said barrel and having a longitudinal central opening adapted to fit said spindle and thereby to prevent rotation of the same, as and for the purpose specified. 2nd. The combination of the hollow barrel, the spindle having a portion angular in cross section, the locking spring, the sliding bearing, the plug secured within said barrel and having a longitudinal central opening, a portion of said opening being angular in cross section to fit said spindle and thereby prevent the rotation of the same, all constructed and arranged substantially as set forth.

No. 19,593. Construction and Internal Arrangement of Ships to Save Drainage from Cargoes of Sugar and Molasses. (*Construction et Disposition Intérieure des Navires pour Eviter le Drainage des Chargements de Sucre et de Mélasse.*)

Titus Langille, Mahone Bay, and Benjamin Westhover, Lunenburg, N. S., 16th June, 1884; 5 years.

Claim.—As an improvement in the construction of ships, the hold constructed with a bottom formed by the parallel cross timbers K tapering towards the turn of the bilge on the side of the vessel, set on edge at right angles to the keelson and having openings o^1 intermediately, in combination with the holding cleats M, cross timbers N, flooring O and removable strips P filling the spaces O^1, constructed and combined, substantially as and for the purpose shown and set forth.

No. 19,594. Carriage Curtain Fastening.

(*Suspension de Rideau de Voiture.*)

Washington Welker, S. F. Heffner and J. V. Beery, Tremont, Ohio, U. S., 16th June, 1884; 5 years.

Claim.—1st. A curtain fastener consisting of the curved plate B, hook a having flanges b and tongue a^2 and eye D, substantially as shown and specified. 2nd. The combination of the curved plate B, hook a having slots a^1, tongue a^2 and flanges b and eye D, substantially as shown and for the purposes described.

No. 19,595. Wood Screw. (*Vis à Bois.*)

George A. Stiles, West Gardner, and Carmi M. Parker, Fitchburg, Mass., U. S., 16th June, 1884; 5 years.

Claim.—1st. The improved wood screw, herein shown and described, having a reduced stem or shank C provided with a collar or annular enlargement D E at its upper end where it connects with the head A, as a new article of manufacture.

No. 19,596. Bed Spring Connection.

(*Ligature de Sommier Elastique.*)

Samuel K. Butterfield, Swanton, Vt., U. S., 19th June, 1884; 5 years.

Claim.—1st. A bed spring connection consisting of a wire having its ends bent into loop hooks b, and the shank bent into three corners b^2, b^2, b^3, forming two loops b^1, the hooks b and loops b^1 occupying the four corners of an imaginary quadrangle and each engaging one of the four adjacent springs. 2nd. The combination of four adjacent springs A connected by the hooked and looped wire B, all substantially as and for the purpose set forth.

No. 19,597. Check-Rein Carrier.

(*Porte Fausses-Rênes.*)

Lafayette E. Champlain, Ypsilanti, Mich., U. S., 19th June, 1884; 5 years.

Claim.—1st. A tubular overcheck-rein carrier pivotally secured to top of a bridle, said carrier having a covering for the rein at or near the centre of its length adapted to support a ring-holder and hold the rein in place, substantially as and for the purposes specified. 2nd. In combination with a bridle for a horse, a metallic tubular check rein carrier, a plate secured to said bridle and a ball-and-socket joint connecting said plate and carrier, substantially as and for the purposes specified

No. 19,598. Mowing and Reaping Machine.

(*Faucheuse-Moissonneuse.*)

Isaac Branch, Adairsville, Ga., U.S., 19th June, 1884; 5 years.

Claim.—1st. The combination, with the frame A having ears a^1, and the axle B and wheels C supporting the rear portion thereof, of the pole A^1 pivoted in said ears, the inverted T-shaped lever D pivoted to the frame, the links d^1 and d connecting lever D with the pole a^1 and the rock-shaft a^{11} respectively, the rock-shaft journalled at j in frame a and the bifurcated cutter bar E hinged to said rock-shaft, as shown and described. 2nd. The scalloped wheel N, the anchor lever K, K^1, the connecting bar M, the T-shaped lever k and the bent driving bars K, K^1, in combination with the two sets of shear blades J, J^1, each blade being independently pivoted to the cutter bars E, E^1, and the cutter-bar E having said blades J, J^1 and the T-shaped lever k pivoted thereto, as shown and described. 3rd. The blades J and J^1, each having cutting edges at both ends and both sides, and each adapted to oscillate upon an independent bushing l, in combination with the bars E, E^1, and the bolts L passing through said bars and bushing, binding the bars against the bushings, and said bushings, each extending through its blade and beyond the face thereof to an amount equal to the thickness of the mate blade, substantially as and for the purpose specified.

No. 19,599. Process and Means for Drying Malt. (*Procédé et Moyens de Dessication du Malt.*)

Friedrich Winter, Prossnitz, Austria, 19th June, 1884; 5 years.

