

*Claim.*—1st. In the lining of horse collars and sweat pads with sheet lead or its alloy; 2nd. In the lining of such parts of harness as come in contact with the flesh of the horse with sheet lead or its alloy.

No. 2424. JAMES GRIFFING & BENJAMIN H. SMITH, Ipswich, Mass., U. S., 5th June, 1873, for 5 years: "Machine for Heading Barrels." (Machine à faire les fonds de futailles.)

*Claim.*—In the lever A, bearer B, hooked arm C, hanger D, and spur E, or stirrup F, or both, all combined and arranged together as specified.

No. 2425. DAVID HEATON, Providence, R. I., U. S., 5th June, 1873, for 5 years: "Combination Tools." (Combinaisons d'outils.)

*Consists* of a combination and arrangement of several well known tools in one, in convenient form for the separate use of either one of the combination, with the object mainly to produce a belt-monding implement for use in manufactories, &c.

*Claim.*—1st. In the combination and arrangement of the guide K, notch F, and toothed slot G, with the two pairs forming the jaws and handles constructed as described; 2nd. In the combination of the file the prying implement L, awl reamer knife blade, rule and pincher as described; 3rd. In the belt-monding tool having a knife blade on one handle, and an awl on the other, the sheath O, for the blade and the sheath P, for the awl as described; 4th. In the combination in a single implement of the several tools described.

No. 2426. THOMAS H. HICKS, Chatham, and THOMAS A. PARISH, Ridgetown, Ont., 5th June, 1873, for 5 years: "Process and Machine for the Manufacture of Gas." (Procédé et appareil de fabrication du gaz.)

*Claim.*—The generation of an electro-oxo-hydro carbon gas by means of the action of sulphuric acid on water, quicklime, oil and molasses in the cylinders A, and B, and the combination of A, and B, with C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, as a machine therefor for the purpose set forth.

No. 2427. JAMES COLLINGE & CHRISTOPHER W. J. POOLE, Toronto, Ont., 5th June, 1873, for 5 years: "Metallic Venetian Shutter." (Jalousie en métal.)

As arranged that by raising or lowering the shutter the amount of light admitted can be more perfectly adjusted than by the venetian shutters now in ordinary use. The window sash being rendered burglar proof.

*Claim.*—The combination of metallic venetian sash blinds or shutter B, B', B'', sliding vertically past each other in upright metallic frame C, as set forth.

No. 2428. DENISON CHASE, Orange, Mass., U. S., 5th June, 1873, for 15 years: "Dog for Saw-mills." (Clameau de scierie.)

More particularly adapted to circular saw-mills.

*Claim.*—1st. In a dog for holding saw logs consisting of an adjustable clamped bar E, and stand D, made and operating as described; 2nd. In the combination of the aforesaid dog with the slotted guide C; 3rd. In the combination of the lugs J, with the stand D, and bar E; 4th. In a dog for holding saw logs consisting of the head plate A, slotted upright C, vertical stand D, and dog proper E.

No. 2429. ELI J. SUMNER, Chicago, Ill., U. S., 11th June, 1873, for 10 years: "Dry Kil for Lumber." (Four de séchage du bois.)

*Claim.*—The floor S, in combination with the register O, the tub A, the opening H, the curtains I, and D, the metal strips C, the openings G, and the air drafts A, and M, all being arranged and used as set forth.

No. 2430. LOFTUS PERKINS, London, Eng., 11th June, 1873, for 5 years: "Packing Rings for Steam Engine Pistons and on the Wearing Surfaces of Slide Valves, &c." (Garnitures métalliques des pistons de machines à vapeur et surface de frottement des tiroirs de vapeur, etc.)

*Claim.*—The construction of piston rings and the wearing surfaces of slide valves and bearings and other such like wearing surfaces of a metal capable of burnishing or polishing in presence of water or steam without the use of oil and composed of copper and tin within the proportions given.

No. 2431. MARTIN P. HAYES, & PETER McEwan, Seaforth Ont., 11th June, 1873, for 5 years: "Brine Evaporating Furnace." (Fourneau d'évaporation de l'eau de mer.)

*Claim.*—1st. The construction of evaporating furnaces the return flues E, E, arranged and formed within and against the side walls A, A, to pass to smoke stacks H, H, at the two front corners of the furnace in combination with the furnace chambers D, D, and evaporating pans F; 2nd. The application to the bottom of all the flues of a heat radiating composition compounded of asher, and water lime, or other non absorbent of heat of which ashes forms the chief ingredient; 3rd. In providing the evaporating pans F, with angle or T bars of iron beaded into the top of the walls between the return flues and furnace chambers.

