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**INVENTIONS PATENTED.**

**No. 12,802. Improvements in the Manufacture of Matches.** (*Perfectionnements dans la fabrication des allumettes.*)

Louis Wagner, Mulheim-on-the-Rhine, Germany, 14th May, 1881, for 5 years.

*Claim.*—1st. A match composition, or composition for tipping match splints, consisting of colla-gelatinæ, leucocæ, kali-chloricæ, plumbum hypo-sulphurosum, stibium crudum pulvis, plumbum hyperoxydatum, carboni ligni pulveratus, vitrum pulvis, saltpetre, sulphur and water. 2nd. The process of obtaining plumbum hypo-sulphurosum, consisting in mixing together solutions of plumbum nitricum and natrum hypo-sulphurosum, and washing and drying the precipitate resulting from the mixture of said solutions. 3rd. A match tipped with a composition containing, as one of the principal ingredients, plumbum hypo-sulphurosum free from plumbum acetium.

**No. 12,803. Improvements on Belt Fasteners.** (*Perfectionnements aux joints des courroies.*)

Peter Thacher, Cleveland, Ohio, U.S., 14th May, 1881; for 5 years.

*Claim.*—A plate with a series of teeth, each of which is elliptical in cross section at its base and gradually to its point, the latter being made with flat sides, and teeth being arranged on the plate so that the widest portion of the teeth shall be at right angles to the length of the belt.

**No. 12,804. Improvements on Devices for Feeding Steam Boilers.** (*Perfectionnements aux appareils à alimenter les chaudières à vapeur.*)

Hans Amundsen and Ole Amundsen, Little Falls, Wis., U. S., 14th May, 1881; for 5 years.

*Claim.*—1st. In a low water indicator for boilers, a wheel H having hollow arms through which the steam escapes and which, in revolving, operates the wheels L N and lever P. 2nd. The combination of the lever G and float B with the rod R provided with the valve W and rack u, whereby it is made to control both the indicator and supply of feed water. 3rd. A float for steam boilers provided with a tube which is open at its upper and lower ends, and has its lower end extending down to or near the bottom of the float, in combination with the removable strainer, which is applied to the upper end of the pipe and provided with the springs a for holding it in position.

**No. 12,805. Improvements in the Manufacture of Glucose.** (*Perfectionnements dans la fabrication de la glucose.*)

Clinton Furbish, Brooklyn, N.Y., U.S., 14th May, 1881; for 5 years.

*Claim.*—The process of producing glucose, or a saccharine solution from corn, practically free from oily and unconverted starchy matters, consisting of the following operations, viz.: First, separating the hulls and heart from the harder and starchy matters of the corn, second, subjecting the starchy matters so separated with water to the effect of steam under pressure, third, transforming the mass so produced into glucose or a saccharine solution.

**No. 12,806. Improvements in Capstans.** (*Perfectionnements aux cabestans.*)

Elouild Duplessis, St. John, Que., 14th May, 1881; for 5 years.

*Claim.*—1st. The combination, with the operating sweep, of mechanism

whereby it may be made, without reversing its action, to draw alternately on one of the ropes connected thereto, independently of the other. 2nd. The combination, with the actuating bar or sweep, of devices whereby such is caused at will to engage with and rotate either the drum proper, or an outer ring carried on spindle of same. 3rd. The combination, with the sweep, of the sliding bar turning spindles I I', and causing pawls K K' to engage alternately with projections d and projections f.

**No. 12,807. Improvements on Faucets.** (*Perfectionnements aux robinets.*)

Theodore F. Conklin and Augustus E. Raggles, Fond-du-Lac, Wis., 14th May 1881; for 5 years.

*Claim.*—1st. In combination with a faucet body, a section of cork or other elastic impervious material, compressed therein, and a gate or spigot adapted to open or close the bore of the faucet by its adjustment within a slit formed in the section of cork. 2nd. In combination with a faucet body of wood or metal provided with the tube y z, the slit and bored section of cork B, or other elastic impervious material, adapted to be compressed into the aperture B' of said faucet body, and the gate or spigot A having bore a and flange f.

**No. 12,808. Improvements on Nut Locks.** (*Perfectionnements aux arrête-écrous.*)

Peter McGregor and Alexander McLean, Ottawa, Ont., 14th May, 1881; for 5 years.

*Claim.*—In combination with the rails A A, bolts C, nuts D, fish plate B and the plate B' having projections or cavities F locking the nuts by its end-wise movement, the washer E having a free end to spring into abutting engagement with the end of cavity F, when the plate is driven forward to prevent a backward movement of the plate.

**No. 12,809. Improvements on Apparatus for Heating Buildings by means of Hot Water.** (*Perfectionnements aux calorifères à eau chaude.*)

Charles C. Longard, Halifax, N.S., 14th May, 1881; for 5 years.

*Claim.*—1st. The inner cylindrical ring B combined with the outer cylindrical ring A and forming a second or double boiler. 2nd. The combination of the inner cylindrical ring B, and the posts or waterways D D cast therein. 3rd. The combination of the two hollow concentric cast iron cylindrical rings A B and the radiating pipes or waterways C C and the ports D D, the position and purposes of the said rings, radial pipes and ports. 4th. The binding together of the sections of the boiler by connecting rolls passing through and enclosed in lugs E E cast in the outer side of the exterior ring A.

**No. 12,810. Improvements on Fruit Driers.** (*Perfectionnements aux séchoirs à fruits.*)

George C. DeLametter, North Wolcott, N. Y., U. S., 14th May, 1881; for 5 years.

*Claim.*—1st. The inclined flues or trunks a b c placed one above the other and connected at opposite ends, to form a continuous passage provided with removable trays e and outlet pipes g and fitted with heater B. 2nd. The lower box A containing heater B, combined with the series of inclined flues placed one above the other and connected together and with box A.

**No. 12,811. Improvements on Wooden Pumps.** (*Perfectionnements aux pompes en bois.*)

Charles Powell, Toronto, Ont., 14th May, 1881; for 5 years.

*Claim.*—1st. In a pump in which the plunger or piston is operated by a rod passing up through and moving within the pump barrel, the combination of a vessel or chamber placed within the pump barrel, and open at its bottom end, forming an air vessel for equalizing the flow of water forced up the barrel of the pump by the action of the plunger. 2nd. In a pump in which the plunger or piston is operated by a rod situated within the barrel, the combination of an air vessel or chamber placed within the pump barrel, and provided with a drop pipe or inner casing, extending from the top of the chamber to its bottom, forming a passage way for the pump rod through the air vessel. 3rd. A pump having a handle operating the plunger rod, a spindle forming the pivotal point for the said lever, and supported by a rod