

pose specified. 5th. An adjustable recoil-block fitted into the case immediately behind the inner end of the barrel of the rifle, in combination with a firing-needle inserted into the recoil-block, and a plunger arranged to convey the blow of the hammer to the cap of the cartridge, substantially as and for the purpose specified. 6th. A sliding-bolt arranged to close the opening in the body or case of the rifle through which the empty cartridge is discharged, in combination with an extractor fitted into the sliding-bolt, and having a hooked end to project behind the head of the cartridge when the sliding-bolt is closed, substantially as and for the purpose specified. 7th. A sliding-bolt arranged to close the opening in the body or case of the rifle through which the empty cartridge is discharged, in combination with a trigger-guard lever pivoted in the body of the rifle, and having an end projecting into the said body, so as to engage with the sliding-bolt for the purpose of operating the same. 8th. A pivoted trigger-guard lever, having an end arranged to engage with the sliding bolt having a slanting bottom side to engage with and throw back the hammer, substantially as and for the purpose specified. 9th. The pivoted trigger-guard lever K having a lug O formed on it, in combination with a pivoted lever N, and recoil-block D, substantially as and for the purpose specified. 10th. The pivoted carrier R having a tail Q formed on it, in combination with the pivoted trigger-guard lever K, arranged substantially as and for the purpose specified. 11th. The pivoted carrier R, designed to be adjusted so as to convey a single cartridge from the mouth of the magazine to the mouth of the rifle-barrel, in combination with the pivoted cartridge-stop S, designed to close the mouth of the magazine when the carrier is opposite to the rifle-barrel, substantially as and for the purpose specified. 12th. A cartridge-stop S pivoted on the carrier R, and shaped so as to prevent the cartridges escaping from the magazine while the carrier is conveying a cartridge to the rifle-barrel, substantially as and for the purpose specified. 13th. A rifle body or case having an opening protected by a suitable pivoted cover, and leading from the bottom of the body to the mouth of the cartridge magazine, substantially as and for the purpose specified.

No. 29,616. Loom. (*Métier à tisser.*)

Thibureau Lafontaine, St. Stanislas, Que., 1st August, 1888; 5 years.

Résumé.—10. La combinaison de la poulie E, de la roue B, et des bras D, U, tel que décrit. 20. La combinaison de la charpente A et des clefs C, C, tel que ci-dessus décrit et pour les fins indiquées.

No. 29,617. Paint Compound.

(*Composition à peinture.*)

Anthony W. Burko, Toronto, Ont., 1st August, 1888; 5 years.

Claim.—A paint compound composed of soluble glass, alum, sulphate of zinc, sugar, flour, lime, salt, water and petroleum oil, the whole compounded as and in about the proportionate quantities specified, with the addition of plaster paris, colored pigments or petroleum gas tar in variable quantity, as and for the purpose set forth.

No. 29,618. Apparatus for the Prevention and Consumption of Smoke and more Complete Combustion of Fuel in Steam Boilers and other Furnaces. (*Appareil pour empêcher et consommer la fumée et mieux brûler le combustible pour les foyers des chaudières à vapeur et autres.*)

Alfred Don, Sydney, N.S.W., 1st August, 1888; 5 years.

Claim.—1st. As a new article of manufacture an attachment for steam boiler and other furnaces, consisting of an L-shaped air-pipe secured to the end of the furnace with its curved portion entering the fire-box, said pipe having a bell-shaped mouth fitted with an adjustable lid or cover, and a bell-shaped exit deflected downwardly over the fuel in said fire-box, and a pipe leading from the steam chest of the furnace to and within the L-shaped pipe, and having its exit within the bent portion thereof, substantially as shown and described for the purpose herein set forth. 2nd. The combination, with a steam boiler or other furnace, of an air-pipe entering the fire-box of said furnace, and having a bell-shaped mouth provided with a lid or cover, and a bell-shaped exit deflected downwardly over the fuel in the fire-box, and a valve pipe connected to the steam chest of the furnace or other source of supply, and adapted to discharge steam into said air-pipe, substantially as shown and described for the purpose herein set forth. 3rd. In an apparatus for consuming smoke in steam boiler and other furnaces, the combination, with an L-shaped pipe C secured to the end of the furnace, and formed with a bell-shaped mouth provided with a lid or cover, and a bell-shaped exit projected into the fire-box and having a downward deflection over the fuel therein, of a pipe D provided with a valve E connected to the steam chest of the furnace or other source of supply, and adapted to discharge steam within the bent portion of the pipe C, substantially as shown and described.

No. 29,619. Washer. (*Rondelle.*)

John W. Parks and Peter G. Roquemore, Marshall, Texas, U. S., 1st August, 1888; 5 years.

Claim.—As a new article of manufacture, a rectangular washer made of tempered steel and having a bolt hole, one side of the washer being cut through from the edge to the bolt hole, and the ends thus formed being bent in opposite directions to substantially the same degree, and each end being beveled from one side to the other to form a knife edge, substantially as described.

