No. 25,139. Hoisting Pulley. (*Poulie.*)

Horace Butters, Ludington, Mich., U.S., 16th October, 1886; 15 years.

Claim.—The combination, with a pulley block, of oil reservoirs B having oil openings G and the pulley shaft extending through the oil reservoirs and block and pulley, and provided with a longitudal oil groove extending into the reservoirs, substantially as set forth.

No. 25,140. Woven Fabric. (*Tissu.*)

George Crompton, Worcester Mass., U. S., 16th October, 1886; 15 years.

Claim.—A double faced fabric in which the face and binder warps are combined with stuffer or cord-weft, and with binder-weft, substantially in the manner hereinbefore set forth, whereby a fabric is produced with ribs on both of its faces formed by the same face-warps bent about the stuffer or cord-weft, the ribs at opposite picks of the fabric being substantially opposite each other, the face-warps being bound down at each side of each stuffer or cord weft by the binder-warps and binder-weft, two picks of the latter lying between each two picks of the stuffer or cord-weft, the binder-warps separating each two alternate picks of stuffer or core-weft, substantially as described.

No. 25,141. Buggy Top. (*Couverture de Voiture.*)

Daniel Conboy, Toronto, Ont., 16th October, 1886. 5 years.

Claim.—1st. As an improved method of securing the quarter-curtain to the back rail of a buggy-top, a strip C extending across the quarter-curtain A, in combination with a bolt or bolts D for securing it to the back rail B, substantially as and for the purposes specified. 2nd. As an improved method of securing the quarter-curtain to the back rail of a buggy-top, a back rail B having its outer side concave, so as to receive the convex inner side of the strip C, in combination with a bolt D for securing the strip to the rail B, substantially as and for the purpose specified. 3rd. A strip G fitting over the rail J, in combination with a block H, the whole being secured to the bracket F by the bolt I, substantially as and for the purpose specified.

No. 25,142. Sash Fastener. (*Targette.*)

Henri Fauteux, Montreal, Que., 16th October, 1886; 5 years.

Réclame.—Un mécanisme de targette pour fenêtres ou autres ouvertures, composé des pièces B, P, T, *s*, *c*, *m*, et *u*, renfermi dans la botte A, recouverte de la maniere susdite et pour les fins susmentionnées.

No. 25,143. Sewer Trap. (*Trappe d'Egout.*)

Christopher Moody, Hamilton, Ont., 16th October, 1886; 5 years.

Claim.—1st. The combination, substantially as described, of a cylinder A, piston B, pipes H, F, plug D, plug seat E, gas pipe I, operating in conjunction with a sewer for the purpose specified. 2nd. In a sewer trap, a cylinder constructed with an inclined bottom *c*, a piston B, weight C, concave plug D, plug seat recess E, inlet pipe F connecting cylinder to a dwelling outlet pipe H, connecting cylinder at plug seat E to sewer main, and a gas pipe I connecting sewer main G to opening *d* at the top of the cylinder A, the said cylinder being placed at any convenient position underground between the sewer main and dwelling, all arranged and constructed to operate substantially as and for the purpose specified. 3rd. In a sewer trap, a plug D, constructed concave on its under side, attached to a piston B acting in a plug seat E, of a cylinder A, in combination with an inlet pipe F outlet pipe H, and air or gas pipe I, connecting sewer main to the interior of the upper part of the cylinder A, substantially as and for the purpose specified.

No. 25,144. Hoop Coiler. (*Machine à Plier les Cercles.*)

Alexander F. Ward, Detroit, Mich., U. S., 16th October, 1886; 5 years.

Claim.—1st. The combination, with the frame A and the coiling head, of the curved rail W secured to said frame beneath the coiling head, the foot-lever V pivoted to said curved rail, the curved lever U pivoted to the frame and terminating in a finger, and a rod connecting said lever V directly with the lever U, substantially as shown and described. 2nd. In a hoop-coiling machine, in combination with the tension-strap and the face-plate B, the guide flange Q secured near the outer edge of said face-plate, and having the overhanging flange Q^1, all arranged to keep the tension-strap from being displaced in removing the coil, substantially as described. 3rd. In a hoop-coiling machine, the combination, with the ram E, of a cross-bar F secured to its rear side transversely the frame and carrying said ram, and of the the sliding-bolts G adjustably secured in bearings to the end of said cross-bar, and having bearings *i* upon opposite sides of said cross-bar, and a gate K hinged at one end of said bolts, substantially as described. 4th. In a hoop-coiling machine, the combination, with the main shaft C, of the sliding bolts G having bearings *i*, the cross-bar F, the ram E carried by said cross-bar, and the hub *g* carried by the ram and having an enlarged opening through which the main shaft passes, and a bevelled edge *f*, substantially as and for the purpose described. 5th. In a hoop coiling machine, the combination, with the friction-wheel M and the coiling mechanism operated thereby, of the friction-pinion M^1 and its swinging frame, the adjustable tension spring *s* to normally keep the swinging frame in its adjusted position, the rock-arm T and trap S carried thereby, substantially as described. 6th In a hoop-coiling machine, the combination, with the coiling mechanism, the tension strap L, of the curved cam K pivoted to the frame, and connected at one end with said tension-strap, and intermediate connections, substantially as described, for producing a decrease of tension on said strap as the coiling progresses, as set forth. 7th. In a hoop-coiling machine, the combination, with the tension-strap L, of a power device, such as formed by the combination of the friction wheels M^{11}, M^{111}, carried by the shafts N, *t* respectively, strap S, the free end of which hangs between said friction wheels, and lever R1 secured on said shaft and constructed to release the tension of the tension-strap, substantially as described.

