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# The Canadian Patent Office

## RECORD

Vol. VIII.—No. 6.

JUNE, 1880.

{ Price in Canada \$2.00 per An  
United States - \$2.50 }

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### INVENTIONS PATENTED.

#### No. 11,172. Improvements in the Art of Manufacturing Wood Pulp. (*Perfectionnements dans l'art de fabriquer la pâte de bois.*)

Angus McDonald, Windsor Mills, Que., 24th April, 1880; for 5 years.

*Claim.*—The art of renewing the spent caustic liquor used in making wood pulp, for paper making and other purposes, by treating it (directly it becomes spent, that is to say, without evaporating to dryness) by boiling and clarifying and adding quick or caustic lime thereto.

#### No. 11,173. Improvements in Pads for Horses' Hoofs. (*Perfectionnements aux bourrelets pour les sabots des chevaux.*)

DeWitt C. Baker, Buffalo, N. Y. U. S., 24th April, 1880; for 5 years.

*Claim.*—1st. An edgewise expansible metallic plate made in two parts, which, when united, have the approximate shape of the interior space of a horse shoe, and provided with fingers to extend over the upper inner margin of the shoe upon a hoof; 2nd. The combination, with the plate adapted to fit and be supported within the horse shoe, of the elastic heel pad; 3rd. The combination, with the pivoted sections of the plate, of the cleft or bifurcated spring heel pad.

#### No. 11,174. Improvements on Horse Powers. (*Perfectionnements aux manèges.*)

John H. Edw rd, Stillwater, Minn., U. S., 24th April, 1880; for 5 years.

*Claim.*—1st. The combination of the following elements, viz.: a rectangular supporting frame, a master wheel provided upon one side only with cogs, and mounted to rotate in a horizontal plane above the rectangular frame, two short shafts arranged within the master-wheel and upon opposite sides thereof, a shaft arranged below the two short shafts and upon a line parallel therewith, a spur pinion mounted upon the lower shaft, and meshing with a spur-driving gear mounted upon one of the upper short shafts, pinions upon the outer ends of the upper short shafts and (meshing with the master wheel) bevel gears mounted upon the inner ends of the upper short shafts, and connected with each other by means of two bevel gears mounted upon a shaft supported between the inner ends of the upper short shafts, at right angles thereto, and in the same longitudinal planes; 2nd. In bifurcated standard *e*, bed plate *e* and arms *e* provided with bearings for the friction roller, in combination with the girts D D, bearing *k* and bolts *e*s, adapted to the master wheel and pinions I I, in proper working relation to each other.

#### No. 11,175. Improvements on Lubricators. (*Perfectionnements aux graisseurs.*)

Peter Barclay, East Boston, Mass., U. S., 24th April, 1880; for 5 years.

*Claim.*—1st. The combination, with the oil cups A having discharge tube *o* at the top, of the inner perforated bottom *c* and steam supply pipe *d*; 2nd. The perforated bottom *c* placed either inside the oil cup A or in an adjoining chamber formed on, or attached to the steam pipe *d*.

#### No. 11,176. Improvements on Envelope Machines. (*Perfectionnements aux machines à enveloppes.*)

Daniel M. Lester, Norwich, Ct., U. S., 24th April, 1880; for 15 years.

*Claim.*—1st. The combination with the vertically reciprocating gummer of an envelope machine and its gumming roller passing backward and for-

ward over its face upon guides, the duplicate gum boxes and supply rollers, whereby a single movement of the gumming roller in either direction gathers a supply from either box alternately and places it upon the gummer; 2nd. In a machine for picking up and gumming envelopes, the combination of the bed or elevator automatically fed up with its entire pile of blanks, by the pendent rack and meshing gear wheel at each revolution of the machine, with the vertically reciprocating gummer which picks up and gums the envelopes at one operation; 3rd. In combination with the corner guide posts for the pile of blanks, the fingers pivoted to the rear of said posts and bent at about right angles to pass through a slot in said posts and rest with their front ends upon the blanks; 4th. In a counting attachment to envelope machines, a horizontal receiver reciprocated to one side and the other in the same horizontal plane by a lever operated by a serpentine cam attached to a rack wheel having fifty teeth, said rack wheel being automatically moved forward through the communicated revolutions of the operating shaft; 5th. The combination with the reciprocating push plate of an envelope counting machine in which the receiving bed reciprocates in a horizontal plane only, a projection hanging down in the path of the envelopes and operated by each as it passes, said projection being upon a shaft which, through lever connections, operate to remove a check plate from the path of the pawl which forces forward a circular rack and serpentine cam; 6th. An envelope counting machine in which the bed moves only in a horizontal plane, a rack wheel of fifty teeth, carrying a serpentine cam with two breaks or bends in its path, and a pin moving in said cam and connected with a jointed lever to reciprocate side wise the receiver for the envelope packs.

#### No. 11,177. Improvements on Rolling Machines. (*Perfectionnements aux machines à laminer.*)

John H. Whitney, New York, U. S., 24th April, 1880; for 5 years.

*Claim.*—1st. A rolling machine made with two roller shafts, one of which is surrounded by a sleeve having a cog wheel mounted on one end and a cam wheel on the other end, whereby the rollers are brought in contact as the work proceeds; 2nd. The combination, with the shafts A B, of the sleeve K, the cog wheel L, pinion M, cam wheel N and smooth wheel O; 3rd. The combination, with the shafts A B, of the sleeve K, worm wheel L, worm M, cam wheel N, and smooth wheel O; 4th. The combination, with the shaft A, of the pivoted bearing J, the sleeve K and the cam wheel N; 5th. The combination, with the shaft A provided with a pivoted journal J, of the L-shaped levers V pivoted at the sides of the shaft A; 6th. The rollers E E with a knife P or P' at each end; 7th. The combination, with the frame G of the guard tube S, of the adjustable sliding pieces U holding said tube; 8th. The combination, with the rollers E E, of the guide tube S and the adjustable pieces U holding said tube; 9th. The combination, with the shaft A, of the pivoted journal J; 10th. The combination, with the guide tube S, of three or more rollers T between which it is mounted; 11th. The method of making rivets, bolts and other articles, consisting in rolling the metal between rollers rotating in the same direction.

#### No. 11,178. Improvements on Knitting Machines. (*Perfectionnements aux machines à tricoter.*)

John Nelson, Ralph Emerson and William A. Talcott, Rockford, Ill., U. S., 24th April, 1880; for 15 years.

*Claim.*—1st. The combination of a series of alternating tubular yarn carriers provided with reciprocating brushes and mechanism for operating the carriers and brushes, whereby one yarn may be substituted for another during the operation of knitting automatically and without interruption to the work; 2nd. The combination, with a reciprocating cam bar, of a plate or bracket provided with a distributing eye through which the yarn passes to the needles, shifting yarn carrier which successively supply yarn to the needles, and a swinging intermittently oscillating frame, all reciprocating with the cam bar; 3rd. The combination of a plate provided with a distributing eye through which yarn passes to the needles, shifting carrier, adapted to successively supply yarn to the needles, and a cutter to sever the yarn as its carrier moves out of working position; 4th. The combination of shifting yarn carriers adapted to successively supply the yarn to the needles, a cutter adapted to be opened by the carrier as it moves out of working position, and a cam adapted to close the cutter to sever the yarn; 5th. The combination of a needle bed, a reciprocating cam bar, shifting yarn carriers reciprocating with the cam bar, and shifting mechanism operated by the cam bar; 6th. The combination of a reciprocating cam bar, yarn carriers mounted in a frame pivoted thereto and reciprocating therewith, and mechanism which

positively and automatically locks the yarn carrier frame in position; 7th. The combination of a traversing shifting yarn carrier frame, a positive automatic locking latch, and mechanism which automatically releases the latch, holds the frame in position until the proper movement shifts the yarn carriers and then allows the latch to escape and relock the yarn carriers in their new position; 8th. A yarn clamp and feeder consisting of the combination of a carrier and a brush, reciprocating endwise in the carrier, and brush reciprocating mechanism; 9th. The combination of a plate provided with the distributing eye, the tubular yarn carrier having an opening therein for the passage of the yarn, and a brush reciprocating from a point above the opening of the yarn tube into the distributing eye and brush reciprocating mechanism, whereby the end of the yarn always protrudes in advance of the brush; 10th. The combination of a yarn carrier, a reciprocating brush, and a cam, whereby the yarn is protruded from the carrier to be seized by the needles, and the brush withdrawn then to allow the yarn to pass freely through the carrier; 11th. The combination of a yarn carrier, a reciprocating brush and a cam which forces down the brush to clamp the severed yarn and prevent its retraction; 12th. The combination of shifting yarn carriers, brushes reciprocating therein, a cutter and two sets of cams arranged in different vertical planes, whereby the yarn is protruded and released by one cam as its carrier moves into action, and clamped by another cam as the carrier goes out of action and the yarn is severed; 13th. The combination of a cam bar, the cam wheel actuated thereby, the shifting slide actuated by the cam wheel and the yarn carrier shifting mechanism carried by the cam bar, but controlled by the shifter slide; 14th. The combination of the needles, a cam bar acting successively thereon, a plate having a distributing eye mounted on the cam bar, shifting yarn carriers also mounted on said bar, mechanism actuated by the cam bar for shifting the yarn carrier and cams acting upon the feed mechanism of the yarn carrier, whereby the yarn may automatically be changed without interruption to the knitting, and a smooth fabric is produced.

**No. 11,179. Improvements on Steam Radiators.** (*Perfectionnement aux calorifères à vapeur.*)

Thomas P. Hardy, New York, U. S., 24th April, 1880; for 5 years.

*Claim.*—A metallic radiating tube formed in one piece and provided with one or more longitudinal depressions, which commence near the open foot and terminate within a short distance from the closed top thereof, leaving a narrow channel *d*, a steam chamber above, and two at opposite sides of, and connected by said narrow channel.

**No. 11,180. Improvements in Mechanical Movements.** (*Perfectionnements aux mouvements mécaniques.*)

Robert C. Barrie, jr., and John H. W. Chesnut, Philadelphia, Pa., U. S., 24th April, 1880; for 5 years.

*Claim.*—1st. The oscillating plate having bearing surfaces *d d*, and arranged to oscillate on a common centre with a stud *J* and in combination with said stud; 2nd. The plate *A* having points *e*, surfaces *d c f* and pivot *b*, arranged in combination with the cylinder *B*, groove *C* and stud *J*; 3rd. The springs *m n*, or their equivalents, the cam *p* and stud *r*, in combination with the plate *A*, groove *C* and stud *J*; 4th. The small cylinder having elongated slot *Q*, in combination with cylinder *B*, groove *C*, stud *J*, stud *M* and shaft *D*; 5th. The two piston heads adapted to reciprocate and rotate within a cylinder, in combination with the operating mechanism.

**No. 11,181. Improvements on Manual Powers.** (*Perfectionnements aux machines à bras.*)

Jasper Bates, Thornbury, Ont., 24th April, 1880; for 5 years.

*Claim.*—The combination of the ground frame *A*, seat frame *B* and foot frame *E* having hand frame *G*, pivoted together.

**No. 11,182. Improvements in Heel Rand Slabs.** (*Perfectionnements des tablettes à boîtes des talons.*)

Levi Darozir and Leon Dion, Natick, Mass., U. S., 24th April, 1880; for 5 years.

*Claim.*—As an improved article of manufacture—a heel rand slab composed of artificial leather moulded to contain two or more heel seat cavities.

**No. 11,183. Improvements on Submarine Excavating Apparatus and Scow.** (*Perfectionnement aux appareils et aux chalands pour les excavations sous-marines.*)

Roy Stone, New York, U. S., 24th April, 1880; for 5 years.

*Claim.*—1st. The combination, with the excavating tube, of a jet nozzle through which water passes to loosen and mix the material to be excavated, and a jet nozzle within the tube through which water passes for conveying the excavated material to the place of destiny; 2nd. The method of excavating beneath the surface of the water consisting in loosening the earthy substances by a jet of water and conveying the materials up through a pipe to the scow, or other receptacle, by the action of a jet of water; 3rd. A scow containing water-tight compartments into which water is admitted to partially sink the same and from which compartments the water is removed to increase the buoyancy of the scow as it is loaded.

**No. 11,184. Improvements on Screws.** (*Perfectionnements aux vis.*)

Allan Cummings, New York, U. S., 27th April, 1883; (Extension of patent No. 4,692) for 5 years.

**No. 11,185. Horse Rake.** (*Râteau à cheval.*)

Alexander S. W. Bridges, Mystic, Que., 29th April, 1880; (Extension of patent No. 4,874) for 5 years.

**No. 11,186. Apparatus for Hoisting Earth Excavated in Trenches.** (*Appareil pour enlever le sol des fouilles.*)

Howard A. Carson, Boston, Mass., U. S., 29th April, 1880; for 5 years.

*Claim.*—1st. The suspension railway and the tub carriage adapted thereto and provided with rope guide wheels, in combination with the forward draught rope and its branches, and with a back draught rope arranged with such carriages and the tubs thereof; 2nd. The suspension railway and its two sets or trains of tub carriages provided with rope guide wheels, in combination with the forward draught and branch ropes, and the back draught rope; 3rd. The combination of the latching bail *e* and the notched plates *g*, and the lifting devices *f d* with the tub and its supporting bail provided with the hook *c*; 4th. The tripping plates *i i* applied to the railway supporting frame work, in combination with the tubs provided with the latching bails and notched plates, and supported by ropes, carriages and a railway; 5th. The combination of the driving and branch ropes with the series of chains and duplex hooks and their carrier or traveller; 6th. The combination of the stop cone *n* applied to each branch rope, with the jaws *p* adapted to the carriage *C* thereof and provided with means or mechanism for operating them to enable the cone to pass down between them; 7th. The "turk's head" or stop *3* applied to the drum rope and to operate with a perforated stop extending from the railway supporting frame work.

**No. 11,187. Improvements on Cultivators.** (*Perfectionnements aux cultivateurs.*)

Byron B. Small, North Lubec, Me., U. S., 29th April, 1880; for 15 years.

*Claim.*—The tongue *A* and slotted cross bars *B C D*, in combination with standards *F*, ploughs *G*, standards *H* and hoes *I*.

**No. 11,188. Improvements on Bottle Stoppers.** (*Perfectionnements aux bouchons des bouteilles.*)

John M. Lewin, Lockport, N. Y., U. S., 29th April, 1880; for 5 years.

*Claim.*—The combination, with the bottle *A* having the neck wire *B*, of the yoke *E* and the lever *G*, said lever having the eyes *I* engaging the lug *J* on the top of the stopper body *K*.

**No. 11,189. Improvements on Barrel Swings.** (*Perfectionnements aux porte-barils.*)

Peter W. Nelson, Moline, Ill., U. S., 29th April, 1880; for 5 years.

*Claim.*—1st. A bar provided, near the lower end, with a laterally extending hook or clasp, and near its upper end with a vertically adjustable lateral hook or clasp by and between which hooks or clasps a barrel may be clamped and held as set forth, said barrel-swing being designed to be pivoted in a vertical position; 2nd. The combination, with the bar *a* provided with a point *f* and vertical slot *g*, of the fixed hook or clasp *b*, pivot *c*, thumb screw and nut *h* and adjustable hook or clasp *k*; 3rd. The combination of the barrel-swing *A*, end plate *B* and base plate *C*, with the floor *D* and counter *E*, whereby a barrel may be swung in and out under the counter; 4th. The combination of the barrel-swing *A*, plate *B* and base plate *C*.

**No. 11,190. Improvements on Grain Binders.** (*Perfectionnements aux lieuses à grain.*)

William N. Whitley, Springfield, Ohio, U. S., 29th April, 1880; for 15 years.

*Claim.*—1st. A two horse gleaner and binder with the draft attachments arranged so that the horses walk in front of the bearing wheels and at each side of the grain to be gleaned and bound; 2nd. A tongue or plough constructed of two bars *T*, united at their front ends and at their back ends, secured to the frame at each side of the driver's seat whereby the driver is enabled to have an unobstructed view of the ground, in front of the binding apparatus; 3rd. The driver's seat placed at the middle of the machine in the plane of motion of the binding devices, so that the driver is enabled to guide the machine accurately as to the grain to be gleaned and bound; 4th. The gatherer *H* mounted in a dragging frame, supported at the rear upon wheels *J J* and adjustable at the front as to height, so that the height of the gatherer from the ground may be varied while the machine is in motion; 5th. The gatherer *H* mounted in a dragging frame supported at the rear upon wheels and adjustable as to height at the front, combined with independent adjusting levers *L*, whereby each end of the gatherer may be independently lifted; 6th. The gatherer *H* mounted in a dragging frame supported at the rear upon wheels and combined with the slotted brackets *i* which swing upon the main axle and are pivoted to the arms *g* of said dragging frame, and the elbow or bell crank levers *L* pivoted to said brackets and engaged with said arms *g*; 7th. The shaft *M* mounted upon the frame *A* and provided with crank arms *q* combined with the flexible connections *c* extending from said crank arms to the rear of the dragging frame and the lever *N*, whereby the shaft *M* may be rotated and the dragging frame elevated; 8th. A gleaner and binder having the driver's seat in the plane of motion of the binding devices, a spool or receptacle *k* located in front of, and below the driver's seat, so that the binding material extending therefrom to the binding apparatus may constitute a gauge line by which he can guide the machine truly as to the grain to be gleaned and bound; 9th. The gatherer mounted in a dragging frame and provided with devices, whereby said frame may be lifted entirely from the ground, combined with a driver's seat which may be adjusted forward or backward so as to locate the driver's weight forward far enough to balance the dragging frame, when it is elevated from the ground.

**No. 11,191. Improvements on Saws.** (*Perfectionnements aux scies.*)

William L. Earing, Brookville, Ont., 29th April, 1880; for 5 years.

*Claim.*—1st. A circular or straight saw having knives *C C* with parallel cutting edges on the back of the saw teeth *B*, whereby said knives penetrate the wood with a planing cut, the point of the succeeding tooth removing the chip or shaving from the kerf; 2nd. The combination of parallel knives or cutters *C C* and intervening clearing teeth *B*.

### No. 11,192. Improvements on Lock Nuts.

(*Perfectionnements aux arêtes noix.*)

Dewitt Halpin, Thornfield, Eng., 29th April, 1880; for 5 years.

