

comprising an inclosing case opening into the cinder-box, a smoke-stack proper situated within the said inclosing case and communicating with the exhaust chamber, perforations 6 in the sides of the said smoke-stack proper, the deflector curved over the smoke-stack and provided with the perforations 13, and having its sides cut away, as shown at 11, to allow the smoke and gases to pass upward, but to deflect the sparks and cinders down through the inclosing case into the cinder-box, substantially as described.

No. 37,535. Car Coupler. (*Attelage de chars.*)

Joseph Kormil, Goldendale, Washington, U.S.A., 5th October, 1891; 5 years.

Claim.—In combination with a car coupler constructed substantially as shown, having a chamber of sufficient size to receive the link and automatic pin-support, the chamber having a flat inclined floor, together with a link having end portions which extend beyond the apertures therein, and concave portions upon which the ball or pin-support will rest when the pin is in engagement with the openings in the link, substantially as set forth.

No. 37,536. Suspender, or Rack, for Drying Clothes. (*Appareil d'étendage ou sechoir à linge.*)

Solomon Roos, Hamilton, Ontario, Canada, 5th October, 1891; 5 years.

Claim.—In a clothes suspender for drying purposes, the combination of the upright support and guide, A, having regulating hand screw, C, the adjustable vertical post, B, provided with movable rings, E and H, the projecting arms, D, the braces, F, the pulley, J, the cords or rods, K, and the cord or chain, I, all arranged and devised, substantially as and for the purpose hereinbefore set forth.

No. 37,537. Wheel. (*Roue.*)

Andrew B. Starkey, Kearney, Nebraska, U.S.A., 5th October, 1891; 5 years.

Claim.—1st. In a wheel, the axle-box A, having its inner end enlarged and provided with a shoulder C and end screw-threads B, in combination with the spokes D, having T-headed inner ends E, the inner extremities of which heads are of the same thickness as said shoulder against which they abut, and sleeves F, F, screwed on said threads, and having flaring inner ends embracing the extremities of said T-headed ends, substantially as described. 2nd. In a wheel, the axle-box A, having threaded ends B, in combination with the spokes D, having T-headed inner ends E, whose faces stand in radial lines from the centre of said box, and sleeves F, F, screwed on said threads and having flaring inner ends embracing the extremities of said T-headed ends, substantially as described. 3rd. In a wheel, the axle-box A, having its inner end enlarged and provided with a shoulder C and end screw-threads B, in combination with the spokes D, having T-headed inner ends E, whose faces stand in radial lines from the centre of said box, the inner extremities of which heads are of the same thickness as said shoulder, against which they abut, and sleeves F, F, screwed on said threads and having flaring inner ends embracing the extremities of said T-headed ends, substantially as described.

No. 37,538. Garment Measure. (*Mesure pour les vêtements.*)

William George Venner, Hamburgh, New York, U.S.A., 5th October, 1891; 5 years.

Claim.—1st. A device or conformator for retaining blanks for marking patterns, consisting of a series of sections, the edges of which sections are separable, and, having elastic connections, are movable toward and from each other, and springs for automatically adjusting the edges of the sections in relation to each other upon the object, and means for securing the blanks to the sections, substantially as described. 2nd. A conformator and a series of pattern blanks temporarily secured to the interior thereof, the edges of which are separable and movable toward and from each other, and said blanks being larger than their respective sections of the conformator, and having their adjacent edges overlapping between the adjacent edges of said sections of the conformator, and means for marking the outlines of two adjacent pattern sections at one end the same time, as for instance, a marking wheel, substantially as described.

No. 37,539. Center Bearing Plate. (*Plaque central de coussinet.*)

The Solid Pressed Steel Company, (assignees of William Voos), all of Chicago, Illinois, U.S.A., 5th October, 1891; 15 years.

Claim.—1st. The pressed steel bearing plate A, composed of the flat base portion, and the interior annular portion, said annular portion being in radial section U shaped, the lower rounding curve of the U, forming the bearing, and the inner leg of the U, extending up to the plane of the base, substantially as described. 2nd. The pressed steel bearing plate B, composed of the flat base portion and the interior annular portion, said annular portion being in radial section S shaped, the inner curve of the S, forming the bearing portion and being substantially in the plane of the base, substantially as described. 3rd. The combination of the plate A, having the flat base and the annular portion with U-shaped radial section, with the plate B, having the flat base and the annular portion with S-shaped inner radial section, the rounding curve of the U, being adapted to fit within and bear upon the inner curve of the S, substantially as described.