No. 29,620. Shoe for Horses, etc.

(*Fer pour chevaux, etc.*)

Charles J. Jutson and Frederick A. Poupard, London, England, 1st August, 1888; 5 years.

Claim.—1st. A nailless shoe for horses and other hoofed animals, having a toe, tongue and clips upon the exterior edge of the shoe, and interior clips upon the shoe at suitable points, together with a fastening band or bands extending from points at the rear of the shoe, as near as possible to the upper tread, to the top of said front tongue, substantially as hereinbefore described. 2nd. The combination of a long toe tongue in front and a pair of short clips upon the exterior edge of the shoe at its heel, and a fastening band or bands extending from said clips to the top of said tongue, substantially as described. 3rd. The combination, with clips upon the exterior edge of the shoe at heel and toe, of interior clips upon the shoe to embed themselves in the soles of the hoof, substantially as described. 4th. A toe tongue having a forked upper end forming a pair of wedge-shaped prongs, and provided with a locking device, in combination with fastening band or bands, having a pair of loops or their equivalent to engage with said prongs and locking device, substantially as described. 5th. The combination of an internal spring L, with the toe-tongue B, of the frame, to ensure a bearing of the frame upon the hoof by the spring, even when the hoof is not quite fitted home into the toe C of the frame.

No. 29,621. Automatic Signal Buoy.

(*Bouée de signal automatique.*)

Henry McLaughlin, Bangor, Me., U. S., 1st August, 1888; 5 years.

Claim.—1st. The combination, with the buoy A, constructed substantially as described, of the longitudinal ribs Q at the sides of the buoy, substantially as shown and described for the purpose set forth. 2nd. The combination, with the buoy A having the ballast block B, the deck C, the longitudinal ribs Q and the central rod D and the gong E secured on said rod, of the radial guides F beneath said gong, and the balls G adapted to travel in said guides to and from said gong, substantially as shown and described for the purpose set forth. 3rd. The combination, with the buoy A having the ballast block B, the deck C, the longitudinal ribs Q and the central rod D, and the gong E secured on said rod, of the radial conductors H on the deck of the buoy, and having open inner ends adjacent to the gong, and the balls J adapted to travel in said conductors to and from said gong, substantially as shown and described for the purpose set forth. 4th. The combination, with the buoy A having the ballast block B, the deck C, the longitudinal ribs Q and the central rod D, and the gong E secured on said rod, of the radial conductors H on the deck of the buoy, and having open inner ends adjacent to the gong, the springs K in the open ends of said conductors, the headed pins M passing through said springs, and the balls J adapted to travel in said conductors to and from said pins, substantially as shown and described for the purpose set forth. 5th. The combination, with the buoy A having the ballast block B, the deck C, the longitudinal ribs Q and the central rod D, and the gong E secured on said rod, of the radial guides F beneath said gong, the balls G adapted to travel in said guides, the radial conductors H on the deck of the buoy, and having open inner ends adjacent to the gong, the springs K in the open ends of said conductors, the headed pins M passing through said springs, and the balls J adapted to travel in said conductors to and from said pins, substantially as shown and described for the purposes set forth.

No. 29,622. Jack Mechanism for Supporting Boots and Shoes. (*Porte-forme de corlonnerie.*)

Frank W. Stone, Lynn, Mass., U. S., 1st August, 1888; 5 years.

Claim.—1st. The post A having upwardly projecting bosses F, the sleeve E provided with trunnions, and a last supporting mechanism, combined, substantially as described. 2nd. The sleeve E having trunnions, combined with post A, and mechanism for clamping and holding the trunnions, and a last supporting mechanism mounted on the sleeve, substantially as described. 3rd. In a jack mechanism, constructed substantially as described, the supporting column A having upward projections or bosses adapted to receive the trunnions G, and a screw T for closing together the projections and clamping the trunnions, substantially as and for the purposes described.

No. 29,623. Car Coupling. (*Attelage de chars.*)

Elam R. Yauger, Rookwood, Penn., U. S., 3rd August, 1888; 5 years.

Claim.—1st. In a car coupling drawhead A, follower D and spring G, all formed, arranged and combined substantially as and for the purpose hereinbefore set forth. 2nd. In a car coupling, the combination with the drawhead A, of the coupling pin K, the vertically movable uncoupling rod N having the horizontal arm M, and the chain or other flexible connection between the said pin and the horizontal arm M, and the stud or stop P on the end of the car, adapted to be engaged by the said horizontal arm when the coupling pin is elevated, substantially as specified.

No. 29,624. Combined Washing, Scalding and Snow Melting Apparatus. (*Appareil combiné pour blanchir, échauder et fondre la neige.*)

Frederick C. Mercer, Winnipeg, Man., 1st August, 1888; 5 years.

Claim.—1st. An upright boiler connected by two tubes, one above the other, with a tank placed at a higher level than the boiler, and provided with gauge cocks, a removable top and a branch pipe for