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INVENTIONS PATENTED.

No. 9608. Remedy for Dyspepsia.

(Remède pour la dispepsie.)

William F. Teetzel, Kincardine, Ont., 23rd January, 1879, for 5 years.

Claim.—A compound of heira pica, brandy and water (the same being preferably flavored with the essence of winter green) mixed.

No. 9609. Improvements on Paper Boxes.

(Perfectionnements aux boites en papier,)

Charles M. Arthur, Ansonia, Ct., U. S., 23rd January, 1879, for 5 years.

Claim.—A paper box constructed from a blank having the sides A C B D in a continuous piece, and the two sides C D, each constructed respectively with a projection C^1 D^1, at one or both ends, and the said projections having a V-shaped notch *a* cut in the corresponding hedge.

No. 9610. Improvements on Saw Teeth.

(Perfectionnements aux dents des scies.)

William E. Brook, Trenton, N. J., U. S., 24th January, 1879, for 5 years

Claim.—1st. The combination with the saw blade of the spring locking plate B and its retaining screw *e* inserted partly in the saw blade and partly in the spring locking plate; 2nd. The saw tooth, provided with the recess *b* and groove b^1, in combination with the spring locking plate B having hooks *c* and tongue c^1 fitted into groove; 3rd. A saw plate provided in its tooth holding recess with d^1, in combination with the spring locking plate retaining screw and tooth all arranged and operating for joint support.

No. 9611. Improvements on Reaping Machines. *(Perfectionnements aux moissonneuses.)*

Adam Kay, Georgetown, Ont., 24th January, 1379, for 5 years.

Claim.—1st. The driving wheel A, mounted on the stud pin c of the gear jack D and provided with the inside gear wheel A^1, in combination with the pinion B and driving shaft B^1; 2nd. The gear jack D provided with the arms d d and arranged in connection with the driving wheel, driving shaft and channel wheel E; 3rd. The wheel E, with inflected channel cut or sunk in its periphery, in combination with the pivoted lever F, 4th. The pivoted lever F in combination with the wheel E, connecting rod F^1 and the knife of a reaping and mowing machine; 5th. A reaping machine in which the driving gear is supported on the front knife board and in which a direct connection is made from the driving wheel to the knife operating mechanism and rake head, 6th. The combination and arrangement of the draught pole and table tilting lever with the gear jacket and table; 7th. The rakes of a reaping machine, independently connected to a stud or pin placed off the centre of rotation of the rakes, 8th The rakes O, each independently connected to the eccentrically placed pin Q by an elongated link, in combination with the eccentric plate M; 9th. The rakes of a reaping machine mounted on a plate L_1, which is detachable from the crown wheel or other operating medium, for the purpose of allowing rake plates with varying numbers of rakes to be used as the character of the grain to be cut requires; 10th. The rake bracket R, provided with the vertically pivoted projecting latch R_1, in combination with the rake arm provided with a slot into which the latch automatically hangs, thus forming a fastening 11th The rake arm latch R_1 in combination with the pivoted switch block S; 12th. The pivoted switch block S mounted in such manner, in connection with the bell crank S^1, that it cannot be moved out of place until said bell crank is turned by the operator.

No. 9612. Improvements on Brush Binders.

(Perfectionnements aux serre-pinceaux.)

Mark W. Marsden, Connellsville, Pa., U. S., 24th January, 1879, for 5 years.

Claim.—A cylindrical or other shape tube of india rubber or similar elastic material.

No. 9613. Improvements in Saw Mill Dogs.

(Perfectionnements aux clameaux des scieries.)

George W. Rodebaugh, Detroit, Mich., U. S., 24th January, 1879, for 5 yearsg

Claim.—1st. In combination with a vertically adjustable dog head B and guide standard A, the flat carrying perforated bar C, bell crank *c* with spring pivoted thereto and resistance pin *d*; 2nd. In combination with the standard A, with eccentric E pivoted thereto, connecting rod D and perforated carrying bar C, the lower dog F actuated by the pin and slot *h*, 3rd. In combination with the dog-head B, carrying its laterally adjustable dog, the lower dog F, each of said dogs being actuated by the perforated carrying bar C by means of the eccentric E, 4th. The laterally sliding dog, provided with a series of notches *b*, in combination with the mortised head tooth a^1 and spring *a*, 5th. The combination of an upper and lower dog, each operating vertically, with laterally working dogs W W_1, when all of said dogs are actuated by one common eccentric E; 6th. The combination of the standard A, the eccentric E pivoted thereto, the arm G pivoted to said eccentric, the strap *k* pivoted to said arm and provided with a segmental slot *r*, the strap *u* pivoted to said strap *k* and the laterally working dogs W W, pivoted to said strap *u*.

No. 9614. Machine for Cutting Sickles.

(Machine à tailler les faucilles.)

Samuel Collinson, St. Catherines, Ont., 31st January, 1879, (Extension of Patent, No. 3063) for 5 years

No. 9615. Improvement on Tongs used for Machinery. *(Perfectionnement aux tenailles à l'usage des mécaniciens.)*

Samuel Collinson, St Catherines, Ont., 31st January 1879, (Extension of Patent, No. 3064) for 5 years.

No. 9616. Improvements on Trolling Spoons.

(Perfectionnements aux cuillers à troller.)

Gardiner M. Skinner, Gananoque, Ont., 3rd February, 1879, (Extension of Patent, No. 3067) for 5 years.

No. 9617. Improvements in Inhaling Tubes.

(Perfectionnements aux tubes inhalateurs.)

William H Cutler, Buffalo N Y., U S, 4th February, 1879, (Extension of Patent, No. 3109) for 5 years.

No. 9618. Improvements on Milk Coolers.

(Perfectionnements aux garde-lait.)

Samuel H Ill, Greensboro, and Benjamin I. Prentice, Hardwick, Vt., U. S., 31st January, 1879, for 5 years.

Claim.—The cylindrical can B, having ventilated orifice *b* b_1, cone C, the cover and collar *a*, the arrangement of these covers and collars when used in sets and the arrangement of the partitions, in combination with and partially surrounded by the ice or water tank A A.

No. 9619. Improvement on Tap Attachments.

(Perfectionnement aux joints des robinets.)

John H Guest and George Guest, Toronto Ont 31st Jan 1879, for 5 years

Claim.—The combination of the cap C, outlet A and joint B with the tap attachment.

No. 9620 Improvement on Stove Attachments. *(Perfectionnement aux ventilateurs des poêles.)*

John G Malcolm, Innerkip, Ont., 31st January, 1879, for 5 years.

Claim.—1st. The attachment of an air chamber D F to the under surface of the hearth or bottom plate of stove A U, so as to enclose the ash box E;

2nd The combination of the grating with the sliding damper upon it at S, between the air chamber D F and the ash box E, the stove pipe hole in the bottom plate of the air chamber D F, as seen at F, and the short pipe around the stove hole at F.

No. 9621. Improvements on Journal Bearings. (*Perfectionnements aux coussinets des tourillons.*)

James Graham and David Corey, (Assignees of John Sweeney,) New-Haven, Ct., U. S., 31st January, 1879, for 5 years.

Claim.—The combination of an imperforated outer casing of cheap metal with a longitudinal central rib of hard metal dovetailed into the inside of said casing, and an inner facing of anti-friction metal secured by flanges on the inside of said casing, the attachment of said rib to the shell being entirely independent of the anti-friction facing.

No. 9622. Improvements on Carriage Springs. (*Perfectionnements aux ressorts des voitures.*)

Jackson W. Hewitt and Willis J. Hewitt, Jackson, Mich., U. S., 31st January, 1879, for 5 years.

Claim.—The short auxiliary flat spring B B welded [illegible] ted on the bars *b b* intermediate of the side half elliptic springs F and arranged in connection with the rear axle G.

No. 9623. Improvement in Potato-Planters. (*Perfectionnement aux traceurs-butteurs.*)

Henry Aston, Toronto, Ont., 31st January, 1879, for 5 years.

Claim.—A shaft A with a handle B, or its equivalent, and a step F, in combination with an arm D, point E and end C.

No. 9624. Improvements on Bark Cutting Machines. (*Perfectionnements aux machines à triturer l'écorce.*)

William Chicken, Boston, Mass., U. S., 31st January, 1879, for 5 years.

Claim.—1st. A cutting wheel or cylinder composed of the disks *g g* provided with V-shaped receding cutting teeth *h h*, 2nd. In combination with a cutting cylinder and feed roller, an inclined apron *k*, 3rd, In combination with a cutting cylinder and feed roller, an adjustable and yielding apron *k*, lever *q* and weight *r*, 4th. In combination with the cutting cylinder of a bark cutting machine, the apron *k* and the hinged shield S with its yielding mouth piece S^1.

