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INVENTIONS PATENTED.

No. 9148. Improvements in Window Sashes.

(Perfectionnements dans les croisées des fenêtres.)

John Costin, Holbrook, Ont., 30th August, 1878, for 5 years

Claim.—1st. The combination of the spring B with the bar C and friction strip D attached to same, inserted in the vertical bar of the frame of the window sash, 2nd. The combination of the spring B and the bar C, inserted horizontally in the bars of the window sash; 3rd. The combination of the spring B and the bar C, to be applied to doors.

No. 9149. Improvements on Life-rafts.

(Perfectionnements aux radeaux de sauvetage.)

Sprague M. Badger, Whiteey's Point, N. Y., U. S., 30th August, 1878, for 5 years.

Claim.—1st. The corrugated side bars D D with fastening plates d d in combination with the water cask A, 2nd. The corrugated head bars or handles F F with fastening plates f f, in combination with the water cask A.

No. 9150. Improvements on Coin Packages.

(Perfectionnements aux enveloppes à monnaie.)

Dilwin G. Hitchcock, Syracuse, N. Y., U. S., 30th August, 1878, for 5 years.

Claim.—1st. In combination, the circular ends a a, trough A having a continuous slot c, with each other and the flap B, 2nd. The trough A provided with a continuous slot, 3rd. The combination of the circular ends a a, trough A and transparent bracing strip gumming over the continuous slot c and to the ends a a.

No. 9151. Improvements on Churns.

(Perfectionnements aux barattes.)

George J. Cline, Goshen, Ind., U. S., 30th August, 1878, for 5 years.

Claim.—1st. The churn dash composed of the cylindrical hub a, the crescent shaped blades c c, the angular blades f f, intermediate to and in the same plane with said blades, and the blade d having orifices e and extending through the hub a at right angles to the blades c f f, 2nd. The combination of the hub a having plate b, with a central polygonal opening, and the spindle C having the polygonal head y adapted to be received in said opening, and collar k, having a conical face, with the bearing D having a counter sunk head and an outside flange l.

No. 9152. Improvements in Fire-escapes.

(Perfectionnements dans les sautoirs d'incendie.)

Friedrich B. Fuchs, New York, U. S., 31st August, 1878, for 5 years

Claim.—The tube A with rings a and b, the latter with clamp D and the former with handles c and cushion F, the rings g g with nettings k h and cords k k.

No. 9153. Improvements in Travelling Bags.

(Perfectionnements dans les sacs de nuit.)

John W. Lieb, Newark, N. J., U. S., 31st August, 1878, for 5 years.

Claim.—The combination of a bag handle, a wire passing lengthwise through the same and connected with the stirrups on the bag frame, and metallic caps or sockets secured to the ends of the handle and pivoted on the stirrups.

No. 9154. Improvements on Hand Stamps.

(Perfectionnements aux estampes à main.)

William H. Keeler, Buffalo, N. Y., U. S., 31st August, 1878, for 5 years.

Claim.—1st. A hand stamp in which the ink pad retainer is pivoted to the frame within the sides a a and caused to recede from and advance to the

impression plate, by the action of the lugs C' upon the sides and the spring I upon the back of said retainer, 2nd. The combination with the frame A, whose upper part consists of a box shaped compartment, of the impression plate C and the pad retainer G, the parts being arranged in relation to each other as described, within said box shaped compartment, to which the pivoted pad retainer forms a cover to exclude dust, &c., from the impression and inking plates, 3rd. A hand stamp composed essentially of the frame A, the impression plate C provided with the lugs c' and the inking pad retainer G pivoted within the said frame A, and actuated by the lugs c' and spring I; 4th. The combination with the pivoted pad retainer G, of the spring I arranged to act upon said retainer.

No. 9155. Improvements on Wash Boilers.

(Perfectionnements aux chaudières de buanderies.)

Thomas Gunsalus, West Troy, N. Y., U. S., 31st August, 1878, for 5 years.

Claim.—In combination with the boiler A, the false-bottom C' having perforations d and brace or braces D, and vertical end conduits B B having each a series of perforations a at its upper end.

No. 9156. Improvements on Two-Horse Carts.

(Perfectionnements aux charrettes à deux chevaux.)

Robert Clark, Brockville, Ont., 31st August, 1878, for 5 years.

Claim.—A bar of wood or other suitable material which is fastened to the underside of the cart tongue by straps on the tongue and bar and to the saddles of the harness.

No. 9157. Improvements on Ship's Pumps.

(Perfectionnements aux pompes des navires.)

James L. DeWolf, Windsor, N. S., 31st August, 1878, for 5 years.

Claim.—1st. The combination of a three armed lever E, centrally fulcrumed to a post F and a cam wheel B keyed on a shaft mounted on a frame A and driven by motion of crank handles, for operating the plunger rods of one or more pumps, 2nd. The inlet cylinder G, constructed with a valve seat N around the inlet opening, raised above the floor of the chamber and tapering towards the top rim, 3rd. The inlet cylinder G constructed with an enlargement to form a chamber Q, 4th. The inlet cylinder G provided with a ball K for securing the cover L, by a screw M or other fastening, 5th. The cover L constructed with a downwardly tubular projection S, and a valve stem O working loosely therein vertically having a valve plate P closing over the valve seat N, 6th. The plunger T constructed with an annular valve seat V tapering upwardly, and having a socket in the plunger head receiving the stem Q of a valve, which rises horizontally from its seat V.

No. 9158. Improvements on Thill Couplings.

(Perfectionnements aux armons des limoniers.)

Alonzo Gaudy and Henry W. Wilson, Freeport, Ohio, U. S., 31st August, 1878, for 5 years.

Claim.—The lug d on shaft sleeve C fitting a recess a' in one of the chip lugs B, whereby the thills may be upheld.

No. 9159. Improvements in Fruit Dryers.

(Perfectionnements dans les séchoirs à fruits.)

Samuel Myers, Adamsborough, Ind., U. S., 31st August, 1878, for 5 years.

Claim.—1st. The heater B with smoke pipe C, in combination with the casing A provided with the drawers or trays E, 2nd. The drawers or trays E arranged as shown, in combination with the diagonal partition F, the valve G, the heater B and the casing A; 3rd. The valve or guage G, in combination with the partition F, the trays E, and the casing A.

No. 9160. Improvements in Glass Targets.

(Perfectionnements dans les cibles en verre.)

Charles A. Tatum, New York, U. S., 31st August, 1878, for 5 years

Claim.—Roughening the outer surfaces of glass target balls.

No. 9161. Improvements in the Production of Muriate of Ammonia.

(Perfectionnements dans la production du muriate d'ammoniaque.)

William Gentles, Saint Helens, Eng., 31st August, 1878, for 5 years.

Claim.—The improvements in the production of muriate of ammonia by the employment of chloride of calcium.

No. 9162. Improvements in Gates. (Perfectionnements dans les barrières.)

Eugène B. Hardy, (Assignee of William C. Hooker,) Abingdon, Ill., U. S. 7th September, 1877, for 10 years.

Claim.—The combination of the connecting bar E, lever F, segmental pulley G, cords slotted bars and guide pulleys I M L J m, weight and pawl O N, and cords and guide pulleys or eyes P Q R, with each other and with the gate B, the support and box H A and the side posts S.

No. 9163. Improvements in Seeding Machines. (Perfectionnements dans les semoirs.)

James S. Heath and George W. W. Billings, Oshawa, Ont., 7th September, 1878, for 5 years.