*Claim.*—A threaded nut A, having a diminished bore at the outer end formed by cutting the face of the nut with diametrical slots a and compressing the divided portions b inwardly, whereby when the nut is placed on a bolt the divided portions will yield to admit the bolt and exert a gripping influence by spring pressure, to prevent the nut from making loose on the bolt.

### No. 11,193. Improvements in Explosive Compounds.

(*Perfectionnements aux composés explosibles.*)

John Pattison, Nevada, Cal., U. S., 29th April, 1880; for 5 years.

*Claim.*—The combination, with an explosive compound having for its base Chlorate of Potash, of an oleaginous flour or meal to prevent premature and spontaneous explosion.

### No. 11,194. Improvements on Glove Fasteners.

(*Perfectionnements aux agrafes des gants.*)

William H. Storey, Acton, Ont., 29th April, 1880; (re-issue of patent No. 9,779.)

*Claim.*—1st. A spring having two diverging legs and provided with a fastening for holding the legs together and finger lugs, to facilitate the closing and opening of the spring; 2nd. A spring glove fastener having diverging legs provided with a coupling device adapted to open the wrist slit of a glove, when the coupling is disengaged, and to draw the edges of the wrist slit together, when compressed and coupled; 3rd. The combination, with a glove or mit provided with wrist slit, of a spring fastening provided with diverging legs which are adapted to open the wrist slit when uncoupled, and to draw the edges of the slit together when closed; 4th. A spring having diverging legs with hook and eye fastening and finger lugs, all fashioned from a continuous piece of metal.

### No. 11,195. Improvements in Evaporators.

(*Perfectionnements aux appareils évaporatoires.*)

Edwin R. Whitney and Angus McKay, Montreal, Que., 29th April, 1880; for 5 years.

*Claim.*—The combination with an evaporating pan in which a winding channel is formed from the centre to the circumference, a vessel discharging into centre of said pan and having formed in it a pipe through which can be taken at will the products of combustion from the furnace.

### No. 11,196. Machine for Dressing Staves.

(*Machine à planer les douves.*)

Horace H. Miller, Lyndonville, Vt., U. S., 29th April 1880; for 5 years.

*Claim.*—1st. The track R, the plane C and the shaft D with the cam bearings at each end, also the dogs E E and the circular lever F, and the belt G with the opening H; 2nd. the dogs a a<sub>1</sub> with the claws b, the shaft f with bearings I I, also the short lever g, the lever e, the feed wheel d and spring h.

### No. 11,197. Improvements on Nut Locks.

(*Perfectionnements aux arête-noix.*)

John B. Robertson, Toronto, Ont., 29th April, 1880; for 5 years.

*Claim.*—A locking washer having holding projections d in its face and a tongue d, in combination with a grooved screw bolt A and nuts B C.

### No. 11,198. Improvements on Reaping Machines.

(*Perfectionnements aux moissonneuses.*)

John F. Mahon, London, Ont., 29th April, 1880; for 5 years.

*Claim.* 1st. The combination of the two wrought iron bars g g' with the and prices g' g''; 2nd. the combination of the gear bracket B B'; 3 d. The adjustable foot piece c with foot rest d; 4th. The adjustable foot c with seat for driver; 5th. The combination of the basket C with the ratchet wheel e, stop pawl h, lever k and lifting chain f, together with the coupling sliding post i and its connection with the table or platform D; 6th. The combination of the toothed sector e, lever and retaining plunger n, the rod m with its connection to the projector l on the table D, together with the oscillating connection of the table D to the coupling post i.

### No. 11,199. Improvements on Wind Mills.

(*Perfectionnement aux moulins à vent.*)

Thomas Dewees, San Antonio, Texas, U. S., 29th April, 1880; for 5 years.

*Claim.*—The combination of a tower having the loose shutters b in a vertical position, and a wheel B consisting of a shaft having radial arms and three intermediate paddles connected with each arm.

### No. 11,200. Improvements on Nut Locks.

(*Perfectionnements aux arête-noix.*)

George E. Facto and Hector Mc'rae, Ottawa, Ont., 29th April, 1880; for 5 years.

*Claim.*—1st. The combination of the rails A A, plates B B; having backs coinciding with the cavity of the rails, bolts C, having square heads sunk into plate B, plate E slotted to receive the nuts of bolts C and held by spikes or screws D passing through plate B into holes in plate E; 2nd. The spikes G or screws D, inserted from the back of plate B through nut plate E and bent over its outer face or screwed therein to retain the same.

### No. 11,201. Machine for Bevelling the Ends of Staves.

(*Machine à biseauter les bouts des douves.*)

James Clancy, (Assignee of Crowell M. Clancy,) Wallaceburgh, Ont., 29th April 1880; for 5 years.

*Claim.*—The combination of the bevelling knife E as made, adjusted and fastened to a stove machine.

### No. 11,202. Improvements on Railway Sema-phores.

(*Perfectionnements aux sémaphores des chemins de fer.*)

Josiah Nesbitt, Toronto, Ont., 29th April, 1880; for 5 years.

*Claim.*—1st. The ratchet wheel I, geared with the wheel L to which the chain M supporting a weight is attached, in combination with the dog H and tumbling plate G supported by the lever E; 2nd. The tumbling plate G provided with a weight g and arm F resting upon the lever E, in combination with the electro magnet D; 3rd. The tumbling plate G provided with an arm h, in combination with the pins k in the ratchet wheel I; 4th. The pivoted forked lever Q fitting into the catch R on the door S, in combination with the pin I; 5th. The pins W, in combination with the spring V connecting with the wire U.

### No. 11,203. Improvements in Knitting Machines.

(*Perfectionnements aux machines à tricoter.*)

William H. Abel, Bridgewater, N. H., and Henry W. Boardman, Lovell, Mass., U. S., 29th April 1880; for 5 years.

*Claim.*—The needle bar having independently constructed fillets attached thereto. The needle bar having flat or horizontal surfaces for the regular knitting needles and inclined or depressed surfaces for the narrowing needles to drop into. The needle cam bar having movable cams. The clutch closer. The latch needle having the flaring slot between the hook and latch pivot. The latch needle having the flaring slot and regulating bar. The transferring point slotted as shown, in combination with the latch needle having the flaring slot in the front comb or push bar. The back comb or push bar having the movements. The front push bar, in combination with the back presser bar. The pitman arm and its elongated rack. The pitman arm with its elongated rack, in combination with the pinion it operates. The transferring points, bar with its frame and actuating cam for moving it forward and backward. The transferring points, bar with its frame and actuating cam for depressing it on to the needles. The transferring points, their bar and frame, in combination with their lock, arm and cam. The transferring points, bar and frame with its locking devices. The transferring points, frame in combination with its pattern mechanism for stopping the same. The pattern mechanism for stopping the knitting and narrowing mechanism, or both. The lever and latch for regulating the slack course. The vibrating cam shaft, in combination with its cam and the needles and transferring points. The vibrating or reciprocating cam shaft with the presser or comb bar and their respective cams. The jointed pawls, in combination with the slides. The jointed pawls, in combination with the transferring points. The needles in combination with the needle bar. The needles, in combination with the movable cams. The needles, in combination with latch closer. The tension drum, in combination with its adjustable loop. The take up arm with its weight for regulating the strain.

### No. 11,204. Improvements on Farm Gates.

(*Perfectionnements aux barrières.*)

William Brown, Easton's Corners, Ont., 29th April 1880; (Extension of Patent No. 4,716), for 5 years.

### No. 11,205. Combined Pen and Ink-Holder.

(*Plume-fontaine.*)

The MacKinnon Pen Company, New York, U. S., (Assignee of Duncan MacKinnon, Stratford, Ont.,) 3rd May, 1880; (Extension of Patent No. 4,809), for 5 years.

### No. 11,206. Combined Pen and Ink-Holder.

(*Plume-fontaine.*)

The MacKinnon Pen Company, New York, U. S., (Assignee of Duncan MacKinnon, Stratford, Ont.,) 4th May, 1880; (Extension of Patent No. 4,809), for 5 years.

### No. 11,207. Improvements in Traction Engines.

(*Perfectionnements aux machines de traction.*)

Charles G. Cooper, Mount Vernon, Ohio, U. S., 7th May, 1880; for 5 years.

*Claim.*—1st. The combination, with the rotating pawl carrier and one more pairs of pawls carried by the same, of the reversing disc capable of a movement of partial rotation independently of the pawl carrier, and provided with one or more tongues projecting one between each pair of pawls, and a friction device to retard the movement of the said disc, when the latter is not engaged with the pawl carrier; 2nd. The rotating reversing disc, provided in its hub with one or more friction blocks, in combination with means for pressing said blocks more or less closely against the journal or axle on which said disc moves; 3rd. An automatic double acting pawl and ratchet mechanism, a pawl carrying wheel provided with spokes, spaced as specified, in combination with a reversing disc provided with a tongue which projects through the wheel between said spokes into the space between the pair of pawls on said wheel; 4th. The combination, in a traction engine with double acting automatic pawl and ratchet mechanism, operating as described, on the inclined shaft, the engine shaft, the gear g and the gears h i movable lengthwise on the engine shaft.

### No. 11,208. Improvements on Vehicles.

(*Perfectionnements aux voitures.*)

Moritz Schmidt, Hanover, and Charles Wiser, Walkertown, Ont., 7th May, 1880; for 5 years.

*Claim.*—1st. The combination of a spring power attached to a wheel

bearing in number 1234, every bearing working separately and united to the bars A B in number 57, by a so-called connection rod D in numbers 68, and to a wrought iron turning bolt D in number 9 between A and B in number 8, a circular turn is fastened and guided by C in number 9 as protecting guide, a metal bolt C in number 9 with boxing acting as a turn or king bolt fitted in wooden bar A and iron plate B, in number 8; 2d. The combination of a safety leader for shafting E F F in numbers 8 and 9 preventing shaft from dropping if side shaft bolt on H in number 8 be lost or otherwise destroyed and will avoid accident in such cases.

### No. 11,209. Improvements on Paper Files.

(*Perfectionnements aux serre-papiers.*)

Daniel W. Lapham, Washington, D. C., U. S., 7th May, 1880; for 5 years.

*Claim.* The base or back plate A adapted to be suspended from a wall, the file hook B attached to the lower end of said plate, extending thence in a curve downward, forward and upward, and having its upper end b pointed, and the guard B attached at one end to the upper end of said plate, extending in a curve upward, forward and downward, and provided at its lower end within its rear side, with a groove or recess b which corresponds to the pointed end b of said hook, whereby, when the latter is placed within said groove, the outward spring of said hook will hold said parts in engagement, and said guard will form a continuation of said hook, and said engaging ends will have substantially the same dimensions at other portions of the latter.

### No. 11,210. Improvements in Boots. (*Perfectionnements dans les bottes.*)

Edmond Parent and Michael C. Mullarky, Montreal, Que., 7th May, 1880; for 5 years.

*Claim.* The blank A B and C comprising, in one piece, the leg, vamp and tongue of a long leg boot, arranged in the manner and cut of the outline.

### No. 11,211. Improvements in Water Conductors. (*Perfectionnements aux conducteurs d'eau.*)

George K. Reber, Pittsburg, Pa., U. S., 7th May, 1880; for 10 years.

*Claim.*—1st. A water conductor provided with a standing seam; 2nd. A water conductor provided with a double locked standing seam; 3rd. In combination with the standing seam of the conductor, a slotted fastener and key; 4th. The slotted headed nail or screw fastener, having inwardly extending lips as at d.

### No. 11,212. Improvements on Bobbin Winders. (*Perfectionnements aux renvideuses.*)

Charles Raymond, Guelph, Ont., 7th May, 1880; for 5 years.

*Claim.* 1st. The frame A provided with the bearing A<sub>1</sub>, socket A<sub>2</sub>, thread distributor A<sub>3</sub> and lug E, all combined in a single piece of metal; 2nd. The combination of the fixed distributing curve placed at the top of the frame, the adjustable driving spindle, the fixed bobbin support, and the hinged presser plate, with the bobbin; 3rd. The combination with the bobbin, bobbin supports and presser bar, of the spring D, said spring being secured on the front of the winder frame; 4th. In bobbin winders, the thread distributing curve and thread retaining lug placed respectively above and below the bobbin, in combination with a winder frame provided with a recess, to permit of the passage of the thread at the back of the winder frame; 5th. A bobbin winder having a thread retaining lug and distributor, in combination with the arm hand wheel, and tension devices of a sewing machine; 6th. In bobbin winders, the combination with the stationary bobbin support, of an inserted hard wood centre; 7th. The sleeve B reduced in diameter near one end.

### No. 11,213. Improvements on Bottle Stoppers. (*Perfectionnements aux bouchons des bouteilles.*)

Mark W. Patten, Somerville, Mass., U. S., 7th May, 1880; for 5 years.

*Claim.* 1st. The body C provided with the arms a a and packing k, and the piston E provided with the button or cap m and packing h, combined and arranged to operate as specified; 2nd. The attachment H provided with the nozzle I, three-way stop cock J and pipe M.

### No. 11,214. Improvements in Hubs. (*Perfectionnements aux moyeux des roues.*)

Charles H. Dunn and Isaac F. Jones, Hillsburgh, N. S., 7th May, 1880; for 5 years.

*Claim.* 1st. The double annular rabbets at either end of the hub B B; 2nd. The flanged rings C C; 3rd. The axle arm.

### No. 11,215. Improvements in Swings. (*Perfectionnements aux balançoires.*)

Alpheus B. Harmon, Traer, Iowa, U. S., 7th May, 1880; for 5 years.

*Claim.* The combination of the beams having the foot boards secured rigidly thereto and having the seat bars pivoted thereon, with the driving beams which have their lower ends secured to the seat bars, between the pivots on which the bars move and the seats.

### No. 11,216. Apparatus for Generating and Burning Gas. (*Appareil pour produire et brûler le gaz.*)

Henry Large, Strathroy, (Assignee of Francis C. S. Ridgway, Ottawa, Ont., 7th May, 1880; for 5 years.

*Claim.*—1st. The mode of generating carbon oxide gas, or carbonic acid gas, by the consumption of wood, saw dust, or other carbon fuel, by fire in a closed furnace discharging all the products of combustion into a receiver, from which the gas is drawn for consumption; 2nd. An apparatus consisting of a furnace discharging the whole product of combustion into a receiver through connecting pipes, and a burner connected to the receiver by pipes, said burner having an orifice to admit atmospheric air into contact with the gas within the burner, whereby they are commingled and consumed on igni-

tion for heating the burner, and disseminating heat within a stove or fireplace; 3rd. The furnace A having an inserted conical fire grate constructed of horizontal bars; 4th. A furnace having at top a hopper B and valve C closing its mouth; 5th. The burner H constructed of a block or casting having tortuous pipes or channels I and an inlet for atmospheric air.

### No. 11,217. Improvements in Rotary Engines. (*Perfectionnements aux machines rotatoires.*)

Loring J. Baker, Boston, Mass., U. S., 7th May, 1880; for 5 years.

*Claim.*—1st. The combination of the grates, the sloping grades, and stand e operating such grades; 2nd. The combination of the shaft and hub, when the two are connected by a loose or yielding connection or joint which protects the hub to a great extent from the thrusts to which the shaft is subjected; 3rd. The combination of the case which contains the wheel or hub, the hub, the driving shaft and the tubular stud or post which constitutes a pivot to the hub, and through which the shaft passes; 4th. In general combination, the case A with its channels G, ports E F, abutment J and stud e, the limb H with its tubular pivot t and gates a a with their cam grades or blocks c c, and the shaft g connected loosely with the hub.

### No. 11,218. Method of Grinding and Polishing Hollow ware. (*Méthode pour remouler et polir les objets creux.*)

William W. Lake and Marvin E. Weller, Fort Plain, N. Y., U. S., 7th May, 1880; for 5 years.

*Claim.*—1st. A process of grinding and polishing hollow ware by filling said ware with a grinding substance and reciprocating the ware in rotary movement, so as to cause the grinding mass to tend to remain stationary within the moving ware; 2nd. The combination, with a rotary table adapted to support the hollow ware, of mechanism which reciprocates said table; 3rd. The combination, with a rotary table adapted to support the hollow ware and mechanism for reciprocating it, of an elastic stop which receives the impact of said table, at the termination of its movement, in one line of direction; 4th. The combination, with a rotary table adapted to support the hollow ware, said table being provided with one or more lateral projections, of mechanism which reciprocates the table and elastic stops located respectively on opposite sides of each projection, in position to receive the impact thereof; 5th. The combination, with a rotary table and mechanism for reciprocating it, of a clamp connected to said table and adapted to secure the hollow ware thereon; 6th. The combination, with a rotary table and mechanism for reciprocating it, of a two part clamp connected to the table and adapted to embrace the hollow ware the two parts of said clamp being hinged together at one side and provided with a fastening device at the opposite side; 7th. The combination, with a rotary table provided with a clamp which embraces the hollow ware, of an independent ring fitted on the clamp and adapted to directly support the ware; 8th. The combination with a rotary table provided with a clamp, of a two part ring fitted on the latter and directly supporting the hollow ware, said ring being provided with slot or slots and screw or headed connection with the clamp, so as to allow of the ring being changed thereon; 9th. The combination, with a rotary table provided with an adjustable clamp for maintaining different sizes of hollow ware in position, of a vertically adjustable support adapted to hold said ware in position while being clamped; 10th. The combination, with a rotary table provided with a tubular shaft extending downward through suitable bearings, of an internal rod, a plate secured to the upper extremity of the latter, and a lever connected to the lower extremity of the same; 11th. The combination, with a rotary table, mechanism for reciprocating it, and the hollow ware filled with a grinding substance, and a ring fitted on the upper edge of the ware; 12th. The combination, with a rotary table, mechanism for reciprocating it, and the hollow ware filled with a grinding substance, of a ring resting on the upper edge of the ware and a plate fitted therein; 13th. The combination, with a rotary table, mechanism for reciprocating it and the hollow ware filled with a grinding substance, of a ring resting on the upper edge of the ware, and a vertically adjustable holder adapted to maintain said ring in position; 14th. The combination, with a ring adapted to rest on the upper edge of the hollow ware, of a vertically adjustable holder having radial arms, the extremities of the latter being provided with depending lugs and means for adjusting them to or from the centre of said ring holder.

