

No. 11,400. Improvements on Saw Mills.*(Perfectionnements aux scieries.)*

James H. Watson and George S. Darling, Tawas, Mich., U. S., 19th June, 1880; for 10 years.

Claim—1st. In a feed and gig mechanism for the carriage of circular saw mills, the combination of the friction wheel C₁ with the iron friction wheels J and P to gig the carriage. 2nd. The combination of the two levers *u*, and the two arms *s v*, the three connecting rods R W Y and the U bar Z, with the sliding bearings of the lower friction wheel C₁, and with the levers G that carries the feed friction shaft F and the upper friction wheel H. 3rd. The friction wheels H G composed of combined layers of paper and rubber.

No. 11,401. Improvements in Stove Dampers.*(Perfectionnements aux régistres des poëles.)*

William M. Gartsbore, London, Ont., 19th June, 1880; for 5 years.

Claim—1st. The metal plate A₁ having a channel or slit B formed in it, so as to give sufficient spring to the inner portion A₂ to bite against the flat side of rod C, when pressed into place through covered grooves D E. 2nd. The rod C with shoulder K, for biting against a corresponding shoulder at D.

No. 11,402. Method of Cooling Liquids. (Méthode de refroidir les liquides.)

Zéphirin M. Gélinas, Ste. Anne d'Yamachiche, Que., 19th June, 1880; for 5 years.

Résumé—1o. Le réservoir à deux compartiments B. 2o. Les tuyaux C C C, pour servir à la circulation de l'eau. 3o. Les tubes coudés mobiles D E.

No. 11,403. Apparatus for Discharging Gas Retorts. (Appareil pour décharger les cornues à gaz.)

Abbott G. Ross, Cincinnati, Ohio, U. S., 19th June, 1880; for 5 years.

Claim—1st. In combination with a reciprocating rake operated by variable power, a water governor. 2nd. In a gas retort discharges, the combination of a steam cylinder and piston with the reciprocating rakes and hydraulic governor. 3rd. The combination of the motor, the rakes and the hydraulic governor, with a regulating valve controlled automatically for the purpose of diminishing the speed of the rakes near the extreme end of their movement. 4th. The combination of the cross head guided and supported by the lateral plates I, with the rakes *gr*, pinion *g*, drum G and wire rope or chain for the purpose of actuating the rakes. 5th. The combination of the traveller E, having the grooved guide wheels, with the rods *a z*, and vertical standard *er*. 6th. The combination of the rakes, the traveller E, the wire rope or chain, the guide pulleys J, the drum G, the cross head H, the steam motor and hydraulic governor. 7th. The combination, with a rake or series of rakes hinged to a reciprocating traveller, of an adjustable support for the free ends of said rake or rakes, by which their elevation above and depression below their horizontal position can be controlled at any part of their stroke, at the will of the operator. 8th. The combination, with a rake or series of rakes hinged to a reciprocating traveller, of mechanism for positively elevating and depressing said rake or rakes at any position of their stroke, at the will of the operator. 9th. The combination, with a rake or rakes hinged to a reciprocating traveller, of an adjustable support for said rake or rakes by which their elevation and depression may be controlled at any part of their stroke, or when the traveller is at rest, at the will of the operator, and with a counter balance for assisting in said elevation and depression. 10th. The combination of the rakes with a counter balance located upon the main frame of the machine, and independent of the traveller. 11th. A rake or series of rakes, provided with mechanism by which they are automatically adjusted to the inequalities or irregularities of the interior of the retorts, in combination with mechanism for holding them positively in adjusted positions, at the will of the operator. 12th. The combination of the reciprocating traveller and a series of rakes, one of which can be projected at a stroke, while the others are rendered inoperative by being secured to the rigid frame of the machine, with a support upon said frame for sustaining the free ends of the rakes, whether projected to enter the retorts or retracted therefrom, and secured to the rigid frame of the machine. 13th. In combination, with a reciprocating traveller, a series of rakes and devices for securing said rakes either to the traveller or to the rigid frame of the machine, whereby one or more of said rakes may be held stationary while the others are projected. 14th. The combination of the rakes with the slotted traveller standard *el*, and means for securing the idle rakes to the frame of the machine. 15th. The combination, with the rake or rakes pivoted to a reciprocating traveller or carriage, of means for elevating and depressing said rake or rakes at any part of the stroke, independently of any movement, of the traveller or carriage. 16th. In combination with the reciprocating rakes, the grooved roller *n* and idle roller *n* upon the adjustable support of the rakes, by which they are guided and prevented from lateral movement. 17th. In combination with the rakes and their operating mechanism, the shields L.

No. 11,404. Improvements on Photographic Albums. (Perfectionnements aux albums photographiques.)

Eli S. Glover, Portland, Oregon, U. S., 19th June, 1880; for 5 years.

Claim—1st. A book or album for holding prints, photographs and like matter, having a series of hinge stubs detachably connected together and to the covers of the book, and each of which is removable independently of the other, in combination with a series of leaves, mats or mounts, each of which has a fastening or clasp, on and along its inner edge, that engages and interlocks with a like fastening provided for it, on the front edge of the stub. 2nd. In combination with the stub C having the double hinge fastening plate D, upon its back edge, and the folded plate E₁ upon its front edge, the leaf, mat, or mount B provided with the like plate or fastening E fixed to and along its back edge. 3rd. In combination with the covers A A, having the hinge binding plates D fixed to and along their inner and back edges, the series of stubs C C having the like hinge plates

D upon their back edge, and locking pins *e* *el* when said stubs are adapted to receive and hold a series of leaves, mats or mounts, by which a metallic flexible or hinged back is formed to the book. 4th. The metal fastening plate E secured to the back edge of a leaf, mat or mount, in combination with the similar fastening plate E₁ provided upon the front edge of a stub C. 5th. In combination with the leaf, mat or stub of a book or album, the locking hinge plate formed of the metal plate D, its tubes *d* *d*₁ and alternating spaces *d*₂, and locking pin *e*.

