

Claim—The fluted heads C, rounds D, and fluted balls G, all constructed and arranged for operation as set forth.

No. 3707. DAVID N. B. COFFIN, Jr., Newton, Mass., U. S., 31st July, 1874, for 5 years: "Improvements on Capstans and Windlasses." (Perfectionnements aux cabestans et vindas.)

Claim.—1st. The combination with a single shaft, of two or more fast friction wheels, a corresponding number of correlative loose chain-wheels, and suitable means for locking the chain-wheels severally to their respective friction wheels or to the shaft; 2nd. The combination of the fast friction wheel *a*, loose bearing gear *f*, loose chain-wheel *g*, and lock bolts *h* or their equivalents operating in the manner described; 3rd. The bearing gear, friction-wheel and chain-wheel, as arranged with relation to one another when the flanges of the gear wheel and the chain-wheel are constructed as described, so as to form local openings or annular openings for a partial exposure of the lock-bolts *h* in the friction-wheel upon both sides thereof; 4th. The combination of two or more loose chain-wheels *g* and a corresponding number of independent riding pawls *l* acting upon the chain links *u*, 5th. The independent riding pawl *l* constructed at its free end, as shown at *v*, to act upon the loose chain-wheel in the manner described; 6th. The combination of the friction wheel *a*, friction-strap *k*, and spring *z*; 7th. The gear wheel *v* upon the capstan shaft in combination with the shiftable gear-wheel *10*, having a flange *14*, and the clasp *13*; 8th. The crystal-pawls having lateral lugs or their equivalents, formed upon them, in combination with the fixed catches upon the capstan-barrel, all as shown in Fig. 9; 9th. The spindle-barrel and head of the capstan, in combination with the inclined and inverted taper gears *13*, *14*, *15*, gear carrier *m*, and lock-bolts *j* and *n* or their equivalents all arranged and operating as described; 10th. The inclined and inverted taper gears *13*, *14*, *15* and gear carrier *m*, in combination with the sliding lock-bolts *n*; 11th. The centre bearing constructed as described, whereby it is made to support the main shaft *b*, and at the same time hold the end of the capstan-shaft in position and prevent it from being carried upward by the action of the wheels into which its gear wheel meshes.

No. 3708. LUDWIG O. P. MEYER, Newtown, Ct., U. S., 31st July, 1874, for 5 years: "India Rubber Compound against which Safety Matches can be Ignited." (Composition de caoutchouc pour frotter les allumettes de sûreté.)

Claim.—A compound of India Rubber, or allied gum, sulphur and gray sulphuret of antimony as described, forming a suitable surface on which to ignite safety matches.

No. 3709. DANIEL C. KELLAM, Pontiac, and ROBERT HAYES and ALBERT HAYES, Detroit, Mich., U. S., 31st July, 1874, for 5 years: "Improvements on Window Screen Frames." (Perfectionnements aux cadres des écrans de fenêtres.)

Claim.—1st. In combination with the frames *a*, *at*, the concealed springs B, *B*; 2nd. In combination with the frames *a*, *at*, the sockets D, *D*, situated on the side faces of said frames; 3rd. The frames *a*, *at*, provided with extensions *c*, *c*, on their ends, to which are attached concealed springs B, *B*, in combination with the sockets D, *D*, situated on the side faces of the frames *a*, *at*, and flush with the upper and lower surfaces of the cross-bars of the frames.

No. 3710. BENJAMIN TAPPAN, Steubenville, Ohio, U. S., 31st July, 1874, for 15 years: "Miners' Lantern" (Lampe de mines.)

Claim.—1st. A casing composed of a central section of mica, and an upper and a lower section of wire gauze or finely perforated metal, the said section entirely surrounding the upper part of the lamp, the wick or flame chamber, and the space above, and fitted in upon or over each other and held in position in manner set forth; 2nd. The mica portion of the casing E, having wire gauze sections D, *D*, fitted to its edges at top and bottom, and combined with the lamp A, *A*, rods G, flange B, ring H, and hinged and lock cap I.

No. 3711. HENRY WHITESIDE, Jr., Ottawa, Ont., 31st July, 1874, for 5 years: "Spring Slat for Beds." (Tringle de ressorts de lits.)

Claim.—The steel wire spring bent in the form as indicated in Figs. 1 and 2, in combination with the wooden slat as shown in Figs. 3 and 4, as set forth.

No. 3712. HENRY BEHNING and JUSTUS DIEHL, New York, U. S., 31st July, 1874, for 5 years: "Improvements in Piano-fortes." (Perfectionnements aux pianos-fortés.)

