

and sections. 7th. The combination, with the stove pipe or drum, of the chamber B having the openings in its opposite sides, the valves *v*, *D*, the rod *c* carrying the valves *C* and affording means whereby the attachment is held in the pipe, and also for operating the valves.

No. 14,421. Improvements on Centrifugal Machines. (*Perfectionnements aux machines centrifuges.*)

The Burmister and Wains Maskin and Skibsyggeri, Copenhagen, (Assignees of Carl Peterson and Lars C. Nielsen, Roeskilde,) Denmark, 16th March, 1882; for 5 years.

Claim.—1st. In a centrifugal machine, the annular plate *e*, located a short distance below the annular top plate or cover *g* of the centrifugal vessel or receiver *a*, whereby a horizontal annular chamber *e* is produced having lots or inlets *i* impinging upon the outer wall of the vessel *a*. 2nd. The annular plate *e* located a short distance below the annular top plate or cover *g* of the centrifugal vessel or receiver *a* and provided, on its under side, with the curved flange or roller *j*, whereby two ring-formed chambers *i* and *j* are formed in the top part of the centrifugal vessel or receiver *a*, concentric with one another and with said receiver. 3rd. The combination of the centrifugal or receiver *a* having the horizontal ring-formed chamber *e* provided with inlets *i* and stationary discharge pipe *f*, adjustable in the direction of its length and curved at its inner end, to form a tapering mouth piece which projects into the ring-formed chamber *e*. 4th. The combination of the centrifugal vessel or receiver *a* having the horizontal concentric ring-formed chambers *i* and *j* and stationary discharge pipe *f*, adjustable in the direction of their length and curved at their inner ends, to form a tapering mouth piece which project respectively into the ring-formed chambers *i* and *j*. 5th. The combination of the stationary safety jacket *b*, having cover *c*, centrifugal vessel or receiver *a* mounted within said safety jacket and having annular chamber *e* and *j* and curved discharge pipes *f* *f* mounted adjustably upon the cover *c* of the safety jacket. 6th. The combination of the discharge pipe *f* having a screw-threaded section *h* and flanged bed plate *k*, grooved nut *n* having thumb-disk *t*, nut-box or bearing *g* having stop screw *v*, and fixed head piece *l* provided with parallel grooves for the reception of the adjustable plate *k*.

No. 14,422. Improvements in Furniture.

(*Perfectionnements dans les meubles.*)

Oliver S. Garretson, Buffalo, N. Y., U. S., 16th March, 1882; for 5 years.

Claim.—1st. The combination, with a slat board or other wooden part B provided with a dovetail groove *c*, of the frame A constructed with a dovetail rib or flange resting against one side of the groove *c* and provided on its opposite with one or more recessed or depressed inclined key-ways *e*, and one or more wedge keys *F*, adapted to be driven between the key-ways of the frame and the adjacent side of the groove *c*. 2nd. The frame A constructed with a dovetail rib or flange adapted to rest against one side of the groove *c* and provided with one or more recessed or depressed inclined key-ways *e* and one or more projecting lips *g*, made shorter than the key-way and arranged over the least depressed portion of the key-way, whereby an opening is formed opposite the most depressed portion of the key-way, through which the key can be inserted and removed. 3rd. The combination, with the frame A constructed with a laterally projecting lip or flange *g*, of the wedge key *F* engaging under the lip *g* and provided with a laterally projecting lip or flange *h* which overlaps the edge of the wood. 4th. The combination, with a slat board, or other wooden part B provided with a dovetail groove *c*, of the frame A constructed with a dovetail rib or flange resting against one side of the groove *c* and provided on its opposite side with one or more recessed or depressed inclined key-ways *e*, and one or more projecting lips *g* made shorter than the key-ways and arranged over the least depressed portion of the key-ways, and one or more wedge key *F* having a laterally projecting lip or flange *h*. 5th. The frame A constructed with a dovetail rib or flange, adapted to rest against one side of the groove *c* and provided on its opposite side with one or more depressed key-ways *e*, and an opening arranged opposite the most depressed portion of each key-way, through which the key is inserted or removed in a lateral direction, or at right angles to the direction in which it is driven.

No. 14,423. Improvements in Gas Generators. (*Perfectionnements aux générateurs à gaz.*)

Joseph Flannery, Philadelphia, Penn., U. S., 16th March, 1882; for 5 years.

