

No. 1733. JOHN LEVEY, Toronto, Ont., 28th October, 1872 for 5 years: "A Steam Printing Press." (Une presse d'imprimerie à vapeur.)

*Claim.*—1st. The application of the steam cylinder and its connections, when the same are used to transmit power to printing or lithographic presses, said cylinder and connections forming part of the same; 2nd. The application of steam, hot air or gases directly applied to the machinery of printing or lithographic presses to set the same in motion; 3rd. The use of steam or gases, as cushions or buffers in printing or lithographic presses to overcome the momentum on the vibratory and reciprocating parts of the machinery.

No. 1734. FRANÇOIS X. VANDANDAIGUE DIT GADBOIS, St. Denis (St. Hyacinthe) Que., 2nd November, 1872, for 5 years: "A Washing machine." (Une machine à laver.)

Consists in a single bottom of corrugated zinc and the manner in which by iron rods it is joined to the tub.

*Claim.*—1ro. Dans la combinaison avec une Blanchisseuse mécanique d'un seul fond B, on zinc cannelé, inséré dans les côtes latérales de la cuve; 2no. Dans la combinaison avec le fond B, et les côtes A, de la cuve de broches on fer C, C, servant à relâcher ou resserrer les côtes et le fond de la cuve.

No. 1735. WILLIAM A. IVES, New Haven, Conn., U. S., 2nd November, 1872, for 5 years: "An Auger Heading machine." (Machine à fileter les meches de carrières.)

*Claim.*—1st. In the process of forming the cutting end of boring instruments, in the arrangement of two dies, the one within the other, the inner or central die operating to form the point, and floor lip or lips, the outer passing over the other or inner die to turn up and size the lip or lips, combined with a pair of holding dies, actuated by the foot to crush the blank; 2nd. In combination with the mandrel F, spindle G, dies c and d, and the holding dies, the cranks a and b, to operate the said dies; 3rd. The dies for forming the spur lips of augers consisting of the dies A, and moveable crimp B, 4th. In the dies figs. 15 and 16 for forming the blank preparatory to introduction to the dies.

No. 1736. WILLIAM G. WARDEN, Philadelphia, Penn., U. S., 2nd November, 1872, for 5 years: "Construction of vessels fit to carry inflammable matter." (Construction de vaisseaux propres au transport des matières inflammables.)

*Claim.*—1st. The construction and arrangement of vessels, in which the engine and boilers are enclosed by a double bulkhead or bulkheads to which steam is admitted, a space being left between the sheathing and inner lining communicating with a steam pipe, the said vessel having a double walled tunnel, in case the shaft passes through any of the cargo spaces extending from the rear bulkhead to the stern; 2nd. The use in steamships for carrying petroleum of double walled partitions or bulkheads forming the wall or walls of gas-tight compartments for holding such cargo, such double partitions being furnished with suitable steam connections with either the steam boiler or engine, or both for the purpose of injecting steam into the cavity of the bulkheads or partitions, in order to test their impenetrability to gas or vapor, and to neutralize the explosive or inflammable character of the petroleum vapor in case any leak should arise; 3rd. The use in combination with otherwise gas-tight cargo spaces or compartments for holding petroleum, of gas-tight hatches, and of ventilating apparatus for carrying off the petroleum vapor; 4th. The combination in steamships or vessels for carrying petroleum of compartments or cargo-spaces gas-tight except at their apertures for ventilation (so made by means of gas-tight bulkheads, deck or covering and bottom, and gas-tight hatches) with ventilating apparatus so constructed with openings for the admission of fresh air and a ventilating pipe or pipes furnished with a steam nozzle for exhausting the vapors so as to prevent the accumulation of the petroleum vapors; and 5th. Constructing steamships or vessels for carrying petroleum in barrels or other packages with a gas-tight cargo space or spaces, the outer wall or walls of which (other than the ship's sides) separating such petroleum cargo space or spaces from other cargo spaces or from other parts of the vessel shall be double metallic walls having a space between them with or without steam connections, such space opening into or directly communicating with the bilge-water space at the bottom of the vessel.

No. 1737. GRAFTON T. NUTTER, Jersey City, N. J., U. S., 2nd November, 1872, for 10 years: "A Railway Wagon Lifting machine." (Machine à élever les voitures de chemin de fer.)

For shifting the trucks from a narrow to a wider gauge or "vice versa."

*Claim.*—In the combination with a rail road track of a lifting machine composed of horizontal shafts M and R, bevelled cog-wheels H, L, P, and V, pinions M, pinions T, F, T, F, horizontal shafts G, G, G, G, pinions C, C, C, C, prime and cog-wheels C, C, C, C, giving motion to four upright screws B, B, B, B, operating on four nuts E, E, E, E, two horizontal beams D, D, and two cross beams D, D, prime, also horizontal shafts V, pulley M, endless chain W.

No. 1738. GEORGE B. CODMAN, Montreal, Que., 2nd November, 1872, for 5 years: "A Tanning process." (Procédé de tannage.)

