drical piece within which said cup is supported, and upon the sides of which it is guided, provided with passages substantially in opposite sides opening respectively into the main burner, and into the auxiliary burner located within the main burner, the former of said passages being normally closed, and the latter normally open when the supply is increased. 6th. In a gas burner, the combination of the main burner B, auxiliary burner L opening thereinto, cylinder E held in said burner having a passage-way K on the one side to said auxiliary burner, and passage-ways I, J on the other to said main burner, valve F provided with opening H normally opposite to passage-way K into the auxiliary burner loosely secured in said cylinder E, but free to rise therein to close the passage-way into the auxiliary burner, and to open that into the main burner. 7th. In a gas burner, the combination of the main burner B, auxiliary burner L opening thereinto, cylinder E held in said burner having a passage-way K on the one side to said auxiliary burner, and passage-ways I, J, on the other to said main burner, valve F provided with opening H normally opposite to passage-way K into the auxiliary burner loosely secured by means of slot *f*, and pin G on said cylinder E, but free to rise therein to close the passage-way into the auxiliary burner, and to open that into the main burner.

No 32,272. Ventilating Man-Hole for Sewers. (*Regard de ventilation pour les égouts.*)

Thomas W. Morgan, Oakland, Cal., U.S., 16th September, 1889; 5 years.

Claim.—1st. The vertical man-hole having the supplemental flue formed parallel therewith, and the curb C having the opening G, said supplemental flue having its lower end leading into the man-hole, and its upper end in communication with the passage G, in combination with a close pan or cover at the bottom of the curb below the opening G, substantially as herein described. 2nd. The vertical man-hole, a supplemental flue built in the side-wall thereof, and the curb C, said supplemental flue connecting with the man-hole at its lower end, and with the space in the cylindrical curb at the upper end, and being filled with charcoal or other disinfectant, in combination with the close pan or cap fitting upon the ledge or lip around the bottom of the curb, the perforated cover fitted to the curb, and the extension at the side of the curb with its supplemental cover, substantially as herein described.

No. 32,273. Machine or Contrivance for Fastening Doors Open. (*Appareil pour retenir les portes ouvertes.*)

Ellen P. Passmore, Brantford, Ont., 16th September, 1889; 5 years.

Claim.—The combination of the bars 2 and 3, with the eyes 4 and 4, for the purpose hereinbefore set forth.

No. 32,274. Portable Centre for Constructing Continuous Archways. (*Cintre portatif pour la construction continue des passages envoutés.*)

Smith Toye, Cardinal, Ont., 16th September, 1889; 5 years.

Claim.—1st. The combination in a portable centre for constructing continuous archways, of the carriage A, with the adjustable cover B having hinged wings L, L, as set forth. 2nd. The combination in a portable centre for constructing continuous archways, of the carriage body or framework A, with the adjustable hinged trucks C, C, and the adjustable cover B having hinged wings L. L. as set forth. 3rd. The combination in a portable centre for constructing continuous archways, of the carriage body or framework A, with the adjustable hinged trucks C, , and the cover B adjustable vertically in two definite positions, and having dependent from each side of said cover, the hinged ways L, L, as set forth 4th. The combination in a portable centre for constructing continuous archways, of the carriage body or framework A, with the adjustable hinged trucks C, C, and the cover B adjustable vertically in two definite positions and having dependent from each side of said cover the hinged wings L, L, with arms J, J, for expanding the same, substantially as set forth.

No. 32,275. Grain Scourer.

(*Nettoyeur des grains.*)

Giles S. Cranson, Silver Creek, N.Y., U.S., 16th September, 1889; 5 years.

Claim.—1st. The combination, with a scouring case, of a scouring drum provided with transverse grooves and recesses or depressions in said grooves, substantially as set forth. 2nd. The combination, with a scouring drum provided with grooves, and recesses or depressions in said grooves, of a scouring case provided with grooves, and recesses or depressions in said grooves, substantially as set forth. 3rd. In a grain scourer, a scouring plate provided with transverse grooves having inclined advancing sides, and abrupt retreating sides, and recesses or depressions in said grooves, substantially as set forth. 4th. The combination, with the scouring case, of a drum having a scouring plate provided at its entering end with inclined flights, and with transverse grooves having recesses or depressions, substantially as set forth. 5th. The combination, with the scouring case, of a drum composed of alternating plates having transverse grooves, with recesses or depressions, and plates having longitudinal grooves, substantially as set forth. 6th. The combination, with a scouring drum, of a scouring case provided with a tight bottom plate, having transverse grooves and recesses, or depressions in said grooves, and with a ventilated top section, substantially as set forth.

No. 32,276. Machine for Moulding Confections. (*Machine à mouler les bonbons.*)

Joshua C. Ruby, Philadelphia, Penn., U. S., 16th September, 1889; 5 years.

