

mixed substance, fourthly, inserting a suspension wire provided with a bend in said mixed substance, and fifthly and lastly, in applying hydraulic or any suitable pressure to said plunger, for the purpose of solidifying and compressing said mixed substance into a solid mass, substantially as set forth.

No. 42,595. Steam Boiler. (*Chaudière à vapeur.*)

Harry W. Seller, Brooklyn, New York, U.S.A., 13th April, 1893; 6 years.

Claim.—1st. The combination in a water tube boiler, of banks of curved inclined water tubes, with a water box above the front end of the furnace, in which the front and upper ends of said water tubes are secured, a water box at and forming a part of the rear end of the furnace in which the rear and lower ends of the said banks of water tubes are secured, and a steam drum or drums connected with both the upper and lower water boxes, substantially as and for the purpose set forth. 2nd. The combination in a water tube boiler, of banks of curved inclined water tubes, a water box at the front end of the boiler above the front end of the furnace in which the front end of said water tubes are secured, and a water box at and forming a part of the rear end of the furnace in which the rear ends of said tubes are secured, with a partition I, in the lower and rear of said water boxes, and a bridge wall D, extending from the lower water box upward and forward at the rear of and above the upper tier of water tubes, substantially as and for the purpose set forth. 3rd. The combination in a water tube boiler, of banks of curved water tubes, as E and E', and water boxes as B and B', in which the ends of said tubes are secured, with a steam drum or drums connected to the front water box, as B, with a large transverse pipe or drum, as C, over the rear and lower water box, as B', pipes, as d, connecting said pipe or drum C with the front and upper water box B, and pipes, as c, connecting said pipe or drum C with the lower and rear water box, as B', at the rear of the bridge wall D, substantially as and for the purpose set forth. 4th. The combination in a water tube boiler, of banks of inclined curved water tubes, as E and E', with sector shaped water boxes, as B and B', in which the ends of said banks of tubes are secured, substantially as and for the purpose set forth.

No. 42,596. Locomotive Boiler.

(*Chaudière de locomotive.*)

Joseph S. Newlin, Fairfax, South Carolina, U.S.A., and William S. Coburn, Savannah, Ga., U.S.A., 13th April, 1893; 6 years.

Claim.—1st. The "return ends" F, having a thickened anvil head, and tapered branches having deep threads cut thereon, substantially as shown and described. 2nd. The combination with the flute (G, H, in a boiler, of the "return ends" F, having a thickened anvil head, and tapered branches having deep threads cut thereon, substantially as shown and described.

No. 42,597. Underground Conduit for Electric Railways. (*Conduit souterrain pour chemins de fer électriques*)

Charles P. Tatro, Spokane, Washington, U.S.A., 13th April, 1893; 6 years.

Claim.—1st. The combination, in conduits, for electric railways, of a series of pipe sections, having an insulated wire in each with projecting branch ends, a branch coupling joining the adjacent ends of pipe sections, a branch pipe in the coupling covering the branch ends of wire, the said branches being secured together in metallic contact, and a switch shield secured upon the said branch pipe, over the end of the said wires, substantially as described. 2nd. The combination of two or more segments of electric conduit pipes joined by branch couplings, and a switch shield upon the end of the branch covering the same, substantially as described. 3rd. The combination of a pipe, an electric line wire insulated therein and projecting from the end thereof, a shield secured upon the pipe over the end of the wire, an outgoing wire from the shield, a switch journaled to rock in the shield to make and break connection between the said line wire, and outgoing wire, a turnstile upon the switch shaft outside the shield, adapted to be engaged by hangers from a car, and lugs in the path of the turnstile, substantially as described, whereby the rotary motion of the switch is limited. 4th. The combination in electric conduits for railways, of a line wire and two branch wires thereof, having their ends parted in a shield, a switch bar having contact springs on its two ends to connect the said branch wires, a shaft for the said switch bar, journaled in the said shield, and means for rocking the shaft external to the shield, the said switch bar being insulated from its shaft, substantially as described. 5th. The combination of an electric line wire, having lateral branches, a series of segmental rails fixed along a road and provided each with a branch wire, a switch adapted to make and break connection between the said branch wires, and mounted on a rock shaft, a turnstile fixed upon the rock shaft in the path of arms depending from the car, and means, substantially as described, for limiting the turnstile to an oscillating movement, whereby the operation of the switch is reversed by reversing the direction of travel of the car. 6th. The combination, in conduits, for electric railways, of a series of segmental, insular rails located upon the road, a line wire having branches communicating with the said rails through switches, provided each with a turn stile, and hangers upon