Claim.—1st. The casing B, provided with the grain opening b and flange B₁, in combination with the wheel A provided with the recess a₂, arranged in such manner that the grain be run to the front or rear by reversing the motion of the rotating wheel, 2nd. A variable reversible grain distributor composed of the fixed downwardly and laterally projecting casing B and the rotating differentially recessed wheel A, which wheel is capable of horizontal adjustment in relation to the casing, for the purpose of regulating the flow of grain, 3rd. The rotating shaft C on which the grain wheels are uniformly mounted, in combination with the sleeve E, set screw c, lever F and graduated index plate F₁, for the purpose of regulating the flow of grain from the distributors, 4th. The oscillating or tilting grain conductors N uniformly mounted on a rod or shaft, in connection with the distributors, in such manner that the grain may be deflected to the front or rear for sowing by broad cast or drilling, 5th. The oscillating or tilting grain conductors P, in combination with the distributors scattering tubes O and the troughs P₁ of the drilling hoes, 6th. The troughs P provided with the projecting studs p₂, in combination with the heads P₁, provided with the hook p and perforated lug p₁; 7th. The combination and arrangement of the distributors, tilting conductors, tubes, scattering tubes and trough connecting with the drilling tubes, with the frame of machine, 8th. A hoe or tooth for a combined seedling machine composed of an upper permanent tubular section H, to which may be secured in an interchangeable manner a cultivator tooth, for sowing grain by broad casting of a tubular section for sowing grain by drilling, 9th. The upper permanent tooth section H constructed in two sections, the contact faces of which are cut away in the manner shown, to form bolts h₁ and the recess h₂, 10th. A yielding locking device for the teeth of seeding machines, composed of the side bars k connected at one end of the tooth and extending upwardly and forwardly, and connected together by a bolt at a point above the drag bars, in combination with the spring k₁, rollers k₂ and retaining block M; 11th. The retaining block M provided with a bevelled face downwardly projecting tennon m and depending lug m₁, in combination with the divided drag-bars, 12th. The combination of the adjusting bolt L with the retaining spring and block, 13th. The bell crank lever T on one end of which is mounted the intermediate wheel D and slotted link U, in combination with the lifting crank arms Q.

No. 9164. Manufacture of Woollen and Cotton Batts for Upholstering Purposes. (Fabrication de la bourre de laine et de coton pour les meubles.)

Joshua Pitt, Dundas, Ont., 9th September, 1878, for 5 years.

Claim.—The cotton or woollen batts, mixed with cedar shavings as specified

No. 9165. Machine for Dressing the Journals of Railway Carriage Axles. (Machine pour tourner les fusées des essieux de wagons de railroads.)

Joseph N. Smith, Jersey, N. J., U. S., 9th September, 1878, for 5 years.

Claim.—1st. The cutter O provided with peripheral and facial cutting edges, and arranged to be rotated on its axis and carried around the journal simultaneously, and provided with a feeding mechanism whereby it is caused to travel along the journal, so as to dress the same at the will of the operator; 2nd. The cutter O provided with cutting edges, and having an axial rotation, also a rotation around the journal concentric therewith, a feed motion to carry it in a plane parallel to the axis of the journal, and a spring feed to keep it up to its work, 3rd. The cutter O, in combination with radius bar N, feed spring M, arranged to keep the cutter up to its work, axle bolt m, compound pinion r and toothed rim G, 4th. The cutter O, in combination with the plates H I, toothed rim G having lugs c c, boss J, feed screws f f, radius bar N, pinion r and spring M arranged to feed the cutter up to its work, 5th. The spring M, spring plate n, scale plate o, screw p and pin or projecting stop q, in combination with the radius bar N, secured to the plate n, and the cutter O adapted to be fed to its work by the spring M, 6th. The flanged and toothed rim G, provided with lugs e e, and arranged to slide in guides in the plate A, the boss J provided with a bearing in some portion of the plate A, the plates H and I, the feed screws f f, toothed nuts g g, intermediate pinions h h, pinions i i and centre L, combined and arranged to operate a rotary cutter; 7th. The spirally or obliquely grooved lever l arranged to engage the head of the bolt k and to draw it back, so as to disengage the feed mechanism, 8th. The two end plates A bearing the cutter heads secured together, by means of rods B B, and provided with adjustable pads C C to rest upon the threads of the wheels, 9th. The end plate A provided with a carriage E having a screw b and wheels d d, to rest upon the reinforce P, 10th. The boss J bored to receive the centre L, and internally threaded to receive the collar of the same, in combination with the centre L provided with a slender shank, a nut and a screw threaded sleeve on its shank, 11th. The centre L provided with a slender shank bearing a nut on its extremity, and a screw threaded sleeve on said shank, 12th. The counter sink provided with a slender shank to fit the sleeve of the centre L, and a screw thread on its tip to fit the nut on the shank of the centre, 13th. The combination of the end plate A, the wheels d d, arranged to be adjusted as described, and the cutter O, 14th. The boss or hub J, in combination with the feed screws f f fixed thereto and the non-rotative rim G, 15th. The combination of the spring M, the plates n o, the screw p and the stop q, or their equivalent devices, 16th. The end plates bearing the cutting or dressing heads, connected together by rigid rods or ties and provided with adjustable pads to rest upon the wheels, and adjustable rollers to bear upon the reinforce.

No. 9166. Windlass and Capstan. (Quindeau et cabestan.)

James L. De Wolf, Windsor, N. S., 9th September, 1878, for 5 years

Claim.—1st. The combination with the capstan and windlass, of the cap wheel J, pawls D and rags K having arms engaging therewith, 2nd. The pawl rings K constructed in two parts, bolted together and having a pawl box L containing vertical sliding pawls, 3rd. The pawl box secured to the pawl bitt M and having vertical sliding pawls, 4th. The capstan head, containing vertical sliding pawls engaging with ratchets on the rim of the capstan barrel, 5th. The ratchet crown wheel I keyed on spindle A and lying in a recess in the capstan barrel, and engaging with vertically sliding pawls in the capstan head; 6th. The capstan barrel E having pawl boxes on its lower side, and vertical sliding pawls G therein, in combination with a capstan base B having a ratchet rim F, for the engagement of the pawls; 7th. The capstan bed B provided with friction rollers H, to receive the bearing of the capstan barrel E.

No. 9167. Spring Bed Bottom. (Fond de lit a ressorts.)

William W. Bartlett, Portland, Me., U. S., 9th September 1878 (Extension of Patent No. 6787,) for 5 years.

No. 9168. Adjustable Rail Frog. (Rail de croisement mobile.)

Burpee R. Starratt, George H. Campbell and William W. McLellan, Truro, N. S., 9th September, 1878, for 5 years.

Claim.—1st. An improved railroad frog formed by the combination of the slotted plank and plate D E, the detachable tongue F the detachable wing rails G and the detachable key H, with the planks and plates B A C, 2nd. The mode of applying the wing rails G and the tongue F to the body of the frog, that is to say, by sliding the flanges and webs of the said rails and tongue into corresponding recesses in the said body of the frog; 3rd. The body of the railroad frog provided with recessed grooves or slots, to receive the detachable wing rails G and tongue F, 4th. The combination of the detachable key H, with the wing rail G and the grooved or slotted body of the frog.

No. 9169. Process of Preparing Paper, Paste-board or Leather-board. (Procédé de préparation du papier, du carton ou du carton-cuir.)

Nahum Harwood, Leominster, and Joseph A. Harwood, Littleton, Mass., U. S., 9th September, 1878, for 5 years.

Claim.—The method of preparing paste board or leather board, by coloring it by a bath and subsequently running it between rollers to even the color and express the surplus liquid, and afterwards dipping it in a bath of gelatine and pebbling or embossing it and treating it with shellac or varnish, in paste board or leather board evenly colored, coated with gelatine, pebbled or embossed and shellaced or varnished.

No. 9170. Improvements on Wooden Dishes. (Perfectionnements aux gamelles.)

George Gardner, Oliver L. Gardner, New York, and Allen M. Jarvis Westfield, N. J., U. S., 9th September, 1878, for 5 years.

Claim.—A wooden dish or plate composed of one or more veneers of wood pressed into the desired shape.

No. 9171. Improvements on Clothes Wringers. (Perfectionnements aux essoreuses a linge.)

Charles Barlow and Horace H. Bailey, Cookshire, Que., 9th September, 1878, for 5 years.

Claim.—The cork elastic roller A A, in combination with the metal collars C and the groove or flatshaft B, in combination with the wooden roller E

No. 9172. Improvements on Gas Apparatus. (Perfectionnements aux appareils a gaz.)

William Duffield, London, Ont., 9th September, 1878, for 5 years

Claim.—1st. The oil still C, retort E, and supply pipes B D, arranged in the interior of an ordinary heating stove A, 2nd. The pusher H contained in a base of a heating stove, for receiving and purifying the gas before passing to the gasometer; 3rd. A circulating retort constructed of outer case E and inner lining F, and series of partitions or divisions G H alternately short at top and bottom, for receiving the vapour from the still C and superheating it, and so constructed as to form the fire pot of an ordinary stove or to be used in any other position as a retort only.

No. 9173. Improvements on Axle Boxes. (Perfectionnements aux boîtes a grasses.)

