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INVENTIONS PATENTED.

No. 10,760. Improvements on Rail'y Brakes. (Perfectionnements aux freins des chemins de fer.)

Stephen P. Tallman, Dunellen, N. J., U. S., 24th December, 1879, for 5 years.

Claim.—1st. In an automatic mechanism for operating railway carriage brakes from either end of the car, the arrangement of a shifting brake mechanism at each end of the car and connected through an evener, and the pawl and ratchet device arranged to operate inversely at opposite ends of the car; 2nd. The push bar, provided with a retracting spring and arranged to be shifted, in combination with a draw head provided with a projecting lug or part; 3rd. The push bar provided with an adjustable head and a suitable retracting spring; 4th. The head of the push bar and the lug on the draw head bevelled; 5th. The push bar and the draw head provided with a lug or projection to engage the head of the bar, in combination with the shifting lever; 6th. The push bar arranged independently of the draw head and provided with suitable cushion and retracting springs, in combination with the suspended lever and the two friction pulleys; 7th. The push bar provided with an adjustable set-collar or nut and a cushion spring; 8th. The friction pulley or gear wheel arranged to turn freely on its shaft and provided with a reversible pawl; 9th. The reversible spring pawl provided with a spindle, whereby it may be reversed, and with an index or pointer.

No. 10,761. Machine for Making Cock Eyes of Traces. (Machine à percer les pattes des traits de voitures.)

James Brayley and Charles H. Dempster, (Assignees of Edward L. Brazenor,) Hamilton, Ont., 24th December, 1879, for 5 years.

Claim.—1st. The frame A, bed plate B, grooves C, head slide D, double cam E with curves *o o r r*, nippers K K, holder G, eccentric *t* with cams *i j* on each side, respectively; 2nd. A hinged holder G with levers *h g* and projections *d d*, the latter made to pass through corresponding openings in the plate B while the formers F F and nippers K K, operated by a cam E, form and complete a cock-eye around said projections; 3rd. The peculiar form of the neck formers F F pivoted to the bed plate, and having the projections *g*, in the form shown, with rounded points and a shoulder, the said projections operating through openings *b b* in the bed plate B and moved by a cam E.

No. 10,762. Improvements on Head Rests. (Perfectionnements aux appui-têtes.)

Rogh McConnell, (Assignee of Warren B. Taylor), Cleveland, Ohio, U. S., 24th December, 1879, for 5 years.

Claim.—1st. The combination, with two clamping heads provided with depending bow jaws and a horizontal adjusting screw which engages with both said heads, of a vertically sliding support connected with one clamping head, and a head frame connected to said support, together with guide rods secured to the front clamping head, and on which the rear clamping head has sliding movement; 2nd. The combination, with two clamping heads provided with depending jaws, of a horizontal screw engaging with both said heads and angular arms pivoted to one clamping head, respectively, on opposite sides of said screw; 3rd. The combination, with two clamping heads provided with depending jaws and a screw engaging with both said heads, of a vertically adjustable support connected to one clamping head, a cross bar pivoted to the upper extremity of said support, and rods hinged respectively to opposite sides of said cross bar; 4th. The combination, with a

vertically adjustable support and a cross bar pivoted thereto, of side rods hinged to said cross bar, and a pad provided with sockets in which side rods fit; 5th. The combination, with the clamping heads provided with depending jaws and guide rods, which maintain the latter in relative position, of arms hinged to one clamping head, a vertically adjustable support connected to the other clamping head, and a head frame pivoted to the upper extremity of said support; 6th. A head rest so constructed and adapted as to permit of lateral adjustment of the head; 7th. A head rest so constructed and adapted as to permit of vertical adjustment of the head, at will, without manipulating the device; 8th. A cushion constructed in one piece and adapted to extend over the whole length of the rest, forming a rest for the head.

No. 10,763. Improvements in Sewing Machines. (Perfectionnements aux machines à coudre.)

Richard M. Wanser (Assignee of Thomas D. Wanser), Hamilton, Ont., 24th December, 1879, for 5 years.

Claim.—1st. In a shuttle sewing machine having the movement of the shuttle to traverse to the motion of the feed device, the pin joint *c* in the connection between the eccentric *b* and the bell crank *a*; 2nd. The adjustable way *p* in the sliding block of the feeding device; 3rd. In a shuttle sewing machine, the combination of the joint *c*, the adjustable way *p* connected with the eccentric *g*, connecting feed bar *h*, swivels *s t* with the feed bar *i*; 4th. A positive motion feed made by the combination of the feed bar *h*, swivel *s* attached to said bar, the swivel *t*, the feed frame *f* with spring *u*, and the eccentric *g* and rod *d*; 5th. In combination with the feed bar *h* of a sewing machine, the gib *u*, the same being placed under the swivel bar *s* and made to slide in the groove formed by the horizontal stationary bar *s*; 6th. The combination, with the horizontal feed bar *h* and the upright connecting rod *g*, of the ball and socket joint *r*, at their junction; 7th. The wear of the shuttle race taken up by means of the screws K L in the studs J J.

No. 10,764. Improvements in Pads for Carpets. (Perfectionnements aux matelas à tapisserie.)

Herbert M. Small, Baldwinville, Mass., U. S., 24th December, 1879, for 5 years.

Claim.—1st. As an improved manufacture, a carpet pad composed of a series of fibrous paddings and three layers of sheet material or paper, and having the intermediate layer fixed or cemented to the other or outer layers, at intervals, so as to form separate pockets or receptacles for receiving the paddings; 2nd. A carpet pad padding holder composed of the three layers of paper or sheet material, and having the intermediate layer connected, at intervals, or alternately, to the outer or other layers, so as to form between them a series of separate pockets or receptacles for holding paddings; 3rd. A carpet pad padding holder consisting of a flat tubular case of paper or sheet material and an interposed sheet of like material connected or cemented, at intervals, alternately to opposite sides of the said case; 4th. A series of fibrous paddings and three layers of sheet material or paper, and not only having the intermediate layer fixed or cemented to the other or outer layers, at intervals, so as to form separate pockets or receptacles for holding the paddings, but such padding secured lengthwise to its pocket by a narrow layer of cement.

No. 10,765. Improvements in Rail'y Brakes. (Perfectionnements aux freins des chemins de fer.)

Carl F. Ston, William Studer, Montreal, and Phillip McCrae, Waterloo, Que., 24th December, 1879, for 5 years.

Claim.—1st. In a continuous railway brake, the combination of the following elements, viz: a frame pivoted to the underside of the car or tender, raised and lowered at will and carrying a shaft on which is wound a chain drawing, through a lever, on a continuous line of rods connected with the brake levers and operating same, said shaft being furnished with frictional surfaces intermeshing with like frictional surfaces formed on one of the axles, and when brought into contact therewith receiving rotary motion therefrom; 2nd. The combination of the frame C, screw rod E working in bushing F, shaft D with surfaces D² and A² on axle A; 3rd. The combination, with the several sections of rods, of the shoulders L.

No. 10,766. Improvements on Bolt Heading Machines. (*Perfectionnements aux machines à entêter les boulons.*)

John A. Pillow and Randolph Hersey, Montreal, Que., (Assignees of James B. Clark and Lucas C. Clark, Plantsville, Ct., U. S.,) 26th December, 1879, for 15 years.

Claim.—1st. In a bolt heading machine, the combination of the following elements, first: the header or plunger C; second: shaping and holding dies F G; third: movable nippers made independent of and distinct from the dies, for acting upon the blank at a point immediately in advance of the header and advancing with said header, and fourth: suitable mechanism for operating said parts; 2nd. The header C recessed upon its two opposite sides, in combination with the nippers a having shoulders f, which rest within said recesses and steady and govern the nippers while advancing with the header; 3rd. In a bolt header having the stationary holding and movable shaping dies, the combination of the shaping dies m m, laterally adjustable blocks g g to which said dies are hinged, and mechanism for fastening the blocks g g in position; 4th. The swinging shaping dies m m, in combination with the straps J J and the adjustable books n n; 5th. The preliminary head forming recess C, in combination with the countersunk face of the neck shaping dies, both being relatively shaped so as to produce the form of preliminary head; 6th. The neck forming dies having the transverse enlargement at the middle portion of the length of the neck.

No. 10,767. Improvements on Sewing Machines. (*Perfectionnements aux machines à coudre.*)

John C. Blackett, Glace Bay, N. S., 31st December, 1879, for 5 years.

Claim.—1st. The bracket A, spindle B, whirl E, clamp F, thumb screws G G and ring screws H H.

No. 10,768. Sock Supporter. (*Bretelle de chaussette.*)

Clinton E. Brush, Toronto, Ont. (Assignee of Christopher C. Shelby, New York, U. S.,) 31st December, 1879, for 5 years.

Claim.—1st. An adjustable sock supporter arranged to encircle the limb and provided with a clamp or hook, at each end, by which the supporter is attachable to or detachable from the limb and sock; 2nd. A sock supporter provided with a clamp or hook, at each end, and an inserted ring or loop D.

No. 10,769. Safety Link for Railway Cars. (*Mailloin de sûreté pour les voitures de chemins de fer.*)

James M. Foss, St. Albans, Vt., and William J. Watson, Chicago, Ill., U. S., 31st December, 1879, for 5 years.

Claim.—1st. The combination of the plates c, ears c, link e and the fastenings or bolts f forming a side bearing and safety link for railway cars.

No. 10,770. Improvements on Journals and Bearings. (*Perfectionnements aux tourillons et coussinets.*)

James H. McLean and Thomas Hostetter, St. Louis, Mo., U. S., 31st December, 1879, for 5 years.

Claim.—1st. A journal bearing lubricating slots b b connected in pairs by the grooves b; 2nd. A journal, for vehicles or for other purposes, constructed with two or more perforations or slots e e connected by longitudinal grooves f; 3rd. The combination of the journal D constructed with perforations or slots e and grooves f, and the bearing A constructed with slots b b and connecting grooves b; 4th. A journal bearing A constructed with lubricating slots b b having inclined faces c₃ c₃ and connected by grooves b.

No. 10,771. Improvements on Car Springs. (*Perfectionnements aux ressorts des wagons.*)

Augustus B. Davis and William B. Whitney, Philadelphia, Penn., U. S., 31st December, 1879, for 5 years.

Claim.—1st. The spring formed of plates A, of flat rhomboidal form; 2nd. A reversible spring formed of rhomboidal plates, and a clamp box having matched sides so that the plates fit either way to provide for reversibility; 3rd. The spring A formed of a series or pile of flat plates, A, connected centrally by a clamp, saddle or box F and adapted to be reversed; 4th. The clamp for spring plates consisting of a box, E having matched sides a and an inner convex or curved face or face b; 5th. The rocking followers C having curved bottoms resting in recessed pedestals and also having pockets d, in combination with the springs A.

No. 10,772. Improvements on Crayon Holders. (*Perfectionnements aux porte-crayons.*)

Joseph Reckendorfer (Assignee of Joseph Hoffman), New York, U. S., 31st December, 1879, for 5 years.

Claim.—1st. The combination of the clamping case or sleeve, the expanding jaws tapered or provided with inclines acted on by the case or sleeve, to produce the closing of the jaws, the lead containing tube or receiver carrying said jaws, and longitudinally movable with respect to the case or sleeve, and the spring; 2nd. The combination of the case, the expanding jaws tapered or provided with inclines, the longitudinally movable lead holding tube or receiver, carrying said jaws and provided with a head or cap projecting from the rear of the case, and the retracting spring; 3rd. In combination with the jaws and the jaw operating device, the tubular sheath or handle composed of two sections, the one carrying the jaws, the other the jaw operating device, and the two being longitudinally movable to and from one another, with or without interposed spring.

