

No. 21,671. Horse Shoe. (*Fer à Cheval.*)

David J. Pryor, Roxbury, and Edward J. McArdle, Boston, Mass., U.S., 15th May, 1885; 5 years.

Claim.—A horse shoe, composed of an upper plate A, having slots B, B', B'', and thinner portions *b, b'* and elastic washer E, in combination with the lower plate A' having lugs F and loops C and wedge-shaped pieces D, provided with nuts *d*, as described, and for the purposes set forth.

No. 21,672. Car-Coupler. (*Accouplage de Chars.*)

George D. Pearson, John Wallace and Peter Wallace, Montreal, Que., 15th May, 1885; 5 years.

Claim.—1st. The combination of the bunters E, provided with extensions F, pins I and K, hook L arranged to be vertically placed, as described, the whole substantially as and for the purposes set forth. 2nd. The combination of a bunter E having projections F, pins K and I and hook L, with link M, of any ordinary link coupling, substantially as described.

No. 21,673. Sink. (*Evier.*)

Jean B. G. Lecompte, Jr., Montreal, Que., 15th May, 1885; 5 years.

Reclame.—Dans un évier le tamis D muni d'un rebord *dt*, des trous *d3*, d'un fond *d*, et d'un anse E, en combinaison avec le fond de l'évier A, le rebord B et le tuyau C, le tout tel que ci-dessus d'écrit et pour les fins sus mentionnées.

No. 21,674. Whiffletree. (*Palonnier.*)

James Whitcomb, Vancouver, T.W., U.S., 15th May, 1885; 5 years.

Claim.—1st. In a whiffletree having a continuous spring bar, the fixed band G provided with a set-screw which by tightening or loosening causes the spring-bar to act with a greater or less resilience, substantially in the manner as herein set forth and specified. 2nd. The combination and arrangement of the bevelled wooden bar continuous spring-bar, angle-irons or fulcrum, and the fixed band provided with the adjusting set-screw, constructed and operating substantially in the manner as herein set forth and specified.

No. 21,675. Pump. (*Pompe.*)

Alexander Porteous and George S. Fairgrieve, Galt, Ont., 15th May, 1885; 5 years.

Claim.—1st. The combination, with the pump stock A and plungers B, C, of the pump rods D, E, plate F, connecting rods G, G', oscillating beam H and rock shaft I, whereby the pump is worked by either an oscillating or a vibrating motion of a lever or lever J, outside the pump head, as set forth. 2nd. The oscillating beam H, provided with holes H' for connecting with rods G, G', to lengthen and shorten the stroke of the plungers, as set forth. 3rd. The plunger B, having an inclined forked connection E' with the pump rod E working through plate F, provided with stuffing boxes F', both pump-rods have a parallel endwise motion in the pump stock, as set forth.

No. 21,676. Steam Engine. (*Machine à Vapeur.*)

William Golding, New Orleans, La., U.S., 15th May, 1885; 5 years.

Claim.—1st. In expansion, steam and other engines, the combination, with an intermediate driving shaft, of a series of independent expansion reciprocating piston engines arranged in pairs on opposite sides of said shaft, and geared or connected with it to rotate the same; the cranks in each pair of said engines being set at right angles with one another, and the cranks of the several engines being arranged progressively and uniformly, one in advance of the other, substantially as and for the purposes specified. 2nd. The combination, in the one expansion engine, of the intermediate driving-shaft E, the duplicate parallel crank-shafts D, D' on opposite sides of said shaft, the gears *f, f', g*, connecting the several shafts, a duplicate series in pairs of reciprocating piston expansion engines, having their cranks arranged, as described, progressively and uniformly, one in advance of the other, and a valve mechanism common to all the engines for simultaneously and similarly controlling them, essentially as described.

No. 21,677. Insulating Material. (*Corps Isolant.*)

Daniel H. Dorsett, Chicago, Ill., U.S., 15th May, 1885; 5 years.

Claim.—1st. The herein-described insulating compound, composed of coal-tar, paraffin silicious sand, and pulverized coal ashes and cinders, in the proportions substantially as set forth and for the purpose specified. 2nd. The above-described compound, composed of coal tar, paraffin silicious sand, pulverized coal ashes and cinders, black oxide of manganese and ammonia chloride, in the proportions substantially as set forth and for the purpose described.

No. 21,678. Machine for Sawing Logs. (*Machine à Scier les Billots.*)

Thomas Spedding, Dunn., Ont., 15th May, 1885; 5 years.

Claim.—1st. A portable hand-power log sawing machine, consisting of frame A, A', lever B, B', saw-arm C to which is attached saw-blade D, guide-arm E, and guide pieces G, G' all constructed and operating substantially as described. 2nd. The guide-arm E, having the guides *e, e'*, and dogs *f, f'*, and working in combination with saw, as specified.

No. 21,679. Car-Coupling. (*Accouplage de Chars.*)

William H. Knight, Portland, Me., U.S., 15th May, 1885; 5 years.