Joseph N. Smith, Jersey, N. J., U. S., 9th September, 1878, for 5 years.

Claim.—1st. The saddle A provided with bored or tubular lugs and adapted to be bolted between the struts of the truss, and provided with a recess at the top to receive a spherical segment and recesses in its lower lugs, to receive lugs on the housing B; 2nd. The housing provided with a recess in its roof and a chilled or hardened spherical segment fixed into said recess and attached to said housing; 3rd. The combination of the saddle A provided with a hollow or recess in its roof or top and recesses in its sides, or lugs at the bottom with the housing B provided with a chilled or hardened segment b fixed in a recess in its roof, and lugs a a on its sides to engage the recesses or cavities in the saddle, and the truss struts or plates bolted or secured to the saddle; 4th. The door D provided with a catch e on its inner face, in combination with a spring hook f hinged to the post C, or other interior part, and adapted to engage the catch e when the door is closed, 5th. The chambered post C provided with an apertured bottom z cross-slotted or grooved to admit the oil and attached to the chamber by means of wires J J, 6th. The apertured bottom z, in combination with the disc-valve h, having apertures not coincident with the aperture in the bottom, when arranged in the chambered-post; 7th. The lever shoe F; 8th. The lever shoe F, in

combination with the collar G and the housing B 9th. The cap E, provided with recess and channels in its top, to receive the oil from the pump and carry it to the back or inner end of the bearing, and grooves I in its under face connecting with the former, 10th. The stopping post C provided with an angular upper corner and a lug or brace on the back, to bear against the housing, in combination with the housing and the door D provided with a notch or recess c, 11th. The cap E provided with an overflow channel N, 12th. The saddle A provided with recesses in its lower edges, to receive lugs on the housing; 13th. The chambered post C arranged to extend to the top of the vibrating pump and to house its top on three sides, 14th. The removably attached hardened spherical segment b mounted u on the roof of the housing; 15th. The bearing cap E arranged to extend over the flange of the button, on the end of the axle journal, 16th. The bearing cap arranged to extend over the flange of the axle button, and recessed to form a hood for the same.

No. 9174. Improvements on Harvesters.
(*Perfectionnements aux moissonneuses.*)

John S. Royce, Cuylerville N. Y., U. S., 10th September, 1878, for 5 years.

Claim.—1st. The combination of the wide tongue extension, the sleeve-bearing secured thereto, the driving and supporting wheel, its projecting hub mounted in said bearing, and the stud axle, 2nd. The combination of the loose driving wheel, the projecting tubular hub, the flanged sleeve bearing, the tongue extension, to which said bearing is bolted, the stud axle and the disc or flange upon its inner end against which said bearing and hub abut, 3rd. The combination of the single driving or supporting wheel, the tongue or draft frame inside thereof and the fender encircling the gearing and its supporting frame and hinged at each end to the tongue, 4th. The combination of the single driving wheel, the tongue extension, the rear cross piece secured upon the tongue and connected with the platform at its inner end, the seat and the seat supporting standard mounted upon and rocking on the outer end of said cross-bar outside the driving wheel; 5th. The combination of the tongue, the driving wheel supported thereby, the front or rear cross-bar secured to the tongue, the platform supported at the inner ends of said cross-bars, and the drivers' seat supported upon the outer ends of said cross-bars outside the driving wheel, 6th. The combination of the tongue, the rear cross-bar, the front cross-bar, the drivers' seat supporting plate-spring connected at one end to said front cross-bar, and the standard and spring connecting said supporting spring with the rear cross-bar, 7th. The combination, in a harvester having no main frame proper, of a main driving and supporting wheel, a tongue extending back of said wheel, a rear rigid cross-bar secured to the tongue at its heel, and the platform connects by a hinge to said cross-bar and capable of rocking thereon transversely thereto, 8th. The combination of the supporting wheel, the tongue, cross bars rigidly secured thereto in front and rear of the supporting wheel, the cutting apparatus, the platform hinged to said rear cross bar, the coupling arm hinged to the shoe, and the lever for rocking the guards mounted upon the front cross-bar, 9th. The combination of the supporting wheel, the tongue, the rear cross-bar rigidly secured upon the top of the tongue at its heel the brace-bar rigidly secured to the underside of the heel of the tongue, and the platform and fender jointed to said cross bar and brace and rocking thereon parallel with the tongue; 10th. The combination of the platform, the fender, the vertical bracket at its rear end, the bracket bearings, the coupling pin, the rear cross bar slotted at its end, the perforated brace-bar, and the tongue, 11th. The combination, in a harvester having no main frame proper, of a hinged platform, cutting apparatus, a main gear wheel, its supporting frame or ricket mounted on the platform or finger beam and shoe, and having a loss upon which said gear wheel is mounted, the supporting wheel, its axle, an universal shaft connecting the axle and gear wheel, 12th. The combination of the single driving or supporting wheel, the universal shaft, the main gear wheel, its supporting frame over the heel of the floating finger beam, the vertical crank shaft, and the pinion on its lower end meshing with the teeth of said main gear, 13th. The combination of the gearing supporting frame over the heel of the finger beam, the main gear wheel driven by its universal shaft connection with the supporting wheel axle, the boss on the gear supporting frame about which said gear wheel revolves, the vertical crank shaft turning at its upper end in a collar supported in said boss, the crank wheel and pinion at the lower end of the crank shaft, and the pitman for driving the cutters, 14th. The combination of the frame supporting the gearing over the heel of the finger beam, the main gear wheel revolving about a boss on said frame, the upright crank shaft, the collar in which said shaft is supported at its upper end, the collar shaft mounted in and projecting through said boss, and the disc or washer on said shaft to keep the main gear wheel in place, 15th. The combination of the main gear wheel having an inner and an outer circle of teeth thereon, the crank shaft directly driven by the outer set of teeth, and the crown wheel for driving the rakes by the inner set of teeth, 16th. The combination of the rocking platform, the shoe, the gearing supporting frame secured at its base upon the platform and shoe, the fender, the plate or top support of the gearing frame secured thereto, the rake driving crown wheel mounted on said plate, and the doubly toothed main gear directly driving both the rake and cutters, 17th. The combination of the main gear wheel, its peripheral flange, the crank shaft pinion, its flange, crank wheel, and the adjustable roller, whereby the two gears are kept securely interlocked, 18th. The combination of the gearing supporting frame, the crank shaft, the crank wheel and pinion provided with a collar, the gearing supporting frame or bracket, the rollers carried thereby, the adjustable roller, and the main gear wheel between said roller and the crank shaft, whereby the crank shaft is sustained and rattling of the main gear prevented, 19th. The skeleton gear supporting frame or bracket, constructed with the posts flanged at their lower ends, the brace connecting the posts and carrying rollers, and the swinging arm carrying the adjustable roller, in combination with the gearing, 20th. The combination of a yoke on the rake arm, and a rake head bracket sliding and turning between the yoke arms, whereby the rake head may be oscillated in the yoke by first moving the bracket endwise, 21st. The combination of the short rake arm, its yoke, the rake head, its bracket movable endwise along and oscillating in the yoke, the rake arm extension upon which said bracket is mounted, and the spring acting upon the bracket with a tendency to prevent endwise movement thereof, 22nd. The combination of the short rake-arm, the oscillating rake-head, the bracket at the inner end of the rake-head turning and sliding upon an extension or rod of the rake arm, the rake arm yoke in which the bracket is secured, a locking arm on the yoke base, an engaging shoulder on the bracket base, and a spring acting upon the bracket with a tendency to keep the bracket and yoke locked together to prevent oscillation of the rake head, 23rd. The combination of the series of

continuously revolving rising and falling short rake arms, the oscillating rake head, yokes on the rake arms, brackets secured to the rake heads turning in said yokes and interlocking therewith, springs acting upon the brackets with a tendency to keep them locked with the rake arm yokes, the curved spring rake guides traversed by the rake head brackets, and the tripping arm to oscillate the rake heads, 24th. The combination of the yoke on the rake arm the bracket turning and moving endwise therein, the oscillating rake head the curved spring rake guide supported at one end on the fender and provided with a shoulder or abrupt incline, and the vertically operating tripping-arm acting upon the rake head bracket to unlock it from the rake arm, and cause the rake head to be quickly oscillated by the contact of its bracket with said shoulder, 25th. The combination of the fender the vertically reciprocating tripper arm outside thereof, the spring inside the fender and acting on the tripper with a tendency to keep it elevated, the bell crank lever, and its cord or wire; 26th. The rake head bracket constructed with cross-arms perforated at their middles to turn upon the rake arm rod o, the lug p; to abut against the yoke arm, and the offset or shoulder q; to engage with the locking arm on the yoke, 27th. The rake-head bracket provided with the edge rib q; 28th. The combination of the rake arm, the yoke having the arm q; and perforated outer end, and the removable rake arm rod o; 29th. The combination of the large forked guard fingers, the small guard fingers arranged between them, and the cutter bar provided with teeth arranged at intervals with spaces between them, and each playing through one of the small guard fingers and in one of the forks of each of the large fingers adjacent thereto, whereby the teeth cut at three points at each reciprocation, 30th. The series of large and small guard fingers cast in sections each forming in small guard, and the adjacent parts of the large guards at each side thereof with a single shank, 31st. The series of large and small guards connected together by means of the mortise and tenon connections between the large guards only, 32nd. The combination of the main gear wheel, the crank shaft pinion, and the crown wheel carrying the rakes, whereby both rake and cutter are driven directly from the interposed main gear.

