

No. 1950. JOHN BURKE, Sullivan, Ind., U. S., 9th January, 1873, for 10 years: "Process of Manufacturing Soap." (Procédé de fabrication du savon.)

*Claim.*—The compound composed of the following parts: common hard soap, sul-soda, unsalted lime, water, alum, borax and benzine, substantially, in the proportions and for the purpose set forth.

No. 1961. HUGH FAIRGRIEVE, Hamilton, Ont., 10th January, 1873, for 5 years: "Compound Engine Single Faced Slide Valve." (Tiroir à simple plaque frottante pour les machines combinées.)

*Claim.*—The valve A, as adapted to its operation within the valve-chest B, also in the sole use of the said valve-chest B, and the adjustable pressure valves V and W, as applied for the purpose of balancing the said valve A, together with the sole application of the invention to either compound or single cylinder engines.

No. 1962. LOFTUS PERKINS, London, Eng., 10th January, 1873, for 5 years: "Improvements on Locomotives and Portable Steam Engines." (Perfectionnements aux locomotives et aux machines à vapeur portatives.)

*Claim.*—1st. The combined arrangement or construction of portable or locomotive engines; 2nd. The construction of the steam-boilers of locomotive or portable steam-engines; 3rd. The construction of the fire-box of the steam-boiler; 4th. The manner of forming the joints *d*, and other steam-pipe connections; 5th. The employment of a narrow-packing ring of copper or other metal, or a narrow projecting surface for forming a tight-joint between the cylinder cover and flanges, and also where flange joints are used in other parts, of locomotive or portable steam engines; 6th. The construction of the condenser of portable and locomotive engines, whereby the steam is retained until condensed, and can yet blow-off should any undue pressure come upon the interior of the condenser.

No. 1963. GEORGE BOLTON, Amprior, Ont., 10th January, 1873, for 5 years: "A Stove-Pipe Elbow." (Un coude de tuyau.)

*Claim.*—1st. The combination of the raised inner sections "A, A, A," with the outer sections "B, B," the inner sections "A, A, A," having been first beaded and rounded in the centre, the whole joined together as described; 2nd. The rivetting of the sections "A, A, A," and "B, B," on the throat or inner rim.

No. 1964. WILLIAM P. SCOTT, Chatham, Ont., 10th January, 1873, for 5 years: "A Car Coupler and Buffer." (Un attache-char avec tampons.)

Consists in the peculiar construction of the automatic coupler and its working parts and in a buffer sleeved on the draw-bar and draw-head.

*Claim.*—1st. The draw-head A, At, draw-spring J, link E, pivoted on the pin or bolt I, and provided with the spring E, the guide-tube F, pin D, dog H, and dog-spring G; 2nd. The combination with the guide-tube F, pin D, and dog H, of the slide C, provided with the tongue C<sub>1</sub>, and stud C<sub>2</sub>; 3rd. The combination with a draw-head A, and draw-spring J, of the buffer B, when the buffer is sleeved on the draw-head and has slots in the sides for the same purpose, as the buffer, and is actuated by the draw-spring.

No. 1965. PETER MUNSINGER, Mitchell, Ont., 10th January, 1873, for 5 years: "A Pump." (Une pompe.)

Relates to a means for operating two pistons in the pump cylinder in connection with a tilting working beam.

*Claim.*—1st. The combination with the pump-head of the shaft I, working-beam J, connecting rods K, arms H, piston-rods F, G, and pistons D, whereby the piston-rods operate in a direct line with the cylinder B; 2nd. The combination of a hollow piston-rod G, internal piston-rod F, and pistons D, alternately approaching and receding from each other.

No. 1966. HARRY ELLENDER, Hamilton, Ont., 10th January, 1873, for 5 years: "Car-Coupling." (Un attache-char.)

*Claim.*—The combination and arrangement of the several parts, namely: the pincher joint-d clasp, or holder C, the arrow-headed tongue A, with shank or holder J, the springs D, for closing the jaws of holder, the pivot E, the lever-wedge F, and lever G, and ratchet H, the springs K, for holding shank in centre of bunter in the whole, in connection with the bunters I.

No. 1977. CHARLES P. HOLMES, New York, U. S., 10th January, 1873, for 5 years: "A Horse Breast Collar." (Une bricole de cheval.)

To prevent chafing by friction.

*Claim.*—1st. A breast-collar formed upon a metal band composed of more or less sectional parts *a, b, c, d, e*, hinged together, and padded; 2nd. A breast-collar having the front portion furnished with a downward curved part C, to drop and be below the wind-pipe.

No. 1968. RICHARD M. WANZER, Hamilton, Ont., 10th January, 1873, for 5 years: "A Sewing Machine Stand." (Une table de machine à coudre.)

Relates to a device for instantaneously securing a sewing machine to its stand without the use of thumb-screws or similar contrivances, so that a machine can be rapidly changed from foot to hand or "vice-versa."

