No. 12,681. Improvements in Revolving Book Cases. (*Perfectionnements aux bois de bibliothèques tournants.*)

John Danner, Canton, Ohio, U. S., 26th April, 1881; (Extension of Patent No. 6,371.)

No. 12,682. Improvements on Heating Apparatus. (*Perfectionnements aux calorifères.*)

Almon H. Hearington, Rochester, N. Y., U. S., 26th April, 1881; for 5 years.

Claim.—The fire box and water surrounding passages 1 2 3 4, the revolving hopper for supplying fuel through openings 15 16, the revolving ash pan 34, the water surrounded passages for air 22 24 25 26 27 36 38 39, the fire bars containing water 30 31 32 33, also the combination of endless chain and hinged lift for supplying fuel to the tubular steam generators, the winding passages through pipes 5 6 7 8 9, through which heated air and gases are drawn, or forced, for heating ovens or other places, the method of securing the ends of such pipes 11 12, the double acting plungers 1 2 with water surrounded passages 3 4 7 18 24, water reservoir 19 and regulating valve 5, the double oscillating cylinders 8 and plungers 5, hollow centre 1, lever 3 and crank pin 4, and valve at 13 serving either as pumps or measuring reservoirs, the vessels or chambers in combination with such reservoirs and the fire box, the single acting pump having water surrounded passages and hand lever and loaded plunger serving as safety valve, the base plate having water surrounded passages, the water surrounded pipes and union joints in combination with the different parts of the apparatus, the several water surrounded passages such as 2 19 21, and the distributing valves having water surrounded passages through them, the method of making air tight joints by forcing sharp edged rings into recesses containing lead, the stuffing boxes with packing having channels through which water circulates, the general arrangement of apparatus described for consuming and utilizing different kinds of fuel in such manner as to control, utilize and economize the heat of the smoke, gases and other products of combustion, without the use of a chimney, and to deliver them in any manner, and for any required purpose.

No. 12,683. Improvements on Cots. (*Perfectionnements aux lits de bord.*)

Benton Van Dyke and James F. Barnett, Chicago, Ill., U. S., 26th April, 1881; for 5 years.

Claim.—1st. The stretcher bar F *g* composed of two pieces, with a space between them to receive the webbing D, and provided with pivots M to turn and in combination with the anchors I forming parts of the pivots. 2nd. Sliding stops H constructed to remain on the rails A, in combination with the stretcher bar F *g* and webbing D. 3rd. The pocket ties K secured to the under edges of the rails A and combined with the webbing to strengthen the cot and to form pockets for storing away the ends of the cot. 4th. The combination of the webbing D E, loop wires *a a a a*, stretcher bars F *g*, side rails A, head and foot board C and legs B, also with the stretcher ropes J.

No. 12,684. Improvemnts on Creamers. (*Perfectionnements aux gardes-lait.*)

Samuel H. Yeoman, Greensboro, and Benjamin B. Prentice, East Hardwick, Vt., U. S., 26th April, 1881; for 5 years.

Claim.—The combination, in an apparatus for raising cream, of a close cabinet A provided with cover B and doors C C, refrigerating tank D within the upper part of the cabinet containing milk vessels E having funnel bottoms penetrating the bottom of the tank, and floor H under the tank to form a close air chamber.

No. 12,685. Medical Compound. (*Composé médécinal.*)

James Bemis, Des Moines, Iowa, U. S., 26th April, 1881; for 5 years.

Claim.—A hoof salve composed of alcohol, spirits of turpentine, neats foot oil, spirits of camphor, aqua ammonia, beef's gall, sassafras oil, origanum oil, cedar oil landanum, sal soda, beeswax, lard and rosin.

No. 12,686. Machine for Mining Under Water. (*Machine pour miner sous l'eau.*)

Joseph Hébert, Winnipeg, Man., 26th April, 1881; for 5 years.

Claim.—A machine for mining under water composed of a revolving wheel B having arranged around its periphery, a series of bucket-shaped scoops *a*, the said wheel projecting through a hole in the bottom of a scow A supporting it and arranged so as to excavate from the bed of the river or other body of water carrying the scow, in combination with a receiving box K provided with a pump and sluicing trough L.

No. 12,687. Improvements on Feed Water Heaters and Filters. (*Perfectionnements aux chauffeurs et aux filtres de l'eau d'alimentation.*)

James N. White, Rothburg, Mich., U. S., 26th April, 1881; for 5 years.

Claim.—1st. The combination, with the feeding heater A and the filtering device, of the boiler supply pipe D opening within a chamber in said filter, and the stop cock V arranged in supply pipe, within said chamber filter. 2nd. The combination, with the feed water heater A and the boiler supply pipe D, of a filtering device arranged within the heater and consisting of a nest of boxes placed one within the other, with intervening spaces and perforated walls, the perforations being above the bottom of the heater, and on a level, or there about, with the inward projecting open end of the boiler supply pipe. 3rd. A feed water heater and filter consisting of the tank A, the inlet water spraying pipe B B the steam pipe C, and the overflow pipe E having the relation to each other, the boiler-supply pipe D, its stop cock V and filtering device arranged within the heater in relation to each other.

No. 12,688. Improvements in Barley Bearders. (*Perfectionnements aux ébarbeurs d'orge.*)

James Sendall, Brockport, N. Y., U. S., 26th April, 1881; for 5 years.

