

tion pipe, substantially as and for the purpose set forth. 7th. In a dredging machine, the combination with a vertically adjustable shaft, of a rotary agitator comprising the ring C', the upwardly and downwardly projecting cutters D', D, provided, respectively, at their adjacent ends with the notches or recesses d', d, in which the ring is clamped, and a ring D¹¹, connecting the upwardly projecting cutters, substantially as described. 8th. In a dredging apparatus, scow or vessel having secured to its deck a segmental rack, combined with an oscillating suction pipe and agitator carrying frame having a vertical shaft O', and a pinion O⁸, on the same meshing in the upright teeth of the said rack, substantially as and for the purpose set forth. 9th. In a dredging apparatus, the combination with a scow or vessel, of an oscillating frame mounted thereon and carrying a lateral beam B⁸, provided with guide pulleys, two power driven drums Q', Q¹¹, mounted on a single shaft Q, journaled on the frame, a rotary agitator and telescopic suction pipe, two hoisting chains or cables R, leading from the two drums over the pulleys on the lateral beam and serving as diagonal braces for and adapted to raise and lower the agitator, and a clutch Q³, located on the drum shaft, for disconnecting one of the drums from the drum shaft to automatically swing the agitator laterally out of the water, substantially as described. 10th. In a dredging apparatus, a rotary conical hood having secured to it a series of downwardly projecting cutters having their upper ends united together by means of a ring D¹¹, substantially as and for the purpose set forth.

No. 37,771. System of Hot Water Circulation. (*Système de circulation de l'eau chaude.*)

Russell Bottsford, Cleveland, Ohio, U. S. A., 13th November, 1891; 5 years.

Claim.—1st. In combination, in a hot water heating apparatus, a water heater, a primary system of water circulating pipes provided with suitable radiators, a discharge pipe communicating with the supply pipe outside of the point of intersection between said supply pipe and the return pipe of the system, a shunt pipe communicating with said return pipe and with the discharge pipe, a valve in said return pipe between the supply pipe and said shunt pipe, a valve in the waste pipe between the supply and the point of intersection between said shunt pipe and said waste pipe, and a valve in said shunt pipe, the parts being constructed, arranged and operating substantially in the manner and for the purposes herein described. 2nd. In a hot water heating apparatus, the combination of a stove, a manifold located within the combustion chamber of said stove, a primary system of piping terminating in a return pipe which communicates with a supply pipe, a shunt pipe which communicates with said return pipe and with a waste pipe, which latter communicates with the supply pipe, a valve located in said return pipe between the supply pipe and the point of intersection of said shunt pipe with said waste pipe, a valve in said shunt pipe, a valve in said supply pipe, located outside the point of intersection between said supply pipe and said waste pipe, when constructed, arranged and operating substantially in the manner and for the purposes set forth.

No. 37,772. Leather Feeder.

(*Alimentateur pour le cuire.*)

Matthew Currie Tanner, Hawkesville, Ontario, Canada, 13th November, 1891; 5 years.

Claim.—A series of vats arranged from A, to B, connected together by a series of tubes D, arranged so that the liquor will flow from the top of one vat into a channel at the bottom of the next vat escaping from the said channel into the latter vat through a narrow longitudinal slit or opening a, substantially as and for the purpose specified.

No. 37,773. Rubber Cushions for Billiard Tables. (*Bande de caoutchouc pour tables de billiard.*)

Alexander Henry Costigan, Montreal, Quebec, Canada, 13th November, 1891; 5 years.

Claim.—1st. The groove g, h, k, in the surface of the rubber cushion. 2nd. The sloping of the portion g, f, substantially as and for the purpose hereinbefore set forth.

No. 37,774. Frog for Railways.

(*Rail de croisement.*)

Albert M. Grubbs, Forest Grove, Oregon, U.S.A., 13th November, 1891; 5 years.

Claim.—1st. The elevated rail forming a portion of the inner siding-rail terminating adjacent to the inner side of the inner-line rail and having its ends inclined downwardly to a level with the main-track rails, in combination with the inner main-line rail having a portion of its head removed on its outer side, substantially as set forth. 2nd. The elevated rail forming a portion of the inner siding-rail and terminating adjacent to the inner side of the inner main-line rail, in combination with the inner main-line rail having a portion of its head removed on its outer side, substantially as set forth. 3rd. The combination of the main-line rails 1, 2, the latter having a portion of its head removed on its outer side, the siding-rails 3, 4, the elevated-rail 6, having the outwardly-turned end 7, said elevated-rail being placed parallel to the inner main-track rail, and the guard-rail 10, substantially as and for the purpose set forth.

No. 37,775. Gate. (*Barrière.*)

Selim D. Hathaway, Gilead, Michigan, U.S.A., 13th November, 1891; 5 years.

