

F, F having pawls *f, f*, substantially as specified. 3rd. The combination of weighing buckets B, B, with chain D, sprocket-wheel E having notches *e, e*, one on each side face, bent scale-beams F, F pivoted at their lower ends to the frame of the machine and arranged one on each side of said wheel E, guards *f, f* for the free ends of said scale-beams, and pawls *f, f* pivoted to said scale-beams, substantially as specified. 4th. The combination of weighing buckets B, B, with line or chain D, pulley E furnished with notches *e, e*, bent scale-beams F, F having pawls *f, f*, and register in operating arm K secured to the shafts of said pulley E, substantially as specified. 5th. In an automatic weighing-machine, the weighing bucket B furnished with an open-bottomed top-closed vertical valve shell or case having side openings near its base, and a vertically-moving piston inside said shell for opening and closing the openings in said shell, whereby the working parts of the valve are kept free from interference, substantially as specified. 6th. In an automatic weighing-machine, the combination, with a weighing bucket B furnished with an open-bottomed top-closed valve-shell or case having side openings near its base, of a valve piston inside said shell, and a fixed stop for moving said valve piston by the movement of said bucket, substantially as specified. 7th. The combination of a weighing bucket B, with open-bottomed top-closed valve-shell *b*, having side openings *b*, loaded valve piston *b*, and adjustable fixed stop *b*, substantially as specified. 8th. The combination of weighing bucket B, with open-bottomed top-closed valve-shell *b* having side openings *b*, loaded valve piston *b*, and adjustable fixed stop *b* furnished with yielding cushion *b*, substantially as specified. 9th. The combination, with a pair of vertically-moving weighing buckets, and a chain for operating said buckets, of a pair of filling valves arranged above said buckets, and each consisting of a valve-shell or case having side openings near its base, and a valve piston working in said shell, substantially as specified. 10th. The combination, with a pair of vertically-moving weighing buckets, and a chain for operating said buckets, of a pair of filling valves arranged above said buckets, and each consisting of a valve-shell or case having side openings near its base, and a valve piston working in said shell, said bucket-chain being furnished with projections for operating said valve piston, substantially as specified. 11th. The combination, with a pair of vertically-moving weighing buckets, and a chain for operating said buckets, of a pair of filling-valves arranged above said buckets, and each consisting of a valve-shell or case having side openings near its base, and a valve piston working in said shell, said valve piston operating by its own gravity in one direction, and said chain being provided with projections for raising said valve pistons, and opening said valves when said buckets are in turn brought to their filling positions, substantially as specified. 12th. The combination, with weighing buckets B, B, of chain D, pulley E, hopper or grain-receptacle G, bottom G¹ having grain-discharge openings *g*, valve-shells H, H having ports *h, h* near their base and pistons H¹, H¹, said chain D being formed with projections *d, d* for operating said valve pistons, substantially as specified. 13th. The combination of weighing buckets B, B, chain D having projections *d, d*, pulley E having notches *e, e*, bent scale-beams F, F having pawls *f, f*, filling hopper or receptacle G, valve-shell or case H having side openings *h*, and pistons H¹ operated by said projections on said chain, substantially as specified. 14th. The combination of weighing buckets B, B, chain D having projections *d, d*, pulley E having notches *e, e*, bent scale-beams F, F having pawls *f, f*, filling hopper or receptacle G, valve-shell or case H having side openings *h*, and pistons H¹ operated by said projections on said chain, said buckets B, B, each having a discharge-valve consisting of a valve-shell or case *b* having side openings *b*, and a piston *b*, substantially as specified. 15th. The combination of weighing buckets B, B, chain D having projections *d, d*, pulley E having notches *e, e*, bent scale-beams F, F having pawls *f, f*, filling hopper or receptacle G, valve-shell or case H having side openings *h*, and pistons H¹ operated by said projections on said chain, said bucket B, B each having a discharge-valve consisting of a valve-shell or case *b* having side openings *b*, and a piston *b* and a fixed stop *b* for raising said valve piston *b* by the descent of said bucket, substantially as specified.