### No. 11,219. Improvements on Musical Instruments. (*Perfectionnements aux instruments de musique.*)

George H. Chinnock, Brooklyn, N. Y., and William W. Bennett, Jersey, N. J., U. S., 7th May, 1880; for 5 years.

*Claim.*—1st. The combination of manual keys by which the sound producing devices may be operated, a series of levers for effecting the operation of the sound producing devices independently of the keys, and a music card or tablet travelling lengthwise of the instrument back of, or over the keys and all arranged within the case of the instrument, and is also applicable to wind or concussive instruments without keys; 2nd. The combination of manual keys whereby the sound producing devices may be operated, a series of levers extending transversely to the keys, connected independently of said keys, with means for effecting the operation of the sound producing devices, a music card or tablet for actuating said levers and means for effecting the travel of the music card or tablet in the direction of the length of the instrument and at the back thereof, or above and transversely to the keys; 3rd. The combination, with a musical instrument having manual keys and a mechanism actuated by a travelling music card or tablet for operating the sound producing devices, of a case having two covers one for the keys and the other for the said mechanism, and either of which may be operated without opening the other; 4th. The combination of valves whereby the operation of wind sound producing devices is controlled, rock shafts whereby said valves may be opened, levers connected with said rock shafts so as to actuate the same, and a music card or tablet for operating said levers in passing over the upper ends thereof; 5th. The combination of rock shafts, whereby the operation of the sound producing devices is effected, massed levers connected by rods or wires, or their equivalents, with arms extending from the rock shafts and a music card or tablet for actuating the said levers; 6th. The combination, with rock shafts whereby the operation of the sound producing devices is effected, of massed levers, a music card or tablet for actuating the latter, secondary upright levers and connections between said levers, and arms extending from the rock shafts; 7th. The combination of the massed

levers, a music card or tablet for actuating said levers, rock shafts of varying lengths connected to said levers and controlling the operation of the sound producing devices; 8th. The combination of massed levers, a music card or tablet for operating said levers, rock shafts connected to said levers, and extending forward under the manual keys of the instrument illustrated and acting on push-pins or tracker-pins, to open pallet valves controlling the operation of the sound producing devices; 9th. The combination, with levers controlling the operation, of the sound-producing devices and a music card or tablet provided with a toothed rack for feeding it along of guides for said piece of music, a gear wheel for engaging with the rack, a worm and worm wheel for imparting motion to said gear wheel, and preferably a balance wheel and pawls, and ratchet wheel applied to said driving shaft or its equivalent, to prevent reversed action; 10th. The combination, with levers for controlling the operation of the sound producing devices, and a music card or tablet provided with a toothed rack for feeding it along, of guides for said music card or tablet, a gear wheel for engaging with the rack, a worm or worm wheel for imparting motion to said gear wheel, and a roller clamp or guide for holding said music card or tablet in contact with the end of said levers; 11th. The combination, with the levers for controlling the operation of sound-producing devices, and a music card or tablet for actuating said levers, and means for feeding said music card or tablet along, of a door in the case of the instrument capable of being opened by the piece of music, so as to permit the exit of the latter from the instrument; 12th. The combination of manual keys, whereby the sound-producing devices may be operated, a series of levers extending transversely to the operation of the sound-producing devices, with the means for effecting the said levers traveling in the direction of the back thereof, transversely to the keys, a rotary shaft employed in feeding said music card or tablet along, and a treadle for operating said shaft; 13th. A music card or tablet made of cast metal, or a combination of wood and metal and having projections, etc., representing notes, and toothed racks integral therewith; 14th. The combination of the massed levers M and the recessed or serrated frame N.

### No. 11,220. Improvements on Trusses. (*Perfectionnements aux bandages herniaires.*)

Leon T. J. Lubin, Boston, Mass., U. S., 7th May, 1880; for 5 years.

*Claim*.—1st. A surgical bandage composed of two independent detached spring bands *a*, arranged and constructed to act automatically and independently of each other in a transverse and horizontal direction; 2nd. Two independent detached springs bands *a*, arranged and constructed to act automatically and independently of each other, in a transverse and horizontal direction, and being enclosed in a suitable casing or confining device for the separated ends thereof; 3rd. The combination of the slotted screw stud *h* and the screw nut *n*, with the bandage.

### No. 11,221. Improvements on Hub Borers.

(*Perfectionnements aux tours à moyeux.*)

Ezra Caswell, Lyons, N. Y., U. S., 7th May, 1880; for 5 years.

*Claim*.—1st. The combination of the socket B, plug E, and the screw shaft G, the shaft provided with the interchangeable cone H and washer L; 2nd. In combination with the plug E, and screw shaft G, the removable cone H for centring the hub.

### No. 11,222. Improvements in Oil Cabinets.

(*Perfectionnements aux armoires à huile.*)

Alexis Foisy, Ottawa, Ont., 7th May, 1880; for 5 years.

*Claim*.—1st. The removable floor A, made and placed so as to act as a cover to the oil tank, and a support for the working parts, which are attached to it; 2nd. The arrangement and combination of the removal floor A with the lift and force pump C, suction pipe *b*, stop valve *f* and feed pipe *d*; 3rd. The pump C in combination with the strainer A, suction pipe *b*, discharge pipe *c*, feed pipe *d*, stopper *e*, stop valve *f* and valve rod *g*.

### No. 11,223. Improvements on Clothes Dryers.

(*Perfectionnements aux séchoirs à linge.*)

Frederick W. Andrews, St. Stephen, N. B., (Assignee of Charles W. Rogers, Boston, Mass., U. S.), 7th May, 1880; for 5 years.

*Claim*.—1st. The combination of the wall piece A and the hinged shaft and arms, with the swinging bracket D; 2nd. The combination of the wall piece A, a shaft and arms and bracket, with hinges fitted respectively with a screw and nut.

### No. 11,224. Improvements in Carpet Sweepers.

(*Perfectionnements aux balayuses des tapis.*)

William Orr, Millgrove, and John W. Cummings, Waterdown, Ont., 7th May, 1880; for 5 years.

*Claim*.—1st. In combination, with a carpet sweeper, of the slides O O the same operating in bevel grooves, and held in place by catches *g g* to allow a ready means for discharging dust; 2nd. The adjustable journal boxes for adjusting the brush, viz.: the upper movable plate L and spring N, the notched eccentric plate M made to impinge on the upper said plate L, the journals of the brush being held between them both; 3rd. The sockets Q Q attached to the top of the box, to receive the arms *h h* of the handle R; 4th. In combination with a carpet sweeper, the strips of felt S S, or the equivalent substance secured thereto.

### No. 11,225. Improvements in the Manufacture of Boots. (*Perfectionnements dans la fabrication des bottes.*)

James F. Sharpe, London, Ont., and Joseph Hogue, St. Jean, Que., 10th May, 1880; for 5 years.

*Résumé*.—1o. La nouvelle manière d'ajouter à une botte de ce genre la partie formant les contre-renforts du dedans et du dehors, *d d*; 2o. La manière spéciale dont le patron est taillé, tel que démontré; 3o. La couture de haut du contre-renfort et d'une partie du quartier, *e e e*.

### No. 11,226. Improvements on Saw Gummers.

(*Perfectionnements aux étampes à dents de scies.*)

Silas A. Stepp, Johnson, Ten., U. S., 10th May, 1880; for 5 years.

*Claim*.—1st. The combination of the clamp H provided with the hollow screw F and hand wheel G, arm B, punching die E and bed die D; 2nd. The combination of the punching die E, annular clamp H, bed die D and slide I; 3rd. The combination of the clamp H, punching die E and retracting spring X; 4th. The combination of the supporting frame W, punching die E, drop N and a controlling device Y, for regulating the extent of the stroke; 5th. The punching die E guided within the hollow screw F; 6th. The annular screw clamp F H; 7th. The combination of the bed die D and slide I; 8th. The combination of the adjustable mandrel J and posts P P, for supporting, levelling and steadying the jaw; 9th. A saw gummer composed of supporting frame, annular bed die, hollow screw clamp and punch working therein.

### No. 11,227. Improvements on Curtain Fixtures.

(*Perfectionnements aux rouleaux des rideaux.*)

Willard H. Gilman, (Co-inventor with Frederick A. Wiswell,) and Charles H. McClintock, Stanstead, Que., 10th May, 1880; for 5 years.

*Claim*.—1st. The roller C having pulleys and handles, in combination with the curtain stick provided with a clamping device at each end to clamp or hold said stick to the cords A; 2nd. The curtain stick B having at each end adjustable clamping devices D consisting of the parts *i j k m n* which enclose the cords A; 3rd. The roller C having the grooved pulleys *e* and handles *o*, the curtain stick B having the adjustable clamping devices D, and the taut cords A arranged, one at each side of the window frame, in combination; 4th. The combination with the stick B having the clamp devices D, the roller C having the grooved pulleys *e* and the taut cords arranged one at each side of the window frame, of the cord *f* attached to said stick passing over pulleys *g h* and of sufficient length to be within convenient reach of the operator, whereby the stick can be raised and the roll lowered, and thus cover the entire window; 5th. The clamping device D, in combination with a curtain stick; 6th. In combination with a curtain roller C the pulleys *e* circumferentially grooved to a depth less than the exterior contour of the said roller; 7th. The tightening devices composed of the drum *b*, ratchet wheel *d* and pawl *c*.

### No. 11,228. Improvements on Steam Boilers.

(*Perfectionnements aux chaudières à vapeur.*)

James Wavish, Leytonstone, Eng., 10th May, 1880; for 15 years.

*Claim*.—In steam boilers, the combination, with fire grates, of water chambers or spaces, communicating with the water space of the boiler and arranged in relation to the said fire grates.

### No. 11,229. Improvements in Boots and Shoes. (*Perfectionnements aux chaussures.*)

James Popham and James Linton, Montreal, Que., 10th May, 1880; (Extension of Patent No. 10,780), for 5 years.

### No. 11,230. Improvements in Signalling Apparatus. (*Perfectionnements aux appareils à signaux.*)

George L. Anders, Boston, Mass., U. S., 10th May, 1880; for 5 years.

*Claim*.—1st. The combination, with a polarized armature oscillated by alternate positive and negative currents, of a ratchet wheel which is rotated by the vibrations of a neutral armature and forms an obstacle to the full movement of the polarized armature, except at any desired point in said rotation; 2nd. An electro-magnet and polarized armature, for retaining a ratchet wheel in position, when said magnet is excited by currents of one polarity, and releasing said wheel when excited by currents of the opposite polarity, in combination with a neutral armature for rotating said ratchet wheel; 3rd. A ratchet wheel which, except when in a pre-determined position, forms or operates an obstacle to the movement of a bell hammer, attached to a polarized armature, in combination with a pawl operated by a mental armature and rotating said ratchet wheel, and a pawl operated by a polarized armature and retaining or releasing the said ratchet wheel according to the direction of the current operating the neutral armature; 4th. The combination of a polarized armature, arranged to be operated by a rapid succession of alternate positive and negative currents, and a neutral armature which is not affected thereby, but is operated only by currents of longer duration; 5th. The combination of the pivoted pawl F, the locking and releasing pins *b c* and the ratchet wheel; 6th. The combination of the gravitating arm and the adjustable signal, for indicating line in use or out of use.

### No. 11,231. Improvements on Lanterns. (*Perfectionnements aux lanternes.*)

(*Perfectionnements aux lanternes.*)

Edward Miller, Meriden, Ct., (Assignee of Leonard Henkle, Rochester, N. Y., and Russell B. Perkins, Meriden, Ct.), U. S., 10th May, 1880; for 5 years.

*Claim*.—1st. The base or support H for the globe formed with an exterior perforated rim to receive the globe, and a hollow bottom for the passage of outside air from said rim to, and outside of the cone; 2nd. The base piece H consisting of the rim *g*, horizontal plates *a a* with centre opening *b* and the radial partitions *h h*; 3rd. The combination, with the open topped side tubes A, of curved flanges *e e* extending from the ends of said tubes upward and serving to deflect currents of air down into said tubes; 4th. The combination, with the open topped side tubes A, of the disc C with its opening, the vertical wing plates C C and the curved flanges *e e* extending upward and venting to a horizontal position; 5th. The cylindrical piece D forming the top support of the globe provided with an opening, in combination with the closing slide *k*; 6th. The piece D, slide *k*, thumb piece *l* and guide or loop *s*, said parts arranged as described; 7th. In combination with the opening L, a slide *r* on the inner side of the perforated base ring H and moved by a knob S through said ring; 8th. The mode of securing the globe in position by means of the inner tube I and the outer tube D, the latter's lower edge being cut in a downward incline from the centre outward and provided with two 7-shaped slots and the former provided with two pins J.



**No. 11,232. Improvement in Table Mats.***(Perfectionnement des dessous de plats.)*

Thomas Mitchell, Hamilton, Ont., 10th May, 1880; for 5 years.

*Claim*—A new article of manufacture in table mats formed of refuse broom corn stalks A, sewed with twine sewings B C, and border D.**No. 11,233. Improvements on Radiators.** *(Perfectionnements aux calorifères.)*

Birdsill Holby, Lockport, N. Y., U. S., 10th May, 1880; for 5 years.

*Claim*—1st The combination of an upper reservoir having ports e and a steam supply pipe S, a lower reservoir having ports e and one or more atmospheric induction and ejection ports b and an escape et for condensed steam, and the intermediate vertical tube C; 2nd. The combination of the upper reservoir E and the supply S having a valve stem F, pointer or finger f and index plate G; 3rd. The combination of the base A, head B, tubes C, bolts D, elastic washers dz and nuts d; 4th. The combination of the base A having outer socket rims a, the tube C and the head B having inner socket rims b.**No. 11,234. Improvements on Telephones.***(Perfectionnements aux téléphones.)*

Frank A. Klemm, Ernest Marx, Julius Kayser, New York, U. S., and Lewis Davis, Montreal, Que., 10th May, 1880; for 15 years.

*Claim*—1st. In telephone transmitters, a diaphragm connected with the mouth piece by one or more spring arm or arms; 2nd. A diaphragm connected with the mouth-piece by a spring or springs, and having a central contact point; 3rd. A diaphragm attached to the mouth-piece by a spring or springs, and having a central point, in combination with an adjustable gravity lever, or spring arm, carrying a carbon contact button; 4th. The combination of an adjustable supporting arm, with fulcrumed gravity lever, carrying the carbon contact button; 5th. An induction coil, for telephone transmitters and other purposes, having its primary and secondary coils wound in alternating layers and separated by intermediate sheets of paper or simi ar material; 6th. The combination of a fixed hanger, with a fulcrumed and spring acted bell crank lever which cuts out or establishes the different connections; 7th. The combination of the fixed hanger post H with a fulcrumed and spring acted bell crank lever I; having contacts i i, and with the contact springs i i i.**No. 11,235. Improvements in Harrows.** *(Perfectionnements aux hersees.)*

Timothy Rogers, Springfield, Ohio, Robert S. Dorsey and Michael E. Bunger, Indianapolis, Ind., U. S., 10th May, 1880; for 5 years.

*Claim*—1st. In a harrow frame, the duplex rods A bent to form the outer rail of said frame and secured by corner clamps; 2nd. The combination, with duplex rods A B, of transverse connecting bars C composed of sections of pipe secured between appropriate fittings and held by a bolt passing through them; 3rd. The combination with the frame and a tooth of a harrow, of the tooth fastening clamp I constructed of four parts i i i i; 4th. The combination, with a harrow composed of sections, of the guards or runners H; 5th. A harrow having hinges D having the elongated openings d therein, whereby the sections of said harrow are enabled to have a vertical movement with relation to each other, to fold up or assume the position shown in fig. 2; 6th. The combination with the rods a forming part of the frame and having enlarged ends, of the corner clamps having suitable openings to hold such ends.**No. 11,236. Improvements on Gas Governors.** *(Perfectionnements aux gouverneurs à gaz.)*

Philip Birch, Stratford, Ont., 10th May, 1880; for 5 years.

*Claim*—1st. The combination of the cut-off valve G, reservoir C, reservoir cap or cover H and connecting rod I; 2nd. The combination of the plug N with egress pipe J; 3rd. The combination of the metal strip or out-off K and guide M, with valve chamber L, and connecting rod I.**No. 11,237. Improvements on Earth Augers.** *(Perfectionnements aux tarières à terre.)*

George A. Crites and Benjamin Crites, Hamilton, Ont. (Assignees of Richard B. Palmer, Chicago, Ill., U. S.), 13th May, 1880; (Extension of Patent No. 4,719), for 5 years.

**No. 11,238. Improvements on Explosive Compounds.** *(Perfectionnement aux composés explosibles.)*

George M. Mowbray, North Adams, Mass., U. S., 13th May, 1880; (Extension of Patent No. 4,769), for 5 years.

**No. 11,239. Frictional Electric Battery.** *(Batterie électrique à friction.)*

George M. Mowbray, North Adams, Mass., U. S., 13th May, 1880; (Extension of Patent No. 4,875), for 5 years.

**No. 11,240. Improvements on Gates.** *(Perfectionnements aux barrières.)*

John H. Smyth and Donald Cameron, Chatham, Ont., 13th May, 1880; for 5 years.

*Claim*—In combination with a gate that may be raised or lowered, the bolt D having pin M and spiral spring N, pin M working in groove L in bolt case, and in combination with the eye bolts E, rod I, latches H, latch plate G, small rods and spiral spring P and knobs F.**No. 11,241. Art of Finishing Textile Fabrics and Machinery for the Same.***(Art de finir les tissus et appareil pour cet objet.)*

Dwight C. Sumner, Millbury, Mass., U. S., 13th May, 1880; for 5 years.

*Claim*—1st. Subjecting the surface of the fabric to the shearing action of revolving cutting sections and a fixed ledger blade; 2nd. Subjecting the surface nap or fibres to the shearing action of revolving and longitudinally reciprocating cutting sections and a stationary ledger blade; 3rd. In a machine for shearing cloth, a ledger blade and a longitudinally reciprocating revolver or blade cylinder, both of which have a series of cutting edges or sections arranged in relation to each other, whereby their combined action will impart to the fabric or face thereof, in a direction with its length, distinct and dissimilar series of stripes alternating with each other; 4th. In a machine for shearing cloth, a revolver or blade cylinder G having its cutting sections arranged in different vertical planes circumferentially, in combination with a stationary ledger blade having a straight continuous cutting edge, whereby, by the combined action of the cutting sections and the stationary ledger blade, diagonal zigzag and herringbone patterns or styles are sheared in the surface of the fabric; 5th. The combination of a blade cylinder or revolver having both a rotary and longitudinally reciprocating movement on its bearings, and provided with cutting sections arranged circumferentially in different, or partially different vertical planes, with a stationary ledger blade having a straight continuous cutting edge for the production of irregular patterns or styles of ornamentation in the surface of the fabric; 6th. A new fabric having its surface ornamented with two or more lines or sections of dissimilar ornamentation produced by shearing the nap or surface fibres, so as to form grooves or furrows, said section or lines of ornamentation being in the direction of the length of the fabric, and in straight or undulating lines.**No. 11,242. Improvements on Vehicles.** *(Perfectionnements aux voitures.)*

Peter Herdic, Williamsport Pa., U. S., 13th May, 1880; for 15 years.

