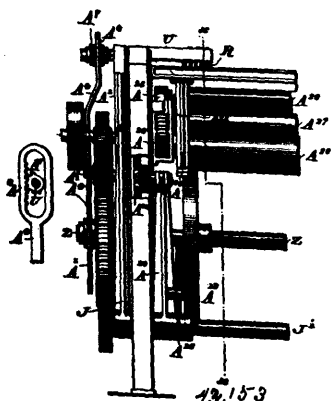


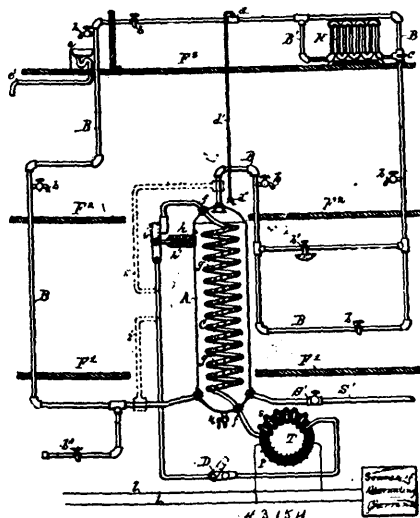
of which is on opposite sides of said passage, and the races extending from side to side of the table, and each shuttle being adapted to be



engaged alternately by the opposite hooks. 6th. The hooks R, the pinions S, secured to the shanks thereof, the tubular bar U, on which said hooks are mounted, the sliding rack T, in said bar U, the lever W, engaging with said rack bar, and operating mechanism for said lever, combined, substantially as described, whereby reciprocating rotary motions are imparted to said hooks, and the latter with their supports are carried in opposite directions over the central passage of the shuttle supporting table, for the purpose set forth. 7th. In a net weaving machine, a shuttle with recesses in opposite ends, and races on a table, rising and falling hooks guided on said table, arms carrying the heads of said hooks, and means for operating said arms, in combination with rotary hooks, a tubular bar on which said hooks are mounted, a rack in said bar, pinions in said bars meshing with said rack, a lever for oscillating said rack, and means for operating said lever, and cams for throwing off the hooks from the shuttles, said cams being on opposite sides of the centre of the table, substantially as described. 8th. In a net weaving machine, a shuttle with recesses in opposite ends, and races on the table, rising and falling hooks guide on said table arms carrying the heads of said hooks, and means for operating said arms, in combination with rotary hooks, a tubular bar on which said hooks are mounted, rising and falling arms carrying said tubular bar, and means for operating said arms, a rack in said bar, pinions in said bar meshing with said rack, a lever for oscillating said rack, means for operating said lever, and cams for throwing off the hooks from the shuttles, said cams being on opposite sides of the centre of the table, substantially as described. 9th. The shuttle, the tables with races and rising and falling hooks thereon, heads, oscillating arms which carry the same, the hooks, and means for supporting and rotating the same, rising and falling arms carrying said means, and means for operating said arms, in combination with cams which are mounted on the ends of the table and located in the paths of the oscillating and rising and falling arms, and the hooks aforesaid. 10th. The hooks, the carrying heads thereof, the oscillating arms supporting the carriers, rising and falling cams, arms carrying said hooks, and cams for operating the latter named arms, in combination with cams on opposite sides of said oscillating arms, and rising and falling arms and heads, substantially as described. 11th. A hook carrier, means for supporting the same, a pinion on said carrier, and a rising and falling rack mounted on the frame and engaging with said pinion, in combination with the cams on said carrier, and posts against which the cams abut, said posts being on opposite sides of said cams, substantially as described. 12th. A bar having a rack fitted thereto, and hooks with pinions mounted thereon, in combination with rising and falling arms A¹, means for vibrating said arms on which said bar is mounted, the oscillating arm or lever W, which is connected with said rack bar, and the cams A²¹ on the device which carries the hooks and connected parts, and the posts A²² on opposite sides of said cams whereby the hooks are rotated, and the bar receives reciprocating motions, substantially as described. 13th. The rollers A²⁷, A²⁸, in combination with a ratchet on the shaft of one of said rollers, a pawl mounted on an arm or lever engaging said ratchet, a slide engaging with said lever arms A²⁰, A¹⁶ connected with said slide, a shaft carrying said arms, and means for operating said arms, combined, substantially as described. 14th. The rollers A²⁷, A²⁸, a pawl and ratchet, a lever carrying said pawl, and a slide engaging said lever, in combination with means for operating said slide consisting of the arms A¹⁶ and A²⁰, and a wheel engaging the arm A¹⁶, as described. 15th. The rollers A²⁷, A²⁸, a ratchet on the roller A²⁷, a pawl engaging said ratchet and a lever carrying said pawl, said rollers A²⁷, and A²⁸ being geared together, in combination with a slide which engages said lever, and means for operating said slide, the latter being provided with a screw which may be set nearer to and further from the lever for adjusting the feeding action of said rollers.