No. 27,952. Tubular Lantern.

(*Lanterne tubulaire.*)

W. C. Whitney, Newport, Vt., U.S. (assignee of Charles E. Kennedy, Beebe Plain, Que.), 7th November, 1887; 5 years.

Claim.—1st. In a tubular lantern, the combination, with the barrel B carrying and holding the globe of a journal neck *b, b*, short hinge-barrel C free to turn upon said neck, the bracket *d*, cover D, tube E¹ and hot air chamber E, substantially as set forth. 2nd. In a tubular lantern, the combination of the hinge-barrel B, neck *b, b*, short barrel C, bracket *d* and cover D, substantially as set forth. 3rd. In a tubular lantern, the combination of the tube A¹, hinge-barrel B, hooked-spring F and catch F¹, substantially as set forth. 4th. In a tubular lantern, the combination of the tube A¹, hinge-barrel B having neck *b, b*, short barrel C, cover D connected to hinge C, hot air chamber E, short open tube E¹, spring F and catch F¹, substantially as set forth. 5th. In a tubular lantern, the combination of the hot air chamber E, downward projecting open tube E¹, cover D, bracket *d* and short hinge barrel C, substantially as set forth.

No. 27,953. Hand Power Drilling Machine.

(*Machine à percer à la main.*)

Riverious P. Elmore New York, N. Y., (co-inventor with Jacob O. Ebbets, Milwaukee, Wis.), and George G. Tillotson, Stroudsburg, Penn., U.S., 7th November, 1887; 5 years.

Claim.—1st. In a rock-drilling machine, in combination, an oscillating hammer, a catch or spring holder so fitted in the frame as to occupy two positions in one locked behind the hammer, and in the other out of the path of the same, and a spring held between the catch and the hammer when the catch is in its locked position, substantially as set forth. 2nd. In a rock-drilling machine having a longitudinally moving drill holder, and a feeding screw parallel therewith, the combination, with the drill-holder and feeding screw, of a slide actuated by the drill-holder, a ratchet wheel surrounding

and provided with means for imparting rotary motion to the screw, a transverse slide, and feed pawl arranged to act on the ratchet wheel, and a connection between the longitudinal and transverse slides whereby they are caused to move in unison, substantially as and for the purposes set forth. 3rd. In combination, the hammer *h*, the spring *k*, the L-catch *l* and the rear end of the carriage *b*, provided with a square socket hole, substantially as and for the purpose set forth. 4th. The double handle formed of two pieces, in combination with locking teeth formed on their adjacent connecting faces, one of the pieces having said locking teeth on both of its sides and connecting bolts, substantially as and for the purpose set forth. 5th. In combination, the hollow drill-holder *f*, the chuck *f*¹ secured to its front end, the collar *f*² at its rear end, and the guide sleeve *a* provided with the elastic washer *a* detachably fitted in its rear end, substantially as and for the purpose set forth. 6th. The combination, with the main frame *a* and screw *c*, of the carriage *b*, sliding half nut *n* fitted in guides at the rear side of the carriage, and the handle *h* located at the front of the carriage, and provided with a crank pin acting in a slot in the nut, substantially as and for the purpose set forth. 7th. In combination, the drill-holder *f*, the slide *g*, the bell-crank *g*¹, the slide *o*, the pawl *o*, the ratchet wheel *p* and the screw *c*, substantially as and for the purpose set forth. 8th. The combination, with the main frame *a* and grooved screw *c*, of the carriage *b*, the ratchet wheel *p* having a spline *p*¹, the pawl *o*, the slide *g*, the bell crank lever *g*¹, the forked slide *g* and the circumferentially grooved drill-holder, substantially as and for the purpose set forth. 9th. In combination, the spring *k*, the L-catch *l*, the hammer *h* pivoted to an arm of the frame, the latch *h*¹ pivoted in the hammer shaft, the links *l*², *l*³ sliding on the belt *l*¹, the forked lever *l*¹ joined to each of the links *l*², *l*³, the connecting link *l*⁴ and the handle *h*, substantially as and for the purpose set forth. 10th. In combination, the hollow drill-holder *f*, the washer *f*¹, the toggle links *l*², *l*³, the slotted link *l*⁴, the bolt *l*⁵, the forked lever *l*¹, the links *l*², *l*³ actuating the hammer, the connecting link *l*⁴ and the handle *h*, substantially as set forth.

