

rods marked with a scale, and having an adjustable clamping connection whereby they can be adjusted upon one another or extended to form a milk scale, substantially as described. 4th. A milk gauge, consisting of the sections 1, 1, connected by the slot 2, bolt nut and washer 3, 4 and 5, and link 6, and having the scale 9 and turned up square ends 7, substantially as described.

No. 27,913. Jack Screw. (*Vis de cric.*)

Charles H. Hopkins and George W. Knight, Lyndonville, Vt., U. S.
2nd November, 1887; 5 years.

Claim.—1st. The combination of the hollow standard A, the bevel gear B mounted on the upper end of the standard, the screw C passing therethrough and into the internal part of the standard, the shaft D formed integral with a portion of the standard and projecting horizontally therefrom, the bevel-gear mounted on the said shaft and meshing with the gear B, the ratchet wheel F formed integral with the gear E, the lever G having the apertures *f*, *f*, near its opposite edges at the outer end, the double-acting pawl having the teeth *f*, *f*, adapted to engage the ratchet-wheel F, and provided with the slot *f* in its lower end, the said pawl being pivoted on the lever G and the torsional spring *s*, having one end secured in the said slot *f*, and its other end extending slightly beyond said apertures *f* in the lever, substantially as specified. 2nd. In a jack-screw, the combination, with the standard A, a screw C therein, a bevel-gear B seated in the upper end of said standard, and provided with an internal screw-thread engaging the thread on said screw-shaft D, a bevel-gear E mounted on said shaft D of said standard at right angles to said gear B, and engaging therewith a ratchet-wheel F integral with said gear B, and a handle G loosely mounted on said stub-shaft of a double pawl F pivoted on said handle, and provided with a slot *f* in its outer end, and a torsional spring *s*, one end of which enters said slot *f*, and the other end of which is provided with a laterally-projecting pin *f*, adapted to enter holes *f* in said handle, said pin being normally farther from the pivot of said pawl than said holes, as and for the purpose set forth.

No. 27,914. Dust Pan. (*Porte-ordure.*)

Richard Sampson, Sherbrooke, Que., 2nd November, 1887; 5 years.

Claim.—As a new article of manufacture, a dust pan, made and constructed substantially as shown and described.

No. 27,915. Art or process of Impregnating Chamois Skin with Rouge. (*Art ou manière de saturer de rouge les peaux de chamois.*)

John E. Darby and Elson Blaslee, Cleveland, Ohio, U. S., 2nd November, 1887; 5 years.

Claim.—1st. The process of impregnating chamois skin with rouge, which consists in working the rouge while dry more or less into the meshes of the skin, and then applying a permeating liquid to drive the rouge into the skin, substantially as set forth. 2nd. In the impregnation of chamois skin with rouge, by means of a penetrating liquid, the process of driving the rouge into the skin, which consists in applying the rouge to the inside surface of the skin, and then saturating a suitable pad with the penetrating liquid and rubbing it over the rouge and skin, substantially as set forth. 3rd. As a new article of manufacture, chamois skin impregnated with rouge, substantially as set forth. 4th. As a new article of manufacture, chamois skin impregnated with rouge, containing alkaline properties, substantially as set forth.

No. 27,916. Wooden Pulley. (*Poulie de bois.*)

The Dodge Manufacturing Company, (assignee of Charles N. MoNeal), Mishawaka, Ind., 2nd November, 1887; 5 years.

Claim.—1st. The mode of procedure in building a wooden split pulley herein described, which consists in first building the central part of said rim, second in dividing the same transversely on an irregular line to make an interlocking joint, third in adding a section to each edge of said central part and diving the same with a straight saw, whereby the adjoining ends of the rim are provided with interlocking portions as set forth. 2nd. A wooden split pulley provided with interlocking projections and recesses in the adjoining ends of the rim, formed by dividing the same on a curved line, substantially as set forth. 3rd. A pulley provided with an arm or spoke C, having at its ends the wedging dovetailed tenons *g* fitting in a dovetailed mortise *h* in the pulley-rim, and the fastening wedges *i*, substantially as set forth. 4th. A separable wooden pulley having its rim divided on an irregular line to form interlocking portions at adjoining ends, and having its spokes or arms at their outer ends embedded in the rim with dovetailed tenons and mortises, substantially as set forth. 5th. A split pulley having a section A, and the arm C mortised into the same near its end, and provided with a stay-bolt K extending from said arm back to the pulley-rim at a distance from its end, substantially as set forth. 6th. A split pulley having the rim A, and the arm C mortised into the same near its point of division, and provided with the stay-bolt K and the anchoring-pin L inserted in the rim, as set forth.

No. 27,917. Construction of Timber Roofs.

(*Construction des toits en bois.*)

Robert R. Little, South Shields, and John Hall, Newcastle, Eng., 3rd November, 1887; 5 years.

Claim.—In timber roofs, the combination of the boards A, with grooves *a* therein, the engaging and joint covering strips B and the saddle pieces C, substantially as described and illustrated.

No. 27,918. Hydro-Carbon Furnace.

(*Foyer à hydrocarbures.*)

Esra T. Williams and Walter B. Wright, Troy, N. Y., (assignees of Walter B. Wright, Chicago, Ill.), U. S., 3rd November, 1887; 5 years.

