adapted to actuate the cylinder, as described, with rod b^5, and the mechanism A, constructed and arranged as described, adapted to operate the handle a^3, as described, the whole constructed, arranged and operating together substantially as, and for the purposes set forth.

No. 34,009. Order Holder. (*Serre-commande.*)

Robert J. Copeland and Albert E. Chatterson, Chicago, Ill., U.S., 1st April, 1890; 5 years.

Claim.—1st. In an order holder, the combination of the clamp B, comprising stiff strips C, C^1, affording the jaws of the clamp, and one or more springs D maintaining the jaws normally closed, and covers A, A^1, hinged at their edges, respectively, to the parting edges of the jaws, substantially as and for the purpose set forth. 2nd. In an order holder, the combination of the clamp B, comprising jaws C, C^1, each formed of a metal strip *t*, imbedded in rubber *s*, and one or more springs D, maintaining the jaws normally closed, and covers A, A^1, hinged at their edges respectively, to the parting edges of the jaws, substantially as and for the purpose set forth. 3rd. In an order holder, the combination of the clamp B, comprising jaws C, C^1, each formed of a metal strip *t*, imbedded in a strip of rubber *s*, provided with recesses *r*, and one or more springs D, extending into the recesses *r*, and operating to maintain the jaws normally closed, and covers A, A^1, hinged at their edges, respectively, to the parting edges of the jaws, substantially as and for the purpose set forth.

No. 34,010. Binder. (*Reliure mobile.*)

Robert J. Copeland and Albert E. Chatterson, Chicago, Ill., U. S., 1st April, 1890; 5 years.

Claim.—1st. In a binder, the combination of the wires, B, B^1, held in fixed relative position, and the removable hollow bar C, adjustable upon the wires and provided internally with locking mechanism to engage the wires, substantially as and for the purpose set forth. 2nd. In a binder, the combination of the wires B, B^1, held in fixed relative position, and the removable hollow bar C, adjustable upon the wires and provided internally with locking mechanism operated by a removable key to engage and release the wires, substantially as and for the purpose set forth. 3rd. In a binder, the combination of the wires B, B^1, held in fixed relative position, and the removable hollow bar C, adjustable upon the wires, and provided internally with locking mechanism comprising a sliding bar C^1, provided with openings *s*, s^1, an engaging edge *o*, at the opening *s*, a loose block D, in the opening s^1, and a set screw D^1, extending through the adjacent end of the bar C^1 against the loose block, substantially as and for the purpose set forth. 4th. In a binder, the combination of the wires B, B^1, held in fixed relative position, adjustable hinged covers, E, E, upon the wires, and the removable hollow bar C, adjustable upon the wires and provided internally with locking mechanism to engage the wires, substantially as and for the purpose set forth.

No. 34,011. Church or Pew Chair. (*Banc d'église.*)

John D. Pennington, Hamilton, Ont., 1st April, 1890; 5 years.

Claim.—1st. The combination of the panelled seat and back with frame, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the division standard and the adjustable bracket arm, substantially as and for the purpose hereinbefore set forth.

No. 34,012. Gas Absorber and Ventilator. (*Aspirateur de gaz et ventilateur.*)

Louis H. Tarrant, St. Thomas, Ont., 1st April, 1890; 5 years.

Claim—1st. The combination of the ordinary pipe O and the tapered pipe T, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, with the ordinary pipe O and the tapered pipe T, of the revolving band or damper D, substantially as and for the purpose hereinbefore set forth.

No. 34,013. Production of Brooches and Like Ornaments from Natural Formations of the Bones of the Cod, (Morrhua Vulgaris) and Other Fishes. (*Production des broches et ornements semblables an moyen des formations naturelles des arêtes de morue (morhua vulgaris) et autres poissons.*)

William H. Read, Maidenhead, Eng., 1st April, 1890; 5 years.

Claim—1st. As a new article of manufacture, an ornament for the adornment of the person, formed from the bones of a fish, such for instance as the scull of the cod fish, in combination, with devices affixed thereto for attaching the same to the clothing of the wearer. 2nd. As a new article of manufacture, in an ornament for the person, the combination, with a fish bone, of means, substantially as described, for attaching said bone to the clothing of the wearer. 3rd. As a new article of manufacture, in an ornament for the person, the combination of a bone of the skull of a fish with a suitable pin or contrivance, substantially as set forth, for attaching said bone to the clothing of the wearer. 4th. As a new article of manufacture, in an ornament for the person, the combination of a fish's skull bone, with a pin for attaching said bone to the clothing of the wearer, substantially as described and set forth.

No. 34,014. Cutting Out and Making of Breeches, Riding Trousers, Pantaloons and Such Like. (*Taillage et confection des culottes, pantalons d'équitation et autres pantalons et articles analogues.*)

William W. Crisp and Robert L. Wood, London, Eng., 1st April, 1890; 5 years.

Claim.—The within described method of cutting out and making up breeches, riding trousers, pantaloons and such like articles, whereby the inside seams are placed somewhat to the front of the leg, substantially as herein shown and described.

