

ed outer end flattened at the outer extremity of said bore, and provided with diametrically opposite pairs of notches D, and E, and the spring F, with the pin G, passing through base and button, and having a pair of diametrically opposite ribs *g, g*, at its outer end, and an enlarged head H, projecting over said ribs and fitting closely therein, and to strengthen the ribs, and adapted to cover the notches for the purpose specified.

No. 34,800. Lightning Arrester.

(*Paratonnerre.*)

George G. Bayne, Fremont, Neb., and William F. Bayne, Macomb, Ill., U.S., 1st August, 1890; 5 years.

Claim.—1st. In a lightning arrester, the combination of a central arrester plate having toothed edges, a ground wire connected to the same, the adjacent arrester plates having toothed inner edges, two vertical series of binding posts connected by fusible wires with the outer arrester plates, conductors connecting one binding post of each series with the line wires, and mechanism, whereby in the event of the fusion of the wire connecting said binding post with the adjacent arrester plate, the said binding post shall be automatically placed in electrical connection with the next adjacent binding post of the same series, substantially as set forth. 2nd. In a lightning arrester, the combination of an arrester plate, a series of binding posts, fusible wires connecting the said binding posts with the said arrester plate, and the electrical conductor connecting one of said binding posts with the line wire, and spring arms attached to each of the remaining binding posts, and having insulating sleeves bearing against the fusible wires connecting the binding posts next above with the arrester plate, thereby holding each of said resilient arms out of contact with the binding post next adjoining, substantially as and for the purpose set forth. 3rd. In a lightning arrester, the combination of a series of binding posts, fusible wires connecting said binding posts with an arrester plate, an electrical conductor connecting one of said binding posts with the line wire, springs coiled upon each of the remaining binding posts, arms extending outwardly from said springs and having cranks at their outer ends, and insulating sleeves mounted upon the said cranks, substantially as and for the purpose set forth.

No. 34,801. Cultivator. (*Cultivateur.*)

John Blakeley and Thomas J. Bounds, Newton, Miss., U.S., 1st August, 1890; 5 years.

Claim.—1st. The combination, with the plow beam and the cross beam in two parts, each formed of a substantially V-shaped piece of metal, arranged with parallel portions in the same vertical plane, the adjacent ends of the two parts being overlapped, of the shank passed through the overlapped ends of the two parts, and provided with a nut for holding the same in place, substantially as shown and described. 2nd. The combination, with the plow beam and the cross beam formed of two like parts overlapped at their adjacent ends, of the plow standards carried by the said two parts and provided with removable plow points, the central plow, the shank, of which serves to connect the two parts of the cross beam, the adjusting nut on the end of the central shank, and the angular braces connecting the said two parts of the cross beam with the plow beam, substantially as shown and described.

No. 34,802. Disk Harrow.

(*Herse à disques.*)

Andrew G. Hill, Prescott, Ont., 1st August, 1890; 5 years.

Claim.—1st. The combination of a tongue, a cross beam or frame, and disk-gangs having motion at a point intermediate the ends of such gangs in both horizontal and vertical planes, said cross-beam and sliding bars connected to the tongue, and the braces to the tongue being operated, one in advance of the other and in parallel planes, substantially as described. 2nd. The combination of a tongue, a cross beam or frame, with disk-gangs, having motion at a point intermediate the ends of such gangs, in both horizontal and vertical planes, and adjustable to said cross beam or frame, that the said disk-gangs may be used to throw the soil either inwardly or outwardly as desired, and operated one in advance of the other and in parallel planes, substantially as described. 3rd. The combination of a tongue, intermediate the ends of such gangs, having motion at a point intermediate the ends of such gangs in both horizontal and vertical planes, and adjustable to said cross beam or frame, that the said disk-gangs may be used to throw the soil either inwardly or outwardly, as desired, lowering them simultaneously for operating said disk-gangs, and raising or tilting as described. 4th. The combination of a tongue, cross-beam, disk-gangs having motion at a point intermediate the ends of such gangs in both horizontal and vertical planes, and sliding bars or motion by means of a lever placed at or near rear end of said tongue for the purpose of operating the disk-gangs, substantially as described. 5th. The combination of a tongue, cross-beam, disk-gangs, operated by a lever on the tongue, and vertical planes, sliding bars interchangeable connections with the disk-gangs, substantially as described. 6th. The combination, with the disk-gangs, substantially as described, of the adjustable loop plates, arranged substantially as described, whereby the height of the braces is varied, as and for the purpose set forth. 7th. In a disk harrow, the combination of a down-disk-gang and disk-gang with the bayonet joint swivel, substantially as described. 8th. In a disk harrow, the lever 11, and the slide bars 10, and at their upwardly-curved front ends working in oblique guides on the tongue in combination with the disk-gangs mounted, substantially as described. 9th. An oil cap, with a lip or extension, in com-