No. 10,773. Improvements on Live Stock Cars. (*Perfectionnements aux wagons à bétail.*)

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

Claim.—1st. A freight car for live stock having an extra story separate from the stable floor and arranged for containing feed for the animals; 2nd. A freight car for live stock, having an upper story arranged for containing feed and water supply for the animals; 3rd. In a freight car for live stock, the hinged head post A, in combination with chains or ropes D d, for rapidly dividing the car into stalls and pens; 4th. A freight car divided by posts and chains A D into stalls, of which those adjacent to each other are arranged to face alternate side walls of the car, and in which the rear floor space of each stall is provided with an outward incline H, having floor opening h¹ with cover I, in combination with a rake aperture J; 5th. In a freight car for live stock, the roof B bolted through the walls, and the horizontal bars C provided with collars or shoulders b₂ to adapt them for use as hinge pins for the head posts A; 6th. A freight car for live stock provided with hoisting buckets and troughs E H, for conveying feed and water from the store room to the stable floor; 7th. A head stall formed of a pair of hinged plates A having reverted edges a₂, in combination with a bucket E provided with the guide grooves e; 8th. A head stall formed of a pair of hinged plates A having the reverted edges a₂ and the vertical h¹ bars G, in combination with the buckets E and collar chains g; 9th. In combination with the stable room of a freight car for live stock, an upper store room N N divided by the walls L and partitions n₁, into a longitudinal passage M and lateral feed bins O O; 10th. The hinged trap doors S arranged in the floor of the feed bins O O, and operated from the central passage M of the feed store of a freight car for live stock, in combination with the hoisting buckets E; 11th. In a freight car for live stock, the water tank T arranged along the walls of the feed store N N, and provided with water traps U having handles u operated from the central passage M, in combination with the buckets E; 12th. The device for charging a pair of feed bins O O, simultaneously, viz.: the combination, with the said feed bins and the central hopper P, of the angular feed board Q Q, arranged astride the central passage M; 13th. In a freight car for live stock, the combination of the central portion of the roof provided with the hoppers P and intermediate vents p₂, the adjacent slide R provided with openings r₁, and the feed boards Q Q, for closing the apertures p₂ while filling the bins; 14th. In combination with the water tank T, the hose V suspended on hooks W, directly beneath the floor openings m¹ of the central passage M; 15th. In a freight car for live stock, the bridge X hinged at the end of the central passage M of the feed store and provided with the side rails or braces Y, in combination with suitable retaining catches and stops x y z Z Z.

No. 10,774. Improvements in Freight Cars. (*Perfectionnements aux wagons à fret.*)

Edward D. Shaffer, Moncton, N. B., 31st December, 1879, for 5 years.

Claim.—A freight car having inclines H H and provided with top openings C, also bottom openings, the top openings having outside covers D and the bottom openings having inside floor doors G and outside covers F F.

No. 10,775. Improvements in Machines for Setting Rivets. (*Perfectionnements aux machines à poser les rivets.*)

Mellen Bray, Newton, Mass., U. S., 31st December, 1879, for 15 years.

Claim.—1st. The hopper J provided with two slots e e and two openings for the passage of the rivets therefrom, in combination with the inclined chute K provided, at its upper end, with two channels f f coinciding, at their upper ends, with the slots e e in the hopper, and converging towards each other J and uniting in a single channel g; 2nd. In combination with the hopper J provided with two slots e e at its bottom, the V-shaped plate L; 3rd. In combination with the chute K provided with the channels f f g arranged relatively to each other, the plunger h adapted to be adjusted to a position to serve as a support for the rivets, in passing from the channels f f to the channel g; 4th. In combination with the chute K provided with the channels f f g, the plunger h provided with a series of teeth r serrations, and the spring latch i adapted to engage with said teeth and hold the plunger in the desired position; 5th. The chute K made up of two pieces K₁ K₂ K₃; 6th. A pair of spring jaws N N, each provided with a semi-circular recess o, the shoulder r and inclined surface s, in combination with an inclined chute K and setting plunger G; 7th. The slotted plate P bent to the form shown and provided with the slot t¹ secured to the foot of the chute K.

No. 10,776. Treenail Wedge Machine. (*Machine à épites.*)

John Lennerton, Princeport, N. S., 31st December, 1879, (Extension of Patent No. 4,222), for 5 years.

No. 10,777. Fracture Bed. (*Lit pour les fractures.*)

Isaac M. Rhodes, Hancock, Mich., U. S., 2nd January, 1880, (Extension of Patent No. 4,281), for 5 years.

No. 10,778. Improvements on Sewing Machines. (*Perfectionnements aux machines à coudre.*)

Richard M. Wanzor (Assignee of James Jamieson), Hamilton, Ont., 2nd January, 1880, (Extension of Patent No. 4,231), for 5 years.

No. 10,779. Improvements in Churns. (*Perfectionnements aux barattes.*)

Donald D. Ferguson and John S. Loughlin, Alvinston, Ont., 5th January, 1880, for 5 years.

Claim.—1st. The combination of the post A and girls D E, with the rock shaft F and bridge piece G; 2nd. The combination of the socket C, pinion I and driving wheel H having the handle b, with the bridge piece G; 3rd. In a churning apparatus, the combination of the rock shaft F and bridge piece G carrying the wheel H and pinion I with the hook a.

No. 10,780. Improvements in Boots and Shoes. (*Perfectionnements dans les chaussures.*)

James Popham and James Linton, Montreal, Que., 10th January, 1880, for 5 years.

Claim.—1st. As a new article of manufacture, a boot or shoe having the pieces forming the upper joined together by rubber cement and a continuous line of rivets.**No. 10,781. Improvements on Gates.** (*Perfectionnements aux barrières.*)

Goodson J. Alford, Bastard, Ont., 10th January, 1880, for 5 years.

Claim.—1st. The combination of levers *l*, lever rods *O*, jack *T* and suspending rods *R*.**No. 10,782. Improvements on Horse Collars.** (*Perfectionnements aux colliers de cheval.*)

Valentine Forester, Craubrook, Ont. (Assignee of Samuel C. Welty, Ligonier, Ind., U. S.), 10th January, 1880, for 5 years.

Claim.—1st. The sheet zinc lining *F* constructed in two parts, made into form to correspond to the shape of the right and left sides of the collar in contact with the skin of the horse, and attached permanently or removably by lacing, screws or other means to the collar.**No. 10,783. Improvements in the Process of Preserving Butter.** (*Perfectionnements dans le procédé de conservation du beurre.*)

Thomas F. Wilkins, London, Eng., 10th January, 1880, for 5 years.

Claim.—1st. The process of preserving butter by mixing, blending and incorporating therewith Glacial Metaphosphoric Acid, in solution or in a solid crushed state.**No. 10,784. Improvements on Bobbins.** (*Perfectionnements aux bobines.*)

Oscar E. Wait, Woonsocket, R. I., U. S., 10th January, 1880, for 5 years.

Claim.—1st. A wooden bobbin having two or more sets of scores distributed over the sides of the barrel, with the scores in each set on different transverse planes; 2nd. A wooden bobbin having two or more sets of diagonal or oblique scores in the sides of its barrel.**No. 10,785. Improvements on Scythe Snaathe Fixtures.** (*Perfectionnements aux araires des manches de faux.*)

Samuel Hayward, St. John, (Assignee of William A. Pitt, Kingston), N. B., 10th January, 1880, for 5 years.

Claim.—1st. The arrangement of the notch or niche in the nib-loop *C* into which the wedge *d* fits, and the grained one-half inch pipe, the object of the grain being to enable the wedge *d* to settle in it; 2nd. The combination of the heel ring *e*, the nut *g*, the screw bolt *f* and clamp *h* with the snathe *a*.**No. 10,786. Process of Cleaning Bolting Cloth.** (*Procédé de nettoyage de l'étamine.*)

Aaron Graham (Assignee of William H. Moses), Shawsville, Va., U. S., 10th January, 1880, for 5 years.

Claim.—First, shaving the nap or beard off the outside of the cloth; next, removing the particles adhering to the inside, by brushing, and, finally, dry sponging the cloth.**No. 10,787. Process for Curing and Preparing Finnan Haddies for Canning.** (*Procédé de conservation de la morue fumée.*)

Edward W. Potter, Smith's Cove, and Edwin R. Oakes, Digby, N. S., 10th January, 1880, for 5 years.

Claim.—1st. The use of lime water or lime and water *A B C D*; 2nd. The short method of curing; 3rd. The use or introduction of steam ovens *G I K*; 4th. The addition of the liquor extracted from the fish and condiments.**No. 10,788. Improvements on Sick Room Lamps.** (*Perfectionnements aux lampes pour les chambres des malades.*)

Thomas T. Johnston, Molesworth, Ont., 10th January, 1880, for 5 years.

Claim.—1st. The combination, with lamp *P*, of standard *D* attached to pedestal *B* by brace *E* and elevated or depressed by adjustment wheel *G*; 2nd. The application of ring *G* on brace *F*, which is formed or attached to standard *D*; 3rd. The application of heater *I* kept down by spring *L* and hinged to standard *D* at *J*; 4th. The application of dryer *N* attached to bottom *K* of heater *I*.**No. 10,789. Improvements on Seal Locks** (*Perfectionnements aux serrures scellées.*)

George M. Patten, Holbrook, Mass., U. S., 10th January, 1880, for 5 years.

Claim.—1st. The combination of the hasp or bolt *A*, means for locking and sealing the same simultaneously, and a lever *G* adapted by its movement to unlatch the lock after the destruction of the seal; 2nd. The combination of the bolt or hasp *A*, the tumbler catch *B* adapted to automatically lock the bolt or hasp, a seal locking device consisting of the lever *D*, a locking bar *E* and a lever *G*, whereby upon the insertion of the seal and the closing of the lock, the seal is confined between the locking bar and the seal supporting lever, and the lever *G* locked and whereby, upon the destruction of the seal upon the movement of the lever *G*, the tumbler catch is thrown back and the bolt released; 3rd. The combination of the seal supporting lever *D*, adapted to be locked in position, after the insertion of the seal by the locking bar *E*, with the lever or binged key *G* arranged to be locked by thelocking of the seal supporting lever *D*; 4th. The combination of the tumbler catch *B*, with means for locking the same and the lever *G*, a seal *F* whereby, upon the closing of the lock, the seal locks the tumbler catch and the lever, and whereby, upon the destruction and removal of the seal, the lever may be operated to move the tumbler catch and disengage it from the bolt or hasp; 5th. A lever *G* adapted to be held stationary, between the seal supporting lever and the tumbler catch, upon the insertion of the seal and the closing of the lock by the seal, and upon the destruction and removal of the seal adapted to be moved to disengage the tumbler catch from the bolt or hasp; 6th. A device, for unlatching or disengaging the catch from the bolt or hasp, arranged to be permanently fastened to the casing of said lock; 7th. A device for disengaging the tumbler catch from the bolt or hasp adapted to be locked by the seal; 8th. The combination of the seal *F*, lever *G* and tumbler catch *B*, a suitable locking and connecting mechanism, whereby the seal locks the tumbler catch and the lever *G*; 9th. The combination of the seal supporting lever, the seal *F* and its locking device, with the lever *G* provided with a projection *g*, whereby the lever *G* is prevented from being moved by the seal.**No. 10,790. Improvements in Threshing Machines.** (*Perfectionnements aux machines à battre.*)

Christopher Costello, Beverly, Ont., 10th January, 1880, for 5 years.

