

and a head surmounting said neck, all formed from a tubular shell open at both ends, substantially as shown and described. 2nd. A shoe-lacing stud, having a tubular setting eyelet and a hollow open head, both formed from a tubular shell open at both ends, substantially as set forth. 3rd. A lacing stud, formed from a tubular shell, open at both ends, and having a tubular setting eyelet, a flange extending circumferentially around the latter, a diminished neck, and an overhanging head, substantially as set forth. 4th. The method of making shoe lacing studs from tubular sheet metal shells, open at both ends, consisting in first swaging said shells at or about the centre, whereby a circumferential flange is formed, and then compressing the shell immediately above said flange, whereby a diminished neck and an overhanging head are formed, substantially as set forth. 5th. The method of making shoe lacing studs from tubular sheet metal blanks, consisting in first forming a flange circumferentially around the blank, and subsequently shaping the upper part of the blank to afford a diminished neck, and an overhanging head, substantially as shown and described.

No. 35,560. Truss. (*Bandage herniaire.*)

Orlando E. Miller and George S. Bennett, both of Denver, Colorado, U.S.A., 5th December, 1890; 5 years.

Claim.—1st. The combination, with the body band of a truss, of a pad, a post for supporting the same and terminating at its rear end in a head, a plate encircling the post and provided with a socket for the reception of the head, a binding disk, having an opening smaller than and adapted to partially receive the head, said opening having sharp angular edges adapted to bind upon the head, a clamping disk mounted on the binding disk and the two embracing opposite sides of the band, and binding screws inserted through the three disks at opposite sides of the head, substantially as specified. 2nd. The combination, with the body band of a truss, of a pad, a post for supporting the same and terminating in a soft metal spherical head, a plate or disk encircling the post and provided with a socket for the reception of the head, a binding disk formed of steel and having an opening smaller than and adapted to receive the head and provided with sharp angular edges adapted to bite into the soft metal of the head, a clamping disk mounted upon the binding disks and with the same embracing the body band, said clamping disk being provided with a transverse groove for the reception of the band, and binding screws located at each side of the band and threaded in openings formed in the three disks, substantially as specified.

No. 35,561. Steam Boiler.

(*Chaudière à vapeur.*)

James Edwin Wilson and Frank Wilson, both of Easton, U.S.A., 5th December, 1890; 5 years.

Claim.—1st. The combination, with the casing A¹, of the detachable covering plate a², having exit openings for the products of combustion, and the pendent vertically-detachable boiler B, having central vertical imperforate interiorly unobstructed dividing chamber b, extending from front to rear of the combustion chamber, and provided with the series of right and left horizontal water tubes b¹ and b², extending to the walls of such combustion chamber, whereby the interior space is divided centrally into two vertically right and left upwardly-discharging chambers. 2nd. The combination, with the casing A¹, and with its detachable covering plate, provided with smoke exit opening, of the pendent upwardly-detachable boiler B, having central rectangular closely-fitting chamber b, extending from the front to rear of the interior space, and dividing the same into two separate right and left chambers, which discharge upwardly, and provided with horizontal water-tubes b¹ and b², extending from the central chamber across the separated parts of the combustion space, the supply pipe b³ extending through the casing at one side thereof, and the return pipe b⁴ extending through the casing at the opposite side thereof. 3rd. The combination, with the casing A¹, having vertical ways in the front and rear walls thereof, extending from the top of the wall downwardly, and terminating in seats a⁵ and a⁷, of the boiler B, having projecting lugs b² and b³, adapted to the vertical ways and to the seats a⁵ and a⁷. 4th. The pendent upwardly-detachable steam generator B, having central imperforate dividing chamber b, right and left outwardly-closed horizontal water tubes b¹ and b², and superposed superheating chamber or steam-drum B¹, in combination with the inclosing casing A¹, the combustion chamber of which is of like horizontal area with the boiler and its tubes, and with the detachable covering plate or cap a² of such casing. 5th. In a steam boiler, the combination, with an inclosing casing, which is provided with a detachable covering plate and with supporting bearings or seats, of a boiler, which is provided with projecting lugs, which engage the supporting bearings in the casing, whereby the boiler, in its entirety, is rendered vertically removable and replaceable.

No. 35,562. Brush. (*Brosse.*)

Robert Hill Crowden, London, assignee of James Oates West Parade, Huddersfield, Yorkshire, both of England, 5th December, 1890; 5 years.

Claim.—The application to, or combination with, paint or varnish brushes, of a hook, such as b, employed in the manner and for the purposes described and shown.

No. 35,563. Curtain Fixture.

(*Gousset porte-rideau.*)

David T. Graham, Henry Fleming and John Coyle, all of Trenton, Missouri, U.S.A., 5th December, 1890; 5 years.

