

have internal longitudinal grooves, and have side bars formed integral with the tubular end bars, and provided with pintle seats, in combination with detachable pintles, each provided at its ends with laterally projecting spurs adapted to enter the grooves in the pintle seats, and to engage with opposite ends of the tubular end bars, substantially as set forth. 2nd. In a drive chain, links composed of tubular end bars, provided with pintle seats which are circular in cross-section and have internal longitudinal grooves, and have side bars formed integral with the tubular end bars, and are provided with pintle seats, in combination with detachable pintles, provided at their inner ends with projecting spurs and fitting closely, the grooved seats in the ends of the side bars, whereby dirt is excluded, substantially as set forth.

No 28,450. Petroleum Gas Carburetter.

(Carburateur de gas de pétrole.)

Louis I. Boivin, Montréal, Que., assignee of Alphonso Krieger, Paris, France, 3rd February, 1883; 5 years.

Résumé.—1o. Un appareil carburateur composé de la caisse *a* et des cylindres creux *b* et *c*, de la cloche *d* et des montants tubulaires *e*, *f*, *g*, tels que décrits et représentés et pour les fins indiquées. 2o. La plate-forme *f* supportant le fourneau *g*, dans lequel est contenu le brûleur *h* et le vaporisateur *k*, tels que décrits et représentés. 3o. L'injecteur *p*, formé de l'ajutage *n* et son conduit *m*, en communication avec le récipient *r* muni de la soupape *q*, du tuyau ouvert *s* et du robinet *t*, tels que décrits et pour les fins indiquées. 4o. En combinaison avec l'appareil, le tuyau *m* muni des robinets *m* et *m*2, servant à régler le débit des essences de pétrole, et le levier *m*3, avec son contre-poids *m*4, automatiquement influé par la cloche *d*, tel que décrit. 5o. En combinaison avec le récipient *d* chlorure de calcium *r*, le levier *q* portant la supapée d'obturation *q*, et aussi influé par la cloche *d*, tel que décrit. 6o. L'ensemble ou la combinaison de la caisse *a*, des cylindres *b* et *c*, de la cloche *d*, des montants *e* et *f*, de la plate-forme *f*, du fourneau *g*, du brûleur *h*, du vaporisateur *k*, de l'injecteur *p*, du récipient *r*, du tuyau *m*, des leviers *m* et *q*, et du contre-poids *m*4, formant un carburateur automatique de l'air desséché et incliné à des vapeurs d'essence de pétrole pour la production du gaz d'air carburé, tel que décrit et représenté.

No. 28,451. Combined Harrow and Cultivator.

(Herse-scarificateur.)

Charles Hayes and John Duggan, Dubuque, Iowa, U.S., 3rd February, 1883; 5 years.

Claim.—1st. The combination, in a combined harrow and cultivator, of an inside triangular frame carrying a series of reversible ploughs or shovels, and an outside triangular frame carrying a series of reversible knives with double cutting-edges, substantially as described. 2nd. The combination, in a combined harrow and cultivator, of an inside triangular frame carrying a series of diamond-shaped ploughs or shovels secured at the centre to their beams, and an outside triangular frame carrying a series of double-edged cutting-knives set at an angle to the frame, substantially as described. 3rd. The combination, in a combined harrow and cultivator, of an outside triangular frame carrying a series of inclined cutting-knives arranged to cut the soil into strips parallel with the line of draft, and an inside triangular frame carrying a series of ploughs or shovels arranged to engage with the soil between the outs of the knives, substantially as described. 4th. The combination, in a combined cultivator and harrow, of a centre beam having a bent or curved-up front end provided with a clevis secured by metal straps at the sides, an outside and an inside triangular frame, both secured to the centre beam at their front ends, a series of knives attached to the outside frame, and a series of ploughs or shovels attached to the inside frame, and a rear cross-bar connected with the entire frame by means of U-bolts, substantially as described. 5th. The combination, in a combined harrow and cultivator, of a centre beam, an inside triangular frame, an outside triangular frame twisted or set at an angle thereto, a series of knives and ploughs attached to said frames, and a rear cross-bar provided with a row of harrow-teeth, substantially as described. 6th. In a combined harrow and cultivator, the combination of centre beam *B*, the inside triangular frame section *A*, the outside triangular section *A*, twisted or set at an angle to the others, and the knives and ploughs attached to said section, substantially as described and for the purposes set forth. 7th. In a combined harrow and cultivator, the combination, with a centre beam and a triangular frame secured and set at an angle thereto, of a series of knives having ellipsoidal blades, with double cutting-edges attached to said frame, so as to incline inwardly and to the rear, substantially as and for the purposes set forth. 8th. In a combined harrow and cultivator, the combination, with a centre beam, an inside triangular frame and an outside triangular frame twisted or set at an angle thereto, of a series of cutting-knives having ellipsoidal blades with double cutting-edges secured to said outside frame, so as to incline inwardly and to the rear, and a series of diamond-shaped shovels secured to beams attached to the inside frame, so as to work on a line between the outs of the knives, substantially as and for the purpose set forth. 9th. In a combined harrow and cultivator, the combination, with the centre beam *B*, the inside triangular frame-section *A* and the outside triangular frame-section *A*, twisted or set at an angle thereto, of the blocks *E* and *F*, grooved to fit said frames and provided each with a notch in the front, the knives *E* with angular shanks and ellipsoidal blades, the ploughs or shovels *F* secured to plough beams with angular shanks, and the eye-bolts *G*, substantially as described and shown.

