

Claim.—1st. The ring C formed wider at the top than at its under side, and provided with a leather or other equivalent lining *b* fitting the upper side of said ring, but projecting below the under side thereof to form the flange *c*. 2nd. The combination, with the socket B and the flange *a*, of the ring C having its rear side bevelled and provided with a leather or other equivalent lining, the latter having a flange *c* which bears against the flange *a*. 3rd. The combination, with the ring C having studs *d*, *e*, of a leather or other equivalent lining *b* having the flange *c*, the clasp ring D adapted to fit over the ring C and provided with an opening *h* to receive the stud *d*, a semi-bearing *k* for the stud *e*, and a clasp arm E passing under the neck yoke and arranged to bear on the pole, and a clasp arm F secured to the front of the neck yoke and provided with a stud *l*, to complete the bearing for the stud *e*.

No. 14,752. Improvements in Machine for Sawing Barrel Hoops From Poles. (*Perfectionnements aux machines pour scier les peches pour les cerceles de futailles.*)

William Bowker, Somerville, Mass., U.S., 8th May, 1882; for 5 years.

Claim.—1st. The combination of two or more endless band saws, with a guide *k* and a pressure roller N arranged and to operate with each of such saws. 2nd. The combination of one or more sets of feed rollers, and a set of draft rollers, with two or more endless band saws, and a guide and pressure roller to each of such saws. 3rd. Two next contiguous band saw supporting pulleys, provided with separate arbors in, or about in line with each other, and having between them and also between the two pulleys, a space *s*, a little wider than the band saw to run on one of such pulleys. 4th. The combination of the five pulleys *d*, *e*, *f*, *g*, *h* with the three endless band saws BCD arranged with such pulleys, the pulley *f* serving in such combination to support the two saws C and D.

No. 14,753. Improvements on Steam Valves. (*Perfectionnements aux soupapes de vapeur.*)

Jonathan Neff, Peterburgh, Ont., 8th May, 1882, (Extension of Patent No. 7479.)

No. 14,754. Improvements on Anti-Friction bearings. (*Perfectionnements aux coussinets à anti-friction.*)

Thomas F. Hemmich, Reading, Penn., U. S., 8th May, 1882; for 5 years.

Claim.—1st. A pedestal B, of Fig. 4, adapted to be used as a car truck pedestal, and in combination therewith a yoke G cast with and forming an integral part of the jaws thereof, and having the set bolt H. 2nd. The combination of pedestal B with an anti-friction axle box case C, by the sliding lugs C, seat C₂ and spring D, and with the yoke G by seat C₃, spring E, cap F and set bolt H. 3rd. The axle box case or seating C provided with interior chilled wearing surface, exterior lug slides C₁, vertical spring seat C₂ and thrust spring C₃, cap C₄, ears C₅, opening in cap C₆ and dirt discharge C₇. 4th. The chilled bearing shell L provided with head or collar L₁, its interior adapted by casting upon a mandrel within a chill, to be fitted upon the end A₁ of the axle shaft or spindle A and to be retained upon the end of the same by the set bolt A₂. 5th. The chilled anti-friction rollers K adapted by a bevel chamber at their base to contact with the head or collar L₁ of the shell bearing or toe L, the rollers being so arranged and combined with the case C and shell bearing L, that the thrust or weight of the axle shaft or spindle A shall be distributed upon the toe L, the collar L₁, the chilled bed of the case C and the roller ledge K at truncated end of the case. 6th. The combination of case C with the anti-friction rollers K, shell bearing L, axle shaft or spindle A and pedestal B. 7th. The combination of the chilled anti-friction rollers K with the chilled surface of the case C, and of the chilled shell bearing L upon the axle shaft or spindle A. 8th. The combination of the chilled shell bearing L having the head L₁ with the axle shaft or spindle A by the reduced portion A₁, and with the chilled interior surface of the case C by the chilled anti-friction rollers K. 9th. The drum support N cut away to form feet R, in combination with the case C as adapted for a step to a vertical shaft or spindle. 10th. In combination with a vertical shaft or spindle A, the case C supported upon the drum N, cast therewith or bolted thereto, and having its interior surface chilled and filled with chilled anti-friction rollers K forming a seat and bearing for the toe L, L₁ of the spindle A, the toe L, L₁ being a chilled or case hardened casting secured to the spindle or shaft by the set bolt A₂. 11th. In an anti-friction car axle bearing, the seat or ledge C₂, at the apex of the shell C, adapted to serve as a bed for the secondary set of anti-friction rollers K₂, in combination with said rollers and with the cap or washer C₃ and bolt A₂. 12th. In an anti-friction roller car axle bearing, the rollers K₂ placed between the seat C₂ of the case C, and the cap or washer C₃ and secured in working contact therewith, by the bolt A₂, whereby the end thrust upon the axle is taken up and the bearing made positive in position upon the journal. 13th. In combination with a shaft or spindle A, provided with an anti-friction toe or collar L, L₁ running upon anti-friction rollers K, the case or shell C provided with a hemispherical base C*, abutment C**, cap C₄ and internal chilled conical bed adapted to receive the said anti-friction rollers, the shell being held within the bridge tree plate ring D₂ by the screws D₃. 14th. The bridge tree plate D₁, provided with a circular rein having ears D₂ and set screws D₃, in combination with a spherical base C*, anti-friction roller shell step C, abutment C** rollers K and toe L, L₁ of a spindle or shaft A. 15th. The exterior mill bush shell T, having wings T₁, cap F₂ and guide entrances or grooves T₂, in combination with the interior mill bush U, rollers K, collars L₂ and spindle A. 16th. The interior mill bush U provided with guide leathers U₁, an internal conical bed for a series of anti-friction rollers R and a dust cap F₁, in combination with the spindle A, shell L₂, collar W, exterior bush T with guide recesses T₂ and guide leathers T₁.

