

set forth. 3rd. The end sections B¹, B², of fire brick and graphite mixed in combination with the interposed insulating material B³, the conducting plates imbedded in the said sections, and electrical connections for the said plates, the receptacle which is composed of the said sections and interposed insulating material being adapted to contain a crucible or similar article, substantially as set forth. 4th. A heating receptacle provided with a filling of pulverized graphite or similar substances, and consisting of two sections of electrically conducting material and an interposed insulating strip in combination with an enclosed crucible attached to and removable with the said strip and the electrical circuit connections to the said sections, substantially as set forth. 5th. A hollow heating receptacle or electrical forge consisting of two conducting sections of high electrical resistance and interposed insulating material, in combination with broad plates imbedded in the said sections and presenting a considerable surface for the electrical discharge, and the necessary circuit connections for these conducting plates, substantially as set forth.

No. 42,490. Metal Wheel. (*Roue métallique.*)

Abram Harton Benton Neff and Edmund Henry Norman Neff, both of Peterborough, Ontario, Canada, 7th April, 1893; 6 years.

Claim.—A metal wheel having light metal spokes, each spoke being rigidly fastened at one end to the felloe, its other end extending through a spiral spring secured at one end to the hub of the wheel, and having its other end formed to act as a butt for a collar fixed to the spoke, substantially as and for the purpose specified. 2nd. A metal wheel having light metal spokes, each spoke being rigidly fastened at one end to the felloe, its other end extending through a spiral spring secured at one end to the hub of the wheel and having its other end formed to act as a butt for a collar fixed to the spoke which extends through the spring and hub and has a head formed on its end, substantially as and for the purpose specified. 3rd. A metal wheel having light metal spokes, each spoke being rigidly fastened at one end to the felloe, its other end having a spiral spring formed on it and being fitted within the hub of the wheel, substantially as and for the purpose specified. 4th. A wheel having a series of metal spokes A, each spoke being screwed into a sleeve C, fixed to the felloe B, the other end of the spoke A, extending through a spiral spring D, and having a projection F, fixed to the spoke, in combination with a collar H, fixed to the spoke A, and designed to butt against the plug G, fixed to the spring D, substantially as and for the purpose specified.

No. 42,491. Sprinkling System. (*Système d'arrosage.*)

William Neracher, Cleveland, Ohio, U.S.A., 7th April, 1893; 6 years.

Claim.—1st. In combination, in a dry pipe system, the main supply valve, with mechanism acted upon by the air pressure for controlling said supply valve, a cut off valve in the dry pipe for cutting off a section of said pipe adjacent to the main supply valve, from the system and the sprinklers, and the means for allowing the air to escape from the section thus cut off, substantially as described. 2nd. In a dry pipe system of water sprinklers, the water supply valve and mechanism for holding it, a valve as L, located in the dry pipe, a branch conduit connecting the dry pipe above with the dry pipe below the said valve L, connections between the branch conduit, and the mechanism for operating the water supply valve and a valve for reducing the air pressure in the dry pipe below the valve L, with operating connections, all substantially as described. 3rd. In combination, with the water supply valve, located in the pipe A, having mechanism whereby it is held to the seat by the pressure of the water, a valve L, located in the dry pipe, a branch or conduit K, connected with the dry pipe above and below said valve connection, a conduit between the branch pipe or pipe A, and the connection, which controls the water supply valve, and a valve L¹, held to its seat by the pressure and mechanism arranged to be controlled by the operator for releasing said valve, substantially as described. 4th. In combination in a dry pipe system adapted to hold compressed air, the main supply pipe, the water supply valve therein, the sprinklers operating automatically under the action of the heat for releasing the air, the check valve L mechanism for controlling the supply valve, said mechanism being under pressure of the air in the system, a valve for controlling the air pressure on said mechanism independently of the sprinklers and the hand operating connections to said valve, substantially as described. 5th. In combination, the water supply pipe, the valve casing interposed in said pipe, a valve therein, a piston casing on the valve casing, the piston therein connected with the valve, the supplemental valve box above the piston cylinder, the diaphragm casing above the valve box, the vertically operating valve, the vertically operating diaphragm on the valve stem, the inclined pipe E extending from the lower part of the main casing to the supplemental valve box, and the air pipe from the diaphragm casing to the dry pipe system, substantially as described. 6th. In combination, the sprinkler frame and the disc having the holes, the exterior row of overhanging studs, and the inner alternately placed row of studs. 7th. In combination, the sprinkler frame, the valve disc, the levers for holding the same and the two part link, one part being formed with holes and having solder therein.

