

height of which column is automatically increased or diminished by the pressure of the fluid upon a fountain in the main, according as it is augmented or reduced as specified; 2nd The combination in an apparatus for governing the flow of a fluid by a changing column of water or mercury, of a valve D, an open vessel E, carried by the valve, and exposed to atmospheric pressure, an open tank G, exposed to the pressure of the fluid in the main and a siphon through which the liquid in the tank G communicates with that in the vessel E, all as specified; 3rd. The tank G, in combination with the adjusting screw spindle G¹, siphon H, vessel E and valve D, as specified.

No. 3542. JOHN W. RICKER, Sherbrooke, Que., 10th June 1874, for 5 years: "Washing Machine." (Machine a laver.)

Claim.—1st. The slotted standard E, E, provided with an inclined face, the adjustable half pulley 2, 2, with the slot 3; 2nd The upper half pulley F, F, with the projections f, f, and the flanges i, i; 3d. The bearing 1, the roller H, as described; 4th. The base D, with the slot a, and the fastening plates B, and socket C, with the loop b and wedge c, all constructed as set forth.

No. 3543. YANCY M. C. JOHNSON, Franklinsville, N. C., U. S., 10th June, 1874, for 5 years: "Combination Tool for Shoemakers' use." (Combinaison d'outils à l'usage des cordonniers.)

Claim.—1st. A shoemakers' combination tool consisting of pinners, hammer, nail-drawer and welt-trimmer as described.

No. 3544. THOMAS HAZARD, Wilmington, Ohio, U. S., 10th June 1874, (Extension of Patent No. 2598) for 5 years: "Straw and Hay-cutter." (Coupe-paille.)

Claim.—1st. The knife c having a concave cutting edge, and having one end pivoted to the frame B, and the other end pivoted to a pitman e, which is coupled to an arm on the end of a rotary shaft b; 2nd. The adjustable pin L, applied to the stationary frame support or standard b, in combination with the rock shaft or lever h, rigid pin L, dog h, and cam b¹; 3rd. A presser feed roller for a hay or straw cutter constructed hollow and adapted to the reception of heavy filling; 4th. A presser block for a hay or straw cutter, constructed hollow and adapted to the reception of heavy filling; 5th. The mouth piece E, slotted arm I, and screw-bolt N, in combination with the knife c, constructed, arranged, and operating as specified.

No. 3545. THOMAS HAZARD, Wilmington, Ohio, U. S., 11th June, 1874, (Extension of Patent No. 2598), for 5 years: "Straw and Hay-cutter." (Coupe-paille.)

No. 3546. ISRAEL P. MAGOON and HENRY FAIRBANKS, Johnsbury, Vt., U. S., 15th June, 1874, (Re-issue of Patent No. 2736): "Locomotive Feed Water Heater." (Chaufeur d'eau pour alimenter les locomotives.)

Claim.—1st. A closed heating chamber arranged to receive exhaust steam, constructed with the smoke flue B, as its inner cylindrical wall and the outside casing of the smoke-stack as its outer cylindrical wall and these two connected by the two heads T, T, at the top and bottom of the heater; 2nd. An insulating outer casing of the heating chamber formed by doubling the walls of the outside of a section of the smoke stack; 3rd. A pipe through which the feed water on its way to the boiler is forced, a section of which is disposed in coils around the smoke flue within the said heating chamber; 4th. In combination with the said heating chamber, the duplex coil E, constructed as described, so that the water passes up in one end, down in another helix thereof; 5th. In combination with the said heating chamber the pipes c, c, conducting exhaust steam fr. in the cylinder into the chamber, the pipe A, discharging the steam after it has performed its office from the chamber into the smoke flue to increase the draught and the drip pipe P, removing the water of condensation; 6th. In the feed water heating apparatus of a steam fire engine (whether locomotive, marine or stationary) a coil through which the feed water is forced within an exhaust steam chamber which is insulated by doubling the outside walls as specified; 7th. A smoke stack of a locomotive constructed in sections with a joint near the top of heating chamber in the manner set forth.

No. 3547. JAMES H. WENTWORTH, Boston, Mass., U. S., 15th June, 1874, for 10 years: "Portable Range or Cooking Stove." (Landier ou poêle de cuisine portatif.)

Claim.—A portable range or cooking stove in two detachable parts, as shown, the combination of the hot-closet attachment with the bottom plate G, of the range, the said bottom plate G, being provided with the removable plate F, as set forth.

No. 3548. HUGH JEFFERSON, Toronto, Ont., 15th June, 1874, for 5 years: "Manufacture of Artificial Stone or Marble." (Fabrication de la pierre ou du marbre artificiels.)