No. 28,452. Bustle, Bustle Skirt and Panier.

(Tournure, jupon-tournure et panier.)

Moritz Rosenstock, New York, N. Y., U. S., 3rd February, 1883; 5 years.

Claim.—1s. A bustle having one or more tubular braided springs of fibrous material, the respective ends of the several strands constituting the tube being connected together and to an attaching band or body belt, substantially as set forth. 2nd. A bustle having two

or more tubular braided springs of fibrous material, and having tapering ends, each spring having independent transverse connection together and to an attaching band, substantially as set forth. 3rd. A bustle having to or more braided tubular springs, each tube being composed of a series of strands or strips of fibrous material, and having tapering ends, said springs being connected together and to a body belt at their respective ends, and having independent transverse connection together and to an attaching band, at a point or points between their ends, an attaching band and adjusting bands or strips attached to the bustle sides, substantially as set forth. 4th. A bustle composed of two or more braided rattan tubes having tapering ends, and means for connecting the same to the body of a wearer or to a garment. 5th. A bustle composed of two or more braided rattan tubes, having tapering ends, and a body belt, said springs being connected to the body belt at their respective ends, and having independent transverse connection together and to the body belt, at one or more points between their respective ends. 6th. A bustle composed of a plurality of overlying tubular braided springs of fibrous material and having tapering ends, the several springs being of unequal size, as described, means, substantially as described, transversely connecting said springs together and to an attaching band or belt, and an attaching band or belt, substantially as set forth. 7th. A bustle composed of one or more tubes of rattan, or other fibrous material, having tapering ends, each tube being formed by braiding a series of strips or strands of such material together and a body belt, and suitable devices for securing the ends of said strands together and for connecting said tube or tubes to the body belt.

No. 28,453. Gate Latch. (Clenche de barrière)

George W. Charleville, McKinney, Texas, U. S., 3rd February, 1883; 5 years.

Claim.—In a gate-latch, substantially as described, the combination, of the rings loosely suspended on opposite sides of a central line, levers extending past such central line, and having their inner ends engaged with the rings on the opposite sides of the centre, from the handle ends, and partition plates interposed between such levers, and the rings past which they are extended, substantially as and for the purpose specified.

No. 28,454. Combined Scissors and File.

(Ciseaux-lime.)

Charles P. Hawley, New York, N. Y., U. S., 3rd February, 1883; 5 years.

Claim.—1st. The combination, with a pair of scissors, of a file attached to the thumb ring thereof, substantially as shown and described. 2nd. The combination, with a pair of scissors, of a file hinged thereto adapted to fold out therefrom and parallel therewith, substantially as shown and described. 3rd. The combination, with a pair of scissors, of a spring-actuated file hinged to the thumb ring thereof, substantially as shown and described. 4th. The combination, with a pair of scissors, of a file hinged thereto, provided with an integral spring, whereby said file is retained in given positions, substantially as shown and described. 5th. A nail file *B*, split at one end to form the hinged portion *c*, and spring *e*, substantially as shown and described and for the purpose herein set forth.

No. 28,455. Knit Garment. (Vêtement en tricot.)

Stephen B. Lewis and Franklin F. Lewis, Portago, Wis., U. S., 3rd February, 1883; 5 years.

Claim.—A knit garment having an elastic body portion, and a comparatively inelastic shoulder portion or yoke integral therewith.

No. 28,456. Butter Mould and Press.

(Moule et presse à beurre.)

David Vrooman, London, Ont., 3rd February, 1883; 5 years.

Claim.—1st. The base *B* formed with outlets *G*, *G*, uprights *D* formed with perforations *D*, cover *C*, pivot bolt *E* and handles *A*, *A*, in combination with the receptacle *F*, substantially as shown and described and for the purpose specified. 2nd. The base *B* formed with outlets *G*, mouldings *I*, uprights *D* formed with perforations *D*, cover *C*, pivot bolt *E* and handles *A*, *A*, in combination with the receptacle *F* and mouldings *I*, substantially as shown and described and for the purpose set forth.

No. 28,457. Railway. (Chemin de fer.)

Enoch L. Taylor, Philadelphia, Penn., U. S., 3rd February, 1883; 5 years.

Claim.—1st. The combination of two metallic chairs having vertical slots opening through the upper surface, and downwardly extending legs or supports, rails supported by said chairs, a cross tie arranged on edge and fitting down into said slots, and forming a vertical web on the under side of the chairs, and stone, or equivalent ballast packed in around the legs, and webs formed by the tie to prevent the chairs from shifting in any direction, as shown and described. 2nd. A chair for a railway, consisting of the top or rail supporting part, with downwardly-extending supporting parts inclosing a large area of ground, and further being provided with a vertical slot opening through the top of the chair for the tie, and one or more retaining or clamping lugs for the rails, as shown and described. 3rd. A chair for a railway, consisting of the top part *B*, having the downwardly extending supporting legs *b*, *b*, the vertical slot *C*, through part *B* and part of legs *b*, and one or more lugs *D*, substantially as and for the purpose specified. 4th. A chair for a railway, consisting of the top part *B* having the downwardly-extending supporting legs *b*, *b*, spread apart at the bottom, the vertical slot *C*, through part *B* and part of legs *b*, and one or more lugs *D*, substantially as and for the purpose specified. 5th. The combination of the rails, the chairs to support said rails, having downwardly extending legs to rest upon the ground or ballast, also a vertical slot for the cross tie, and lugs to fit over the flanges of the rails, and a metallic cross tie having