Claim.—1st. In a hydrocarbon furnace, substantially such as described, the combination of a boiler and burners, a pipe H for delivering the vapor to be burned located partly within the bridge wall, a gas chamber I located within the fire-pot and connected with the pipe H, and a series of pipes J also connected to the gas chamber I and extending horizontally out through the front of the furnace. 2nd. In a hydrocarbon furnace, the combination with a boiler, of a pipe H provided with burners G, a gas chamber I extending transversely across the fire-pot and connected to the pipe H by means of pipe H₃, a series of pipes J connected to the opposite ends of the gas chamber I and extending into the front wall of the furnace, a series of generators K, K₂ below the pipes J and connected to a suitable steam and oil supply, and a series of pipes J₃ connecting the pipes J with the retort K₂. 3rd. In combination with a boiler and a fire-pot, a gas chamber I, a pipe H communicating with said chamber, burners supplied by said pipe, and a series of pipes J connected with said chamber at one end, and embedded at their other ends in the front wall of the furnace, the chamber and pipes being located within the fire-pot and adapted to have a fire built upon them. 4th. In combination with a boiler and a fire-pot, a gas chamber I, a pipe H communicating with said chamber, burners supplied by said pipes, and a series of pipes J connected with said chamber at one end, and embedded at their outer ends in the front wall of the furnace, the chamber and pipes being located within the fire-pot, and adapted to have a fire built upon them, and a pipe P connected at one end with the water-space of the boiler, and at the other end with the chamber I, as and for the purpose set forth. 5th. In a hydrocarbon furnace, the combination of a boiler, a fire-pot and gas or vapor burners, a grate composed of a series of pipes, a water pipe connected with the latter, and a gas pipe also connected with the grate pipes and with the burners, the gas and the water pipes being each provided with a valve, substantially as shown and described. 6th. In a hydrocarbon furnace, the combination of a boiler, a fire-pot, a series of retorts K, K₂ and K₃ located therein, and projecting at one or both ends through the walls thereof, and provided with removable caps, a pipe H provided with burners, a chamber I connected with pipe H, and a series of pipes J adapted to form a grate surface, and connected with the retorts and with the generator, substantially as shown and described. 7th. In a hydrocarbon furnace, the combination, with a boiler, of a grate composed of tubular bars J, connected with a gas generating retort, and adapted to serve the twofold purpose of supporting a fire for the generation of steam in the boiler, and afterwards serving as distributing pipes for the gas generated. 8th. In a hydrocarbon furnace, the combination, with a boiler, of a grate composed of pipes J, a series of gas generators, burners supplied therefrom, and valved water, oil, steam and discharge pipe P, Q, O, L, arranged and operating substantially as shown and described. 9th. In a hydrocarbon furnace, the combination of a boiler A, a fire-pot and gas or vapor burners, of a grate composed of a series of pipes J adapted to have a fire built upon them to generate steam within the boiler, a series of gas generating retorts connected with the pipes J and communicating with the burners, a valved pipe, as P, adapted to supply water to the pipes J, a valved outlet pipe L also connected with the pipes J, and valved steam and oil supply pipes O and Q connected with the retorts, all substantially as shown and described. 10th. In a hydrocarbon furnace, in combination with boiler A and fire-pot or chamber, a series of pipes J therein, a chamber I connecting said pipes at one end, a series of retorts K, K₂ below and connecting with the pipes J, valved steam and oil pipes O, Q connected with one of the retorts, a valved water pipe P connected with the chamber I, and a valved gas distributing pipe provided with burners G, and connected with the gas chamber, all substantially as shown. 11th. In a hydrocarbon furnace, the combination, with a boiler and fire-pot, of a grate consisting of a series of pipes, a water pipe connected with the latter, a gas pipe also communicating with the grate pipes, and with burners for consuming the gas, and valves applied to the gas pipe at either side of the point of communication with the grate pipes, whereby water may be prevented from entering the same, and gas may be admitted to or excluded from the gas pipe at either or both sides of said point at will. 12th. In combination, with a case or shell provided with oil and steam inlets, and with a discharge nozzle, a rotatable hollow valve provided with a longitudinal depression or slot to register with the oil inlet, and a stem mounted within the hollow valve, and adapted to regulate the discharge of steam from the latter. 13th. In combination, with case or shell 1 provided with discharge nozzle 3, steam inlet 6 and oil inlet 15, a hollow and rotatable valve 7 provided with steam inlet 19, and a longitudinal slot or depression 20, and a valve stem 12 mounted within the hollow valve 7, all substantially as shown and described. 14th. In combination, with case or shell 1 having steam inlet 6 and oil inlet 15, a conical discharge nozzle 3, a hollow valve 7 provided with steam inlets 19 and with a tapered end, a longitudinal depression 20 formed in the outer face of the conical end, a conical discharge outlet also in the end of the hollow valve, and a valve stem provided with a tapered nose 22 to fit into the discharge outlet of the hollow valve, all substantially as shown. 15th. In combination, with case or shell 1 having steam and oil inlets 6, 15, a discharge nozzle 3, a rotatable hollow valve 7 provided with a longitudinal slot or depression 20, an opening 15 elongated at right angles to the axis of the valve, and serving to convey the oil from the oil inlet 15 to the depression 20, and a valve stem 12 mounted within the hollow valve, all combined and arranged substantially as shown. 16th. In combination, with case or shell 1 having steam and oil inlets and a discharge nozzle, a hollow valve 7 provided with a central steam discharge outlet, and with a longitudinal depression, as 20, to register with the oil inlet, a worm wheel 5 secured to said hollow valve, a worm 10 mounted in the casing to engage with said worm wheel, and a valve stem mounted within the hollow valve and arranged to regulate the discharge of steam therefrom. 17th. In combination with case or shell 1, provided with steam inlet 6, circumferential enlargement 17, oil inlet 16 and discharge nozzle 3, the rotatable hollow valve 7 pro-