

the sliding plate C having the pin *c*, and flanges *c*, *c*¹, the spring D and knob-spindle E having lever F, and suitable front and back plates, arranged and operating substantially in the manner specified. 3rd. The combination of the screwed pin *h*, with bolt B having slot, and the front and back plates, for the purpose described. 4th. The sliding gate R for covering the key-hole, in combination with the front plate, substantially as set forth.

No. 20,535. Butter Worker. (*Batte à Beurre*.)

Wordsworth F. Waters and Samuel H. Waters, Johnson, Vt., U. S., 7th November, 1884; 5 years.

Claim.—1st. In a butter-worker, the combination of the frame A having standards E, F, the removable roller *G*, shafts X and Y, with their respective gear-wheels I and J, and pinion K on the shaft Y, with the reciprocating trough D provided with the rack *g*, substantially as described and for the purpose set forth. 2nd. In a butter-worker, the combination of the frame A, provided with the removable spout L, with the reciprocating trough D, having an outlet *d*, substantially as and for the purpose specified. 3rd. In a butter-worker, the crank-shaft X carrying the roller G, and trough D provided with a rack *g*, in combination with the shaft Y, carrying the pinion K and I gear-wheels I and J, whereby a reciprocating motion may be given to the trough D, substantially as hereinbefore set forth. 4th. In a butter-worker, the corrugated or ribbed roller G, in combination with the standards E, F, attached to the frame A, the former being so arranged that, by means of a lateral slot *e* and hook *f*, the roller may be removed or held in place, substantially as described.

No. 20,536. Steam Vehicle. (*Voiture à Vapeur*.)

Orson B. Kendall, Toronto, and Isaac H. Culp, Hamilton, Ont., 8th November, 1884; 5 years.

Claim.—In a steam vehicle, the combination of the steam boiler H, with an ordinary steam engine attached to the end of the boiler H, on the preparation G, and fixed on the vehicle in the most appropriate place, the two arms N and the bar M suspended from the crank shaft J, the two ends of the bar M attached to the axle L to work on a swivel, the four chain wheels D, D, and *e*, on their shafts K and L, the clutch C and the slide O, substantially as and for the purpose hereinbefore set forth.

No. 20,537. Apparatus for Operating Dry Earth Closets. (*Appareil de Siège à la Terre Sèche*.)

William Heap, Owensound, Ont., 8th November, 1884; 5 years.

Claim.—The pivoted lever I, provided with a friction roller *a* on one of its arms, to act against the face of the pivoted hopper A, and having its other arm connected to the seat H by the rod K, in combination with a rod D connected at one end to the hopper A, and at its other end to one arm of the bell-crank E, which is pivoted to the frame F and has a weight G attached to its other arm.

No. 20,538. Horse Rake. (*Râteau à Cheval*.)

William S. Wilson, Ayr., Ont., 8th November, 1884; 5 years.

Claim.—1st. In a horse-rake, in which the friction dump is applied by torsion strain exerted on a rod journalled on the toothed bar, the torsion rod A having its inner end journalled in a bracket arranged to suspend it up above the toothed bar B, in combination with a crank D formed upon or fixed to the inner end of the rod A, and having its end arranged to extend downwardly sufficiently far to allow the chain E, which is connected to it, to pass below the toothed bar B, but not sufficiently far to be below the centre upon which the toothed bar B is pivoted. 2nd. In a horse-rake, in which the friction dump is applied by torsion strain exerted on a rod journalled on the toothed bar, the torsion rods A having their inner ends journalled in a bracket arranged to suspend it above the toothed bar B, and a crank D formed upon or attached to the inner end of each rod A, arranged to extend below the toothed bar B, but still above its rolling centre, in combination with an equalizing lever G, pivoted at its centre on the end of the lever I, and connected at its ends to the cranks D by the chains or rods E, substantially as described. 3rd. The lever I, pivoted at its centre on the foot-lever J, and having its bottom end suitably connected to the damping mechanism of the machine, and its upper end connected by the rod L to a lug or projection M formed on the end of the hand-lever N below its pivot point, substantially as and for the purpose specified. 4th. In a horse-rake, in which the friction dump is applied by torsion strain exerted on a rod journalled on the toothed bar, the torsion rods A having their inner ends journalled in a bracket arranged to suspend it above the toothed bar B, and a crank D formed upon or attached to the inner end of each rod A, arranged to extend below the toothed bar B, but still above its rolling centre, in combination with a lever G pivoted at its ends to the cranks D by the chains or rods E, the lever I being pivoted at its centre on the foot-lever J and connected at its upper end by the rod L M, formed on the hand-lever N, below its pivot point *b*.

No. 20,539. Saw Jointer and Set.

(*Fer à Contourner et Etamper les Scies*.)

James K. Bridges, Woodstock, Ill., U. S., 8th November, 1884; 5 years.

Claim.—1st. The combination of the handle *a*, provided with a head *b*, comprehending shoulder *c* and flange *d*, and an adjusting screw *j* with the clamp screws *g* and plate *f*, substantially as set forth. 2nd. The combination of the handle *a*, with a head *b*, consisting of a shoulder *c*, flange *d*, the ledges *o*, the said ledges being separated from the flange *d* and from each other by the spaces *l*, *y*, and an adjusting screw *j*, at the lower end of the handle, with the clamp screws *g*, whereby the clamping plate and file and the tooth-holding plate may be interchangeably used, substantially as set forth. 3rd. The improved tool, herein described, consisting of the handle *a*, formed with a head *b*, comprehending the inclined shoulder *c*, *n*,

flange *d* and ledges *o* above said flange, incline *q* at the end of the handle opposite said head, a adjusting screw *j*, plate *f*, file *e* and clamping screws *g*, substantially as set forth.