*Claim*—1st. The axle-tree or axle proper B with its struts or braces b b in all in one piece; 2nd. The axle B; having the cranks D D and the struts or braces d d, all made in one piece, with the axle arms and provided with the struts or braces d d; 4th. The ribbed and webbed axle B having the cranks D D, the struts or braces d d and the axle-arms all in one piece of cast steel; 5th. The combination of the axle-tree or axle proper B, the struts or braces thereof, the turning posts having boss and socket connection with the axle tree and the struts, and the axle arms carried by said posts; 6th. The combination of the front axle-tree or axle proper, the struts or braces, the tubular turning posts having boss and socket bearings in the axle-tree and struts, and carrying axle-arms, and the pivot bolts passing through the turning posts, axle-tree and struts; 7th. The one part tubular post G, and axle arm a formed to interlock with bearings in the axle-tree, and strut or braces thereof; 8th. The combination of the reach bars, the front axle-tree, the struts or braces thereof, the turning post carrying the axle-arms, the pivot bolts, and the braces connecting said bolts with the reach bars; 9th. The combination of the reach bars, the cranked and braced rear axle and the braces connecting the reach bars and axle cranks; 10th. The combination of the front axle, its struts or braces, the rear crank axle, the reach bars or two part reach connecting the axles, the front and rear brace bars of the reach, the posts carrying the axle arms for the front wheels and their pivot bolts; 11th. The combination of the rear crank axle having the struts or braces d d and the body supporting springs secured to the axle, close to its cranks and inside the struts; 12th. The combination of the front axle proper, its struts or braces, the axle arms turning posts carrying said arms, their pivot bolts, the draft bar, the rod or strap connecting said bar and the axle, and the link connections between the ends of the draft bar and the turning posts and their pivots, these members being and operating as set forth.**No. 11,243. Feeder for Carding Mechanism.** *(Alimentateur de machine à carder.)*

William C. Bramwell, Hyde Park, Mass., U. S., 13th May, 1880; for 5 years.

*Claim*—1st. The combination of a vibrating or oscillating toothed comb Cr or equivalent device, with a toothed apron A; 2nd. The peculiarly constructed adjustable comb Cr operating as set forth; 3rd. The endless apron B; having flexible strips z, in combination with the apron A; having teeth m; 4th. An apron B constructed with flexible strips z; 5th. The concave shell or dish D, in combination with an apron B; with or without teeth, or with a cylinder; 6th. A weighing apparatus having one or more movable wings J J, forming the side or sides of a receptacle F hung so as to be swung or opened apart for the purpose of discharging, or closed for the purpose of receiving any substance to be weighed; 7th. A board h or equivalent device for pushing forward successive portions of material; 8th. The extended journal boxes or bearings 2 for rolls, cylinders, &c.**No. 11,244. Improvements in Boots and Shoes.** *(Perfectionnements dans les chaussures.)*

Dominick A. McDonald and Charles F. Kittridge, Rookland, Me., U. S., 13th May, 1880; for 5 years.

*Claim*—1st. An insole having a channel on its inner side in which is coiled a spring, such insole being perforated to form a communication between such channel and the interior of the boot or shoe; 2nd. The combination of the perforated insole, the channel between the soles communicating with a vertical passage within the counter terminating in an air inlet opening and a continuous coiled spring.**No. 11,245. Improvements on Lock Nuts.***(Perfectionnements aux arrête-noix.)*

John Ford, Portneuf, Que., 13th May, 1880; for 10 years.

*Claim*—1st. In combination with the bolt A of nut B having a cavity C, eccentric to the bolt hole, and nut E having cam projection F eccentric to the bolt hole, both nuts conjointly screwing on the bolt and locking by independently turning the nut E; 2nd. The combination of the nut B having a spirally crowning face and projection h and nut E, provided with a downward projection i to stop the nuts at their interlocking position.

**No. 11,246. Improvements on Fences.** (*Perfectionnements aux clôtures.*)

John Elliott, Goderich, Ont., 13th May, 1880; for 5 years.

*Claim.*—1st. A fence panel composed of wire stretched longitudinally on a frame formed of top and bottom boards A A and three or more uprights B B fastened together, so that the ends of top and bottom boards project to form supports for the panel, provided with a cap nailed along the top board of panel; 2nd. A fence post constructed of two inclined legs E E fastened at the top and braced by one or more intervening bars C C furnished with receptacles *i i*, for receiving the projecting ends of panels, for the purpose of supporting and holding them in position in the construction of fence; 3rd. A fence post constructed of two inclined legs E E fastened together at the top, and braced by one intervening bar C fastened to the legs E E near the bottom, provided with standards *h h* held in position at lower ends by blocks *e e* fastened to bar C and held in position at top by wire *g*, forming a receptacle for rails, or substitute for rails.

**No. 11,247. Improvements on Ploughs.** (*Perfectionnements dans les charrues.*)

Henry Sanford and Henry R. A. Boys, Barrie, Ont., 13th May, 1880; for 5 years.

*Claim.*—The piece of sheet or cast iron in either of the shapes described, or in any modification of the same, to be placed on the angle formed by the plough beam and the coulter.

**No. 11,248. Improvements on Emery Wheels.** (*Perfectionnements aux tambours à émeri.*)

James T. Barnard, Hamilton, Ont. (Assignee of Gilbert Hart, Detroit, Mich., U. S.) 13th May, 1880; for 5 years.

*Claim.*—A grinding and polishing wheel in which the abrading and polishing surface is composed of a plastic composition of emery, corundum, or similar material, braced by means of embedded fragments of metal mixed irregularly or at random therein, and of such nature as to wear away by friction as readily, or more readily than the composition of which the main body of the wheel is formed.

**No. 11,249. Improvements on Pencil Sharpeners.** (*Perfectionnements aux taille-crayons.*)

Marvin C. Stone, Baltimore, Md., U. S., 13th May, 1880; for 5 years.

*Claim.*—1st. A combined pencil sharpener and pencil point protector, constructed wholly of one piece of metal, consisting of a hollow cylinder having a hollow conical end, the whole being slotted longitudinally, and the conical end being provided with a cutting edge which has a flexibility in dependent of that consequent upon the slotting of the device longitudinally; 2nd. A combined pencil sharpener and pencil point protector, provided with a cutting edge which is rendered flexible by means of a transverse slit at the base of the said cutting edge; 3rd. In a combined pencil sharpener and pencil point protector, the aperture in the apex of the conical end thereof having a cylindrical inner surface; 4th. A combined pencil sharpener and pencil point protector, having the outer surface of the cylindrical portion thereof roughened.

**No. 11,250. Improvements on Farm Gates.** (*Perfectionnements aux barrières.*)

Wallace Claypool, North Buffalo, Pa., U. S., 13th May, 1880; for 5 years.

*Claim.*—1st. The folding gate A properly hung on post B combined with the weighted lever D, swivel E and link or strap d; 2nd. The folding gate A adapted to be operated as described, and combined with spring latch C; 3rd. The combination of folding gate A with post B, pin *i*, swivel E, lever D, weight F and link d.

**No. 11,251. Improvements on Tool Handles.** (*Perfectionnements aux manches des outils.*)

Levi H. Roberts, Cadillac, Mich., U. S., 13th May, 1880; for 5 years.

*Claim.*—1st. The plate D roughened upon one side and flat upon the other, and the key E to adapt them to be inserted between the rear edge of the handle and the rear edge of the tool eye; 2nd. The combination, with the tool A and the handle B, of the plate D roughened upon one side and smooth upon the other, and the key E, whereby the handle will be secured to the tool A firmly and detachably.

**No. 11,252. Improvements on Whiffletrees.** (*Perfectionnements aux palonniers.*)

Denis Foley, Bridgeport, Conn., U. S., 13th May, 1880; for 5 years.

*Claim.*—1st. The combination of the tree A, band C, nut *i* and eye bolt *g*; 2nd. The combination of the tree A, ferrule *f*, with the recess d, nut *i* and eye bolt *h*, the end of the latter made long and with a taper pointed screw.

**No. 11,253. Improvements in Telephones.** (*Perfectionnement aux téléphones.*)

George H. Bliss, Pittsfield, Mass., U. S., 13th May, 1880; for 5 years.

*Claim.*—1st. A clock or time train, combined with a bell or other signal and an electro-magnet to operate it, and connecting devices between the time train and signal controlled by the time train, to render the signal silent at all times except at pre-determined intervals of time, to thereby permit the said signal to be sounded only at pre-determined intervals of time, to avoid sounding more than one bell or signal in each circuit at one time; 2nd. In a clock or time train, a signal bell and electro-magnet to operate it and a shunt circuit to shunt said electro-magnet, one portion of said shunt circuit being composed of a circuit closer controlled by the said time train, whereby the said electro-magnet is shunted during certain intervals of time; 3rd. In a telephonic circuit, a series of clocks or time trains and bells operated by electro-magnets, the armatures of which are adapted to be released by a break in the electric current combined with a series of armature controlling

devices, each of which, in all the clocks or time trains of the circuit, is adapted to release the armature of its own electro-magnet at a different time from any of the others, whereby any signal in connection with any telephone of the circuit may be called at a pre-determined and definite time and at no other time at which time all the other armatures which operate all the other bells of the circuit are mechanically and positively held closed, to thereby permit but one signal for one telephone of the circuit to be sounded at the same time; 4th. In a telephonic circuit, a series of clocks or time trains and signal bells operated by electro-magnets, combined with a series of circuit closing devices to close a shunt around the said electro-magnets, each one operated by the said time trains to open the shunt and cause the current to pass through the coils of the corresponding electro-magnet at a different time from any of the others, whereby all the signals in the circuit may be operated each in turn by a battery of sufficient power to operate one; 5th. A time train or clock to operate an armature controlling device in a telephonic circuit and automatically release an armature at stated intervals, to permit it at that time and at no other time, to be operated by a break of the battery current, combined with a check or stop to temporarily arrest the motion of the clock or time train at regular intervals of time, to permit each clock or time train in the telephonic circuit to be stopped at regular intervals of time, preparatory to being again started together, to ensure uniformity of time or speed of movement of the armature releasing devices of all the clocks of the circuit; 6th. A time train or clock to operate an armature controlling device in a telephonic circuit, and automatically release an armature at stated intervals, to permit it at the proper, and only at that time, to be operated by a break of the battery current, combined with a check or stop to temporarily arrest the motion of the clock or time train at regular intervals of time, to permit each clock or time train, in the telephonic circuit, to be stopped at regular intervals and with a central clock in electric connection with all the other clocks of the circuit, and circuit breaking devices or switch operated by the said central clock, whereby the clock or clocks in the circuit with the central clock may be automatically started at the same defined time; 7th. In combination, one of the main arbors of a clock, an arm and connections to raise the weight which holds the armature closed against the poles of its magnet, preparatory to breaking the current of the circuit in which the said magnet is placed, and stopping device released by the movement of the said magnet when the current is broken, the said stopping device engaging a projection moving in unison with the second hand of the clock and automatically stopping at certain predetermined intervals; 8th. A time train or clock and armature and electro-magnet, combined with a weight to hold the armature closed mechanically, except for a certain number of seconds, at regular intervals, when the said weight is raised to release the armature and permit it to be operated by the battery current if desired, the bell or signal being noiseless at all other times.

**No. 11,254. Improvements on Telephones.**(*Perfectionnements aux téléphones.*)

Charles Williams, jr., Somerville, (Assignee of George L. Anders, Boston, Mass., U. S.) 13th May, 1880; for 5 years.

*Claim.*—1st. The combination, with the switching devices, of a central office, a magnet induction apparatus or generator having a circuit for obtaining continuous currents in either direction; 2nd. A magneto-generator having a circuit for obtaining reversing currents and a circuit for obtaining continuous currents; 3rd. The combination of the magneto-generator, the insulated sections E E, mechanically connected to the shaft of the armature and rotating therewith, the springs H H arranged to bear against the sides of the sections E E and the spring N arranged to bear uninterruptedly against one of the sections and the electrical connections; 4th. The rotating armature shaft having attached to one end the socket D of insulating material, combined with the metallic sections E E inserted in said socket and separated from each other by an insulating strip F; 5th. The keys I I J J arranged in pairs, each pair connected by a coupler of insulating material, whereby one or both of the keys of each pair may be operated.

**No. 11,255. Improvements on Steam Generators.** (*Perfectionnements aux générateurs de vapeur.*)

William A. Green, Elizabethport, N. J., U. S., 13th May, 1880; for 5 years.

*Claim.*—1st. In a furnace for steam generators, adapted for burning soft coal, the combination of the pendant partition D arranged with its rear face inclined to the front and having an air passage left for a reduced circulation between it and the boiler shell with the perforated fire-bed *b*, the back hearth *c*; 2nd. In a furnace for steam generators adapted for burning soft coal, inclined fire-bed *b*, the back hearth *c* arranged flush with the fire-bed at their junction and sloping up to the door K, the said door K arranged to admit air to the flues, and the pendant partition D; 3rd. The perforated door K arranged in the back wall of the same, the hearth *c* or its equivalent grate surface arranged to slope down from the said door to the fire-bed *b*, the fire-bed constructed of perforated sections, and the door G; 4th. The arrangement of the furnace or fire-bed *b* under the forward end of the boiler, the partition D arranged to partially divide the fire-box, and the perforated door K to admit air to the furnace at the point where the products of combustion turn into the flues; 5th. In a furnace for steam generators adapted for burning soft coal, the fire front provided with the perforated door or plate *f*, for charging door or doors G, the holes *d d* and door *t*, in combination with the sloping hearth *c*, the door K and the partition D; 6th. The combination of the pendant partition D arranged to divide, or partially divide the fire-box, the perforated fire-bed *b*, the perforated air pipes I, the charging door G and the door K.

**No. 11,256. Improvements on Motors for Machinery.** (*Perfectionnements aux moteurs pour les machines.*)

Joseph Williams, Sharpsburgh, Edgar Smith, Pittsburgh, and Joseph R. Milligan, Wilkins Township, Pa., U. S., 13th May, 1880; for 5 years.

*Claim.*—The mixture described to be used for actuating a piston, composed of the vapour of bi-sulphide of carbon and petroleum oil; 2nd. The method of producing a motor for actuating a piston, viz.: injecting bi-sulphide of carbon into a boiler supplied with petroleum oil previously heated; 3rd. The method of operating a piston, viz.: supply the cylinder of an engine with a mixture composed of the vapour of bi-sulphide of carbon and petroleum oil, and with a small quantity of liquid petroleum oil.



**No. 11,257. Harvester Attachment for Cutting Peas.** (*Disposition des moissonneuses pour arracher les pois.*)

Benjamin Tolton and Andrew Tolton, Eramosa, Ont., 15th May, 1880; (Ex tension of Patent No. 4,727), for 5 years.

**No. 11,258. Machine for Mortising Doors for Locks.** (*Machine à mortaiser les portes pour les serrures.*)

Hiland A. Holt, Frank A. McKean, Moses Davis and James H. Tolles, Nashua, N. H., U. S., 15th May, 1880; for 5 years.

*Claim.* 1st. The combination with a rigid supporting frame of a vertical laterally adjustable support, carrying a mortising bit upon one side, and a chisel having a bent shank upon the other, with a key hole cutting mechanism consisting of two graduated arms, one carrying a cutting tool and moving for the purpose of adjustment upon the other; 2nd. The combination, with a rigid supporting frame of a laterally adjustable support, carrying a vertically adjustable bit on one side and a revolving chisel upon the other, said chisel having a bent or bayonet-shaped shank; 3rd. The combination, with the mortising mechanism and its supporting frame, of a vertical bar supporting a fixed arm which, in turn, supports a vertical bar carrying a cutting tool at its end, the vertical bar and its fixed arm being so located as to furnish two fixed points from which the position of the key hole and knot hole may be laid off upon the graduated scale marked upon the fixed arm and the vertical bar; 4th. The combination, with the mortising bit D, of the revolving chisel having a bent shank; 5th. The combination, with the platform A, of the vertical bar L and the horizontal arm and radius bar L' R'; 6th. The combination of the frame A, the vertical and laterally adjustable frame B, the bit D, chisel H having bent shank, and a suitable clamp for attaching the frame A to a door; 7th. The combination with the bit D and chisel H supported upon an adjustable frame of the bits T T', the vertical bars K', horizontal arm L' and set screw S'.

**No. 11,259. Improvements on Filtering Machines.** (*Perfectionnements aux machines à filtrer.*)

George H. Moore, Norwich, Ct., U. S., 20th May, 1880; for 5 years.

*Claim.* 1st. In a filtering apparatus, a compartment for filtering material provided with compressors, the movement of which compresses the material in different lines of direction; 2nd. A compartment for filtering material provided with movable parts, the movement of which enlarges the dimensions of the compartment in different lines of direction; 3rd. The filtering cylinder, the end compressor and the cone frustum compressor, all combined; 4th. The plural number of receptacles for the unfiltered fluid on its way to be filtered; 5th. Distributing pipes arranged about the filtering compartment; 6th. The exterior casing, the extra unfiltered fluid receptacle, the distributing pipes and filtering compartment all combined; 7th. The outlets for the unfiltered fluid set at a direction relative to the filtering compartment, to give a rotary movement of the fluid thereon; 8th. An exterior indicator of the compactness of the filtering material through a rod communicating with a movable part of the filtering compartment; 9th. An exterior indicator of the position of a compressor relative to the filtering compartment, through a rod communicating with a movable part of the compartment; 10th. The filtering cylinder, the end compressors, the hollow cone-frustum compressor, the threaded shaft, and the stuffing box appurtenant for the end-compressor, all combined; 11th. The filtering cylinder, the lower end-compressor being the cone-frustum compressor regularly shaped at its upper end, and the upper end compressor having the annular recess, all combined; 12th. The exterior casing, the filtering cylinder, the end-compressors, and the threaded shaft passing out the lower head of the casing, all combined; 13th. The exterior casing provided with the internal flange, the induction pipes, the extra unfiltered fluid receptacle provided with the distributing pipes, the filtering cylinder, the end compressors, the cone frustum compressor, and the threaded shaft, all combined as set forth.

