

No. 26,889. Strength Testing Machine.*(Machine à éprouver la force.)*

Horace Fairbanks and William P. Fairbanks, St Johnsbury, Vt., (assignees of Edwin R. Whitney, Manchester, N. H.), U. S., 6th June, 1887; 5 years.

Claim.—1st. In a therapeutic strength-testing machine, the combination of the following elements: a resisting pull, a battery, an induction coil, one part of which is movable with the pull and connections of secondary coil to handle by which a continuous pull in one direction will cause a constantly increasing induced current to be sent to operator, and the cessation of such pull will diminish and cut off such current. 2nd. In a therapeutic strength testing machine, the combination of a resisting pull, secondary coil connected to same and raised by it primary coil over which secondary coil is drawn, and electrical connections of secondary coil with handle of pull, as and for the purposes set forth. 3rd. The combination of a strength testing machine, induction coil, automatic coin-catching device (arranged to unlock the apparatus so that it can be operated upon when the coin is introduced and indicator showing pounds lifted, and units of electric energy developed, substantially as set forth.

No. 26,890. Neck Yoke. *(Volée d'avant.)*

Hezekiah Latshaw and Henry J. Stiefelmeyer, New Hamburg, Ont., 6th June, 1887; 5 years.

Claim.—1st. The combination, with the pole A having guard G and neck yoke B, of the straps D connecting curved link plate E and hook F, whereby the neck yoke will sway without rising, as set forth. 2nd. The combination, with the neck yoke B, of the socket tip H having a loop I and hook J and a spring K, as set forth.

No. 26,891. Steam Engine. *(Machine à Vapeur.)*

Oliver H. Castle, George W. Lutz and Hyam Cohen, Indianapolis, Ind., U.S., 6th June, 1887; 5 years.

Claim.—1st. A steam engine having a trunk piston moving in the bore of its cylinder, and actuated by a rod connected with a crank shaft by a crank inclined at an angle to the line of bearings, such piston provided with ports adapted to be closed and opened by the oscillation and reciprocation of the piston, whereby the outlets and inlets communicate with such ports and admit the steam that drives the engine, substantially as shown and described. 2nd. An engine constructed of a base *b*, forming a crank chamber and oil receptacle into which the crank dips at each revolution, a cylinder *c*, the trunk piston *p* moving in the bore thereof, and connected by the rod *r* with the inclined crank *c* of the crank shaft *c s* journaled in bearings connected with such base, the base and cylinder connected by bolts passing through a flange the cylinder surrounded by a steam jacket *s j*, all combined substantially as described. 3rd. In a steam engine, a crank driving shaft having the center line of its crank wrist set at an angle to the line of bearings, and adapted to conform to the amount of oscillation necessary to be given the piston to allow its ports to be opened and closed as required by its movement substantially as shown and described. 4th. In a steam engine the cylinder *c* having outlet and inlet passages *i, i, i* and *e, e, e*, for the steam the base *b* having chambers for the lubricant and crank bearings *c, b*, the crank shaft *c s* having crank *c* set at an angle to the axial line of the bearings of the crank shaft the bisected crank boxes *c, b*, the rod *r* and trunk piston *p* having ports *i, i, i*, all combined substantially as described. 5th. A steam engine whose base contains space for a lubricant, a crank whose axis is at an angle to that of the driving shaft and of which it forms a part, such crank connected by a rod with a trunk piston having ports which serve as steam inlets when the piston moves in one direction, and as out lets when it moves in the opposite direction, moving in a cylinder having steam and exhaust ports to correspond with those in the piston, the movement of the latter being made oscillatory and reciprocating by the crank connection, all combined substantially as described. 6th. A steam engine whose connection rod is formed in two parts, which at its lower end look over the trunions of the crank box, and at its upper end over those of the cross head forming an universal joint at each end, preventing the piston from binding in the cylinder at any point in the stroke, substantially as described.

No. 26,892. System of Banding for Spinning or Twisting Frames. *(Système de Courrois sans fin pour Machines à filer et à Rotordre.)*

Thomas Clarke, Richard C. Williams, Truro, N.S., and Oronhyatekha, London, Ont., 6th June, 1887; 5 years.

Claim.—1st. In a spinning or twisting frame, the combination with the spindles and driving roller or drum, of an endless band passed alternately over the drive-drum and around the spindles, as and for the purpose shown and set forth. 2nd. In a spinning or twisting frame, the combination of the spindles and the drive-drum horizontally revolving pulleys placed to the rear of the ends of the drive-drum, and an endless band passed alternately over, the drive-drum and the spindles, and passing from the spindles at the ends of the gang around the end pulleys along the rear side of the frame, as and for the purpose shown and set forth. 3rd. In a spinning or twisting frame, the combination of the spindles, the drive-drum, horizontally revolving pulleys placed in the rear at the ends of the drive-roller, a band passing alternately over the drive-drum or roller and around pulleys upon the spindles, and passing from the spindles at the ends of the gang around the end pulleys along the rear side of the frame, and tension pulleys upon the rear portion of the band having means for forcing them yieldingly against the band, as and for the purpose shown and set forth. 4th. A tension device for spinning and twisting frames, consisting of a drum having central bearings in its heads, a shaft journaled in the bearings and having diverging arms upon its ends, and provided with a ratchet-wheel, a flat helical spring secured to the barrel or drum and to the shaft winding upon the same, a pawl engaging the ratchet wheel and pulleys upon the ends of the