No. 9175. Improvements in Piston Packing.
(*Perfectionnements dans les pistons.*)

Samuel I. Carter, (Assignee of Joseph Varon,) Union, Ind., U. S., 11th September, 1878, for 5 years.

Claim.—1st. A cylinder head provided with a wrench passing through it, 2nd. The combination with a perforated cylinder head provided with a conical valve seat, of a wrench head, a portion of which is tapering or conical in form, and arranged to seat within the conical recess in the cylinder head, 3rd. The combination with a piston the packing of which is adapted to be expanded by means of an angular ended bolt passing through the follower, of a wrench, the shank of which extends through the cylinder head, 4th. The combination of the follower h, rod c, cone g, ratchet u, pins b, bars f, springs d and packing rings e e.

No. 9176. Improvements on Carburetters.
(*Perfectionnements aux carburateurs.*)

Edward A. C. Pew, Welland, Heber V. Noel, Ottawa, Jay W. Schooley Welland, and Arthur Lloyd, St Catharines, Ont., 19th September, 1878, for 5 years.

Claim.—A gas carburetting apparatus formed by outer and inner shells A C and partitions E E', provided with gas tight ends B and D, the spaces between the outer and inner shells A C and covers B D being filled with non-combustible and non-conducting material, and the spaces between the perforated partitions E E' packed with cotton, wool, or its equivalent, and partially filled with a carbon oil of suitable specific gravity, the said apparatus being arranged so that the gas will enter at the pipe F and after passing through in the manner described, finally escape into the distributing pipe G.

No. 9177. Improvements in Gas Carburetters.
(*Perfectionnement dans les carburateurs à gaz.*)

Madison Baell, Buffalo, N. Y., and Walter B. Moore, New York, U. S., 23rd September, 1878, for 5 years.

Claim.—1st. The combination of perforated cylinders C and D, with the headings E having annular flanges e e' and with rod F and nuts f f', 2nd. The combination of perforated cylinders C and D having absorbent packing between them, with the imperforated plate K, 3rd. The imperforated cylinder A having inlet pipe G and outlet pipe H, heads B, rod F and nuts f f', combined with the perforated cylinders C and D having an absorbent between, and fitted with headings E, having flanges e e', 4th. The air or gas inlet pipe G, in combination with perforated cylinders C and D, and plate K, 5th. Placing the cylinders A C and D in a longitudinal form.

No. 9178. Improvements on Mowing Machines.
(*Perfectionnements aux machines à faucher.*)

David Crowell and James Grey Florence Ont. 23rd September 1878, for 5 years.

Claim.—1st. The combination with the main frame A and cam wheel D of the oscillating sliding bar F, bracket J, lever K and connecting bar L, for throwing the bar F in and out of engagement with the cam wheel D, 2nd. The combination with the main frame A and finger bar O of the shoe M and bar Q connectedly hinged as set forth, 3rd. The combination with the cutter bar R of the hinged bar S and sliding bar F oscillating as set forth.

No. 9179. Process of Curing Fish.

(*Procédé de préparation du poisson.*)

Sumner W. Gilman, Chelsea, Mass., U. S., 23rd September, 1878, for 5 years.

Claim.—Skinning the fish, removing the bones and skin from the flesh, and subsequently without granulating it and soaking it in brine, subjecting the said fish to compression in a press, so as to expel the water or surplus brine from and reduce the mass to a cake or cakes.

No. 9180. Improvements on Car Roofs.

(*Perfectionnements aux toitures des wagons.*)

Hiram Aldridge, Chicago, Ill., U. S., 23rd September, 1878, for 5 years.

Claim.—1st. In a car roof wherein metal sheets and wood covering boards are used, the combination of the clamping ridge-board and ridge-beam, and the outer eave beam with spaces between them and the eaves, for the pur-

pose of fastening the roof without piercing the sheets and allowing water to escape. 2nd. In a car-roof, the combination of the laterally adjoining roof boards E, of a length greater than that of the lining or joint sheets, and the ridge-clamps; 3rd. In a roof, the boards E having their inner or lower sides corrugated to fit a corrugated metal lining or metal joist strips.

No. 9181. Improvements on Well Pumps.

(*Perfectionnement aux pompes de puits.*)

John A. Nowell and Ary Lucasse, Kalamazoo, Mich., U. S., 23rd September 1878, for 5 years.

Claim.—The socket couplings a b and nipples c c, in combination with the tube E for guiding a reamer in forming a seat for a valve box D, and for guiding the latter into its seat.

No. 9182. Improvements on Oil Wells.

(*Perfectionnements aux réservoirs à huile.*)

Charles Means, Modoc, Pa., U.S., 23rd September, 1878, for 5 years

Claim.—The combination of the return working barrel, the suction pipe and the vent pipe.

No. 9183. Compound for Washing Clothing.

(*Composé pour laver le linge.*)

John Lafontaine, Belleville, Ont., 23rd September, 1878, for 5 years.

Claim.—A compound of common soap dissolved in water and mixed in a solution of boiling water, sal soda, borax, unslacked lime, benzole and spirits of ammonia.

No. 9184. Improvements on Stoves and Ranges.

(*Perfectionnements aux poêles et aux landiers.*)

George R. Prowse, Montreal, Que., 23rd September, 1878, for 5 years.

Claim.—The frame A having projections E, arms G, in combination with the door C having staples D.

No. 9185. Improvements in Carriages.

(*Perfectionnements dans les voitures.*)

Daniel Conboy, Uxbridge, Ont., 23rd September, 1878, for 5 years.

Claim.—1st. The standards C provided with the bracket-arms D, in combination with the quadrant plates E. 2nd. The clamp and screw fastening F; F, in combination with the quadrant plate E, and bracket arm D. 3rd. The combination of the pawl G with the notched quadrant plate E and bracket arm D. 4th. The quadrant plates E solidly attached to the rear bow and provided with the forwardly projecting arm G, to which the other principal bows are pivoted; 5th. The sectional hinge braces I pivoted to the front and rear bows and provided with the central overlapping hook joint; 6th. The intermediate bows H H, in combination with the folding horizontal braces I; 7th. A cover frame for buggies and carriages, in which the bows are arranged close upon the rear bow and the whole frame is mounted in such a manner that it may be adjusted and held at any position desired over the seat.

No. 9186. Machine for Dressing the Caps for the Journals of Railway Carriage Axles.

