No. 42,495. Press. (*Presse.*)

Alexander Doig, Toronto, Ontario, Canada, 7th April, 1893; 6 years.

Claim.—1st. In a machine of the class described, the combination with a compression block having a cylindrical hole, and a resistance block or blocks located therein, of a plunger designed to co-act with the resistance block, and means whereby the plunger derives a vertical reciprocating motion, as and for the purpose specified. 2nd. In a machine of the class described, the combination with a compression block having a plurality of shoulders designed to rest against corresponding shoulders in the supporting block, a cylindrical hole, and a resistance block or blocks located therein, and a plunger designed to co-act with the resistance block, and means whereby the plunger derives a vertical reciprocating motion, as and for the purpose specified. 3rd. In a machine of the class described, the combination with the compression block having a cylindrical hole, and a resistance block or blocks located therein, of a vertical plunger and eccentric for operating on the top of the plunger in order to give it a vertical motion, as and for the purpose specified. 4th. The combination with the compression blocks C, provided with a cylindrical hole D, having resistance blocks inserted in the same and supported as specified, of the plungers, X, secured in the lower end of the vertical rods V, and the blocks U, secured on the upper ends of the vertical rods V, having a concave recess *u*, the concave blocks T, having the convex ribs *t*, which fit within and rock in the recess *u*, and the eccentrics S, caused to rotate and coact with the concave block T, as and for the purpose specified. 5th. The combination with the compression blocks C, provided with a cylindrical hole D, having resistance blocks inserted in the same and supported as specified, of the plungers X, secured in the lower end of the vertical rods V, and the blocks U, secured to the upper ends of the vertical rods V, which are driven downward by the eccentrics S, set in relation to each other as shown, and the gear pinion W, meshing with the racks *r*, on the vertical rods V, as and for the purpose specified. 6th. The combination with the compression blocks C, provided with a cylindrical hole, D, having a resistance block or blocks inserted in the same and supported as specified, of the plunger X, vertical rods V, gear pinion W, meshing with the racks *r*, on the vertical rods, and the eccentrics S, chain of gearing R, Q, M, O, and fly wheel 2, arranged as and for the purpose specified. 7th. In a machine of the class described, the combination with the compression block having a cylindrical hole, air ducts leading from such hole, and a resistance block or blocks located therein, of a plunger designed to co-act with the resistance block, and means whereby the plunger derives a vertical reciprocating motion, as and for the purpose specified.

No. 42,496. Cast Iron Sectional Boiler.

(*Chaudière à carneaux en fonte.*)

Henry A. Smith, Detroit, Michigan, U.S.A., 7th April, 1893; 6 years.

Claim.—1st. A sectional boiler consisting of sections H, having the parts K and P connected together by the pipes M, N, the box L, and the pipes M^1, N^1, substantially as shown and described. 2nd. A sectional boiler consisting of opposing rows of sections H, each section having an intermediate water box L, a damper between the opposing boxes L, end sections covering the vertical space between the two rows of sections H, a manifold at the base of each row of sections, and a drum connected with the top of all the sections, substantially as shown and described.

No. 42,497. Door Closer. (*Appareil à fermer les portes.*)

Milo Jackson Althouse, Vaupun, Wisconsin, U.S.A., George Tait Blackstock and John Charles McKeggie, both of Toronto, Ontario, and James Herbert McKeggie, Barrie, Ontario, assignees of Harman Bunker, Barrie, Ontario, Canada, 7th April, 1893; 6 years.

Claim.—1st. The combination, with a door and its jamb, of a single piece of wire having angularly bent ends, secured respectively to the door and its jamb by means of staples, substantially as set forth. 2nd. The combination of a door and its jamb, a single piece of wire having angularly bent ends and pointed extension, engaging the wood work and staples securing the wires at their angles, substantially as set forth. 3rd. As an improved article of manufacture, a door closer, consisting of a single piece of wire bent into approximate V-form having a series of coils at the bend and its ends bent angularly, substantially as set forth.

No. 42,498. Disc Harrow. (*Herse à disque.*)

William Pitt Millar, Morrisburg, Ontario, Canada, 7th April, 1893; 6 years.

Claim.—The combination in a disc harrow. with the arms carrying the discs, of a horizontal rigid bar secured to the seat casting, carrying adjustable levers pivoted at its outer ends, the said levers carrying a frame having a segmental lower edge eccentric to the pivot of the lever, substantially as and for the purpose set forth.

No. 42,499. Milking Machine.