No. 34,015. Wind Wheel. (*Moulin à vent.*)

Leroy S. Pfouts, Canton, Ohio, U.S., 1st April, 1890; 5 years.

Claim.—1st. The combination, with the wind wheel centrally supported on the turn-table, of a vane hinged to said turn-table by the diagonal and horizontal rods S and T respectively, said rods connected with the said turn-table at one side of the axes of the wheel shaft, the diagonal rod connected to the turn-table at the base, and the horizontal rod at a point above the base, the diagonal rod being provided with a bend terminating in a laterally projected arm, thereby providing a firm bearing for said brake, the stud *q* secured to the wind wheel support, the cranked lever U fixed to said shaft, a link P connected at one end to the crank arm of the lever U, and connected at its opposite end to the laterally projecting arm of the rod S, substantially as set forth. 2nd. The combination of a wind-wheel and its supporting frame G, of a turn-table to which the said supporting frame is secured, the said turn-table consisting of the top centrally apertured plate, provided with annular flanges *q* and *f*, the latter flange having a greater diameter than the former flange, an annular supporting head C, provided with a central aperture coincident with the aperture of the top plate, the short annular flange of said top plate turning upon the upper face of said head, while the longer annular flange engages the periphery of the flange *q*, thereby forming a closed chamber, the circular plate enclosed within said chamber, and provided with a central aperture through which the pipe spindle projects, said plate further provided with radial spindles, upon which rollers are journalled, and a tube spindle D projecting through the aperture of the turn-table journalled at its lower end in stationary bearings and secured at its upper end to the said turn-table, substantially as set forth. 3rd. In combination, with a wind wheel centrally mounted over a supporting revolving tower, of a supporting shaft J, having crank wheels mounted on the ends thereof, wrist pins carried by the wheels, and connecting rods M, connecting said pins to a cross-bar N, said bar having a central pivotal connection with the pump rod, substantially as described and for the purpose set forth. 4th. The combination, in a revolving frame for supporting a wind wheel, of the cap E, frame bars G and brace rods, when constructed substantially as described and for the purpose set forth. 5th. The combination, with a wind wheel and its supporting frame, of a vane pivotally secured to said frame, a link connecting said vane to a weighted lever pivoted to the supporting frame, a crank wheel and a brake strap to embrace and engage the periphery of said wheel, said strap, having a link connection with the weighted lever, whereby the folding movement of the vane will move said lever to draw the strap against the crank wheel to resist or arrest rotary movement of the wind wheel, substantially as described.

No. 34,016. Electro Magnetic Dispatch Apparatus. (*Appareil électro-magnétique à dépêche.*)

John T. Williams, Mount Vernon, N. Y., U. S., 1st April, 1890; 5 years.

Claim.—1st. The combination, with a series of helices A, A^1, A^2, A^3, a track or guide B, which extends through the helices and forms a continuous conductor, a core or carriage E supported by and moving in said track or guide, of a continuous conductor C extending through said helices, a series of conductors D, D^1, D^2, D^3, which are insulated from each other and extend through the successive helices, a contact F secured to the core or carriage and engaging the conductor C, a contact F^1 secured to the carriage in metallic connection with the contact F, and made to engage the successive conductors D, D^1, D^2, D^3, connections between the ends of the helices, the track B and conductors D, D^1, D^2, D^3, and connections between the electric generator, the track B and the conductor C, substantially as described. 2nd. The combination, with the helices, the track, the conductors extending through the helices, the electric generator and the connections between the helices conductors and electric generator, of a carriage and pairs of spring arms, each pair secured at one end to the carriage and pressing towards each other at their free ends, and contact wheels carried by the free ends of the springs and pressed towards each other, to grip the opposite sides of the conductors, substantially as described. 3rd. A carriage, having spring arms secured at one end and pressing towards each other at their opposite free ends, and provided at their free ends with contact wheels mounted to grip the opposite sides of electrical conductors, substantially as described.

No. 34,017. Steam Heating Boiler. (*Chaudière de calorifère à vapeur.*)

William B. Dunning, Geneva, N.Y., U.S., 1st April, 1890; 5 years.

Claim.—1st. In a steam boiler, the combination of two annular water chambers A and D, of different lengths, one arranged within the other and connected by collars *b*, and forming a large steam chamber G directly over the fire-box Q, with the tube or box H, flues L, M, smoke flue R and steam pipes, substantially as and for the purpose specified. 2nd. In a steam boiler, the combination of the two annular water chambers A and D, large steam space G directly over the fire box, fuel tube H, with damper *g*, draft opening *o*, sliding damper P, heat flues L and M, diaphragm N, all arranged and constructed substantially as and for the purpose described.

No. 34,018. Treatment of Slag. (*Traitement des scories.*)

St, George T. C. Bryan, Birmingham, Ala., U. S., 1st April, 1890; 5 years.

Claim—1st. The herein described process of treating slag mechani-