

No. 2321. GEORGE P. CLAPP & HARLEY D. COWLES, Montreal, Que., 5th May, 1873, for 5 years: "A Boot and Shoe Fastener." (Attache de chaussures, etc.)

*Claim.*—1st. The flaps *a* and *b*, eyelets *e*, *f*, and *c*, hooked, plate *g*, with holes *e*, *k*, *l*, *m*, and lace arranged and working together as described; 2nd. The flaps *a*, and *b*, eyelets *e*, *f*, and *c*, plate *g*, with holes *e*, *k*, *l*, *m*, and lace, constructed, arranged, and operating as described; 3rd. The flaps *a* and *b*, eyelet *c*, plate *g*, having but two holes, and lace as described.

No. 2322. RALPH D. KENDALL, Richville, N. Y., U. S., 5th May, 1873, for 5 years: "A Breast Collar for Harness." (Une bricole de cheval.)

*Claim.*—1st. The metal spring-plate *A*, provided with metal loops *a*, *a*, *b*, rigidly secured thereto and arranged to project through the leather sheathing; 2nd. Securing the trace buckles *D*, to the ends of the plate *A*, by bending the same through the buckles and fastening the lapping portions by riveting; 3rd. Securing the trace loops *F*, by rivets *G*, passing through the sheathing and plate *A*, as described.

No. 2323. ANDREW TURNBULL, RODOLPHUS L. WEBB and JAMES D. FRARY, New Britain, Ct., U. S., 5th May, 1873, for 10 years: "Improvements in Bed Bottoms." (Perfectionnements aux fonds de lits.)

Consist in a net work formed of longitudinal and transverse links attached at the head and foot to springs secured to the frame.

*Claim.*—1st. A bed bottom composed of a succession of non-flexible links *D*, *D*, made elastic by means of springs *C*, as described and with or without the transverse links *F*; 2nd. Combination with the subject matter of the first clause of claim, the auxiliary springs *S* and their triangular links *T*, *T*; 3rd. A frame for bed bottom, consisting of the transverse bars *A*, *B*, and longitudinal bars *L*, *L*, the seat or socket *a*, *d*, by which the said transverse bars *A*, *B*, and longitudinal bars *L*, *L*, the seat or socket *a*, *d*, by which the said transverse bars are attached to the longitudinal bars; 4th. In the sections or links for a bed bottom as described, formed from cast metal and each provided with means for attachment to the adjoining sections in the manner specified; 5th. The sections or links for a bed bottom formed from a single piece of iron as described.

No. 2324. BARTHOLOMEW GOMMENGINGER, Rochester, N. Y., U. S., 5th May, 1873, for 5 years: "Improvements on Hot Air Furnaces." (Perfectionnements aux calorifères à air chaud.)

*Claim.*—1st. The body *I* of the furnace constructed with the elevated seats *r*, *r*, and the inclined planes *s*, *t*, lying at right angles to each other and employed for rendering the interior of the furnace self-clearing from ashes; 2nd. Combination with the seats *r*, *r*, provided with the ports *d*, *d*, the air cone *K*, constructed with the flues *f*, *f*, cone *g*, and jacket *h*, and employed immediately between the water chamber *H* and top plate *L*; 3rd. Combination with the dome consisting of the two drums *E*, *E*, connected by the flue *N*, the two ring registers *N*, *N*, when so relatively arranged that by turning said ring registers in proper positions the draught may be made direct or indirect; 4th. The arrangement as a whole consisting of hollow ring *g*, with tubes *b*, *b*, *b*, water chamber *H*, pipes *C*, *C*, body *J*, air cone *K*, and the dome consisting of drums *E*, *E*, with ring registers *N*, *N*, the whole operating in the manner described; 5th. Combination with the grate *B*, of a furnace or stove, the removable standard *P*, arranged and operating as described; 6th. In combination with the pipes *C*, *C*, the covering shields *R*.

No. 2325. JOHN GREENWOOD, Rochester, N. Y., U. S., 5th May, 1873, for 5 years: "Machine for Crozing and Chamfering Barrels." (Machine à jâbler et chanfreiner les futailles.)

Relates to a machine in which barrels are placed after being "set up" for the purpose of forming the "croze" and "chime" at the ends of the staves and it consists, more particularly, in a pair of revolving barrel clamps used in connection with adjustable outer heads and rotary gauges which regulate the depth of the cut.

*Claim.*—1st. The disk gauge *G* in combination with the cutter head *F*, and clamp *C* or *C*, operating as set forth; 2nd. Combination with the revolving clamp *C* or *C*, the friction wheels *j*, *j*, arranged to support said clamp and one of which constitutes its driver; 3rd. Combination with the disk gauges *G*, the spring *P* arranged to operate as described.

No. 2326. AUSTIN D. CABLE and JOHN C. FORD, Montreal, Que., (Assignees of Nathaniel Marshall, Plattsburg,) N. Y., U. S., 5th May, 1873: for 5 years: "A Spinning Machine." (Machine à filer.)

