

a cover J arranged, substantially as and for the purpose specified. 2nd. In a ruling machine provided with conveying cords F arranged to carry the paper over the pen rollers D, the combination of the stop piece K operated by automatic mechanism, in such a manner that each sheet of paper is stopped before passing below the pen roller till the proper moment arrives for it to pass below the roller, substantially as and for the purpose specified. 3rd. In a ruling machine, provided with conveying cords F arranged to carry the paper over the pen roller D, the stop plate K attached to the rod L having an arm L¹ connected to the vertical rod M¹ by the chain M and to the main frame of the machine by the spiral spring P, in combination with the cam O keyed to the spindle Q and operating substantially as and for the purpose specified. 4th. In a ruling machine, the spindle Q supported in bearings in an adjustable frame and having keyed to it a nest of graduated sized spur wheels Q, in combination with a spindle R supported in suitable bearing and having keyed to it, the spur wheel R¹ meshing with the spur wheels Q¹, and the friction pulley R² which rests on the feeding roller C for the purpose of driving a rotary movement therefrom, substantially as and for the purpose specified. 5th. In a ruling machine provided with conveying cords for carrying the paper below the pen clamp, an arm S resting in a groove in the pen roller D and attached to the rod T which is pivoted on the back of the pen clamp U and is provided with a downwardly projecting arm V, in combination with the rod V¹ and supporting block V² for operating the pen clamp U, substantially as and for the purpose specified. 6th. In a ruling machine having a pen clamp provided with a vertical arm connected to the pivoted arm X¹ by a cord or wire, the combination, of cam blocks arranged in the periphery of the cam head X², substantially as and for the purpose specified. 7th. In a ruling machine, a clamp plate Y connected to the rod Y², carried in bearings on the back of the clamp plate and having a projecting arm Y³ connected by the wire Y⁴ to the pivoted arm X¹, in combination with cam blocks arranged in the periphery of the cam head X², which cam head is keyed to the spindle O, substantially as and for the purpose specified. 8th. In a ruling machine the pivoted pen clamp U having a rail g with an adjustable weight arranged upon it to counterbalance the weight of the pen clamp in combination with the fingers j² resting in grooves in the roller D and arranged to tilt the pen clamp, substantially as and for the purposes specified. 9th. In a ruling machine, having a pivoted pen clamp U, the extension fingers l resting in grooves in the roller D and supporting one end of the bell crank m, which is held down by the spring n, in combination with the projection piece K arranged to tilt the clamp U, substantially as and for the purpose specified. 10th. In a ruling machine, a receiving box composed of board r, in combination with a rectangular adjusting frame made of the bars r¹ and z, substantially as and for the purpose specified.

No. 17,499. Device for keeping the Frost and Snow from Road Beds of Railways. (*Mode de garantir les railroutes de la gelée et de la neige.*)

Thomas Patterson, Stratford, Ont., August 15th, 1883; 5 years.

Claim.—A pipe or duct placed below the road bed of a railway and supplied with steam from a boiler situated near the track for the purpose of heating the road bed, and whereby preventing the hardening of the road bed by frost or the accumulation of snow on the said bed, substantially as and for the purpose specified.

No. 17,500. Dynamo Electric Machine. (*Machine dynamo-électrique.*)

Lord Elphinstone, Musselburgh, Scotland and C. W. Vincent, Halloway, Eng., August 15th 1883; 15 years.

Claim.—1st. The manufacture of armature hanks of dynamo electric machines, by winding them upon a rotating former and moulding the same by heat and pressure in the manner and for the purpose above set forth. 2nd. In a dynamo electric machine in which the field magnets are set around and concentric with the armature, a diamagnetic drum fitted to receive hanks which extend beyond the ends of the field magnets and have their ends secured to the periphery of the drum in the manner and for the purpose above described. 3rd. The construction of rotating commutator as described with reference to Figures 9 and 10 consisting of a series of parallel bars set radially around an insulating cylinder and held in place by a flange and cap plate bearing on their ends. 4th. The means above described, with reference to Figures 11, 12 and 13, grouping the currents derived from armature coils consisting of removable grouping pieces fitted to one end of the commutator and serving to minimize the sparking and the friction put upon the commutator by the brushes or rubbers.

No. 17,501. Fifth Wheel for Vehicles. (*Rond d'avant train pour voitures.*)

William G. Lockhart and Thomas Symons, Bowmanville, Ont., August 15th, 1883; 5 years.

Claim.—1st. A fifth wheel in which the top plate is the head block is adjustable to the lower plate on the axle bed by means of ear pieces which form parts of the top plate and the drop reach irons passing through the same and simultaneously with the adjustment of the reach irons to the axle, the wheel plates are adjusted to each other as set forth. 2nd. In combination with the top plate A provided with the ear pieces A¹ A², and the lower plate B, the drop reach irons D D for taking up the slack between the plates from long use and wear, substantially as set forth. 3rd. In combination with the top plate A provided with ear pieces A¹ A², the lower plate B, king bolt C, drop reach irons D D and axle E, substantially as and operating as set forth.

No. 17,502. Store Shelving. (*Tablettes de magasin.*)

William L. Riffe, (assignee of Thomas A. Harris), Calisburg, Texas, U. S., August 15th, 1883; 5 years.

Claim.—The combination, with the herein described store shelving, of a covering Q of sheet metal, substantially as herein shown and described and for the purpose set forth.

