No. 32,976. Cash Carrier Apparatus.

(Chien de magasin.)

Frederick J. H. Hazard, Toronto, Ont., 2nd December, 1889; 5 years.

Claim.—1st. The pivoted levers A connected together by the wires or cords C, D, on one of which the carriage H is supported, in combination with means for rocking the levers A on their pivots and locking them at any desired angle, substantially as and for the purpose specified. 2nd. The pivoted levers A connected together by the wires or cords C, D, on one of which the carriage H is supported, in combination, with the spring latch E, provided with a cord F, connected to the lever or levers A, and designed to engage with the latch-holder G, substantially as and for the purpose specified. 3rd. The pivoted levers A connected together by the wires or cords C, D, on one of which the carriage H is supported, the hooked fingers T connected to the levers A and designed to engage with the pin U projecting from the carriage H, in combination with means for rocking the levers A on their pivots and locking them at any desired angle, substantially as and for the purpose specified. 4th. The basket-hook J pivoted on the carriage H, and actuated by the torsion spring K, the bail of the basket L, in combination with the elevator M provided with a finger S, and slidingly connected to the vertical standard N and operated by the cord Q, substantially as and for the purpose specified. 5th. An elevator M, provided with a projecting finger S to carry the basket L to and from the carrier, substantially as and for the purpose specified. 6th. A basket L having a bail formed by the handles *a*, *b* and *c* connected together by a plate *d*, substantially as and for the purpose specified.

No. 32,977. Knitting Machine.

(Machine à tricoter.)

Edward Murby, Detroit, Mich., U.S., 2nd December, 1889; 5 years.

Claim.—1st. The combination of a vibratory yarn-guide, a looper attachment comprising a stationary cam-grooved plate, and a rotatable disk provided with a series of radiating points or fingers, having heels that engage the cam-groove, and a central stem on which said guide and looper attachment are located, substantially as described. 2nd. The combination, with the central stem F, and a vibratory yarn-guide swivelled about said stem, of a looper attachment supported on said stem and comprising a stationary cam-plate, provided with a cam-groove, a rotatable radially-grooved disk and a series of radiating points or fingers having heels that engage the cam-groove, substantially as described. 3rd. The combination, with a centrally supported looper attachment comprising a stationary cam-grooved plate, a rotatably disk and a series of radiating points, of fingers carried by said disk, and having heels that engage the cam-groove, of a yarn-guide provided with a guide-point, means for adjusting said point in a vertical direction, and means for adjusting it in a direction toward and from the centre of motion of the looper attachment, substantially as described. 4th. The combination, with a looper attachment, comprising a stationary cam-grooved plate, and a rotatable disk having a series of radiating points of fingers engaged with the cam-groove, a vibratory yarn-guide, and the central stem on which said guide and looper attachment are located, of a collar surrounding said stem and provided with stops to limit the vibration of said guide, substantially as described. 5th. The combination, with a looper attachment comprising a stationary cam-grooved plate, a rotatable disk, and a series of radiating points or fingers engaged with the cam-groove, of a vibratory yarn-guide and a take-up device, substantially as described. 6th. The combination, with the central stem F, and a vibratory yarn-guide located on said stem, of a binding device to hold said guide in any required position, substantially as described. 7th. The combination, with the stem F, of a vibratory guide engaged thereon, said guide comprising an arm *k*, an arm k^2, and adjustably mounted on the arm *k* by set-screws, and the point k^4 adjustably engaged upon the arm k^2 by a set-screw, substantially as described. 8th. The combination, with the needles, and a stationary yarn-guide E for feeding yarn to the needles, of a centrally supported looper attachment comprising a stationary cam-grooved plate, a rotatable disk and a series of radiating points or fingers carried by said disk and having heels that engage the cam-groove, and an independent vibratory yarn-guide K for feeding a separate looping-yarn to the needle, substantially as described.

No. 32,978. Looping Attachment for Knitting Machines. *(Machine à tricoter.)*

Edward Murby, Detroit, Mich., U.S., 2nd December, 1889; 5 years.

Claim.—1st. In a looping attachment for knitting machines, the combination, with the needles, the needle-cylinder, and means for operating the needles and cylinder, of a conically-shaped plate supported within said needle-cylinder, and adapted to be revolved therewith, a series of points supported by said cone-plate, and means for projecting the points upward in a diagonal direction when desired, substantially as described. 2nd. In a looping attachment for a knitting machine, the combination, with the needles, the needle-cylinder, and means for operating the needles and cylinder, of a cone-plate supported within the needle-cylinder and adapted to be revolved therewith, a series of points supported by said cone-plate, and a cam-groove in which the heels of the points are engaged for projecting the points upward in a diagonal direction, substantially as described. 3rd. In a looping attachment for a knitting machine, the combination, of the needle-cylinder, the needles, a cone-plate supported within the needle-cylinder and adapted to be revolved therewith, a series of points supported by said cone-plate, a cone-cam having the grooves *g* and g^1, a standard having an arm for supporting the stem of the looping attachment, and a weight supported on the upper end of said stem to hold the looping mechanism down to its work, substantially as described.

