

the central eye L, the gate J having the vertically perforated pivot K, and cogs N. 3rd. A cylindrical water heater consisting of the outer shell C, inner shell D and reservoir F.

No. 13,606. Improvements on Telephones. (*Perfectionnements aux téléphones.*)

Webster Gillett, Brooklyn, N. Y., U. S., 26th October, 1881; for 5 years.

Claim.—1st. In speaking telephones, an adjustable cylinder, containing a low variable conducting medium, combined with separate and independent devices for obtaining an adjustment in respect to the position of the diaphragm, and means for securing an accurate and sensitive adjustment of contact between the powdered conducting medium within the cylinder and adjacent electrical connections. 2nd. An adjustable cylinder F, for containing the powdered conducting medium N, in combination with diaphragm B, its vibratory arm O, compression screw R and its metallic pin S, said arm and pin being arranged opposite to each other with powdered conducting medium between them, whereby a variation in electrical resistance is effected.

No. 13,607. Improvements on Sleighs. (*Perfectionnements aux traîneaux.*)

Benjamin F. Sweet, Fond du Lac, Wis., U. S., 26th October, 1881; (Extension of Patent No. 6,710.)

No. 13,608. Improvements on Sleighs. (*Perfectionnements aux traîneaux.*)

Benjamin F. Sweet, Fond du Lac, Wis., U. S., 27th October, 1881; (Extension of Patent No. 6,710.)

No. 13,609. Horse Shoe Nail Machine. (*Machine à clou à cheval.*)

Joseph Varney, Montreal, Que., 27th October, 1881; (Extension of Patent No. 6,599.)

No. 13,610. Improvements in Heaters (*Perfectionnements dans les calorifères.*)

Daniel L. Lamson, Fryeburgh, Me., U. S., 27th October, 1881; for 5 years.

Claim.—1st. The combination of the coal burning chamber A and wood burning chamber C connected by flues D E G H. 2nd. A wood burning chamber and a coal burning chamber arranged one above the other, the radiating space O between them, to permit free radiation from the bottom of the one and the top of the other.

No. 13,611. Improvements on Horse Shoe Nail Plates. (*Perfectionnements aux carreaux à clou à cheval.*)

Joseph M. Laughlin, Boston, Mass., U. S., 28th October, 1881; (Extension of Patent No. 6,719.)

No. 13,612. Improvements on Corsets (*Perfectionnements aux corsets.*)

Electa A. Waterhouse, Chatham, Ont., 29th October, 1881; (Extension of Patent No. 6,724.)

No. 13,613. Improvements in Sewing Machines. (*Perfectionnements aux machines à coudre.*)

William Muir, Montreal, Que., (Assignee of David M. Smyth, Lynn, Mass., U. S.,) 29th October, 1881; (Extension of Patent No. 6,708.)

No. 13,614. Improvements on Machines for Trimming the Edges of the Soles of Boots and Shoes. (*Perfectionnements aux machines à polir les tranches des semelles de chaussures.*)

John W. Dodge, Malden, Daniel C. Knowlton and John Hitchcock, Boston, Mass., U. S., 31st October, 1881; for 15 years.

Claim.—1st. The jack carrier consisting of the shaft *a*, sliding frame *f*, gear *c* and rack *d*, the whole combination operating to move the shaft sidewise, when the shoe is turned. 2nd. The combination, in the edge trimming tool, connecting rod *b*, carriage *g* and rack and pinion being controlled by the clutch mechanism, and in gear with the rack on the carriage. 3rd. In combination, shaft *a*, sliding frame *f*, gear *c*, rack *d*, shaft *e*, clutch *g*, pinion *h*, carriage *g* provided with its rack, and rod *b*. 4th. In an edge plane, the combination of stock *n* carrying knife *a*, and the adjustable stop *p* carrying rand guide *o*, and gauge *q*, the rand guide being adjustable on stock *p*. 5th. In an edge plane, the gauge *o*, narrower than the edge to be trimmed, and bottom gauge *q*, both arranged on a slide, whereby the gauge *o* is moved by the action of the bottom guard away from the rand guide, when the tool passes from the thin edge at the shank of the sole to the thicker edge of the fore part. 6th. A boot or shoe jack having the shaft *a* passing through the body and encircled by the springs *s*, in combination with the pinion *u* and the rack *v* of the heel piece. 7th. In combination with a boot or shoe jack or holder, the shaft *a* having a reel *r*, and

ratchet *r* attached to its outer end, and the pinion *u* attached to the inner end, and the heel piece *s* having a rack, so that the foot of the jack or holder may be made to accommodate the length of the boot or shoe. 8th. In combination, the shaft *a* in a jack or holder for boots or shoes, and the spiral spring *s* by means of which the shaft may be revolved, so as to loosen the foot of the holder from the boot or shoe. 9th. The shaft *a* encircled by the spiral spring *s* in the body of the jack, in combination with the pinion *u* and ratchet *r*.

