

sion chamber B<sub>4</sub>, steam pipe B<sub>5</sub>, an air-exhaust pipe G having openings *g*, *g*, a series of suction-cones G<sub>1</sub> attached to the air-exhaust pipe, and a pipe G<sub>2</sub> surrounding the lower part of the air-exhaust pipe, substantially as specified. 13th. The combination of an ejector-body A, having a steam-induction channel B<sub>3</sub> and an expansion chamber B<sub>4</sub>, a steam pipe B<sub>5</sub> and an air-exhaust pipe G, the latter having openings *g*, *g*, suction-cones G<sub>1</sub> and a conically enlarged and contracted end portion G<sub>3</sub>, G<sub>4</sub>, substantially as described. 14th. The combination of a vacuum cylinder applied to the car-bottom, a vertically guided piston having a recessed hub and a guide roller, and a cylinder bottom having guide rollers one at each side of the guide roller of the piston, for the passage of the chain connecting the brake-levers, substantially as and for the purpose set forth. 15th. The combination of the vacuum cylinder A, a vertically-guided piston C having a guide-stem B<sub>1</sub>, a packing ring D applied to the recessed under side of the piston and guide rollers *e*, *e*, *e*, arranged in the hub of the piston, and the bottom of the cylinder and a brake chain E passing over said rollers, substantially as set forth. 16th. The combination of a vacuum cylinder A, a cylinder bottom B having slots *e*<sub>3</sub> and guide rollers *e*<sub>2</sub>, *e*<sub>2</sub>, a vertically-guided piston C having a recessed hub, a guide roller *e*, the slots of the cylinder bottom being in line with the recess of the piston hub, and a brake-chain E passing over the guide rollers *e* and *e*, *e*, *e*, substantially as and for the purpose set forth. 17th. The combination of a vacuum cylinder, a piston having a flaring circumference and a circular recess or seat, and an elastic packing ring having flanges at the inner edge that are sprung into the recess of the piston, substantially as set forth. 18th. A piston for vacuum cylinders of railway-car brakes, having a circular recess or seat and being provided with an elastic packing ring, having flanges at the inner edge that are sprung into the recess of the piston, substantially as described. 19th. The combination, with the air-ejector C and the vacuum cylinder B, both constructed as described, the hose coupling made of two parts E, E<sub>1</sub>, one being a counterpart of the other, adapted to form open communication for the air when coupled together and to automatically close the end-openings when uncoupled, substantially as specified.

### No. 22,063. Copying Machine.

(Machine à Copier.)

William F. McKay, Toronto, Ont., 13th July, 1885; 5 years.

*Claim*.—1st. A sheet of paper covered with a thin coating of gelatine or other suitable material, and fixed to a yielding surface, substantially as and for the purpose specified. 2nd. As an improved copying machine, a roller A having attached to its surface, a sheet of prepared paper C and suitably carried in a frame D, in combination with a roller E arranged to act in connection with the roller C, substantially as and for the purpose specified.

### No. 22,064. Electric Conductor for Wire Fencing. (Conducteur d'Electricité pour Clôtures en Fil de Fer.)

Charles Williamson, Washington, Ks., U.S., 13th July, 1885; 5 years.

*Claim*.—1st. The combination, with a fence wire, of a conductor, and a collecting point having a slot to receive the conductor and catches for holding the fence wire, substantially as and for the purposes specified. 2nd. An electric collecting point having laterally-projecting points, a conductor-slot for receiving a conductor, and a wire groove for receiving a fence wire, substantially as and for the purpose specified. 3rd. The combination, with a fencing wire, of a bifurcated conductor, lateral collecting points for connecting the wire with the conductor, and a grooved point having a driving-head and a socket for the reception of the conductor, substantially as and for the purpose specified. 4th. An electric conducting ground-point, having a driving-head and a socket, substantially as and for the purpose specified.