Claim.—1st. The combination of square shank *D* with any form of tooth *A*; 2nd. The combination of cutter *C*, shank *D*.**No. 10,791. Improvements on Electric Lamps.** (*Perfectionnements aux lampes électriques.*)

Thomas A. Edison, Menlo Park, N. J., U. S., 10th January, 1880, for 5 years.

Claim.—1st. The manufacture of carbons for electric lights from paper; 2nd. The method of manufacturing carbons for electric lights consisting in exposing the filament of paper to the action of heat in a mould to drive off the volatile portions and carbonize the paper; 3rd. A carbon for electric lights made as a filament, with the ends broader for the clamping devices that connect the conductors; 4th. The clamp, for the carbon of an electric lamp, composed of a bow or elliptical spring with the ends crossing each other, and receiving between them the carbon.**No. 10,792. Improvements on Electric Signals.** (*Perfectionnements aux signaux électriques.*)

Francis Blake, jr., Weston, Mass., U. S., 10th January, 1880, for 5 years.

Claim.—1st. In combination with a bell and bell hammer, a pendulum hung as the armature of an electro-magnet, with a suitable device for automatically making and breaking the circuit or varying the strength of the current flowing through the circuit, to which the electro-magnet belongs, at intervals corresponding to the rate of vibration of the pendulum; 2nd. A series of pendulums of different lengths, in combination with a series of bells and electro-magnets, in a common circuit, and a suitable device for making and breaking the circuit, or varying the strength of the current flowing through the circuit at intervals corresponding to the rate of vibration of either pendulum; 3rd. Two pendulums of substantially equal length, one hung as the armature of an electro-magnet and provided with a bell and bell hammer, and the other operating a circuit closer to make and break the circuit containing the electro-magnet at each vibration; 4th. The post *O*, *C*, axis *K* with pendulum suspended therefrom, collar *a*, plate *e*, spring *s*; and thumb screw *t*, in combination with an electric circuit.**No. 10,793. Improvements on Middlings Separators.** (*Perfectionnements aux séparateurs des gruaux.*)

John W. Pyne, Cincinnati, Ohio, U. S., 10th January, 1880, for 15 years.

Claim.—1st. A bolt cloth having a compound motion, to wit: a rapid vertical longitudinal and a shaking motion; 2nd. A sieve or riddle, the bolting material of which hangs loosely, so that in the vertically reciprocating motion of the riddle caused by mechanism, a wave motion is given to its bolting surface; 3rd. A sieve or riddle with its bolting material hanging loosely, having a compound motion, to wit: a rapid vertical and longitudinal movement and a wave motion to the bolting material caused by mechanism; 4th. The combination of the casing having a series of openings, at the bottom, for the discharge of the purified material, and an opening at the head end of the casing for the admission of air into the machine, a vertically reciprocating riddle and a suction fan; 5th. The combination, with a vertically moving riddle frame having side journals, of the adjustable boxes having curved slots for communicating a longitudinal motion to said frame; 6th. The combination of the main shaft having a suction fan, pulleys and a crank at each end of the shaft, the pitmans, the riddle frame and mechanism for operating the conveyer.**No. 10,794. Improvements on Non-Conducting Pipe Covering.** (*Perfectionnements aux couvertures des tuyaux non-conductrices.*)

Hugh Burgess, Royer's Ford, Penn., U. S., 10th January, 1880, for 5 years.

Claim.—1st. The segmental blocks, consisting of paper pulp or similar fibrous material, in concentric layers, and either alone or combined with saw dust or similar granular vegetable substance; 2nd. The combination of a screen made in halves separable from each other, appliances for rapidly rotating the said screen and a central pipe *E* communicating with a supply of the material to be treated and having a lateral opening or openings *f* within the screen; 3rd. The combination of the screen, means for rotating the same, the pipe *E* having an opening or openings *f*, and devices for withdrawing the pipe longitudinally from the screen; 4th. The combination of the screen with the pipe *E* and its detachable follower *Er*; 5th. The combination of the screen with the pipe *E*, reservoir *F* and the elastic tube *G*, the combination of the screen with the pipe *E*, and devices for withdrawing the same, the pipe *E* having an opening or openings *f*, and devices for withdrawing the pipe longitudinally from the screen; 6th. The combination of the screen and its pipe *E* with transverse partitions; 7th. The combination of the outer screen *A* having transverse partitions, with the inner screen *Y* made in sections, each of which consists of a strip secured to the screen *A*, at one end but free at the other end.

No. 10,795. Improvements on Elevators. (*Perfectionnements aux élévateurs.*)

Samuel A. Bates, Pittsburg Penn. U. S. 10th January 1880 for 5 years

Claim—1st In a self-loading barrel hoist the combination of platform frame *c* having downwardly bent projections *c*, springs *e* and skid *b*. 2nd In a self-discharging elevator, the combination of platform frame *n*, tilting platform *m* pivoted to, and carried by said frame, two or more rollers *n* journalled in the tilting platform *m* and a mechanism for tilting the platform at the desired point. 3rd As a device for tilting the platform of a self-discharging elevator and in combination with such platform, a rock shaft *S* having a projecting stop *h* attached thereto adapted to engage with, or clear the platforms by the rotation of the shaft and having suitable mechanism for imparting such rotary motion to the shaft of the operator. 4th The combination of endless belt *B* carrying one or more elevating platforms, guide bars *a* arranged across the belt at or near the platforms, and side grooves *a* in the main frame on either side *f*, and in line with the belt and adapted to receive the ends of the bars. 5th In an elevator apparatus, the combination of an endless and continuously operating belt, and a passenger car having main platform *H* secured to the belt and supported by extended back *II* and brackets or braces *II*. 6th The combination of endless belt *B* frame *c* secured to the belt and supported by braces *o* bucket *S* pivoted to the frame, rear support *o*, tappet *t* and a suitable stop or trip for engaging the tappet and tilting the bucket.

No. 10,796. Improvements on Trusses for Bridges and Roofs. (*Perfectionnements aux fermes de ponts et de toits.*)

Edward Wassell, London, Ont., 10th January 1880 (Extension of Patent No. 4,379), for 5 years.

No. 10,797. Oil Treating Process. (*Procédé de traitement des huiles.*)

Donald D. Cattnach Providence R. I. U. S. 10th January, 1880 (Extension of Patent No. 4,297), for 5 years

No. 10,798. Improvements on Mowing Machines. (*Perfectionnements aux faucheuses.*)

Rudolf Eickemeyer, Yonkers, N. Y., U. S., 11th January, 1880, for 15 years.

Claim—1st A triangular frame *E* and the shoe *G* of a mowing machine combined with the coupling arm *H* which is jointed to said shoe by a pin *I*, the axis whereof is parallel with the line of the machine's progression, and to said triangular frame by a pin *g*, the axis whereof is oblique to the line of progression, whereby said shoe and the cutting apparatus, attached thereto, may be rotated upon the pin *I* to raise the outer end of said cutting apparatus from the ground, or may be independently rotated upon the pin *g* to raise or depress the points of the fingers and cutters. 2nd A triangular frame *E*, shoe *G* and the connecting coupling arm *H*, combined with the lifting lever *L* and coupling rod *O*, connecting the crank end of said lever with the coupling arm *H*, whereby said coupling arm may be rotated upon the pin *g*. 3rd. The shoe *G* connected with the frame of the machine by a longitudinal joint pin *I* combined with the bale *B*, the end whereof is jointed to said shoe in front and rear of the cutter bar, and the lever *K* provided with the hook *k*, whereon said bale is engaged and whereby said shoe is caused to rotate upon said joint pin *I*. 4th. A shoe *G* connecting with the frame of the machine by a coupling arm *H*, one joint whereof is in the line of the machine's progression and the other joint oblique thereto, so that the cutting apparatus attached to said shoe may be raised or lowered at its outer end, or raised or lowered at the point of the fingers and cutters, and the lifting lever *L* provided with the hook *k* combined with the bale *B* constructed with a longitudinal curved slot *B*, to receive and confine said hook *k*, whereby said shoe may be rotated upon its oblique axis while being supported wholly or partly above the ground by the lever *K*. 5th. The inner shoe of a mowing machine hinged to one side of a brace or arm which arm in turn is hinged to one end of a vibrating frame by a hinge diagonal to the shoe hinge, and bisecting the axis thereof at or near the pitman joint at the heel of the cutter bar.

No. 10,799. Improvements on Grain-Binding Machines. (*Perfectionnements aux machines à tier les grains.*)

Moses A. Keller, Brockport, N. Y., U. S., 11th January, 1880, for 5 years.

Claim—1st The rectangular main frame composed of the metallic end piece *A* and sills *B C D*, whereby one part of said frame is substantially on a level with the axes of the supporting wheels and another part is upright, and the remainder is horizontal and above the wheels and extended further toward the grain side. 2nd A combined gleaner and binder, the main frame whereof is mounted and balanced upon two wheels and provided with a flexible tongue or thills, and a slotted arm projecting backward from said tongue or thills, combined with a bell crank tilting lever *I*, whereby said slotted arm engages, and a segment rack *J*, whereby said lever may be locked in any desired position for the purpose of enabling the driver to lift the front of the machine, up or down and hold it in any desired position. 3rd. A combined gleaner and binder, provided with an elevator to gather the grain stalks and carry them upward, combined with a cylinder *L* which rotates in the direction of, and at a speed greater than the machine's advance, whereby the projecting fingers *b* are caused to disturb the grain stalks upon the ground and render them substantially parallel prior to being taken up by the elevator. 4th. A combined gleaner and binder and elevating device to take the grain stalks from the ground and carry them upward, combined with a gatherer *L* mounted upon a horizontal shaft in front of said elevator and gatherer revolving with the same speed or thereabouts, and in opposite directions. 5th. The revolving gatherer *L* mounted in bearings suspended from the front sill *B*, combined with a slotted apron also secured at its upper edge to said sill and with its lower edge curved under said gatherer. 6th. The endless elevator *N* and the revolving gatherer *L*, combined with the yielding grain compressors or guard slats *w* attached at their lower ends to the lower edge of the apron, to guide and compress the ascending grain upon the elevator and strip the same from the teeth *t*. 7th. The endless elevator *N* and the yielding compressor or guard slats *w* combined with a cut-off capable of being thrown forward against said guard slats, to arrest the upward flow of grain without arresting the movement of the elevator; 8th. The endless elevator *N*, another yielding compressor or guard slat *w* combined with the cut-off slats or apron, hinged at the lower edge and capable of being thrown