Claim.—The combination of the four vertical chambers located in a single frame work and connected by pipes. 2nd. The combination of the four vertical chambers, which are connected together by means of pipes, one of the pipes being provided with a valve, whereby the two sets of chambers can be disconnected, and each set operated independently of each other, for the production of a non-luminous heating gas and a luminous gas. 3rd. A series of vertical chambers which are connected together by pipes, the retorts passing through the chamber B and heated by the products of imperfect combustion from the chamber A, for the purpose of superheating the steam and distilling the carbonaceous material. 4th. The combination of a series of chambers, which are connected by pipes, one of the chambers of which series is adapted to receive a fire of carbonaceous material in its bottom and is provided with a series of perforated plates in its top, so as to expand and fix the gas as it passes through the plates. 5th. The combination of the four chambers, built side by side in the same casing with their connecting pipes which are built inside of the frame work for the purpose of preventing the radiation of heat and enabling the two generating chambers to be placed side by side. 6th. In a hydro-carbon gas generator, the combination of the chamber A, the pipe D leading from the top of the chamber into the bottom of the chamber B and the gas jet O located at or near the mouth of the pipe, whereby the carbonic oxide is ignited and prevented from accumulating in the top of the chamber B.

No. 14,424. Improvements on Bottle, Jar, and Other Stoppers. (*Perfectionnements aux bouchons des bouteilles, pots, et autres.*)

Nathan Thompson, London, Eng., 16th March, 1882; for 5 years.

Claim.—Combining with a cap cover or stopper, a lever handle *c* pivoted thereto and formed with levers *e*, to act against the end of the bottle neck, or against a projecting ring or flange thereon.

No. 14,425. Improvements on Evaporators. (*Perfectionnements aux appareils évaporatoires.*)

John C Gunn, Knoxville, Tenn., U. S., 16th March, 1882; for 5 years.

Claim.—1st. The combination, with a stove or heater, of a casing G having smoke flues D, hot air flue I, shelves K, and cold air entrance Q. 2nd. The combination, with a suitable casing having vertical smoke flues, of the shelves or partitions K, having flanges L and flaps *m*, forming screens between the smoke flues, and the trays *n* supported upon said shelves.

No. 14,426. Improvement on Tuyeres.

(*Perfectionnement dans les tuyères.*)

Oliver P. Clayton, Holly Springs, Ga., U. S., 16th March, 1882; for 5 years.

Claim.—The combination of the air chamber A, top C, adjustable rod H having a grate F at its top, stopper T and the means for rotating the rod backward and forward and raising the stopper.

No. 14,427. Spirometer. (*Spiromètre.*)

Mathieu Souvielle, Montreal, Que., 16th March, 1882; for 5 years.

Claim.—In an apparatus for facilitating the use of medicated inhalations, the combination, with a box provided with a double cover and inlet and outlet tubes or openings, of perforations or inlets arranged in the inside cover, for the admission of air to the interior of the box.

No. 14,428. Improvement on Swivels for Adjusting Pumps and Pump Rods in Deep Wells. (*Perfectionnement des perriers pour ajuster les pompes et les tiges des pompes dans les puits profonds.*)

Henry Cairns, Petrolia, Ont., 16th March, 1882; for 5 years.

Claim.—1st. The combination of the links C and F, with the clamp A. 2nd. The combination of the slot plates H H, with the clamp A.

No. 14,429. Improvements for Hanging Lock Gates. (*Perfectionnements aux pentures des portes d'écluses.*)

Thomas B. Townsend, Ottawa, Ont., 17th March, 1882; (Extension of Patent No. 7265.)

No. 14,430. Apparatus for Gelatinizing Grain. (*Appareils pour convertir le grain en gélatine.*)

Edward Luck, London, Eng., 17th March, 1882; for 5 years.

Claim.—1st. In apparatus for the gelatinization or conversion of grain, the use of a revolving hollow shaft with hollow arms having inclined perforated faces, so that steam passing down the shaft and into the arms will issue through the perforations in a backward and downward direction. 2nd. The combination of parts with reference to the accompanying drawings, constituting apparatus for the gelatinization or conversion of grain. 3rd. The combination of the shaft B, arms C C, and perforated covers D.

No. 14,431. Improvement on Steam Engine Valve Gears. (*Perfectionnement des engrenages de soupapes des machines à vapeur.*)

James Scott, (Assignee of Elon A. Marsh,) Battle Creek, Mich., U. S., 17th March, 1882; for 5 years.

Claim.—In combination with the main driving shaft of an engine and the valve rod thereof, the intergearing cog wheels of equal diameter, one fixed on the driving shaft, and the other capable of a movement partially around the first mentioned wheel, the movable wheel having a wrist pin, to which the valve rod of the engine is connected, whereby the said valve rod is adapted to reciprocate the valve and operate the same to reverse the engine.

No. 14,432. Improvements on Sewing Machines. (*Perfectionnements aux machines à coudre.*)

George Doolittle, Bridgeport, and W. J. Bradley, New Haven, Ct., U. S., 17th March, 1882; for 5 years.

Claim.—1st. In a sewing machine attachment consisting of a tubular box or work holder adapted to contain a rope or congregation of strands of yarn, or other suitable material, mounted in boxes or bearings arranged upon a securing plate, said box or work-holder adapted to rotate in its bearings upon an axis at right angles to the needle, in combination with suitable intermediate mechanism between the work-holder and the driving mechanism of the machine, whereby a rotary feed is given to the rope or yarn contained in the tubular work-holder and short circumferential and intersecting diametric