Claim.—1st. An improved process of drying malt, in malt-kilns, having three or more floors in which the noxious vapours deriving from the malt on the lower floors are prevented from passing through the green freshly introduced malt, which purpose is obtained by separating the upper compartment of the kiln, in which the malt is at first introduced, from the lower compartments by means of a partition, and by supplying that upper compartment with fresh atmospheric air through separate air-conduits, which air is heated to the required temperature by means of heating pipes conducted through the said separated compartments and forming a continuation of the general heating-pipe-system, substantially as described. 2nd. A malt-kiln with three or more drying floors, in which the upper compartment containing the green newly introduced malt is separated from the other compartments, so that the vapours deriving from the malt on the lower floors are prevented from passing through the green malt and escape directly in the flue, substantially as specified. 3rd. In malt-kilns having three or more drying floors and being provided with a separated compartment for the first drying of the green malt, the arrangement of conduits A for introducing fresh air in the upper green-malt compartment, and of the extended heating pipes B running through this compartment in order to heat to the required degree the introduced atmospheric air, substantially as described and shown. 4th. In malt kilns having three or more floors and constructed as hereinbefore specified, the arrangement of the air-conduits E for leading the heated air from the last compartment in which the drying of the malt is terminated into the upper compartments, so that in the said undermost compartment a very feeble circulation of air takes place, substantially as and for purpose specified. 5th. In malt-kilns having three or more floors and constructed as hereinbefore described, a widened portion D of the vapour stack C, whereby the vapours deriving from green malt on the uppermost floor are allowed to escape through a separate exit, in which owing to the heating of the vapour stack C by the hot gases escaping through the heating pipes and by the vapours from the lower floor, a very energetic air-draught is maintained, substantially as shown and described and for the purpose set forth.

No. 19,600. Joint Lever. (*Levier Brise.*)

William B. Hall, Du Quoin, Ill., U.S., 19th June, 1884; 5 years.

Claim.—1st. As an improvement in joint-levers, the combination, with the double-arm pawls projecting in opposite directions, of an operating lever having arms projecting over the inner arms of the pawls and bearing against the outer face of the same, as shown, whereby the arms of the lever are adapted to independently operate either pawl, substantially as and for the purpose set forth. 2nd. As an improvement in joint-levers, the combination of the main lever carrying two oppositely-projecting pawls, the segmental rack spring mechanism secured upon the lever and acting upon the pawls, and an operating lever having arms bearing against the outer face of the pawls, so that they will independently operate either pawl without engaging the other, substantially as set forth. 3rd. As an improvement in joint-levers, the combination, with the segmental rack, of the main lever carrying the bell crank pawls having their engaging ends projecting in opposite directions, and a double arm spring disposed between the inner arms of the pawls and acting upon the same, substantially as and for the purpose set forth. 4th. As an improvement in joint-levers, the combination of the main lever, the segmental rack, two bell-crank pawls fulcrumed upon the main lever above the rack, and having their engaging arms projecting in opposite directions, the double arm spring acting upon the pawls, the operating lever fulcrumed upon the main lever and provided with an arm projecting at each side and engaging the inner arms of the pawls, and a centrally disposed stop-pin to limit the movement of the operating-lever in either direction, substantially as set forth. 5th. As an improvement in joint levers, the combination of the main lever, the segmental rack, the bell crank pawls having their main arms projecting laterally in opposite directions and provided with the bevelled inner faces, the centrally disposed double-arm spring acting upon the inner arms of both pawls, the centrally disposed stop-pin arranged above the spring and the operating-lever fulcrumed upon the main lever having the central recess in its bottom and the downwardly-projecting arms at each side of this recess, substantially as and for the purpose set forth.

No. 19,601. Shaded Straw Hat. (*Chapeau de Paille Nuancé.*)

Charles Desjardins, Montreal, Que., 19th June, 1884; 5 years.

Réclame: Un article nouveau de manufacture consistant en un chapeau de paille ordinaire, nuancé par le procédé décrit.

No. 19,602. Gate. (*Barrière.*)

Mark W. Foster, Minneapolis, Minn., U.S., 19th June, 1884; 5 years.

Claim.—1st. The combination, with the levers d and gate a suspended therefrom, of the angle-levers A pivoted on the studs v and connecting-rods i, substantially as shown and described. 2nd. The combination, with the levers a, connecting-rods i, levers d and rails f, of the gate a, said gate being suspended from the rails f, and the said levers d and levers a being arranged to raise the gate and cause it to roll along the rails f, substantially as described. 3rd. The combination of the levers a, connecting-rod i, levers d and rail f, with the gate a, said levers d being fitted by slots h to fulcrum-pins, and said levers d and levers a being arranged to operate the gate, substantially as described. 4th. The combination, with the levers d and gate a suspended therefrom and the connecting-rod e provided with a pivot x, of the angle-lever a composed of the arms j and k rigidly secured at their ends by the plate a^1 having angle-slot w and pivots v, substantially as shown and described. 5th. The combination, with the levers