forward at its top against the slats *w* to cut-off the forward flow of grain; 9th. The endless elevator *N*, with the yielding compressor or guard slats *w* and a cut-off capable of being projected forward against said guard slats combined with the rock shaft *D* and its crank arms *d* and links *e* for the purpose of actuating said cut-off. 10th In a gleaner and binder an endless elevator to gather and elevate the grain stalks combined with boxes for the lower roller, movable up and down, and depressing springs *V*, for the same to render said lower roller flexible the more easily to pass obstructions. 11th The rectangular main frame, the upper horizontal part whereof is extended laterally beyond the lower and upright part combined with an elevating device to gather the grain upon the ground and a grain wheel located immediately adjacent to, or in rear of the elevator and clearly within the parts cleared thereby. 12th The driving pulley sprocket wheel *M* having a ratchet clutch on one side and a cam projecting from said side, combined with the lever *O* or stop, which may be caused to engage with said cam and thereby move said wheel sidewise out of engagement with said clutch at the will of the driver. 13th. The driving pulley or sprocket wheel *M* having a ratchet clutch on one side, combined with a pivoted lever *O* and a foot rod *P*, whereby the driver can, at will, cause said lever to engage with said cam and cause said wheel to go out of engagement with said clutch. 14th The driving pulley or sprocket wheel *M* having a ratchet clutch upon one side, and a cam *g* combined with the pivoted lever *O*, provided with a stop *h* and the rock shaft *B*, the entire end whereof rests upon the upper part of the receptacle or thereabouts, so that it will be raised up by the passage of a mass of grain over the elevator and thereby trip said lever *O*, to release the driver *M* automatically. 15th A gleaner and binding machine having an endless elevator and gatherer to gather the grain and elevate it from the ground, a concave receptacle *V* and a rotating binder arm revolving in the direction of the machine's advance, so as to secure the bundle during the descent of said arm and bind it upon the surface of said receptacle. 16th. A revolving binding arm *A* combined with a fixed cam *k* to impart said arm an irregular movement of advance and temporary pause; 17th. A revolving binding arm *A* and a secondary arm *m* pivoted thereto, combined with a stationary cam wheel *g* when the knotting of the band has been completed said arm *m* is caused to advance more rapidly than the arm *A*, and thereby discharge the bundle in advance; 18th. The revolving binding arm *A* pivoted to the arm *W*, combined with a pin *a*, slot cam and cam *k*, whereby the irregular movements of said arm *A*, in advance and pause, are actuated and limited. 19th The revolving binding arm *A* provided with a pointed end or head, and on the side thereof with a detachable finger *q* and roller *r*, to properly gather the binder cord and present it to the knotting device. 20th The rotating binding arm *A* combined with the compressor *Y* pivoted at the end of the rod *T*, and made elastic or yielding by a spring *y* and arbor *z* likewise fastened upon said rod *T*. 21st. A spool *l*, the spindle whereof is mounted upon a suitable supporting standard, and provided with a pulley at one end, combined with a belt *n*, and a corresponding pulley on the shaft *K*, said belt being adjusted to rotate said spool backwards and thereby produce a constant tension and take up. 22nd The spool *l* provided with a tension to prevent all undue discharge of the binding cord, combined with the tension *v* controlled by a spring *w* and screw nut, the end whereof is made angular and is locked by the reactionary pressure of said spring. 23rd. The tubular shaft *K*, bearing at one end, the revolving binding arm *A* and its connected parts, and at its other end, the pulley or sprocket wheel *N*, which receives its motion from the wheel *M*, and the rod *T* which bears the compressor *Y*, at one end, and the pinion *u* at the other combined with the cam *v* and slotted rack bar *d*, for the purpose of imparting to said rod *T* a vibratory rotation at the proper times. 24th The shaft *K* which actuates the binding arm and its connected devices, provided with an arm *a*, combined with the connecting rod *E*, rock shaft *D* and cut-off *V*. 25th. The pulley or sprocket wheel *N* provided on its inner face with a cam, and a vibrating rack *h* pivoted to the frame *g*, and pinion at the end thereof, whereby a vibratory reciprocation is periodically imparted to said shaft to actuate the knotting mechanism. 26th. A binder wherein the gavel is compressed, bound and discharged from a binding table or receptacle the horizontal horn or arm *m* projecting rearward from said table or receptacle combined with a stationary upright horn or stop *n*, to arrest one end of the bundle while being discharged, whereby the discharging mechanism causes the bundle to swing around and fall upon the ground, with its length in the direction of the machine's advance or thereabouts. 27th. The binding arm discharging mechanism of a binder and the supporting arm *m* combined with an upright stop *n* attached at its upper end and free at its lower end. 28th. The rectangular main frame constructed with the end iron *A*, at one end of the same, extending around over the sill *D* and at a distance above it, to constitute a bracket *J* integral with said end iron. 29th. The binding and discharging mechanism of an automatic binding machine and the supporting arm *m* combined with an upright stop *n* attached at its upper end and free at its lower end.

No. 10,800. Improvements on Barrel Stands. (*Perfectionnements aux chantiers des barils.*)

Léonidas D. West, West Valley, N. Y., U. S., 11th January, 1880, for 5 years

Claim—1st. The caster *D* consisting of the prong *a* and hook claws *b*, the lug *c*, the sleeve socket *d* extending vertically through said lug and provided with a stop shoulder *d*, and the spindle *e* having its bearings in said socket. 2nd. The caster consisting of the clip prongs *a b*, the adjustable spindle *e*, the socket *d* and a roller at the lower end of said spindle. 3rd The combination of a cover having the pivots or journals at one side of its diameter, and the adjustable hangers *G* depending from a suitable support and affording bearings to said pivots a barrel eccentrically supported upon a pivot and casters. 4th. The combination with the hangers or hooks *G* and the cover having pivots at one side of its diameter of the bearing blocks *J* adjustable vertically on said hooks, and the eccentrically pivoted and horizontally vibrating barrel *A*; 5th The combination with a counter or shill and a barrel supported upon casters of a recessed chock receiving one of the rollers of said casters. 6th The chock consisting of the U shaped section *g* having points upon its underside and provided with inclined ways *r*, and the section *g*, received in said ways designed to be secured to the flow and forming with section *g* a recess *z*.

No. 10,801. Improvements in Fanning Mills. (*Perfectionnements aux tarares-cribleurs.*)

John E. Mitchell, Milton, Ont., 11th January, 1880, for 5 years.

Claim—1st The sieve *A* provided with a drip slide *B*, in combination with the spout *C*; 2nd. The sieve *A F G* contained in the frame *H*, in com-

bination with the auxiliary sieves H; 3rd. The sieves A F G supported by the screw eyes I, in combination with the crank rods J and fixed nuts L; 4th. The wind board M over the auxiliary sieve H, in combination with the adjustable piece N provided with the plate O and thumb screw P; 5th. The shut board E and wire board D, relatively arranged in connection with the screws of a fanning mill.

No. 10,802. Improvements on Gas Regulators.
(*Perfectionnements aux régulateurs à gaz.*)

William B. Malcolm, Toronto, Ont., 11th January, 1880, for 5 years.

Claim.—1st. The disc *k*, stem *c*, rough threaded screw *b*, tube *d* and nut *d*, nipple *h*, socket *i* and stuffing box *a*; 2nd. The disc *k*, stem *c*, rough threaded screw *b*, tube *d* and nut *d*, nipple *h*, socket *i* and stuffing box *a*, in combination with supply pipe *l*, centre piece *m*, branches *n m m*, upper casing *o*, lower casing *e*, flower ornament *f* and nob *b*.

No. 10,803. Improvements on Horse Powers.
(*Perfectionnements aux manèges à cheval.*)

Engène S. Manny, Beauharnois, Que., 11th January, 1880, for 5 years.

Résumé.—10. La combinaison du pavé A et des roues qui le supportent B B et C C; 20. La combinaison du régulateur F et du levier G, opérant d'une manière indépendante de l'essieu moteur ou des roues motrices du manège.

No. 10,804. Improvements in Memorandum Books. (*Perfectionnements aux agendas.*)

Alexander Gardner, Hamilton, Ont., 11th January, 1880, for 5 years.

Claim.—1st. The combination of the cover A, writing pad B with stub C, clasp D, pocket E, blotting pad F, slate G, pencil holder H and hanger I.

No. 10,805. Improvements on Water Meters, Applicable to Motors. (*Perfectionnements aux compteurs d'eau, applicables aux moteurs.*)

Joseph Lewis, Manchester, England, 11th January, 1880, (Extension of Patent No. 4,322), for 5 years.

No. 10,806. Improvements on Hand Cars.
(*Perfectionnements aux wagons à bras.*)

George S. Sheffield, Three Rivers, Mich., U.S., 11th January, 1880, for 5 years.

Claim.—1st. The combination of the hand lever, the dependent arms T adapted to be connected therewith, by means of detachable links, and the stirrups secured to said dependent arms, whereby the foot power may be applied to the car; 2nd. The combination, with the dependent arms T and their links, of the studs secured to the truck for supporting said links, when detached from the hand lever; 3rd. In combination with the truck, a lateral arm carrying a flanged wheel adapted to traverse the opposite rail to that upon which the riding and driving wheels travel, said arm being adjustably secured to the truck in order to adapt the apparatus to broad and narrow gauge roads.

No. 10,807. Improvements in Boot and Shoe Heels. (*Perfectionnements aux talons des chaussures.*)

Frederick Richardson, Providence, R. I., U. S., 16th January, 1880, for 5 years.

Claim.—1st. The combination, with the heel shell C, of a wooden tap *e*, the whole secured by nails passing through the wood into the sole; 2nd. The combination, with the heel shell, of a metal plate arranged to arrest and clinch the nails; 3rd. The combination, with a heel shell, of a metal plate provided with the prongs *ff* arranged to secure the shell; 4th. The combination with a heel shell, of a plate, the two secured together by screws so as to clamp the sole between the plate and the shell; 5th. The combination, with a plate arranged to form a shank stiffener and provided with a nut, of a heel shell and a renewable tap, the whole secured together by a central screw; 6th. The combination, with a metal heel shell secured to a central screw; 7th. A heel shell divided by a rim or plate into two parts, the upper part enclosing the sole and the lower part, the tap arranged to be secured by nails passing through the tap and through holes in the plate or rim.

No. 10,808. Improvements on Incubators.
(*Perfectionnements aux fours d'incubation.*)

James L. Campbell, West Elizabeth, Penn., U. S., 16th January, 1880, for 5 years.

Claim.—1st. The combination of the frame *a*, hanging frame *b*, for the support of the lamp, and hot air chamber *d*, the lamp being held below the chamber so that it will not become heated; 2nd. The hot air box *e* divided into chambers by the partitions *f* and provided with tubes *g*, for fresh air, and with holes *h*, at the corners, for the escape of the warm air; 3rd. The combination of the hot air chamber *d*, the hot air box *e*, divided by partitions into chambers, and the regulator box; 4th. A box, for regulating the temperature, which has had a partial vacuum formed in it, to make it more sensitive to the action of the heat; 5th. The combination of a box having a partial vacuum formed therein, with a pivoted lever, suitable connecting rods and a valve placed in the side of the hot air chamber *d*, for regulating the admission of air to the flame of the lamp; 6th. The combination of stationary trays, slats for moving the eggs, which are adjustable backward and forward on their rods, and an automatic mechanism for moving the slats; 7th. An automatic mechanism in combination with a crank *r*, that is revolved one half around by the mechanism every six hours, and suitable connecting rods for connecting the crank to the slats in the trays.

No. 10,809. Improvements on Motors. (*Perfectionnements aux moteurs.*)

William S. Colwell, Pittsburg, Penn., U. S., 16th January, 1880, for 5 years.