### No. 22,065. Churn. (Baratte.)

Joseph Bradley, Hamilton, Ont., 13th July, 1885; 5 years.

*Claim*.—1st. The combination of the frame A and at the shaft F and the crank H, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, with the frame A and at, shaft F, agitators F<sub>1</sub>, crank H, of the pendulum G, fulcrum D, bearing C, handle B and foot attachment B<sub>1</sub>, substantially as and for the purpose hereinbefore set forth.

### No. 22,066. Belt Fastener. (Joint de Courroie.)

Joseph Essig, Larwill, Ind., U.S., 13th July, 1885; 5 years.

*Claim*.—A belt-fastener formed of the T-slotted holders B, B<sub>1</sub>, and the H-shaped latch, said parts being relatively constructed and adopted to be used substantially as described.

### No. 22,067. Car - Coupling. (Accouplage de Chars.)

George W. Curtis, Philadelphia, and John Wood, jr., Conshohocken, Penn., U.S., 13th July, 1885; 5 years.

*Claim*.—1st. In a car-coupling, the combination, with a slotted draw-head provided with a stop for the coupling hook, of a spring buffer, a coupling hook provided with an elongated shank or stop arm adapted to abut against the stop, and a chain and crank connection, the arrangement being such that when the crank is thrown back the chain is held taut and the coupling hook sustained in such a position that automatic coupling is impossible, substantially as described. 2nd. In a car-coupling, the combination, with a draw-head having an upper slot and a lower stop for the coupling hook, of a spring buffer and a pivoted coupling hook entered within the upper slot of the draw-head and is adapted to abut against the stop, which plays within said draw-head and is adapted to abut against the stop, substantially as described. 3rd. In a car-coupling, the combination, with a draw-head having an upper slot, a lower slot and a coupling stop, of a spring buffer, a pivoted hook entered within the upper slot

of the draw-head and provided with an elongated shank playing within said lower slot, and adapted to abut against the stop, and a chain and crank connection, the arrangement being such that when the crank is thrown back the chain is held taut and the coupling hook sustained in such position that automatic coupling is impossible, substantially as described. 4th. The draw-head A having a hollow throat or interior A<sub>1</sub>, and provided with pivot slots *a*<sup>x</sup>, *a*<sup>x</sup> extending forward to its mouth, substantially as and for the purposes set forth. 5th. The draw-head A having a hollow throat or interior A<sub>1</sub> and upper slot *a* and pivot slots *a*<sup>x</sup>, *a*<sup>x</sup> extending forward to its mouth, in combination with a coupling hook B provided with lateral pivot pins *b*, *b* adapted to the pivot slots, and with a spring buffer D provided with ears *d*<sup>x</sup>, *d*<sup>x</sup> also adapted to the pivot slots, substantially as and for the purposes set forth. 6th. The draw-head A having a hollow throat or interior A<sub>1</sub>, provided with pivot slots *a*<sup>x</sup>, *a*<sup>x</sup>, an upper slot *a*, and notches *a*<sub>5</sub>, *a*<sub>5</sub>, substantially as shown and described and for the purposes specified. 7th. The draw-head A having a hollow throat or interior A<sub>1</sub>, provided with pivot slots *a*<sup>x</sup>, *a*<sup>x</sup>, an upper slot *a*, and notches *a*<sub>5</sub>, *a*<sub>5</sub>, in combination with the coupling hook B, provided with pivot pins *b*, *b*, and with spring buffer D, substantially as described and for the purposes specified. 8th. In combination, the draw-head, the coupling hook, the chain, the crank, and the car provided with bearing for the crank and with the inclined channel for the chain, substantially as and for the purposes set forth. 9th. As an article of manufacture, a draw-head, having the upper slot *a*, the lower slot *a*<sub>1</sub>, the pivot slots *a*<sup>x</sup>, *a*<sup>x</sup>, ten pivot notches *a*<sub>5</sub>, *a*<sub>5</sub>, and the stop *a*<sub>2</sub>, substantially as described.