No. 25,145. Machine for Making Sand Moulds for Casting Metals. (*Machine à faire les Moules en Sable Maigre de Fonderie.*)

Matthew R. Moore, Indianapolis, Ind., U. S., 16th October, 1886; 5 years.

Claim.—1st. Two or more pattern-slides, as I and J, adapted to carry the parts of a divided pattern, in combination with means for mechanically operating the same, whereby they may be drawn from the sand successively, as herein specified. 2nd. In a pattern chest, two or more slides I, J, carrying portions of the pattern respectively in combination with each other, and a silhouette plate S, and with partially revolving shafts K carrying cams K^2, K^4 arranged to withdraw the respective portions of the patterns at different periods, as herein specified. 3rd. The locking means *z*, in combination with two or more pattern-slides I, J, and with the shafts K carrying cams K^2, K^4, arranged for joint operation, as herein specified. 4th. The sheet metal packing C1 and cover C, in combination with the sand-box O, pattern-box L^3, and provisions as the piston and cylinder P, A^4 for raising the latter, and with provisions, as the air bags R and their inflating means, for compressing the sand in a moul'd all arranged for joint operation, as herein specified. 5th. One or more pattern-chests *ol*, moulding benches adapted to carry a flask and contents, in combination with a platen having yielding pressers, and with a valve N^1 arranged to control the admission of fluid to actuate the same, and means, as the valve-stem *n*, for opening the valve by the last portion of the closing movement of the machine, so as to insure that the flask shall be in place when the pressers act, substantially as herein specified. 6th. The fixed projection A^4 and movable cap or cylinder P, in combination with each other, and with means for admitting fluid to raise the cap and with a platen C having yielding pressers, as R, adapted to act independently on different portions of the moulding sand presented thereto, substantially as herein specified. 7th. Two or more pattern-slides I, J, in combination with the partially rotating shafts K, cams K^2, K^4, and operating cranks K^3 with the links k^3 and *k*, levers G, H, and operating hand levers h^1, h^2, arranged for joint operation, as herein specified. 8th. The combination, with two pattern chests L^1, L^2, of two or more pattern-slides I, J, in each and connecting levers G, H, arranged to also balance each other and rise and sink independently thereof, as herein specified. 9th. A yielding platen or presser adapted to move to varying extents in compressing different parts of the sand, in combination with provisions as the revolving pattern-boxes L^1, L^2 for mechanically introducing and removing flasks containing patterns and sand, substantially as herein specified. 10th. Two or more pattern boxes having provisions for supporting flasks, and for operating the patterns therein, in combination with provisions for moving them horizontally, and with a catch B and means for conveniently operating it to hold and release the pattern-boxes, substantially as herein specified. 11th. Two or more pattern-boxes L^1, L^2, in combination with each other, and with provisions as E^1, E^2 for supporting and balancing the same, and allowing them to be elevated and depressed, as herein specified. 12th. A group of bags or flexible pressers R, and provisions for admitting fluid under pressure thereto, in combination with the rigid cover C, and with two or more pattern-boxes L^1, L^2 carrying flasks with sand and provisions for raising and lowering and also revolving the same, all arranged for joint operation substantially as herein specified. 13th. The sand-hopper Q and valve *q*, cover C and adjusting means and sleeve D, levers E^1, E^2 and pattern-boxes L^1, L^2, combined and arranged for joint operation, as herein specified. 14th. The scraper F and adjusting and holding means *f*, in combination with two or more pattern chests L^1, L^2, sand-box O, hopper Q and valve *q*, and with provisions for compressing the sand under the cover C, as herein specified. 15th. The combination, with two pattern-chests revolving on a common centre, of the two main levers E^1, E^2 mounted one above the other, and taking hold of the pattern chests at correspondingly separated points arranged for joint operation, as herein specified. 16th The sand-box O, in combination with two or more pattern boxes L^1, L^2, and turning on a common centre therewith, as herein specified. 17th. Two or more pattern-chests, and mechanism for presenting and withdrawing the patterns therein, in combination with each other and with a platen having yielding pressers, and with a rand-box capable of being moved independently, and with two catches and suitable operating means arranged the one to hold the patterns-chests and the other to hold the sand-box, as herein specified.

No. 25,146. Broom Sewing Machine. (*Machine à Coudre les Balais.*)

George F. McCombs, Allegheny, Penn., U. S., 16th October, 1886; 5 years.

Claim.—1st. In a broom sewing machine, the combination of a pair of hinged main or outer vise jaws, a pair of auxiliary jaws located between said main jaws and adapted to be clamped upon a broom by the closing thereof, and a lever pivoted to one of said main jaws and supporting the auxiliary jaws, these members being combined for joint operation to admit of the lowering of the auxiliary jaws coincidently with the slackening of the jaws by the prior movement of the supporting lever, substantially as set forth. 2nd. In a broom sewing machine, the combination of a pair of hinged main or outer vise jaws, a pair of auxiliary jaws located between said main jaws, a lever pivoted to one of said main jaws and supporting the auxiliary jaws, and an adjustable lever rack or series of catches fixed upon the main jaw which carries the supporting lever, and adapted to retain said lever in different vertical planes, substantially as set forth.