No. 9625. Improvements in Stoves or Ranges. (*Perfectionnements aux poêles ou landiers.*)

Henry L. Howse, San Francisco, Cal., U S., 31st January, 1879, for 5 years

Claim.—1st. The water back, having the narrow vertical closed cell or chamber D extending to the bottom of the stove, in combination with the fuel grate B in front and the flue O behind, whereby it is heated upon both sides by the escaping products of combustion, 2nd. The oven F placed in the rear of the water back and having the flue or space O surrounding it, so that the heat from the fuel grate B shall pass around the water back D, then down in front beneath and up behind the oven successively, 3rd. The water back D and the oven F with the intervening flue O and the fuel grate B, in combination with the arched or inclined grate K, 4th. The grate B, water back D and the oven F, with its surrounding flue O, in combination with the diagonal partition or diaphragm G dividing the space upon the top of the oven and distributing and directing the heat, 5th. The fuel space and grate B with the diaphragm or water back D and oven F with its surrounding flue O, whereby the heat from the fuel acts upon both sides of the water back or diaphragm and passes under the bottom of the oven, in combination with the damper J, said damper serving to direct the heat beneath the oven or, when opened, allowing it to pass directly to the chimney, 6th The fuel space and grate B, having the diaphragm or water back D extending to the bottom with the intervening flue O, whereby the heat passes over the diaphragm and then down between it and the oven, in combination with the oven F, said oven having its wall or walls N made double to regulate the side heat to the interior, 7th. In combination with the fuel space or grate B with the vertical diaphragm or water back D and the oven F with the intervening flue O, the independant ash pan L and the door M whereby this flue may be cleaned.

No. 9626. Machine for Cutting off Gelatine Capsules. (*Machine à couper les capsules en gelatine.*)

Frederick A. Hubel, Detroit, Mich., U. S., 31st January, 1879, for 5 years

Claim.—1st. The combination of the series of moulds *e*, the platform D and F and rock shaft T operated by any suitable lever, for the purpose of regulating the length of the capsules; 2nd. The construction of the platform D, rod F and rock shaft T operated by a pinch bar or lever H which engages with a notch plate H^2 for the purpose of raising or lowering the platform D, 3rd. A series of rotary cutters operated by a crank and pinion acting upon pinions, one of which is attached to each of said cutters; 4th. The rotary cutters driven by gearing and supported upon spring arms; 5th. The combination of the plate G, lever M, shaft I and locking lever N, for the purpose of disengaging the centre heads from their contact with the moulds and locking the crank by which said cutters are rotated, 6th. A machine for cutting off gelatine capsules, wherein the parts are so arranged that capsules of varying lengths can be cut by means of a vertically adjustable platform which carries the moulds to the cutters, 7th. The platform D, carrying the plate C upon which are secured the moulds *e*, in combination with the rod F, rock shaft T, levers H M N, segment plate H^2 plate G, shaft I and pinions *b* to which are secured the drum b^1 carrying the cutters *d*.

No. 9627. Improvements on Harness. (*Perfectionnements aux harnais.*)

Charles S Piersons and Charles Ferris, Sandy Hill, N. Y., U. S., 31st January, 1879, for 5 years.

Claim.—1st. The strap coupling formed of the outer plate D^2 provided with flanges along its side edges and with pins and rivets upon its inner surface, and the inner or clamping plate E^2 for connecting the adjacent ends of straps, 2nd. The breast piece formed of the plate Q^2 provided with the eye S^2, the notched flanges U^2 and the pins X^1, the loose key W^2 the hinged cover Y^2 and the clamping plate R^2 to adapt it to receive and hold the breast strap G^2, the neck strap T^2 and the tug V^2; 3rd. The buckle holder formed of the plate M^2 bent together at its centre and provided with recesses to receive and hold the buckle O^2, the keeper N^2 and the strap I. 4th. The tug eye plate Z^2 provided with eyes to receive the eye or hook of the whiffletree and with a recess to receive the end of the tug and the clamping plate A^2, 5th. The breeching piece formed of the plate B^2 recessed at both ends, the clamping plate D^2 provided with the arms d^2, the cross bars d^2 d^3 d^2 and the pin d^4 for holding the ends of the side strap, the clamping plate F^2 for holding the end of the breeching strap and the brace G^2 provided with a recess, a stationary pin nut and a screw for receiving and holding the hip strap, 6th The carrier N^2, made in two parts and provided with notches to receive the buckle P^2 and loop R^2, and a groove to receive the strap O^2, the plate S^2 provided with flanges along its side edges and the clamping plate T^2, in combination with each other and with the said buckle, loop and strap.

No. 9628. Improvements on Feed Cutters. (*Perfectionnements aux hache-paille.*)

Thomas Clark, Truro, N.S., 31st January, 1879, for 5 years.

Claim.—1st. The combination of a feed cutter and a grinding Mill, 2nd. The combination of the fly wheel carrying the cutting knives, and having a grinding face with a grinding plate provided with a suitable hopper and discharge chute; 3rd. The combination of the feed roller C^2 having the crown wheels L L^2 upon its shaft with the lever N, worm M and the roller C, said rollers being connected by suitable gear, 4th. The combination of the reversable grinding plate R with the adjustable frame S^2 and the adjusting shaft V.

No. 9629. Improvements on Machines for Manufacturing Tobacco. (*Perfectionnements aux machines à fabriquer le tabac.*)

John L. Jones, Greensborough, N. C., U. S., 10th February, 1879, for 5 years.

Claim.—1st. In combination with the stationary bed provided with a longitudinal groove, a series of removable cutters and the guage for holding them in place, said cutters being adapted to be adjusted at various intervals in said groove in order to vary the length of the plugs to be cut, 2nd. In combination with the stationary bed and its cutting knives, a series of interchangeable knife-gauges slotted at intervals at which the knives are arranged and varying in thickness according to the thickness of the plug to be cut. 3rd. A trough, mold or former, closed at one end and open at the other, in combination with the movable follower adapted to fit into said trough, whereby the nip or waste cut from the end of the bar may be removed in condition to form the end of the bar in the next succeeding freshly filled trough, *mould or former*, 4th. *In combination with the movable plunger or follower* for compressing the troughs, moulds or formers and the leading screw and the toggle lever for operating said plunger, the pulleys loosely mounted on the leading screw, the longitudinally moving clutch, the clutch lever and arm provided with tappets, and the tappet bar and slide operated by the rider of the toggle lever, whereby the motion of the leading screw is automatically arrested, 5th. In combination with the plunger and its operating mechanism, a lever adapted to be tripped by a pawl on the rider of the toggle lever, the vertically moving slide provided with a rack at its upper end, the pinion on the leading screw for operating said slide and the lever and vertically moving slides for elevating the trough adjoining the stationary bed, 6th. In combination for the mechanism for elevating the trough adjoining the stationary bed of the machine, the bevelled trip or trips for upsetting the elevated trough.

No. 9630. Improvements on Fountair Pens. (*Perfectionnements aux plumes-fontaines.*)

George Wells and George Staples, Montreal, Que., 10th February, 1879 for 5 years.

Claim.—1st. The combination of the tubes A B H and valve O; 2nd. The combination of the tubes B and H, valve O, apron A^4, said valve being adjustable, whereby the pen is rendered self-feeding; 3rd. The combination of the apron A^2 having slot C^2 and projection D^2, 4th. The combination of the tube A, having opening E, with the tube B provided with valve O, whereby the tube B may be charged with ink; 5th. The combination of the tubes B and H, valve O, with the tube A having opening E, whereby the tube B may be charged with ink; 6th. The combination of the tube B having tube H attached thereto and provided with lugs G, with a rod or wire K having valve O and flange P and with spring R and plate S; 7th. The combination of the wire K, having valve O and actuated by the spring R, and having nut L and elastic washer M with the tubes A and B; 8th. The combination of the tubes A and B, tube H, projection W and valve O, 9th. The combination of the tube B, tube H and valve O, whereby the pen is held between the tubes H and B and fed by the operations of the valve O

No. 9631. Improvements on Railway Switches. (*Perfectionnements aux aiguilles des railroutes.*)

John H. Ainsworth, Philadelphia, Pa., U S., 10th February, 1879, for 10 years.