Claim.—1st. A chamber at the feeding end provided with a cleaning door at the bottom, in combination with a screening cylinder and a rotating shaft, provided with spirally arranged beater or blades. 2nd. A chamber at the feeding end provided with a cleaning door at the bottom, in combination with a screening cylinder, opening therefrom, an automatic self-regulating discharge door, and a rotating shaft provided with a series of spirally arranged blades or beaters. 3rd. A chamber to separate stones, dirt, etc., from the grain, located in the feeding end of the machine and provided with a cleaning door, the bottom of said chamber being below the screening cylinder. 4th. A chamber to separate stones, dirt, etc., from the grain located in the feeding end of the machine, and provided with a cleaning door, the bottom of said chamber being below the screening cylinder, in combination with an extension of said chamber above the body of the machine and provided with a feeding aperture located on the side facing the rear end of the machine. 5th. The combination of a semi-cylindrical screen, located in, and secured to the body of the machine, and a removable semi-cylindrical screen secured to a removable frame, and adapted to be placed upon the rigid screen to form a completed cylinder. 6th. The combination of a feeding chamber the floor of which is located below the screening cylinder, a cleaning door at the bottom of said chamber, a semi-cylindrical screen secured in the body of the machine, and a semi-cylindrical screen secured to a removable frame. 7th. A discharging door for a barley bearder in which the door is hung and arranged with reference to the centre of gravity, so that it exerts automatically an increased pressure to close itself in proportion as the discharge increases, and vice versa. 8th. A screening cylinder in combination with a vertical door of metals, or other heavy material, hinged at the top and provided with an arm and a regulating weight adjustable thereon, said door operating to increase its tendency to close in proportion as the discharge of grain increases and vice versa. 9th. The combination of the separator P, the barley bearder frame A and one or more U-shaped clamping irons provided with clamping bolts. 10th. The cast iron head T provided with flanges to clamp and hold together the frame A of the bearder, and also support and carry the bearding shaft. 11th. The shaft D in combination with a screening cylinder and flat blades or beaters *e* screwed into the shaft, set spirally thereon, and set at an angle thereto to feed the grain through the cylinder.

No. 12,689. Improvements on Self-Counting Egg Packers. (*Perfectionnements aux boites-compteurs à œufs.*)

James Cameron, Victoria, B. C., 27th April, 1881; for 5 years.

Claim.—1st. The egg tray described, the cradlers or compartments of which are formed of cords laced across the tray. 2nd. The tray A having the side boards *b b* and the end boards *c c* perforated with the double series of holes *e e*, in combination with the cords *f*. 3rd. In the egg trays A, the cradles or egg compartments, which are formed of cords laced across the trays, in combination with the crate formed of the bottom board D, cross bars F, frames G and cover H.

No. 12,690. Improvements on Dumping Carts and Waggons. (*Perfectionnements aux charrettes et aux wagons à bascule.*)

Ze Butt, Ocala, Fla., U. S., 27th April, 1881; for 5 years.

Claim.—1st. A crank axle composed of the straps L spindle K and wooden bar or bars R, the straps L being provided with feet *l* and bolted to the wooden part. 2nd. The cart body having the body or bottom curved or sloped from or near its middle portion backward and upward, and its front portion similarly curved or sloped upward and forward, in combination with the crank axle. 3rd. The combination of the cart body curved or sloped the cranked axle, and pole or shafts connected to the central members of the axle by hoops and eyes or hinge joint. 4th. The combination of the cart body, curved or sloped, the cranked axle hinged pole or shafts, and the spring H. 5th. The combination of the cart body and hinged tail board D with the self-acting latch F having the projecting end, which is adapted to strike upon the ground and release the catch when the cart is dumped. 6th. The combination, with the cart body, of a rocking seat Q hung upon the cranked shaft *q* and interposed springs. 7th. The combination of the flaring cart body and wheel A having its spokes and fellies bevelled outwardly, whereby dirt, etc., carried up by wheels will be thrown away from the cart body.

No. 12,691. Improvements on Dumping Waggons. (*Perfectionnements aux wagons à bascule.*)

Kenneth Kennedy, Kenyon, Ont., 27th April, 1881; for 5 years.

Claim.—A dumping waggon box consisting of the rectangularly framed sill pieces A supporting the sides C, the floor constructed of two sections F F telling on pintles G journalled into the longitudinal sills, the ends J fixed to the floor sections and provided with spring catches H engaging with the sills, to hold the sectional bottom horizontally, and, when released, the sections tilt inwardly to dump the contents.

No. 12,692. Improvements on Breast Strap Slides. (*Perfectionnements aux glissants des bricoles.*)

Seth Ward, Princeton, Ind., U. S., 27th April, 1881; for 5 years.

Claim.—1st. The breast strap slide A provided with the loops B B, tongues *a a* and apertures *b b*. 2nd. The combination of the slide A having loops B, tongues *a* and apertures *b*, the strap *c* having a hole in each end and the snap hooks D.

No. 12,693. Improvements on Trace Buckles. (*Perfectionnements aux boucles des traits.*)

James Lally, Kendall, N.Y., U.S., 27th April, 1881; for 5 years.

Claim.—As an improved article of manufacture in the two part trace buckle, composed of the frame *a b c d* and the detachable and sliding