No. 13,615. Improvements on Car-Couplings.

(*Perfectionnements aux accouplages des chars.*)

John H. Blanchard, Boston, and Henry E. Waite, Newton, Mass., U. S., 31st October, 1881; for 5 years.

Claim.—1st. The combination, with the draw-head A having a slot or groove *a* and recess *at* on its lower surface, of the detachable draw-bar B having enlarged head or shoulder *b* and secured by pins *b* *b* *1*. 2nd. The combination, with the recessed draw-heads A having pivoted coupling hooks or links D and catches E, of the levers F G adapted to simultaneously raise the coupling hook of each draw-head. 3rd. The combination, with the draw-head and coupling hook, of the pin *e*. 4th. The combination, with the draw-heads A A having recess *C* *C*, lugs *e* *e* and bevelled catch E, of the coupling hooks or links D having slots *d* and bevelled ends provided with projections *d* and adapted to be operated by the levers F G. 5th. The combination, with a draw-head having recess *C* provided with a catch E adapted to engage with the slotted coupling hook of the opposite draw-head and having a ledge *C* *2*, and lever F arranged beneath the hooked end of said coupling link. 6th. The combination of the recessed draw heads A, tongue or bar B, slotted hooks D, catches E, levers F G H *1* and chains *f* *g* *i*. 7th. The combination of the draw heads A having open top recesses C *C*, bevelled catch E and lugs *e* *e*, the levers F G pivoted in said lugs, the slotted coupling hooks D pivoted in the recess C, with a lever F resting below the bevelled end of each, and lever G bearing down upon the rear end, and the lever handle H provided with chains or cords *f* *g* *i* connecting said handle with the levers F G and with the lever H *1* at the top of the car, whereby both coupling hooks may be simultaneously operated from the top or side of each car.

No. 13,616. Improvements on Gates. (*Perfectionnements aux barrières.*)

William Malloy, (Assignee of Alfred F. Wright), Toronto, Ont., 31st October, 1881; for 5 years;

Claim.—1st. The saddle brace composed of the following parts, the upper angular bar *b* with upright piece *d* on face of instile, the horizontal pieces *d* *d* to which these are secured, the under angular bar *c* and the pieces *d* *d* to which it is secured, the key *c* and the bolts *n* *n* *n*. 2nd. The upright centre brace *e* composed of the parts *s* in two thicknesses, the caps and keys *f* *f* *f*, cap *k* *k* and the bolts *o* *o* *p* *p* *r* *g*. 3rd. The combination of the saddle brace, centre brace and the rods *l* *l*, and plate at apex of the instile *a*, outstile *t* and bars *h* *h* *i* *i*.

No. 13,617. Improvements on Range Stoves.

(*Perfectionnements aux landiers de cuisine.*)

Joseph Roy, Montreal, Que., 31st October, 1881; for 5 years.

Claim.—1st. A range stove composed of two divisions, each division having a furnace arranged back to back with cooking sections on opposite sides, having smoke flues horizontal and downward connecting a section of one division with a section of the other division, whereby one or both furnaces will heat all the sections of the range. 2nd. A range composed of two furnaces arranged back to back, and four cooking sections, having an intervening horizontal and downward flue common to one side of the furnace, and an intervening horizontal and downward flue common to the other side of the furnace, whereby one half of the range can be used with one furnace independently of the other half. 3rd. A range composed of two divisions, each division composed of sections arranged on both sides of two furnaces placed back to back, with smoke flues lateral from the furnaces, and thence downwardly and horizontally through opposite sections to an exit, in the bottom of one section. 4th. A range composed of two furnaces and four cooking sections having horizontal and downward discharging smoke passages, two exit smoke passages connected with underground smoke ducts, and a chimney. 5th. A range having pot holes at top composed of sections, consisting of double ovens, a single oven, a hot water circulating boiler and two furnaces, arranged to form a rectangular block. 6th. A range composed of sections placed rectangularly, having two furnaces arranged back to back, and intervening the sections, which are subdivided by a space in which are flues, serving two of the sections with smoke exit in the bottom of the range. 7th. A range having horizontally hinged oven doors, provided with quadrants and weights for supporting the doors flatwise and closing them vertically.

No. 13,618. Improvements on Envelopes.

(*Perfectionnements aux enveloppes.*)

Gustave F. Tassé, Montreal, Que., 31st October, 1881; for 5 years.

Résumé.—1o. Des enveloppes ordinaires employées soit pour la correspondance ou autre chose, les perforations de forme quelconque, pratiquées sur toutes, ou sur une seule des parties des enveloppes, en rapport avec les parties gouennées ou collées. 2o. Une enveloppe de la forme A B C D E F G, la languette A collée sur les deux côtés, en combinaison avec l'ouverture C et les perforations E E.