

described. 8th. In a steam engine, the combination, with the cylinder A, the piston D having the downwardly extending cylindrical portion or trunk, and the connecting rod Dr pivoting therein, of the annular oil chamber *d* surrounding said trunk, the trap M for the water of condensation, and the vapor pipe for conducting away the steam entering said chamber, substantially as described.

No. 32,259. Potato Digger.

(*Scarificateur à patates.*)

Alexander Wilkin, London Thp., Ont., 14th September, 1889; 5 years.

Claim.—1st. The digging blade *z*, and the pivotal vibrating fingers *a* extending through and having a portion *a*₂ resting on said digging blade or other suitable support, in combination with the sliding bar Y, means for operating the same, and the bracket or guide *y*₂, substantially as and for the purpose set forth. 2nd. The digging blade *z*, and the swinging vibrating fingers *b* secured to and in combination with the pivotal bar Y₁, and means for operating the same, substantially as and for the purpose set forth. 3rd. The digging blade *z*, and the swinging vibrating fingers *b* formed with curved ends *b*₂, in combination with the bar Y₁ formed with the sockets *U*, substantially as and for the purpose set forth. 4th. The digging blade *z*, the pivotal vibrating fingers *a*, and the vibrating fingers *b*, in combination with the sliding bar Y, guide or bracket *y*₂, and the pivotal bar Y₁, and means for operating the same, substantially as and for the purpose set forth. 5th. The combination, of the guard or shoe *z*₁, with the sliding bar Y, guard or bracket *y*₂, and the digging blade *z*, substantially as and for the purpose set forth. 6th. The combination, of the guard or shoe *z*₁, with the pivotal bar Y₁, and the digging blade *z*, substantially as and for the purpose set forth. 7th. The digging blade *z*, guard or shoe *z*₁, the pivotal vibrating fingers *a*, the vibrating fingers *b*, sliding bar Y, guide or bracket *y*₂, pivotal bar Y₁, rocking standard U having arms *x*, *z*₁ and U₁, and means for operating the same, in combination with the standard B and frame A, substantially as and for the purpose set forth. 8th. The digging blade *z*, the standard B secured thereto at one side, and the plate W having inclined edges *b*₂, and the frame A, in combination with the bell-crank lever V having a knife V₂ secured thereto, and means for operating the latter, substantially as and for the purpose set forth. 9th. The digging blade *z*, the standard B secured thereto at one side, the frame A, the bracket *o*, shaft N having crank *n*₁, upright R, connecting bar Q and pickers P, and means for operating the same, substantially as and for the purpose set forth. 10th. The digging blade *z*, the guard or shoe *z*₁, vibrating fingers *a*, *b*, sliding bar Y, guide or bracket *y*₂, pivotal bar Y₁, rocking standard U having arms *x*, *z*₁ and U₁, and means for operating the same, in combination with the standard B, frame A, bracket *o*, shaft N having crank *n*₁, upright R, connecting bar Q, and picker P, and means for operating the same, substantially as and for the purpose set forth. 11th. The digging blade *z*, the guard or shoe *z*₁, vibrating fingers *a*, *b*, sliding bar Y, guide or bracket *y*₂, pivotal bar Y₁, rocking standard U formed with arms *x*, *z*₁ and U₁, and means for operating the same, in combination with the standard B, frame A, bracket *o*, shaft N having crank *n*₁, upright R, connecting bar Q, and picker P, and means for operating the same, substantially as and for the purpose set forth. 12th. The supplemental frame F, the wheels H having flanges H₁ formed thereon, shaft C, the frame A, and sleeve C₃, in combination with the connecting bar *n*₂, lever *d*₁, and means for holding the lever at the position to which it is adjusted, substantially as and for the purpose set forth. 13th. The wheels H having flanges H₁ formed thereon, frame F toothed wheels G, and pinions G₁, shaft C, and frame A, in combination with the ratchets *k*, *k*₁, stud pin M, and spring L, substantially as and for the purpose set forth. 14th. The guards J secured to the flanges *f*₂ on the frame F or other suitable support, in combination with wheels H, toothed wheels G and pinions G₁, substantially as and for the purpose set forth.

No. 32,260. Trace Holder. (*Crochet de palonnier.*)

George L. Hydorn, Lacona, N.Y., U.S., 16th September, 1889; 5 years.

Claim.—1st. A trace holder consisting of a wire coiled, then bent to form an arch, and then bent to form a handle, and means for securing the same to the whiffletree, substantially as described. 2nd. A trace holder consisting of a handle, an arch adjacent to the handle, a spring adjacent to the arch and rearward arms, all constructed from a simple piece of wire, and means for securing the arms to the whiffletree.

No. 32,261. Berth and Seat for Ships and Railway Cars. (*Lit et siège pour les navires et les chars de chemins de fer.*)

James G. W. Aldridge, Southampton, Eng., 16th September, 1889; 5 years.