the car adapted to strike opposite ends of the turn stile alternately, substantially as described. 7th. The combination, in conduits for electric railways, of an electric switch mounted upon a rock shaft provided with turnstile arms, hangers from the car adapted to engage the said arms at opposite ends alternately, and guiding wedges for the hangers, located in line of the turnstile, substantially as described. 8th. The combination, in conduits, for electric railways, of an electric rail located along the road within a channel having a wall opposite to the rail, and a trolley hung to the car, and having two wheels to engage the said rail to form electric communication with the car motor, and further, having another wheel opposite and intermediate to the said electric wheels to bear against the opposite wall of the channel, substantially as described. 9th. The combination in conduits for electric railways, of an electric rail located along the road, a wall opposite thereto, and a trolley having two wheels to roll on the rail, and one wheel opposite and intermediate to the two wheels to roll on the wall, there being a yielding connection between one of the said wheels and the trolley body, substantially as described.

No. 42,598. Holder for Spring Harrow Teeth.

(*Porte-dents élastique pour herbes.*)

Arthur B. Farquhar, assignee of Henry W. Eisenhart, both of York, Pennsylvania, U.S.A., 13th April, 1893; 6 years.

Claim.—A holder for spring harrow teeth, consisting of the split clamping ring, clamping plate, fast at one end to the ring, and having between it and the ring a socket to receive the end of the tooth, and means for drawing together the free end of the clamp plate and the opposite free end of the clamping ring, whereby at one and the same operation the tooth may be clamped in its holder and the holder itself may be clamped or closed upon its support, substantially as and for the purposes hereinbefore set forth.

No. 42,599. Waist and Supporter for Garments.

(*Gilet et bretelle pour vêtements.*)

Harriet M. Clark, Flushing, New York, U.S.A., 13th April, 1893; 6 years.

Claim.—1st. The garment having straps attached thereto at the shoulders and extending down the back, where they are provided with attaching means, in combination with the elastic M-shaped suspenders having means for attaching one of the upwardly extending folds to the strap extending from one shoulder only and the other fold to the other shoulder strap, and means for attaching the two downwardly extending ends and the middle fold to the nether garment, substantially as described. 2nd. The garment having shoulder straps attached and extending down the back, as described, and provided at the lower ends with tabs and buttons, in combination with the M-shaped elastic suspenders having loops at the two upper folds, through which the said tabs extend, said suspenders having means for attaching the two pendent ends and the pendent middle fold to the nether garment, substantially as described. 3rd. The shirt waist described, having attached inside shoulder straps extending down the back, provided with tabs, as described, and having holes below said shoulder straps for the passage of the suspenders, in combination with the M-shaped suspenders connected at their upper folds to said tabs and having their lower ends and folds extending through the holes in the shirt and provided with means for attachment to the nether garment, substantially as described.

No. 42,600. Nursing Bottle. (*Biberon.*)

Gustav Rudolph Schimmel, Detroit, Michigan, U.S.A., 13th April, 1893; 6 years.

Claim.—1st. The combination with a bottle having an orifice K in its neck, of a bottle stopper having a milk passage D and an air aperture H, opening in a chamber containing fibrous material and placed into and out of coincidence with the orifice in the bottle neck by the axial rotation of the bottle stopper, substantially as described. 2nd. The combination with a bottle having an orifice K in its neck, of a stopper C having a flange F, milk passage D, air aperture H, chamber I, containing fibrous material and an elastic sleeve G provided with a perforation opposite the slot in the stopper and placed into and out of coincidence with the orifice in the bottle neck by the axial rotation of the stopper, substantially as described. 3rd. In a nursing bottle, the combination with the bottle and its stopper, of a vent aperture, a chamber formed in said aperture and fibrous material in said chamber, substantially as described. 4. In a nursing bottle having a curved lower end, of a flat base formed by a cord extending from a point on the side to a point at the lower end, substantially as described.

No. 42,601. Draft Regulator. (*Régulateur de tirage.*)

Charles Dezag Howard, Syracuse, New York, U.S.A., 13th April, 1893; 6 years.

Claim.—1st. A draft regulator consisting of two slat work cylinders, one within the other, a lever connecting the inner cylinder, and piping therefrom in combination with a thermostat connected to said lever and adapted to rotate the inner cylinder by the thermostatic deflection. 2nd. The combination, with a thermostat, of two compartments created by two slat work cylinders,