No. 14,755. Railway Fish Plate Bolt Fastener. (*Serre-boulon des éclisses de chemin de fer.*)

Magloire Thibault, Ottawa, Ont., 8th May, 1882; for 5 years.

Claim.—1st. The joint fastenings composed of the plate B, necked bolts D, the two tapered slotted plates C, provided with notches *f* and the pin E. 2nd. As a new article of manufacture, a flat taper plate provided with longitudinal slots enlarged at one end and with transverse grooves in one face. 3rd. The taper slotted plate C provided with the grooves *f* for a fastening pin, and the notch *g* to facilitate their removal.

No. 14,756. Improvements on Combined Registers and Ottomans. (*Perfectionnement aux registres de chaleur et aux ottomans combinés.*)

John A. Graham, Emelie C. Rausch and Amelia L. Graham, Red Wing, Minn., U.S., 8th May, 1882; for 5 years.

Claim.—1st. An ottoman or like article of furniture, having an open base or bottom, and provided with doors in its sides, whereby it is adapted to receive and distribute heat from a register opening. 2nd. The described article of furniture A, provided with doors or valves C, latches D and keepers E F. 3rd. The ottoman A, provided with doors C and stops H.

No. 14,757. Improvements in Boots and Shoes. (*Perfectionnements aux chaussures.*)

Augustin O. Lemay dit Delorme, Montreal, Que., 8th May, 1882; for 5 years.

Claim.—Une bonte-semelle fendue de sorte qu'elle peut être ouverte du milieu.

No. 14,758. Improvement on Corsets. (*Perfectionnement aux corsets.*)

Frederick Compton, Toronto, Ont., (Assignee of Thomas P. Taylor, Bridgeport, Ct., U. S.), 9th May, 1882; for 5 years.

Claim.—The combination in a corset, of sections constituting part of the body, having independent pockets extending from the edges toward the inner portions and overlapping each other, and containing ribs which overlap at such inner portions.

No. 14,759. Improvements in the Manufacture of Barrel Heads. (*Perfectionnements dans la fabrication des fonds de futailles.*)

The American Paper Barrel Company, (Assignee George W. Laraway, and Dwight Slate,) Hartford, Conn., U.S., 9th May, 1882; for 5 years.

Claim.—1st. The combination of the piston, the resisting surface opposed to the piston, and the laterally removable matrix case. 2nd. The removable matrix case made of sections hinged together to the end, that the case may be opened. 3rd. As a part of a pulp moulding machine, the removable matrix case, provided with a movable cover. 4th. The combination of the eccentric, the toggle arms and the piston.

No. 14,760. Improvements in the Manufacture of Shovels. (*Perfectionnements dans la fabrication des pelles.*)

Henry W. Sheppard, (Assignee of John Graves,) New York, U. S., 10th May, 1882; (Extension of Patent No. 7450.)

No. 14,761. Improvements on Electric Alarm Apparatus. (*Perfectionnements aux appareils électriques d'alarme.*)

Samuel S. Applegate, Camden, N.J., U. S., 10th May, 1882; for 5 years.

Claim.—1st. The combination of a mat, with wires and plates carried by the mat, and adapted to form part of a closed circuit line. 2nd. The combination of a mat with two sets of wires and plates carried by the mat, one set being adapted to form part of a closed circuit line, and the other set being adapted to form part of an open circuit line. 3rd. The combination of a mat carrying two independent sets of wires and plates, one adapted to form part of an open circuit, and the other adapted to form part of a closed circuit, with a switch whereby one set may be thrown into action, and the other set out of action. 4th. The combination of a mat composed of jointed strips, with circuit making or breaking devices carried by said strips, and with connecting wires crossing the joints between the strips diagonally. 5th. The combination of the mat having openings *b*, wires carried by the mat and adapted to form part of a closed circuit line, and plates *a* *a*₁ connected to the wires, and having bent ends overlapping each other, and adapted to the openings *b*. 6th. The combination of the mat, the wires carried thereby, and the plates *a* *a*₁, the latter having a slotted end forming a series of contact fingers. 7th. The combination of a mat, with two or more sets of circuit making or breaking plates carried thereby, and wires connecting said sets of plates, and sunk in grooves in the mat. 8th. The combination of the mat, with the circuit making or breaking devices, carried thereby, with the tapered pads P. 9th. The combination of the mat and the circuit making or breaking devices, the tapered pad P and the corner pad P₁. 10th. The combination of the bell, magnet, armature and frame, the circuit breaker *b*, the post *f* having a finger *z*, and the wheel M operated by the armature, and having pins or projections *u*. 11th. The combination of the bell, magnet, armature and frame, the circuit breaker *b*, the post *f* having a finger *z*, the wheel M operated by the armature, and having pins or projections *u*, the lever N carrying