Claim.—The elevated rest C, on a grapple B, as described.

No. 3713. EZRA S. WATERMAN, Hamilton, Ont., 31st July, 1874, for 5 years: "Improvements in Bed Bottoms." (Perfectionnements aux fouds de lits.)

Claim.—1st. The slats *c*, of a bed bottom supported by strap steel springs E; 2nd. The construction and combination of the bevelled sills A, cross-pieces B, strips D, with the angle and double springs E; 3rd. The arrangement of fastening the springs E, strips D, and slats C, with one bolt or rivet as specified.

No. 3714. WILLIAM F. REDDING, New York, U. S., 31st July, 1874, for 5 years: "Improvements on Metallic or other Boxes." (Perfectionnements aux boîtes métalliques ou autres.)

Claim.—1st. The novel combination of the box B, cover C, handle H, rivets 1 and 2, all operating as set forth; 2nd. The handle H, secured to the cover C, and pivoted to the box B, for the purpose set forth.

No. 3715. WILLIAM MOREHOUSE, Buffalo, N. Y., U. S., 31st July, 1874, for 5 years: "Improvements on Ship Knees." (Perfectionnements aux courbes des navires.)

Claim.—A ship knee consisting of the wrought angle iron A, strengthened by a corner brace *d*, as described.

No. 3716. WILLIAM B. HALL, Lancaster, Penn., U. S., 31st July, 1874, for 5 years: "Improvements in Cartridge Creasing for Breech Loading Fire Arms." (Perfectionnements dans le suage des cartouches de chargement par la culasse.)

Claim.—The combination of a grooved roller or cylinder A, and crossing wheel B, on their respective arms *a*, and *b*, hinged together at C, operated and constructed in the manner set forth.

No. 3717. WILLIAM H. BECKETT, Chelmsford, Eng., 31st July, 1874, for 5 years: "Improvements in Valves." (Perfectionnements aux valves.)

Claim.—The adaptation or combination of the parts *c*₁, *c*₂, *d*, and *e*, *e*₁, and *b*₂, acting in the manner stated.

No. 3718. WILLIAM M. WATSON, Tonica, Ill., U. S., 31st July, 1874, for 5 years: "Nut Lock." (Noix de sûreté.)

Claim.—1st. The method or process described of locking and unlatching nuts by bending the lip formed on the screw threads out of place, and restoring it again as specified; 2nd. The lip *e*, formed by bending the bolt thread; 3rd. The key A, made with one side flat and the other bevelled to correspond with the angle of the thread, as described.

No. 3719. CHESTER COMSTOCK, New Canaan, Ct., U. S., 31st July, 1874, for 5 years: "Combined Hot Air and Hot Water Furnace." (Calorifère mixte.)

Claim.—1st. The hot water chamber F, provided with the pipes *f*, *f*, and combined with the fire place E, shells B, A, and smoke pipes *g*, *g*, 2nd. The combined hot air and hot water furnace, in combination with one or more hot air registers and radiators or coils placed in any room and affording to both their respective supplies of hot air and heated water or steam as described.

No. 3720. J. YGNACIO CASSIANO, San Antonio, Texas, U. S., 3rd August, 1874, for 5 years: "Improvements on Hats." (Perfectionnements dans les chapeaux.)

Claim.—1st. The hat band B, made in sections, and each section provided with one or more U-shaped springs C; 2nd. The combination of an extension brim E, and extension devices for varying the extension with the permanent brim of a hat; 3rd. The folding extension arms G, mounted on sliding extension arms K; 4th. The combination of the elastic straps L, with the extension brim E, and the sliding extension arms K; 5th. The combination with a hat, of a brim or sun shade E, for extending beyond the permanent brim, also for folding back under it; 6th. The combination of the ring C, stationary arms D, adjustable arms G, and clips *g*₁, with a hat and an extension brim E; 7th. The combination of the elastic cord F, with the extension brim and the clips *g*₁; 8th. The combination of the hooks M, with the clips *g*₁, elastic cord and the extension brim as specified.

No. 3721. PHINEAS F. KING, GEORGE N. BEARD, ELEAZAR J. BEARD and JAMES ASHWORTH, St. Louis, Mo., U. S., 3rd August, 1874, for 5 years: "Nut Lock." (Noix de sûreté.)

Claim.—1st. The bolt provided with two nuts, and composed of two sections constructed so as to draw in opposite directions with each other; 2nd. The combination of sections *a*, *b*, having heads *c*, *d*, screw threaded portions *g*, and reduced shank *h*, and provided with nuts *c*, *f*.