(*Machine à finir les cuillers des fusées d'essieux des wagons de railroutes.*)

Joseph N. Smith, Jersey, N.J., U. S., 23rd September, 1878, for 5 years

Claim.—1st. A table F to bear the work to be dressed, in combination with a suitable rotating cutter C, the table being arranged to rotate on an axis concentrically or eccentrically, with the cutter as desired, the eccentricity being effected by means of a radial adjustment; 2nd. A table F to bear the work to be dressed, in combination with a rotating cutter C, the table being arranged to rotate on an axis parallel with the axis of the cutter, and provided with mechanism whereby it may be thrown out of rotated gear if desired, and mechanism whereby it may be caused to traverse or move radially; 3rd. The combination of the table F provided with teeth on its margin, or their equivalent, the bed E arranged to traverse the bed plate of the machine, the slotted lever G, the idler pinion e and the pin z arranged to play in the slotted lever G; 4th. The plate c and tapered key J, in combination with the bed E; 5th. The table F provided with teeth or other equivalent mechanism, whereby it is rotated, and the ring d, in combination with the bed E; 6th. The combination of the plate B, or its equivalent, the strip c mounted thereon, the key j adapted to be adjusted by a suitable screw, the bed E, the ring d and the table F arranged to rotate on the bed E; 7th. The clamping mechanism composed of the pivoted jaws l l, screws of their equivalent m, plate k provided with a suitable clamp screw and bearing post n; 8th. The combination of the carriage J with the plate k and the clamping mechanism mounted thereon, and the bearing post n; 9th. The carriage I mounted upon the bed-piece H and arranged to be adjusted or moved thereon, in a direction at right angles to the radius of the table F, in combination with said table, the block H and the clamping mechanism borne by said carriage I; 10th. A clamping device to hold the piece to be dressed, composed of two jaws to grasp it, arranged to be drawn back so as to press the piece grasped against a fixed post or abutment; 11th. The combination of the table F arranged to rotate on the bed E, and the bed E arranged to traverse radially with respect to the table; 12th. The arrangement in combination with a rotating table, with teeth on its periphery, adapted to be adjusted radially with respect to a driving pinion, of a device whereby the said pinion is kept in mesh with the teeth on the periphery of the table.

No. 9187. Improvements on Milk Coolers.

(*Perfectionnements aux boîtes à lait.*)

David Lockhart, Richmond, Que., 23rd September, 1878, for 5 years.

Claim.—1st. The bevelled bottom with groove or grooves; 2nd. The lip F placed over the mouth of the outlet spout; 3rd. The position of the gauge glass; 4th. The outlet spout E.

No. 9188. Improvements on Baskets.

(*Perfectionnements aux paniers.*)

Isaac I. Cole, Hillsdale, N.J., U.S., 23rd September, 1878, for 5 years.

Claim.—A basket whose ends and handle are secured by a single nail at each side.

No. 9189. Improvements in obtaining Cream from Milk.

(*Perfectionnements dans la production de la crème.*)

Philander Shaw, Boston, Mass., U.S., 23rd September, 1878, for 5 years.

Claim.—1st. The process of treating milk for raising cream by covering the mouth of the can containing the milk with a non-conductive cover; 2nd. The process for obtaining cream from milk by surrounding the milk can with a water jacket that is exposed, first to heat by which the milk is heated through the water jacket to the desired temperature, and afterwards gradually cooled from the bottom upwards; 3rd. The process for removing the cream from the milk, by gradually drawing the cream downwards through a tube; 4th. The apparatus for obtaining cream from milk, composed of the milk can a, the water jacket i contained in the vessel k, the closed receptacle l, the heater m and the cooler p; 5th. The milk can a for raising cream, in combination with its non-conducting cover b; 6th. The milk can a for raising cream, in combination with the telescopic tubes d f, the graduated scale g and the indicator h; 7th. The combination with a milk receptacle, of a discharge tube of which the end inside of the receptacle is adjustable to different altitudes.

No. 9190. Improvements on Railways.

(*Perfectionnements aux railroutes.*)

James A. Bonnell and John M. Summers, Philadelphia, Pa., U.S., 23rd September, 1878, for 5 years.

Claim.—1st. The metal cross-tie or girder, having opposite side flanges or ribs a and a top rounded gently transversely, and merging with abrupt curves into the said sides; 2nd. A rail supporting girder or tie, having a transversely ribbed top; 3rd. The combination of the recessed girder A having openings i with the rails B, the interposed elastic blocks e and clamping blocks d.

No. 9191. Improvement on Car Windows.

(*Perfectionnement aux fenêtres des wagons.*)

Benjamin L. Wood, Taunton, and Benjamin D. Washburn, Boston, Mass., U. S., 23rd September, 1878, for 5 years.

Claim.—The frame A with its central bar C, the sashes B and the jointed lever K, or its equivalent, when combined together for the purpose of forming a detachable car window, as a new article of manufacture.

No. 9192. Improvement in Saw Teeth.

(*Perfectionnement dans les dents des scies.*)

Jesse King, Oswego, N.Y., U.S., 23rd September, 1878, for 5 years.

Claim. 1st. A saw-tooth made from iron or steel that will not temper or only partially temper with case hardened edges, in combination with a continuous set along the whole length of the bit of the tooth, 2nd. In combination with the first claim, a saw tooth with a flat semi-circular or angular top surface.

No. 9193. Improvements on Stove Pipes.

(*Perfectionnements aux tuyaux de poêles.*)

John Harrison, Cleveland, Ohio, U.S., 23rd September, 1878, for 5 years.

Claim.—A stove pipe rivetted at one end only, the combination of the folding lap D, grooves F C, rib or bead H and spring C.

No. 9194. Resonant Chamber for Cabinet Organs.

(*Chambre de résonance pour les basses-orgues.*)

George Blatchford, Mitchell, Ont., 23rd September, 1878, for 5 years.

Claim.—1st. A resonant air chamber for organs having the reed-board inserted into grooves inside of the chamber. 2nd. A resonant air chamber for organs made of a horizontal and a vertical section having solidifying or qualifying bars; 3rd. In combination with a resonant chamber for an organ an auxiliary front swell in connection with or independently of the grand swell at the top of the chamber. 4th. The combination of the knee-stop H lever G, pivot I and levers J K L M and N, lever O, lever P and leather strap attachment.

No. 9195. Improvements on Car Starters.

(*Perfectionnements aux leviers de mise en train des wagons.*)

Jesse H. Quackonbush and Henry M. Yeoman, East Saginaw, Mich., U.S., 23rd September, 1878, for 5 years.

Claim.—1st. In a car starting device, the pawl H pivoted in the block G sliding upon guides F, in combination with the draw bar E and ratchet wheel D; 2nd. The latch K, in combination with a draw bar E; 3rd. The pawl H pivoted in the block G sliding upon guides F and latch K, in combination with the draw bar E and ratchet wheel D; 4th. The pawl H pivoted in the block G sliding upon guides F, spring I and latch K, in combination with a draw bar E and ratchet wheel D; 5th. The pawl H pivoted to the block G, sliding upon guides F, spring I J and latch K, in combination with the draw bar E and ratchet wheel D; 6th. The pawl H provided with the stem H; and arm d, in combination with the wedge block L, draw bar E and ratchet wheel D.

No. 9196. Sub-aqueous Drilling Apparatus.

(*Appareil de forage sous-marin.*)

Ebenezer E. Gilbert, Montreal, Que., 23rd September, 1878, for 5 years.

Claim.—1st. The combination of the spindle C, bed G and tube L; 2nd. The combination of the bed G, sub-bed H and cylinder Z, hinged thereto; 3rd. The combination of the chamber H, piston rod C, having a passage

within it connecting with the chamber H, tubular drill stock Q¹ and bit O₂. 4th. The combination of a tubular drill stock Q¹, supplied with a stream of water passing through it and the bit O₂, with the bit O₂; 5th. The combination of the chamber H, piston rod C₁ and pipe I₁ having force pump attached thereto; 6th. The combination of the cylinder Z₁, having piston H₁ and posts T₁ V₁ and A₂, arranged as described with valve W₁; 7th. The combination of the bracket I₂ having projection M₂, with pipe L₂, guide N₂, and stock Q¹; 8th. The combination of the frame A, bed G, frame B and spud C₂; 9th. The combination of the spud C₂, bracket I₂, having projection M₂ and tube L₂; 10th. The combination of the bracket I₂, tube L₂, guide N₂ and spud C₂, with the drill stock Q¹; 11th. The combination of the bed G and spud C₂ with the sub-rod H₁ and cylinder Z₁ attached thereto as described.

No. 9197. Improvements on a Folding Table.
(*Perfectionnements d'une table pliante.*)

Addison W Walker, (Assignee of Volney B. St. John Erie, Pa., U. S., 23rd September, 1878, for 5 years

Claim—The wooden bow spring C of such a length and so formed at its ends as to engage with the notches d, in the stiles D, in combination with the legs B and back stay F.

No. 9198. Improvements on Safes.
(*Perfectionnements aux coffres-forts.*)

Thomas Saunders and Robert Bain, Toronto, Ont., 23rd September, 1878, for 5 years.