No. 43,154. Electric Water Heater.

(Réchauffeur d'eau électrique.)



Mark Wesley Dewey, Syracuse, New York, U.S.A., 7th June, 1893; 6 years.

Claim.—1st. The method of supplying hot water for consumption purposes, consisting in subjecting water to a heating effect produced by an electric current in a part of an electrical circuit, circulating said water in a pipe leading to one or more localities and provided with outlets for releasing or drawing the water from the pipe at said locality or localities, and controlling the current to maintain the water at a constant temperature. 2nd. The method of supplying hot water for consumption purposes, consisting in subjecting water to a heating effect produced by a current in a part of an electric circuit, circulating said water in a pipe leading to and from one or more localities and provided with outlets for releasing or drawing the water from the pipe at said locality or localities, and controlling the current to maintain the water at a constant temperature. 3rd. The method of supplying hot water for consumption purposes, consisting in subjecting water contained in a reservoir to a heating effect produced by a current in a part of an electric circuit, simultaneously therewith circulating said medium through a pipe leading from and to the reservoir and through one or more remote localities, whereat the water may be released or drawn from said pipe, and automatically controlling the current to maintain the water at a constant temperature. 4th. The method of supplying hot water for consumption or heating purposes, consisting in subjecting water contained in a reservoir to a heating effect produced by a current in a part of an electric circuit, simultaneously therewith circulating said water in a pipe leading from and to the reservoir and through one or more remote localities, whereat the water may be released from the pipe or utilized for heating purposes, and automatically controlling the current to maintain the water at a constant and predetermined temperature by the heat or pressure of the water. 5th. The method of supplying hot water for consumption for heating purposes, consisting in subjecting water contained in a reservoir to a heating effect produced by a current in a part of an electric circuit, simultaneously therewith circulating said water in a pipe leading from and to the reservoir and through one or more remote localities, whereat the water may be released from the pipe or utilized for heating purposes, and controlling the electric current by the pressure of the water in the reservoir. 6th. The method of supplying hot water for consumption or heating purposes, consisting in subjecting water contained in a reservoir to a heating effect produced by a current in a part of an electric circuit, simultaneously therewith circulating said water in a pipe leading from and to the reservoir and through one or more remote localities, whereat the water may be released from the pipe or utilized for heating purposes, and automatically controlling the electric current to maintain the water at a constant temperature. 7th. The method of supplying hot water for consumption or heating purposes, consisting in filling a reservoir and circulating pipe with water, allowing the escape of air from the highest part of the pipe while it is filled, subjecting the water contained in the reservoir to a heating effect produced by a current in a part of an electric circuit, simultaneously therewith circulating said water in a pipe leading from and to the reservoir and through one or more remote localities, whereat the water may be released from the pipe or utilized for heating purposes, and automatically controlling the temperature of the water by causing it to control the electric current. 8th. The method of supplying hot water for consumption or heating purposes consisting in subjecting water contained in a reservoir and pipe connected therewith to a heating effect produced by a current in a portion of an electric circuit composed of said pipe