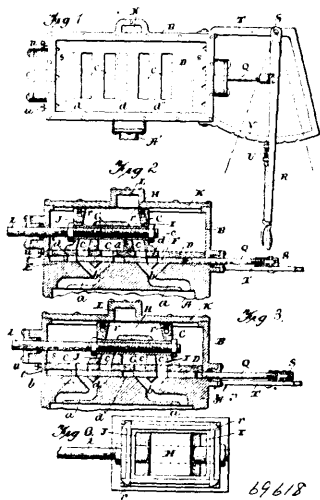
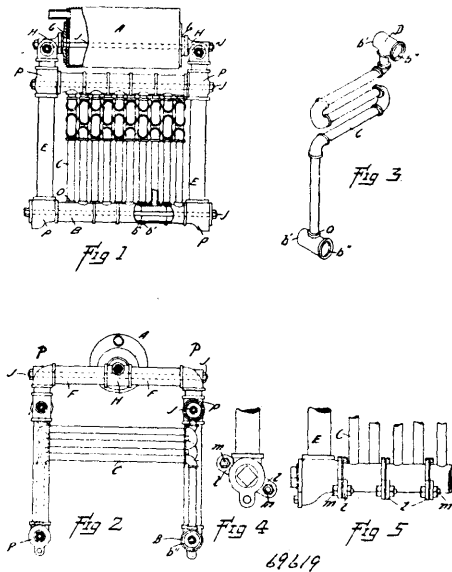


ports of the valve and separate from the communication of the inlet port of the said valve, substantially as described. 3rd. A reversing



valve comprising a stem chest having a stationary plate therein provided with inlet and exhaust passageways, a power cylinder adjacent thereto having ports in communication respectively with opposite ends of the said cylinder, a reversing plate situated and movable between the said stationary plate and the power cylinder ports, the reversing plate having passageways adapted to register with the said ports and with the passageways in the stationary plate, a valve within the steam chest having its sides out of contact with the sides of the steam chest, the said valve having a transverse inlet port with open ends in communication with the space between the sides of the valve and the sides of the said chest, the top of the steam chest having a laterally projecting exhaust port, and the said valve having at opposite ends exhaust ports having their lower ends adapted to register with the openings of the stationary plate and their upper ends in communication with the exhaust ports of the top of the steam chest, substantially as described. 4th. A reversing valve comprising a steam chest having a stationary plate therein provided with inlet and exhaust ports, a power cylinder having ports in communication with opposite ends thereof, a reversing valve movable between the stationary plate and the said power cylinder ports and having passageways adapted to control the said ports of the power cylinder and the passageways in the stationary plate, a valve within the said steam chest, the valve having a centrally arranged inlet passageways having open ends and an open bottom, the open bottom adapted to register with the said passageways of the stationary plate, the said valve having also end exhaust ports with open lower ends and a horizontal recess or chamber in its upper side with which the upper ends of the exhaust ports communicate, the top of the said chest having a laterally extending exhaust passageway in communication with the recess in the said valve, the said laterally extending exhaust port of the top of the steam chest having an outlet opening at one side of the steam chest, substantially as described. 5th. A steam engine valve comprising a steam chest, the bottom of the steam chest having inlet and exhaust ports in communication with opposite ends of the power cylinder, a valve within the steam chest having exhaust passageways with upper and lower ends, the top of the steam chest having a laterally extending exhaust passageway with its outer end projecting beyond the side of the steam chest, the side of the steam chest having a downwardly extending passageway in communication with the projecting end of the said laterally projecting passageway of the top of the steam chest, substantially as described. 6th. A valve for reversing mechanisms having a recess in its top, a transverse inlet port below the said recessed top, the said transverse port having open ends and an open bottom, and vertically arranged exhaust ports situated at opposite sides of the said transverse inlet port, the ends of the exhaust ports being open and communicating respectively with the recessed top and the working cylinder ports, substantially as described. 7th. A reversing valve comprising a steam chest, a stationary plate situated therein and having inlet and exhaust ports, a working cylinder having ports communicating with its opposite ends, a shifting plate situated between the stationary plate and the said working cylinder ports, the reversing plate having passageways, a valve situated above and resting upon the stationary plate, the stationary plate having steam passageways to permit the steam to pass therebelow independent of the said inlet and exhaust ports thereof, substantially as described.

No. 69,619. Pipe Boiler. (*Chaudière à tubes.*)

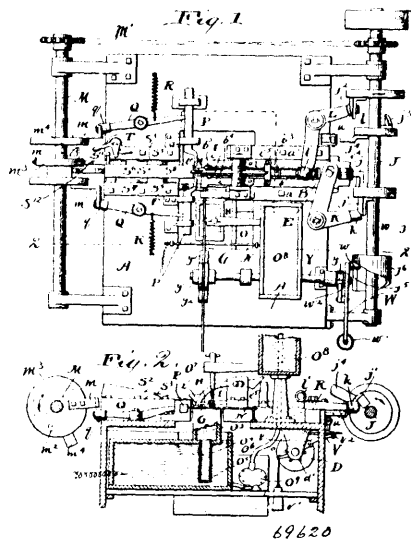


Charles D. Casad and John Stauber, both of Seattle, Washington, U.S.A., 6th December, 1900; 6 years. (Filed 6th November, 1900.)

Claim.—1st. In a pipe boiler, the combination with supporting down flow pipes, of water drums and a steam separating drums connected to and supported by the said down flow pipes, and each comprising a series of pipe sections having interfitting ends, means for securing the pipe sections of each drum together, and coil pipes connecting such pipe sections in pairs, so that each pair of pipe sections with the connecting coil pipe is independently removable. 2nd. In a pipe boiler, the combination with supporting down flow pipes, of water drums and steam separating drums, connected to and supported by the said down flow tubes, and each comprising a series of pipe sections having interfitting ends, stay bolts for securing the pipe sections of each drum together, coil pipes connected to the respective pipe sections, a steam drum, pipes connected to the steam separating drums and to the drum by detachably seated connections, and stay bolts for holding such detachably seated connections together, so as to allow separation of the parts.

No. 69,620. Chain Making Machine.

(*Machine à faire les chaînes.*)



Daniel Roche, Albert Scheuer, and John A. Saunders, all of Cleveland, Ohio, U.S.A., 6th December, 1900; 6 years. (Filed 15th December, 1899.)

Claim.—1st. In a chain making machine, the combination with mechanism for bending stock into a loop, and mechanism for welding the ends of said loop, of mechanism for varying the distance