Claim.—1st. In evolving bi-sulphide of carbon into a vapour for a motor for operating machinery, the method of generating heat in a generator and

transferring it into a vessel containing bi-sulphide of carbon, where, having performed its office, the refuse or unabsorbed heat is returned to the heat generator; 2nd. The method for automatically conveying the heat from its generator into the chamber containing the bi-sulphide of carbon, in quantity sufficient for evolving the necessary amount of the bi-sulphide of carbon into a vapour for a motor of the required power for operating machinery; 3rd. The valves B C; in combination with a vaporizing chamber, whereby heat may be automatically admitted into said chamber, for evolving bi-sulphide of carbon into a motor of the power desired for operating machinery; 4th. The cylinder of an engine and its valve chamber heated by conveying heat from its generator into a coiled pipe, surrounding the said cylinder, and to a vessel containing bi-sulphide of carbon for evolving it into a vapour for a motor for operating machinery; 5th. The cylinder of an engine and its valve chamber surrounded with the coiled pipe, which communicates with a heat generator and chamber for evolving bi-sulphide of carbon into a vapour, for a motor for operating machinery; 6th. The exhaust pipe *t* enclosed in a pipe *u*, whereby the temperature of the exhausted vapour from the cylinder *l* is reduced, in its passage to the exhaust chamber *w*, by the overflow of water from the condenser; 7th. The combination of the siphon *j* and vacuum gauge *l*, with the exhaust chamber *w* and condensing pipes *r* of the condenser; 8th. In a condenser for a bi-sulphide of carbon engine, the combination of the exhaust chamber *w*, pipes *r* *u*, stop valve *h* and chamber *v*; 9th. In a bi-sulphide of carbon engine, the piston rod *r* enclosed in a casing adapted to be elongated and contracted in accordance with the movements of the piston rod with relation to its cylinder; 10th. In a condenser for a bi-sulphide of carbon engine, the air blast in combination with the pipes *v* *r*; arranged with relation to each other; 11th. In an apparatus for evolving bi-sulphide of carbon into a vapour for a motor, for operating machinery, the walls of the evolving chamber coated with tin that is impervious to heated bi-sulphide of carbon.

No. 10,810. Improvements on Reed Organs.
(*Perfectionnements aux orgues à anches.*)

George Piggott, Bowmansville, Ont., 16th January, 1880, for 5 years.

Claim.—1st. The hinge bar D, lever E and its connection at I with valve B, the valve B applied as set forth, also the application of all the parts with each other.

No. 10,811. Improvements on Compression Cocks. (*Perfectionnements aux robinets à rondelles.*)

Thomas Campbell, St. John, N. B., 16th January, 1880, for 5 years.

Claim.—1st. A twin or double compression cock composed of the cocks A B, connected by a tube C having a discharge spout D of greater capacity than the combined discharge of both cocks.

No. 10,812. Improvements in Permutation Locks. (*Perfectionnements aux serrures à combinaison.*)

Joseph Z. C. Miquelon, St. Camille, Que., 16th January, 1880, for 5 years.

Claim.—1st. The combination wheels *e* having on their outer edges a system of figures, letters or other marks, and having also the chambers *f*; 2nd. The combination of the wheels *e* having the chambers *f* and slots *i*, with the combination bar *b* provided with the projecting pins *g*; 3rd. The combination of the wheels *e*, combination bar *b* and guide pieces *a*, with the bolt bar C having the bolt hook *c* and arms *d*; 4th. The combination of the wheels *e*, with the combination bar *b* extended endwise, so as to protrude through the end of the lock case, so as to form the lock bolt.

No. 10,813. Improvements in the Manufacture of Aerated and other Beverages. (*Perfectionnements dans la fabrication des boissons gazeuses et autres.*)

David Johnson, Wrexham, Wales, 16th January, 1880, for 5 years.

Claim.—Combining with water, wine, malt liquor, spirit, syrup or other liquid, a mixture or solution of strychnia (or nux vomica), and a soluble phosphate, a lactophosphate, pyrophosphate, or hypophosphate, or unoxidized phosphorus, or any or all of the same, or by combining with water, wine or other liquid, any or all of the said phosphates, lactophosphates, pyrophosphates, or hypophosphites without the strychnia.

No. 10,814. Improvements on Grain Binders.
(*Perfectionnements aux lieuses à grain.*)

Charles L. Travis, Minneapolis, Minn., U. S., 16th January, 1880, for 5 years.

Claim.—1st. The combination of the binder arm mounted in fixed supports, the sliding divider, the extensible apron or bridge and the elevator; 2nd. The combination of a binder arm, an elevated grain conveyer or elevator, an intermediate reciprocating divider and an extensible horizontal bridge to support the inflowing grain during the advance of the divider; 3rd. The combination of the elevator or conveyer, the take up roll, the apron, the divider board and a binder arm; 4th. The combination of a grain delivering mechanism, means for delivering the grain from the conveyer to the binder arm, and an extensible bridge or apron to sustain the flowing grain during the advance of the conveying devices; 5th. The combination, in a grain binder, of the spring driven roll, the apron and the upright divider board; 6th. In combination with the elevator apron, the breast piece; 7th. In combination with the reciprocating divider, the rock shaft having three arms and the crank arranged to operate the same; 8th. The combination of a grain delivering mechanism, a binder arm located at a distance therefrom and an intermediate divider and carrier arranged to move bodily to and fro in a horizontal direction, and sustain the inflowing grain as the handle is carried to the binder arm.

No. 10,815. Improvements on Motors for Locomotives, &c. (*Perfectionnements aux moteurs pour les locomotives, &c.*)

William S. Colwell, Pittsburg, Penn., U. S., 16th January, 1880, for 5 years.

Claim.—1st. The use of bi-sulphide of carbon for a motor for operating machinery, the method of applying heat to bi-sulphide of carbon, so that a

given temperature will be imparted to it and a determined volume and pressure of vapour obtained for a motor; 2nd. The use of bi-sulphide of carbon for a motor for operating machinery, the method of applying heat to the bi-sulphide of carbon, so that a given volume and pressure of its vapour will be obtained for a motor, and not increased or diminished by admitting the quantity of bi-sulphide of carbon in the evolving chamber; 3rd. In an apparatus for utilizing the bi-sulphide of carbon for a motor for operating machinery, the combination of a heat-receiving and distributing chamber, regulating valve or valves and an evolving chamber; 4th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of two or more heat-receiving and distributing chambers, a regulating valve or valves and evolving chamber; 5th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of a heat-receiving and distributing chamber, regulating valve or valves and an evolving chamber enclosed in a casing for surrounding it with an unflammable liquid or vapour; 6th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of two or more heat-receiving and distributing chambers, regulating valve or valves and an evolving chamber enclosed in a casing for surrounding it with an unflammable liquid or vapour; 7th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of a steam or heat generator, steam or heat-receiving and distributing chamber, regulating valve or valves and evolving chamber; 8th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of a steam or heat generator, two or more steam or heat-receiving and distributing chambers, regulating valve or valves, and evolving chambers; 9th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of a steam or heat generator, a steam or heat-receiving and distributing chamber, regulating valve or valves and evolving chamber enclosed in a casing for surrounding it with an unflammable liquid or vapour; 10th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of a steam or heat generator, two or more steam or heat-receiving and distributing chambers, regulating valve or valves and evolving chamber, enclosed in a casing for surrounding it with an unflammable liquid or vapour; 11th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of a furnace surrounded with a water chamber communicating with two boilers, communicating with a single breeching and smoke stack, a steam dome communicating with said chamber and boilers and evolving chamber; 12th. In an apparatus for utilizing bi-sulphide of carbon for a motor, the combination of a furnace surrounded with a water chamber communicating with a single breeching and smoke stack, and evolving chamber enclosed in a casing for surrounding it with an unflammable liquid or vapour; 13th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of a furnace surrounded with a chamber communicating with two boilers furnished with flues communicating with a single breeching and smoke stack, a steam dome communicating with said chamber and boilers, and evolving chamber having a steam-receiving and distributing chamber; 14th. In an apparatus for utilizing bi-sulphide of carbon for a motor, the combination of a furnace surrounded with a water chamber communicating with two boilers having flues communicating with a single breeching and smoke stack, a steam dome communicating with said chamber and boilers, and evolving chamber enclosed in a casing for surrounding it with an unflammable liquid or vapour, said evolving chamber having two or more receiving and distributing chambers communicating with each other; 15th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of the regulating valves *f, g, i*, adjustable tension spring *k*, a steam generator and evolving chamber *l* having steam or heat-receiving and distributing chambers *n, o*; 16th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of the water chamber *du* with the chamber *q*, around the evolving chamber *l* and a steam generator; 17th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of a condenser consisting of a series of shallow chambers, arranged one above the other, and communicating with each other, and a reservoir for bi-sulphide of carbon communicating with said shallow chambers, the whole enclosed in a casing and surrounded with water; 18th. In an apparatus for utilizing bi-sulphide of carbon for a motor for operating machinery, the combination of a condenser consisting of a series of shallow chambers, arranged one above the other and communicating with each other, a reservoir for bi-sulphide of carbon, a collecting chamber, said chambers and reservoir communicating with each other through the pipes *7, 8*, and the whole enclosed in a case and surrounded with water; 19th. In an apparatus for utilizing bi-sulphide of carbon for a motor, the combination of a condenser consisting of chambers *1, 2, 3, 4, 5, 6* and *9*, reservoir *z*, communicating by pipes *7* and *8*, steam siphon *rt*, casing *st* and an air blast device; 20th. In a bi-sulphide of carbon engine, a cylindrical slide valve arranged on a valve stem with carriers provided with spiral packing recesses; 21st. A chamber for evolving bi-sulphide of carbon into a vapour for a motor, said chamber furnished with a vapour dome, and chamber and dome enclosed in a casing for surrounding it with an unflammable liquid or vapour; 22nd. In a bi-sulphide of carbon engine, the method described for lubricating the working surfaces of the cylinder, piston, valve or valves and their seats, and preventing said surfaces from oxidation, viz.: by mixing finely pulverized black lead or plumbago with oil, and introducing it into the valve chamber or chambers and cylinder of the engine.

No. 10,816. Improvements on Sun Dials. (*Perfectionnements aux cadrans solaires.*)

Lyurgus Thurston and Jay Vaadenburg, Findlay, Ohio, U. S., 17th January, 1880, for 5 years.

Claim.—1st. The combination of a hinged gnomon with a spring; 2nd. The box *A* having cover *a*, face *B* suitably marked with hour and minute points, spring *d* and hinged gnomon.

No. 10,817. Improvements on Skates. (*Perfectionnements aux patins.*)

George McCord, New York, U. S., 17th January, 1880, for 5 years.

Claim.—1st. In combination with an ice or parlor skate, an auxiliary spring cushioned sole plate above the rigid sole plate; 2nd. The combination of the auxiliary sole plate that is permanently attached to the heel plate, and supported by cushioning springs on the sole plate proper; 3rd. The combination of an auxiliary spring cushioned sole plate with a guide

and stop device, connecting the same at the front end with the supporting sole plate of the skate; 4th. The combination of an auxiliary spring cushioned sole plate that is permanently attached to the heel plate, and supported above the sole plate with front clamping and fastening devices secured thereto.

No. 10,818. Improvements on Animal Traps. (*Perfectionnements aux pièges à vermine.*)

Ogle Caras, Smith's Falls, Ont., 17th January, 1880, for 5 years.

Claim.—1st. The vertical arm *H* rigidly attached to the tilting shelf *F* and terminating in a hook *I*, in combination with the gravitating platform *D*.

No. 10,819. Metallic Fastening for Under Garments and Supporters. (*Agrafe de jupon et de bretelle.*)

Clinton E. Brash, Toronto, Ont. (Assignee of Christopher C. Shelby, New York, U. S.) 17th January, 1880, for 5 years.

Claim.—A metallic attachment for garments and supporters provided with the cleating lugs *C*.

