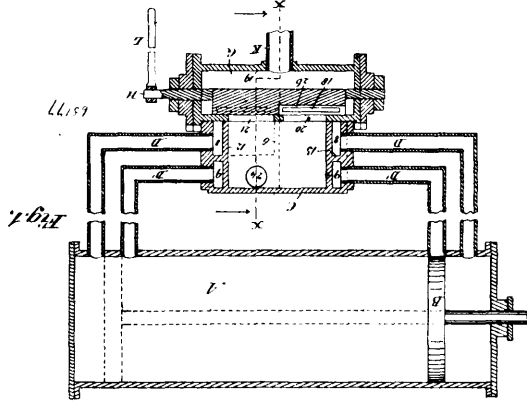


adjoining portion of such body fabric on the other side thereof, substantially as described. 2nd. In a shirt waist, the combination of the edge *c*, of the sleeve fabric *a*, the overlapping portion *d*, and the portion of the body fabric *b*, adjoining said overlapping portion, and the line of stitching *f*, substantially as described and for the purpose set forth.

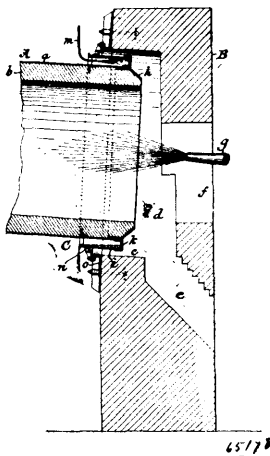
No. 65,177. Valve. (Soupape.)



The William Hamilton Manufacturing Company, Peterborough, assignee of Isaac N. Kendall, Ottawa, both in Ontario, Canada, 2nd December, 1899; 6 years. (Filed 6th November, 1899.)

Claim.—1st. A reversing steam valve, comprising a tubular valve cylinder having a feed inlet and feed and exhaust ports, a valve rocking therein and having feed and exhaust passages from opposite ends alternating as described and adapted to close the feed port near one end and open the exhaust port at the other end and vice versa, a steam chest connecting with said ports and having steam passages agreeing with said feed and exhaust ports, and feed and exhaust pipes from opposite ends of said steam chest and connecting with said steam passages and with a piston cylinder near opposite ends, substantially as set forth.

No. 65,178. Rotary Furnace. (Fournaise rotatoire.)

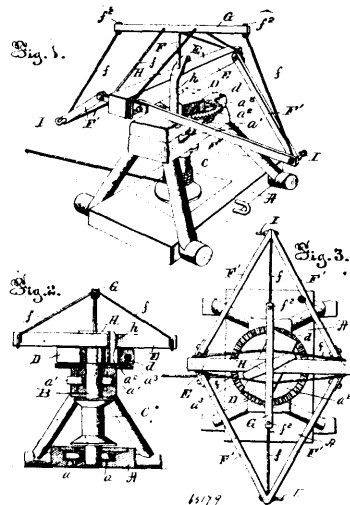


Edward H. Hurry, Bethlehem, and Harry J. Seaman, Catasauqua, both places in Pennsylvania, U.S.A., 2nd December, 1899; 6 years. (Filed 6th November, 1899.)

Claim.—1st. The herein described tubular structure provided adjacent its end with a jacket closed at its end nearest the end of said structure, open and unobstructed at the other end and having its annular inclosing wall extending toward the rear of the furnace, inclined from the closed end upwardly with reference to a horizontal line, and a water feed pipe for discharging a jet of water directly into the open unobstructed end of the jacket. 2nd. The herein described rotary furnace provided adjacent its end with a jacket closed at its end nearest the end of said furnace, open and unobstructed at the other end and having its annular inclosing wall extending toward the rear of the furnace inclined from the closed end upwardly with reference to a horizontal line, and a water feed

pipe for discharging a jet of water directly into the open unobstructed end of the jacket. 3rd. The herein described downwardly inclined furnace, provided adjacent its lower end with a surrounding jacket closed at its end nearest the end of said furnace, open and unobstructed at the other end, and having its annular inclosing wall extending toward the rear of the furnace, inclined from the closed end upwardly with reference to a horizontal line, and a water feed pipe for discharging a jet of water directly into the open unobstructed end of the jacket. 4th. The herein described downwardly inclined rotary furnace, provided adjacent its lower end with a surrounding jacket closed at its end nearest the end of said furnace, open and unobstructed at the other end and having its annular inclosing wall extending toward the rear of the furnace inclined from the closed end upwardly with reference to a horizontal line, and a water feed pipe for discharging a jet of water directly into the open unobstructed end of the jacket. 5th. Coating the firebrick lining of a rotary cement furnace with a refractory skin or shell of cement material, substantially as described. 6th. The herein described method of coating the firebrick lining of a rotary cement furnace with a refractory skin or shell of cement material, which consists in heating the furnace to such a point that the face of the lining begins to fuse, and thus becomes viscid, plastic or sticky, and while such surface is in this condition applying thereto a layer of cement material which adheres to the surface of the firebrick, and forms a protective skin or shell thereto. 7th. The herein described method of coating the firebrick lining of a rotary cement furnace with a refractory skin or shell of cement material which consists in coating the lining with a layer of salt or other suitable fusible mineral, which is brought into a state of fusion by the action of heat, thus causing the surface to become viscid, plastic or sticky, and while the surface is in this condition applying thereto a layer of cement material which adheres to the surface of the firebrick lining and forms a protective skin or shell thereto.

No. 65,179. Capstan. (Cabestan.)



Thomas Huntbatch, Hampton, Iowa, U.S.A., 2nd December, 1899; 6 years. (Filed 7th November, 1899.)

Claim.—1st. In a capstan, the combination with a suitable supporting frame, of a vertical shaft, a winding drum and a head, a power beam movable horizontally on the said head, and a pivoted horizontally swinging capstan driver carried by the said power beam and adapted to be automatically brought into engagement by the power beam with the capstan head to revolve it in one direction and to be again automatically brought into engagement by the power beam with the said head to revolve it in the opposite direction in the event of the cable breaking or slipping, a partial revolution of the power beam in the reverse direction being permitted during the changing of the engaging position, substantially as described. 2nd. In a capstan, the combination with a suitable supporting frame, of a vertical shaft, a winding drum and a head, a power beam movable horizontally on the said head, sweeps attached to the power beam and extending from the same in opposite directions, and a capstan driver carried by the said power beam and adapted to be automatically brought into engagement with the capstan head to revolve it in one direction, and to be again automatically brought into engagement with the said head to revolve it in the opposite direction in the event of the cable breaking or slipping, a partial revolution of the power beam in the reverse direction being permitted during the changing of the engaging positions, substantially as described. 3rd. In a capstan, the combination with a