No. 32,979. Photographic Vignetter.

(Appareil photographique à vignettes.)

Aaron W. Clark, St. Louis, Mo., U.S., 2nd December, 1889; 5 years.

Claim.—1st. In combination, with a camera, the herein-described photographic vignetter, the same consisting of the two masks and their support, said support having an opening opposite the lens, said masks being independently adjustable vertically and laterally upon said support, and one of said masks consisting of a transparent plate having an opaque vignette arranged centrally thereupon, and the other of said masks being opaque and having a serrated edge, substantially as and for the purpose set forth. 2nd. The combination of the two masks and their support, said support having an opening l^2, said masks being independently adjustable upon said support, and one of said masks consisting of a transparent plate having an opaque vignetter, and the other of said masks being opaque and having a serrated edge, substantially as described.

No. 32,980. Shingle Binding Loop.

(Châssis d'empaquetage du bardeau.)

George H. Waring, Jr., Milford, N. B., 2nd December, 1889; 5 years.

Claim.—The combination of the endless metallic loop A, with the binders B, substantially as herein shown and described.

No. 32,981. Culvert for the Passage of Water.

(Ponceau.)

William D. Harris, Ottawa, Ont., 2nd December, 1889; 5 years.

Claim.—1st. A culvert constructed or consisting of a number of vertical sections, each of which is complete in itself, and is composed of vertical sides and inclined roof either of wood or of metal, placed side by side and forming in the aggregate a tube, substantially as and for the purpose herein before set forth. 2nd. The novel construction thus secured of a culvert flexible at all points and in all directions.

No. 32,982. Grass Harvesting Machine.

(Machine à moissonner l'herbe.)

The William N. Whitely Company, (assignee of William N. Whitely), Springfield, Ohio, U. S., 2nd December, 1889; 5 years.

Claim—1st. In a tubular frame harvesting machine supporting the three shafts in tubular bearings, two of the bearings being cast solidly together, the third, which supports the crank or fly wheel shaft, having one end securely fixed to the main tube and braced therefrom, its forward end supporting the crank or fly wheel and the end of the main brace to the cutting apparatus, substantially as shown and described. 2nd. In a harvesting machine carrying a part or all the weight of the cutting apparatus on the frame or pole by means of two springs, one of which is attached to the brace or supporting bar near its connection to the fly wheel shaft bearing, and the other acting upon the inner end of said finger bar through the medium of a spring bolt arranged in the coupling frame and operated upon by the lifting lever, substantially as shown. 3rd. In a harvesting machine, lifting the outer end of the cutting apparatus from the ground by means of a main lever, which first operates an intermediate lever pivoted to the coupling frame that acts upon a spring bolt arranged in the coupling frame, thereby causing the outer end of the cutting apparatus to rise before the inner end after which the entire cutting apparatus is lifted bodily from the ground, substantially as shown and described. 4th. In a harvesting machine, the combined tubular bracket for connecting the cutting apparatus to the brace bar, the forward and rearward tubular projections fitted to the front and rear portions of the inner shoe, the other surrounding a portion of the brace bar making a light and strong connection between it and the cutting apparatus, substantially as shown. 5th. In a grass harvesting machine, arranging a pocket in the tubular bracket attached to the brace bar for the spring bolt, which acts to hold the outer weight of the cutting apparatus from the ground by making the joint at the inner end of the cutting bar nearly rigid, but, at the same time, sufficiently elastic to permit the cutting apparatus to follow the undulations of the ground, substantially as shown. 6th. In a harvesting machine, lifting the outer end of the cutting apparatus from the ground by means of a main lever, which first operates upon an intermediate lever pivoted to the coupling bar, and bearing upon the inner end of the finger bar, thus causing the outer end of the cutting apparatus to rise before the inner end after which the whole may be bodily lifted from the ground. 7th. In a harvesting machine, the tubular bracket or coupling frame for connecting the cutting apparatus to the brace bar, having forward and rearward tubular projections adapted to receive the corresponding front and rear portion of the inner shoe, and a tubular part to receive the brace bar making a light and strong connection between the brace bar and cutting apparatus, substantially as shown. 8th. In a harvesting machine, constructing the main frame tubular in all its parts for sustaining the shafting which through the gearing attached communicates motion from the drive wheels to the knife, the drive wheels being arranged at either end of the main shaft, the second shaft parallel with the main shaft having a gear wheel on each end, the third shaft at right angles to the main shaft with a gear wheel on one end and a crank or fly wheel on the other, all located outside of the tubular frame, bearings for the purpose of giving strength and lightness to the machine, and to preserve the perfect alignment of all parts, so the shafts may run free being at the same time self contained for supporting all the gear shafting of the machine. 9th. In a harvesting machine, wherein the gearing may be disconnected when the cutter bar is elevated, and again connected when the bar is restored to its working position, whereby the operator may raise and lower the cutter bar at will, to pass obstructions, in combination