Claim.—1st. In a confection-moulding machine, the combination of the hopper with the discharge tube X, the vertically movable plungers I1 in the said tubes, provided with the inlet openings, and the vertically movable rods M1 having the stems O1 extending through the upper ends of the plungers, and provided at their lower ends with valves P1, substantially as described. 2nd. In a confection-moulding machine, the combination, of the hopper, the discharge tubes, valves D1, reciprocating plungers I1 and rods M1, having valves P1, substantially as described. 3rd. The combination in a machine for moulding confections, of the hopper, with the tubes X in its lower side, the cups Z attached to the lower ends of said tubes, the spring pressed valves D1, the vertically movable plungers I1 arranged in the tubes and having the inlet openings, and the openings L1 in their lower sides, and the vertically movable rods M1 playing loosely in the plungers, and having the valves P1 to open and close the openings L1, substantially as described. 4th. The combination, in a confection-moulding machine, of the hopper, having the discharge tubes with the plungers I1 in said tubes, and provided with the inlet openings, and the vertically movable rods M1, having a limited independent movement in said plungers, and provided at their lower ends with the valves P1, substantially as described. 5th. The combination in a confection moulding machine, of the hopper having the discharge tubes, the plungers I1 in said tubes, provided with the inlet openings, and the vertically movable rods M1, having a limited independent movement in said plungers, and provided at their lower ends with the valves P1, with the adjustable stop R1 to limit the independent movement of the rods in the plungers, for the purpose set forth, substantially as described. 6th. In a machine for moulding confections, the combination of the hopper with the rigid table, the horizontal tray resting on and supported by the table and divided into a series of compartments, the driving shaft, the two shafts C, the chain running around the said shafts C, the pitman F2 connecting at one end with the driving shaft, the rocking lever C2, to which the other end of the pitman is adjustably connected, the pawl carried by the lever and the ratchet on one of the shafts C to be engaged by the pawl, as set forth. 7th. In a machine for moulding confections, the hopper, having an open bottom combined with the closed hollow steam chamber W, removably fitted within, and closing the open bottom of the hopper, whereby the chamber can be removed and another chamber substituted, having a greater or less number of tubes, and the pipes to supply the chamber with steam, substantially as described. 8th. In a machine for moulding confections, the combination of the hopper with the discharge tubes X, the I1 having the inlet openings and working in the tubes X, and the discharge cup Z fitted to the tubes and valves D1 in the cups, the plungers rods M1 having a limited independent vertical movement in the plungers and carrying valves P1, as set forth. 9th. In a machine for moulding confections, the hopper having an open bottom, combined with the closed hollow steam chamber W, removably fitted within and closing the open bottom of the hopper, whereby the chamber can be removed and another chamber substituted, having a greater or less number of tubes and the pipes to supply the chamber with steam, and the said hopper having side compartments M and pipes N to supply hot water thereto, the compartments N being entirely separate and independent of the chamber W.

No. 32,277. Plough and Cultivator.

(*Charrue et cultivateur.*)

Edward Bartlett, Bancroft, Ont., 16th September, 1889; 5 years.

Claim.—1st. The side bend or off-set of the beam marked A, towards the land side of the plough or cultivator, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the said bend or off-set A in the beam with the standard and mould board of the plough or cultivator, substantially as and for the purpose hereinbefore set forth.

No. 32,278. Metallic Wheel.

(*Roue métallique*)

George H. Everson, Pittsburg, Penn., U. S., 16th September, 1889; 5 years.

Claim.—1st. The combination of the sleeve, the wooden filling placed therein, and the box, the wooden filling being bored out to receive the box, the central ring or band F, the hub sections and the fastening devices which engage with the inner ends of the spokes and hold them in position, substantially as shown. 2nd. In a hub, the sleeve A, provided with a series of sockets or recesses in its outer side to receive the ends of the spokes, in combination with the central band or ring, the spokes, the fastenings to engage with the ends of the spokes and hub sections, substantially as described. 3rd. A metallic spoke formed of thin metal, and which is made angular at its inner end, oval in cross section a short distance beyond the hub, and then round at its outer end so as to correspond to the shape of an ordinary buggy spoke, substantially as set forth. 4th. The combination of the metallic felloe, the detachable separate fastenings placed therein and provided with ribs or flanges on their inner sides, so as to catch in grooves or recesses formed in the sides of the end of the spokes, and the rivets or fastenings which are passed through the felloe, substantially as specified. 5th. The combination, with the hub and the notched metallic spokes, of separate springs, which are applied to the spokes for the purpose of securing them in position in the hub, and imparting to the wheel the necessary amount of elasticity, substantially as shown and described. 6th. The combination, with the felloes, of a suitable filling of wood and rubber, which is placed therein between the castings to which the ends of the spokes are fastened, substantially as set forth. 7th. The combination, with the felloe, of the rubber Q and a layer or layers of wood which are placed upon the top of the rubber, substantially as specified.