ination with the box on the axle of the disk-gang for holding the brace securely to the box, substantially as described. 10th. The combination with the tongue, the cross beam pivoted thereto, and the two disk-gangs mounted on the beam, of the braces pivoted to the gang bearings and adjustably secured to the tongue, substantially as set forth. 11th. The combination of the tongue, the cross-beam pivoted thereto, and the two disk-gangs mounted on the beam, of the outer braces pivoted to the gang bearings and adjustably secured to the tongue, the sliding frame and the inner braces adjustably secured to the frame and to the gangs, substantially as described. 12th. The combination, with the disk-gangs and their inner braces, of the lever and the sliding frame moved thereby forward or backward, and simultaneously raised or lowered respectively, substantially as and for the purpose set forth. 13th. The combination of the disk-gangs and their inner braces, of the tongue, the lever pivoted thereto, and the sliding frame suspended at its rear end on the lever, and supported on its front upwardly curved end on guides on the tongue, substantially as described. 14th. The combination of the tongue, the cross beam pivotally mounted thereon, and the opposite disk-gangs, each connected near one end by a universal joint to the cross bar, and at its other end horizontally and vertically adjustable, substantially as described. 15th. The tongue and the disk-gang beam, pivotally mounted thereon, and having at its ends down-hangers supporting one end of the disk-gang shafts, in combination with the disk-gangs, the lever and slides, and the braces connecting the free ends of the gangs to the slides, substantially as described.

No. 34,803. Invalid's Garment.

(*Vêtement d'invalidé.*)

Emma L. Tozer, Canandaigua, N.Y., U.S., 1st August, 1890; 5 years.

Claim.—1st. A combination garment, comprising a body covering and a bifurcated covering for the legs, the said garment being separable into two sections, the lines of separation running up and down the front and back, connecting with each other under the crotch, and provided with detachable fastenings, substantially as set forth. 2nd. A combination garment, divided into two sections, the lines of separation running up and down the back and front, and connecting under the crotch, the rear line dividing into branches *d, e*, which form flaps under the seat, for the purpose set forth. 3rd. An article of wearing apparel, divided along the back from neck to the hips, and provided below the latter with branches *d, e*, of the line of separation, both the main line and the branches being detachably fastened, substantially as set forth. 4th. An article of wearing apparel, conforming to the shape of the upper part of the person, and divided from the neck along the back to below the seat, substantially as set forth. 5th. An undershirt or equivalent article for female wear, formed with curves, corresponding to the convexity of the bosom, in order to dispense with the pieces, which usually are let in opposite the breasts, but without straining the material, for the purpose set forth.

No. 34,804. Shuttle Guard for Power Loom

(*Garde-travelle pour les métiers mécaniques.*)

Ludwig Povel, Nordhorn, Prussia, 1st August, 1890; 5 years.

Claim.—In power looms, provided with a so-called reed-releasing mechanism, *i. e.*, a device by which, when the shuttle is accidentally arrested in the shed, owing to the pressure exerted by the reed against the arrested shuttle, the reed is forced out of the lathe, and provided moreover with a catch or tongue W, the arrangement that the frog F, applied before the tongue W is secured to an arm or lever J, movable about a fixed pivot or pin J', which lever J, when the shuttle has come to rest in the shed, and the tongue W strikes against the frog, moves about the pivot J', and raises or lowers by means of a roller R secured to the arm J, one end of a lever H, movable about a fixed pivot and acting thus in one sense or the other on the reed-releasing mechanism, so that the reed-pressing rail (V¹) in Figs. 1, 2, 3, 4, and F, in Figs. 5, 6, 7, holding the reed fast to the lathe is removed, and the reed is set free which, owing to the pressure exerted against the shuttle is readily forced out of the lathe, substantially as herein described and shown in the accompanying drawings.

No. 34,805. Gate. (*Barrière.*)

John Gunder, Six Points, Ohio, U.S., 1st August, 1890; 5 years.

Claim.—1st. The stationary supporting-post S, the lever L pivoted at l to the upper end of said post, and an operating cord E connected to the rear end of the lever and depending therefrom, in combination with a gate G, hinged so as to swing in a horizontal plane at a variable height, and a supporting cord O adjustably connected at one end to a bar of the gate, led thence through a hole U in the front end of the lever, and connected at its other end to a fixed part of the gate, substantially as described. 2nd. The supporting post S, having the hook K, the lever L, pivoted between its ends to the upper end of said post, an operating cord E, connected to the rear end of said lever, and having rings adapted to engage said hook, and the pivot post P, parallel with and in front of said supporting post, in combination with a gate G, having rollers R at its inner end and engaging said pivot post, and a supporting cord O adjustably connected at one end to the gate, its body passing through a hole U in the inner end of the lever, and its other end secured to the gate, the whole constructed and adapted to operate substantially as and for the purpose set forth.

No. 34,806. Rail Joint. (*Eclisse de rail.*)

Charles B. Lyon, New York, N.Y., U.S., 1st August, 1890; 5 years.

Claim.—The combination, with the rails slotted in the web at the ends thereof only, of the base-plate and the angle-plates properly slotted to allow for expansion and contraction, the said base and angle plates united by bolts passing through the bases of the rails, the said angle-plates being also united by the single bolt passing through the slot at the abutting ends of the rails, substantially as set forth.