Claim.—1st. The combination, with the switch rails of a railroad switch of mechanism for imparting a positive movement to the switch rails in opening and closing the switch, and retain them in a yielding position when either open or closed; 2nd. The combination, with the switch rails of a railroad switch, of a switch rod attached to one of the switch rails or switch rail, a spring located between sliding sleeves on the switch rod, a yoke provided with collars which form bearings for the sliding sleeves, and a link connecting the yoke with the crank shaft of the switch, 3rd. The combination, with the switch rails of a railroad switch and a switch rod provided with a yoke and a spring located on the rod between collars in opposite end of the yoke, of a guard plate for forming a rigid connection between the yoke and switch rod; 4th. The combination with the crank shaft, a yoke and link of a switch rod provided with sliding collars and a spring, the ends of which rest against the ends of said collars, 5th. The combination, with

the crank shaft having a locking bar attached thereto, of a pin on the switch rod and a slotted guard plate pivoted to a yoke supported on the switch rod, 6th. The combination, with a switch rod having antifriction rollers journalled in the outer end thereof, of a switch stand constructed with an inclined track-way and a link provided with an inclined depending projection, 7th. The combination, with the switch rod K, of the sliding sleeves M M_1, spring L_1 and screw threaded sleeve N; 8th. The combination, with the switch rod R, of the bracket O, sliding sleeves M M_1, spring L_1 and adjusting nuts m_2 m_3: 9th The combination, with the switch rod K, of the yoke L provided with collar N N_1, the link *k* connecting the crank shaft and yoke, sliding sleeves M M_1 and spring L_1, 10th The combination, with the switch rod K, spring L_1, sleeves M M_1 and yoke L, of the link *k* and lift bar P, 11th. The combination, with the switch rod K and bracket O provided with pin R and lift bar P, of the yoke L, link *k*, guard plate Q and locking bar T, 12th. The combination, with the pin R connected with the switch rod, of the guard plate Q provided with openings *q* q_1, support S and locking bar T; 13th. The combination, with the switch rod K provided with rollers *o* o_1, of the inclined track-way R and link *k* provided with a depending inclined projection; 14th. The combination, with the main switch rail having fingers or braces attached thereto, of switch chairs provided with end stops and staples; 15th. The combination, with a main rail having a bent portion *e* and a pointed switch rail, of mechanism for automatically closing the switch and retaining the switch rails in a yielding position to allow a train to run from the siding onto the main track without leaving the switch open; 16th. The combination, with the switch rails of a switch, of mechanism connected therewith for automatically closing and locking the switch by the flanges of the car wheels when running on the main track; 17th. The combination, with switch rails of different lengths, of switch operating mechanism connected therewith and constructed and arranged to allow the train to run from the siding onto the main track without leaving an open switch while the wheel flanges of a train running on the main track will automatically close and lock the switch if left open; 18th In combination, with the main or blunt pointed switch rail having a brace secured thereto, of staples secured to the chain and extending over the brace on the main switch rail whereby the latter is prevented from being raised; 19th. In a railway switch, the combination with the main rail having a tapered end, of the main switch rail constructed with a blunt pointed end, 20th. The combination, with the main rail having a tapered end and the side rail extending beyond said tapered end, of the main switch rail constructed with a blunt pointed end, 21st The combination, with a tapered switch rail, of a main switch rail constructed with a blunt pointed end and the main rail formed with a tapered end whereby the flanges of the wheels are guided by the main switch rail and prevented from striking the tapered switch rail, 22nd The combination, with the main rail having a bent portion *e* and pointed switch rails of different length, of switch operating mechanism for imparting a positive movement to the switch rails when they are opened and closed, and retaining the same in either opened or closed position by spring power.

No. 9632. Improvements on Disintegrating Mills. (*Perfectionnements aux moulins à triturer.*)

Lewis J. Bennett, Buffalo, N.Y., U.S., 10th February, 1879, for 5 years.

Claim.—1st. The combination, with the disks and rings of the cages of pins or bars arranged with capability of being separately removed or inserted, 2nd The combination, with the disks and rings of the cages, of pins or bars consisting of a soft metal central rod and a chilled metal tube passed over said rod and secured between the disks and rings; 3rd A pin or bar interposed between the disks and rings and arranged with capability of being revolved around its supporting pivots, whereby the wearing surfaces may be changed, 4th. The pin or bar having two parallel or nearly parallel sides *r r* and the curved sides r^1, 5th. The combination, with the pin or bar L having the end projections *a*, of the disk I provided with grooves a_1 for the reception of said projections *a*; 6th. The combination, with the rings P, of the protecting plates Q having the ledges *q* and the plates R, whereby the sides and edges of said rings are protected, 7th. The combination, with the plates Q having the ledges *q*, of the plates R fitted between the said ledges and provided with circular recesses for the reception of the nuts N_{12}, 8th. The combination, with the rings P having their edges bevelled of the plates Q provided with the ledges *q*, plates R and the nutted rods N^1, 9th The disks I I^1 and K provided with wear plates K^1 and i^1, 10th The standard F, having the projection E, in combination with the front plate A_1 provided with the socket E^1, 11th. The combination, with the front plate A_1 having the socket E^1, of the standard F provided with the hollow projection E and the breaker M passed through the aperture F^1 in said projection E and held therein by the fastening *g*, 12th. The combination, with the standard F of the threaded block g^1 and the set screws *g*, 13th. The breaker M having the shoe *m*; 14th. The breaker M provided with the shoe *m* having the inclined part m^1, 15th. The combination, with the casing, of the shaft G and the cone V, 16th. A breaker, for a disintegrating mill, having one of its edges inclined, 17th. The combination, with the casing of the chute Y, said chute being arranged with capability of being reversed.

No. 9633. Improvements in Soldering Clamps. (*Perfectionnements aux mordaches pour souder.*)

Charles A Bangs, Richmond, and George H. Pierce, Cleveland, Que., 10th February, 1879, for 5 years.

Claim.—1st In combination with the fixed core B, a band of moving clamps hinged to each other and each clamp composed of two side clips C C (with projection *a a*) either hinged to or sliding into a sole piece H; 2nd. The movable cores B B in combination with a band of moving clamps.

No. 9634. Improvements on Meat Mallets. (*Perfectionnements aux maillets à viandes.*)

Clements T Stephens, Ithaca, N Y., U S, 10th February, 1879, for 5 years.

Claim.—1st. The handle *a*, the head or weight *b*, tooth holding base plate *c*; 2nd. The combination of the handle *a*, the head *b*, tooth holding base *c*, cleaning plate *d* with the rod *f* extending through the head *b* of the mallet (or partially so) and lying loosely therein, equipped with the spiral spring surrounding with its condensing bases *g* and *h* and nut *f*, or other equivalents, whereby the cleaning plate *d* may be operated, 3 d. The weighted head *b*, in combination with the cleaning plate *d* and spiral spring (or springs) *i* vertically arranged so that the said cleaning plate may be turned from the base of the mallet head *b* to the lower end of knives *e* by physical or automatic force 4th In combination with the mallet head *b*, the teeth or knives *e* provided with chisel or incisor edges arranged in parallel rows across the face of the weighted head *b*, said chisel or incisor edges in each row being set at right angles to those of the adjoining rows whereby a series of clear cuts will be given to the meat.

No. 9635. Improvements on Water Wheels. (*Perfectionnements aux roues hydrauliques.*)

William H. Fruen, Minneapolis, Min, U S, 10th February, 1879, for 5 years.

Claim.—1st. In combination with the vertically stationary clutches F E_1, shaft *c* and governor balls H H^1 with their connecting arms, the tapered disks F F^1 with intermediate pinions b^1 between said disks, 2nd The vertically stationary bevel gears F E^1 having one common pinion b_1, in combination with the bevelled disks F F^1 with intermediate pinion b_1, 3rd The combination, with the shaft C and *c*, of the groove or grooves c^1 and conduits *r* whereby the shafts and step may be oiled without stopping the machinery, 4th The combination and arrangement of the shaft *m*, gear b_2, notched plate k_1, spring catch *n* and cam k_2 whereby the governor may be automatically disconnected from the gate rod or thrown out at pleasure, 5th The combination, with the shaft *c*, of an adjustable spring pin *d*, whereby the speed of the governor may be regulated, 6th. The arrangement upon a water wheel governor of a graduated indicating device, whereby the position of the gates may be ascertained.

No. 9636. Process for Amalgamating Precious Metals. (*Procédé pour amalgamer les metaux précieux.*)

Julio H Rae, New York, U. S, 10th February, 1879 for 5 years

Claim.—1st. The process of amalgamating auriferous or argentiferous ore, by forcing the same on a pulverized state against an amalgamated plate supplied with water through the medium of a blast of air; 2nd. The combination of a closed chamber, a lateral amalgamated plate situated in said chamber, means for supplying said plate with water and an air forcing device connected to one side of the chamber opposite to the lateral plate, 3rd The combination of an amalgamated base plate, a closed chamber arranged above said plate a lateral amalgamated plate situated in said chamber, means for supplying both plates with water and an air forcing device connected to one side of the chamber opposite to the lateral plate, 4th The combination of an amalgamated base plate divided into two sections and a trap which is made in one piece with the first section of the plate and arranged between the two sections

No. 9637. Improvements on Stove Pipe Machines. (*Perfectionnements aux machines à tuyaux de poêles.*)

Frank R Packham, Mechanicsburgh, Ohio, U. S., 10th February, 1879, for 5 years.