(*Appareil pour traire les vaches.*)

James Calvin McCollum and William Warren Murphy, both of Los Angelos, California, U.S.A., 7th April, 1893; 6 years.

Claim.—1st. In a milking machine the combination of two series of teat compressing rollers and suitable mechanism arranged to operate such rollers to bring pairs of rollers into juxtaposition successively and move them downward for a distance in substantially parallel planes whereby the cow's teat may be successively engaged by such pairs of juxtaposite rollers to force the milk down and out of the nipple. 2nd. In a milking machine the combination of a series of endless belts provided respectively with a series of teat compressing rollers and arranged oppositely upon suitable belts carrying and driving rollers arranged to rotate the belts; such carrying and driving rollers and means for rotating such rollers. 3rd. In a milking machine the combination set forth of two endless belts arranged with a space between them and provided with teat compressing rollers, and means for rotating the belts. 4th. The combination of the series of belt carrying and driving rollers, the train of cogs connecting the driving rollers; the endless belts mounted upon such rollers and arranged in pairs and provided respectively with the seriei of teat compressing rollers, and means for rotating the driving rollers. 5th. In a milking machine the combination of two series of teat compressing rollers arranged to operate in pairs as set forth and a collapsable tube arranged in the space between such series of rollers. 6th. The combination of the endless belts arranged in pairs and provided with the teat compressing rollers; the belt driving rollers, the adjustable belt carrying rollers, and springs arranged to press the belt carrying rollers toward each other to close the space between the belts. 7th. The combination of the endless belts arranged in pairs and provided with the teat compressing rollers, the carriers pivoted at their lower end, the belt driving rollers, the belt carrying rollers journalled in the movable carriers, and springs arranged to press the carriers toward each other. 8th. In a milking machine of the class described, the combination of the belt carrying rollers, the slotted slides S, S^1, the toggle joint T pivoted to the slides, the frame of the machine provided with the vertical slot, and the pin of the toggle joint arranged to slide in such slot. 9th. In a milking machine of the class described, the combination of the slotted frame, the movable slotted slide provided with the sockets, the belt carrying rollers journalled therein, the collapsable tube and the tube supporting brackets inserted in such sockets.

No. 42,500. Rock Drilling Machine. (*Foret de mine.*)

Theodore Weld Sterling, New York, State of New York, assignee of Eugene Moreau, Philadelphia, Pennsylvania, U.S.A., 7th April, 1893; 6 years.

Claim.—1st. In a rock drilling machine, comprising a striking device composed of two hammers reciprocating in the direction of impact and also in a line crossing that of the impact, mechanism for imparting the desired movements to the striking mechanism, a drill tool, and a rock shaft connected to the drill tool, or to a part holding a drill tool, and receiving motion from the operating mechanism of the striking device, substantially as described. 2nd. In a rock drilling machine, comprising a striking device composed of two hammers reciprocating in the direction of impact and also in a line crossing that of impact, mechanism for imparting the desired movements to the striking mechanism, a drill tool, and a rock shaft connected to the drill tool or to a part holding a drill tool by a ratchet feed, and receiving motion from the operating mechanism of the striking device, substantially as described. 3rd. In a rock drilling machine, comprising a striking device, composed of two hammers reciprocating in the direction of impact and also in line crossing that of impact, mechanism for imparting the desired movements to the striking device, a standard upon which the machine is mounted, a connection between the standard and the operating mechanism of the striking device, and a screw receiving motion from the operating mechanism, and imparting a longitudinal movement to the connection, substantially as described. 4th. In a rock drilling machine, comprising a striking device composed of two hammers reciprocating in the direction of impact and also in a line crossing that of impact mechanism for imparting the desired movements to the striking device, a standard upon which the machine is mounted, a longitudinally movable connection between the standard and the operating mechanism, and a clutch attaching the connection to the operating mechanism, substantially as described. 5th. In a rock drilling machine comprising a striking device composed of two hammers reciprocating in the direction of impact and also in a line crossing that of impact, mechanism for imparting the desired movements to the striking device, a standard upon which the machine is mounted, a longitudinally movable connection between the standard and the operating mechanism, a drill tool holder having a limited longitudinal movement, and a connection between the tool holder and the clutch, substantially as described.

No. 42,501. Striking Device. (*Marteau.*)

Theodore Weld Sterling, New York, State of New York, assignee of Eugene Moreau, Philadelphia, U. S. A., 7th April, 1893; 6 years.

Claim.—1st. In a striking device, in combination, a pair of independently reciprocating hammers and mechanism for reciprocating simul-