No. 20,540. Electric Lamp. (*Lampe Electrique*.)

Thomas L. Kay, Hamilton, Ont., 8th November, 1884; 5 years.

Claim.—1st. In an electric lamp of feed regulating mechanism, consisting of a notched clamp *j* made to catch in a disk *y*, keyed in a spindle *e*, the said spindle carrying a pinion *m* made to mesh into a pinion rack on the carbon rod, the said clamp being attached by a connecting lever *h* and connecting rods *o* and *q* to a pair of coarse and fine wire magnets, and made by a current of electricity to clasp and release alternately the disk *y*, thereby operating the carbon rod to allow it to feed automatically as the carbon points are consumed. 2nd. In an electric lamp, and in combination with the clamp *j*, of the spring *u* and bracket *y* substantially as specified. 3rd. In an electric lamp, and in combination with the clamp *j*, spring *u* and bracket *y*, of the stops *x*, *z*, and *o*, the latter regulated by a thumb screw *v*, substantially as specified. 4th. In an electric lamp, the combination of the coarse magnet armatures *d*, fine wire magnet armatures *d*¹, connecting lever *h*, connecting rods *o*, *q*, clamp *j*, springs *u*, *r*, spindle *e*, pinion *m* and carbon rod pinion rack *l*, substantially as specified. 5th. In an electric lamp the combination of the spindle *e*, hub *e*¹, connecting lever *h*, bearings *f* and *f*¹, substantially as and for the purpose specified.

No. 20,541. Milk Can. (*Boîte à Lait*.)

John McHardy and George Balkwill (assignees of Walter O'Hara), Walkerton, Ont., 10th November, 1884; 5 years.

Claim.—The combination of the cylindrical and dome-shaped cone D K and the ventilating pipe E E thereto attached, the perforated cover F F and the short pipe G thereto attached, and the rubber seal H, all substantially as and for the purposes hereinbefore set forth.

No. 20,542. Bolster Plate.

(*Plaque de Selle de Voiture*.)

Leroy J. Brandow and John Hall, Starkville, N. Y., U. S., 10th November, 1884; 5 years.

Claim.—The combination of the axle A, having a plate B, provided with an upwardly projecting pintle D secured to said axle by means of transverse bolts, having interposed washers F, said plate being also provided with oblong recesses C, and a plate H secured to the under side of the bolster J by means of bolts K, said plate H having jaws *m* to engage the edges of the plate B, said plate H being also provided with a transverse opening L, through which passes the pintle D, the end of which is seated in an opening formed upon the under side of the bolster, substantially as and for the purpose set forth.

No. 20,543. Horse Collar Pad.

(*Collier de Cheval*.)

Aaron Work, Elkhart (assignee of Johannes Wallmer, Middlebury), Ind., U. S., 10th November, 1884; 5 years.

Claim.—The horse-collar pad, consisting of the yoke *a*, having the transverse lateral slots *b*, *b*¹, between its ends, the elongated recess *c* in its under face, and the pad seats *d*, *d*¹, secured to the yoke by a joint or hinge at its ends, in combination with the concavo-convex pads *e*, *e*¹, secured to the pad-seats, as shown, the whole adapted to be applied to a horse-collar, substantially as specified.

No. 20,544. Vehicle Seat. (*Siège de Voiture*.)

Jeremiah P. Johnson, Detroit, Mich., U. S., 11th November, 1884; 5 years.

Claim.—A sheight metal plate, formed with enlarged or raised edges, inserted into a vehicle seat or arranged at right angles to the seat joint, in combination with the sides and back of the seat.

No. 20,545. Combined Boiler and Steam Vacuum Pump. (*Pompe de Chaudière et de Vapeur à Vile Combinée*.)

Carroll L. Riker, Brooklyn, N. Y., U. S., 11th November, 1884; 5 years.

Claim.—1st. The method, substantially as described, of exhausting the steam from the working chamber of a steam vacuum-pump, which consists in applying to the steam in the working-chamber the pressure of a column of water contained in a separate water-chamber at a higher level, by means of the open connection of said higher water-chamber with the lower portion of the working-chamber, and providing for the steam subjected to said pressure, an exhaust vent so soon as it has forced the water out from the working-chamber to a given level, by means of a water-trapped tube connecting the upper part of said chamber with a separate condensing-chamber, which is automatically unsealed by the depression of the water therein to said level, substantially in the manner set forth. 2nd. The method, substantially as described, of automatically arresting the feed of water to the boiler, of a combined boiler and steam vacuum-pump at the moment of exhausting the steam from its working-chamber, which consists in connecting the feed-water pipe with the exhaust pipe through which the steam is withdrawn from the working-chamber when the discharge from the pump is completed, substantially in the manner set forth. 3rd. The method, substantially as described, of exhausting the water from the boiler of a combined boiler and steam vacuum-pump, which consists in producing a vacuum in a tube connected with the lowermost level of the boiler, by extending the open mouth of said tube into the steam-exhaust pipe of the working-chamber of the pump and allowing steam to escape around the same, substantially in the manner as set forth. 4th. The combination, with the steam-pressure or working chamber of a steam vacuum-pump, and with a separate condensing chamber