soles to uppers, the slotted spindle-head, the grippers 23 inserted in the slots of the said spindle head, and provided near their lower ends with shoulders 54, and at their upper ends with hooks, and means to support loosely and reciprocate the said grippers in the slots of the spindle head, combined with the loosely-supported cam ring 55 to retain the grippers in the slots of the spindle, and to actuate the grippers to grasp the wire, substantially as described 27th The slotted spindle-head, the working-head, its attached ring G provided with the tappets 45, and the loosely-suspended toothed grippers provided at or near their upper ends with hooks, and near their lower ends with shoulders 23 combined with the ring 55 having cams 57 and recesses 58, the said ring being supported frictionally by the said grippers, substantially as described. 28th. The slotted spindle-head, means, substantially as described, to partially rotate it, and the toothed grippers to feed the wire, and the tappet-ring, combined with the loosely supported cam ring surrounding the said spindle-head and to actuate the grippers, substantially as described. 29th The cutter-carrying levers E. E1, geared together as described, combined with the sliding rack-bar having teeth to engage the teeth 13 of the lever E1, substantially as described. 30th The feed bar m, the lever 33 and means to move it, combined with the lever 36 and the cam rod h_4 to control the movements of the feed-bar, substantially as described 31st. The spindlehead D^7, slotted longitudinally for the reception of the grippers, and provided with the slot 72 at right angles to the gripper receiving slot for the reception of the detaining jaws or blocks, and the toothed grippers, and the detaining jaws or blocks, combined with the reciprocating working-head and the cam-ring, and with means, substantially as described, to effect the movement of the said head and ring to actuate the grippers, for the purposes set forth. 32nd. In a machine for uniting the uppers and soles of boots and shoes, the tappet-ring having tappets 45, the slotted spindle-head provided with toothed grippers for feeding the wire, and the gripper-operating loose ring provided with tappet projections and surrounding the said spindle-head, said loose ring being provided with tappet projections to engage with the tappets 45 carried on the working head, combined with means, as described, for partially rotating the slotted spindle head. 33rd. The reciprocating pitman B^1, provided with a hook, and the horn combined with the trip rod f^2, slide f^5 and intermediate connecting mechanism, substantially as described, to release the horn, as set forth. 34th. The reciprocating pitman B^1, provided with a hook, and the horn and the lifting rod, combined with the lever 31 to lift the horn, substantially as described. 35th. The reciprocating pitman B^1, provided with the hook or projection, and the trip-rod and lifting rod, and means, substantially as described, intermediate or between the said rods and horn to effect the release and the ascent of the horn, combined with a rod controller to operate, as set forth. 36th. The rod controller, the treadle to move it, the horn, the rods f^2 and f^3, the horn-locking slide f^5, and means, substantially as described, to connect the said rods operatively with the said slides and horn, combined with the reciprocating pitman provided with a hook or projection to engage the said rods and operate the horn, substantially as described. 37th. The horn its pivot pin f^6, the lever 31, link g^3, lever f^4 and locking slide f^5, combined with the rod f^3 and latch to first lift the horn to place the boot or shoe thereon against the presser, and to thereafter operate the slide g^5 to lock the horn in elevated position, substantially as described. 38th The rising and falling horn, combined with the feed dog m and its pivoted guide, to permit the front end of the feed-dog to be placed opposite the edge of the sole of the boot or shoe and lifted, substantially as described. 39th. The feed-bar m, the lever 33 and means to move it, combined with the lever 36 and the cam-rod h_4 to control the movements of the feed-bar, substantially as described.

No. 24,885. Pessary. (*Pessaire.*)

Madison M. Warmoth, Brandenburg, Ky., U.S., 4th September, 1886, 5 years.

Claim.—A cone-shaped pessary, consisting of a spring-metal body inclosed in a rubber tubing and formed into coils contracting or tapered toward the upper end for supporting the uterus or womb, and its lower ends adapted to rest upon the soft parts within the vagina, substantially as shown and described.

No. 24,886. Marking Device. (*Machine à Etiqueter.*)

Sampson R. Brown, Leesville, Texas, U. S., 4th September, 1886; 5 years.

Claim.—The herein described improved marking device, the same consisting of an arm adapted to be inserted between the folds of a fabric, and provided with means for holding it fixed in its position after it has been inserted, and having hinged to its outer end the tag having a strip of suitable material secured around its edges, as shown, so as to form on both sides of the tag the flanges adapted to receive the removable, reversible and interchangeable cards, substantially as set forth.

No. 24,887. Fire Grate. (*Grille de Foyer.*)

Ephram J. Story, Washington, D. C., U. S., 4th September, 1886; 5 years.