Claim—1st. The construction of a safe having the front frame B made of angle iron and the back frame B of bar iron, having one or more welds and having rounded solid corners the said bars to be rolled or pressed or otherwise manipulated into the proper size and shape; 2nd. The construction of a safe having the rabbets or steps of the door and jambs made of sheet of iron, the same to be rolled or pressed, or otherwise manipulated into shape in one or more pieces.

No. 9199. Improvements on Wood Spirals.
(*Perfectionnements aux spirales en bois.*)

Nathaniel Fuller Boston Mass U.S. 23rd September 1878, for 5 years

Claim—The wood spiral provided with a coloured spiral edge or band of any desired width, or coloured throughout with one or more colours, or coloured more or less from either ends.

No. 9200. Improvements on Stump Machines.
(*Perfectionnements aux arrache-souches.*)

Charles Hazelton, Townsend, Ont., 23rd September, 1878, for 5 years

Claim—1st The combination of shaft A and pulley B suspended in derrick frame and worked by rope or chain C, running through the sheave or snatch block D, secured to base of frame work; 2nd. The combination of the shaft A with the lever E and lever support C suspended from the frame-work.

No. 9201. Mechanism for Lasting Boots and Shoes.
(*Machinè à enformer les chaussures.*)

Franklin P. Hinds, Quincy, Mass., U.S. 23rd September, 1878, for 5 years.

Claim—1st. In a boot and shoe lasting apparatus, the combination with a pair of nippers a, b, and an automatic tack feeding and driving mechanism, of a trigger T, for operating the driving mechanism. 2nd. In a hand lasting tool, the combination with the tack feeding and driving mechanism of a trigger T; 3rd. The automatic feeding device composed of the spring fingers d, d', in combination with the driver D with any suitable means for operating the driver and for giving the agitator a reciprocating motion. 4th. The spring fingers d, d' operating to close the chute i, and to present the tack to the driver.

No. 9202. Improvements on Platform Cars.
(*Perfectionnements aux wagons plateformes.*)

Owen M Avery, Pensacola, Florida, U. S., 23rd September, 1878, for 5 years.

Claim—1st The combination of the socket C, having slots d and pivoted stanchion D, having slot d' and the locking latch F. 2nd. The combination of the socket C, the pivoted stanchion D and the locking-latch F, pivoted to the bolt E and made detachable therewith.

No. 9203. Improvements on Baskets.
(*Perfectionnements aux paniers.*)

Isaac I. Cole, Hillsdale, N.J., U.S., 23rd September, 1878, for 5 years.

Claim—1st. A blank of thin wood veneer or other flexible material cut or stamped with two notches on each side thereof, and provided with holes A B C D E F. 2nd. A basket handle blank with spatulate ends. 3rd. The combination of the basket blank and handle constructed and united, as set forth.

No. 9204. Improvements on Washing Machines.
(*Perfectionnements aux machines à laver.*)

Albert Foster, Essex Centre, Ont., 23rd September, 1878, for 5 years

Claim—The combination of cylinder C having triangular corrugations on its circumference fitted with a spur gear on one end and a shaft at the

other, and the boiler A provided with bearings on both sides, and gear wheel C and crank D.

No. 9205. Improvements in Horse Powers.
(*Perfectionnements dans les manèges.*)

George E. Burt and Edwin A. Hildreth, Harvard, Mass., U. S., 23rd September, 1878, for 5 years.

Claim—1st. In combination with the platform and rack attached thereto and spur wheel b meshing into said rack above and below the shaft S, spur wheel G and pulion H, having rolling coogs and counter shafts S₂, for giving rotation to the driving pulley B; 2nd. The fluke L L₂, cast with an open rack leaving open spaces between the coogs. 3rd. The combination and arrangement, with the link L, of the posts p p on the upper face and near the two extremities of the link, and the rib r on the inner edge of the link, both being formed to fit into grooves in the lags, to hold the links in position; 4th. In combination with the tread L of an endless, chain horse power platform, the truss rods q passing through the ends of the tread and outside of the path of the horse, and support for supporting the tread at the middle.

No. 9206. Process of Coating Boiler Tubes.
(*Procédé pour enduire les bouilleurs des chaudières.*)

Robert Brayton, David June and Oratus S. French, Fremont, Ohio, U.S., 24th September, 1878, for 4 years.

Claim—The process for coating boiler tubes of iron or steel, by first heating them to a red heat, then covering them with pulverized borax, again heating them to a yellow heat, and finally subjecting them to a bath of non-corroding metal, for the purpose of saturating them as well as coating them.

No. 9207. Improvements in Steel Tempering.
(*Perfectionnements dans le recuitage de l'acier.*)

John B. Armstrong, Guelph, Ont., 24th September, 1878, for 5 years.

Claim—1st. The oven or retort C and the oven or retort D, arranged in connection with each other and a fire chamber and a series of heat conducting passages, in such manner that one oven or retort may be used for heating the material before hardening, and the other oven or retort may be used for heating to draw or let down the temper to any fixed or uniform degree; 2nd. The combination of the fire-chamber H, passages or flues E, heating oven or retort C and drawing oven or retort D. 3rd. The air space A₁ formed in the brickwork around one or both heating chambers for the purpose of retaining the heat in said chamber or chambers by preventing radiation; 4th. Combination with the fire-chamber H, passages E, and retorts or ovens C D of the regulating blast pipe B, and dampers G. 5th. The combination with the retorts C and D, of pyrometer or heat indicators.

No. 9208. Machine for Moulding Sand for Casting.
(*Machinè à mouler le sable de coulèe.*)

William Aikin and William W. Drummond, Louisville, Ky., U.S., 24th September, 1878, for 5 years.

Claim—1st. An improvement in the art of moulding in sand forming molds by compression, by first filling loosely the open flask placed over a box and movable follower, then closing the flask and afterwards compressing all the sand into the flask about the pattern by the uniform forward movement of the follower and pattern, then withdrawing the pattern, and finally withdrawing the intermediate sections of the follower. 2nd. The combination of the box B, flask C and cup E, with the sectional follower G H, the sections of which are successively actuated in one direction, and alternately in the other. 3rd. In combination with the sectional follower G H, the cross-heads G₁ H₁, rods G₂ and piston H₂, yoke G₃ and double cam L L₁, for allowing the section to be separately withdrawn; 4th. In combination with the plungers and cans, the adjustable bearings of the inner, for regulating the action of the plungers upon the sand in the flask; 5th. In combination with the frame D, the double steady pins D₁ D₂ of which section D₃ engages the guides on the box B, in operating the machine, and section D₄ enters guide on the drag inclosing the flask; 6th. The combination of the hopper, the sand transferring drawer, the movable bottom Q and an automatic latch or latches, for locking the said bottom to and unlatching it from the said drawer, as the latter is drawn backward and forward in transferring the sand from the hopper to the flask; 7th. The combination of the hopper O, flask C, bottom Q and sliding bar R, which moves far enough to carry the bottom to the flask, and then is disengaged. 8th. The combination of the hopper O, flask C, drawer P, bottom Q, bar R and latch S.

No. 9209. Machine for Moulding Sand for Casting.
(*Machinè à mouler le sable de coulèe.*)

William Aikin and William W. Drummond, Louisville, Ky., U. S. 24th September, 1878, for 5 years.

Claim—1st. The combination of the shaft C, eccentrics D D₁, double pattern carrying frame E E, arranged so that one pattern section shall be drawn from the sand at the same time that the other pattern section is forcing the sand into another flask, to form the mould by compression. 2nd. The combination of the follower plate and its frame and the pattern and its frame and actuating mechanism, for imparting motion, first to the follower plate and then to both, it and the pattern.

List of Patents issued up to 23rd October, 1878, but not yet Officially published in the Patent Office Record.

