

verse open slots N, to receive and retain the inner ends of the links and vertical open slots P, for the pins R, to enable said pins to retain said inner ends of the links in the holders, said slots N being of greater depth than the said slots P, and the pair of coupling links I, substantially as described. 2nd. In a car coupling, the combination, with the draw head and coupling pin of the longitudinally movable bar W, the vertically movable lever arm C', the chain connecting the latter to the coupling pin, the hand lever I' connected to the bar W, and the chains connecting the lever arm C' to said bar at opposite ends of the latter, and at points above and below the lever arm C', substantially as described. 3rd. In a car coupling, the combination, with the draw head and coupling pin, of the lever arm C', the chain connecting the same to the pin, the longitudinally movable rod W having the arms A', B', extending from its lower and upper sides, the chains connecting the lower arm C' to the extremities of said arms A', B', and the guides for said chains, substantially as described.

### No. 34,048. Electric Heating and Cooking Device. (*Appareil de chauffage et de cuisine à l'électricité.*)

The Butterfield and Mitchell Electric Heating and Cooking Company, (assignee of Henry R. Butterfield,) Waterville, Me., U. S., 5th April, 1890; 5 years.

**Claim.**—1st. An electric cooking or heating device, consisting of a coiled wire enclosed in insulating material arranged externally and internally, said wire being in an electric circuit, substantially as set forth. 2nd. In an electric heater and exterior layer of insulating material an interior layer of insulating material concentric therewith, and an interposed coil of wire the ends of said insulating material layers being connected by strips or rings, and the wire forming part of an electric circuit, substantially as set forth. 3rd. An electric cooking or heating device consisting of a wire protected by insulating material and in circuit with a generator of electricity for the purpose set forth. 4th. An electric cooking and heating device consisting of a wire forming part of an electric circuit and enclosed between insulating walls as shown the walls and wire considered as a whole having the shape of a hollow cylinder or equivalent hollow figure and operating substantially as set forth.

### No. 34,049. Sash Balance. (*Contrepoids de croisée.*)

James McArthur and Charles J. Wichmann, Rochester, N. Y., U. S., 5th April, 1890; 5 years.

**Claim.**—1st. In a sash balance, the combination of a face plate A, with the spring drum C holding the cable D, and a swinging guide pulley E over which the cable passes, substantially as described. 2nd. In a sash balance, the combination of a face plate A, with spring drum C holding the cable D, a swinging guide pulley E, over which the cable passes, and a brake H, operating on the guide pulley, substantially as described. 3rd. In a sash balance, the combination of a face plate A, with spring drum C holding the cable D, a swinging guide pulley E over which the cable passes, a brake H operating on the guide pulley E, and a guard G to protect the cable, substantially as described. 4th. In a sash balance, the combination of a face plate A, with spring drum C holding cable D, a swinging guide pulley E over which the cable passes, and an adjustable brake H operating on the guide pulley, with an adjusting screw g bearing on the prolongation f of the brake strap, substantially as described. 5th. In a sash balance, the combination of a face plate A, the spring drum C holding the cable D, and guide pulley E over which the cable passes, together with a frame holding said guide pulley and swinging in a plane at right angles to the face plate, substantially as described. 6th. In a sash balance, the combination of a spring drum holding the cable, a guide pulley over which the cable passes, a brake operating upon said guide pulley and an adjusting screw for increasing or diminishing the pressure of said brake, substantially as described. 7th. In a sash balance, the combination of a face plate A, a grooved spring drum C, to which the cable D is attached, and having said cable run in the grooves of said drum with a guide pulley E, over which said cable passes, and a brake operating upon said guide pulley, substantially as described.

### No. 34,050. Hand Car. (*Char à bras.*)

Ira E. Stump, Richville, and Calvin S. Pierce, Cleveland, Ohio, U. S., 5th April, 1890; 5 years.

**Claim.**—In a hand car, and in combination with one of the axles thereof, the spur wheel G, crown wheel F, having the flange a, the connecting rod J, cross head I, link M, and actuating lever L, the parts being arranged and operating in the manner, and for the purposes set forth.

### No. 34,051. Pocket Lamp. (*Lampe de poche.*)

The Magic Introduction Company, (assignee of Elias B. Koopman,) New York, N. Y., U. S., 5th April, 1890; 5 years.

**Claim.**—1st. In a lighting device, a light producing apparatus, combined with an automatically revolvable carrier, and a removable disk provided with drops or bits of explosive material and applied to said carrier, and a scratcher against which the explosive material is forced and by which it is ignited as the carrier is revolved, substantially as described. 2nd. In a lighting device, a light producing apparatus, combined with a rotary carrier provided with teeth, a disk of ignitable pellets applied thereto, a spring pawl to engage said pellets, and a scratcher, substantially as described. 3rd. In a lighting device, a light producing apparatus, a case containing it, and a pawl arranged in and fastened to said case, and having one end formed as a pawl and provided with a button to move it, combined with a rotary fulminate carrier arranged in said case, and constructed with ratchet teeth adapted to be engaged by said pawl, a disk of ignitable pellets applied to said carrier, and a scratcher, substantially as described. 4th. In a lighting device, a light producing appar-