No. 37,540. Car Heating Apparatus. (*Appareil de chauffage des chars.*)

The Consolidated Car Heating Company, Wheeling, West Virginia, (assignees of James Hale Sewall, Chicago, Illinois), U.S.A., 5th October, 1891; 5 years.

Claim.—1st. In a car heating apparatus, a system of circulating pipes within the car and two independent heaters, both in operative contact with said circulating system, adapted to be operated simultaneously or separately by heat imparted thereto, combined with a current direct or interposed at the junction or point of contact of the said heaters and circulating system, substantially as described. 2nd. In a car heating system, the combination, with a system of water circulating pipes within the car, of a suitable radiator in contact with said circulating system, mechanism for supplying the said radiator with steam as a primary means of heating said circulating system, and a secondary independent heater also in operative contact or connected with said circulating system and adapted to heat the same, combined with a current director, substantially as described, interposed at the junction or point of contact of the primary and secondary heaters, and the circulating pipes, substantially as described. 3rd. In a car heating system, the combination with a system of circulating pipes within the car and two independent heaters in operative contact with said circulating system, each having exposed radiating surfaces, one of the said heaters being adapted to contain a fire and the other to receive steam, combined with a current director, substantially as described, located at the point of contact or junction of the said heaters and circulating system, substantially as described. 4th. In a car heating apparatus, the circulating system located within the car and having an expansion drum, two independent receptacles containing the circulating pipes connected at each end with the circulating system, a steam receiving case inclosing one of the said receptacles, combined with a current director located at the junction of the upper end of the said receivers, and the circulating system, substantially as and for the purpose set forth.

No. 37,541. Sewing Machine. (*Machine à coudre.*)

Charles Culley, John Hassard McBrien and Joseph Sanderson, all of Toronto, Ontario, Canada, 5th October, 1891; 5 years.

Claim.—1st. In combination, the grooved cam on the main shaft, the bell crank lever secured on the main frame and engaging said cam by its vertical arm, the connecting rod connected to the bell crank lever at one end and to the needle lever at its opposite extremity, the means in the said bell crank lever to adjust the throw of the needle lever, the needle lever supported to vibrate on its fulcrum pin in the main frame, and the needle support carried on the fulcrum pin with the needle lever saddled over it, substantially as shown and described. 2nd. In combination, the cam on the main shaft to operate the work piece, the lever supported on the main frame at its lower end, a spring to maintain the upper end of said lever engaged with said cam, the connecting bar secured at one end to said lever and to the work piece at its opposite end, the work piece dovetailed to slide on its bearing on the main frame, the front lever having the feed point at its lower extremity and pivoted in the main frame to operate with said work piece, the rear curved lever supported pivoted to the top of said work piece, and the presser foot carried by said lever, substantially as shown and described. 3rd. In combination, the grooved cam on the main shaft to operate the presser foot, the lever secured centrally to the main frame and engaging said cam at its upper end, the jointed connecting bar connected to the lower end of said lever, and said jointed connecting bar connecting said lever with the curved lever carrying the presser foot thereon, substantially as shown and described. 4th. In combination, the looper cam carried on the main shaft, and the looper lever supported medially by a swivel bearing on the main frame, the springs securing the upper end of said lever in contact with the cam and the looper on the lower end of said lever and having a hollow axis therein to carry the wire or thread, substantially as shown and described. 5th. In combination, the clutch cam on the main shaft and in the rear of the main frame, the vertical rod carried in bearings on said main frame and in contact at its upper end with said cam, the clutch lever pivoted medially to the main frame and adjustably connected to the lower end of said vertical rod, and the rest bar supported from the main frame and engaged by said clutch lever at its rear end and having a spring to actuate it as specified, and a rest on its front end, substantially as shown and described. 6th. In combination, with a machine, for the purpose specified, the fixed pulley supported on a shaft in rear of the machine, the loose pulley in juxtaposition with the fixed pulley on the same shaft, and the means as specified to operate the same by frictional contact by a foot lever, substantially as shown and described.

No. 37,542. Process Relating to the Saccharification and Fermentation Amylaceous Matter. (*Procédé de saccharification et fermentation de matières amylacées.*)

Eugène Carez, Brussels, Belgium, 6th October, 1891; 5 years.

Claim.—1st. The process of preventing the development of injurious and destructive ferments in the manufacture of syrups, sugar, or alcohol, which consists in subjecting a wort of amylaceous substances to the action of hydrofluoric acid in about the proportions and manner described. 2nd. The process of preventing the development of injurious and destructive ferments in the manufacture of syrups, sugar, and alcohol, which consists in subjecting a wort of amylaceous substances to the action of diastase, mixed previously with hydrofluoric acid in about the proportions and manner described. 3rd. The process of preventing the development of injuri-