

No. 21,362. Doubletree Cleyis.*(Volée de Polonmier.)*

Herman M. Zinn, Bleinheim, Ont., 2d April, 1885; 5 years.

Claim.—The combination of the projection C, the washer figure 2, together with the slots A and B, substantially as and for the purpose hereinbefore set forth.**No. 21,363. Direct Acting Engine.***(Machine à Effet Directe.)*

Charles C. Worthington, Irvington, N.Y., U.S., 2nd April, 1885; 5 years.

Claim.—1st. The combination, with a main cylinder and piston, of one or more compensating cylinders and piston, which are arranged to act in opposition to said main piston, during the first part of its stroke, and in conjunction therewith during the last part of its stroke, a tank communicating with said compensating cylinder or cylinders, and an air-compressing pump which is operated by the engine and communicates with said tank, substantially as described. 2nd. The combination, with a main cylinder and piston, of one or more compensating cylinders and pistons, which are arranged to act in opposition to said main piston during the first part of its stroke, and in conjunction therewith during the last part of its stroke, a tank communicating with said compensating cylinder or cylinders, and an air-compressing pump which communicates with said tank and is operated from the engine, so as to make two strokes to each stroke of the engine, substantially as described. 3rd. In combination, with the main cylinders and pistons, forming the two sides of a duplex-engine, and provided with means by which each side actuates the valves of the other, of one or more compensating cylinders and pistons, arranged to operate in connection with each side of said engine and acting in opposition to said main pistons during the first part of the stroke, and in conjunction therewith during the last part of the stroke, a tank communicating with said compensating cylinders, and an air-compressing pump which communicates with said tank, and is operated from the engine so as to make two strokes to each stroke of the engine operating it, substantially as described. 5th. The combination, with a main cylinder and piston and one or more compensating cylinders and pistons, arranged to operate in connection therewith, of a tank communicating with said compensating cylinder or cylinders, an air-compressing pump which is operated by the engine and communicates with said tank, and means by which the position of the piston or plunger of said pump can be varied so as to regulate the amount of air forced into the tank at each stroke, substantially as described.

No. 21,364. Steam Boiler. (Chaudière à Vapeur.)

Milton W. Hazelton, New York, N.Y., U.S., 2nd April, 1885; 5 years.

Claim.—1st. The combination, with the steam chamber of a boiler and the steam delivery pipe, closed at its inner end, of a series of tubes with closed outer ends radiating from the steam chamber into a hot air chamber, and a series of smaller open-ended tubes radiating from the steam delivery pipe into the said steam chamber tubes, substantially as and for the purposes set forth. 2nd. The method, substantially as herein described, of drying or superheating steam, consisting in subdividing the mass of steam into many distinct and individual columns or jets, and exposing them to heat by causing the steam from the steam-chamber to enter a series of tubes radiating therefrom, and then to pass into tubes that radiate from the steam delivery pipe into the steam chamber tubes and thence into the steam delivery pipe, said steam chamber, and the tubes radiating therefrom being exposed to heat in a hot-air chamber, as set forth.

No. 21,365. Hay-Cutter. (Coupe Paille.)

Charles A. Clark, St. John, N.B., 2nd April, 1885; 5 years.

Claim.—The knives L, and the method of connecting the frame-work containing the knives with the crank-wheel, and also the combination of the knives and frame-work with the cog-wheels and crank wheel, as above described.

No. 21,366. Apparatus for the Purification of Water. (Appareil pour la Purification de l'Eau.)

Albert R. Leeds, Hoboken, N.J., U.S., 2nd April, 1885; 15 years

Claim.—1st. In an apparatus for the purification of water, the water supply pipe A, receiving water under pressure from any suitable source, and the air-supply pipe B, receiving air under pressure from any suitable source and a conducting main C, through which the communicating air and water under pressure and in motion will be conveyed to a suitable reservoir or point of discharge, substantially as and for the purpose hereinbefore described. 2nd. In an apparatus for the purification of water, the combination of a water supply pipe A, provided with a check valve a, and air-supply pipe B, provided with a check valve b, a conducting main C, and a reservoir D, substantially as and for the purposes hereinbefore described. 3rd. In an apparatus for the purification of water, the water supply pipe A, and an air-supply pipe B, with a conducting main C, having, at suitable intervals in its length, a series of pressure chambers D, E, and F, substantially as and for the purpose hereinbefore described.

No. 21,367. Process for the Purification of Water. (Procédé pour la Purification de l'Eau.)