*Claim.*—The construction of a sewing machine stand having a recess B, of any size, on the top of the stand, to receive the slab C, or its equivalent as shown in fig. 4.

No. 1969. JOHN VAN B. CARTER & JAMES DWYER, Detroit, Mich., U. S., 10th January, 1873, for 5 years: "A Base Burning Stove." (Un poêle à charbon dont le foyer est à la base.)

*Claim.*—1st. The reservoir M, provided with the plates *k*, and the combustion sleeve N, provided with the air-ducts *l*, arranged within the cylinder of a base-burning stove with relation to a draught register *k*, or equivalent device; 2nd. The hopper *o*, provided with the supporting studs *l*, for supporting it above the magazine M; 3rd. The rotating and tilting grate P, when provided with the jointed arms *n*, the latter with the cavity in its end; 4th. The spider Q, Q<sub>1</sub>, for supporting the grate; 5th. The plate R, provided with the studs *p, p*, in combination with the grate-arm and the slot *q*, of the ash-pit top; 6th. The depression A<sub>1</sub>, in the base-plate A, which with the ash-box-bottom forms the base-flue; 7th. The prolongations B<sub>1</sub>, B<sub>2</sub>, of the side-walls of the ash-box and the flanges *d, d*, of the section E, and an oven or a plain back-plate, which in combination with the fire-pot, form the back-flue; 8th. The double-walled oven F, provided with the partitions F<sub>1</sub>, projecting into and closing the back-flue of a base-heating stove to compel the heated currents to pass around the oven before finding an exit at the smoke-pipe; 9th. The construction and arrangement of the base-plate A, A, ash-box B, fire-pot *c*, annular sections D, E, G, G<sub>1</sub>, K, cover L, magazine M, combustion sleeve N, plates A, air-ducts *l*, register K, hopper *o*, flue H, damper J, and smoke-pipe I; 10th. The combination with the sleeve N, of the adjustable finger-plate N<sub>1</sub>, 11th. The sectional ash-drawer front D<sub>1</sub>.

No. 1970. HENRY S. WOODRUFF, Janesville, Wis., U. S., 20th January, 1873, for 5 years: "A Buckle." (Une boucle.)

The object of this invention is to relieve the brace-strap or belt from strain at the point where it is perforated for a buckle-tongue.

*Claim.*—1st. A fixed tongue on the outer-face of the forward-bar E, of frame A, in combination with a loose curved draft-loop; 2nd. The frame A, tongue D, and loose curved draft-loop B, when the whole are not constructed, combined together, and used, as set forth.

No. 1971. ELIJAH MCCOY, Ypsilanti, Mich., U. S., 10th January, 1873, for 5 years: "A Steam Engine Lubricator." (Un graisseur de machine à vapeur.)

An automatic feeder erected on and acting in connection with the valve-chest of the engine.

*Claim.*—1st. The cap A, stem A<sub>1</sub>, and cap A<sub>2</sub>, having the tube B rod C, valve D, piston E, and cock H; 2nd. The combination with the elements named of the spring F; 3rd. The regulator-stem G, in the cap of a lubricator for regulating the lift of its valve.

No. 1972. CHARLES M. NESS, York, Pa., U. S., 14th January, 1873, for 15 years: "Iron and Steel Manufacturing Process." (Procédé de la fabrication du fer et de l'acier.)

Consists in immersing iron, whether wrought or cast, in a bath composed of carbon or silicon steel, (an ore containing silica, metallic iron, alumina, magnesia, and phosphorus) combined with cinder, and in subjecting a charge of this mixed iron and ore to a blast of oxygen or atmospheric air in a reverberatory furnace.

*Claim.*—1st. The process of manufacturing steel by the immersion of iron, whether wrought or cast, in a bath of melted ore such as specified, used either alone or in connection with other ingredients; 2nd. The manufacture of steel from old horse shoes, or other wrought iron and the ore specified in a crucible; 3rd. The mode of refining or purifying iron in a reverberatory or puddling furnace; 4th. The production of cast-steel in a puddling or reverberatory furnace; 5th. The production of wrought steel in a puddling or reverberatory furnace; 6th. The manufacture of cast or pig-iron from mill-cinder in a blast or other suitable furnace; 7th. The employment of the ore specified for separating the metallic part of the mill-cinder from the impurities mixed with the same.

No. 1973. OLIVER BENOIT, Brockville, Ont., 14th January 1873, for 5 years: "Clothes-Line Fastener." (Porte-linge d'étendage.)

Consists of a revolving cylinder with flange having on its periphery horse-shoe or other shaped notches. The cylinder being attached to the wall, the line can be secured without tie or knot and is easily removed.

*Claim.*—A clothes line-fastener composed of the fixed axis A, having a bent-end or arm H, and cylinder C, rotating thereon provided with a notched flange D, with or without the washer G.