

**No. 18,819. Electric Lamp. (*Lampe Electrique.*)**

Elihu Thompson, Lynn, Mass., U. S., 8th March, 1884; 5 years.

*Claim.*—1st. The combination, with two carbons or carbon-carriers, of mechanism for locking or holding one of said carriers from movement, and a device connected to, or moving with the other carrier, and arranged to cause either directly or indirectly the release of said mechanism, so as to allow the first named carrier to feed when the carbon of the other is consumed. 2nd. The combination, with two sets of carbons or carbon-carriers, of mechanism for holding one of said carbons or carriers in lifting position, and a stud projection or its equivalent connected to, or moving with the other carrier and arranged in the manner described, when the carbon is nearly consumed, to directly or indirectly cause the release of the first-named carrier. 3rd. The combination, with two carbon-carriers, of separate feed clamps or clutches, mechanism for holding the feed-clamp for one carrier in position where it will prevent said carrier from feeding, and a releasing-lug projection or other suitable device connected to, or moving with the other carrier. 4th. The combination, with two carbon-carriers, of feed-controlling mechanisms for said carriers, a feed-shifting lever arranged to act in turn upon the feed-controlling mechanisms, and means for causing the operation of said lever when one of said carriers has completed its feed movement. 5th. In an electric lamp having two sets of carbons, the combination, with two clamps or clutches, one for each upper carbon, of a transfer-lever L and a button or projection upon the first acting carbon-holder operating directly or indirectly to cause said lever to shift. 6th. In a double electric-arc lamp, the combination of a pivoted lever, clamps or clutches supported at opposite ends thereof, so that they may be raised or lowered in turn thereby, and a support for said lever connected to, or operated by a lamp magnet. 7th. The combination, with two carbon rods or carriers, of clamps or clutches, one for each carrier, a lever connected to both clutches and supported at its middle portion by the operating devices of the lamp, and a transfer-lever and detent therefor. 8th. The combination, with a double system of lifting and feeding devices, of a spring-actuated transfer-lever L, detent *d*, carbon-carrier R and button B. 9th. The combination, with two sets of feed-controlling devices, of a spring-actuated transfer-lever, a detent or catch for the same, and actuated rod or bar connected to the lever for setting the same. 10th. The combination, with the clutches for two independent carbons, of a pivoted lever adapted to act on the clutches and cause them to engage with, or disengage from the carbons, and means for shifting said lever, as and for the purpose described. 11th. The combination of the lever A supported from the armature-lever, the clutches mounted in opposite ends thereof, and the lever L arranged to lift one or the other of the clutches, according to its position. 12th. The combination, with two carbon carriers, of separate feed clamps or clutches connected to a common pivoted support, a feed-controlling magnet operating the latter, and mechanism for operating the common support, so as to cause one or the other of the clamps to be put into operative condition controlled by the descent of a carbon-carrier.

**No. 18,820. Turbine Water Wheel. (*Turbine Hydraulique.*)**

Henry R. Austin, Norwood, N. Y., U. S., 8th March, 1884; 5 years.

*Claim.*—1st. A turbine water wheel having elevated conical hub F provided with spiral grooves G, buckets B and the removable block D, substantially as and for the purpose hereinbefore set forth. 2nd. In combination with the turbine water wheel A having buckets B and conical hub F, the removable block D, substantially as and for the purpose hereinbefore set forth.

**No. 18,821. Car-Coupling. (*Accouplage de Wagons.*)**

Charles E. Mark, Flint, Mich., U. S., 8th March, 1884; 15 years.

*Claim.*—1st. A car-coupling device wherein the draw-bar is enclosed within a box, the two parts being pivotally secured together and the box adapted to perform the functions of a buffer, substantially as and for the purposes described. 2nd. In a car-coupling device and in combination, with a draw-bar enclosed therein and pivoted thereto, a buffer box supported upon a fulcrum plate and provided with a spring by means of which the vertical working movement of said buffer is limited, substantially as set forth. 3rd. In a car coupling device, the combination of the hooked draw-bar A enclosed with the buffer box D and pivotally secured thereto, spring K, follower L and resistance plate M, the parts being constructed, arranged and operating, substantially as and for the purposes described.

**No. 18,822. Car Stove. (*Poêle de Wagon.*)**

Kinsey Fife and James N. Pickenpaugh, Morgantown, W. V., U. S., 8th March, 1884; 5 years.

*Claim.*—1st. The combination, with the valve ball and the tapering thimble connected to the stove-top, of the basket and rest for the ball below the thimble, and the pivoted prop-arms adapted to engage the valve-ball when in the thimble, and prevent it escaping therefrom, substantially as specified.

**No. 18,823. Rake Attachment for Ploughs. (*Ajustage des Râbles aux Charrues.*)**

Valentine Wood, Peru, Ind., U. S., 8th March, 1884; 5 years.

*Claim.*—1st. In combination with a plow, the harrow attachment constructed, substantially as shown and described, and consisting of the rod having oblique tooth sockets or perforations, and bent slotted portion or extremity attached to the plow standard, the slotted eye-piece arranged midway upon the rod and adjustably attached to the mold-board, and the harrow-teeth adjustably secured in the oblique sockets or perforations, whereby the rod and the teeth may be elevated together, or the teeth receive independent vertical adjustment, the latter having both an outward and a backward inclination, as and for the purpose set forth. 2nd. In combination with a plow and the harrow attachment, the combination of the adjustable slotted eye-bearings, the short arm, the rod extending forward to, and connecting

with an upright lever, the series of graduated notches and the lever extending upward alongside of the plow handle, as and for the purposes set forth.