No. 10,820. Improvements on Motors. (*Perfectionnements aux moteurs.*)

William S. Colwell, Pittsburg, Penn., U. S., 17th January, 1880, for 5 years.

Claim.—1st. A motor for operating machinery, consisting of bi-sulphide of carbon, water and plumbago or black lead charged into a vessel, and heat applied thereto; 2nd. A bi-sulphide of carbon, water and plumbago or black lead charged into a vessel enclosed in a case and surrounded with an unflammable liquid or vapour; 3rd. Bi-sulphide of carbon, or other liquid, evolved into a vapour for a motor, conveyed from a generating chamber to the piston of an engine through the medium of a pipe enclosed in a case and surrounded with an unflammable liquid or vapour; 4th. The cylinder of a bi-sulphide of carbon engine and its valve chamber communicating directly with the case *A* and chamber *A'* through the pipes *E, W*, whereby steam of the same temperature as that used for evolving the bi-sulphide of carbon will surround said cylinder, valve chamber and pipe *W*; 5th. In combination with a bi-sulphide of carbon engine, a condenser consisting of the chambers *D, E*, pipes *u, z*, perforated diaphragm and a blast device; 6th. The employment of a liquid from which a given pressure can be obtained from a given quantity of the liquid used, the combination of a chamber for evolving said liquid into a vapour, and a valve that can be adjusted to regulate the flow of said liquid into said chamber, in quantity corresponding to the pressure desired, and automatically cut off the flow into said chamber when the pressure of the vapour in it becomes greater than that desired; 7th. In combination with a reservoir for bi-sulphide of carbon, or a compound thereof, a vaporizing chamber, adjustable valve or valves that will open and close automatically by a fixed pressure, a supply pipe having a return branch and a force pump, said reservoir and vaporizing chamber communicating with each other through the medium of said supply pipe and its branch; 8th. In a bi-sulphide of carbon engine the combination of the double throttle valve or valves *U*, with the pipes *E, W* communicating with the chambers *A, B* and the steam ports of the cylinder *B*; 9th. Bi-sulphide of carbon evolved into a vapour and transferred to the condenser, by means of valve *m* and pipe *l*, and condensed and collected in reservoir *F*; 10th. The combination of a cylinder *B* and reservoir *F* communicating with each other by means of coiled pipe *z*, the latter passing through a condenser.

No. 10,821. Improvements in Book Binding. (*Perfectionnements dans la reliure.*)

Francis Hadley, Toronto, Ont., 17th January, 1880, for 5 years.

Claim.—A metal cover *A* hinged to the back *B*, in combination with the fasteners or rivets *D* passing through the book *C*.

No. 10,822. Improvements in Stuffing Boxes. (*Perfectionnements aux boîtes à étoupes.*)

John Kennedy, Toronto, Ont., 17th January, 1880, for 5 years.

Claim.—The box *A* having its interior bored in the shape of a frustrum of a cone, in combination with a gland *C* fitting the spindle *B*.

No. 10,823. Improvements on Hand Scrubbers. (*Perfectionnements aux brosses à frotter.*)

Horace A. Ste. Marie, Montreal, Que., 17th January, 1880, for 5 years.

Claim.—The rubber composed of block *A*, in combination with mat *C*; 2nd. The block *A* having projection *D*, in combination with mat *C*.

No. 10,824. Compass for Scribing Ellipses. (*Compass pour tracer les ellipses.*)

Cyrus McBean, Toronto, Ont., 17th January, 1880, for 5 years.

Claim.—1st. A compass leg *E* connected to the sleeve *D*, in combination with a bar *B* hinged to the plate *A*; 2nd. A scribing point or pencil connected to a sleeve sliding on an adjustable bar.

No. 10,825. Improvements in Horse Powers. (*Perfectionnements aux manèges à chevaux.*)

Duncan Carmichael, jr., Mariposa, Ont., 17th January, 1880, for 5 years.

Claim.—1st. A crown wheel *C*, with its teeth upwardly directed, and the crown wheel *C*, set in the reverse direction, in combination with the line shaft *H*, set at such an angle that the plane of the line of action of both crown wheels, respectively on their respective pinions, shall be on a parallel line with the plane of the master wheels, while, at the same time, the bevel pinions *I, I'* shall mesh with the said crown wheels, on the inside of their respective centres; 2nd. The crown wheel *C*, with its teeth upwardly directed, and the crown wheel *C'*, with its teeth pointed in the reverse direction, in combination with the bevel pinions *I, I'*, both on the line shaft *H* and gearing with, and on the inside of the centre of the crown wheels *C, C'*, respectively.

List of Patents issued up to 18th February, 1880, but not yet Officially published in the Patent Office Record.

- No. 10,832. G. M. Holmes, Gardiner, Me., U. S. A., "Planer," Patent dated 19th January, 1880.
- No. 10,833. T. Lavitt, Everett, Mass., U. S. A., "Post Marking and Cancelling Machine," 20th January, 1880.
- No. 10,834. J. H. Mears, Philadelphia, Penn., U. S. A., "Process of Chlorination," 20th January, 1880.
- No. 10,835. M. Bray, Newton and A. Dames, Wakefield, Mass., U. S. A., "Shoe Lacing Stud" (Re-issue of Patent, No. 7,558), 20th January, 1881.
- No. 10,836. C. Barlow, Cookshire, Q., "Fire Escape," 20th January, 1880.
- No. 10,837. E. H. N. Clarkson, Baltimore, Md., U. S. A., "Sash Card Guide," 20th January, 1880.
- No. 10,838. G. W. Swett, Troy, N. Y., U. S. A., "Car Wheel," 20th January, 1880.
- No. 10,839. J. B. White, Buffalo, N. Y., (Assignee of G. Bryden, Hartford, Conn., U. S. A., "Horseshoe Cutting Process," 20th January, 1880.
- No. 10,840. H. W. Stanton, Montreal, Q., "Nut Lock," 20th January, 1880.
- No. 10,841. W. N. Whiteley, Springfield, O., U. S. A., "Reaper," 20th January, 1880.
- No. 10,842. J. D. Craig, Vincennes, Ind., U. S. A., "Railway Water Tank," 20th January, 1880.
- No. 10,843. C. H. Parker, Robinson, Q., "Double Turbine Water Wheel," (Extension of Patent, No. 4,366), 20th January, 1880.
- No. 10,844. D. Adams, Cleveland, O., U. S. A., "Iron and Steel Process," 20th January, 1880.
- No. 10,845. D. F. Van Liew, Aurora, Ill., U. S. A., "Grain Door for Freight Cars," (Extension of Patent, No. 4,354), 20th January, 1880.
- No. 10,846. D. F. Van Liew, Aurora, Ill., U. S. A., "Grain Door for Freight Cars," (Extension of Patent, No. 4,354), 21st January, 1881.
- No. 10,847. J. S. Bogle, Springfield, O., U. S. A., "Grain Sowing Machine," 21st January, 1880.
- No. 10,848. J. Lane, Chicago, Ill., U. S. A., "Plow, Coultter and Scraper," 21st January, 1880.
- No. 10,849. J. Quayle, (Assignee of G. W. Severance), Ravenna, O., U. S. A., "Oatmeal Machine," 21st January, 1880.
- No. 10,850. H. E. Shaffer, (Assignee of C. F. Spencer), Rochester, N. Y., U. S. A., "Lamp Stand," 21st January, 1880.
- No. 10,851. H. E. Shaffer, (Assignee of C. F. Spencer), Rochester, N. Y., U. S. A., "Lamp Stand," 21st January, 1880.
- No. 10,852. G. Smith, Stratford, O., "Lever Car Brake," 21st January, 1880.
- No. 10,853. G. L. Anders, Boston, Mass., U. S. A., "Electric Call Apparatus," 21st January, 1880.
- No. 10,854. J. W. Calef, North Easton, Mass., U. S. A., and A. D. Cable, Montreal, Q., "Clothes Wringer," 21st January, 1880.
- No. 10,855. J. W. Spruit, Millwood, Va., U. S. A., "Commode," 21st January, 1880.
- No. 10,856. C. H. White, Malden, and B. Woodward, Watertown, Mass., U. S. A., "Furnace Regulator," 21st January, 1880.
- No. 10,857. R. S. Rhodes, Chicago, Ill., U. S. A., "Audiophone," 22nd January, 1880.
- No. 10,858. C. S. Bastright, Lebanon, N. H., U. S. A., "Railroad Switch," 22nd January, 1880.
- No. 10,859. W. Bray, Petiotodiac, N. B., "Carpet Fastener," 22nd January, 1880.
- No. 10,860. A. McCarvie, Lucknow, O., "Hameless Horse Collar," 22nd January, 1880.
- No. 10,861. W. F. Phillips, Watford, O., "Pleasure Spring," 22nd January, 1880.
- No. 10,862. H. B. Powell, Napoleon, O., U. S. A., "Hand Hold for Reins," 22nd January, 1880.
- No. 10,863. J. W. Elliott, Toronto, O., "Reaper and Mower Knife Grinder," 22nd January, 1880.
- No. 10,864. J. Myers, Boston, Mass., U. S. A., "Salve," 22nd January, 1880.
- No. 10,865. O. Lugo, Flushing, and W. T. Lees, Brooklyn, N. Y., U. S. A., "Process of Purifying Gas," 22nd January, 1880.
- No. 10,866. A. H. Brintwell, Belleville, O., "Method and Machinery for Manufacturing Cheese," 22nd January, 1880.
- No. 10,867. W. Baragwanath, Chicago, Ill., U. S. A., "Feed Water Heater," 22nd January, 1880.
- No. 10,868. W. J. Watson, (Assignee of A. Nicol, Ayton, O., "Gate," 22nd January, 1880.
- No. 10,869. D. B. Campbell, Palisade, Nev., U. S. A., "Reaper and Mower," 22nd January, 1880.
- No. 10,870. A. Richardson, Port Perry, O., "Supporting and Looking Window Sash," 22nd January, 1880.
- No. 10,871. J. M. Harper, El Paso, Ill., U. S. A., "Bases for Stone Legs," 22nd January, 1880.
- No. 10,872. J. J. Cobb, Grand Rapids, Mich., U. S. A., "Vehicle Spring," 22nd January, 1880.
- No. 10,873. D. A. Scott, Boston, Mass., U. S. A., "Broom Stock Holder," 22nd January, 1880.
- No. 10,874. S. B. Castle, Syracuse, N. Y., U. S. A., "Hay Loading Machine," 22nd January, 1880.
- No. 10,875. W. J. Stevens, New York, U. S. A., "Hose and Pipe Coupling," 22nd January, 1880.
- No. 10,876. F. Shaw, New York, U. S. A., "Telephonic Exchange Systems and Devices," 22nd January, 1880.
- No. 10,877. H. W. Oxford, Chicago, Ill., U. S. A., "Incubator," 22nd January, 1880.
- No. 10,878. W. Raydt, Hanover, Germany, "Mode of Raising Bodies in Water and Air," 26th January, 1880.
- No. 10,879. G. Hartig, Brixton, England, "Expanding Window Screen," 26th January, 1880.
- No. 10,880. A. Jaeger, Bremerhaven, Germany, "Fog Horn," 26th January, 1880.
- No. 10,881. J. S. Henshaw, Goshen, Ky., U. S. A., "Gate," 26th January, 1880.
- No. 10,882. W. H. Allen, New York, U. S. A., "Grain Weighing and Registering Machine," 26th January, 1880.
- No. 10,883. J. B. Armstrong, (Assignee of A. R. Woodyatt), Guelph, O., "Bending and Shaping Machine," 26th January, 1880.
- No. 10,884. B. C. Shaw and J. V. Cook, Indianapolis, Ind., U. S. A., "Running Gear for Wagons," 26th January, 1880.
- No. 10,885. J. Russell and G. P. Fulkhouser, Plattsburgh, N. Y., U. S. A., "Middlings Purifier," 28th January, 1881.
- No. 10,886. R. B. McPherson, (Assignee of W. H. Howell), Thorold, O., "Pulp Grinder," 28th January, 1880.
- No. 10,887. B. N. Stuart and G. A. Fuxbury, (Assignees of J. W. Gear), Haverhill, Mass., U. S. A., "Valve," 28th January, 1880.
- No. 10,888. W. Chadwick, T. Chadwick and J. Chadwick, Manchester, and J. W. Kynaston, Liverpool, Eng., "Process of Manufacturing and Purifying Sulphate of Alumina and Alum," 28th January, 1880.
- No. 10,889. J. Hall and C. M. Lane, Keene, N. H., U. S. A., "Portable Steam Engine," 28th January, 1880.
- No. 10,890. J. Hall and C. M. Lane, Keene, N. H., U. S. A., "Portable Steam Boiler," 28th January, 1881.
- No. 10,891. T. D. Davis, Syracuse, N. Y., U. S. A., and J. R. Smith, Brookville, Ont., 31st January, 1880.
- No. 10,892. G. L. Thorne, Buffalo, (Joint Inventor and Assignee of W. H. Wright), Rochester, N. Y., U. S. A., "Archery," 31st January, 1880.
- No. 10,893. A. Harris, J. Harris, J. K. Osborne and L. M. Jones, Brantford, Ont., (Assignees of J. H. Jones and R. Emerson), Rockford, Ill., U. S. A., "Mower," 31st January, 1880.
- No. 10,894. B. Slusser, Sidney, Ohio, U. S. A., "Safety Elevator," 31st January, 1880.
- No. 10,895. O. J. Bergeron, La Rochelle, Que., "Spring Bed," 31st Jan., 1880.
- No. 10,896. P. Lajoie, St. Hyacinthe, Que., "Stove," 31st January, 1880.
- No. 10,897. J. D. Brassington, New York, U. S. A., "Extension Table," 31st January, 1880.
- No. 10,898. E. Fisher and J. Watson, Kincardine, Ont., "Horse Collar and Dies," 31st January, 1880.
- No. 10,899. L. J. Bennett, Buffalo, N. Y., U. S. A., "Revolving Screen," 31st January, 1880.
- No. 10,900. J. D. Bush, Detroit, Mich., U. S. A., "Door Bolt," 31st January, 1880.
- No. 10,901. T. Witmer, Buffalo, and M. M. Martin, Niagara, N. Y., U. S. A., "Slicing Machine," (Extension of Patent No. 4,373), 5th February, 1880.
- No. 10,902. W. H. Munson, Ottawa, Ont., "Dust Pan," 5th Feb., 1880.
- No. 10,903. G. Eastman, Rochester, N. Y., U. S. A., "Process of Preparing Gelatine Dry Plates for use in Photography," 5th February, 1880.
- No. 10,904. H. S. Hoeller, (Assignee of C. Hoeller, Cincinnati, Ohio, U. S. A., "Stove Pipe Elbow," (Extension of Patent No. 1,691), 6th February, 1880.
- No. 10,905. A. R. Gullder, Minneapolis, Minn., U. S. A., "Middlings Purifier," February 10th, 1880.
- No. 10,906. H. F. Attrill and W. Farmer, New York, U. S. A., "Gas Cupola," 10th February, 1880.
- No. 10,907. L. E. Salisbury, Providence, R. I., U. S. A., "Knitting Machine," 10th February, 1880.
- No. 10,908. J. E. Trotter, Three Rivers, Que., "Stamp Extractor," 10th February, 1880.
- No. 10,909. J. Boydell, Kingscy, Que., "Sleigh Clutch," 10th February, 1880.
- No. 10,910. S. Marrotte, Montreal, Que., "Food Preparation," 10th February, 1880.
- No. 10,911. J. G. Shaw, Biddeford, Me., H. J. Jennings, Worcester, Mass., Wm. Wickersham, Boston, Mass., and A. Davis, Worcester, Mass., U. S. A., "Nail Cutting Machine," (Extension of Patent No. 5,642), 10th February, 1880.
- No. 10,912. C. Salter, (Assignee of J. Best, Montreal, Que., "Wrench," 12th February, 1880.
- No. 10,913. A. T. and A. T. Mitchell (Assignees of S. T. Dobyns), North Middletown, Ky., U. S. A., "Composition for the Cure of Catarrh," 14th February, 1880.
- No. 10,914. J. N. Chamberlain, Springfield, Mass., U. S. A., "Gas Burner," 14th February, 1880.
- No. 10,915. J. Brown, Malahide, Ont., "Method of Laying up Rails or Poles for Fencing," 14th February, 1880.

