

ing table C, of the blade I operated in connection therewith. 6th. The combination, with the pug-mill, of the shaft H and the connecting bevelled gears with the bevelled gear J and spring L. 7th. In combination with the walking beams R R', the levers y y' and the cam G. 8th. The combination, with the bar W having the offset 18, of the stud 17, of the wheel U. 9th. The combination of the inclined flange 19 and the notch 20 on the bar W. 10th. The combination of the blocks X, the plungers, the piston 23 and the springs.

No. 12,464. Improvements on Electric Lamps. (*Perfectionnements aux lampes électriques.*)

John W. Swan, Newcastle upon Tyne, Eng., 8th. March, 1881; for 5 years.

Claim.—1st. Forming the carbon or carbons of an electric lamp, from cotton thread converted by the action of sulphuric acid, and carbonized by subjecting it to heat in a vessel or receptacle containing powdered carbon, or other powder which will prevent the oxidation of the material under treatment. 2nd. Constructing carbons formed from cotton thread, with thickened terminations by wrapping the ends with strips of bibulous paper, muslin, or other suitable material, and then submitting the cotton thread so treated to the action of the sulphuric acid, and afterwards carbonizing it by subjecting it to heat in a vessel or receptacle containing powdered carbon, or other powder which will prevent the oxidation of the material under treatment. 3rd. Binding the ends of the cotton thread to the conducting wires, and subjecting the same to the converting and carbonizing processes. 4th. The employment, in an electric lamp, of multiple carbons formed of curved filaments. 5th. The production of carbons for electric lamps from cotton thread, compressing the cotton thread so as to render it perfectly uniform in texture and section throughout its length. 6th. The production of carbons for electric lamps from cotton thread, flattening the cotton thread in order to obtain an increased superficial area. 7th. Constructing the carbons of compound thread as described.

No. 12,465. Improvements on Bicycles. (*Perfectionnements aux vélocipèdes.*)

Edouard C. F. Otto, London, Eng., 8th March, 1881; for 5 years.

Claim.—1st. In a bicycle or velocipede, the endless driving bands a made of thin metal and adapted to be slightly loosened and tightened for steering purposes. 2nd. The construction and arrangement of the steering gear, consisting of steering handles b, secondary handles b', bevel gears c, sectional bevel wheel c', steering rods e, screws f, tubular links g, spiral spring 7, collars 8, connecting rods 9 and lever 10. 3rd. The construction and arrangement of the crank slide bearings comprising s a d bearings 3, perforated tubes f' and hollow sockets g. 4th. The adaptation of such improvements to velocipedes in general.

No. 12,466. Improvements in Waggon. (*Perfectionnements aux voitures de roulage.*)

John O'Neil, Pakenham, Ont., 8th March, 1881; for 5 years.

Claim.—1st. The box of a convertible agricultural waggon, made in two parts B C which are pivoted or hinged to the body frame A by the pivots a b respectively, and gusset pieces c with their standards d d. 2nd. The hopper D attached to the body frame A and pivoted with the draw gate E, and the rear side h secured on place by the pins p p', and having formed in it the slots f. 3rd. The arrangement and combination with the rear side h, of the agitator bar H in which are fixed the studs e', and which is attached by the spiral springs e' to the cross bar d' of the sliding frame b'. 4th. The arrangement and combination of the hopper D, distributing roller F with its beaters v, cross-head G with its fingers q a d handle r.

No. 12,467. Improvements on Lamps. (*Perfectionnements aux lampes.*)

Frederick R. Cole, Montreal, Que., (Assignee of Charles T. Spencer, Rochester, N. Y., U. S.) 9th. March, 1881; (Extension of Patent No. 6,707.)

No. 12,468. Improvements in Brick Machines. (*Perfectionnements aux machines a briques.*)

Joseph Close, Woodstock, Ont., 9th. March, 1881; (Extension of Patent No. 886.)

No. 12,469. Improvements on Pruning Implements. (*Perfectionnements aux sécateurs.*)

John M. Bailey, Bellerica, Mass., U. S., 9th. March, 1881; for 5 years.

Claim.—1st. In a pruning implement, a pole A having a fixed chisel B on one end, in combination with the projecting spindle C and hammer D sliding thereon.

No. 12,470. Improvements on Piano-Fortes. (*Perfectionnements aux forte pianos.*)

Theodore A. Heintzman, Toronto, Ont., 9th March, 1881; for 5 years.

Claim.—1st. An iron frame provided with a continuous bridge having a longitudinal groove cut in its base, in combination with a brass plate, or bead secured to the bridge on one side of the said groove, and forming a ringing point for the strings which pass over it and the groove referred to, thence through holes in the bridge to the turning pins.

No. 12,471. Attachment for Axe and Tool Handles. (*Disposition aux manches des haches et outils.*)

George P. Morrill, Canterbury, N.H., U. S., 9th. March, 1881; for 5 years.