**No. 11,260. Improvements on Metallic Hubs.** (*Perfectionnements aux moyeux métalliques.*)

John B. Newman, Wallaceburgh, Ont., 20th May, 1880; for 5 years.

*Claim.* 1st. The combination of the box A, as shaped to receive the hinge and cap nut, the dish-shaped discs E, the hinged wings D and also the band F.

**No. 11,261. Improvements on pens.** (*Perfectionnements aux plumes à écrire.*)

Duncan MacKinnon, Adrian, Mich., U. S., 20th May, 1880; for 5 years.

*Claim.* A pen constructed with a point formed of two short nibs f separated by a slightly v-shaped slot, transverse and longitudinal slits or openings g g in the body, and central groove c extending from the slotted body to the point of the pen.

**No. 11,262. Improvements on Stovepipe Thimbles.** (*Perfectionnements aux douilles des tuyaux de poêles.*)

Nathan D. Morey, Saratoga Springs, N. Y., U. S., 20th May, 1880; for 5 years.

*Claim.* 1st. A stovepipe fastener composed of a collar with pivoted jaws or lips operated by thumb screws, or equivalent means for clamping the stovepipe; 2nd. The combination of the collar B, the pivoted jaws or lips D, connections a b and the screws F.

**No. 11,263. Improvements on Sawing Machines.** (*Perfectionnements aux scieries.*)

David R. Proctor, Gloucester, Mass., 20th May, 1880; for 5 years.

*Claim.*—1st. A plate having a series of inclined grooves formed alternately in its opposite sides, and a series of cutters formed on its edge at the ends of the grooves, each cutter being substantially equal in thickness to the depth of each groove, said cutters being narrower than the thickness of the plate and so arranged that one side of every alternate cutter is flush with

one side of the plate, and the opposite sides of the other cutters are flush with the opposite side of the plate; 2nd. A plate having a series of cutters thinner than the body of the plate (one side of every alternate cutter being flush with one side of the plate, and the opposite side of the other cutters with the opposite side of the plate) and a series of inclined grooves or channels formed alternately in the opposite sides of the plate and extending from the points of the cutters, to conduct the shavings out of the log; 3rd. A plate having a series of cutters and a series of grooves extending alternately on opposite sides from the cutters, each groove being wider than it is deep and having its forward edge curved to join its inner side.

**No. 11,264. Improvements on Weighing Machines.** (*Perfectionnements aux appareils de pesage.*)

John B. Stoner, Toledo, Ohio, U. S., 20th May, 1880; for 5 years.

*Claim.*—1st. In an apparatus for weighing grain, in combination with the hopper and the chute for supplying the same with grain, a bucket wheel mounted upon a shaft and two strokers or distributors, with suitable mechanism for transmitting motion from the bucket wheel to the same, whereby they will be automatically operated by the infowing grain; 2nd. In combination with the discharge valves mounted upon a rock shaft at the lowest part of the hopper, a lever operated by said rock shaft and a reciprocating bar operated by said lever, said bar being slotted near each end into which slots two pivoted bars are adapted to alternately drop, said bars being connected to the levers for actuating the cut-offs of the chute for alternately supplying each compartment of the hopper; 3rd. In combination with the rising and falling hopper the platform fulcrumed at one end to the frame of the apparatus, and at the other to links fulcrumed to the rocking frame which supports the hopper, said platform being provided with ways or rails upon which is adapted to travel a weight mounted on wheels and provided with a leading screw by means of which it may be shifted in order to adjust the weight; 4th. In combination with the rising and falling hopper, a platform suitably fulcrumed to the frame of the apparatus and connected to the rocking frame which supports the hopper, said platform being provided with movable weight which may be adjusted as required; 5th. A hopper having its two chambers formed respectively with a large compartment at top, and a small compartment at bottom, and the two compartments in communication with each other by means of a contracted portion or throat, in combination with a two way chute provided with cut-off gates, a scale beam, a double acting valve and tripping mechanism for operating the cut-off gates, this combination being such that the chute remains stationary while the two chambers of the hopper and the large and small compartments of each chamber thereof rise and fall together, and that the valve is opened on one side of the partition of the hopper and closed on the other side thereof when only a small weight from the fall chamber of grain is resting directly upon it, and the sudden discharge of the whole chamber of grain cannot take place when the valve is thus opened; 6th. The hopper C having a large upper compartment and a small lower compartment, the two compartments being rigid with one another and connected by a contracted portion or throat, whereby the weight of the larger portion of the grain in a chamber of the hopper is supported in a great measure in the upper compartment above the grain in the lower compartment, while the discharge valve is being opened, and gradually discharged after the valve is opened; 7th. The double valve provided with a counter balance, in combination with the hopper having two chambers and relatively large and small compartments in each chamber, which are connected by a narrow throat; 8th. The weights slotted as at g g' and provided with the set screw g<sub>2</sub>; 9th. The hopper C provided with the vertical sliding partition M.

**No. 11,265. Improvements on Horse shoes.** (*Perfectionnements aux fers à cheval.*)

John D. Billings, New York, U. S., 20th May, 1880; for 10 years.

*Claim.*—1st. A double rectangular or T-bar for the manufacture of horse-shoes by machinery, the same consisting of a flat foot plate B and continuous rib A, said plate being provided with a groove R on one side of the said rib, and the said rib projecting vertically from said plate and being about equally distant from either edge thereof; 2nd. A machine made horse-shoe, from a T-bar of iron or steel, consisting of a right line horizontal foot plate B from end to end and side to side (with or without the toe flange or clips C) having a groove or fullering R upon the under side near the outer edge of the said plate, and a rib A upon the under side of the foot plate B extending around the entire shoe from heel to heel.

**No. 11,266. Improvements on Locomotive Brakes.** (*Perfectionnements aux freins des locomotives.*)

Charles W. Lanpher, Norwich, N. Y., U. S., 20th May, 1880; for 10 years.

*Claim.*—1st. In an apparatus for braking or retarding locomotive engines and other railroad vehicles, a power cylinder into one end of which the motive force is admitted, while the opposite end has no induction or eduction aperture, but is made to contain air, which is compressed by the use and movement of the piston and is thus made to aid in releasing the brake, when the steam or other gas is allowed to pass out of the cylinder; 2nd. The combination with the steam generator of a locomotive engine, or with another gas generator placed upon the train, the described braking or retarding mechanism, it consisting of a cylinder A closed at both of its ends, and adjustable cross head E attached to the end of the piston-rod of said cylinder, links E', levers F for applying the brake shoes to the wheels, connecting rods G G' for operating the shoes upon opposite portions of the peripheries of the wheels, hangers for supporting the parts in position and brake shoes for application upon the wheels, the parts being arranged for joint operation.

**No. 11,267. Process and Apparatus for Casting Leads.** (*Procédé et appareil pour couler les interlignes et les blancs.*)

John Fleming, Toronto, Ont., 20th May, 1880; for 5 years.

*Claim.*—Casting the leads in a series of bars in a gate between the sections of a flask faced with a covering of asbestos, paper or similar material; 2nd. The flask A constructed in sections, which are faced with

asbestos or similar material, in construction with the gate C, provided with parallel opening c c; 3rd. The flask A, constructed in sections hinged together and provided with an adjustable clamping device, in combination with and pivoted to the frame D.

**No. 11,268. Apparatus for Exhausting Air from Cans, etc.** (*Appareil pour pomper l'air des boîtes, etc.*)

Thomas G. F. Dolby, Dulwich, Eng., 20th May, 1880; for 5 years.

*Claim.*—1st. The combination of the cylinder A and piston and rod B C with chamber F mounted on the cylinder A and provided with a cover a passing a valvular opening therein; 2nd. The combination of a chamber F provided with a cover a, arranged to be held in place by atmospheric pressure and provided with a valvular opening, and valve c with the cylinder A and its piston and rod; 3rd. In combination with the cylinder A provided with a suitable piston and rod and a cover E, having opening b b, a removable chamber F having a cover a with an opening controlled by a valve and constructed as shown, whereby chambers of various sizes and shapes may be employed interchangeably; 4th. The disc or presser f, plunger g and lever n or other equivalent arrangement for exerting pressure upon the lid of the vessel G while air is being re-admitted to the chamber F.

**No. 11,269. Improvements on Refrigerating Covers.** (*Perfectionnements aux couvercles frigorifiques.*)

Abijah North, New York, U. S., 20th May, 1880; for 5 years.

*Claim.*—1st. As an improved article of manufacture, a vessel cover open at the bottom provided with a packing ring and containing a perforated or wire netting ice receptacle resting on a drip plate, which conducts the drip water into a hollow space in the lower part of the wall of the vessel; 2nd. The combination with the vessel A, of the plate D forming the space C, drip plate J and ice receptacle Q; 3rd. The combination with the vessel A, of the rubber tube G, and the spreading wire H, and the bottom E of the wall D; 4th. The combination with the vessel A, of the plate D forming the space C, the drip plate J having the spout K and the tube L; 5th. The combination with the vessel A, of the wire netting ice receptacle Q and the drip plate J.

**No. 11,270. Improvements on Reaping Machines.** (*Perfectionnements aux moissonneuses.*)

John Johnson, Milton, Ont., 20th May, 1880; for 5 years.

*Claim.*—The lever J, pivoted to a post or bracket L and supported by the table A, in combination with the chain F and adjustable grain wheel E arranged as described, for the purpose of enabling the driver to adjust the grain wheel side of the table A.

**No. 11,271. Improvements on Fishways.**

(*Perfectionnements aux passes migratoires.*)

William H. Rogers, Amherst, N. S., 20th May, 1880; for 5 years.

*Claim.*—1st. A fish-way or ladder combined with or built into or through a dam A, the entrance to said ladder or way D; being at the foot of the dam and projecting inclinedly into a pond or reservoir B; 2nd. A fish ladder or way permanently built into a dam A having side gates I opening into the pond or reservoir; 3rd. A fish ladder or way passing through a dam A protected by exterior crib work K; 4th. A fish-way or ladder having curvilinear steps or buckets J with radial projections a; 5th. A fish ladder or way consisting of flood D, slides G, framing H, crib-work K and an abutment C combined with a dam A.

**No. 11,272. Improvements in Hay Presses.**

(*Perfectionnements aux presses à foin.*)

Joseph Berthiaume, sr., and Joseph Berthiaume jr., Boucherville, Que., 20th May, 1880; for 5 years.

*Claim.*—The combination, with the press box A and its accessory parts, of the ratchet wheel a, chain pulley b, movable pulley d, working chain e with the sliding bolt c, or any equivalent device for connecting quickly the chain e with the bar d.

**No. 11,273. Improvements in Hay Presses.**

(*Perfectionnements aux presses à foin.*)

François Berthiaume, St. Roch, Que., 21st May, 1880; for 5 years.

*Claim.*—In a machine for pressing hay or other materials into bales or bundles and actuated by brakes, ratchet wheels, pawls and elevating chains, the combination and arrangement of the movable pulleys b b, platform cross-head D, shackles or carriages a a, chains E E, fixed bars or bolts c c, indented and grooved chain wheels F F, brackets or uprights d d and small chains or chains f f.

**No. 11,274. Improvements on Pillow Holders.**

(*Perfectionnements aux porte-oreillers.*)

John B. Adams, Oakland, Cal., U. S., 26th May, 1880; for 10 years.

*Claim.*—1st. The bar or rod c and the rods d d; in combination with the supporting brackets D secured to the head board of the bedstead, and the pins or screws h that serve as pivots or pintles for the frame C; 2nd. The frame C with pivots or pintles e e and a holding device i to support it in a turned position, in combination with supporting staples D; which are secured to the head board of a bedstead; 3rd. A pillow sham frame and holder permanently hinged or pivoted to a bedstead at the head thereof, by means of supporting arms of brackets D secured to the head board and pins or screws h that serve as pivots or pintles for the frame and holder; 4th. The combination with the bar c, of the brackets D provided with the flanges or lugs g; 5th. The combination with the bar or rod c, of a pillow sham frame and holder C provided with friction caps or ferrules E on the ends hereof, of the brackets D and pins or screws h.

**No. 11,275. Improvements on Top Boots.** (*Perfectionnements aux bottes à tige.*)

Edward Roos, Galt, Ont., 26th May, 1880; for 5 years.

*Claim.*—As an improved article of manufacture, a top boot in which the leg is made in two pieces, with joining the seams situated in the front and back respectively.

**No. 11,276. Improvements on Beer Faucets.**

(*Perfectionnements aux robinets à bière.*)

Charles C. Redmond and Archibald W. White, San José, Cal., U. S., 26th May, 1880; for 5 years.

*Claim.*—A body B, provided with the passages b b; and the globe C, in combination with the cock E provided with the openings e e, the tube D provided with the valve K, and the nozzle H.

**No. 11,377. Improvements in Telephones.**

(*Perfectionnements dans les téléphones.*)

George L. Anders, Boston, and Thomas A. Watson, Everett, Mass., U. S., 26th May, 1880; for 5 years.

*Claim.*—1st. In an electric circuit, a series of switches permanently connected to the main circuit, each of which switches is operated by an electro-magnet acting to simultaneously put all the switches to earth or to consecutively remove the same from the earth; 2nd. In an electric circuit whose continuity is unbroken, a series of switches permanently connected thereto, all of which switches are simultaneously put to earth when their operating electro-magnets are discharged after a current in one direction and which are consecutively removed from earth by succeeding discharges of currents in the opposite direction through their operating electro-magnets; 3rd. The electro-magnet with its neutral and polarized armature, in combination with a grounding switch that is operated by said magnet when the same is discharged; 4th. The combination, with a polarized armature of a bell hammer attached thereto and vibrated thereby, of a switch for establishing a ground connection, which switch when disconnected from earth locks said armature and prevents it from vibrating; 5th. The combination with an electro-magnet, of the pivoted lever F carrying a neutral and a polarized armature of said magnet, of the pivoted lever L which is moved one side or the other by the back stroke of the neutral armature according as one pole or the other of the polarized armature is attracted to the electro-magnet; 6th. The combination, with the switch lever L provided with the arms M M and projections a a, of the polarized armature provided with the projections b b.

**No. 11,278. Improvements on Sewing Machines.** (*Perfectionnements aux machines à coudre.*)

Duryea S. Van Wyck, Fishkill Plains, N. Y., U. S., 26th May, 1880; for 5 years.

*Claim.*—1st. In combination with the foot board a, of a sewing machine, the extended slotted pivoted treadles B B provided with sheaves d d; 2nd. The combination with the treadles B B provided with sheaves d d, of the belts c c grooved eccentric D D and driving shaft E; 3rd. The lever H, adjustable tightening pulley I and spring J, in combination with the driving belt G, whereby the said driving belt is made to operate the driving pulley of the needle bar; 4th. The lever H, rod K, brake shoe K, spring m and friction pulley M, in combination with the needle bar O, whereby the motion of the said needle bar O is arrested; 5th. In combination with a sewing machine, the lever H, spring J, tightening pulley I, rod K, brake shoe K and friction pulley M; 6th. The combination with the lever H, pulley I, rod K and brake shoe K, of the rod n and treadle N; 7th. The combination with the lever H, of the pivoted spring catch Q, whereby the said lever H is held retracted so that the motion of the needle bar is arrested; 8th. The combination with the foot board a, of a sewing machine, of the stool S provided with an adjustable seat q pivoted on the bevelled head of the screw T; 9th. The combination with catch Q, of the spring R, whereby the said catch is operated as set forth; 10th. The combination with the driving shaft E, of the balance wheel F, whereby the motion of said shaft is made continuous, while the motion of the needle bar is arrested.

**No. 11,279. Improvements on Carriage Seat Locks.** (*Perfectionnements aux serrures des sièges des voitures.*)

Clark Robinson, Eau Claire, Wis., U. S., 26th May, 1880; for 5 years.

*Claim.*—1st. The combination of the arm c, brace or supporting piece c, and thumb screw r; 2nd. The combination of the arm c and brace or supporting piece d having nib e, which engages with the arm c below the hinge or support with a screw r for tightening the arm c; 3rd. The combination of the brace or supporting piece d having nib e, thumb screw r with arm c having hooks k, slot l and angular projection g.

**No. 11,280. Improvements on Steam Boilers.**

(*Perfectionnements aux chaudières à vapeur.*)

William Johnstone, Ottawa, Ont., 26th May, 1880; for 5 years.

*Claim.*—1st. The top chamber A, annular base chamber F connected by circulating tubes E and provided with drop tubes B and fire bar grating G; 2nd. The jacket or buckwork setting N enclosing the boiler recessed from and below the chamber A, to form an annular flue K for the passage of the smoke between the tubes E to the central exit, over top of the chamber.

**No. 11,281. Improvements in Churns.** (*Perfectionnements dans les barattes.*)

George S. Ward, Hamilton, Ont., 26th May, 1880; for 5 years.

*Claim.*—The combination, in a cube churn A, of the flanged circular screw threaded collar H and corresponding threaded cover J to fit thereon, the sieve K adjustably secured under the outlet opening L by arms a a and slats b b, or the equivalent, and the spring counter sunk handles M on two sides.

**No. 11,282. Improvements on Thrashing Machines.** (*Perfectionnements aux machines à battre*)

George Culham, Beverley, Ont., 26th May, 1880; for 5 years.

*Claim*—The combination of the fanning mill A, elevator B, screw D D and endless belt D D D.

**No. 11,283. Improvements in Grain Measures.** (*Perfectionnements aux mesures à grain.*)

William M. Dight, (Assignee of Henry M. Daggert.) Mercer, Pa., U. S., 26th May, 1880; for 10 years.

*Claim*—1st. The combination of the vessel A, inclined trough D and pivoted stroke off rod K; 2nd. The vessel A E C with sockets L and legs N having hooks M, stroke-off rod K, inclined trough D and slide or valve H with lever F.