No. 10,916. E. W. Blackhall, (Assignee of R. W. Semple, Toronto, Ont. "Hydraulic Machinery," 14th February, 1880.

No. 10,917. J. Blais and A. S. Ruel, Sherbrooke, Q., "Improved Carriage Wheel," 14th February, 1880.

No. 10,918. J. H. Ellis, Boston, Mass., U. S., A., "Horse Liniment," 14th February, 1880.

No. 10,919. J. W. Wakeman, Jersey City, N. J., U. S., A., "Copy Book," 14th February, 1880.

No. 10,920. L. B. Tyng, Lowell, Mass., U. S., A., "Railroad Rail Joint," 14th February, 1880.

No. 10,921. J. A. Allison, Dunbar, Ont., "Seeding Machine," 14th February, 1880.

No. 10,922. J. W. Mann, Brockville, Ont., "Seeding Machine," 14th February, 1880.

No. 10,923. A. Parsons, Chicago, Ill., U. S., A., "Gas Regulator," 17th February, 1880.

No. 10,924. A. Muirhead, Westminster, England, and J. A. Briggs, Jubblepore, and G. K. Winter, Arconan, India, "Duplex Telegraph," 17th February, 1880.

No. 10,925. A. C. Biethen, Lynn, Mass., U. S., A., "Nose Clamp for Eye Glasses," 17th February, 1880.

No. 10,926. H. Williams, Jackson, Mich., U. S., A., "Railroad Rail Joiner," 17th February, 1880.

No. 10,927. J. K. Boswell, St. Louis, Mass., U. S., A., "Heating, Cooking and Drying Apparatus," 17th February, 1880.

No. 10,928. De L. Kennedy, New York, and J. H. Raymond, Chicago, Ill., U. S., A., "Metal Punch," 17th February.

No. 10,929. W. Lindon, Brooklyn, N. Y., U. S., "Clock Striking Mechanism," 17th February, 1880.

No. 10,930. N. Green, Waterford, Ont., "Improvements on Reaping Machines," 17th February, 1880.

No. 10,931. L. S. Hill, Grand Rapids, Mich., U. S., A., "Spoon Bolt Hook," 17th February, 1880.

No. 10,932. The Huston Ships' Berth Co., (Assignees of D. Huston), Boston, Mass., U. S., A., "Self-levelling Berths for Vessels," 17th February, 1880.

No. 10,933. O. Peck, Rowe, (Assignee and joint inventor with D. Powers), Shelburne, Mass., U. S., A., "Bit Brace," 18th February, 1880.

No. 10,934. E. D. Shaffer, Moncton, N.B., "Cattle and Sheep Car," 18th February, 1880.

No. 10,935. W. N. De Great sr., and A. L. Maxwell, Knoxville, Tenn., U. S., A., "Rotary Engine," 17th January, 1880.

No. 10,936. G. J. O'Doherty, (Assignee of W. E. Soare, Ottawa, Ont., "Improvements on Setting out Slope Stakes," 18th February, 1880.

No. 10,937. W. R. Whittington, Middletown, and W. S. Neale, Lakeport, Cal., U. S., A., "Sickle Bar for Harvesters," 18th February, 1880.

No. 10,938. The Huston Ships' Berth Co., (Assignee of D. Huston), Boston, Mass., U. S., A., "Self-levelling Berth for Vessels," 18th February, 1880.

No. 10,939. G. Desforges dit St Maurice, St. Henri, Que., "Improved Shoe," 18th February, 1880.

No. 10,940. The Card Automatic Brake Co., (Assignee of W. L. Card and J. Noble), St. Louis, Miss., U. S., A., "Car Brake," 18th February, 1880.

No. 10,941. C. E. Petrie, Rochester, N. Y., U. S., A., "Mechanical Movement," 18th February, 1880.

No. 10,942. The Card Automatic Brake Co., (Assignees of W. L. Card), St. Louis, Miss., U. S., A., "Locomotive Brake," 18th February, 1880.

