

shallow groove in which one side of the head of a rail is compressed, and the other roll having a deeper groove to receive the opposite side of the head of the rail, substantially as described. 3rd. In a machine for reducing railroad rails, a pair of rolls for effecting the pass, substantially as at P, the one roll having a broad shallow groove in which one side of the rail-head is compressed, and having a broad rib to bear upon the web of the rail, and having a deep groove with inclined face to receive and bend one of the rail flanges, and the other roll having a deep groove to receive one side of the rail head, and having a groove of less depth than one of the rail flanges, to receive and compress said flanges, substantially as described. 4th. In a machine for reducing railroad rails, a pair of rolls for effecting the pass, substantially as at Q, one of said rolls having a groove to receive one side of the partially compressed rail-head, and the other of said rolls being provided with a rib opposite said groove of the other roll, said rolls being formed with a broad and unobstructed space adjacent the tread of the rail-head wherein said head may be freely extended, substantially as described. 5th. In a machine for reducing rails, a pair of rolls for effecting the pass, substantially as at Q, said rolls having grooves to receive and compress the opposite flanges of the rail, said grooves being out of alignment with each other, substantially as described. 6th. In a machine for reducing railroad rails, a pair of rolls for effecting the third or following pass, substantially as at R, etc., one of said rolls having a groove to receive the partially compressed rail-head, and having a groove to receive one of the partially compressed rail flanges, and the other of said rolls having two ribs, one opposite each of said grooves, substantially as described. 7th. In a machine for reducing railroad rails, the combination, with a pair of compressing rolls, of diagonal guides for causing the passage of the blank obliquely through the rolls, substantially as described. 8th. In a machine for reducing railroad rails, the combination, with a set of three rolls having flat portions for compressing the blank of two sets of diagonal guides, one of said sets for causing the passage of the blank obliquely between the middle and upper rolls, and the other of said sets for causing the passage of the blank obliquely between the middle and lower rolls, substantially as described.

No. 29,440. Semaphore Signalling Apparatus. (*Appareil à signal sémaphore.*)

Frederick Stitzel, Charles Weinedel, Adolph Reutlinger, Moses Schwartz, Otto E. Mueller and Henry J. Egelhoff, Louisville, Ky., U. S., 4th July, 1888. 5 years.

Claim.—1st. The combination of a signalling blade pivoted to go to danger by gravity, a motor vibrating by a change of liquid from chamber to chamber by heat, and its return by gravity, and electrical holding devices, substantially as set forth. 2nd. In a thermo-motor for a semaphore signalling device, the combination, with two pivoted and hermetically sealed chambers, two pipes connecting the chamber at opposite points, and volatile liquid placed in the chambers, of a heat generator adapted to create vapour in one chamber, and drive the liquid into the other chamber, and vibrate the joined chambers by the preponderance of weight thus created, substantially as set forth. 3rd. In a thermo-motor for a semaphore signalling device, the combination, with two pivoted hermetically sealed conical chambers provided with a volatile liquid, two pipes oppositely located, and attached by their ends to form communicating passages between the chambers, one chamber having two heads with an intervening space, the inner head being perforated to allow liquid to enter this space, of a heat producer located in proximity to the lower chamber to create vapour, and expel the liquid from this lower chamber into the upper chamber, to vibrate it to or near a horizontal plane, substantially as set forth. 4th. In a semaphore signalling device, the combination, with a visual signalling blade pivoted and weighted to cause its vibration and outward extension, of electromagnets and a thermo-motor that co-acts with the gravitating blade to set it for danger or safety signals, the motor operating by the expulsion in volume of liquid from one chamber to another, and its return by gravity to the chamber from which it was expelled, substantially as set forth. 5th. In a semaphore signalling device, the combination, with a visual signalling blade pivoted and weighted to vibrate from a vertical position by gravity, of two sets of electromagnets, their armature bars and a motor that derives power from the vaporizing of a portion of its liquid contents, the expulsion of the major portion of the liquid from one chamber to another, and its return to the chamber from which it was expelled by gravity, substantially as set forth. 6th. In a semaphore signal, the combination, with a visual signalling blade adapted to fall to a horizontal position by gravity, of two sets of electromagnets, one set adapted to release the blade and allow it to fall, and the other set effecting an elevation of the blade, substantially as set forth. 7th. In a semaphore signal, the combination, with a signalling blade adapted to fall to a horizontal position by gravity, and a motor, of two sets of electromagnets, one set adapted to release the blade and allow it to fall, and the other set adapted to release the motor, which latter returns the blade to its upright position, substantially as set forth. 8th. In a semaphore signalling device, two sets of electromagnets having weighted armature bars pivoted to rest on the poles of the magnets by force of gravity, and a pivoted hook plate adapted to have hooked engagement with the armature bar of the dominant magnets, to retain this bar in place on the poles of these magnets by its enforced contact of the hook plate with the armature bar of the set of magnets that are charged with electricity, substantially as set forth. 9th. In a semaphore signal, the combination, with a signal blade adapted to fall by gravity, and a depending sliding rod for turning said blade to an upright position, of a motor, an electromagnet, an armature bar for locating said motor against movement, and a second electromagnet having an armature bar adapted to hold the signal blade in an upright position, substantially as set forth. 10th. In a semaphore signal for the railway block system of signalling, the combination, with a signal blade adapted to fall to a horizontal position by gravity, of two sets of electromagnets, their armature bars and latches, and a motor, one set of magnets adapted to hold the signal blade in a position to indicate "safety," and the other set holding the motor in proper adjustment to effect an elevation of the signal blade to a position indicating "safety" when the train leaves the block, substantially as set forth.

