden plug within the hollow cylinder, thereby producing lightness and economy.

Third, I claim in combination with the other parts of the spring, the manner of giving a progressive or increased elastic resistance according to the increase of the load, by making the columns constituting the springs of different heights as described.

37,863.—Door Bell.—Melvin A. Genuing, Gransville, Ohio :

I claim the combination of the chains, *X*, brackets, *D*, springs, *F* and *G*, and supporting hinge, *S*, when all are arranged as and for the purpose specified.

37,864.—Folding Chair.—Henry S. Golightly and Charles S. Twitchell, New Haven, Conn. :

I claim the combination and arrangement described of the legs, *A*, *A*, back or arms, *B*, *B*, legs, *C*, *C*, and seat bars, *S*, when the same operate to fold and lock in the manner substantially as herein specified.