No. 42,492. Packing Box. (*Caisse d'emballage.*)

Clarence Rudolph Mengel, Louisville, Kentucky, U.S.A., 7th April, 1893; 6 years.

Claim.—1st. In a box, the combination with the side A, grooved on its inner face as at *a*, of the top fitting within the sides, of the box and the cleat or lining seated in the groove and bearing upon the top, all substantially as shown and described. 2nd. In a box, the combination with the side grooved on its inner face, of the top fitting within the sides and cut away along the edges as at *c*, to form a shoulder *f*, and the cleats C, seated in the grooved side, and resting upon the top at its edges. 3rd. In a box, the combination with the grooved side, of the top, the cleat seated in the groove and bearing upon the top, and the hole or opening for the insertion of a cleat removing tool. 4th. In a box the combination with the sides and the top, of the retaining cleats, and an eye or staple *i*, secured to the top. 5th. In a box, the combination with the grooved side, of a cover or top, and a sectional cleat seated in the groove and bearing upon the top. 6th. In a packing box, the combination with the sides, of a top or cover fitting within the sides and a cleat frame also fitting within the sides and engaging one of the latter, said frame having outer dimensions exceeding those of the top or head.

No. 42,493. Automatic Railway Pumping Mechanism. (*Mécanisme automatique pour pompes de chemin de fer.*)

Hiram D. Lyman, Little Rock, Arkansas, U. S. A., 7th April, 1893; 6 years.

Claim.—1st. The combination with the track, the well at one side of the same, and the tank located at one side of the well, of the series of pump cylinders, the intermediate water box with which they communicate, the discharge pipe leading from the water box to the tank, the transverse shaft supported within and partly without the well, the gear wheel mounted loosely thereon and provided with a pawl, a ratchet wheel fixed upon the shaft at one side of the gear, the rewinding drum mounted on the shaft, the cable thereon, and provided at its lower end with a rewinding weight, the power drum fixed upon the shaft, the cable wound thereon and extending therefrom, guide devices for the cable, and an engaging device at the free end of the same lying at the side of the track, the pair of opposite short transverse shafts arranged at the sides of the main shaft, and terminating at their ends in cranks, piston rods connected to the crank, and descending into the pump cylinders, and gears mounted on the shafts and engaging the gear of the main shaft, substantially as specified. 2nd. The combination with the track, the tank, the pump mechanism, the drum, the cable extending from the drum and terminating at one side of the track, of an engaging device located at the end of the cable and adapted to engage a bar extending from the moving train, and the curved throw-off rod or automatic detacher 40¹, located in the path of the engaging device and at one side of the track, substantially as specified. 3rd. The combination with the pump operating mechanism, comprising a cable, combined with the herein described bar engaging device, consisting of an eye to which the cable is attached, and the series of three prongs bent to form loops and diverging from the eye, substantially as specified. 4th. The combination with the track, the pump operating mechanism, the cable for operating the same and the connecting three pronged catch 19 secured to the cable at one side of the track, of a tender, its sand bolster, the pair of bolts extending through the same, the offset strap or keeper perforated to receive the bolts, the engaging bar mounted for reciprocation in said keeper, and the hand lever pivotally connected to the inner end of the bar and extending within reach of the engineer, substantially as specified.

No. 42,494. Milk Aerator and Cooler.

(*Garde-lait aérateur.*)

Edward Bartlett, Belleville, Ontario, Canada, 7th April, 1893; 6 years.

Claim.—1st. In a device of the character described, the combination of a reservoir, a strainer, an aerator, and cooler, substantially as shown and described. 2nd. In a device of the character described, the combination of a reservoir R, a strainer S, a rim or flange N, attached to the lower extremity of the reservoir R, a cylindrical body H, a corrugated adjustable flange K, a projecting rib 41, with apertures or orifices 12, opening upward, substantially as described. 3rd. The combination of the corrugated top of cooler 21, a body part H, and orifices open upward, a corrugated adjustable flange K, substantially as set forth. 4th. The combination of a top E, of a cooler 21, provided at its centre with an aperture and cover 8, a side *x*², and legs L, a bottom W, a flange 22, substantially as shown and described. 5th. In a device of the character described, the combination of a reservoir R, a strainer S, a rim or flange N, attached to the reservoir R, a body H, a flange K, either a justable or rigid, orifices 12, a rib 41, a top E, of a cooler 21, an aperture and cover for the same 8, a side *x*², a bottom W, a rim 22, and legs L, a can A, substantially as and for the purpose specified.