No. 11,761. Improvements in Car-Couplings.

(*Perfectionnements aux attelages des chars.*)

Charles E. Larocque, St. Jérome, and Auguste Laberge, jr., Montreal, Que., 15th September, 1880; for 5 years.

Claim.—1st. The link rest C for supporting the coupling link B. 2nd. The arrangement and combination of the draw head A and link B with the link rest C and fixed rest D.

No. 11,762. Improvements on Sulky Cultivators. (*Perfectionnements aux cultivateurs a siège.*)

William Nunn, Nixon, Ont., 15th September, 1880; for 5 years.

Claim.—1st. The cultivator frame composed of bars F F G G carrying the side standards, with teeth, and the axial bar or roller P carrying the front standard, with tooth journalled to the bars G. 2nd. The cultivator frame composed of longitudinal bars F G, bar P and bars N, suspended by drop bars *c* from bars H crossing the tongue C, whereby said bars F G have horizontal and lateral adjustability. 3rd. The combination with the vehicle frame having a draft tongue carrying transverse bars H, of the lifting chains I I gripping segments J J, shaft K, bearings L L and lever M mounted on the axle A.

No. 11,763. Improvements in Spring Tooth Harrows. (*Perfectionnements aux herses à dents à ressort.*)

Henry A. Kiltz, Kalamazoo, Mich., U.S., 15th September, 1880; for 5 years.

Claim.—1st. A spring harrow tooth having a straight portion D extending from its point of attachment to the tooth bar or frame and curved portion B. 2nd. A spring harrow tooth having a straight portion D, curved portion B and curved shank F, in combination with a tooth bar having a concave mortise, in its upper side, to receive the shank of the tooth and clip *c*. 3rd. A sectional harrow frame bearing spring teeth extending above the tooth beams, in combination with a boltless and keyless hinge constructed with a perpendicular oblong eye, and an open link with its oblique angled free end.

No. 11,764. Improvements on Pumps. (*Perfectionnements aux pompes.*)

John Hoover and Isaac N. Van Sickle, Crawfordsville, Ind., U. S., 15th September, 1880; for 5 years.

Claim.—1st. A falling drop or weight operating by concussion upon the upper end of the piston. 2nd. The combination of the piston B, drop or weight C, having guides *h*, rod *b*, eye *d* and guide rods I.

No. 11,765. Improvements on Scythe Fastenings. (*Perfectionnements aux manches des faulx.*)

George W. Pressey, Hammontown, N.J., U.S., 15th September, 1880; for 5 years.

Claim.—1st. The blade A having a segment or segmental termination A^1, one or both curved edges thereof being notched as at *b*. 2nd. The blade A having a segmental termination A^1 bevelled at *a*. 3rd. The handle provided with engaging lugs D D^1, and a tightening bolt E adapted for operation with the segmental end A^1 of the blade. 4th. The blade A with notched segment, or segmental termination A^1, in combination with lugs D D^1 and tightening bolt E. 5th. The face plate C with lug E^1, and the bolt E with head *a*, in combination with the blade A. 6th. The blade in combination with the face plate C having a ring or band C^1.

No. 11,766. Improvements on Electric Lamps. (*Perfectionnements aux lampes électriques.*)

Antoine H. J. M. Durrieu, (Assignee of Jules C. Jamin), Paris, France, 15th September, 1880; for 10 years.

Claim.—1st. An electric lamp having its carbons in proximity to an electric directing circuit so arranged as to attract the voltaic arc to the points of the carbons, such directing circuit being also made to effect the separation of the carbon points after kindling. 2nd. The method of effecting separation of the carbon points, after kindling, by means of an armature attracted to an iron sheathing of the directing coil which is rendered magnetic by the passage of the current. 3rd. The method of effecting separation of the carbons, when they are nearly consumed, by pressing one of them against a stud near its root, so that when it is no longer supported by the stud, it is pushed away from the other carbon. 4th. The arrangement of several pairs of carbons in one lamp, so that they are successively kindled and consumed. 5th. The arrangement for maintaining the general circuit, when the circuit is interrupted through any one of the lamps connected to the general circuit.

No. 11,767. Improvements on Can Filling Apparatus. (*Perfectionnements aux appareils à emplir les bidons.*)

John West, Westport, Oregon, and Robert D. Hume, San Francisco, Cal., U.S., 15th September, 1880; for 5 years.