*Claim.*—The process of tanning hides for bo'ting and all other

kinds of leather by using solutions or liquors composed of gambor or terra japonica, valonia, glauber salt or sulphate of soda, sal soda or other alkali, sulphuric acid and myrabolans in the proportions described to be used in a series of twelve vats, the whole operation to be gone through as described.

No. 1739. EDMUND N. LACROIX, Minneapolis, Ma., U. S., & WILLIAM T. ARCHIBALD, Moulinette, Ont., 7th November, 1872, for 5 years: "Improvements on Flour Bolts." (Perfectionnements aux bluteaux.)

Mechanical arrangement whereby the flour as well as the fine bran and other fibrous matter is separated from the middlings which are then prepared for re-grinding and purification.

*Claim.*—1st. The adjustable eccentric c, c, in combination with the suspended and vibrating bolt-frame B, and bolt-cloth b; 2nd. The combination of the reciprocating bolt cloth b, endless chain f, caps, brackets I, when constructed to revolve on their own axis while travelling with the chain and in contact with the bolt-cloth; and 3rd. The middlings separator composed of the feeding device F, reciprocating bolt cloth b, travelling and revolving brushes I, conveyor K, partitions C, and exhaust fan D.

No. 1740. JOHN PURDIE Administrator of the Estate of H. L. Purdie, Buffalo, N. Y., U. S., 7th November, 1872, for 15 years: "Locking Washers for nuts." (Rondelles d'écrans.)

*Claim.*—1st. In the combination with a washer-plate A, of one or more pivoted dogs B, so arranged as to enter a recess a, in said washer-plate, when the nut D is turned home while the dog or dogs B, are swung out by the side of the nut after the latter is tightened and held in this position by gravity, thereby locking the nut against backward rotation; 2nd. In the combination with the pivoted dog B, and slotted washer H, of the spiral spring K, and locking notch L, for securing the dog B, in its projecting and engaged position; and 3rd. In a washer F, provided with a pivoted dog B, having the locking parts.

No. 1741. JOHN JAMES GRANT, SOLON L. WILEY & CHAS. P. RUSSELL, all of Greenfield, Mass., U. S., 7th November, 1872, for 5 years: "Screw Cutter and Drill." (Machine à percer et fileter les écrous.)

Relates to an improvement in the seating lever. In the means for securing and adjusting the revolving die-holding disc to the head-stock. In the adjustment of the feed. In the construction and arrangement of the yoke bearing the shaft and in an adjustable nut chuck capable of holding square and hexagon nuts.

*Claim.*—1st. In the combination of the die-holding disc, provided with slots for the reception of the locking pin the head stock provided with a projection to which the disc is pivoted, and the locking pin; 2nd. In combination with the head-stock, the starting lever provided with a pawl; 3rd. In the construction of the reversible chuck-plate J, the socket in which the said chuck-plate is fitted, and the vertical spring bolt; 4th. The disc D; 5th. In the combination of the shaft H, provided with two or more cams h, h, reciprocating bar W, adjustable casing w, having a slot m, spiral spring r, thumb-nut i, pawl r, and the ratchet wheel q; and 6th. In the combination of the yoke provided with wheels bearing the shaft; the operating gear revolving upon a fixed journal secured to said yoke, the shaft and the work-holding chuck.

No. 1742. SAMUEL R. BOWIE, & HENRY LIBBEY, New Bedford, Mass., U. S., 11th November, 1872, for 5 years: "Glass Blower's Mould." (Moule de verrerie.)

*Claim.*—1st. The rotary mould for forming the outer surface of a blown glass article; 2nd. In the combination of a stationary axial bed or bottom former with the rotary mould or body-former; 3rd. A mould as made with a series of peripheral rollers; 4th. In combination with a rotating mould made in two sections or parts, B, B, mechanism for opening and closing the same; 5th. In combination with the stationary axial support or bottom-former, and the rotary mould or parts B, B, mechanism for rotating the latter; 6th. Giving each of the rollers c, a compound motion; and 7th. The new method of forming a glass article, viz. by moving or rotating the mould against the outer surface of the glass while the latter is being inflated or blown out by the glass blower.

No. 1743. CHARLES BARBER, Meaford, Ont., 11th November, 1872, for 5 years: "A Turbine Water Wheel." (Une turbine hydraulique.)

Consists in the combination and working of movable guides or gates with stationary gates in such manner that the alternate gates are pivoted vertically to the case and can be opened or closed to control a volume of water to the extent required.

*Claim.*—1st. In the combination, in a water-wheel, of movable guides or gates D, and stationary chutes C, the movable gates operating on pivot centres F; 2nd. In combination with the upper ring of case K, the arrangement of the ring A, provided with eccentric slots L, in which the controlling pins H, of movable gates fitted to friction blocks work said ring A, being held concentrically by arms J, and hub T, fitting over the neck of cover of wheel case and operated by pinion F, and rack M, or other suitable device.