Capable of feeding itself and of giving a more even and uniform thread than that manufactured by machines in general use.

*Claim.*—1st. The spinner head composed of disc *X*, provided with rollers *C*, rotating together and with the disc; 2nd. The combination of the disc *X* projections *a*, rollers *b*, gear wheels *C*, screwed shaft *d*, gears *f* and hollow shaft *y*, all working together as described; 3rd. The feed rollers *l* and *l*; 4th. The combination of the plate *l*, opening *U*, projections *K*, gear wheels *n*, screw shaft *O*, and gears *q*, and *r*; 5th. In the combination of the double reversed thread on the neck *q*, the tie *u*, arm *V*, and standard *t*; 6th. The combination of the spindle *a*, collar *b*, screw *c*, and spiral spring *d*; 7th. The rollers *c*, consisting of axle *q*, rollers *h*, india rubber coating *u*, and outer metallic shell *h*.

No. 2327. JEROME J. WEBSTER, Magog, Que., 5th May, 1873, for 5 years: "Apparatus for Measuring and Rolling Cloth." (Appareil à mesurer et rouler les tissus.)

*Claim.*—1st. The roller *I*, and gears *L*, and *N*, or their equivalents, dial *P*, and finger *O*, all working together as set forth; 2nd. The roller *I*, in combination with the boards *G* and *G*, and holders *J*; 3rd. The roller *I* in combination with tension pulley *R*.

No. 2328. EDDY T. THOMAS, Boston, Mass., U. S., 5th May, 1873, for 5 years: "Adjustable Braider for Sewing Machines." (Perfectionnement aux machines à coudre.)

Consists in the arrangement within a sloping or diagonal slot in the presser foot of a cylindrical guide piece, provided with a circumferential *V* shaped groove and adapted to rotate on its axis whereby the passage of the braid may be enlarged or contracted in width.

*Claim.*—1st. The cylindrical piece *d*, provided with the circumferential *V* shaped groove *E* and adapted to be turned on its axis, when arranged transversely to the inclined slot *B* of the pressure foot as specified; 2nd. The set screw *F*, applied to the presser foot, as set forth for securing the cylinder *B*, when in the desired adjustable position.

No. 2329. JOHN FENSOM, Toronto, Ont., 5th May, 1873, for 5 years: "Improvements on Hoists." (Perfectionnements aux élévateurs.)

*Claim.*—1st. The moving of the hatchet *B*, backwards and forwards, and leaving it over the opening in the floor without the use of counter weights, ropes, and pulleys, but solely by means of the cage *A*, in the manner specified; 2nd. The locking of the hatch *B*, when in its original position over the opening in floor by means of a roller and bolt, operated upon by the cage *A*, or by a spring *S*, and the unlocking of the latch by means of the cage *A*, in the manner specified; 3rd. The device for securing the parallel motion of the hatch *B*, consisting of the arm *d*, and wheel *E*, *E*, as specified.

No. 2330. WILBUR F. WHITE, Belchertown, Mass., U. S., 5th May, 1873, for 5 years: "Manure Spreading Cart." (Voiture à distribuer les engrais.)

*Claim.*—1st. A cart for spreading manure, the combination and arrangement of the rotary spreader *h*, revolving so as to raise the manure as described, with the series of fingers, or grid *K*, and guard *B*, constructed and operating as described; 2nd. The combination and arrangement of the series of fingers or grid *K*, with the series of spring teeth *X*, and the spreader *h*, all constructed and operating as set forth.

No. 2331. LEWIS LINTON, Libbytown, Que., 5th May, 1873, for 5 years: "A Safety Whiffle-tree." (Un palonnier de sûreté.)

Consists of a bent arm or hook at each end of the whiffle-tree to receive the loop of the trace tug. The inner end of each hook engages with spring bolts affixed to the forward face of the whiffle-tree and these when drawn rearward by means of a coupling chain within convenient reach of the driver at once liberate the horse.

*Claim.*—The combination of the pivoted bent-arms *C*, bolt *D*, barrels *E*, springs *F*, and ropes *G*, applied to the whiffle-tree *A*, and operating as set forth.

No. 2332. EDE W. LEE, Stanstead, Que., 6th May, 1873, for 5 years: "Sap Pan Elevator and Car." (Élévateur et chariot pour les casseroles à sucre.)

*Claim.*—1st. The combination of the ropes *E*, *E*, *E*, *E*, pulleys *F*, *F*, *F*, shaft *G*, wheel *H*, rope *I*, and pawl *J*; 2nd. The combination of the tracks *B*, *B*, trucks *D*, *D*, *D*, *D*, frame *A*, rope *K*, and pulley *L*.

No. 2333. HENRY MCPHILLOMY, Chatham, Ont., 6th May, 1873, for 5 years: "Marine and Stationary Boiler." (Chaudière à vapeur marine et fixe.)

*Claim.*—A smoke box in the interior of the boiler in which the large flue or flues, and also the small tubes terminate, the whole being surrounded by water as set forth.