Claim—1st. In a mechanical apparatus for filling cans, the carrying belt A moving over drums A^1 and actuated intermittently by the crank arm B, lever C and ratchet *b* with its pawl, whereby the material is delivered into the vertical directing chute. 2nd The horizontal belt A with its drums A^1, ratchet wheel *b* and pawls, in combination with the crank arm B, rotating lever C, said crank and lever being slotted and united by the adjustable bolt b^1, whereby the rotation of the ratchet and the movement of the belt may be increased or diminished. 3rd. In combination with the vertical chute G, the combined gate and presser f^1 with its lever *f*, and outwardly moving slide F^1 actuating disk E, arms D d^1 and the pitman F, whereby the gate is opened and closed, and caused to reciprocate to force the material downward. 4th. The vertically moving slide F^1 and the horizontally moving gate and presser f^1, in combination with the triple arms lever *f* pivoted to the slide F^1 and provided with the actuating pitman F, whereby the vertical movement of the slide and horizontal movement of the gate are performed by one operation, so that the material to be forced downward is separated from that above by each movement of the slide and gate. 5th. The forming and compressing case consisting of the semi-cylindrical plate *h h* rotating about a longitudinal axis and provided with an operating mechanism, whereby their upper edges are separated to receive the material from the chute, and closed after the can is filled. 6th. The forming and impressing case consisting of the semi-cylindrical plates *h h* adapted to be rotated upon each other about a horizontal axis, each plate having a seam in the upper edge to receive the material from the chute, when separated, and to act as a cutting knife and shaper, while closing. 7th. The cylindrical shaping and cutting knives *h h* adapted to receive material from the vertical chute G, said knives acting as a former to cut and mould a quantity of material sufficient to fill the can, and as a gate to separate this amount from that remaining in the chute. 8th. The cylindrical former consisting of the two movable sides *h h* with their flat toothed disks J, in combination with the rack bars I adapted to rotate the disks and plates in opposite directions alternately. 9th. The forming case consisting of the semi-cylindrical cutting plates *h h* with their actuating disks J and rack bars I having slotted links *q*, in combination with the lever P with its lugs *p* and the crank arm or cam O O, whereby the rack bars and disks are moved, and the sides of the cylinder are alternately opened and closed. 10 h. The case formed of the semi-cylindrical rotating and cutting knives *h h* with their operating disks J, said disks turning on a sleeve, whereby the plunger M is allowed to reciprocate through the case. 11th. In combination with the receiving and forming case consisting of the semi-cylindrical rotating cutters *h h*, adapted to be opened to receive the charge, and closed when full, and the reciprocating plunger M, the stationary extension L fitted to receive the can *l* and act as a guide, so that the material is deposited in the can and the latter removed when full, all at one operation. 12th. In a can filling apparatus, the can holding tubular extension adapted to fit within the can, so that the material, when forced through the extension, will be first deposited in the bottom of the can, and the air expelled as the can is filled.

No. 11,768. Improvements on Tailors' Measures. (*Perfectionnements aux mésures des tailleurs.*)

Robert G. McLellan, Guelph, Ont., 15th September, 1880; for 5 years.

Claim.—The plumb A with wire B, tape measure E with ring D and cords C F.

No. 11,769. Improvemnts on Moulds and Processes for Casting Car Wheels. (*Perfectionnements aux moules et procédés de coulage des roues des chars.*)

Zadoc S. Washburn, Chelsea, and Lucius W. Washburn, Boston, Mass., U.S., 15th September, 1880; for 5 years.

Claim.—1st. The mould for casting the tires of car wheels consisting of the bottom *b*, outer ring *c* and top or cope *e*, in combination with the removable centre ring *d* adapted to be forced out after the operation of casting is completed. 2nd The process of making a car wheel, consisting in, first, casting a tire in a mould A constructed as described and provided with a removable centre ring *d*, to allow of the transfer of the tire to a second mould before having time to cool below a welding heat, and then casting the centre or body of the wheel within the tire while the latter is at a welding heat in a second mould.

No. 11,770. Improvements on Water Supply Systems. (*Perfectionnements aux systèmes d'approvisionnement d'eau.*)

Nelson W. Green, New York, U.S., 15th September, 1880; for 5 years.

Claim.—1st. The combination of one or more series of driven wells penetrating into the water bearing stratum of the earth, a common suction pipe connecting said wells, a force pump or pumps having its or their induction part or parts connected with said suction pipe, and one or more water-mains connected with the eduction of said pump or pumps, whereby said mains and their connections are supplied with a copious supply of water under regulated pressure. 2nd. The combination of one or more series of driven wells penetrating into the water bearings stratum of the earth, a common suction pipe connecting said wells, one or more force pumps connected with said suction pipe, and one or more water mains connected with the eduction of said pump or pumps, whereby the general subterranean water deposit of the earth is caused to flow to said wells, thereby rendering them a substitute for a reservoir and local impurities of the water are eradicated. 3rd. The combination of one or more series of driven wells penetrating into the water bearing stratum of the earth, a common suction pipe connecting said wells, a force pump or pumps having its or their induction port or ports connected with said suction pipe, and one or more water mains provided with an automatic waste valve and connected with the eduction of said pump or pumps, whereby said mains and their connections are supplied with a copious supply of water under regulated pressure.

No. 11,771. Improvements on Tool Ferrules. (*Perfectionnements aux viroles d'outils.*)

John McMurchy, Gananoque, Ont., 15th September, 1880; for 5 years.

Claim.—Two ears of an oval form as designated on the drawing, figure 1 A B C and on figure 2 A *b*, section through A *b*, and on figure 3 C D section through C *d* protruding on the wooden handle of the implement fixed by being pressed on the said handle without the use of rivets.

No. 11,772. Saw Mill Dog. (*Clameau de scierie.*)

John M. Stowell, (Assignee of Albert Cunningham,) Milwaukee, Wis., U. S., 17th September, 1880; (Extension of Patent No. 5,184.)

No. 11,773. Improvements in Padlocks. (*Perfectionnements aux cadenas.*)

William R. McDonald, Willis E. McAllister, Calais, and Prentiss, Loring, Portland, M., U. S., 17th September, 1880; for 5 years.

Claim.—1st. The combination with the separable ends of the arms of a sleeve encompassing and sliding upon one, and adapted to enclose the other,