Claim.—1st Two cylindrical fluted rolls arranged to mesh into each other with their axis in diverging lines, 2nd. Two spirally fluted rolls arranged with their surfaces nearer together at one end than at the other; 3rd. The frame provided with the open slot to receive the pivoted shaft and with the cap plate serving the double purpose of excluding the chips and dirt and of sustaining the compressing screw, 4th In combination with the diverging crimping rolls, the beading rolls having their outer ends enlarged; 5th. In fluted rolls and detachable beading rolls adapted for removal independently of the fluted rolls, 6th. In combination with the fluted rolls, the hardened steel guards applied to the frame.

No. 9638. Process for Resolving Vulcanized Rubber Waste. (*Procédé de révivification des déchet de caoutchouc vulcanisé*)

Thomas Aspden, London, Ont., 10th February, 1879, for 5 years.

Claim.—1st. The process of reducing vulcanized rubber to a plastic state by first cutting the vulcanite into lumps of a suitable size, then wetting the same with linseed oil, then gradually heating the oil coated mass in a suitable pan over the fire to 400 or 500 degrees; 2nd. The process of reducing vulcanized rubber to a fluid state by cutting it into lumps, then wetting the same with linseed oil, then heating the oil coated mass until it becomes plastic, then allowing it to cool and boiling the same in linseed oil, in quantity to reduce it to a fluid of the required strength or density.

No. 9639. Improvements on Bottles. (*Perfectionnements aux bouteilles.*)

Melville S Bagley, Buenos Ayres, Argentine Republic, 10th February, 1879, for 5 years.

Claim.—A bottle or hollow vessel of a book shape.

No. 9640. Improvements on Mattrasses. (*Perfectionnements aux matelas.*)

Charles P. Rice, Toronto, Ont., 10th February, 1879, for 5 years.

Claim.—1st. A bed mattrass composed of the parallel longitudinally crimped wires I secured at the ends to cross rods, and at intermediate point between the ends by transverse crimped wires G; 2nd. The mattrass A provided with suspension springs E, in combination with the suspension bars C and brackets B, 3rd. The side compression springs H H, in combination with the mattrass.

No. 9641. Improvements on Repeating Matches. (*Perfectionnements aux allumettes à reprise.*)

William W. Batchelder, New York, U.S, 10th February, 1879, for 5 years.

Claim.—1st. The combination, in a suitable casing, of two or more substances or compounds which, in themselves, are not explosive, but which, if mixed or united, and rubbed, or otherwise mechanically acted upon, will explode or burn rapidly, said substances or compounds being separated,

and arranged to produce a flash or flame, or a succession of flashes or flames without danger of igniting the mass, 2nd. The combination, in a suitable casing, of two or more separate substances or compounds which will not explode when separate, but will burn violently or explode when mixed or brought in contact with each other and rubbed or otherwise mechanically acted upon, and a suitable device for accomplishing such mixing or uniting and ignition of said substances or compounds, 3rd. A suitable casing, divided into adjacent chambers, each of which is adapted to contain a compound or substance which produces explosion or combustion when brought in frictional contact with that of the other or others, and provided with a suitable device for traversing the mouths or open ends of said chambers, each bringing small portions of said compounds or substances in such contact with each other, 4th. A suitable case divided into adjacent chambers and having one end open and adapted to contain a compound or substance which will produce combustion when brought in contact with the compound or substance of the other chamber or chambers, in combination with a suitable scraping or conveying and igniting device adapted to traverse the open ends of said chambers for bringing small portions of the said compounds or substances in frictional contact with each other, and an automatic feeding device for forcing said compounds or substances into position to be operated upon by the said scraping or conveying and igniting device, 5th A novel case for a repeating match or igniter, the same consisting of two separate adjacent chambers with open ends connected by a flush platform or plate, a spring scraper or conveying, rubbing and igniting device adapted to play across said platform and followers, or pushers fitting within said chambers and adapted to move automatically therein simultaneously with the operation of the scraper, conveyer and rubbing and igniting device; 6th As a new article of manufacture, a suitable case divided into two adjacent chambers, each of which contains a compound or substance which will produce combustion, when brought in contact with that of the other, and provided with a suitable scraper or conveying, rubbing and igniting device for bringing small portions of the compounds or substances in contact with each other, and an automatic feeding device for forcing said compounds or substances into the path of the said scraper, conveyer or rubbing and igniting device.

No. 9642. Manufacture of Artificial Stone.

(Fabrication de la pierre factice.)

Agapit Brault and Gédéon Rondeau, Laprairie, Que., 11th February, 1879, for 5 years.

Claim.—A compound of sulphur, marble or stone dust, ivory black and powdered vermillion, the whole mixed.

No. 9643. Improvements on Buggy Tops.

(Perfectionnements aux soufflets des voitures.)

Edward N. Heney, (Assignee of William Davis), Montreal, Que., 11th February, 1879, for 5 years.

Claim.—1st. In combination with the bows and seat of a buggy or car riage, the central bow iron C pivoted to the standard A and having two diverging tangs or shanks c c and arm E with serrated inner surface the standard A with correspondingly serrated outer surface and concentric slot *a*, the sliding stud *e*, stop *e*1, binding lever handle with cam *f* and washer *g* 2nd. The socket or plate *h* and joint pin provided with ornamental head *j* combined in the manner set forth.

No. 9644. Improvement on Clothes Driers.

(Perfectionnements aux séchoirs à linge.)

John N. Valley, Jersey City, N.J., U. S., 11th February, 1879, for 5 years.

Claim.—1st. A clothes drier made by hinging together rigid frames formed of horizontal bars secured to vertical posts, the hinge posts B composed of sections B1 having axial end sockets *b*1 and joined together, by glueing or screwing the hinge-pins C into said socket, to allow of hinging the said frames together by holes *a* through the end of the bars A; 2nd In combination with a clothes drier made in hinged frame sections, the horizontal swinging arms and hooking braces D pivoted to the vertical posts B.

No. 9645. Improvements on Reaping and Mowing Machines.

(Perfectionnements aux faucheuses-moissonneuses.)

Alanson Harris, Brantford, Ont., 11th February, 1879, for 5 years.

Claim.—A guard A having notched, serrated or roughened edges.

No. 9646. Improvement in Bathing Apparatus.

(Perfectionnement aux appareils à bains.)

Warren Wasson, Carson, Nev., U. S., 11th February, 1879, for 5 years.

Claim.—1st. The combination of chamber F having door F1, window *f*, hook *f*1, and water tight bottom tank H and floors *h*1, with pump A having plungers C1 and chambers *a*3 and hose E with or without hose sprinklers *e*, 2nd. The combination of oscillating beam D, plungers C1, valves V V1, air chamber *a* and hose pipe E with or without hose sprinkler *e* arranged and operating in chamber F, 3rd. In a shower bath apparatus adapted to be operated by the alternate tilting weight of the bather, the combination, with the two end pumps, of the single platform pivoted in a vertical plane between said pumps and actuating the same, 4th The combination of a pump or other device capable of producing a continuous shower or stream by repeatedly rising the same liquid without addition or loss of liquid, with a bathing chamber when used for bathing purposes, 5th. A bathing chamber provided with a pumping apparatus for applying the bathing liquid to the bather, the ventilator P so constructed as to allow the passage of air but prevent the passage of water.

No. 9647. Art of Manufacturing Twist Drills.

(Art de fabrication des forets à vis.)

Simon P. Graham, London, Ont., 11th February, 1879, for 5 years.

Claim.—1st. The art of process of manufacturing rolled twist drills and bits; 2nd As a new article of manufacture, a drill or bit in which the concaves B B are rolled.

No. 9648. Improvements on Steam Engines.

(Perfectionnements aux machines à vapeur.)

Jacob I. Anthony, Sharon Springs N. Y U. S., 11th February, 1879, for 5 years.

Claim.—1st. The combination of the rectangular cylinder B having the ports F *e*, the piston B1, valve P having the ribs *q*, the steam chest C, valves D and levers G, 2nd. The combination, with chest I having four ports, of the valves J J connected by a bar *k*1 attached to rod *l*1, and the two valves K K connected by a bar *m*1 attached to rod *n*1; 3rd. The bed A having chambers *a b c d*, the heating pipe A1 and pump consisting of the barrel *f* plunger *g* and valves *i l* in combination as set forth.

No. 9649. Improvements in Boiler Furnaces.

(Perfectionnements aux fourneaux des chaudières.)

Thomas Murphy, Detroit, Mich., U. S., 11th February, 1879, for 5 years.

Claim.—1st In a furnace, the arch B provided with flues D F communicating with the outer air through the openings L and flue M for the purpose of heating and discharging air upon the fuel 2nd In combination with said arch constructed with flues, the ribbed or corrugated base plate C placed above the fuel discharge openings *x* in a furnace; 3rd. In combination with the coal chamber A, the flame chamber I and the arch B provided with flues, 4th A furnace provided with the arch B constructed with flues and resting upon the ribbed or corrugated base plate C, the dead plates N upon which the base of the fuel in the chambers V is coked preparatory to being fed to the grates, 5th In combination with such dead plates N and the fuel openings *x*, the pushers O operated by the shaft P for the purpose of discharging the coked coal into the coal burning chambers A; 6th In combination with said dead plate and pusher, the scraper R U; 7th In combination with said dead plate, pusher and scraper R, the reciprocating braker bar S, 8th. The combination, in a boiler furnace, of devices for feeding coal upon a dead or coking plate with devices also for discharging heated air upon the fuel in said plate, for the purpose of coking said fuel preparatory to its being discharged or fed into the coal burning chamber

No. 9650. Improvements on Safes.