**No. 18,824. Hydro-Pneumatic Engine. (*Machine Hydro-Pneumatique.*)**

Levi G. Cook, Mapleville, R. I., U. S., 8th March, 1884; 5 years.

*Claim.*—1st. In a hydro-pneumatic engine, the combination of two or more still liquid tanks A, A<sub>1</sub>, A<sub>2</sub>, one or more motors arranged in each of said tanks for operation by air or gas under pressure, rising through said liquid, and one or more pipes I arranged to connect the upper portion of one tank with the bottom of the next succeeding tank or chamber connected therewith, whereby the air or gas collecting in the upper portion of one tank is transmitted for further utilisation within a succeeding tank, substantially as specified. 2nd. In a hydro-pneumatic engine, the combination, with one or more rotating wheels or motors arranged within a still-liquid tank for operation by air or gas under pressure, rising through said liquid, of the diverging ducts *i*, *i*, and valve *h* controlling the same, for reversing the action of the motors, when required, by conducting the air or gas to act upon the opposite sides of the axis of the motors, essentially as described. 3rd. The combination of one or more automatic deflectors *k* with the wheels or motors C, C or C<sub>1</sub>, C<sub>2</sub>, J, and the curbs D, D, substantially as and for the purpose herein set forth. 4th. In combination with the wheels or motors C, C or C<sub>1</sub>, C<sub>2</sub>, J and still-liquid tank or tanks in which said motors work, the curb or guides D, D made adjustable toward or from said motors on opposite sides of their axis, essentially as described. 5th. In a hydro-pneumatic engine, the combination, with a blower E, or other air or gas forcing means, and with a series of connected still-liquid tanks A, A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub> having motors arranged within them for operation by air or gas from the blower, as described, of the chambers G, G<sub>1</sub>, G<sub>2</sub>, G<sub>3</sub>, the supply pipes *g*, *h*, the valves *f*, *r*, and the delivery pipe L with its branches L<sub>1</sub>, L<sub>2</sub>, the connections *s* and the valves *u*, *v*, substantially as and for the purpose herein set forth. 6th. In a hydro-pneumatic engine, the combination of a circular series of connected still-liquid tanks, a series of motors within said tanks, for operation by the continuous flow of the air or gas within said tanks successively, a driving-shaft arranged to occupy a central portion relatively to said tanks, and gears connecting said central shaft with the motors in the tanks, essentially as specified.

**No. 18,825. Mechanism for Driving Dynamo-Electric Machines. (*Mécanisme pour faire fonctionner les machines Dynammo-Electriques.*)**

John R. Markle and James B. Wayne, Detroit, Mich., U. S., 8th March, 1884; 5 years.

*Claim.*—The combination, with the crank-shaft of a reciprocating steam engine, of a counter-shaft driven from the crank shaft and having thereon a fly-wheel, substantially as and for the purposes set forth.

**No. 18,826. Flour-Dressing Machine. (*Blutoir.*)**

William D. Gray, Milwaukee, Wis., U. S., 8th March, 1884; 5 years.

*Claim.*—1st. The revolving reel or cylinder, provided with the smooth cylindrical, and the toothed surfaces encircling the same, in combination with supporting pulleys provided with corresponding smooth and toothed surfaces. 2nd. A horizontal bolting reel encircled by a smooth track or flange and also by a line of gear teeth, in combination with a wheel provided with teeth engaging with teeth of the track and also with a smooth supporting surface bearing beneath the wheel, or flange of the reel, substantially as described and shown, whereby said pulley is adapted to serve the two-fold purpose of supporting and driving the reel. 3rd. In combination with the bolting reel or cylinder having the flange *a* and teeth *b*, the supporting driving pulley provided with the teeth *c*, surfaces *d* and flange *g*, as and for the purpose described. 4th. The reel having the smooth encircling pulleys or bearing *a* and adjacent teeth *b*, combined with supporting pulleys provided with corresponding smooth surfaces and teeth, the pitch lines of the gear teeth, whereby the two smooth surfaces are caused to travel at equal speeds without slip or friction upon each other. 5th. The bolting reel provided with smooth encircling tracks or flanges and gear teeth at both ends, in combination with two longitudinal shafts and two supporting and driving pulleys mounted on each shaft and a located beneath opposite ends of the reel, each pulley having a smooth supporting surface and a series of driving teeth, as described and shown, whereby a smooth positive motion is imparted to both ends of the reel. 6th. The metallic ring or hoop forming the head of the bolting cylinder, provided with the smooth flange *a*, provided in combination with the driving and supporting pulley E, in combination with a smooth surface *d* and toothed surface *e*. 7th. In combination with a bolting reel and devices, substantially such as shown, for sustaining the same and preventing its longitudinal motion, and a supporting pulley for said flange having its surface adapted, as described, to permit the adjustment of the flange thereon in the direction of the axis of the pulley. 8th. A bolting reel or cylinder having one end or head movable in the direction of its axis, for the purpose of flange or ing the bolting cloth, in combination with an encircling flange, said track thereon and smooth supporting pulleys beneath said flange, to permit the movement of the flange thereon as the head of the reel is adjusted. 9th. In combination with a horizontal bolting reel or cylinder, supporting rolls located beneath its opposite ends, the roll at one end being flanged and arranged to engage with a corresponding flange upon the reel, to prevent the longitudinal motion of the latter, and the rolls at the opposite end being made with smooth extensive surfaces adapted to permit the end of the reel to slide lengthwise thereon. 10th. In combination with the bolting reel, the supporting and driving pulleys, constructed as described, and located beneath the end of the same, the smooth supporting pulleys located beneath the opposite end of the same, and the driving shaft G extended endwise