Claim.—1st. In a curtain fixture, an upper spring roller and a lower movable spring roller, connected thereto by flexible straps, and carrying a shade, substantially as set forth. 2nd. In a curtain fixture, an upper spring roller, a lower movable spring roller carry-

ing a shade, and having the positive and reversed end pawls J, J, and O, O, and flexible straps connecting the upper and lower rollers, and adapted to be wound upon the upper roller, substantially as set forth. 3rd. The combination of an upper spring roller bearing slides, flexible straps, connecting said slides with the upper roller, and adapted to be wound upon said roller, and the lower spring roller carrying a shade and having positive pawls J, J, and reversed pawls O, O, substantially as set forth. 4th. The combination of the upper spring roller, the vertical guides, the bearing slides, the flexible straps connecting said slides with the upper roller, and adapted to be wound upon said roller, and the lower spring roller carrying a shade mounted in the said bearing slides and having the positive pawls J, J, and the reversed pawls O, O, substantially as set forth.

No. 35,564. Coupling for Whiffletrees.

(*Joint de palonnier.*)

Oliver J. LaBaie, Buffalo, New York, U.S.A., 5th December, 1890; 5 years.

Claim.—1st. The combination, with the plate B, having the apertured projection and flange at its rear extremity, and the grooved projection on its upper surface, of the plate B¹ having the projection on its lower surface engaging said grooved projection, and the pivot at its rear extremity formed integral with said plate B¹, and engaging said apertured projection, in a manner, substantially as set forth. 2nd. The combination, with the plate B, having the projection D, and groove d, the projection C¹, having the aperture c and groove c¹, and the flange C, of the plate B¹, having the flange E and groove d¹, the pivot F and nose f, substantially as and for the purpose set forth.

No. 35,565. Lawn Mower.

(*Faucheuse de pelouse.*)

Colborne Powell Meredith, Toronto, Ontario, Canada, 9th December, 1890; 5 years.

Claim.—As a collector attachment for lawn mowers, the sides A, connected together by the bottom B and cover F to form a receptacle open only at the front, the bearings C secured to said collector, the roller D carried by said bearings to support the collector, and the bifurcated strips H, secured to the said sides, as a means for securing the whole to a lawn mower, substantially as shown and described.

No. 35,566. Joint for Furniture.

(*Joint pour les meubles.*)

The Globe Furniture Company, Walkerville, Ontario, Canada, assignee of Francois R. Beal, Northville, Michigan, U.S.A., 9th December, 1890; 5 years.

Claim.—1st. In a device for the purposes set forth, the combination of a wooden part, as C, having a series of key-hole shaped mortises, with an undercut along the necks of said mortises, and a series of lugs formed integral with a metal frame, said lugs adapted to register and to interlock with the mortises, as and for the purposes specified. 2nd. In a device for the purposes set forth, the combination of the wooden part C, having a series of key-hole shaped mortises, with an inclined undercut a¹ along the necks of the mortises, and being cut gradually deeper from the point e¹ to the point m, the series of conical lugs Z, formed integral with the metal frame, having ledges a, said lugs adapted to register and to interlock with the mortises, substantially as set forth. 3rd. The combination, with the flanges supporting the seat or back, of a series of buttons formed in one piece with the said flange and projecting into said recesses in the seat or back, the said recesses being undercut at the sides and forward ends to engage the sides of the buttons, the undercut recesses gradually increasing in depth from one end to the other, and the lateral edges of the recesses thereby converging toward one end, substantially as set forth.

No. 35,567. Truss Pad.

(*Tampon de banlage herniaire.*)

The Leonard Truss Company, Manchester New Hampshire, assignees of Charles Seward Leonard, Glover, Vermont, all of U.S.A., 9th December, 1890; 5 years.

Claim.—1st. In a truss pad, the combination, with the circular holder, having an annular flange, of an elastic cushion held under said flange and adapted for use, so that the said cushion may bear upon the hernia while the said annular flange bears upon the surrounding parts, substantially as and for the purpose described. 2nd. In a truss pad, the combination, with the holder, having a convex outer face and a concave inner face, and provided on the concave side with an annular inwardly-projecting flange, of the convex elastic cushion, provided with an air vent and held in place with its periphery under said annular flange, the convexity of said cushion projecting beyond said flange, the whole device being adapted for use, as stated. 3rd. In a truss pad, the combination, with the holder, having an annular flange having a support on the surrounding parts, substantially as described.

No. 35,568. Car Coupler. (*Attelage de chars.*)

Albert Mailman, Liverpool, and Cyrus A. Perkins, Annapolis, both of Nova Scotia, Canada, 9th December, 1890; 5 years.

Claim.—In a car coupler, the combination, with the draw-bar head, having the cross-pin f, the pin C and a suitable recess, of the block or tumbler B, having the slotted hole b, the groove d, the tongue D, having the slotted hole e, and a suitable pin made one with the block B, which retains the tongue D, to slide in the groove d, substantially as and for the purposes set forth.