- No. 9210. T. H. Hicks, London, Ont., "Automatic Coal Gas Saver," 24th September, 1878.
- No. 9211. S. Aldred, Maryon-Road, Charlton, Kent Co., Eng., "Railway Rail," 30th September, 1878.
- No. 9212. R. M. Wanzer, Hamilton, Ont., (Assignee of E. W. Silsby, Ottumwa, Iowa, U. S. A.), "Plating Machine," 30th September, 1878.
- No. 9213. Rev. E. Draper, North Bridge, Ont., "Organ Top," 30th September, 1878.
- No. 9214. O. E. Wait, Gardner, Mass., U. S. A., "Spool and Bobbin," 30th September, 1878.
- No. 9215. J. Carter, Blyth, Ont., "Boiler Cleaner," 3rd October, 1878.
- No. 9216. E. Hill and S. Burland, (Assignees of D. Vass,) Montreal, Que., "Combined Chair and Lounge," (Extension of Patent No. 2782,) 3rd October, 1878.
- No. 9217. E. Hill and S. Burland, (Assignees of D. Vass,) Montreal, Que., "Combined Chair and Lounge," (Extension of Patent No. 2782,) 4th October, 1878.
- No. 9218. D. W. Copeland, Theresa, N. Y., U. S. A., "Thill Coupling," 4th October, 1878.
- No. 9219. S. Crawford, London, Ont., "Reaper and Mower," (Extension of Patent No. 2783,) 5th October, 1878.
- No. 9220. A. Woodward, Shelburne Falls, Mass., U. S. A., "Wall Protector," 9th October, 1878.
- No. 9221. J. Rourk, Kingston, Ont., "Steam Propeller, (Extension of Patent No. 2788,) 10th October, 1878.
- No. 9222. J. C. Dietrich, Galt, Ont., "Saw," (Re-issue of Patent No. 7188,) 10th October, 1878.
- No. 9223. G. W. Wheeler, Ogdensburgh, N. Y., U. S. A., "Fence," 10th October, 1878.
- No. 9224. J. R. Holcomb, York, Ohio, U. S. A., "Telephone," 14th October, 1878.
- No. 9225. T. J. Gifford and T. H. Gifford, Salem, Mass., U. S. A., "Shoe Press," 14th October, 1878.
- No. 9226. J. Appleby, Palmerston, Ont., "Lumber Wagon," 14th October, 1878.
- No. 9227. J. B. Armstrong, Guelph, Ont., "Tire," 14th October, 1878.
- No. 9228. J. T. Ross, Toronto, Ont., "Edging Machine," 14th October, 1878.
- No. 9229. W. H. Brush, Buffalo, N. Y., U. S. A., "Brick Kiln," 14th October, 1878.
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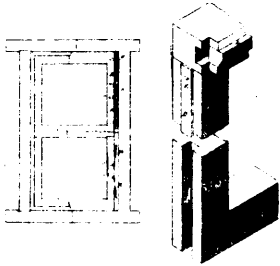
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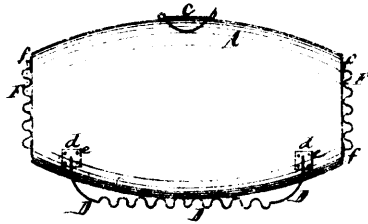
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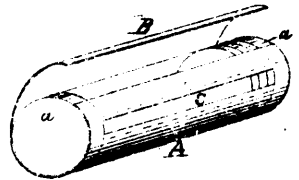
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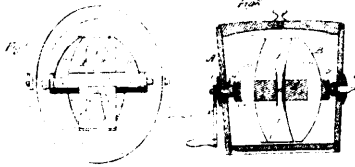
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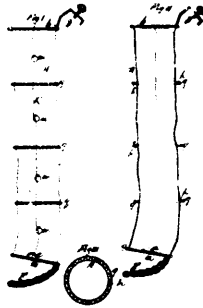
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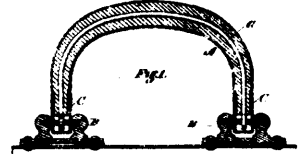
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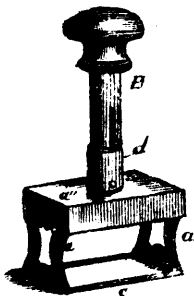
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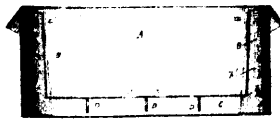
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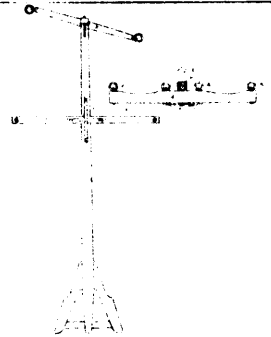
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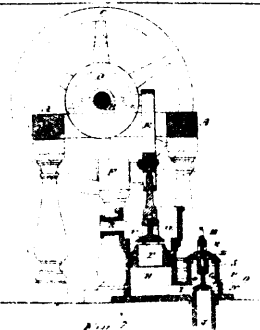
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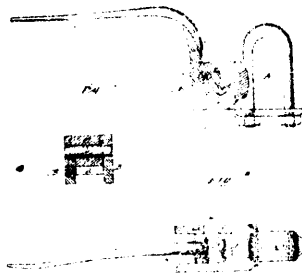
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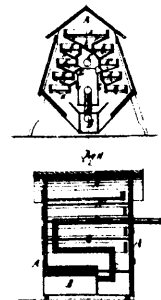
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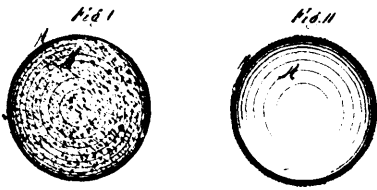
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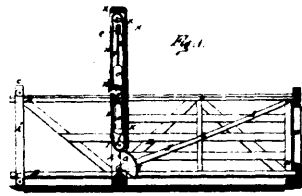
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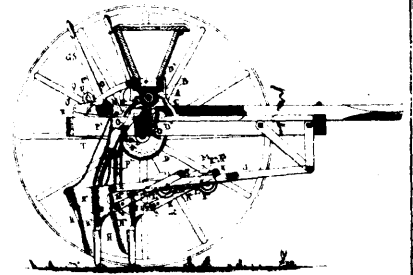
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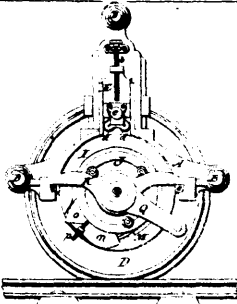
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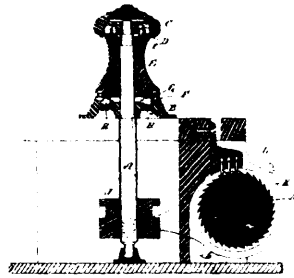
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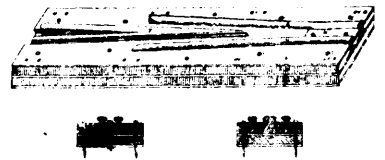
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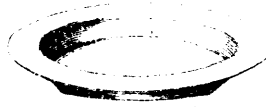
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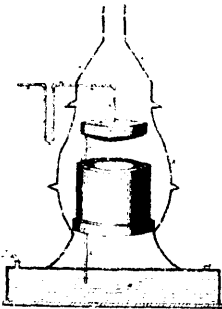
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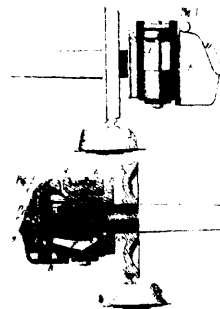
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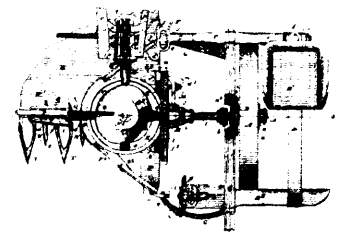
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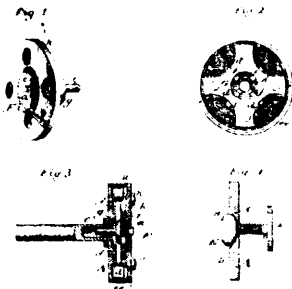
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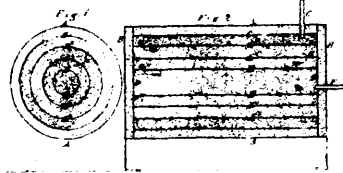
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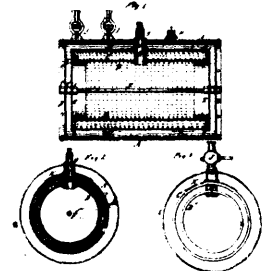
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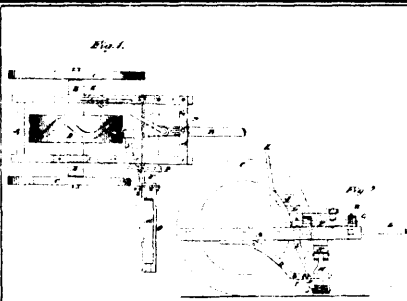
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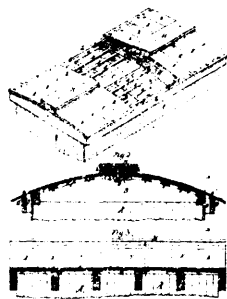
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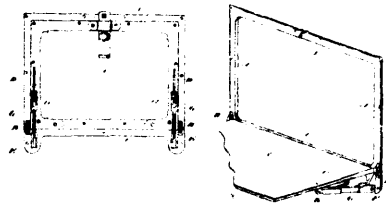
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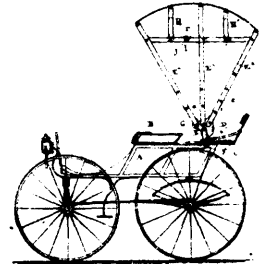
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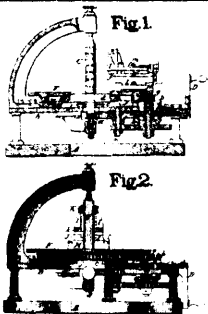
9182 Means' Improvements on Oil Wells.



