

it down upon the body, whereby the parts are held securely together without the use of bolts, nuts or rivets. 4th. The method of constructing car wheels, which consists in forming grooves and interlocking beads or flanges upon the outer periphery of the body, and inner periphery of the tire, and a flange projecting from the face of the tire, then placing the body within the tire and interlocking their beads or flanges, and then heating the flange projecting from the face of the tire and hammering it down upon the body for securing them together.

No. 35,210. Cresting for Sheet Metal Roofs.
(*Ornementation des feuilles de metal pour toitures.*)

John Hewitt, Chicago, Illinois, U.S.A., 15th October, 1890; 5 years.

Claim.—1st. The sheet metal cresting for roofs, made in two parts, and consisting of the comb strip B, and the crest strip C, applied to the comb strip by means of the legs c, bent in opposite directions, substantially as specified. 2nd. The combination of the comb strip B, and the crest strip C, the latter provided with legs c, alternately bent in opposite directions, substantially as specified. 3rd. The combination of the comb strip B, and the crest strip C, the latter provided with legs c, alternately bent in opposite directions, and the final applied to the comb strip in the same manner as the crest is applied, substantially as specified. 4th. The crest strip C, of sheet metal, with any desired form of openings, provided with legs c, on opposite sides to be applied to the comb of a building, as set forth.

No. 35,211. Rope Coupling. (*Joint de cordage.*)

Charles Davidson, Guelph, Ontario, Canada, 15th October, 1890; 5 years.

Claim.—1st. A rope or cable coupling, consisting of a hook and eye, each having a hollow shank split up either side, forming two jaws, the said jaws being provided with a series of annular serrations or teeth, and rivet holes and rivets adapted to be driven through the rope or cable and hold the jaws securely thereto, substantially as set forth. 2nd. The combination in a rope or cable coupling, with the hook A, shank B, splits C, interior annular serrations or teeth D, having square shoulders d, rivet holes e, rivets E, of the rope R, the end of which being whipped with wire r, substantially as set forth. 3rd. The combination in a rope or cable coupling, with the eye F, shank G, splits C, interior annular serrations or teeth D, having square shoulders d, rivet holes e, rivets E, of the rope R, the end of which being whipped with wire r, substantially as set forth.

No. 35,212. Brace for Chairs.
(*Tirant pour chaises.*)

James S. Virtue, Leadville, Colorado, U.S.A., 15th October, 1890; 5 years.

Claim.—1st. As a new article of manufacture, a brace for connecting the seats of chairs with the rungs thereof, the same comprising a body screwed to the seat, a hook detachably embracing one of the rungs, and means, substantially as described, for adjustably connecting the meeting ends of said body and hook, as and for the purpose set forth. 2nd. The body B, having its ends E, turned at right angles, and provided with holes H, and a screw S, adapted to pass through one of said holes into a chair-seat, in combination with the rod D, having a hook K, at its lower end adapted to engage one of the rungs, and its upper end passing through the holes in the lower end E, of said body, and means, substantially as described, for adjustably connecting the meeting ends of said body and rod, as and for the purpose set forth. 3rd. The body B, having its ends E, turned at right angles, and provided with holes H, and a screw S, adapted to pass through one of said holes into a chair seat, in combination with the rod D, having a hook K, at its lower end adapted to engage one of the rungs, and at its upper end passing through the hole in the lower end E, of said body, and being provided with screw threads T, and a nut N, engaging said threaded end above the lower end of the body, as and for the purpose set forth.

No. 35,213. Spoke Socket. (*Mortaise de jante.*)

Joseph Watson, Cincinnati, Ohio, U.S.A., 15th October, 1890; 5 years.

Claim.—1st. The combination, with the felly and its spoke, of the sections 1, and 2, mounted at opposite sides thereof, each of said sections comprising a central transverse embracing curved portion, and an upper semi-cylindrical reduced spoke embracing portion, webs connecting said portions, and having opposite threaded openings, binding screws passed through the perforations, the section 1, having at its lower end a right angularly disposed flange centrally recessed, as at 8, and forming opposite triangular prongs 9, and the angle to the remainder of the section, or flange 10, disposed at a right angle to the flange of the section, and adapted to take into the recess in the flange of the opposite sections, perforations formed in the prongs, and screws inserted through the prongs into the felly and spoke, substantially as specified. 2nd. A spoke socket formed in opposite sections or halves, and adapted to be applied to the opposite sides of a rim or felly, each of said sections consisting of a felly embracing portion, a spoke embracing portion, and the felly embracing portion terminating in flanges taking under the rim of the wheel, and said flanges interlocking, substantially as specified.

No. 35,214. Jack for Horse Shoeing.

(*Banc pour le ferrage des chevaux.*)

James Allen, Alliston, Ontario, Canada, 15th October, 1890; 5 years.