Claim.—1st. The arrangement of springs and operating mechanism between a bed or seat frame and a skeleton frame, by means of which the bed or seat frame can either be made to rest directly upon the skeleton frame, or be raised and supported upon the springs, consisting of spring batters between a top frame and a skeleton frame, and having their ends resting in shoes, which can be drawn together or be allowed to move apart by the cams and connecting rods, substantially as described. 2nd. The arrangement of springs and operating mechanism supporting a skeleton frame, itself supporting a bed or seat frame, by means of which the skeleton frame can either be raised and supported upon the springs or be lowered, consisting of the spring batters below the skeleton frame, and having their ends resting in shoes, which can be drawn together or allowed to move apart by the cams and connecting rods, substantially as described. 3rd. The arrangement of springs and operating mechanism, by means of which a bed or seat frame can either be raised upon a skeleton frame and supported upon the springs or be lowered, and the skeleton frame can be lowered on to the floor or other support, or be raised upon the springs, substantially as described. 4th. Supporting

a frame carrying a bed or seat, by spring batters upon a skeleton frame supported upon brushes, substantially as described and for the purposes set forth. 5th. The combination of the berths and seats, substantially as described, with reference to the drawings.

No. 32,262. Car Brake. (*Frein de char.*)

Earl A. Wescott and Edmund R. Bristol, Minneapolis, Minn., U.S., 16th September, 1889; 5 years.

Claim.—In a car truck, the combination of the frame, rock-shafts journaled therein and having intermediate arms projecting transversely therefrom, and trip arms projecting from near the ends thereof, ports suspended from the frame in suitable guides, carrying buffer wheels or beams on their lower ends, and provided with suitable nuts on their upper ends for engagement with said trip-arms, straps connecting the several rock-shafts together, and another strap connecting one of said rock-shafts with the valve lever of the air-pipe, substantially as shown and described.

No. 32,263. Hot Water Heater.

(*Calorifère à eau.*)

Archibald Brake, Toronto, Ont., 16th September, 1889; 5 years.

Claim.—1st. The wrought metal tubes F, connected by expansion to the tube sheets E and H, in combination with the water crown section C, and upper water section I, bolted respectively to the tube-sheets E and H, substantially as and for the purpose specified. 2d. The fire-box section B, having a corrugated interior wall, the water crown section C bolted to the section B, in combination with the tube sheet E, tubes F, and upper water section I, arranged substantially as and for the purpose specified. 3rd. The fire box section B, having a corrugated interior wall, the water-crown section C bolted to the section B, in combination with the tube-sheet E, tubes F, upper water section I and casing formed by the outer plates J, arranged substantially as and for the purpose specified.

No. 32,264. Hammock and Hammock Support. (*Hamac et châssis de hamac.*)

William Challenger, Toronto, Ont., 16th September, 1889; 5 years.

Claim.—1st. The canvas A, having a bar B fixed to each end, in combination with the cord C threaded through hems made on each side of the canvas A, and made sufficiently long that when the ends of the cord are spliced together, a loop will be formed extending beyond each end of the said canvas, substantially as and for the purpose specified. 2nd. The canvas A, having a bar B fixed to each end, the cord C threaded through hems made on each side of the canvas A, and made sufficiently long that when the ends of the cord are spliced together a loop will be formed extending beyond each end of the said canvas, in combination with the hook E, pivoted legs F and bracing cords G, substantially as and for the purpose specified.

No. 32,265. Rectifying Chemical or Technological Fluid Products and Apparatus belonging thereto. (*Rectification des produits fluides chimiques ou technologiques et appareil pour cet objet.*)

Bogdan Hoff, Iaroslavl, Austria, 16th September, 1889; 5 years.

Claim.—1st. A process, wherein a mixture of vapors of several fluids of a different boiling point is passed through a tank with a single distillation, in which tank are arranged bodies containing salicic acids or minerals, as pebble stones, chippings, or rubbles, in a quantity to be ascertained in an empiric way without the use of water for the rectification, so that the vapors of the fluids of higher boiling points are condensed, whilst the vapors of the fluids of a lower boiling point are allowed to escape still in the shape of vapor, and are subsequently condensed as a pure product in the condenser, substantially as shown and described. 2nd. The tank or tanks A₁, A₂, A₃, A₄, necessary for the performance of this process with the connecting pipes H, the admission pipe E, the discharge or exhaust pipes D and F, and the sifters C with the condensing bodies, consisting of bodies containing salicic acids or minerals arranged thereon, substantially as shown and described.

No. 32,266. Mechanical Movement.

(*Moteur à mouvement d'horlogerie.*)

Henry Pineus and Oakley Selleck, New York, N.Y., U.S., 16th September, 1889; 5 years.

Claim.—1st. The combination, substantially as herein described, of a motor, a display wheel mounted loosely on a shaft of said motor, a spiral spring having one end secured to the display wheel, and the other end secured to said shaft, an escape wheel secured to the display wheel, an escape lever, a shifting arm connected with said lever and a crank arm connected with the shifting arm, for the purpose set forth. 2nd. The combination, substantially as herein described, of a motor, a display wheel mounted loosely on a shaft of said motor, a suitable spring having one end secured to the display wheel and the other end secured to said shaft, an escape wheel secured to the display wheel, an escape lever, a shifting arm connected with said lever, and a crank arm connected with the shifting arm, for the purpose set forth.

No. 32,267. Burial Casket. (*Cercueil.*)

Mary E. Ripson and William A. Frazer (assignees of John D. Ripson), Suspension Bridge, N. Y., U.S., 16th September, 1889; 5 years.

Claim.—1st. A casket lid, having the foot and centre panels made in a single piece of sheet-metal or other thin material fastened to the plate of the said lid, in combination with a head panel made of