**No. 11,284. Improvements on Bench-Hooks.** (*Perfectionnements aux crochets d'établis.*)

Cyrus Kinney, Windsor, and Anthony Neville, Hamilton, Ont., 26th May, 1880; for 5 years.

*Claim*—1st. A bench-hook A operated by means of screw E and collar or shoulder F and in combination therewith as specified; 2nd. The plate D forming a hinge for hook A and in combination therewith as specified.

**No. 11,285. Improvements on Marking Gauges.** (*Perfectionnements aux trusquins.*)

Cyrus Kinney, Windsor, and Anthony Neville, Hamilton, Ont., 26th May, 1880; for 5 years.

*Claim*—The combination of serrated disc or toothed wheel D with shaft A gauge B thumb screw C and screw or pin E.

**No. 11,286. Improvements on Slitting Gauges.** (*Perfectionnements aux trusquins à lame.*)

Cyrus Kinney, Windsor, and Anthony Neville, Hamilton, Ont., 26th May, 1880; for 5 years.

*Claim*—1st. The combination of serrated disc F, bearing arm G, shank H, wheel I and box A; 2nd. The gauge C, carrying arm D, thumb screws E and box A; 3rd. The combination of disc F and wheel I with gauge C and box A.

**No. 11,287. Machine for Affixing stamps or Labels.** (*Machine pour appliquer les timbres ou les étiquettes.*)

William Rushmer, Aylmer West, Ont., 26th May, 1880; for 5 years.

*Claim*—1st. The combination of the tube A with the perforated end B; 2nd. The combination of the rod or bar C with the head fitted with an absorbent substance D.

**No. 11,288. Improvements on Milk Pans.** (*Perfectionnements aux boîtes à lait.*)

Charles C. Fairlamb, Chicago, Ill., U. S., 26th May, 1880; for 5 years.

*Claim*—1st. A deep milk pan provided with a central vertical tube A, opened at bottom and communicating with a horizontal pipe B extending through the side of the pan near the top; 2nd. The pan P provided with a circular pipe A B opening through the bottom and side, and having a cover C provided with an elastic band D to make it air-tight.

**No. 11,289. Improvements on Metallic Coffins.** (*Perfectionnements aux cercueils métalliques.*)

James McMaster, Ridgetown, Ont., 26th May, 1880; for 5 years.

*Claim*—The application of sheet or galvanized iron at D in the place of a solid bottom.

**No. 11,290. Improvements in Buggy Tops.** (*Perfectionnements aux soufflets des voitures.*)

Edward N. Heney, (Assignee of William Davis,) Montreal, Que., 26th May, 1880; for 5 years.

*Claim*—In combination with the bars and seat of a carriage, the shifting rail B having a socket a for the pivoting of the bow irons, a knee b for the reception of the curtain end, a stud C for pivoting the end of the brace D, and two holes E E into which are inserted the adjusting screwed pins c c, said pins being screwed into fixed studs d d with palms e e and provided with adjusting heads f f and jam nuts g g.

**No. 11,291. Improvements on Fluid Soaps.** (*Perfectionnements aux savons liquides.*)

Charles J. Geier, (Assignee of Elisha W. Lincoln,) Richmond, Ind., U. S., 26th May, 1880; for 15 years.

*Claim*—A soap composed of one gallon of rain water, one pound of concentrated lye, two and one half ounces of borax, one ounce of spirits of ammonia, one half ounce of alum, one ounce of coal oil, two ounces of tallow melted and one ounce of sal soda.

**No. 11,292. Improvements on Sash Fasteners.** (*Perfectionnements aux arrêts-croisés.*)

John Warren, Toronto, Ont., 26th May, 1880; for 5 years.

*Claim*—The combination of the gravitating bolt F having extremity B secured to the sash by pivot screw G, and rack bar H secured to the window frame.

**No. 11,293. Improvements on Grain Weighing Machines.** (*Perfectionnements aux appareils de pesage du grain.*)

John W. Hill, Cincinnati, Ohio, U. S., 26th May, 1880; for 5 years.

*Claim*—1st. The balance bobs K K having curved toes K<sub>1</sub> K<sub>1</sub>, in combination with the beam B having lifting toes b<sub>1</sub> b<sub>1</sub>. 2nd. The balance bobs K K having curved toes K<sub>1</sub> K<sub>1</sub>, in combination with the rock shaft K, fixed clutches L<sub>1</sub> L<sub>1</sub> N, loose clutches L L M and cut offs h and h<sub>1</sub>; 3rd. The combination of the curved toes K<sub>1</sub> K<sub>1</sub>, rock shaft K, fixed clutches L<sub>1</sub> L<sub>1</sub> N, loose clutches L L M, with the lifting toes b<sub>1</sub> b<sub>1</sub> and cut off h h<sub>1</sub>; 4th. The combination of the beams B b, weights B b<sub>1</sub>, stop i and grain bucket D; 5th. The combination of the curved toes K<sub>1</sub> K<sub>1</sub>, rock shaft K, fixed clutches L<sub>1</sub> L<sub>1</sub> N, loose clutches L L M and cut offs h h<sub>1</sub>, with the fixed grain spout G.

**No. 11,294. Improvements in the Manufacture of Boots and Shoes.** (*Perfectionnements dans la fabrication des chaussures.*)

Louis Goldu, Winchester, Mass., U. S., 29th May, 1880; for 5 years.

*Claim*—1st. In a nailing machine to unite the uppers and soles of boots and shoes, a horn and a rigid nose above, combined with mechanism to permit the horn to automatically adapt itself to the thickness of the stock, and with mechanism to automatically and positively depress the said horn a fixed and determined distance from a base line variable according to the thickness of the stock; 2nd. The combination with wire feeding mechanism, of mechanism to sever the wire and simultaneously from the point for one and the head for another nail; 3rd. The upwardly pressed horn made self adapting to the varying thickness of the stock, combined with means to automatically lower the same after each nail is driven and the feeding mechanism, to engage and move the boot or shoe forward; 4th. The upwardly pressed horn and means to lower the same after driving each nail, combined with wire feeding mechanism, and connecting mechanism between the horn and said feeding mechanism to vary the length of the wire fed into the machine, to automatically adapt the length of the nail to the thickness of the stock; 5th. The combination with the clamping dies provided with head shaping cavities to grasp and hold the wire, of a cutter to sever the wire diagonally, and to follow the upper end of the nail being severed, and from an enlarged head upon it while held by the clamping dies; 6th. The combination with the clamping dies, provided with a heading cavity and a point shaping cavity or off-setting recess, of a cutter to first act upon the wire and bend it into the point shaping cavity, and then cut into the wire diagonally to form an enlarged head upon and sever a nail from the length of wire; 7th. The feeding rollers, ratchet 34 fixed with relation to one of them, and pawl carrier and a pawl and its rocker shaft, and mechanism to always throw the pawl carrier and pawl forward to a certain fixed point, combined with a spring to throw the pawl carrier backward, and a variable stop to arrest the backward movement of the pawl carrier, according to the position of the upper end of the horn; 8th. The combination with the clamping dies to grasp and hold the wire and a cutter to sever and form an enlarged head on the nail to be driven, combined with the feeding mechanism adapted to feed into the dies a variable quantity or length of wire, according to the thickness of the stock to thereby form headed nails of different lengths as needed in stock of different thickness; 9th. The combination with the horn and regulating rod 28 and pawl carrying rock shaft for the feeding mechanism, of a block to hold the pawl carrier in elevated position and prevent the operation of the wire feeding mechanism; 10th. The horn depressing rod l and the connecting lever between them, combined with the spring to depress the rod b and control the extent of upward pressure of the upper end of the horn against the stock; 11th. The rod l, collar 15, bearing 16 and spring m, combined with an adjusting device o to move the bearing and compress the spring; 12th. The cutter carrying bar b b and mechanism to move it laterally to press the end of the cutter against the wire, combined with the pivoted rack 71 and oscillating pinion 67 to permit the cutter to be moved downward; 13th. The combination with the movable die and its arm, of a slotted toe held thereto; 14th. The cutter or die fluted at its side, to enable it to be held securely and rigidly; 15th. The nose provided with the prongs 85 86, combined with the dies; 16th. In a machine for uniting the soles and uppers of boots and shoes, the following instrumentalities, viz: a horn to enter the shoe, mechanism to move the end of the horn a fixed distance from a variable base line, a variable spring to strike or impact the end of the horn against the stock held between it and the nose preparatory to, or when driving the nail and feeding mechanism to feed a wire a variable distance, in accordance with the thickness of the stock; 17th. The horn depressing rod mechanism to lift and depress it, the horn and pivoted lever connecting them, combined with an independent regulating rod or device connected with and moved by the horn to control the extent of movement of the wire feeding mechanism and the length of the wire to be formed into a nail.

**No. 11,295. Improvements on Stump Extractors.** (*Perfectionnements aux arrache-souches.*)

William Armstrong, De Pere, Wis., U. S., 29th May, 1880; for 5 years.

*Claim* 1st. The combination of a supporting frame, a movable pulley and rope of a final stationary pulley, and a rotary and longitudinally reciprocating windlass or drum; 2nd. The combination of the beams A, cross beam D, horizontal beam F having formed therein a lower bearing for the windlass and carrying a stationary pulley, the arm G provided with the upper bearing of the windlass, the windlass having elongated journals playing in said bearings the stationary pulley l, the movable pulley, and a rope or chain applied to said pulleys and windlass; 3rd. The combination, with the lifting rope or chain and the root or hitching chain, of the supplementary chain p.

**No. 11,296. Improvements on Grain Cutting Machines.** (*Perfectionnements aux machines à couper les grains.*)

William Heston, Ravenna, (co-inventor with Chester Purdy, Cleveland,) Ohio, U. S., 29th May, 1880; for 3 years.

*Claim* 1st.—Two or more cases of knives, one case being above the other case and the knives of one case alternating with the knives of the other with respect to their lateral positions; 2nd. The cases or series of knives e e e e n n n n n n, in combination with the cylinder C; 3rd. The

series of knives  $e_1 e_2 e_3$ , in combination with the series of knives  $n_1 n_2 n_3$  4th. Two or more series of knives, one series being above the other series the knives of one series alternating with the knives of the other series, with respect to their lateral positions, in combination with corrugated cylinders C C' and the hopper G; 5th. The hopper G in combination with the cylinders C C'; 6th. A cylinder corrugated by longitudinal semi-annular grooves, and circumferential slits of a depth greater than the depth of the semi-annular grooves.

**No. 11,297. Self-Acting Gate and Door Shutter.** (*Fermeture automatique de barrière et de porte.*)

Amos Wright, Prince Arthur's Landing, Ont., 29th May, 1880; for 5 years.

*Claim.*—The bale  $d$  and the combination or application of the pulleys  $a b$  bale  $d$ , weight  $e$  and lever  $l$ .

**No. 11,298. Improvements on Telephones.** (*Perfectionnements aux téléphones.*)

Frank A. Klemm, Ernest Marx, Julius Kayser, New York U. S., and Louis Davis, Montreal, Que., 29th May, 1880; for 15 years.

*Claim 1st.*—The magnet A fitted with an induction coil around one pole and with a vibrating pole terminating in the magnetic field, in combination with a diaphragm of non-conducting material, being in mechanical contact with the vibrating pole of the magnet; 2nd. The magnet A having an induct on coil B around one pole, and a vibrating tongue  $a$  at the upper pole, in combination with a diaphragm C forming contact with the tongue by an interposed or block point.

**No. 11,299. Method of Copying Written or Printed Matter, and Material for the same.** (*Méthode pour copier la matière écrite ou imprimée, et matériel pour cet objet.*)

Michael Alisoff, St. Petersburg, Russia, 29th May, 1880; for 5 years.

*Claim.*—The polygraphic method of copying as a combination, of using aniline ink and polygraphic paper coated with animal glue and glycerine to which other substances are added, to make the composition practically more serviceable, and also using prepared paper as a matrix for taking copies on ordinary paper.

**No. 11,300. Improvements on Waggon Brakes.** (*Perfectionnements aux freins des wagons.*)

James Carpenter, Moraira, N. Y., U. S., 29th May, 1880; for 5 years.

*Claim 1st.* In combination with the bolsters  $e e$  and the brake bar A, provided with the nut  $n$  and screw rod C having the circumferentially reduced rear end  $a'$  provided with nuts  $b b$  at opposite sides, of the hind bolster, and the tubular bar D adjustably connected to the forward end of the rod C by telescopic joint and by a pin or set screw  $d$  and provided at its forward end with the gear E; 2nd. The combination of the tubular bar D, the gear E applied to the end thereof, the bolt  $f$ , sleeve  $g$  provided with sockets  $h$ , and the set screw  $r$  passing through the hub of the gear and through the bar D into the bolt  $f$ ; 3rd. In combination with the tubular

bar D provided with the gear E, the bolt  $f$ , sleeve  $g$  provided with the socket  $h$  and set screw  $i$ , and the rod F provided with gear C' and stepped in the socket  $h$  and having on its stepped end a circumferential groove for the bearing of the set screw; 4th. In combination with the screw rod C, the brake bar A provided with the block B, and the nut  $n$  confined and enclosed between said brake bar and its block B; 5th. A brake shoe, in combination with an elastic support on the brake bar; 6th. The combination of the brake bar A, spring plate  $t$  and the shoe H adapted to slide on said spring and provided with the set screw K.

**No. 11,301. Improvements in Car-Couplers.** (*Perfectionnements aux attelages des wagons.*)

Théophile A. Trudelle et Eusébe Maheux, Quebec, Que., 29th May, 1880; for 5 years.

*Résumé 1er.*—La combinaison d'un tampon J attaché à une tige O, avec un ressort P en de-lans de la boîte d'attelage; 2ème. La combinaison de deux leviers A munis des petits bras H, et la cheville L.

**No. 11,302. Improvements on Force Pumps.** (*Perfectionnements aux pompes foulantes.*)

Alexander Barrow, Wareham, Ont., (assignee of Charles C. Newman, Cedarville, Ks., U. S.) 29th May, 1880; for 15 years.

*Claim 1st.*—The valved piston C and the plunger E of the hollow piston rod attached to each other by pivotal and slotted bearing connections, whereby to allow them to open or close with each other with a free pivotal adjustment of said piston in effecting the cut off of the water from one side of the piston to the other; 2nd. The valve piston C having the vertical slotted extensions I, and the plunger E of the hollow piston rod having the diameter bearings  $a a$  for the said slotted extensions, whereby to unite the parts and suspend the said valved piston; 3rd. The recessed piston C and the recessed plunger E having the circumferential bearing rim united to each other, in combination with a flat bevelled valve L operating in connection with the piston and the hollow piston rod; 4th. The cylinder having induction valved ports at each end, the valved recessed piston C L the hollow piston rod having the recessed plunger E and the circumferential slotted pivotal connections J  $a$  of the valve and plunger.

**No. 11,303. Improvements on Bakers' Ovens.** (*Perfectionnements aux fours des boulangers.*)

George Brake, Lansing, Mich., U. S., 1st June, 1880; for 5 years.

*Claim 1st.*—A bakers' oven constructed with baking portion A, layer C of non-conducting material between the floor and the lower heating flues D, non-conducting top E, division wall F' and sliding doors N; 2nd. Layers of non-conducting material between the top and bottom of the baking portion of the oven and the upper and lower heating flues respectively, whereby the temperature of the oven is equalized; 3rd. The division wall F' between the fire place and the baking portion of the oven, whereby the products of combustion are prevented from entering the said baking portion of the oven; 4th. The combination with the flues D D, of the division wall L provided with opening  $h$ ; 5th. The combination with the baking oven A, of the laterally sliding doors N N provided with rollers  $m m$ , whereby the whole front of said oven may be thrown open; 6th. The lower heating flues D D in combination with the fire-place F.

List of Patents issued up to 19th July, 1880, but not yet Officially published in the Patent Office Record.

- No. 11,418. D. Williamson, Sunbury, Pennsylvania, "Grain Binder," 21st June, 1880.
- No. 11,419. H. M. Williston, Halifax, N. S., "Staple Lock," 21st June, 1880.
- No. 11,420. W. White, London, England, "Tap and Ball Valve," 21st June, 1880.
- No. 11,421. M. Roberts, Westfield, New Jersey, "Sheave for Sliding Doors," 21st June, 1880.
- No. 11,422. J. W. Cogswell, Erie, Michigan, "Guide Pruner," 21st June, 1880.
- No. 11,423. A. E. Ferve, Albany, and W. E. Ferve, Tivoli, N. Y., "Processes and Apparatus for Fining Fermented Liquors," 21st June, 1880.
- No. 11,424. F. Moses and J. Moses, Toronto, Ont., "The Combination Cooking Stove," 21st June, 1880.
- No. 11,425. B. F. Locke, Weymouth, Massa., "Improved Shoe Heel," 21st June, 1880.
- No. 11,426. E. Fisher and J. Watson, Kincardine, Ont., "Improved Metallic Horse Collar Fastener," 21st June, 1880.
- No. 11,427. S. Johnston, Brockport, N. Y., "Harvesting Machine," 21st June, 1880.
- No. 11,428. J. Dobbins, Marine City, Mich., "Peeless Hoop Machine," 21st June, 1880.
- No. 11,429. E. V. Winzard, Pittsburgh, Penn., "Eureka Brick Burning," (Extension of Patent No. 5,077), 21st June, 1880.
- No. 11,430. T. H. Dunham, Boston, Mass., "New Process for Making Cotton Yarns," 28th June, 1880.
- No. 11,431. R. B. Sheldon and J. V. Peacock, Shortsville, N. Y., "Force Feed Distributor for Fertilizers," 28th June, 1880.
- No. 11,432. L. G. Masson, Cleveland, Ohio, "Safety Lamp," 28th June, 1880.
- No. 11,433. E. W. Taylor, Detroit, Mich., "Advertising Device," 28th June, 1880.
- No. 11,434. G. J. Capewell, Cheshire, Connecticut, "Machine for Reducing and Shaping Bars of Metal," 28th June, 1880.
- No. 11,435. H. E. Rowe, Hamilton, Ont., "The Westworth Feather Renovator," 28th June, 1880.
- No. 11,436. G. W. McKenzie, Harrington, Maine, "Improved Cistern Well Pump," 28th June, 1880.
- No. 11,437. W. Wilson, Oakland, California, "Collapsible Valve," 28th June, 1880.
- No. 11,438. J. Kieffer, Montreal, Que., "Heel Counter Machine," 28th June, 1880.
- No. 11,439. W. Masson, Taunton, Mass., "The Mason-Bozie Locomotive," 28th June, 1880.
- No. 11,440. P. C. Evans and P. J. Evans, Brinscombe, and H. J. H. King, Newmarket, England, "Needle Sheaf Binder," 28th June, 1880.
- No. 11,441. J. M. Fair, Buffalo, N. Y., Assignee of David Leib, Columbus, Ohio, "Improved Sewing Machine Treadle," 30th June, 1880.
- No. 11,442. A. Riddell, Georgetown, Ont., "The Peeless Globe Fastener," 30th June, 1880.
- No. 11,443. C. I. Humphreys, Boston, Mass., "Lacing Hook," 30th June, 1880.
- No. 11,444. G. D. Whitcomb, Chicago, Ill., O. Butler, Wayne, Mich., Assignees of G. D. Whitcomb, "Mining Machine," 30th June, 1880.
- No. 11,445. W. J. Stethem, Montreal, Que., "Car Coupler," 2nd July, 1880.

