

No. 13,924. Improvements on Head Lights for Locomotives. (*Perfectionnements aux lanternes des locomotives.*)

Irvin A. Williams, Utica, N. Y., U. S., 2nd January, 1882; for 10 years.

Claim.—1st. The combination of a reflector provided with means whereby it is connected to its support and is allowed to tilt out of the range of the burner, a burner and a head light case. 2nd. The combination of a reflector provided with means whereby it is connected to its support and is allowed to slide upward, out of the range of the burner, a burner and a head light case. 3rd. The combination of a reflector provided with means whereby it is connected to its support and is allowed to slide and tilt, out of the range of the burner, a burner and a head light case. 4th. The combination of a reflector having a chimney attachment and provided with means whereby it is made movable within the head light case, out of the range of the burner, a burner and a head light case. 5th. The combination of a removable burner, a head light case and a reflector provided with means whereby it is connected to its support and is allowed to have a tilting movement, out of the range of the burner. 6th. The combination of a removable burner, a head light case and a reflector provided with means whereby it is connected to its support and is allowed to have an upward sliding movement out of the range of the burner. 7th. The combination of a removable burner, a head light case and a reflector provided with means whereby it is connected to its support and is allowed to have a tilting and a sliding movement, out of the range of the burner. 8th. A reflector provided with means whereby it is permanently supported and allowed a tilting forward movement out of the range of the burner while in the head light case.

No. 13,925. Improvements in the Art of Raising Bread. (*Perfectionnements dans l'art de faire lever la pâte.*)

Charles E. Avery, Boston, Mass., U. S., 2nd January, 1882; for 5 years.

Claim.—1st. The improved baking powder, or cream of tartar substitute described, composed of an acid lactate with an alkaline carbonate or bicarbonate. 2nd. A bread-raising composition composed of acid lactate of calcium and an alkaline bicarbonate or carbonate.

No. 13,926. Improvements in Straw-Cutters. (*Perfectionnements aux coupe-pailles.*)

Cornelius Shepardson, Czajenovia, N. Y., U. S., 2nd January, 1882; for 5 years.

Claim.—1st. In combination with the gate B arranged to reciprocate vertically across the end of the box A, the knife C having V-shaped teeth, and the cutting edges thereof formed by a continuous bevel at the front, and a short level around the points at the rear. 2nd. In combination with the box A and the knife C, the gauge D having ears a, adjustably connected with the brackets b having slot c. 3rd. The combination, with the box A provided with vertically reciprocating knife C, of the plate E, sustained by the downward projecting arms d having lugs e, and the bolts passing through said lugs. 4th. In combination with the knife C operated by the foot lever F, the apron G.

No. 13,927. Improvements in Hot Water Heating Apparatus. (*Perfectionnements aux calorifères à eau.*)

John Pye, Quebec, Que., 2nd January, 1882; for 5 years.

Claim.—1st. The boilers B B having return water inlets Q, intervening fire chambers E, coil pipes or sections I rising transversely over the fire chamber and connecting the boilers B B with horizontal tubular headers J J having branches o within the walls K K enclosed by top L, whereby, when distributing pipes are connected to the branches o and inlets Q, the circulation of water will be carried through the coil headers and distributing pipes, and returned to the boilers. 2nd. A series of sectional pipes or coils I, each section independently connected to a boiler arranged on both sides of the fire chamber and with tubular headers H common to all the sections of one boiler, the whole enclosed by walls K and top L. 3rd. The combination, within suitable sides and top of the boilers B B, intervening fire chamber E, tubular headers H, connecting sectional pipes or coils I with a series of distributing pipes connecting the header and boiler. 4th. The shaker composed of triangular bars R, intervening the grate bars mounted on transverse bars S and reciprocated by lever T.

No. 13,928. Improvements in the Method of, and Apparatus for Breaking Down and Getting Coal and other Minerals in Mining. (*Perfectionnements dans la méthode de briser ou extraire le charbon et autres minéraux en minant, et dans les appareils pour cet objet.*)

Charles S. Smith, Leicester, and Thomas Moore, Shipley, Eng., 2nd January, 1882; for 5 years.

Claim.—1st. The method of breaking down or getting coal and other minerals by the introduction into bore holes of caustic lime, which, after compression and confining by lamping or otherwise, is brought into contact with water or other suitable liquid along the entrance or greater part of the length of the charge so as, by the expansion of the lime and pressure of the steam generated, to produce sufficient force for breaking down the mineral. 2nd. In breaking down or getting coal or other minerals, a cartridge formed of compressed caustic lime having one or more longitudinal grooves or passages, to serve as channels for the introduction of water. 3rd. In combination with cartridges or charges of caustic lime, a perforated or slotted or permeable tube placed along the side or through the body thereof and serving to bring water into intimate contact therewith. 4th. In combination with the perforated or slotted tube for lime cartridges, a

covering of woven fabric for preventing the lime from entering the holes of the tube.