(Perfectionnements aux coffres-forts.)

Joseph Grove, Toronto, Ont., 12th February, 1879, for 5 years.

Claim.—1st. A fire-proof safe constructed with projections B B B1 and recesses B1 B1 attached to the inside of the door A and projections D D and recesses C C C attached to the inside of the lambs A1 A1, and the non conductors *c*11 *c*11 and *d*11 *d*11 placed between the flanges *c c c c* and *d d d d* 2nd. A burglar proof safe having its whole exterior plates forming the body of the safe, also the back and front thereof of welded steel and iron manufactured specially for the purpose of an exterior covering for burglar proof safes.

No. 9651. Improvements on Castors.

(Perfectionnements aux roulettes des meubles.)

C nrad G Bacon, (Assignee of William D Spencer), Middletown, Ct U S, 12th February, 1879, for 5 years.

Claim.—1st. In a ball castor, the combination of the plate D having three triangular arranged grooves *d*, the oblong rollers E made shorter than the grooves, the ball C and cup A, 2nd. Three oblong rollers arranged in a triangular manner, in three intersecting grooves and made shorter than the grooves of the bearing plate in which they move and having their ends cone-shaped.

No. 9652. Improvements on Screw-Thread Swaging Machines.

(Perfectionnements aux machines à étamper en vis.)

Charles J. Shirreff, Belleville, Ont., 12th February, 1879, for 5 years.

Claim.—1st. The combination of a tubular die A spirally grooved internally, a roller J and a shaft G having a screw feed, 2nd The two part tubular die A, spirally grooved internally and locking together to hold the inserted stove pipe *a*, in combination with a screw feed shaft G carrying an arm provided with a roller J to travel in the grooves of the die A, for swaging screw threads; 3rd. The tubular die A, spirally grooved, the brackets E and tubular arm F, in combination with a screw feed shaft G having an arm carrying a roller J; 4th. The provision, to the die A, of a frame B for supporting the pipe *a* in line with the die; 5th. The clamping band Q attached to the frame B for holding the pipe *a*; 6th. The conical headed bolt N for adjusting the roller J.

No. 9653. Improvements on Waggon Dashers.

(Perfectionnements aux garde-crotte des voitures.)

George E. B. Parkin, Cookshire, Que., 12th February, 1879, for 5 years.

Claim.—The combination of the frames A and B and the sheet C

No. 9654. Improvements on Locomotive Head Lights.

(Perfectionnements aux lampes des locomotives.)

Andrew Dressell, Ernest H Voth and John G. Voth, Cleveland, Ohio, U.S. 12th February, 1879, for 5 years

Claim.—1st. In locomotive head lights, the side chambers D provided respectively with a reflector or reflectors, glass faced and sides, and connected to the sides of the head light case and in open relation with the reflector thereof by openings C; 2nd. The reflectors, provided with side openings and slides L, in combination with side chambers, 3rd. The side chamber or chambers D with their respective reflectors, glass face and sides; 4th. In locomotive head lights, the reflector B, provided with side openings, in combination with one or more chambers, each having a reflector, glass face, side or back arranged that the light therein will be transmitted through said openings into the chamber and be reflected therefrom; 5th. In the locomotive head lights, a reflector, having side openings therein, in combination with side chambers provided with reflectors, glass face and sides.

No. 9655. Improvements on Shaft Bushes.

(Perfectionnements aux coussinets des arbres.)

Peter J. McClury, Vanessa, Ont., 12th February, 1879, for 5 years.

Claim.—1st The combination of large roller E on which shaft D runs, with rollers G G and K set in pillow block A 2nd The double bushes H H and keys I I to alter and set rollers G G; 3rd. The roller K, in cover, adjusted by packing C.

No. 9656. Improvements on Organ Pedals.

(Perfectionnements aux pédales d'orgues.)

James H White, West Meriden, Ct., U.S., 12th February, 1879, for 5 years.

Claim.—1st. The combination, with the principal blow pedals of an organ of second or independent blow pedals arranged above the principal pedals, and so that either may act directly upon the bellows; 2nd. The combination of the second or independent blow pedals with, and arranged above, the principal pedals, and so as to be closed into the front when not required for use 3rd. The brackets constructed for attachment to, or detachment from, the case, and above the principal pedals, the pedals hinged to said brackets and detachably connected to the bellows

No. 9657. Improvements on Harrows.

(Perfectionnements aux herses.)

Lyman Norton, Hartford, N Y., U S, 12th February, 1879, for 5 years.

Claim.—1st. In a harrow, the combination of the jointed toothed cross-bar B having the fingers *d*, the rods *a b* and the jointed toothed front and rear bars A A, 2nd. In a harrow, the combination of the bars A A having hooks *f f*, the cross-bar B having curved pivots *d*, the rods *a b* and key *i*, whereby the said parts are adapted to be readily connected and detached.

No. 9658. Machine for Swinging Barrels.

(Machine à balancer les barils.)

John A. Westlake, Cooperstown, N.Y., U. S, 14th February, 1879, for 5 years.

Claim.—The pivot post A, arranged beneath a store counter, and provided with rest plate E and grappling device F, for holding the barrel upon the pivot post around which it may revolve.

No. 9659. Improvements on Curry Combs.

(Perfectionnements aux étrilles.)

Freeman Fairchild and Channing Hazeltine, Derby, Vt., U. S., 14th February, 1879, for 5 years.

Claim.—1st. A single bladed curry comb, with one edge serrated, and the other adapted to serve as a scraper, 2nd. A single bladed curry comb having its point or forward end provided with a hook, 3rd. A single bladed curry comb, with one edge serrated and the other adapted to serve as a scraper, and having its forward end provided with a hook; 4th. As a new article of manufacture, the single bladed curry comb consisting of a handle C having the straight blade A with one edge serrated, and the handle C being parallel with, but in a different plane from, the blade A.

No. 9660. Improvements on Printing Presses.

(Perfectionnements aux presses d'imprimeries.)

Walter S. Appleton, New York, U. S., 14th February, 1879, for 15 years.

Claim.—1st. An endless wiper belt and a revolving, elastically surfaced drum, which drives the belt and brings it in contact with the plate; 2nd. The combination of the driving drum, the endless wiper belt, a rubber for removing the surplus ink from said belt, and a knife for scraping the rubber.

No. 9661. Machine for Sprinkling Paris Green. *(Machine à distribuer le vert de paris.)*

Albert Keeler, Prescott, Ont., 14th February, 1879, for 5 years

Claim.—1st. The bottom of the pail B, 2nd The sprinkler C, plunger E, plunger rod F, and perforated tube D; 3rd. The spring G, cross-piece H, and valve I.

No. 9662. Improvements on Packings for Steam Engines. *(Perfectionnements aux garnitures des machines à vapeur.)*

Aloha Vivarttas, New York, U. S., 14th February, 1879, for 5 years.

Claim.—1st. The packing A composed of two parts, either of which may be radially contracted or expanded independently of the other; 2nd. The packing A, consisting of the parts B and C, combined with the helix or tapered spiral D when the convolutions of D, by overlapping, form between themselves a tight or impervious joint; 3rd The packing A consisting of the spirals B and C; 4th. The combination, with the packing A, of the reinforcement *c* or *b*; 5th. The combination, with the packing A, of the arming c^1 or b^1; 6th The combination of the packing A with the stuffing box F and rod E, 7th. The combination of the packing A with the cylinder F^1 and piston rod E; 8th. The combination of the packing A with the plate d; 9th The packing A having the parts B and C combined with the helix D^1 when, by the elasticity and flexibility of D, the necessary freedom of motion is permitted to the parts B and C.

No. 9663. Improvement on Reaper Knives.

(Perfectionnement aux couteaux des moissonneuses.)

Samuel Collinson St Catharines, Ont., 14th February, 1879, for 5 years.

Claim.—Sickle sections for reapers in which the teeth are cut upon the face or flat sides of the edges, and the bevelled sides are left smooth.

No. 9664. Stove-pipe Damper Regulator.

(Régulateur de clé de tuyau de poêle.)

Alvin A. Walker, Quincy, Mass., U S., 14th February, 1879, for 5 years.

Claim.—The combination of the toothed sector B, provided with the lugs or stops *c d* arranged thereon, with the perforated bolt C and the slide catch E, applied to each other and the sector.