No. 2432. JAMES L. SMITH & BENJAMIN MORRISON, Toronto, Ont., 11th June, 1873, for 5 years: "Art of Road Making." (Art de faire les chemins.)

*Claim.*—The use of blocks of wood in their natural rough state with a filling of gravel, or gravel, sand and lime, or any other similar hard binding and good wearing substances for the making of pathways and roadways.

No. 2433. DAVID RENSCHAW, Syracuse, N. Y., and LOUISA A. LONG, wife of F. LONG, Hingham, Mass., U. S., 11th June, 1873, for 5 years: "Steam Generator." (Générateur de vapeur.)

The object of the invention is to secure a greater economy of space for any given amount of boiler power and also to produce a more economical generation of steam.

*Claim.*—1st. The combination of the reverberatory furnace a, the pipe D, the pipes E, the pipes F, branching out from the pipes E, and returning thereto, and the steam drum G; 2nd. The combination of the reverberatory furnace a, steam drum G, placed outside of the said furnace, horizontal pipe D, and flat disc or equivalent shaped sections H, H, each connected to the said steam drum G, and horizontal pipe D, and having all its surfaces upon which the contained water rests, and upon which sediment can form or deposit, inclined downwardly toward its connection with the horizontal pipe D, and the whole being constructed as set forth; 3rd. The combination with the reverberatory furnace a, of the flat section N, N, made broader in the middle thereof than at their ends and stay bolted by means of stay bolts cast therewith, the pipes E, E, the cross cylinder or pipes M, M, the cylinders or pipes D, and L, L, and the steam drum or steam chest G, 4th. The sections N, N, with stay bolts cast in the same piece and hollow with the outer ends of the openings through them enlarged and the inside angles rounded so as to unite the said stay bolts with the shell of the section upon a curve both inside and outside instead of at an angle.

No. 2434. DAVID RENSCHAW, Syracuse, N. Y., and LOUISA A. LONG, wife of F. LONG, Hingham, Mass., U. S., 11th June, 1873, for 5 years: "Sectional Steam Boiler." (Chaudière à vapeur à compartiments.)

*Claim.*—1st. The verberatory furnace built up of sections, each section or any number of them being cast in a single piece and stay bolted as described; 2nd. The combination of a fire chamber or furnace built up of sections, each section or any number of them, being cast in a single piece and stay bolted with steam generating apparatus, contained within said furnace; 3rd. The reverberatory furnace having its sides composed of a series of flat or flattened sections A, A, curved so as to form an arch when put together, each being complete in itself and connected at or near the top with the steam drum E, and at or near the bottom with the lower water space H; 4th. The combination of the horizontal cross-pipe C, the vertical pipes F, connecting directly with the pipes C, and the pipes G, also connecting directly with the pipes C, at their lower ends, and with the pipes F, at their upper ends; 5th. The combination of the horizontal cross-pipes C, the vertical pipes F, connecting directly with the cross-pipes C, the pipes G, also connecting directly at intervals with the cross-pipes C, and the steam drum E; 6th. The combination of the horizontal cross-pipes C, the vertical pipes F, connecting directly with the said pipes C, the pipes G, also connecting directly with the said pipes C, at their lower ends and with the pipes F, at their upper ends, and the removable heads C, attached to the ends of the horizontal pipes C; 7th. The combination with the reverberatory furnace a built up of sections and stay bolted of the vertical pipes O, opening into the crown thereof; 8th. The combination of the said reverberatory furnace the vertical tubes O, O, opening into the crown thereof and the cross pipes or cylinders C, C; 9th. The combination of the said reverberatory furnace the tubes O, O, opening into the crown of the said furnace, and the steam drum E; 10th. The combination with the steam drum E, of the vertical pipes F, curved pipes Q, branching from the said pipes F, and returning thereto, and cross pipes placed in a reverberatory furnace.

No. 2435. ALEXANDER MCCALLUM & THOMAS MOFFAT, Dundas, Ont., 11th June, 1873, for 5 years: "Portable Parlor Grate." (Grille de salon portative.)

Relates to the class of grates usually composed of a metal front and metal grate and set in masonry which forms the back and it