- No. 11,446. J. Foley, Montreal, "Paper Pulp," 5th July, 1880.
- No. 11,447. D. Horner, Brome, Que., "Guide for Filing and Jointing Circular Saws," 5th July, 1880.
- No. 11,448. H. Wiard and W. R. Bullock, Syracuse, N. Y., "Improvements in the construction of Ploughs," 5th July, 1880.
- No. 11,449. M. Bray and M. N. Bray, Newton, Mass., "Improved Tubular Rivet," 5th July, 1880.
- No. 11,450. L. W. Hall, Syracuse, N. Y., "Improved Plough Point," 5th July, 1880.
- No. 11,451. E. Fontaine, Detroit, Mich., "Improved Locomotive," 5th July, 1880.
- No. 11,452. C. D. Rogers, Providence, Rhode Island, "Improved Wire Draw Plate," 5th July, 1880.
- No. 11,453. The Washburn-Moan Manufacturing Company, of Worcester, Mass., (Assignee of J. F. Glidden, De Kalb, Illinois,) "Wire Fence," (Re-issue of Patent No. 4,916), 5th July, 1880.
- No. 11,454. The Washburn-Moan Manufacturing Company, of Worcester, Mass., (Assignee of J. F. Glidden, De Kalb, Illinois,) "Wire Fence," (Extension of Patent No. 11,453), 5th July, 1880.
- No. 11,455. The Washburn-Moan Manufacturing Company, of Worcester, Mass., (Assignee of J. F. Glidden, De Kalb, Illinois,) "Wire Fence," (Extension of Patent No. 11,453), 6th July, 1880.
- No. 11,456. S. N. Allen, Duxbury, Mass., "Machine for the Manufacture of Paper Pulp from Wood," 6th July, 1880.
- No. 11,457. S. N. Allen, Duxbury, Mass., "Grinding Cylinders for Reducing Wood to Pulp," 6th July, 1880.
- No. 11,458. H. Wiard and W. R. Bullock, Syracuse, N. Y., "Devices in the Construction of a Plough," 6th July, 1880.
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- No. 11,469. C. C. Bradley, Syracuse, N. Y., "Harvester," (Re-issue of Patent No. 6,605), 10th July, 1880.
- No. 11,470. L. A. Dodge, Heeseville, N. Y., "Improved Feeding Device of Machines for Forging Nails and Spikes," (Extension of Patent No. 5,036), 10th July, 1880.
- No. 11,471. J. Haiger, Toronto, Ont., "Butter Curing Process," 10th July, 1880.
- No. 11,472. W. G. Alexander, Oskaloosa, Iowa, "Roller Hinge Gate," 10th July, 1880.
- No. 11,473. F. J. Drake, Belleville, Ont., "Shingle Edging Machine," 10th July, 1880.
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- No. 11,479. L. Young, Sing-Sing, and L. Lyon, Albany, N. Y., Assignee to N. Lyon, "Tool Holder for Grind Stones," 10th July, 1880.
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- No. 11,484. L. S. Chichester, Jersey City, New Jersey, "New Process Pneumatic Pulverizer," 10th July, 1880.
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- No. 11,492. J. L. Phillips, Lowville, N. Y., "Novelty Road Waggon," 15th July, 1880.
- No. 11,493. Thos. Cowan and J. Ballantine, Galt, Ont., "Rotary Bed Planers (Extension of Patent No. 5,339), 15th July, 1880.
- No. 11,494. Thos. Cowan and J. Ballantine, Galt, Ont., "Rotary Bed Moulding Machine," (Extension of Patent 5,951), 15th July, 1880.
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- No. 11,497. C. H. Duweliuss, Richmond, Indiana, (Assignee of L. C. Abbott,) "Double-Acting Plough," 15th July, 1880.
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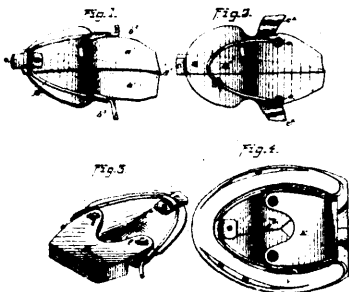
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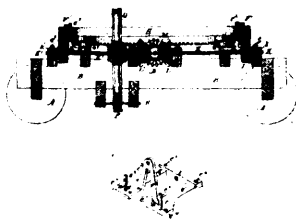
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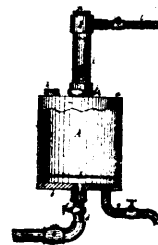
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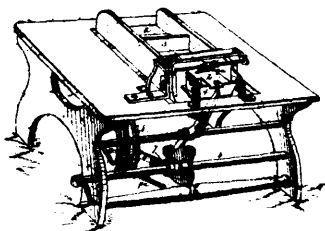
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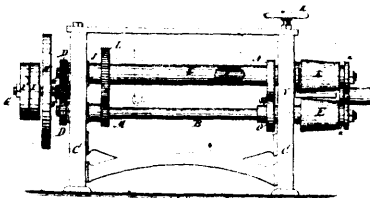
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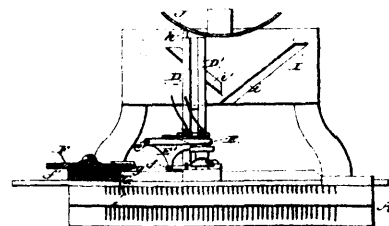
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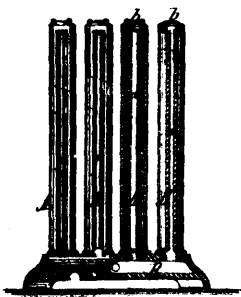
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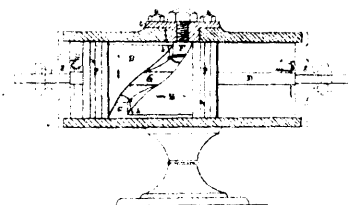
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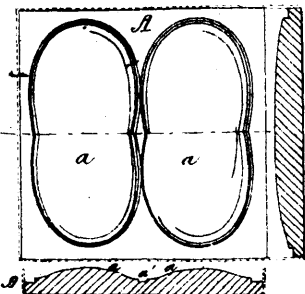
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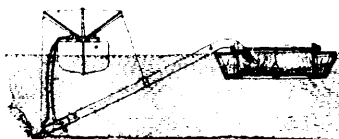
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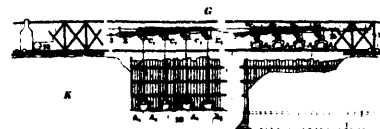
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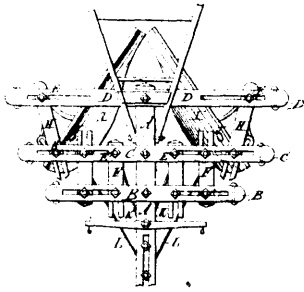
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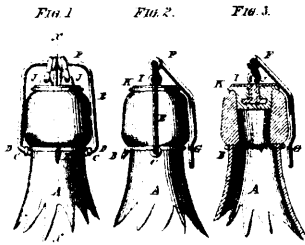
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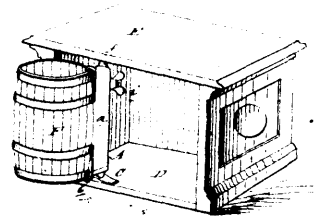
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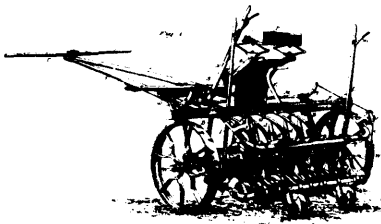
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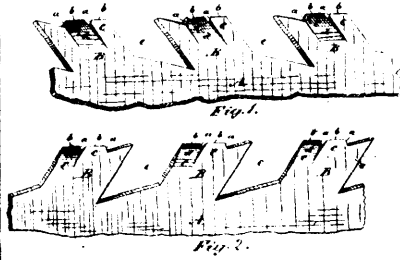
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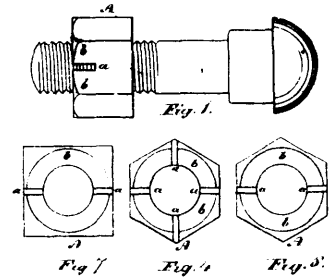
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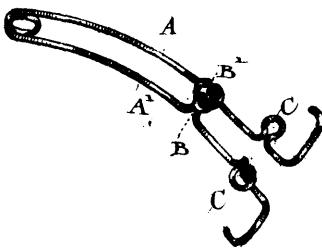
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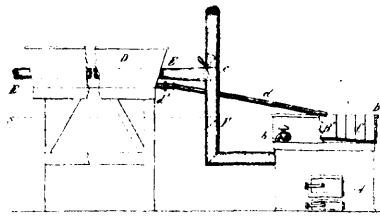
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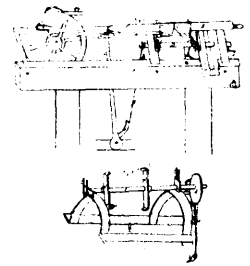
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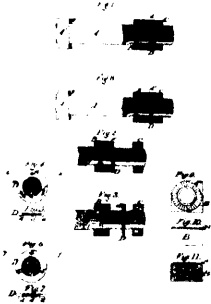
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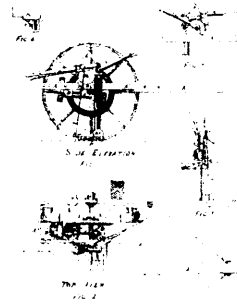
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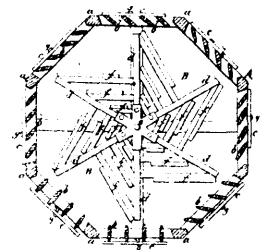
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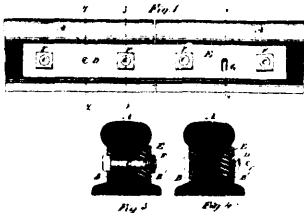
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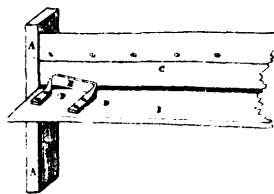
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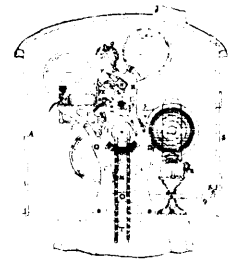
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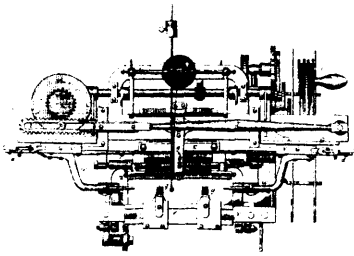
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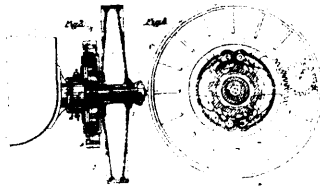
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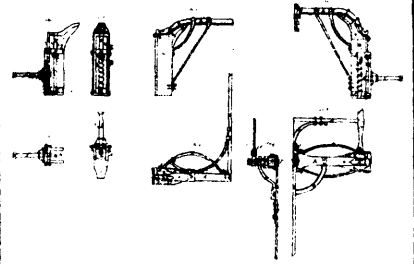
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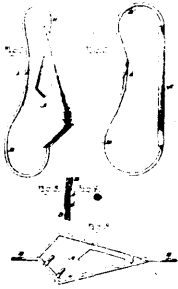
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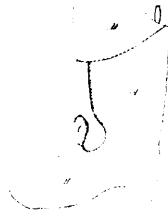
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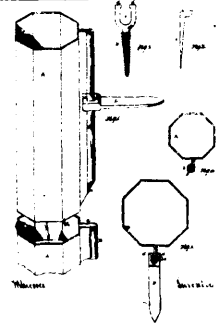
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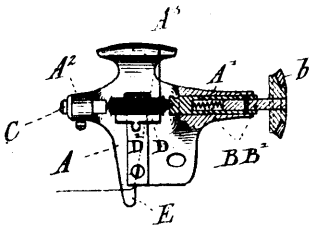
11209 Lapham's Improvements on Paper Files.



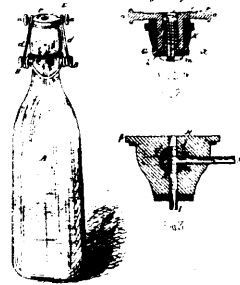
11210 Parent & Mullarky's Improvements in Boots.



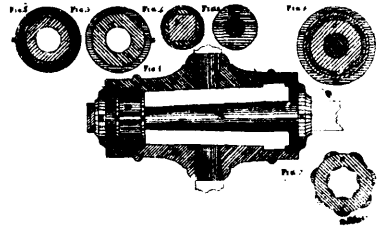
11211 Reber's Improvements in Water Conductors.



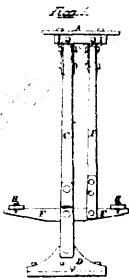
11212 Raymond's Improvements on Bobbin Winders.



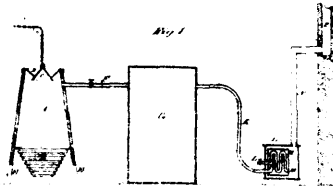
11213 Patten's Improvements on Bottle Stoppers.



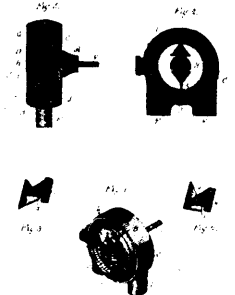
11214 Dunn & Jones's Improvements in Hubs.



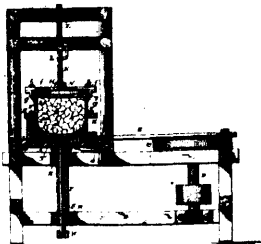
11216 Harmon's Improvements in Swings.



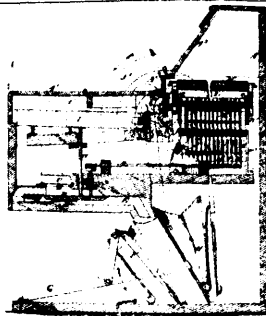
11216 Ridgway's Apparatus for Generating and Burning Gas.



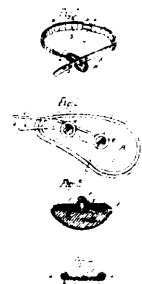
11217 Baker's Improvements in Rotary Engines.



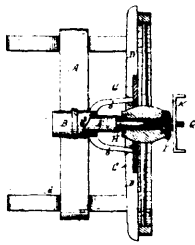
11218 Lake & Weller's Method of Grinding and Polishing Hollow Ware.



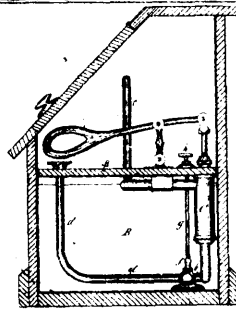
11219 Chinnock & Bennett's Improvements on Musical Instruments.



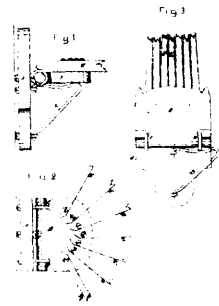
11220 Lubin's Improvements on Trusses.



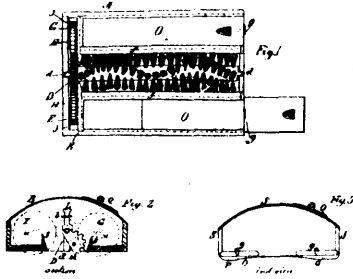
11221 Caswell's Improvement on Hub Borers.



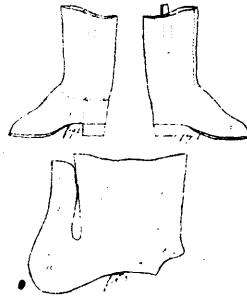
11222 Foisy's Improvements in Oil Cabinets.



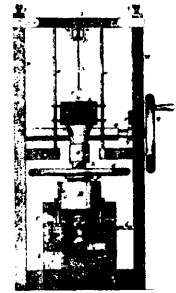
11223 Roger's Improvements on Clothes Dryers.



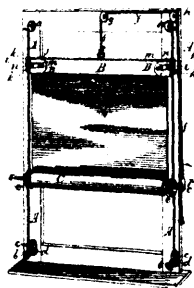
11224 Orr & Cummins's Improvements in Carpet Sweepers.



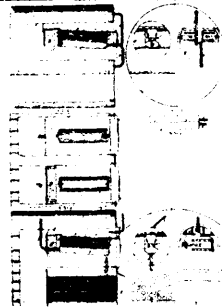
11225 Sharpe & Hogue's Improvements on the Manufacture of Boots.



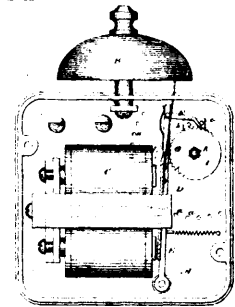
11226 Stepp's Improvements on Saw Gummers.



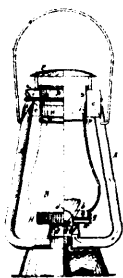
11227 Gilman & McClintock's Improvements on Curtain Fixtures.