No. 9665. Device for Arresting Sparks and Burning the Smoke for Locomotives. *(Appareil fumivore et arrête-flammèche pour les locomotives.)*

Stephen Lett, Toronto, Ont., 14th February, 1879, for 5 years

Claim.—1st The introduction of a solid diaphragm into the smoke box of locomotives, with the devices for adjusting the same. 2nd The introduction of cold air through the pipe A the process of heating this air and the application of it to the unconsumed escaping fuel 3rd The method of returning the heat from the smoke-box to the fire-box by the combination of the diaphragm and the air pipes.

No. 9666. Improvements on Churn Dashers.

(Perfectionnements aux batte à beurre.)

William Southward, London, Ont., 18th February, 1879, for 5 years.

Claim.—1st. The combination, with the dashers *a b c*, of the tubes *d d* and *e e*, and the holes *h* and *g*, 2nd. The combination, with the air tube *f*, of the dashers *a b c* and the hole *h*.

No. 9667. Concentrated Malt Extract.

(Extrait de malt concentré.)

Barnabas W. Day and George Thompson, Kingston, Ont., 18th February, 1879, for 5 years.

Claim.—The preservation of malt extract, or extract of malt and hops in solution concentrated by evaporation, by the incorporation of salicylic acid, or its chemical equivalent and butter or other oleaginous matter.

No. 9668. Improvements on Grain Binders.

(Perfectionnements aux lieuses à grain.)

The Grain Binder Association, (Assignees of William H. Rittenhouse), Norristown, Pa., U S., 18th February, 1879, for 5 years.

Claim.—1st. A revolving binder head, provided with two pinions having oblique twister and cutter slots, arranged to receive twist and cut the wire with a shear cut after it has been thrown around the gavel; 2nd. The revolving binder head, provided with two pinions having oblique twister and cutter slots, in combination with stationary vertical rack gears of unequal length for revolving said pinions, 3rd. The combination of the two pinions, constructed with oblique twister and cutter slots, with two locks for securing the said pinions in the proper position, to allow the wire to pass into the said slots and so arranged that one pinion is held stationary while the wire is being cut by the continued revolution of the other pinion; 4th The stationary vertical rack gears *a* and a^1, one of them being of a greater length than the other, in combination with the two pinions G G each being constructed with oblique slots, for receiving, twisting and cutting the wire, and so arranged, in connection with the said rack gears, that one of them is backed after the wire is twisted, and the other continues to revolve, by which action the wire is cut near the centre of the said pinions, 5th. The combination of a revolving binding arm and head, provided with the two pinions G G, with oblique slots for receiving, twisting and cutting the wire, with the spring locks H H spring catch J friction guide roller I, segment F, rack gears *a* and a^1, catch K and roller L.

No. 9669. Mode of Packing Cotton Batting.

(Mode d'empaquetage de la bourre de coton.)

George M. Hamlin, Lockport, N. Y., U. S, 18th February, 1879, for 5 years.

Claim.—1st. A package of cotton batting composed of one or more tiers of rolls of batting compressed in their longitudinal direction and clamped between two or more rigid heads B B^2, 2nd. A package of cotton batting composed of one or more tiers of rolls of batting clamped between two or more rigid heads B B^2, secured together by an outer covering *d* and rings *e e*; 3rd. A package of cotton batting composed of one or more tiers of rolls of batting, clamped between two or more rigid heads B B^2, secured together by an outer covering *d*, rings *e e*, and central tie *c*.

No. 9670. Improvements on Match Machines.

(Perfectionnements aux machines à allumettes.)

Ezra B. Eddy, (Assignee of George H. Millen), Hull, Que., 18th February 1879, for 5 years.

Claim.—1st The employment of a heated cylinder B, revolving partly within a trough C holding the chemical compound in liquefaction, 2nd. The cylinder B, having internal pipe or pipes D connecting with its hollow journals, in combination with the double walled trough C having steam inlet pipe *a* and aperture D^1, 3rd. The double walled trough C, having geared shafts E with agitators *d*, in combination with the hollow cylinder B mounted to revolve partly in the trough C, 4th The double walled trough C, having sieve G in combination with the cylinder B mounted on frame A having scraper bars G^1, 5th. The combination, with the cylinder B and frame A, of the hinged gauge bar G^1 and lever J

No. 9671. Improvements on Shaft Hangers.

(Perfectionnements aux coussinets des arbres.)

Henry D. Cone, Stockbridge, Mass., U. S., 18th February, 1879, for 15 years.

Claim.—1st. In a shaft hanger, the combination of the box which forms the bearings constructed with a transverse screw threaded socket, a transverse correspondingly threaded sleeve stationary in the direction of its axis, but so as to be rotated thereon and a support for said sleeve, 2nd. In a shaft hanger, the combination of the box which forms the bearings constructed with a transverse screw-threaded socket, a transverse correspondingly

threaded sleeve stationary in the direction of its axis, but so as to be rotated thereon, a screw-threaded shank at right angles to and carrying said sleeve and box with a correspondingly threaded nut supported stationary in the direction of its axis; 3rd. In a bearing for shafting, the combination of the two parts of the box screw-threaded at each end and a collar correspondingly threaded; 4th. In a bearing for shafting, the combination of the two parts of the box screw-threaded at the two ends and a collar correspondingly threaded made in two parts interlocking with each other by a longitudinal movement, and secured by said screw threads; 5th. In a bearing shafting, the cap or upper part of the box constructed with one or more lubricating cavities, combined with a follower arranged in said cavity.

No. 9672. Improvements in Window Bars.

(Perfectionnements aux grilles des fenêtres.)

Joseph A. Quesnel, Arthabaskaville, Que., 18th February, 1879, for 5 years.

Claim.—1st. In a prison or other guard bar, the pipe A, plug B, cap C, core D, washer E and rings or small pipes F and G; 2nd. The arrangement and combination of the pipe A, plug B, cap C, core D and washer E, with any desirable number of rings or small pipes around the core D, having the joints or meetings irregularly placed.

List of Patents issued up to 19th March, 1879, but not yet Officially published in the Patent Office Record.

No. 9679. A. F. Collette, St. Luc, and J. C. Ulric, Chambly, Que., "Candle Making Apparatus," 20th February, 1879.

No. 9680. Jas. Spruce, Waterbury, Ct., U. S. A., "Spring Hinge," 20th February, 1879.

No. 9681. F. M. Mahon, St. Joseph, Miss., U. S. A., "Ice Boat and Bar Dredge," 20th February, 1879.

No. 9682. E. Wassell, Digby, N. S., "Bridge Truss or Girder," 20th February, 1879.

No. 9683. A. E. Feroe, Tivoli, N. Y., U. S. A., "Mashing Process," 20th February, 1879.

No. 9684. T. P. Ball, Brooklyn, (Assignee of J. L. Dickenson, Hempstead), N. Y., U. S. A., "Improvements on Reefing Fore and Aft Sails," 20th February, 1879.

No. 9685. Jas. M. Aitchison and Chs. McBean, Napanee, Ont., "Cast Seed and Plaster Sower," 20th February, 1879.

No. 9686. M. Johnson and M. C. Richardson, Lockport, N. Y., U.S.A., "Hand Truck," 20th February, 1879.

No. 9687. The Ramsay Stove Works, Albany, (Assignee of C. A. Hamlin, Greenbush), N.Y., U.S.A., "Wood Cooking and Heating Stove," 20th February, 1879.

No. 9688. C. C. Doten, Plymouth, Mass., U.S.A., "Self-reaming Screw," 20th February, 1879.

No. 9689. E. M. Ball and D. F. Gallaher, Stanstead, Que., "Fire Escape," 20th February, 1879.

No. 9690. H. B. Perham, New Hamburg, Ont., "Blacking Brush," 25th February, 1879.

No. 9691. H. Léger, Ottawa, Ont., "Boot," 25th February, 1879.

No. 9692. J. Pierce, Alma, Mich., U. S. A., "Scoop," 25th February, 1879.

No. 9693. T. Emery, Pesilitigo, Wis., U.S.A., Log Rolling Machine," (Extension of Patent No. 3153,) 25th February, 1879.

No. 9694. L. Whitney, Muncie, Ind., U. S. A., "Rotary Churn," 25th February, 1879.

No. 9695. F. L. Norton, New York, U. S. A., "Ventilator," 25th February, 1879.

No. 9696. Jno. Pike, Montreal, Que., (Assignee of R. E. Tanner, Cayuga, N.Y., U.S.A.), "Washing Machine," 25th February, 1879.

No. 9697. W. E. Christian, G. C. Greenwood, and C. H. Denison, Bay City, Mich., U. S. A., "Skate," 25th February, 1879.

No. 9698. M. MacVicar, Potsdam, N.Y., U.S.A., "Tellurian Globe," 25th February, 1879.

No. 9699. W. B. Crich, Clinton, Ont., "Spring Bed Bottom," 20th February, 1879.

No. 9700. S. Rochwell, Baltimore, Md., U. S. A., "Button Hole Attachment," 25th February, 1879.