### No. 22,068. Shirt Lace. (Lacet de Chemise.)

William F. Gallt, Port Byron, N.Y., U.S., 13th July, 1885; 5 years.

*Claim*.—As a new article of manufacture, a lacing for shirts, made from cord, consisting of the opposite loops *b*, *b* and connecting lengths *d*, *d*, extending from one pair of loops to the next, as herein shown and described.

### No. 22,069. Steam and Water Locomotive Ash Pan Cleaner. (Cure-Cendrier à Vapeur et Eau de Locomotive.)

Adolphus Davis, Montreal, Que., 13th July, 1885; 5 years.

*Claim*.—1st. In a locomotive ash pan cleaner, the door M, having the trap F, both made to be operated from the cab of the engine, for the purpose hereinbefore set forth. 2nd. In a locomotive ash pan, the water and steam pipe D, provided with the cock K, as shown and described, for the purpose hereinbefore set forth. 3rd. In combination with perforated water and steam pipes in rear of a locomotive ash pan, of the door M, and trap F, as shown and described for the purpose hereinbefore set forth.

### No. 22,070. Refrigerator. (Glacière.)

Charles Cavanagh, Cleveland, Ohio, U.S., 14th July, 1885; 5 years.

*Claim*.—In a refrigerating apparatus, the removable frame N, constructed to have an air space around it when placed in the case A, having a series of inclined ridges to support ice, and covered with caps K, and the intermediate gutters, all supported on the joists G, having on them the piers H, covered with hoods L provided with channels *c*, *c*, whereby the water from the melted ice and condensed moisture will all be conducted to the side channels and waste pipe, constructed so as to retain any desired quantity of water, all constructed substantially as and for the purpose described.

### No. 22,071. Flat Roof for Buildings. (Comble Plat pour Bâtisses.)

Howard Williams, Toronto, Ont., 14th July, 1885; 5 years.

*Claim*.—1st. The combination of slate, laid in cement spread on boards, forming a flat surface, as a roof covering for buildings, as set forth. 2nd. The combination of slate laid on boards, with one or more plies of tarred, or other roofing paper, between the board and the slates, as a covering for buildings with flat surfaces, as set forth. 3rd. The combination of slate laid in cement, spread on one or more plies of felt also embedded in a cement, composed of the ingredients specified and for the purposes set forth.

### No. 22,072. Electric Telephone. (Téléphone Electrique.)

Charles E. Allen, Adams, Mass., U.S., 14th July, 1885; 5 years.

*Claim*.—1st. The combination, with the diaphragm and a body or mass of conducting material in a loose pulverized or granulated state, of a connecting piece touching the diaphragm and the mass or body, and a spring to cause the connecting piece to promptly follow the diaphragm and release its pressure upon the mass. 2nd. The combination, with the diaphragm connecting or contact piece and retracting spring provided with an adjusting screw, of the mass or body of conducting material in a loose pulverized or granulated state. 3rd. The combination, with the mass of pulverized or granulated conducting material, vibrating platinum plate provided with a post for connection with the diaphragm, and a spring for throwing the platinum plate away from the mass, said post and spring being provided with a platinum covered portions where they touch each other to aid in varying the working strength of the current, as set forth. 4th. The combination, with the diaphragm contact piece and retracting spring, of the mass of pulverized or granulated conducting material, the adjusting plug C<sub>2</sub> C<sub>1</sub> provided with the platinum top and the threaded metal sleeve D, as set forth. 5th. A case for transmitters, consisting of the body A having the longitudinal central opening, with the screw-threaded sleeve D extending beyond the end of the body, and the cap A<sub>1</sub> for screwing upon the sleeve and covering the parts, in combination with the diaphragm and electrodes, as set forth. 6th. The combination, with the diaphragm, of a transmitter of metallic electrode contact pieces, making electrical contact with