Claim.—A compound composed of sulphate of zinc, chloride of zinc, sugar of lead, pulverized alum or rock salt, warm rain water,

marble cement or hydraulic cement, ground siliceous barytes, alumina, calcium or clay and gypsum, the whole mixed in the proportions set forth.

No. 3549. CHARLES H. HUTCHINSON, Manchester, Eng., 15th June, 1874, for 5 years: "Balanced Valve." (Soupape équilibrée.)

Claim.—1st. The chambered weight or piston K, and its supporting levers N, N, applied to the slide valve in combination therewith, and with the chambered cap B, and the open balance or frame D, all being arranged together and with the valve chest or the guard plate F, thereof as described; 2nd. The weight receiving chamber or receptacle L, provided with apertures as described in combination with the valve A, and with the chambered and perforated weight K, the levers N, N, the chambered cap B, and the open balance or frame D, applied to the said cap, all being as specified; 3rd. The metallic packings S, S, and their caps T, arranged together and with the frame or balance D, as described; 4th. The open frame or balance D, provided with the grooves or escape passages arranged in its upper edge as set forth; 5th. The rocker levers N, N, extended laterally across the interior space of the balance or open frame D, or between the partitions as described and arranged to operate as explained, without any weight applied to the inner ends; 6th. The holes i, i, arranged in the top of the valve A, and with the frame balance D, applied to the chamber B, all being as represented; 7th. The perforated bridge and the reed arranged and combined together and with the valve A, the balance D, and with the levers N, N, extended longitudinally and laterally across the space within the balance D, as explained.

No. 3550. DAVIS H. PACKARD, Brockton, Mass., U. S., 15th June, 1874, for 5 years: "Moulded Box for the Toes of Boots and Shoes." (Carre moulée pour les chaussures.)

Claim.—An improved article of manufacture, in a moulded box too for boots and shoes, formed of leather board in manner described.

No. 3551. JOHN T. JONES, Ilion, N. Y., U. S., 15th June, 1874, for 5 years: "Treadle for Sewing Machines, &c." (Marche de machines à coudre, &c.)

Claim.—1st. The rocking lever a, connected to the crank or fly wheel by the pitman c, in combination with the treadles f, and parallel motion bar i; 2nd. The heel pieces m, separate from the moving foot pieces or treadles in combination with the rocking lever a, to which the treadles are connected; 3rd. The treadle for sewing and other machines made with heel and foot bearings and an intermediate space, so that the foot may rest upon both portions or only on the foot bearing for the purposes set forth.

No. 3552. JOHN GOULD, Clinton, Penn., U. S., 15th June, 1874, for 5 years: "Animal Trap." (Piège à vermine.)

Claim.—The combination of the pivoted or tilting platform E, K, connecting rods F, N, levers G, G, pivoted rods H, P, bent lever catches J, Q, cam levers J, R, stop springs S, T, gear wheels V, having pins U, projecting alternately from its opposite sides, coiled spring Z, gear wheel W, shaft C, cranks D, and connecting bars B, with each other and with the three boxes A, B, C, drop-doors F, and wire drop gate M, as described.

No. 3553. MARNELL B. MARCUM, Cameron, Mo., U. S., 15th June, 1874, for 5 years: "Car-coupling." (Attelage de wagons.)

Claim.—The drawhead A, provided with the spear shaped draw-bar C, having catch-pawl F, in combination with the tripping lever D, lever E, rod H, bell cranks b, b, and handled rods d, and d, as specified.

No. 3554. BENJAMIN T. BABBITT, New York, U. S., 15th June, 1874, for 5 years: "Process for Coating Caustic Alkali." (Procédé pour enduire les alcalis caustiques.)

Claim.—The process for coating packages of caustic alkali with a substance or composition which is solid at ordinary atmospheric temperature, but capable of fusion or solution by submerging the package in the substance or composition while the latter is in a liquid state in a vessel in which a vacuum is produced as described.

No. 3555. BENJAMIN T. BABBITT, New York, U. S., 15th June, 1874, for 5 years: "Caustic Alkali Package." (Paquet d'alcali.)

Claim.—A ball, slab or block, of caustic alkali hermetically sealed and protected from atmospheric influence by means of a coating or envelope of turpentine as described.

No. 3556. WILLIAM H. BOND, Syracuse, N. Y., U. S., 15th June, 1874, for 5 years: "Hot Air Furnace." (Calorifère à air.)

Claim.—1st. The corrugated air heating surface D, combined with the inlet and outlet air passages; 2nd. In combination with the corrugated chamber D, and chamber B, the triple pipes f, f, f, connecting the chamber C, therewith, as specified for extending