No. 9701. T. R. Butman, Milan, Ohio, U. S. A., "Furnace Grate Bars," 25th February, 1879.

No. 9702. T. R. Butman, Milan, Ohio, U. S. A., "Furnace Doors," 25th Febuary, 1879.

No. 9703. A. E. Barthel, Detroit, Mich., U. S. A., "Grate Bars," 25th February, 1879.

No. 9704. C. G. C. Simpson, Montreal, Que., "Hot Water Feeder for Steam Boilers," 26th February, 1879.

No. 9705. G. D. Daly, Flatbush, N. Y., U. S. A., "Steam Boiler," 3rd March, 1879.

No. 9706. W. Thomas, Geneseo, Ill., U. S. A., "Folding Tables," 3rd March, 1879.

No. 9707. W. M. Button, Wooler, Ont., "Reach for Connecting Bob Sleighs," 3rd March, 1879.

No. 9708. H. R. Ives, Montreal, Que., "Barn Door Hanger," 3rd March, 1879.

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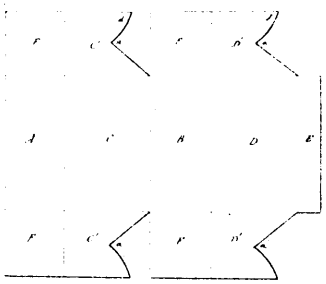

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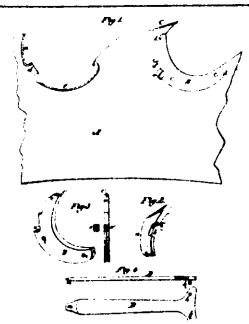

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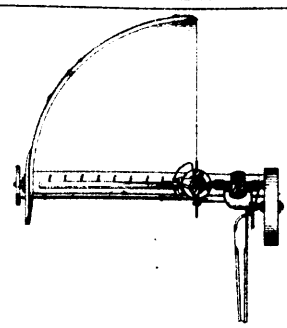

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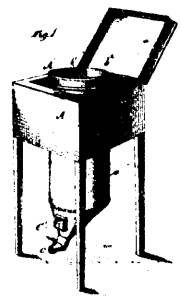

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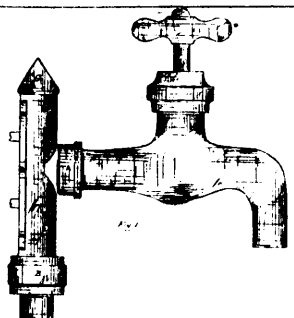

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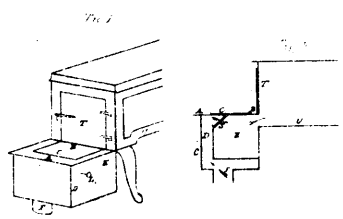

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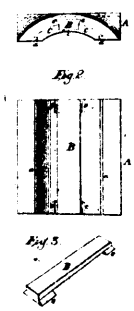

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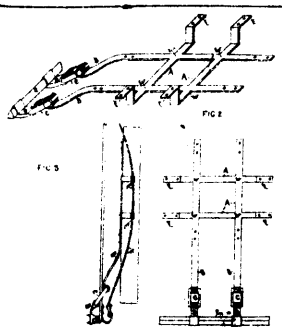

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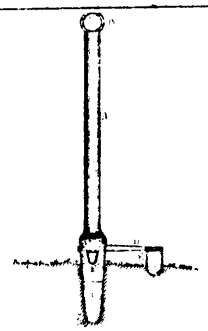

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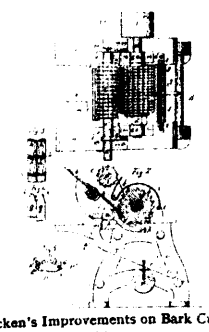

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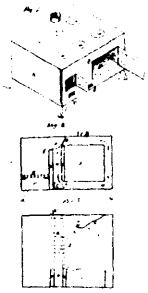

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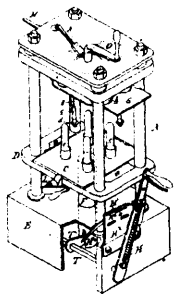

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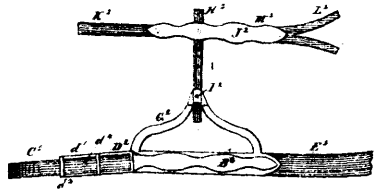

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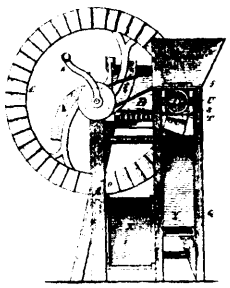

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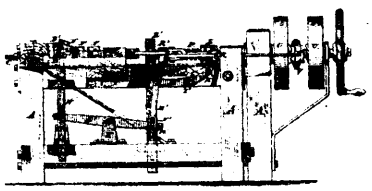

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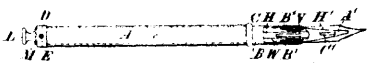

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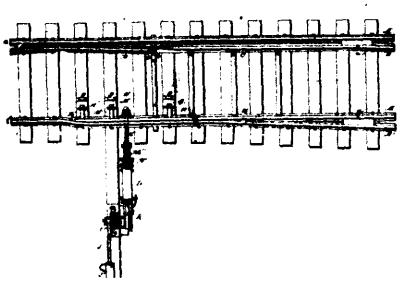

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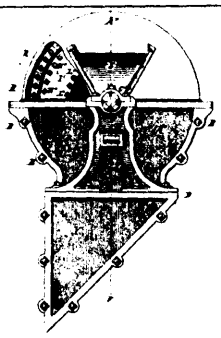

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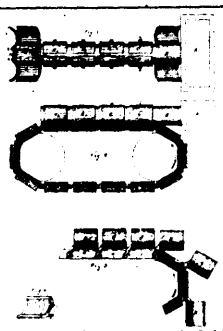

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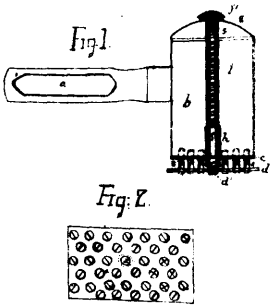

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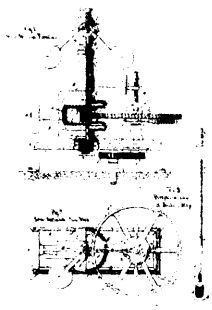

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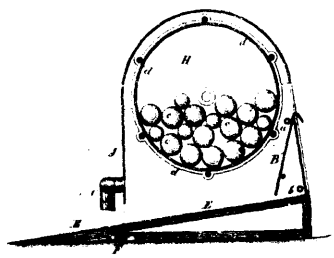

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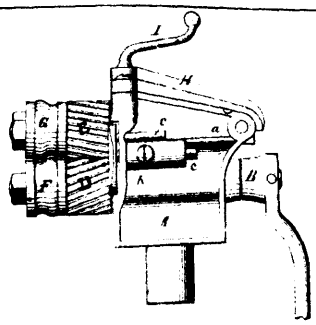

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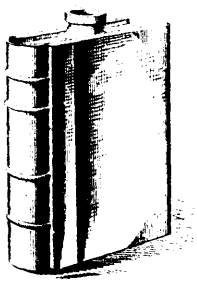

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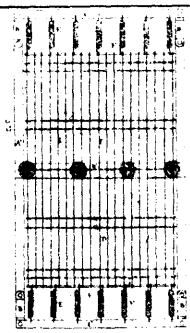
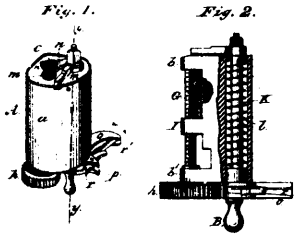
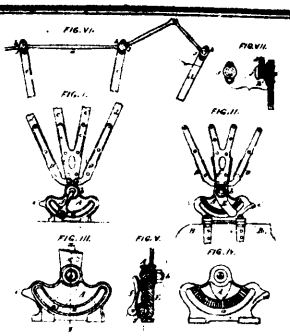


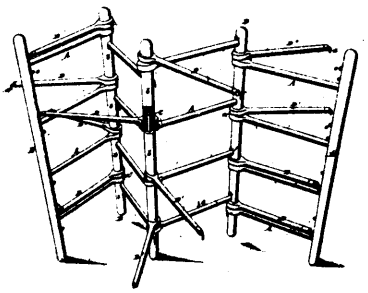
9640 Rice's Improvements on Mattrasses.



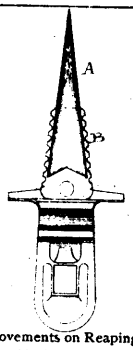
9641 Batchelder's Improvements on Repeating Matches



9643 [illegible] Tops.