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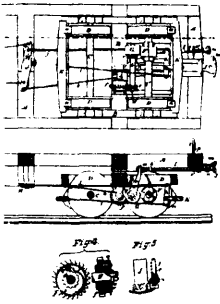
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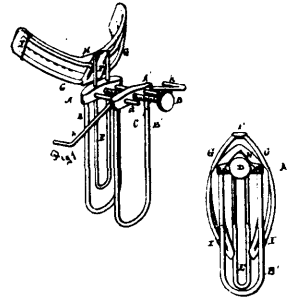
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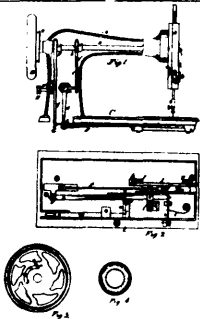
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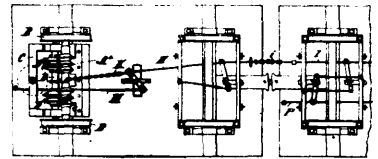
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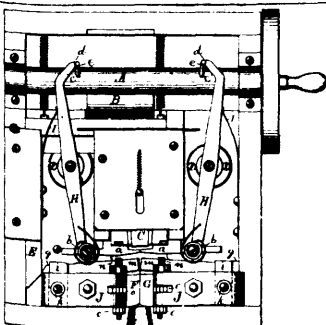
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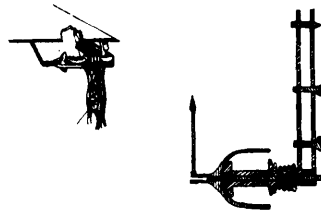
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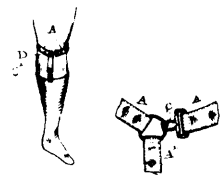
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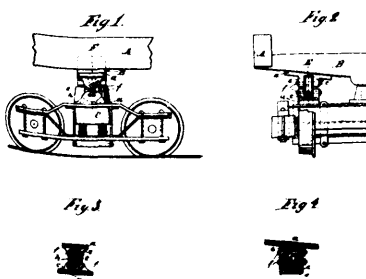
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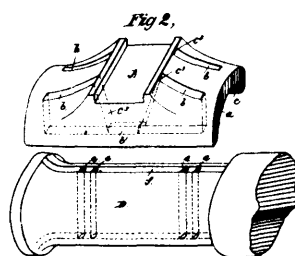
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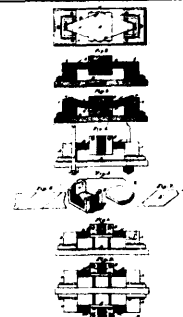
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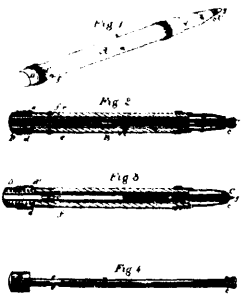
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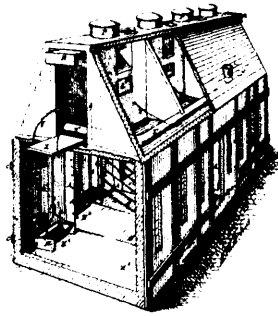
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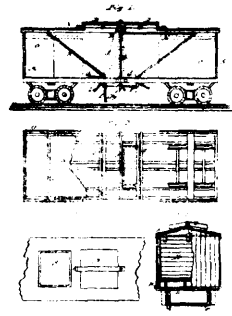
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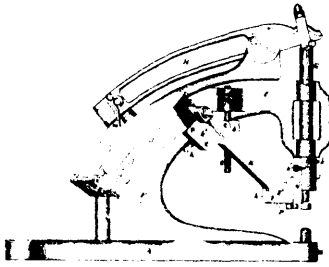
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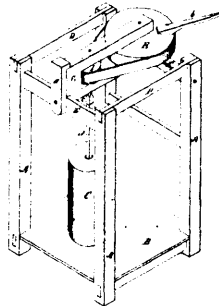
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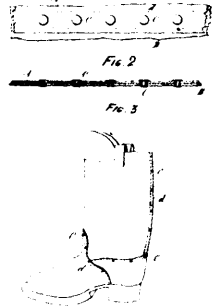
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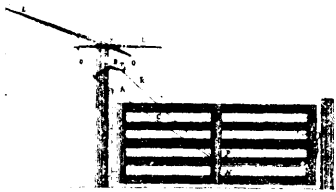
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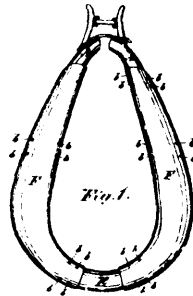
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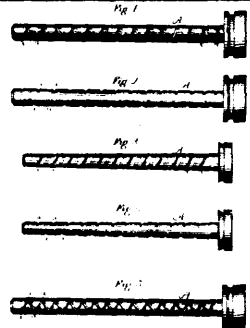
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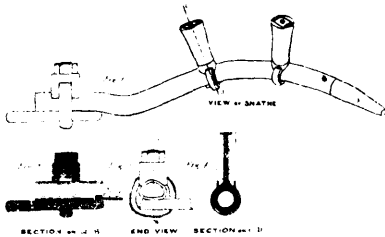
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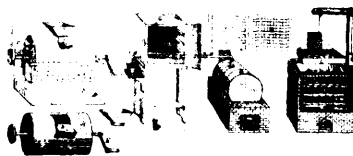
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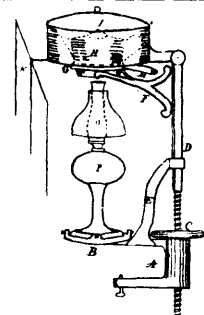
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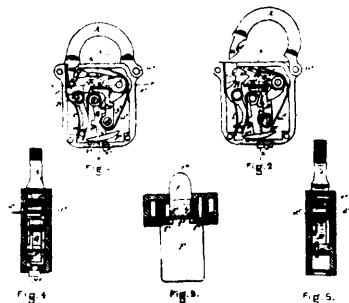
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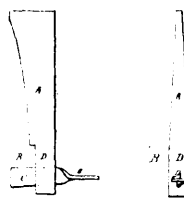
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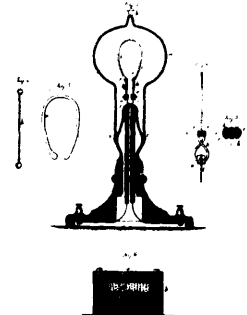
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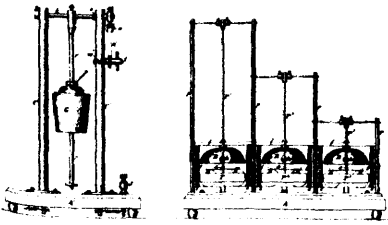
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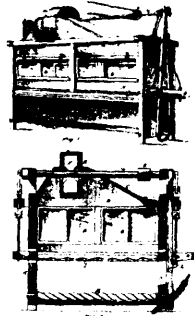
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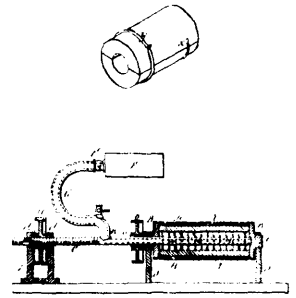
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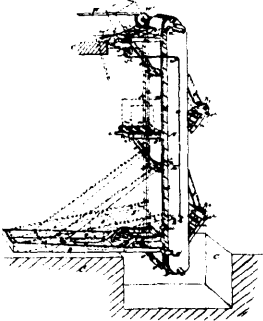
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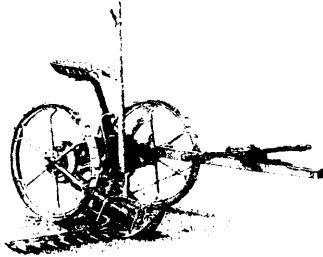
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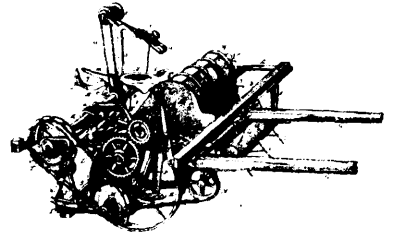
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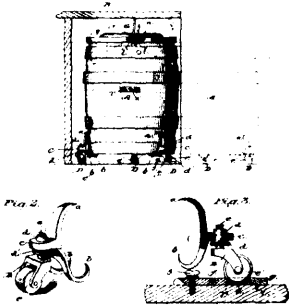
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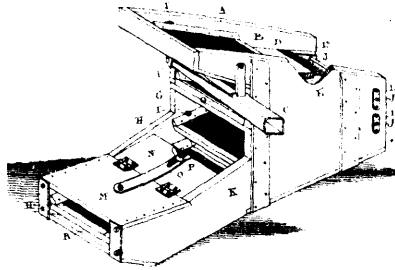
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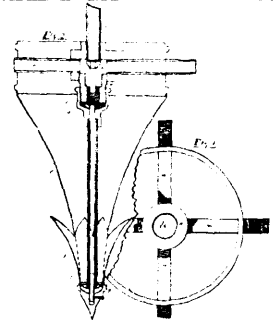
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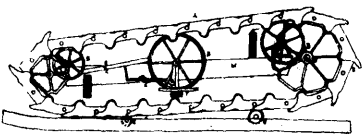
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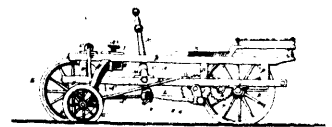
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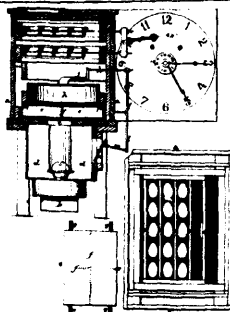
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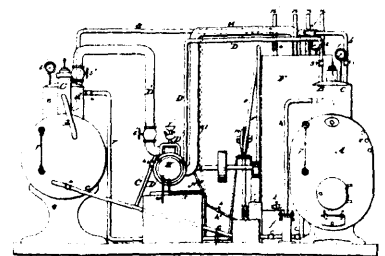
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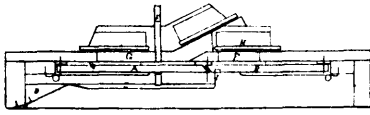
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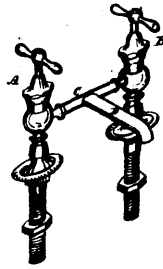
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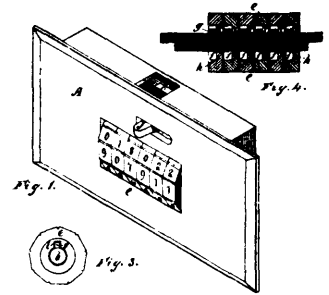
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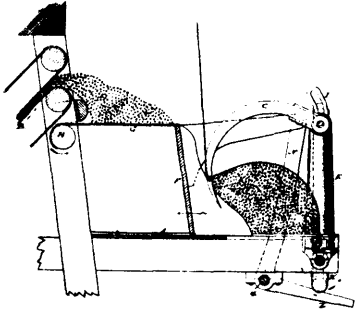
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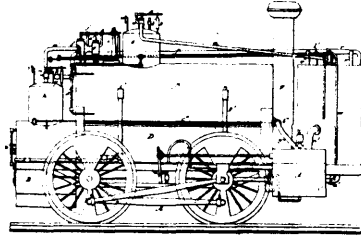
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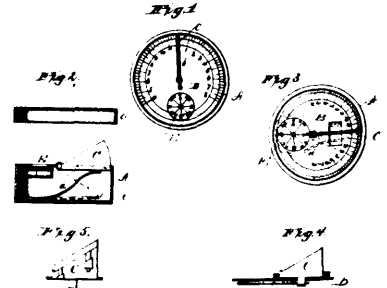
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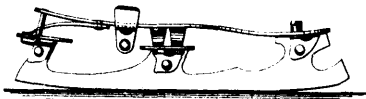
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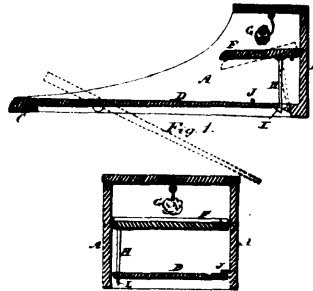
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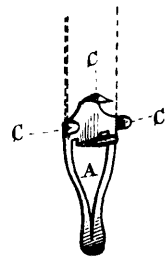
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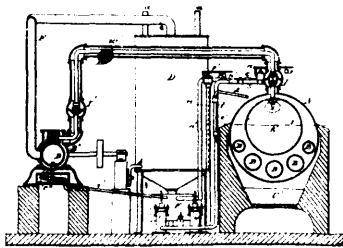
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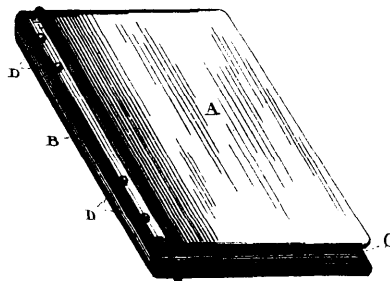
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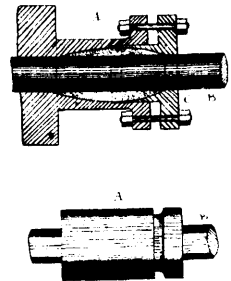
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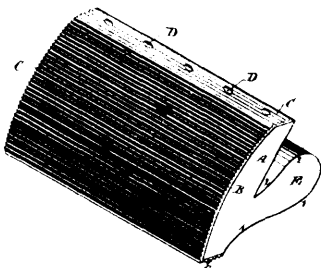
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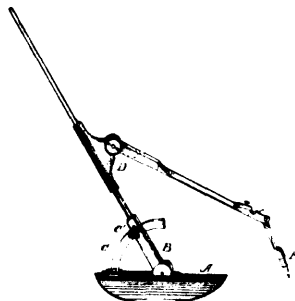
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