No. 13,929. Improvements on Door Knobs. (*Perfectionnements aux boutons des portes.*)

George M. Hathaway, Jersey, N. J., U. S., 2nd January, 1882; for 5 years.

Claim.—The knob shank C having one internal side inclined as at c and inclined seat c₂, and the knob D having a central counter-sunk aperture d₁ and inclined surface d to correspond with the seat c₂, combined with the wedge F having perforated arm F and the screw E adapted to serve with the spindle A.

No. 13,930. Improvements on the Process of Tanning Hides. (*Perfectionnements dans les procédés de tannage des peaux.*)

Robert F. Dobson, Darlington, Wis., U. S., 2nd January 1882; for 5 years.

Claim.—The improved process of tanning hides which consists, first, in immersing them for five or ten days or thereabout, in a bath formed of strong brine and tanning extract, or of strong brine alone, second, in placing them in an air tight compartment and subjecting them to the action of fumes of sulphur therein for twelve or twenty-four hours.

No. 13,931. Improvements on Car-Couplings. (*Perfectionnements aux accouplages des chars.*)

James E. Smith, Wilkesbarre, Pa., U. S., 2nd January 1882; for 5 years.

Claim.—1st. The combination, with the longitudinally slotted draw-head provided with bearings C, of the transverse shaft D to which is detachably secured the angular coupling pin I. 2nd. As an improvement in car-couplings, the combination of the longitudinally slotted draw-head A having eyes or bearings C, shaft D having crank E and detachable angular pin I, lever G and chain F or its equivalent. 3rd. The combination, with the draw-head formed with the slots B, of the transversely arranged shaft D journaled in the bearing C, that is secured directly to the draw-bar, the bent pin I secured to said shaft and arranged to work in the slots of the draw-head, the crank arm F upon one end of the shaft C and connecting with the operating lever, and the dog G pivoted to the side of the draw-head in position to be brought against the crank.

No. 13,932. Improvements on Vacuum Dredges. (*Perfectionnements aux dragues à vide.*)

Abel C. Whittier, Boston, Mass., U. S., 2nd January, 1882; for 5 years.

Claim.—The steam vacuum chamber provided with trunnions and supported in bearings, to be tipped backward and forward and having the draft pipe g g combined with the second turn-table.

No. 13,933. Improvements in Flower Crocks. (*Perfectionnements aux pots à fleurs.*)

Amelia D. Polsgrove and Benjamin R. Davis, Catawissa, Penn., U. S., 2nd January, 1882; for 5 years.

Claim.—1st. The combination of the pot A having tube B and base N, the lining G provided with tube H, and the cup E. 2nd. The combination, with the flower pot or crock A provided with a screw collar D, of the cup E provided with a screw collar F. 3rd. The combination of the flower crock or pot A provided with a screw collar D, and a tube B of the cup E provided with a screw collar F. 4th. The combination, with the flower pot or crock A, of the lining G provided with a tube H projecting from its bottom.

No. 13,934. Improvements on Door Checks. (*Perfectionnements aux arrête-portes.*)

The Norton Door Check and Spring Company, Portland, Me., (Assignee of Lewis C. Norton, Boston, Mass.) U. S., 2nd January, 1882; for 5 years.

Claim.—1st. The combination of the cylinder C with its cap e and piston d, the three parts forming a chamber for the compression of air, which chamber is provided with two outlets, one adjustable by hand and the other automatically. 2nd. The door check consisting of the cylinder C, piston d and cap e with its automatically adjustable valve. 3rd. The adjusting device consisting of the hollow screw E and the adjusting screw F. 4th. The combination of the cylinder C, cap e, piston d, spring E, cap e with its valve, and the adjusting device F. 5th. The valve consisting of the cap e provided with the hole f and ridge or shoulder g, and the flexible disk i provided with slots h. 6th. In combination with a door and its frame of a door check in which the forward stroke of the piston is controlled by compressed air, provided with an arm whereby its piston rod may be operated, a guide rod whereby the stroke of its piston will be controlled, and suitable devices for the attachment of said arm guide rod and door check to the said door or its frame. 7th. The combination of the door check C, D, hinge plate J, guide rod H and the arm G provided with a suitable device for attaching it to the door or its frame. 8th. The combination of the piston rod D, guide rod H and arm G with its adjusting disk K.

No. 13,935. Composition to be Used as Paint. (*Composé à peinture.*)

Anthony W. Burke, Stayner, Ont., 2nd January, 1882; for 5 years.

Claim.—A compound composed of resin, shellac, camphor, castor oil and glycerine dissolved in methylated spirits and colored with lamp black or any other coloring, the whole compound in the manner and in the proportions specified.