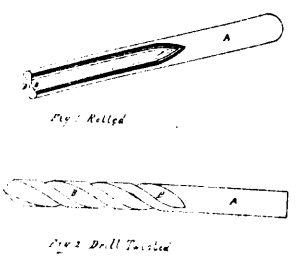


9644 Valley's Improvement on Clothes Driers.

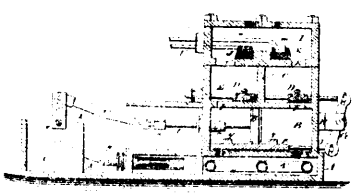


9645 Harris' Improvements on Reaping and Mowing Machines.

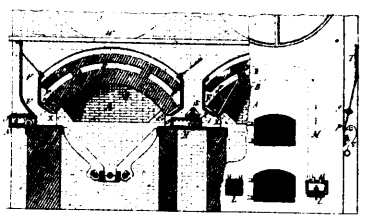
9646 Wasson's Improvement in Bathing Apparatus.



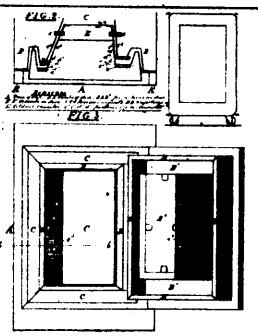
9647 Graham's Art of Manufacturing Twist Drills.



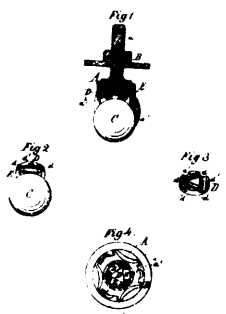
9648 Anthony's Improvements on Steam Engines.



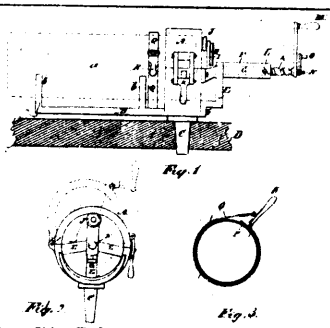
9649 Murphy's Improvements in Boiler Furnaces.



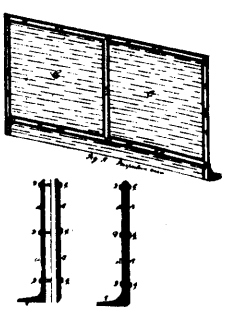
9650 Grove's Improvements on Safes.



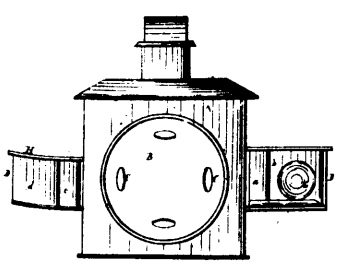
9651 Spencer's Improvements on Castors.



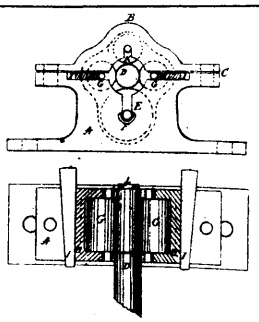
9652 Shirreff's Improvements on Screw-Thread Swaging Machines.



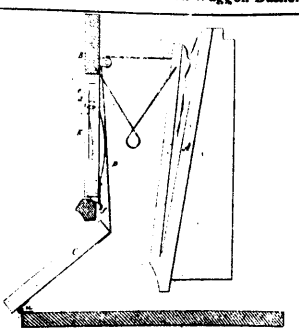
9653 Parkin's Improvements on Waggon Dashers.



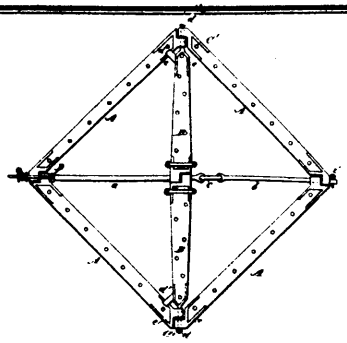
9654 Dressell & Voth's Improvements on Locomotive Head Lights



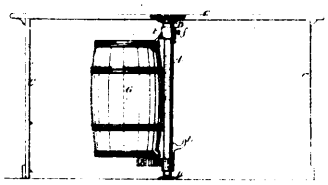
9655 McClory's Improvements on Shaft Bushes.



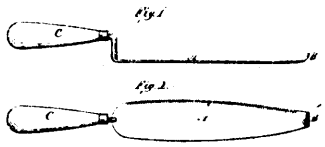
9656 White's Improvements on Organ Pedals.



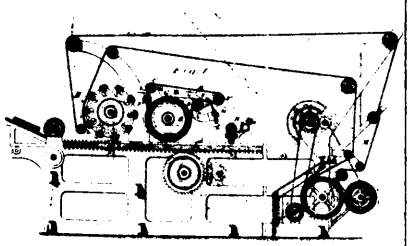
9657 Norton's Improvements on Harrows.



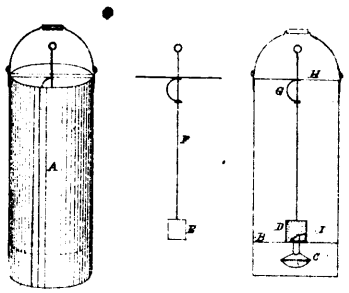
9658 Westlake's Machine for Swinging Barrels.



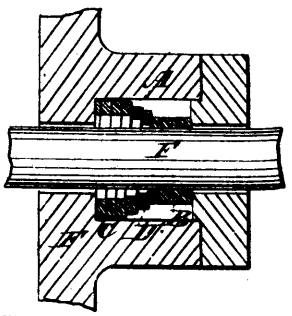
9659 Fairchild & Hazeltine's Improvements on Curry Combs.



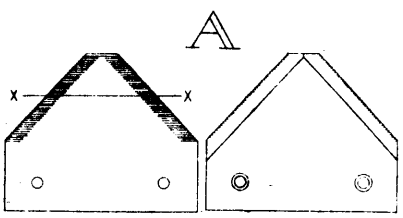
9660 Appleton's Improvements on Printing Presses.



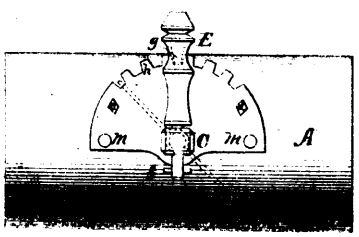
9661 Keeler's Machine for Sprinkling Paris Green.



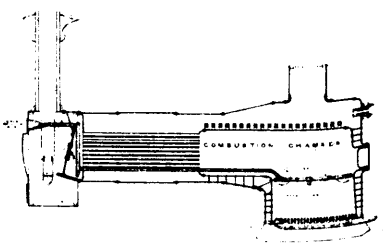
9662 Vivarttas' Improvements on Packings for Steam Engines.



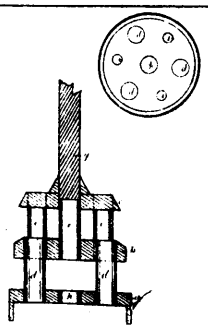
9663 Collinson's Improvement on Reaper Knives.



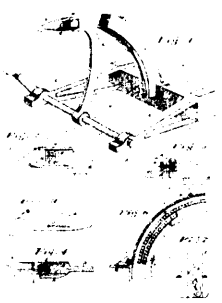
9664 Walker's Stove-Pipe Damper Regulator.



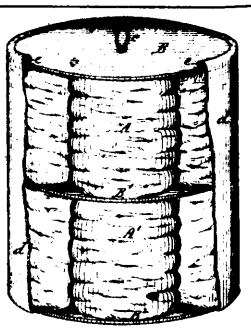
9665 Lett's Device for Arresting Sparks and Burning the Smoke for Locomotives.



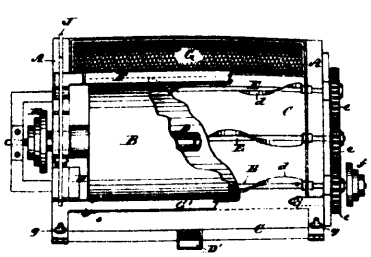
9666 Southward's Improvements on Churn Dashers.



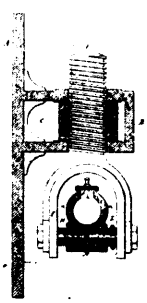
9668 Rittenhouse's Improvements on Grain Binders.



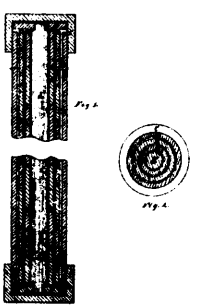
9669 Hamlin's Mode of Packing Cotton Batting.



9670 Eddy's Improvements on Match Machines.



9671 Cone's Improvements on Shaft Hangers.



9672 Quesnel's Improvements in Window Bars.