top to be used for the ordinary purposes of a toilet wash-stand, when closed, and provided with a hinged or removable cover of water tight tank or tub adapted to be extended beyond the limits of the casing for use as a bath tub, and to be retracted within the casing when not in use, 2nd. In combination with a casing provided with a hinged or removable cover or lid, and made of suitable height to adapt its top to be used for the ordinary purposes of a toilet wash-stand or commode when closed, the pivoted tank D adapted to be folded into the casing or extended beyond the same and the seat D, 3rd The combination with a commode or wash-stand casing of the pivoted tank D, and the brace or pawl F, adapted to engage with the rear end of the tank D, and lock it in position for use; 4th. The combination with a commode or wash-stand casing of the pivoted tank D, brace F and cord *d*, 5th The combination with a commode or wash-stand casing provided with a hinged lid or cover, of the pivoted tank D, seat G, and one or more drawers H located beneath said seat and in the rear of said tank.

No. 8324. Apparatus for the Manufacture of Drop Shot. (*Appareil de fabrication du menu plomb.*)

Benjamin Tatham, New York, U.S., 22nd January 1878 for 5 years

Claim.—1st. The combination of a shield or cylinder closed at the top and open to the atmosphere at the bottom for retaining heat and keeping currents of cold air from the outside surface of the pan, 2nd. The combination of a dropping pan with a gas flame or other supply of artificial heat applied to the bottom of the pan for regulating and controlling the temperature of the metal in said pan, 3rd. The combination of a dropping pan, a gas flame or other supply of artificial heat situated in the interior of the shield, directly under the bottom of the dropping pan and of a shield or cylinder for retaining heat and keeping currents of cold air from the outside surface of the dropping pan.

No. 8325. Boat Launching Apparatus.

(*Appareil à lancer les bateaux.*)

Martin Bourke, Youngstown, Ohio, U.S., 22nd January, 1878, for 5 years

Claim.—1st. The frame pivoted to the supporting bars, and provided with a slot or groove and pins, for the purpose or adapting it for securing the boat until such time as it is desired to release the same 2nd The combination of the pivoted bars and jointed blocks and spring dogs, with the pivoted notched boat supporting bars C, for the purpose of preventing the latter falling back toward the side of the vessel, 3rd. The windlass ropes, friction brake and weighted lever, in combination with the boat supporting bars pivoted to the side of the ship, 4th. The combination of a strip catch N, cord O and lever L, with the friction brake *h*, windlass D and boat lowering bars C 5th The combination of the adjustable arm of the trip catch N with the screw threaded shank thereof and the weighted brake lever L.

No. 8326. Compound for Facilitating the Combustion of Anthracite Coal.

(*Composé pour faciliter la combustion du charbon dur.*)

DeWitt C. Breed, Buffalo, N.Y., U.S., 22nd January, 1878, for 5 years.

Claim—The combination of a metallic oxide or salt with a silicate when mixed with carbonaceous fuel.

No. 8327. Improvements on Fare Boxes.

(*Perfectionnements aux troncs de wagons.*)

George Beadle, Syracuse, N.Y., U.S., 22nd January, 1878, for 5 years.

Claim.—1st. The combination of the box having dovetailed recesses in its sides, the cross bar K and top B each provided with corresponding dovetailed projecting ends with the front and rear sides, and receiving chute and locks 2nd A fare box provided with a change chute, consisting of two or more parallel or downwardly diverging plates of glass, the space between which is divided into two or more sections by means of sliding gates whereby the fares may be retained in such sections for inspection, 3rd. The combination of the bottom L, the front glass A, back glass A1, parallel or downwardly diverging change chute divided into sections by means of sliding gates and the cover B 4th The combination of the rods F provided with slots, the gate D, the ends of which are inserted in said slots, the springs H placed around said rods and abutting against the said gate, with the side of the box, provided with an aparture and a removable plate placed over the same, to facilitate the removal of the gate, 5th. The drawer S provided with the bolt *b* and register R provided with the lever *m*, in combination with the casing P; 6th. The drawer S provided with the hinged cover portion c, stop *d*, and spring *x*, in combination with the casing P, 7th. The drawer S provided with the discharge chute T, inclined bottom V, lever *m* and spring *n* in combination, 8th The partition O for dividing the receiving chute into compartments 9th The partition O, in combination with the fare receivers N, the receiving chute and the gates C D E.

No. 8328. Process for Desulphurizing Ores.

(*Procédé pour desulfurer les minerais.*)

Zabdiel A. Willard, Boston, Mass., U.S., 22nd January 1878, for 5 years.

Claim—1st. The process of desulphurizing ores by moistening a mixture of the pulverized ore and saw-dust with salt water, and then subjecting the mass to the action of a heated current of air, the current being disseminated throughout the material, and its flow continued until desulphurization is completed 2nd The method of preparing pulverized sulphuret ore or other mineral for treatment by intimately incorporating therewith a suitable proportion of saw dust or other similar combustible substance and moistening the whole with water, with or without salt, 3rd. The process of treating a mass of moistened pulverized sulphuret ore, by intimately incorporating with it saw-dust, or similar carbonaceous matter then passing through this mass a current of air, or air and steam, the quantity of steam (if steam be used) being regulated by the operator, whereby combustion is maintained within the retort: 4th The method of desulphurizing ores containing arsenic or tellurium, or other volatile material, by mixing the ore with saw-dust, properly moistening the mixture, and then passing a current of heated air through the mass, and conducting the vapours and gases rising therefrom at a reduced temperature, into a suitable condensing chamber.