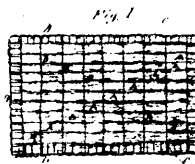
11228 Wavish's Improvements on Steam Boilers.



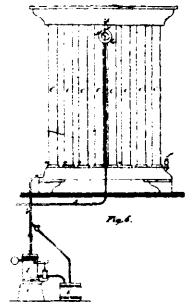
11230 Anders's Improvements in Signalling Apparatus.



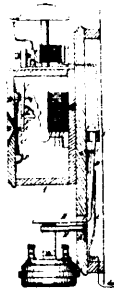
11231 Henkle & Perkins's Improvement on Lanterns.



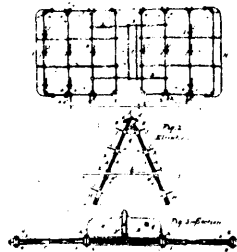
11232 Mitchell's Improvement in Table Mats.



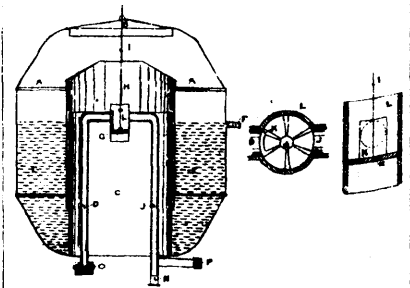
11253 Holly's Improvements on Radiators.



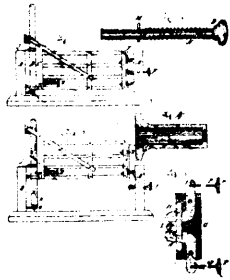
11234 Klemm's Improvements on Telephones.



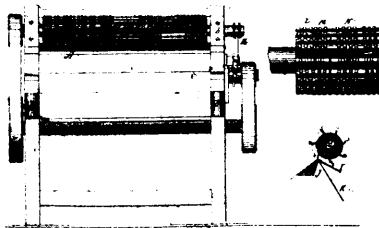
11235 Rogers's Improvements in Harrows.



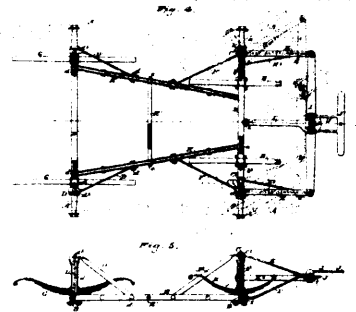
11236 Birch's Improvements on Gas Governors.



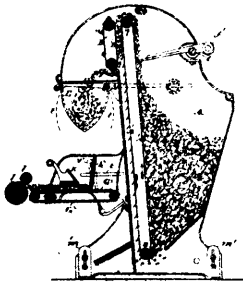
11240 Smyth's Improvements on Gates.



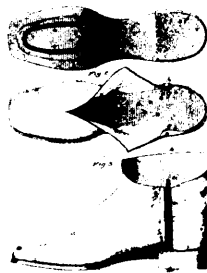
11241 Sumner's Art of Finishing Textile Fabrics and Machinery for the same,



11242 Herdic's Improvements on Vehicles.



11243 Branwell's Feeder for Carding Mechanism.



11244 McDonald & Kittridge's Improvements in Boots and Shoes.

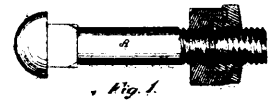


Fig. 1.



Fig. 2.

Fig. 3.



Fig. 4.

Fig. 5.

11245 Ford's Improvements on Lock Nuts.

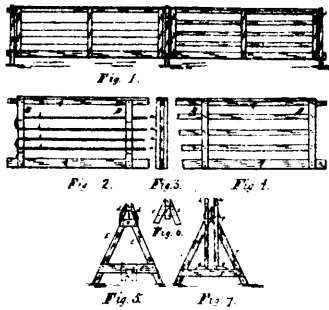


Fig. 1.

Fig. 2.

Fig. 3.

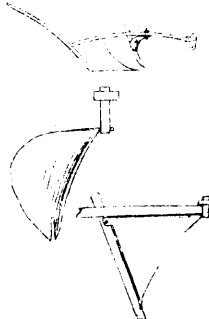
Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

11246 Elliott's Improvements on Fences.



11247 Sanford & Boys's Improvements in Ploughs.

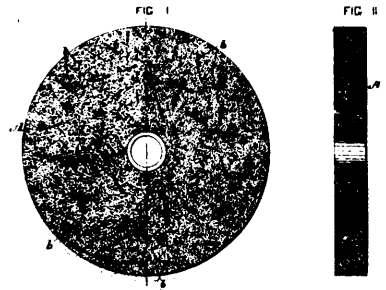
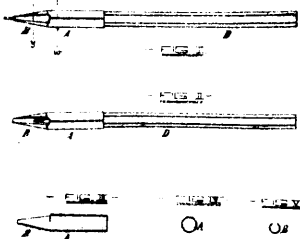


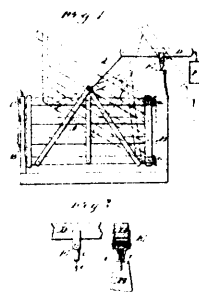
FIG I

FIG II

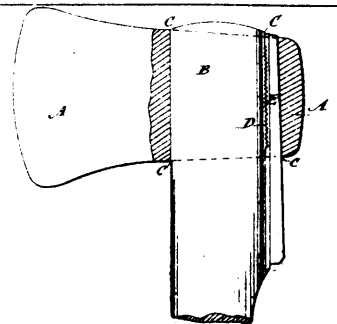
11248 Hart's Improvements on Emery Wheels.



11249 Stone's Improvements on Pencil Sharpeners.



11250 Claypool's Improvements on Farm Gates.



11251 Roberts's Improvements on Tool Handles.

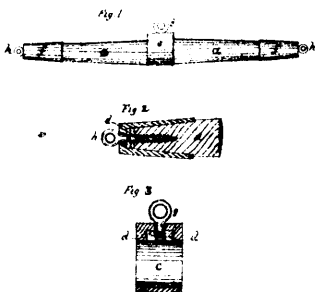
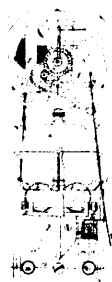


Fig 1

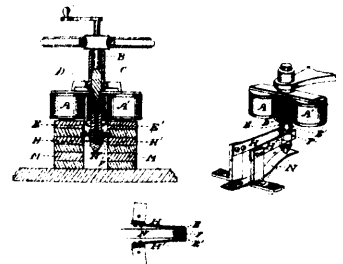
Fig 2

Fig 3

11252 Foley's Improvements in Whistles.

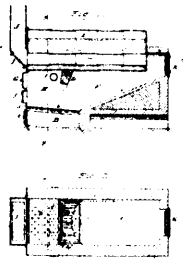


11253 Bliss's Improvements in Telephones.

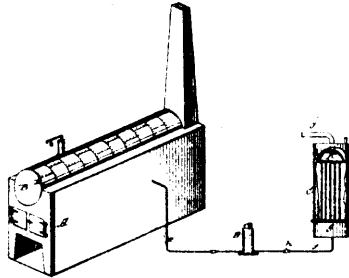


11254 Anders's Improvements in Telephones.

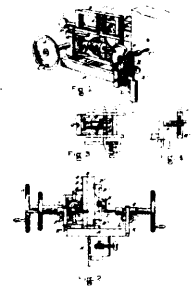




11255 Green's Improvements on Steam Generators.



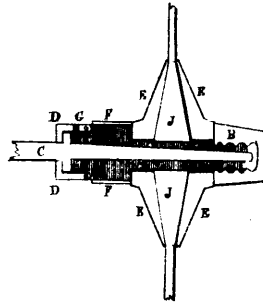
11256 Williams, Smith & Milligan's Improvements on Motors for Machinery.



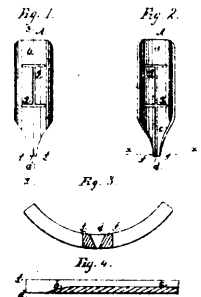
11258 Holt's Machine for Mortising Doors for Locks.



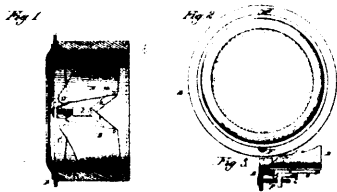
11259 Moore's Improvements on Filtering Machines.



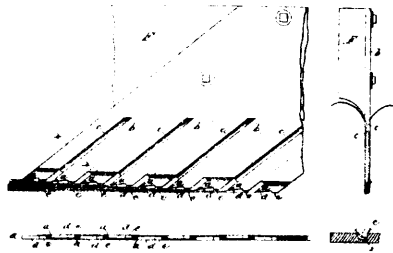
11260 Newman's Improvements on Metallic Hubs.



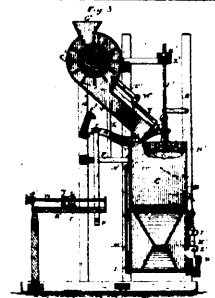
11261 MacKinnon's Improvements on Fens.



11262 Morey's Improvements on Stove-pipe Thimbles.



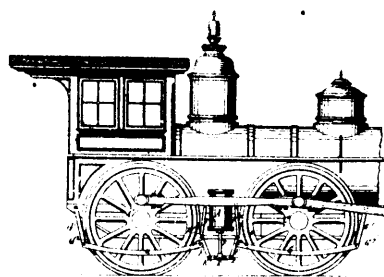
11263 Proctor's Improvements on Sawing Machines.



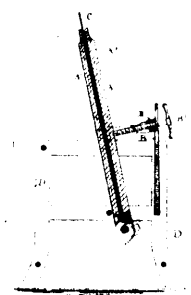
11264 Stoner's Improvements on Weighing Machines.



11265 Billings's Improvements on Horseshoes.



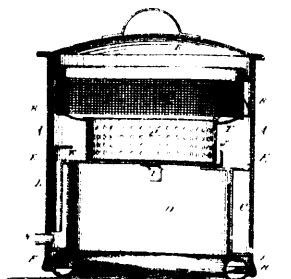
11266 Lanpher's Improvements on Locomotive Brakes.



11267 Fleming's Process and Apparatus for Casting Leads.



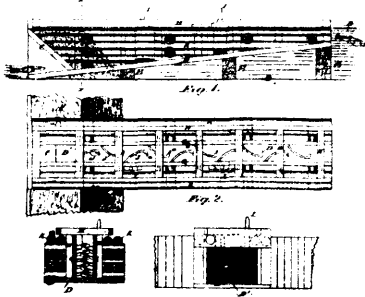
11268 Dolby's Apparatus for Exhausting Air from Cans, &c.



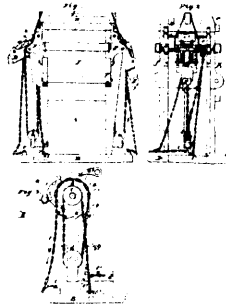
11269 North's Improvements on Refrigerating Covers.



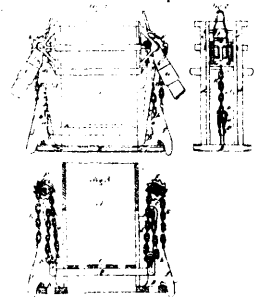
11270 Johnson's Improvements on Reaping Machines.



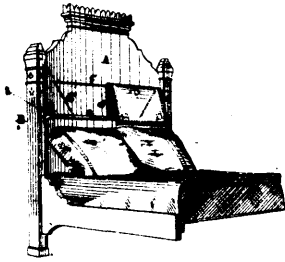
11271 Rogers's Improvements on Fish Ways.



11272 Berthiaume's Improvements in Hay Presses.



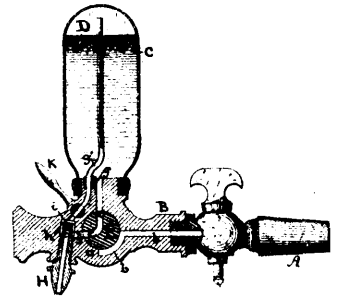
11273 Berthiaume's Improvements in Hay Presses.



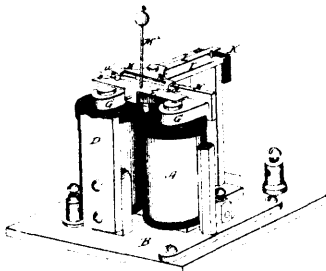
11274 Adams's Improvements on Pillow Holders.



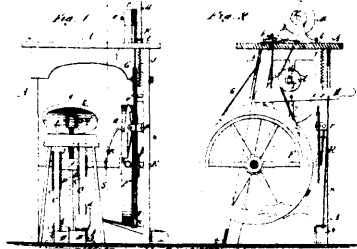
11275 Roos's Improvements on Top Boots.



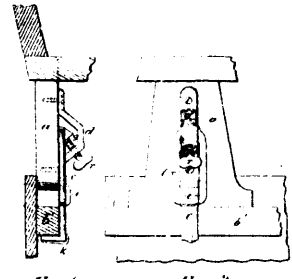
11276 Redmond & White's Improvements on Beer Faucets.



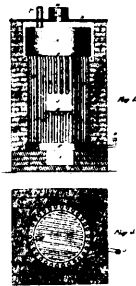
11277 Anders & Watson's Improvements in Telephones.



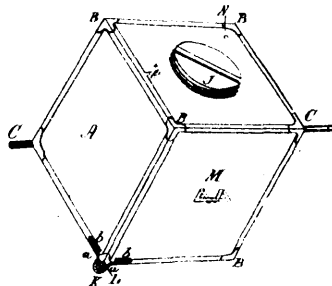
11278 Van Wyck's Improvements on Sewing Machines.



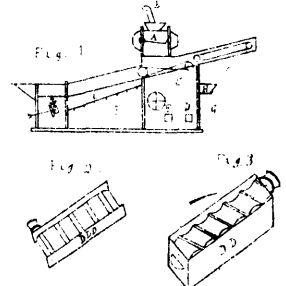
11279 Robinson's Improvements on Carriage Seat Locks.



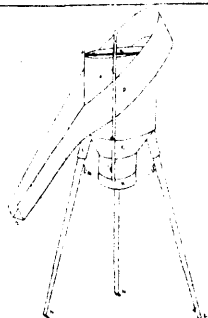
11280 Johnstone's Improvements on Steam Boilers.



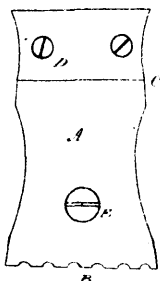
11281 Ward's Improvements in Churns.



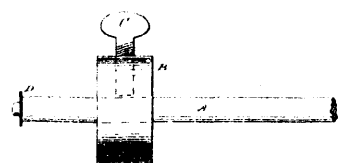
11282 Culham's Improvements on Thrashing Machines.



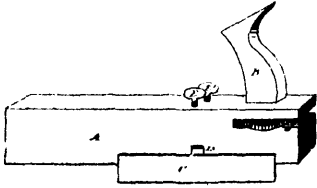
11283 Dight's Improvements in Grain Measures.



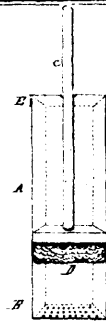
11284 Kinney's Improvements on Bench-hooks.



11285 Kinney's Improvements on Marking Gauges.



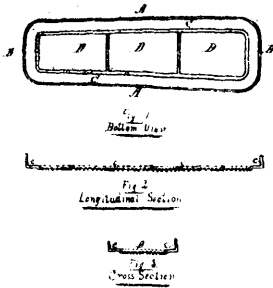
11286 Kinney's Improvements on Slitting Gauges.



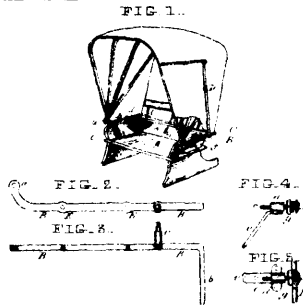
11287 Rushmer's Machine for Affixing Stamps or Labels.



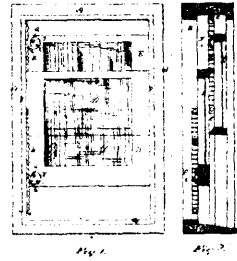
11288 Fairlamb's Improvements on Milk Pans.



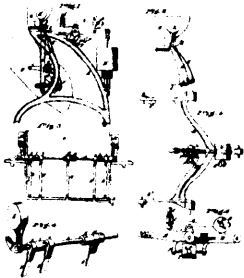
11289 McMaster's Improvements on Metallic Coffins.



11290 Heney's Improvements to Buggy Tops.



11292 Warren's Improvements on Saah Fasteners.



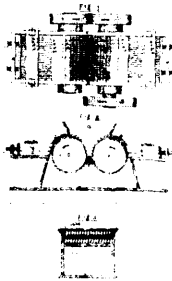
11293 Hill's Improvements on Grain Weighing Machines.



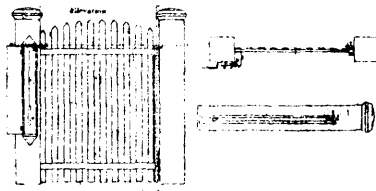
11294 Goddu's Improvements in the Manufacture of Boots and Shoes.



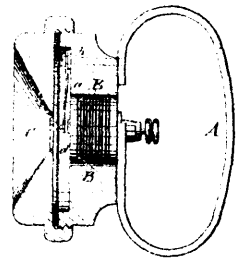
11295 Armstrong's Improvements on Stump Extractors.



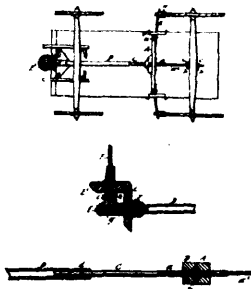
11296 Heston & Purdy's Improvements on Grain Cutting Machines.



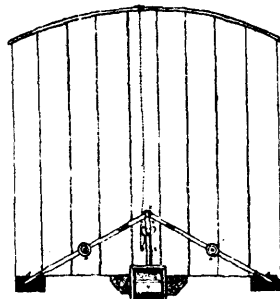
11297 Wright's Self-acting Gate and Door Shutter.



11298 Klein's Improvements on Telephones.



11300 Carpenter's Improvements in Waggon Brakes.



11301 Trudelle & Maheux's Improvements in Car-couplers.



11302 Newman's Improvements on Force Pumps.