Claim.—1st. The combination of the post, the hanger hinged to the post, the bracket hinged to the outer end of the hanger and pro-

vided with a pivot, and the gate centrally mounted upon the pivot, substantially as described. 2nd. The combination of the post, the hanger hinged to the post and provided with the hooks 26, arranged upon opposite sides, and the gate hinged to the hanger at a point intermediate of its ends and adapted to swing upon either side of the hanger and engage the hooks thereof, substantially as described. 3rd. The combination of the post, the hanger hinged to the post, the bracket hinged to the end of the hanger and provided with a horizontal pivot, and the gate provided intermediate of its ends with a vertical series of perforations adapted to receive the pivot, substantially as described. 4th. The combination of the post, the hanger hinged to the post, the gate pivoted intermediate of its ends to the hanger and provided with spurs arranged to engage the ground to hold the gate at any desired point, and the removable weight, substantially as described. 5th. The combination of the post, the hanger hinged to the post, the bracket comprising the vertical portion and the horizontal portions or arms, and provided with the horizontal pivot, the pin passing through the horizontal portions or arms and hinging the bracket to the end of the hanger, and the gate mounted upon the pivot, substantially as described. 6th. The combination of the hinge and latch-posts, the hanger provided with supporting-hooks arranged on opposite sides, and the gate centrally hinged to the outer end of the hanger and having, when closed, one end supported by the latch-post and the other end supported by one of said hooks, substantially as described.

No. 37,776. Bolster Bearing for Sleds.

(*Selette de coussinet pour traîneaux.*)

John J. McMan and Amos Rippon, both of Wakeman, Ohio, U.S.A., 13th November, 1891; 5 years.

Claim.—A bolster-buckle for sleigh-knees, comprising the triangular block 4, having oppositely-inclined faces 7, and provided at its apex with the cylindrical socket and the integral plates 10, arranged at the sides of the block and at each end of the socket, and provided with central openings 11, concentric with the socket, the casting having the integral cylindrical eye 9, arranged in the socket and being composed of the horizontal bar 13, the vertical flanges 14, forming a recess 16, to receive a bolster, and the coupling-bolt passing through the side plate and the eye 9, substantially as described.

No. 37,777. Combined Carpet Stretcher and Tack Driver. (*Tendeur de tapis et machine à chasser la broquette combinés.*)

Linus Stewart Denison, Warren, Ohio, U.S.A., 13th November, 1891; 5 years.

Claim.—1st. In a combined carpet-stretcher and tack-driver, a stretcher-head and a bar or handle perforated lengthwise from end to end, the stretcher-head being secured to such bar or handle, the latter having attached a tack-guide, substantially as indicated, the stretcher-head being provided with a receptacle adapted to receive the tack from the tack-guide, said receptacle terminating, at its lower end, in expansible clamping-mechanism, in combination with a hammer-rod adapted to reciprocate through said perforated bar or handle and drive the tack, and spring-mechanism adapted to be actuated by said hammer-rod, and comprising arms or members adapted to prevent the tack-guide from discharging more than one tack at a time, substantially as and for the purpose set forth. 2nd. The combination, with a bar or handle perforated lengthwise from end to end, and having secured thereto a tack-guide substantially as indicated, of a hammer-rod adapted to reciprocate through said perforated bar or handle, and a spring connected with said bar or handle, the free end of the spring being located in the path of said reciprocating hammer-rod and adapted to be actuated by said rod, said spring having arms or members adapted to alternately operate to prevent the tack-guide from discharging more than one tack at a time, substantially as and for the purpose set forth. 3rd. In a combined carpet-stretcher and tack-driver, a perforated stretcher-head and a bar or handle perforated lengthwise from end to end, the stretcher-head having upwardly-extending arms secured to said bar or handle, said arms being connected by a ferrule that embraces the lower end of the bar or handle aforesaid, the latter having attached a tack-guide, substantially as indicated, in combination with a hammer-rod adapted to reciprocate through said perforated bar or handle and stretcher-head, and a spring connected with the device, the free end of the spring being located in the path of said reciprocating hammer-rod and adapted to be actuated by said rod, said spring having arms or members adapted to control the feeding of the tack from the tack-guide, substantially as and for the purpose set forth.

No. 37,778. Wire Suspension Hook.

(*Crochet de suspension en fil de fer.*)

Charles Holman Thurston, Boston, Massachusetts, U.S.A., 13th November, 1891; 5 years.

Claim.—1st. A bent-wire suspension-hook having a screw-shank B, a flattened base F, which surrounds said shank B, and a fin integral with the said shank, substantially as described. 2nd. A hook formed of continuous wire and containing the following parts integral with the said wire: a screw-shank B, a suspension-arm A, a brace C, and a flattened base F of different cross-section from the rest of the wire, substantially as described. 3rd. A hook formed of continuous wire and containing the following parts integral with the said wire: a screw-shank B, a suspension-arm A, a brace C, a flattened base F of different cross-section from the rest of the wire, and a fin f, integral with the arm A, substantially as described.

No. 37,779. Knife Sharpener.

(*Rémouleur de couteaux.*)

George Geer, Oxanna, Alabama, U.S.A., 13th November, 1891; 5 years.

Claim.—1st. The herein described knife sharpener, consisting of