Claim.—1st. A draw-link E, having parallel barbs 2, 2 and 3 at the ends, as set forth. 2nd. The draw-head A, having vertical slots

A₁, A₂ at the sides, as set forth. 3rd. A block or cross-piece C, which moves vertically in slots in the sides of the draw-head A, as set forth. 4th. A coupling-block, consisting of shank B and cross-piece C, combined as set forth. 5th. A web 6, introduced between barbs or draw-links, as set forth. 6th. The combination, with the draw-head A, having vertical slots A₁, A₂ in its sides, of the block C, as set forth. 7th. The combination, with the draw-head A, having vertical slots A₁, A₂ in its sides, of the coupling block G consisting of shank B and cross-piece C, as set forth. 8th. The combination, with the draw-head A having vertical slots A₁, A₂ in its sides, of the block C, with or without the shank B, and the slotted draw-link E having barbed ends, with or without the intervening web 6, as set forth.

No. 21,680. Furnace Grate. (*Grille de Fourneau.*)

Fred. V. Medynski, Des Moines, Iowa, U.S., 15th May, 1885; 5 years.

Claim.—A furnace grate composed of a series of bars, or sections, having broad, flat and perforated top surfaces A, lateral and downward projections B, tapering flanges C, extending along their under sides and centers, and cup-shaped openings or cells in the entire under sides, substantially as shown and described, to operate in the manner set forth for the purposes stated.

No. 21,681. Bottle Stopper. (*Bouchon de Bouteille.*)

Frederick B. Thatcher and Lyman B. Goff, Pawtucket, R. I., U.S., 15th May, 1885; 5 years.

Claim.—1st. As an improved article of manufacture, an elastic bottle stopper plug having a socket for a stem, valve ports, and a valve re-enforced by a rigid material supported by the valve, all substantially as described. 2nd. As an improved article of manufacture, an elastic bottle stopper plug having a socket for a cap-plate stem, also a series of grooves in the inner walls of the plug that open in ports near the lower side of the plug, and a valve supported by the stoprops between the grooves, all substantially as described. 3rd. As an improved article of manufacture, an elastic bottle stopper plug having a central socket for a cap-plate stem, inner grooves terminating in ports, and a valve reinforced by a disk of rigid material, supported by the valve, all substantially as described. 4th. In combination, an elastic bottle stopper plug having a stem socket, and a valve and a reinforce of rigid material cast within the valve, all substantially as described. 5th. In combination in a bottle stopper, a cap-plate having a stem tapered below the shoulder, an elastic plug having a socket, whose wall conforms to the outline of the stem, grooves in the walls that terminate in ports, and a reinforced valve closing the bottom of the stem, all substantially as described.

No. 21,682. Changing the Draft in Coal Par-lour Cook Ovens. (*Manière de Changer le Tirage des Fourneaux de Salen à Charbon.*)

Thomas Rose, Georgetown, Ont., 15th May, 1885; 5 years.

Claim.—The combination of the dampers A, A' and the drafts *c, c'*, substantially as and for the purpose hereinbefore set forth.

No. 21,683. Churn. (*Barratte.*)

Franklin T. Morrelle, John H. Redstone and John A. Obermuller, San Francisco, Cal., U.S., 15th May, 1885; 5 years.

Claim.—1st. The revolving cylinder B, with the reverse curved arms C, for the purpose of effecting counter currents, as described, in combination with the air retainer and milk atomizer L, for the purpose of retaining the air and thoroughly mixing the same, constructed and operated substantially as and for the purposes set forth. 2nd. The cylinder B, in combination with the reverse curved arms C, for the purpose of producing counter currents, as described, constructed and operated substantially as and for the purpose set forth.

No. 21,684. Saw Sharpening Machine. (*Machine à Aiguiser les Scies.*)

William R. Hibbard and William C. Hibbard, Montreal, Que. (Assignees of Danford Willey, Saint Johnsbury, Vt., U.S.), 16th May, 1885; 5 years.

Claim.—1st. In a machine for sharpening circular saws by means of an emery wheel, the combination of a saw rest having a vertically projecting spindle, which is concentric with the circular sides of said rest, to which are threaded two cone-shaped nuts, one being large enough to cover the other, and a tilting table upon which said parts are placed and rendered capable of rotary motion, said tilting table being hinged to a sliding carriage connected with, and operating upon a suitable base, substantially in the manner described and for the purpose set forth. 2nd. In a machine for sharpening circular saws by means of an emery wheel, the combination of a saw-rest having a vertically projecting spindle, which is concentric with the circular sides of said rest, to which are threaded two cone-shaped nuts, one being large enough to cover the other, a tilting table upon which said parts are placed and rendered capable of rotary motion, and means, substantially as described, for gaging the rotation of said parts, said tilting table being hinged to a sliding table connected with, and operating upon a suitable base, all arranged and operating as and for the purpose set forth. 3rd. In a machine for sharpening circular saws by means of an emery wheel, having an iron base, to which may be attached a sliding carriage, the tilting table D hinged to said carriage, and provided with a spring catch S, in combination with a revolving saw-rest E, having flange *f* and teeth *f'*, and the spindle G to which are threaded the nuts H, I, operating substantially as and for the purpose specified.

No. 21,685. Harvester Cutting Apparatus. (*Appareil Coupeur de Moissonneuse.*)

Patrick Dowling, Toledo, and Alonzo P. Fisher, Wansoon, Ohio, U.S., 16th May, 1885; 5 years.