Claim.—1st. A horizontal rest, shaped as described, to receive and support the leg of the horse, in combination, with a vertical stand provided with a spring latch designed to engage notches made in the

vertical stand C, substantially as and for the purpose specified. 2nd. A horizontal rest, composed of a horn-shaped bracket L, adjustably supported on the plate M, fixed to the standard C, on which a cup-shaped bracket K, is fixed, in combination, with the stand A, provided with a pivoted lever D, having a latch F, to fit into one of the notches H, and actuated by a spring G, substantially as and for the purpose specified.

No. 35,215. Heater for Bath Water.

(*Réchauffeur d'eau pour bains.*)

John L. Brandt, Terre Haute, Indiana, U.S.A., 15th October, 1890; 5 years.

Claim.—A heating apparatus, consisting of the vessel, having the horizontal and vertical portions, a slide located between said portions and provided with an air passage in its lower end, a zig-zag hot air flue, having a width equal to the width of the vessel and extending upward from the horizontal portion thereof, whereby, it presents an extended heating surface to the water, transverse tubes extending across said horizontal portion, and a burner or burners located in such portion beneath the zig-zag flue, substantially as described.

No. 35,216. Whip. (*Fouet.*)

Edward K. Warren, Three Oaks, Michigan, U.S.A., 15th October, 1890; 5 years.

Claim.—1st. As an improved article of manufacture, a whip, having a tapering core and an external layer of bone, formed of thin flat splints of bone bound flatwise longitudinally upon said previously formed core, with their longitudinal edges overlapped, and arranged to break joint, and a binding material around the exterior of the layer of bone, substantially as set forth. 2nd. In a whip, the tapering resilient core, provided with a covering composed of separate and independent thin flat splints, and small fibres c, c', of bone, arranged to break joint, as described, and bound upon the core throughout its length. 3rd. As an improved article of manufacture, a whip, consisting in a resilient core, of less length than the whip, a series of separate and independent flat splints c of bone, bound upon the core throughout its length, arranged to break joint, and extended beyond the end of the core, and there bound together to form the tip B, and the outer lining inclosing the whole, substantially as set forth.

No. 35,217. Paper File. (*Serre-papier.*)

Charles Edgar Stone, Toronto, Ontario, Canada, 15th October, 1890; 5 years.

Claim.—1st. The combination, in a paper file, of the upright curved wires A, A, with the plate B, the upright wires or tubes C, C, with the balanced weight D, and the pivot E, in box F, as shown and described. 2nd. The combination, in a paper file, of the button G, with lock plate G', and flange H, on box F, with the plate B, as shown and described, the whole arranged and combined and operating, substantially as set forth.

No. 35,218. Machine for Uniting the Soles and Uppers of Boots and Shoes.
(*Machine pour assembler les semelles et empeignes des chaussures.*)

Stillman Williams Robinson and Sern Perley Watt, both of Columbus, Ohio, U.S.A., 15th October, 1890; 5 years.

Claim.—The combination, with the spindle-piece A, constructed as described, and having internally-located spring-actuated upper grippers B, of the gripper-carriers C, thread-ring E, having prongs e, pronged coupling D, adapted to be made to interlock with the prongs of said thread-ring, the grippers G, gripping F, and ring I, adapted to operate, substantially as described.

No. 35,219. Wire Stretcher.

(*Tendeur de fil de fer.*)

Joseph Klopfenstein, Archbold, Ohio, U.S.A., 15th October, 1890; 5 years.

Claim.—The combination of the end post, provided with eyes 2, arranged near its top and bottom, and having the stop or support 9, the tube or pipe journaled in the eye, and resting upon the stop or support, and provided with a vertical series of perforations to receive the wire, and having its upper end squared, and adapted to be engaged by a wrench or similar tool, and provided with perforations G, arranged at various points on the circumference of the tube or pipe, and the pin 7, passing through one of the perforations 8, and engaging the end post, and preventing the tube or pipe from turning in the eyes 2, substantially as described.

No. 35,220. Transposing Pianoforte.

(*Transpositeur pour pianoforte.*)

Henry Schallehn, London, Middlesex, England, 15th October, 1890; 5 years.

Claim.—1st. In a pianoforte, the combination of the case, having an horizontal lever F, with a forked inner end K, and an outer handle H, with the adjustable back, having a stud or staple L, for making a detachable connection with the lever F, substantially as hereinbefore described. 2nd. In a pianoforte, the combination of the adjustable back, having a rack N, with the case, having a looking pedal P, and means, substantially as described for moving this back to the right or to the left, substantially as and for the purpose specified. 3rd. The transposing pianoforte, substantially as hereinbefore described, and shown in the accompanying drawings.