arms of the shaft, as and for the purpose shown and set forth. 5th. In a spinning or twisting frame, the combination of the spindles, the drive-drum, horizontally revolving pulleys placed in the rear at the ends of the drive-drum, a band passing alternately over the drive-drum and around pulleys upon the spindles, and passing from the spindles at the ends of the gang around the end-pulleys along the rear side of the frame, and guide-pulleys having the band passing around their opposite sides, arranged in pairs upon the ends of diverging arms of a shaft having a spring cushioning its turning, as and for the purpose shown and set forth. 6th. In a spinning or twisting frame, the combination of the spindles, the drive-drum composed of sections and having the ends of the sections separated by transverse partitions in the frame, a band passing alternately over the drive-drum and around pulleys upon the spindles, and pulleys secured adjustably upon the partitions and having the band passing around them from the drum, as and for the purpose shown and set forth.

No. 26,893. Reservoir Lamp and System of Lighting. *(Lampe à Réservoir et Système d'éclairage.)*

The Ross Patent Lighting Company, (assignee of William A. Evans John H. Ross,) Dublin, Ireland, 6th June, 1887; 5 years.

Claim.—1st. The herein described system of illuminating a building with oil, which consists in applying a number of lamps with oil from a common reservoir, substantially as shown and described. 2nd. The herein described system of illuminating a building with oil, which consists in supplying to a number of lamp burners compressed air from a common reservoir, substantially as shown and described, whereby a perfect combustion is obtained and chimneys dispensed with, as set forth. 3rd. The herein described system of illuminating a building with oil, which consists in automatically supplying a number of lamps with oil from a common reservoir, and introducing compressed air to the burners of said lamps also form a common reservoir, substantially as shown and described and for the purposes herein set forth. 4th. The combination, with a lamp provided with a burner and burner cap, and inner tubular casing 23 having an oil chamber 25 and apertures 30 below said chamber, an apertured drip cup 18 and a cone 22 within said tubular casing at the base of the vertical air pipe 32 having a nozzle 28, furnished with a needle valve 29 at its lower end, the tubular connections 13 and 27, the reservoir *l* and compressed air pipe 31, substantially as shown and described and for the purposes set forth. 5th. The combination, with a lamp provided with a burner and burner cap having an outer slotted tubular casing 14, an inner tubular casing 23 provided with an oil chamber 25, apertures 30 below said chamber, and a cone attached at the base and the detachable apertured drip cup 18, of the vertical air pipe 32 provided at its end with valve controlled nozzle 28, the compressed air pipe 31 and reservoir *l*, together with means for connecting the oil chamber 25 with the reservoir and the air pipe 32 with the compressed air pipe 31, substantially as shown and described. 6th. The combination, with a burner, of an apertured tube extending below the same, an outer casing surrounding the burner and tube, a cone in the lower end of said tube, an inspirator at the base of said cone, and a pipe connecting said inspirator with an air forcing device, substantially as shown and described. 7th. The combination, with a burner, of a tube extending below said burner, an oil chamber being formed in said tube, and said tube being apertured below the reservoir, an outer casing for said tube and burner, a cone in the lower end of said tubes, an inspirator at the base of said cone, a pipe connecting said inspirator with an air compressor, and a pipe connecting the oil chamber with an oil reservoir, substantially as shown and described.

No. 26,894. Washing Machine.*(Machine à Laver.)*

Edward S. Redfern, Sarnia, Ont., 7th June, 1887; 5 years.

Claim.—The combination of the inner tube C having holes K and flaring end G, the outer cylinder A, the plunger rod B provided with a handle, and a plunger D provided with a slot *h* and valve *g* and the handle E, substantially as described and for the purpose specified.

No. 26,895. Wrench. *(Clé à écrou.)*

John D. Bowman, Altoona, Penn., U.S., 7th June, 1887; 5 years.

Claim.—1st. A wrench for studs or other round metallic bodies, consisting of a sleeve A, A' having a serrated eccentric gripping-roller D pivoted in a slot C in one end thereof, and its other end projecting beyond said gripping device, substantially as and for the purpose specified. 2nd. A wrench for studs or other round metallic bodies, consisting of a sleeve A, A' having a serrated eccentric roller D pivoted in a slot C formed in one end thereof, and having its other end projecting beyond said gripping device, and adapted to be firmly grasped by a removable actuating wrench or lever, substantially as and for the purposes specified. 3rd. In a wrench, substantially as shown and described, the combination of the sleeve A, A' having the V shaped slot *a* and slotted opening C, the serrated eccentric roller D pivoted in said slot, and the sleeve continued above said gripping-roller to form a holding-place for an actuating-lever, all substantially as specified.

No. 26,896. Medical Compound for the Cure of Whooping Cough, Bronchitis, Colds, Consumption and Diarrhoea. *(Composition Médicinale pour la Coqueluche, les Bronchites, le Rhume, la Consumption et la diarrhée.)*

Adolphe Derbain, St. Henri de Montreal, Que., 7th June, 1887; 5 years.

Claim.—The herein described medical compound to be used for the cure of Whooping Cough, Bronchitis, Colds, Consumption and Diarrhoea, consisting of high wines, honey and coal tar in the proportions specified.