No. 17,503. Apparatus for Sulphurizing and Phosphorizing Friction Matches. (*Appareil à soufrier et phosphoriser les allumettes chimiques.*)

Ezra B. Eddy (assignee of George H. Millen, Joseph H. Mantion, and Felix Labelle), Hull, Que., and Thomas A. Cook, Ottawa, Ont., August 15th, 1883; 5 years.

Claim.—1st. In a machine or apparatus for sulphurizing and phosphorizing match-splints, the combination of an endless apron or chain 6 having transverse channels to pinch the splints, hopper 14 to feed the splints to the apron or chain, furnace 22 having chambers 24 to dry the ends of the splints and pans 23 to contain the sulphur, arms 26 to cant the apron to depress the ends of the splints into the sulphur, blast pipes 27 to cool the sulphurized ends of the splints, pan 29 to contain the phosphor, flanged cylinder 30 and rollers 39 to transfer the phosphorous to the ends of the splints, blast pipes 27 to cool the phosphorized ends and a saw 43 to cut the splints transversely at the middle, the whole operating continuously, as set forth. 2nd. In a match machine, an endless apron 6 composed of a metal band having threaded thereon blocks uniformly notched in their tops to adapt the same to receive and hold the splints, substantially as and for the purpose set forth. 3rd. The flexible apron or chain 6 composed of pointed section forming channels to seize and relinquish the splints, in combination with drums 55, arms 26, hopper 14 and furnace 22 having pans 23, as and for the purpose described. 4th. The flanged roller 19 at the outlet of the hopper 14, in combination with an endless apron or chain pinching the splints as set forth for the purpose described.

No. 17,504. Hame Tug. (*Mancelle de collier.*)

Morgan E. Lasher, Champaign, Ill., U. S., August 16th, 1883; 15 years.

Claim.—1st. A hame tug consisting of a series of detachable metal links provided with end attaching devices, all constructed and adapted to operate substantially as set forth. 2nd. The combination of the detachable hinged sections or link D with the looped buckle B and the hinged plate F constructed and adapted to operate substantially in the manner and for the purpose described. 3rd. For a hame tug, a number of hinged metal links, each link having a perforation a and recess e, a pintle c and a hook r constructed and adapted to operate substantially as described. 4th. The combination, with a brace of the frame J, its hooked lug J¹, the hinged locking device G g and perforated hame tug sections D, all constructed and adapted to operate substantially in the manner and for the purpose described. 5th. The combination with a hame tug composed of detachable flexible metal sections of a hooked brace fastener and a locking device therefore, substantially in the manner and for the purpose described. 6th. The guard n on the frame J, in combination with hinged lever G locking tongue g and hooked lug J¹, substantially as described.

No. 17,505. Pontoon. (*Ponton.*)

Alfred H. Williams, Clapham Road, Eng., August 16th, 1883; 5 years.

Claim.—1st. A pontoon composed of two flanged sections or portions of like size and shaped substantially as described and as shown, whereby they will nest or pack closely in any number as described for purposes of storage and transport and one of said sections or portions provided with fastening contrivances to take over the other section or portion, whereby the sections or portions may be secured together when the pontoon is set or built up as set forth. 2nd. The combination to form a pontoon of the section A provided with a flange a and section A¹ provided with a flange a¹, a packing b retained in place by the reflexed edge of the flange and fastening contrivances c, substantially as set forth. 3rd. A pontoon constructed of two flanged sections or portions A and A¹ provided with a suitable packing between the flanges and with fastening contrivances c and handles d, substantially as set forth. 4th. The construction of pontoon, as described and shown in Fig. 8, having a flat lid or cover and fastening contrivances for securing the same in place as set forth. 5th. The construction of pontoons in the manner substantially as herein described under the third system or arrangement and for the purposes set forth.

No. 17,506. Cant Hook. (*Renard.*)

Bowden S. McLean, Ottawa, Ont., August 16th, 1883; 5 years.

Claim.—The combination with the pole A, of the slotted lug D having a notched bearing H at one end, and a hook F fulcrumed therein by bolt G, said hook rounded and notched to form a shoulder I, as and for the purpose set forth.

No. 17,507. Cuspidor. (*Crachoir.*)

Jean A. Mathieu, Detroit, Mich., U. S., August 16th, 1883; 5 years.

Claim.—1st. A cuspidor having over its top a grating or netting adapted to partially conceal its contents, substantially as shown and described. 2nd. A cuspidor in whose mouth is suspended a receptacle for an absorbent or disinfectant, substantially as herein shown and described. 3rd. The combination of the cuspidor A, grating B having bars b b and cup F suspended from grating B, substantially as shown and described. 4th. The combination of the cuspidor A, cup F suspended in the mouth thereof, and disinfectant G, as and for the purposes set forth.

No. 17,508. Life Preserver Holder. (*Bâti à contenir les appareils de sauvetage.*)

William P. Gray, Ainsworth, W. T., U. S., August 18th, 1883; 5 years.

Claim.—The combination with gates D, beams and a number of bolts E having a horizontal projection at the upper end and passing through vertical holes in the gates D and beam B, of a spring held slide bar G having at intervals a cam projection H for each bolt, and arranged to work under the upper end bend of hook, whereby the bolts may be simultaneously lifted out of the gates, as described.