No. 27,954. Portable House. (*Maison portative.*)

William M. Duckar, New York, N.Y., U.S., 10th November, 1887; 15 years.

Claim.—1st. A portable house, consisting of a central longitudinal section A, floor sections M and side sections B, C, in combination with suitable end sections, ridge pole N and supports and roof D, substantially as described and shown. 2nd. In a portable house, a shaft, as A, provided with suitable locking devices to support the floor centrally, substantially as described and shown. 3rd. In a sectional house, a central longitudinal part A adapted to support the centrally-disposed ends of the floor sections, in combination with floor sections, provided with suitable devices, as the feet *m*, adapted to adjust the outer portions of the sections to the inequalities of the ground, substantially as described. 4th. In a portable house, a floor consisting of sections M, M, provided with key pieces Z, Z, adapted to permit the sections M, M to be lifted up out of place independently, substantially as described and shown. 5th. In a portable house, the floor sections M, provided with the lip *m*¹ and adjustable feet M³, substantially as described and shown. 6th. In a portable house, the roof, as D, ridgepole N supports P, P and rafters O, O, in combination with the trays B, C and suitable end sections E, F, G, substantially as described. 7th. In a portable house, consisting of suitable sides and roof, the end sections E, E, F, F and roof sections G, G, substantially as described and shown. 8th. In a portable house, the door section E, tongue pieces *d*, *d* and sliding door H, substantially as described and shown. 9th. In a portable house, the trays B, C adapted to fold together and inclose a suitable packing space, substantially as described and shown. 10th. In a portable house, the tray sections C, with window openings therein, in combination with a suitable shutter C² to swing outwardly and glazed sash C³ to swing inwardly, substantially as described. 11th. In a portable house, the tray, as B, provided with a bed adjustable thereto and adapted to fold into the same, substantially as described and shown. 12th. In a portable house, the tray, as C, provided with the hinged table I, adapted to fold into such tray, substantially as described and shown. 13th. In a portable house, the sections A, B, C, E, F, G, and M, in combination with the plates Y having dovetailed slots Y¹, and plates Z, having corresponding dovetail projections Z¹, substantially as described and shown.

No. 27,955. Carbon Machine.

(*Machine à pointes de charbon.*)

John T. Lister, Cleveland, Ohio, U. S., 10th November, 1887; 5 years.

Claim.—1st. The combination in a carbon machine, of a press, a furnace and a mould, with a carrying support for the mould between the press and the furnace, whereby the mould is conveyed from the furnace to the press and back again to the furnace, substantially as set forth. 2nd. The combination, in a carbon machine, of a furnace having a passage-way for the mould, with a press and a mould for the carbons constructed to be carried through the furnace, whereby the carbon dust is warmed as the mould passes through the furnace, substantially as set forth. 3rd. In a carbon machine, a press, a furnace and a carrying support for the mould between said parts, in combination with mould and a device for filling the mould, substantially as set forth. 4th. The combination, in a carbon machine, of a device for filling the mould, a furnace in which the carbon dust is heated in the mould, with said mould and a press, substantially as set forth. 5th. In a carbon machine, a furnace, having an open passage-way extending through it, and constructed to heat the carbon dust in the mould, while said mould passes through the furnace, substantially as set forth. 6th. In a carbon machine, a device for filling the mould, a furnace having a passage-way through it, and a press, in combination with a support connecting said filling device, furnace and press in a circuit, whereby the mould is conveyed round from one to the other in turn, substantially as set forth. 7th. In a carbon machine, a stationary mould-filling device, and a furnace constructed with a passage-way through it for the mould, in combi-