No. 29,441. Trace Fastening.

(*Embout de palonnier.*)

Julius S. Clark, Rockford, Ill., U. S., 4th July, 1888; 5 years.

Claim.—1st. A trace fastening consisting of the ferrule 2 having an end piece 5, and tongue or tongues 6 formed integral, substantially as set forth. 2nd. A trace fastening consisting of the ferrule 2 having an end piece 5, and tongue or tongues 6 formed integral, said ferrule provided with a trace fastening, substantially as set forth. 3rd. A trace fastening consisting of the ferrule 2 having an end piece 5, tongue or tongues 6 and lips 7 formed integral, substantially as set forth.

No. 29,442. Side Spring Buggy and Carriage Gear. (*Train de voiture à ressorts de côté*)

John B. Armstrong, Guelph, Ont., 4th July, 1888; 5 years.

Claim.—1st. In a side spring buggy or carriage, the curved tapered springs C, flattened at their upper bearings G, so as to form a bed for the body sills F, to which they are directly attached, and also so attached at their other ends, to the head-block H and rear axle I, as to be in line with the said body sills, substantially as described and for the purpose specified. 2nd. In a side spring buggy or carriage, the combination of the curved tapered side springs C, body sills F, head block H, rear axle I, front axle L, hangers e and bifurcated reaches A, substantially as and for the purpose specified. 3rd. In a side spring buggy or carriage, the combination of the curved tapered side springs C, body sills F, head block H, rear axle I, front axle L, compensating rubber cushion a, hangers e and bifurcated reaches A, substantially as specified.

No. 29,443. Draft Attachment for Wagons.

(*Disposition aux volées de derrière des wagons.*)

John G. Unsoeld, Chicago, Ill., U. S., 4th July, 1888; 5 years.

Claim.—In a draft equalizer, the combination of the draw bar C, sliding in the guide bracket A and carrying the evener B, the rearwardly extending V-shaped draw link E, pivoted to the draw bar C centrally, and duplicate links F and spring devices G, g, ot, g, connected to the rear ends of the link E and axle F, the parts being arranged in the manner and for the purpose set forth.

No. 29,444. Poultice Pan. (*Poñon à cataplasme.*)

Kate Scanlon, New York, N. Y., U. S., 4th July, 1888; 5 years.

Claim.—In a poultice pan, the combination, with compartment B provided with pipe f and removable cap g, of compartment C, provided with slide l and communicating with compartment B, and cover D, substantially as shown and described.

No. 29,445. Button Boot. (*Bottine boutonnée.*)

John Ritchie, Quebec, Que., 4th July, 1888; 5 years.

Claim.—In a button boot made with one large and one smaller quarter, and having a buttoning fly or flap adapted to button up or over the smaller quarter, the combination therewith of an attached inner lining fly beneath the buttoning fly or flap, and adapted to lace up the side of the smaller quarter within the boot's row of buttons, and extending from or near the instep to or near the ankle, substantially as and for the purposes herein set forth.

No. 29,446. Two-Wheeled Vehicle.

(*Voiture à deux roues.*)

John W. Phillips and Frank C. Staley, Kalamazoo, Mich., U. S., 4th July, 1888; 5 years.

Claim.—1st. The combination of the axle, spring, spring bar and a fulcrumed body having the rearwardly extended brace arms between which the ends of the spring bar are attached, substantially as set forth. 2nd. The combination of the wheeled axle, the thills having the single cross bar, the hanger supports which also form braces to the thills, said supports being attached to the cross-bar extending across the angle of the cross-bar and thills, thence down the bend of the thills and attached thereto, the fulcrumed body spring and the hangers jointly attached to the lower end of said support, substantially as set forth.

No. 29,447. Flue Cleaner. (*Nettoyeur de tuyau*)

William H. Thomas, Detroit, Mich., U. S., 4th July, 1888; 5 years.

Claim.—1st. The combination, with the stem and the adjusting nuts, of the inner elliptical spring bearing against the inner springs at or near the center of its length, and both of said springs secured to said nuts, substantially as described. 2nd. The combination of the outer spring E, the inner elliptical springs F, bearing said spring E at or near its longitudinal center, the conical nuts D, nuts I and washers C, all constructed, arranged and operating substantially in the manner and for the purpose, so described.

No. 29,448. Churn Motor. (*Moteur de baratte*)

Joseph W. Jack, New Glasgow, N. S., 4th July, 1888; 5 years.

Claim.—The combination, with the rocking chair, of the frame E, shafts G, H, I and gear wheels J, K, L, pawls O, P and power wheel N, substantially as set forth.

No. 29,449. Baking Pan. (*Cassrole.*)

Edward F. Green and Frank H. Hendrix, Bath, N. Y., U. S., 4th July, 1888; 5 years.

Claim.—The pan A and false-bottom B, having handle C, substantially as and for the purpose hereinbefore set forth.