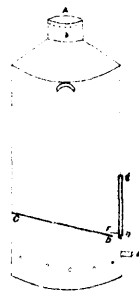
9184 Prowse's Improvements on Stoves and Ranges.



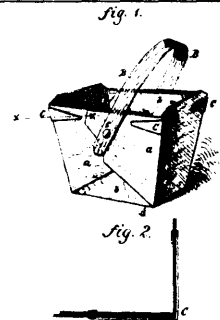
9185 Conboy's Improvements in Carriages.



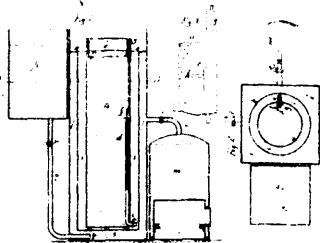
9186 Smith's Machine for Dressing the Caps for the Journals of Railway Carriage Axles.



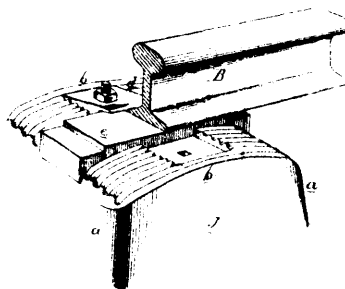
9187 Lockhart's Improvements on Milk Coolers.



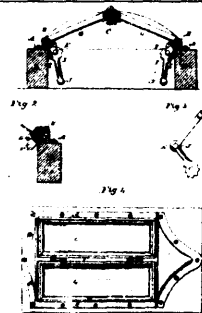
9188 Cole's Improvements on Baskets.



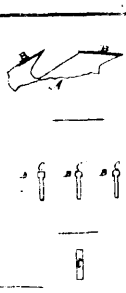
9189 Shaw's Improvements in Obtaining Cream from Milk.



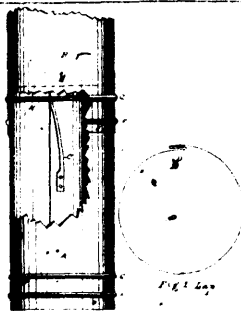
9190 Bonnell & Sumners' Improvements on Railways.



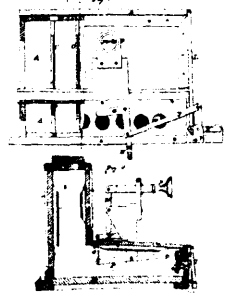
9191 Wood & Washburn's Improvement on Car Windows.



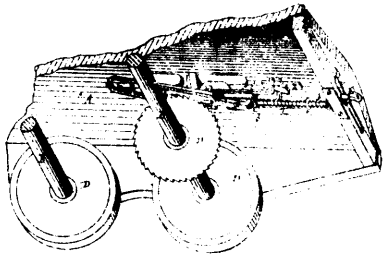
9192 King's Improvement in Saw Teeth.



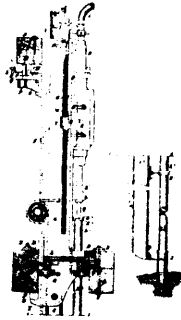
9193 Harrison's Improvements on Stove-pipes.



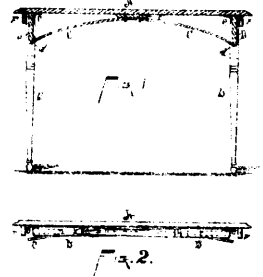
9194 Blatchford's Resonant Chamber for Cabinet Organs.



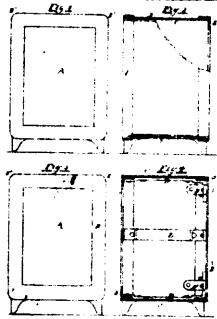
9195 Guackenbush & Yeoman's Improvements on Car Starters.



9196 Gilbert's Sub-Aqueous Drilling Apparatus.



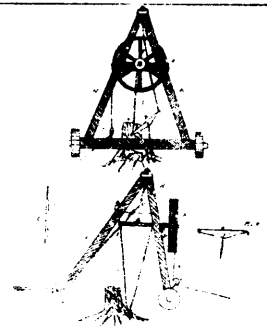
9197 St. John's Improvements on a Folding Table.



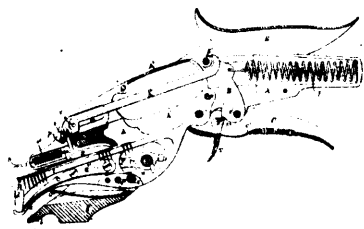
9198 Saunders & Bain's Improvements on Safes.



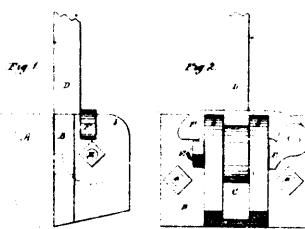
9199 Fuller's Improvements on Wood Spirals.



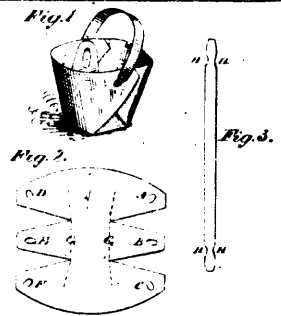
9200 Hazelton's Improvements on Stump Machines.



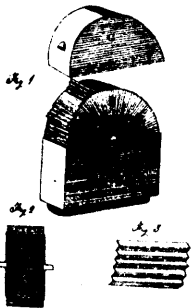
9201 Hinds' Mechanism for Lasting Boots and Shoes.



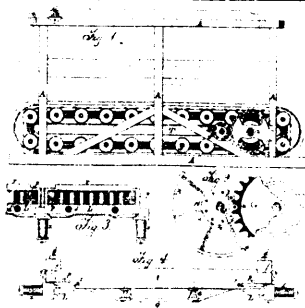
9202 Avery's Improvements on Platform Cars.



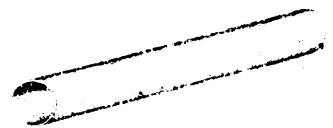
9203 Cole's Improvements on Baskets.



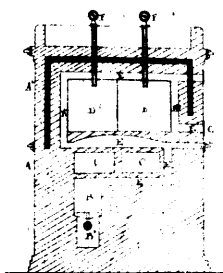
9204 Foster's Improvements on Washing Machines.



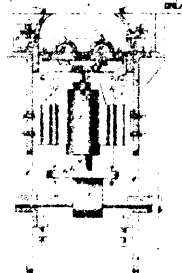
9205 Burt & Hildreth's Improvements in Horse Powers.



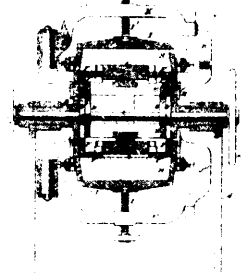
9206 Brayton, June & French's Process of Coating Boiler Tubes.



9207 Armstrong's Improvements in Steel Tempering.



9208 Aikin & Drummond's Machine for Moulding Sand for Casting.



9209 Aikin & Drummond's Machine for Moulding Sand for Casting.