Claim.—1st. The collar a with shank b, screws c, nut f and a double or single wedge d for holding axes and other tools upon their handles.

No. 12,472. Improvements on Ventilating Apparatus. (*Perfectionnements aux appareils de ventilation.*)

John R. McKinnon, North Wakefield, Que., 9th. March, 1881; for 5 years.

Claim.—1st. In an apparatus for ventilating rooms and sick wards, the

combination with a chimney flue A, of eduction pipe F, with inlets G, lantern D, lamp E, induction pipe H and water chamber I provided with outlets b d, whereby the burning lamp induces the entrance of cold air a and c and creates a current to carry off the foul air, the odor of the lamp escaping into the flue.

No. 12,473. Improvements on Spring Carriages. (*Perfectionnements aux voitures à ressorts.*)

Adam Warnock, Galt, Ont., 9th March, 1881; for 5 years.

Claim.—1st. A lug B forged, or otherwise formed upon the axle A, near the collar F, in combination with a draw jack C, provided with a shank and supporting the shackle E.

No. 12,474. Sap Bucket. (*Seau pour l'eau d'érable.*)

Lucratus H. Lawrence, Granby, Que., 9th March, 1881; for 5 years.

Claim.—1st. A sap bucket having four straight or flat surface sides meeting and joining each other at right angles. 2nd. The combination of the body A with cover B, and the journals D D.

No. 12,475. Improvements on Instruments for Setting Buttons. (*Perfectionnements aux outils à poser les boutons.*)

George W. Prentice, Providence, R. I., U. S., 9th March, 1881; for 5 years.

Claim.—1st. A setting instrument composed of the jaws B C, operated by handles D E, the upper jaw B having recess F provided with slot G for the reception of the button and fastening, and the lower jaw C being provided with a die K, constituting the clinching mechanism.

No. 12,476. Improvements on Reflecting Ovens. (*Perfectionnements aux fourneaux à réflexion.*)

William A. Austin, Gloucester, Ont., 9th March, 1881; (Extension of Patent No. 12,390.)

No. 12,477. Improvements on Reflecting Ovens. (*Perfectionnements aux fourneaux à réflexion.*)

William A. Austin, Gloucester, Ont., 10th March, 1881; (Extension of Patent No. 12,390.)

No. 12,478. Improvements on the "Maxwell Reaper." (*Perfectionnements à la moissonneuse dite "de Maxwell."*)

David Maxwell, Paris, Ont., 10th March, 1881; (Extension of Patent No. 8,275.)

No. 12,479. Improvements on the "Maxwell Reaper." (*Perfectionnements à la moissonneuse dite "de Maxwell."*)

David Maxwell, Paris, Ont., 11th March, 1881; (Extension of Patent No. 8,275.)

No. 12,480. Improvements on Fences. (*Perfectionnements aux clôtures.*)

Alfred F. Allan, London, Ont., 11th March, 1881; (Extension of Patent No. 5,778.)

No. 12,481. Improvements on Car Axle Boxes. (*Perfectionnements aux boîtes des essieux des chars.*)

Charles Barrett, Somerville, Mass., U. S., 11th March, 1881; for 5 years.

Claim.—1st. In combination with a railway car journal box, and the moveable bearing plate between such journal and the top of the box, one or more adjustable stops to prevent escape of said plate. 2nd. The dust guard G with its collar f, in combination with the axle box. 3rd. In combination with a car axle box having a frame on its rear end and rods c c, which pass through said frame, a cylindrical dust excluding collar provided with lugs through which said fastening rods pass, said collar being formed in one piece and extending beyond the rear end of said frame, so as to receive the thrusts of the wheel hub. 5th. In car axle boxes, a shelf or other obstruction erected upon the floor of the oil well or cellar outside of the journal, to prevent the crowding forward of oiled waste in said cellar. 6th. The ring plate or dust guard, in combination with the journal box or housing, and encircling the journal, being of sufficient size to cover at all times the space between the elliptical opening in the said box, and when confined to such box by suitable guides which permit it, the ring, to slide vertically upon the box. 7th. The collar e tightly enclosing the axle journal and disposed against the wheel hub. 8th. In combination with a railway car axle box, the ears g, as extending sideways from the top of the guiding ribs, in order to adapt the top surface of the box to the support of those springs. 9th. One or more loose washers b b.

No. 12,482. Improvements on Harvesters. (*Perfectionnements aux moissonneuses.*)

Joshua L. Abell, Chicago, Ill., U. S., 11th March, 1881; for 5 years.

Claim.—1st. In combination with loop B, having set screw E, and with studs D D' and section F, the box G and follower A, forming a compressing mechanism to transmit the elasticity of the rubber, or equivalent spring, to all of the journal surfaces of the link. 2nd. In combination with the sickle bar and with the finger bar, the rub iron L, provided with the bearing point o, arranged to receive the rear edge of the sickle bar at the end of its sweep, each way. 3rd. The rub iron L having an arched connection with its bearings.