No. 8329. Improvements on a Milk Vessel.

(*Perfectionnements à un pot-de-lait.*)

Henry Aylmer, Melbourne, Que., 22nd January 1878, for 5 years

Claim—The inner vessel A surrounded on its sides by an outer vessel B in which is the partition *f g* and between the wall of which the cooling medium B1 is placed, and provided with a lip D and inlet C at its upper extremity, and its base with an outlet E.

No. 8330. Improvements on Stone Dressing Hammers. (*Perfectionnements aux marteaux à rhabiller les meules.*)

Alexander McDonald, Belmont, Mass. U.S., 22nd January, 1878, for 5 years.

Claim—1st The tapered and separate head parts B provided with the rib *b* and groove *c* 2nd. The tapered and separate head parts A and B provided with the rib *b*, groove *c* and collar C, 3rd. The tapered and separate head parts A and B, provided with the rib *b*, groove *c*, oblique shoulder *a* and handle socket *e* 4th The tapered and separate parts A and B, provided with collar C the rib *b* the groove *c* handle socket *e* and oblique shoulder *a*.

No. 8331. Improvements on Lace Curtain Stretchers. (*Perfectionnements aux platines à rideaux de dentelle.*)

James Gilmy, Toronto, Ont., 22nd January, 1878, for 5 years.

Claim.—1st The substitution of ogee cross bars as B B, as more suitable, in combination with the clamp C C C C, to form an easy adjustable lace curtain stretcher F 2nd The stretcher frame F comprising, in combination, the bars A A B B, clamps C C C C and the headless brass pins *d d d*, &c.; 3rd. The headless brass pins *d d d*, &c., and projecting about three eighths of an inch from the bars A A B B, and leaning at an angle outwards.

No. 8332. Improvements on Axles.

(*Perfectionnements aux essieux.*)

Richard F Pickard and Henry H. Pickard, Tonowanda, N.Y. U.S., 22nd January 1878, for 5 years.

Claim—1st. A vehicle axle and hub box consisting essentially of the axle A, having the permanent collar B and removable collar or collars E, the recessed sleeve F, provided with the wrench section *f* and arranged to revolve between the collars B E and to screw into the box C, 2nd The combination with the axle A having the permanent collar B and screw collar or collars E, and also the oil reservoir I and lubricating groove K, of the recessed sleeve F provided with the wrench section *f*, the hub box C and the cap J; 3rd. A vehicle axle and box in which the box is attached to a sleeve, said sleeve being arranged to revolve between two collars on the axle.

No. 8333. Improvements on Life Boats.

(*Perfectionnements aux bateaux de sauvetage.*)

Martin Bourke, Youngstown, Ohio. U.S., 22nd January. 1878, for 5 years.

Claim.—1st. The improved life-boat having the top or cover B constructed with inclined sides or angular in cross section, and the hull proper having the slightly rounded bottom greatest breadth at or below the water line, and sides inclined inward. 2nd The removable deck or cover be notched flange and screw bolts, in combination with the body of the life boat, 3rd. The life boat provided with the hollow conical projection 4th The combination of the pivoted locking device H with the polygonal paddle shaft, 5th. The improved dead-light formed of the outer or socket tube provided with an inner and outer flange and screw threaded as shown, the inner tube *b* for securing the glass and the nut *d*

No. 8334. Improvements on Boiler Tube Cleaners. (*Perfectionnements aux nettoyeurs de tuyaux bouilleurs.*)

William Dunn and Daniel B Ruffner, Philadelphia, Pa., U.S., 22nd January, 1878, for 5 years.

Claim.—1st The jaws A automatically closed by means of the noses B which are swelled, as at C, 2nd. The conical jaws A with a cylindrical base, 3rd. The jaws, in combination with a closing plate at their base, 4th. The conical jaws with shoulders F, 5th. The conical jaws A closing noses B and base covering plate D 6th The conical jaws A with a cylindrical base, in combination with the noses B, with swells C, 7th The tube cleaner, in combination with the guides G.

No. 8335. Improvements on Buckboard Waggons. (*Perfectionnements aux voitures-planches.*

Andrew King and Robert P King Lowville, N.Y., U.S., 22nd January, 1878, for 5 years.

Claim—1st The combination of the spring-buckboard A, the arm or bracket C, the pivoted spring brace E, with the axle B 2nd The combination of the spring buckboard A, arm C and pivoted double jointed brace E, with the axle B 3rd The combination of the spring buckboard A, arm C, brace E and spring B1 with the axle B, 4th. The combination of the spring buckboard A, with the spring brace E attached to the underside of the buckboard A at one end, and the other end attached to the axle B or other rigid part, that is attached to the axle, 5th. The spring B1 interposed between the axle of the waggon and the end of the spring board A.

No. 8336. Boot and Shoe Pegging Machine.

(*Machine à cheviller les chaussures.*)

Lyman R. Blake, Brooklyn, N.Y., U.S., 22nd January, 1878, (Extension of Patent No. 2014), for 5 years.