Albert R. Leeds, Hoboken, N.J., U.S., 2nd April, 1885; 15 years.

Claim.—1st. In the art of purifying water, the process of saturating water with oxygen or ozone, consisting in introducing into water while in motion under pressure, compressed air also in motion, substantially as hereinbefore described. 2nd. In the art of purifying water, the process of saturating it with oxygen or ozone by causing to come in contact, while under artificial pressure and in motion, with compressed air, in a system of pipes with or without pressure chambers along its length, permitting both air and water to enter under pressure to move through said system while under pressure, and to be discharge into a suitable reservoir, substantially as hereinbefore described.

No. 21,368. Lamp. (Lampe.)

William H. Harvey, Medford, Ont., 2nd April, 1885; 5 years.

Claim.—1st. The combination, in lamps, of the cylindrical air-chamber A, having opening F, E, and collar D, enclosing wick case B, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the suspended isolated wick case B, with the cylindrical air-chamber A, substantially as and for the purpose hereinbefore set forth.

No. 21,369. Apparatus for Justifying and Stereotyping Matrix Strips. (Appareil pour Justifier et Stéréotyper les Bandes des Matrices.)

Mirritt H. Dement, Chicago, Ill., U.S., 2nd April, 1885; 5 years.

Claim.—1st. The combination of the grooved bars A, with the movable covers F, substantially as and for the purposes shown and described. 2nd. The combination of the bars A, plate G, having bars F, and plate a, having transverse ridges c, substantially as and for the purposes shown and described. 3rd. The combination of the bars, provided with bevelled tongues f, and the matrix strip E, provided with a bevelled edge, substantially as and for the purposes shown and described. 4th. The combination of the plate d, strips E, and grooved plate a, substantially as and for the purposes shown and described. 5th. The combination of the grooved plate I, stops Q, and R, and pedal, substantially as and for the purposes shown and described.

No. 21,370. Manufacture of Solidified Compound Metals. (Fabrication des Métaux Solides Composés.)

Ferdinand E. Canda, New York, N.Y., U.S., 2nd April; 5 years.

Claim.—1st. A mixture or compound composed of two or more ground, pulverized, granulated or otherwise divided metals, or of two or more alloys, or of one or more metals with one or more alloys, solid at ordinary atmospheric temperature, mixed in any desired proportions, such mixture or compound being in a loose form or condition, as and for the purposes specified. 2nd. A mixture or compound, composed of two or more ground, pulverized, granulated or otherwise divided metals, or of two or more alloys, or of one or more metals with one or more alloys, solid at ordinary atmospheric temperature, any or all of which are coated mixed in any desired proportions, such mixture or compound being in a loose form or condition, as and for the uses mentioned. 3rd. A solidified compound metal composed of two or more metals or two or more alloys, solid at ordinary atmospheric temperature, in any desired proportions, soldered or welded together and forming one compact mass, substantially as and for the purposes mentioned. 4th. The method of producing the within described material or compound, which consists in first grinding pulverized granulating, or otherwise dividing into particles, two or more metals or two or more alloys, or one or more metals with one or more alloys, solid at ordinary atmospheric temperature, and mixing in any desired proportions, substantially as described. 5th. The method, herein described, of making a material or compound from two or more metals or two or more alloys, or from one or more metals with one or more alloys, solid at ordinary atmospheric temperature, which consists in first grinding pulverized granulating or otherwise dividing into particles the metals or alloys, and then coating or covering the same with other metals or alloys melting at lower degrees of temperature, substantially as herein specified. 6th. The method, herein described, of making a solidified compound metal, which consists of first grinding, pulverizing, granulating or otherwise dividing two or more metals or two or more alloys, or one or more metals with one or more alloys, solid at ordinary atmospheric temperature, then subjecting the whole to heat sufficient to bring some or all of the metals to a welding or soldering state, and afterward pressing the same while hot to perfect the welding or soldering and to give the mass or compound metal compactness, solidity, and shape, substantially as set forth. 7th. The method, herein described, of making a solidified compound metal, which consists of first grinding, pulverizing, granulating or otherwise dividing two or more metals or two or more alloys, or one or more metals with one or more alloys, solid at ordinary atmospheric temperature, then coating one or more of said metals or alloys with other metals or alloys melting at lower degrees of temperature, the subjecting the whole to heat sufficient to bring the metals, or alloys, or the coating thereof to a soldering or welding state, and afterward pressing the same while