Claim.—1st The combination of two parallel grate-sections, each of which has a rear pivotal bearing, whereby, when the sections are dumped, each section will discharge its contents toward the front. 2nd. The combination of the two parallel grate-sections D^1 and D^2, each of which has a rear pivotal bearing, whereby, when the sections are dumped, each section will discharge its contents toward the front. 3rd. The combination of the two parallel grate-sections D^1 and D^2, each having rear bottom engaging hooks with rear pivotal bearings, whereby, in dumping the contents, each section will be discharged toward the front. 4th. The combination of two oppositely inclined parallel grate-sections, each of which has rear pivotal bearings, whereby, when the sections are dumped, each section will discharge its contents toward the front 5th. The combination of the two oppositely-inclined parallel grate-sections D^1 and D^2, each of which has rear pivotal bearings, whereby, when the sections are dumped, each section will discharge its contents toward the front. 6th. The combination, with a central longitudinal grate-bar, of a rear grate section which is pivotally supported at its rear extremity, and a front grate section which is pivotally supported at its rear extremity. 7th. The combination, with a central longitudinal grate-bar D, of a rear grate-section D^1, which is pivotally supported at its rear extremity, and a front grate-section D, which is pivotally supported at its rear extremity. 8th. The combination, with a central longitudinal grate-bar, of a rear grate-section which has rear pivotal bearings, and which inclines from its rear extremity downwardly toward the central longitudinal grate-bar and a front grate-section which has rear pivotal bearings and which inclines from its front extremity downwardly toward the central longitudinal grate-bar. 9th. The combination, with the central longitudinal grate-bar D, of a rear grate-section D^1 which has rear pivotal bearings, and which inclines from its rear extremity downwardly toward the central longitudinal grate-bar, and a front grate-section D^2, which has rear pivotal bearings and which inclines from its front extremity downwardly toward the central longitudinal grate-bar 10th. The combination of a rear grate-section, which is at its rear extremity pivotally supported upon bearings which project from the walls of the fire-chamber, a central longitudinal grate-bar which is supported in bearings in or upon the end-plates of the fire-chamber, and which is provided at each end with a front hooked supporting-lug, and a front grate-section which is at its rear extremity pivotally supported upon the front hooked supporting-lugs of the central longitudinal grate-bar. 11th. The combination, with a central longitudinal grate-bar, of a rear grate-section which consists of a longitudinal connecting-web, and two distinct alternating series of transverse bars, and a front grate section which consists of a longitudinal connecting-web and two distinct alternating series of transverse bars, substantially as and for the purposes set forth. 12th. The combination, with a central longitudinal grate-bar D, of a rear grate-section D^1, which consists of a longitudinal connecting-web d^9 and two distinct alternating series d^{10} and d^{11} of transverse bars, and a front grate-section D^2 which consists of a longitudinal connecting-web d^{14} and two distinct alternating series d^{17} and d^{18} of transverse bars. 13th. The combination, with a central longitudinal grate-bar, which is provided with short lateral bars or agitating fingers, of a rear grate-section which embraces a longitudinal connecting-bar or web and two distinct series of alternating transverse bars and a front grate-section which embraces, a longitudinal connecting-bar or web and two distinct series of alternating transverse bars. 14th. The combination, with a central longitudinal grate-bar D which is provided with short lateral bars or agitating-fingers d^5 and d^6, of a rear grate-section D^1 which embraces a longitudinal connecting-bar or web d^9, and two distinct series d^{10} and d^{11} of alternating transverse bars and a front grate-section D^2 which embraces a longitudinal connecting-bar or web d^{14}, and two distinct series d^{17} and d^{18} of alternating transverse bars. 15th. The combination, with a central longitudinal grate-bar which is provided with lateral supporting-lugs, and with short lateral bars or agitating-fingers, of a rear grate-section which has a series of transverse bars which are adapted to engage with the lateral supporting lugs upon the central bar, and which has also a series of transverse bars which are adapted to operate in connection with the short lateral bars or agitating-fingers. 16th. The combination, with a central longitudinal grate-bar D, which is provided with lateral supporting-lugs d^2 and d^4, and with short lateral bars or fingers d^3 and d^5, of a rear grate-section D^1 which has a series of transverse bars d^{10} which engage with the lateral supporting-lugs d^4 upon the central bar, and which has also a series of transverse bars d^{11} which operate in connection with the short lateral bars or fingers d^5. 17th. The combination, with a central longitudinal grate-bar, which is provided with two series of lateral supporting-lugs, and with two series of lateral bars or agitating-fingers, of two grate-sections, each of which has two series of transverse bars of dissimilar longitudinal extent, the longer series being adapted either to rest upon the supporting-lugs or to be passed vertically between them, and the shorter series being arranged coincident with, and adapted to be operated in connection with the short lateral bars or agitating-fingers. 18th. The combination, with a central longitudinal grate-bar D which is provided with two series d^2 and d^4, of lateral supporting-lugs, and with two series d^3 and d^5 of lateral bars or fingers, of two grate-sections D^1 and D^2, each of which has two series of transverse bars of dissimilar longitudinal extent. 19th. The combination, with a central longitudinal grate-bar D, which is provided with two series d^2 and d^4, of lateral supporting-lugs, and with two series d^3 and d^5, of lateral bars or fingers, of two grate-sections D^1 and D^2 which have two series d^{10}, and d^{11}, and d^{17}, and d^{18}, respectively of transverse bars, the longer bars d^{10}, and d^{17}, being operated either to rest upon the supporting-lugs or to be passed vertically between them, and the shorter bars d^{11} and d^{18} being arranged coincident with, and operating in connection with the lateral bars or fingers. 20th. The combination of a central longitudinal grate-bar which has two horizontal transverse perforations with a rear grate-section, which has two pairs of engaging-lugs, which are coincident with the two perforations in the central grate-bar, and a front grate-section which has a single pair of engaging-lugs, whereby when an operating lever is applied in one of the transverse perforations, the two grate-sections may be agitated simultaneously or the front section alone may be agitated, and whereby when the lever is applied in the other transverse perforation the rear section only of the grate may be agitated. 21st. The combination of a central longitudinal grate-bar, which is supported at its ends upon suitable bearings, and which has two horizontal transverse perforations with a rear grate-section, which has two pairs of engaging-lugs, which are coincident with the two perforations in the central grate-bar, and a front grate-section which has a single pair of engaging-lugs, the two grate sections resting upon suitable supports, whereby, when an operating lever is applied in one of the transverse perforations, the two grate sections may be agitated simultaneously, or the front section alone may be agitated, and whereby, when the lever is applied in the other transverse perforation the rear section only of the grate may be agitated. 22nd. The combination of a central longitudinal grate-bar D, which is provided with perforations d^1 and d with a rear grate-section D^1,