No. 11,405. Improvements on Sash Fasteners.*(Perfectionnements aux arrêles croisées.)*

John Harley and John B. Newman, Wallaceburgh, Ont., 19th June, 1880; for 5 years.

Claim—The combination of the slide A, the holder B and the spring E.

No. 11,406. Improvements on Car-Couplings*(Perfectionnements aux attelages des chars.)*

Martin E. Morningstar and John W. Roberts, Arkona, Ont., 19th June, 1880; for 5 years.

Claim—1st. The spring B having hooked bars C C, or other suitable device, for holding the draw link D by the resiliency of the spring affixed to draw bar A. 2nd. The combination of the draw bar A, sloped on its under side, and spring B having hooked bars C C, the slot forming a recess for the hooks when the spring is in a normal state. 3rd. The draw bar A, having a forward projection G raised over the seat of the cross headed draw pins 5 to prevent it from jumping out of position.

No. 11,407. Improvements on Nut Locks. (Perfectionnements aux arrête-noix.)

James L. De Wolfe, Windsor, N. S., 19th June, 1880; for 5 years.

Claim—In combination with plate A, bolts B B having nuts C C, a curved or bent locking plate D notched at the ends to encompass a portion of the nuts and held fixedly between the nuts by straightening and by a recess in the nuts receiving the ends E, or overturning a silvered portion of the nut.

No. 11,408. Improvements in Heel Trimming Machines. (Perfectionnements aux machines à finir les talons.)

Charles W. Glidden, Lynn, Mass., U. S., 19th June, 1880; for 5 years.

Claim—1st. In a heel trimming machine, the knife and the means to impart to it a tipping motion as the knife trims the heel. 2nd. A knife holder, a knife, a pattern surface adapted to impart to the knife a tipping motion, and intermediate mechanism between the said knife-holder and pattern surface, and means to move the said holder and knife to trim the heel. 3rd. The rocking knife *e* combined with a gauge to rest upon the heel seat, between the free upper end of the knife and the heel seat. 4th. A knife and knife holder, supported by and made movable about an axis at right angles, or substantially so, with the axis of the heel, combined with a pattern surface and intermediate connecting mechanism to operate the said knife. 5th. A knife holder supported by and made movable about an axis at right angles, or substantially so, with the axis of the heel, combined with a sliding gauge and connecting mechanism between them to move the gauge in unison with the tipping movement of the knife carried by the knife holder. 6th. The combination of the stationary plate with the pattern surface adapted control the tipping motion of the knife. 7th. The turn-table plate and its bearing block *i*, combined with the amular block, its plate *g*, the knife-holder and lever *j*. 8th. The knife-holder grooved and combined with the knife and its segmental base adapted to turn in the holder as the knife is rocked. 9th. The foot combined with the lever *j* by means of a pin filled loosely in the head of the foot, to permit the bearing block and knife holder to be adjusted radially. 10th. The combination with the frame of the movable spring *az* composed of a single piece or band of thin metal, and inclined upward and backward and adapted to embrace and hold the shoe to be trimmed. 11th. The spring clamp provided with the turned edge to enter the recess of the shoe clasped by the clamp. 12th. The frame and spring clamp, combined with the links to open and close the clamp.

No. 11,409. Improvements in Piston Packing.*(Perfectionnements aux garnitures des pistons.)*

George C. Phillips, Silver City, Nev., U. S., 19th June 1880; for 5 years.

Claim—The combination, with steam tight wedge pieces or rings *d g g*, having bevelled surfaces, of the conical sleeve A made in sections with wedge-shaped pieces or segments *bb*, the said parts being arranged to break joint at their lines of division.

No. 11,410. Improvements in the Manufacture of Spools. (Perfectionnements dans la fabrication des bobines.)

Charles E. Burns, Lancaster, N. H., U. S., 19th June, 1880; for 5 years.

Claim—1st. The combination of the cylindrical saws having central bits, the vertical movable table and the horizontal sliding plate F. 2nd. The cylindrical saw D, fixed to the shaft or spindle *d* and provided with clearances *gr*, *t* a central boring bite *f*, in combination with suitable feeding mechanism. 3rd. The elevating and depressing table E, with transverse plate F operated by lever *t*, in combination with feed roller G and cylindrical saws D. 4th. The discs *g*, within the circular saws, provided with vertical rods *f* projecting through the saw head stock in combination with the tappet *gr* elevating and depressing table E, the cylinders *h* for knocking the blocks out of the saws, when the butts are cut through and the table is depressed. 5th. The cylinder *h* supporting the projecting part of the butt on the table, in combination with elevating and depressing table, cylindrical saws and centre boring bits. 6th. The shaft *u*, one end journalled in a movable bearing, operated by treadle and spring, so as to place the friction roller *sr* in and out of gear with shaft *t*, in combination with the shaft *t* provided with the tappet *y gr*, shaft *v* having friction roller *sr*, and elevating and depressing table E. 7th. The saws arranged at distances apart equal to the diameters of their bores and to operate with a table so as to cause the blanks to be cut from the butt.