atus, a case containing it, and a spring arranged in and fastened to said case, and having one end formed as a pawl and provided with a button to move it, combined with a rotary fulminate carrier arranged in said case and constructed with ratchet teeth adapted to be engaged by said pawl, a disk of ignitable pellets applied to said carrier, a projection from the spring to dog said carrier by engagement with its teeth, and a scratcher, substantially as described. 5th. In a lighting device, the lamp proper, a case containing it, a cover hinged to said case, a rotary fulminate carrier provided with ratchet teeth, a disk of ignitable pellets applied to said carrier, and a scratcher, combined with a spring having one end formed as a pawl to engage the ratchet teeth of the carrier to rotate it, and also constructed with a detent for the carrier, and also having its other end in engagement with the cover to throw it open as the pawl is actuated to rotate the carrier, substantially as described. 6th. A lighting device composed of a case, a hinged side containing the lamp proper, and a scratcher thereon, a rotary toothed fulminate carrier, a fulminate disk applied to said carrier, a cover for the case, and a spring comprising a pawl and a detent for the carrier, and a cover opener, substantially as described. 7th. In a lighting device, a light producing apparatus, combined with a carrier adapted to receive a removable disk of ignitable pellets and provided with a ratchet, a pawl to engage the said ratchet to move it and the carrier tooth by tooth, a detent for the ratchet, and a scratcher against which the ignitable pellets are forced and by which they are ignited as the carrier is revolved, substantially as described.

### No. 34,052. Adjustable Chair and Lounge.

(*Fauteuil et causeuse brisés.*)

Clarence E. Allen, Swanton, Vt., U. S., (Co-inventor with Ira D. Hatch, Maxville, Ont.) 5th April, 1890; 5 years.

**Claim.**—1st. In a folding chair, the combination, with the notched and inclined sills, of the hinged jointed back supports E, I, having the extensions Z, and the hinged back D, front legs F and braces K, substantially as specified. 2nd. The combination, with the notched and inclined sills, the hinged back and the hinged jointed back supports, and the pins W and the canvas H, of the foot rest provided with the folding legs, the notched metal plates A and the thumb nuts T, substantially as specified.

### No. 34,053. Water Wheel. (*Roue hydraulique.*)

Adolphe Patrick, St. Jean, and Michel T. Lefebvre, Montréal, Qué., 5th April, 1890; 5 years.

**Résumé.**—1o. La combinaison, dans un coffre de turbine, des conduits fixes c', c', et du régulateur circulaire B, avec la crémaillère A, l'engrénage q' et la tige C, tels que décrits et pour les fins indiquées. 2o. La combinaison, dans une roue hydraulique genre turbine, des aubes l', l', recourbées en forme d'un quart d'ellipse et disposées autour de la roue G de chaque côté de la languette k, tel que décrit et pour les fins indiquées. 3o. La combinaison, avec le coffre de turbine A, du couvercle L muni du tuyau d'échappement M, tel que décrit et pour les fins indiquées.

### No. 34,054. Drilling Machine.

(*Machine à percer.*)

Samuel J. Moore, Hamilton, Ont., 5th April, 1890; 5 years.

**Claim.**—In a drilling machine, the combination of the bed A, formed with heads B, C, spindle D, hub J, handle K, d, face plate F, pressure screw H, wheel G or handle attachment, clamp bracket L and clamping screw N, all arranged and constructed substantially as and for the purpose specified.

### No. 34,055. Elevator Lo

(*Arrêtée monte-charge.*)

George R. Holden, St. Thomas, Ont., 5th April, 1890; 5 years.

**Claim.**—The combination of the sliding jaws F, F, and the swinging arms E, E, substantially as and for the purpose hereinbefore set forth.

### No. 34,056. Pine Fibre as a New Article of Manufacture. (*Fibre de pin.*)

William Latimer, Wilmington, N. C., U. S., 5th April, 1890; 5 years.

**Claim.**—As a new manufacture, the herein described product, termed by me pine fibre, composed of lone pine twisted filaments, having serrated or rough edge or surfaces interwoven and clasping each other, dry and practically devoid of moisture, and sufficiently strong, soft and pliable to withstand the unavoidable and necessary strain incident to its manipulation in spinning and weaving, as hereinbefore set forth.

### No. 34,057. Vapor Burner. (*Foyer à gaz.*)

Lewis S. Calder, Terre Haute, Ind., U. S., 5th April, 1890; 5 years.

**Claim.**—1st. In a vapor burner, the combination, with the conical mixing chamber having the air flue and guide and provided with air inlets, of the superheater having a depending tube entering the guide, and the perforated hood or spreader having the supporting legs, said mixing chamber being provided in its top with the oval-shaped opening, substantially as described. 2nd. In a vapor-burner, the conical mixing chamber having a series of air inlets and formed with the guide and air-flue, the same having also in its top a double or approximately oval-shaped opening, substantially as described. 3rd. In a vapor burner, the combination, with the conical mixing chamber, having the air-flue and guide and provided with air inlets, of the superheater having a depending tube entering the guide, the perforated hood or spreader having the supporting legs, and the rod entering the mixing chamber, substantially as and for the purpose described.