

No. 4521. JOHN L. KERR, Alleghany, Pa., U. S., 20th March, 1875, for 5 years: "Improvements on Guns." (Perfectionnements aux fusils.)

*Claim.*—A gun, the calibre bore of which is enlarged for about one-fourth or one-third of its length commencing at the muzzle end, the larger bore being on parallel lines with the smaller bore.

No. 4522. ORLANDO JENNESS, Alton, N. H., U. S., 20th March, 1875, for 5 years: "Vehicle Spring." (Ressort de voiture.)

*Claim.*—In an independent attachment to vehicles, a spring consisting of a top and base plates *a*, *c*, rods *d*, which have a vertical play through one of the plates and the coiled springs *e*, parts being combined as set forth.

No. 4523. THOMAS LINKLATER, Belleville, Ont., 20th March, 1875, for 5 years: "Eave Trough." (Dalle de toiture.)

*Claim.*—The combination of the rims *C*, tubes *D*, shoulders *E*, lips *F*, and screw *G*.

No. 4524. CARL W. VOLNEY, Brockville, Ont., 20th March, 1875, for 5 years: "Improvements on Explosive Compounds." (Perfectionnements aux compositions explosives.)

*Claim.*—The explosive compound composed of nitrated naphthalene and an oxidizing agent, prepared in the manner and in the proportions set forth.

No. 4525. GARRET SEGER, JOSEPH HEILBRUNN, JOHN KOABEL and JACOB BAUER, Humberstone, Ont., 20th March, 1875, for 5 years: "Force Pump." (Pompe foulante.)

*Claim.*—The tongue *L*, in combination with the inner ends of the conducting pipes *I*, *I*, being so arranged as to answer the purpose of a check valve.

No. 4526. EDWARD C. IBBOTSON, Chelsea, Mass., U. S., 22nd March, 1875, for 5 years: "Railway Joint." (Joint de rail de rail-roules.)

*Claim.*—1st. The clasp *D*, having projections *d*, *d*, in combination with rails *A*, *A*, provided with notches *e*, *e*, and screw or spike *f*; 2nd. The clasps *D*, and *D*, of equal or unequal lengths having projections *d*, *d*, in combination with rails *A*, *A*, notches *e*, *e*, and screws or spikes *f*; 3rd. The clasp *D*, having projections *d*, *d*, in combination with the spring clip or scabbard *B*.

No. 4527. DANIEL L. TOPPAN, Somerville, DAVID C. MELOON, East Cambridge, GARDNER B. CHAPIN, Medford, and HOPKINS H. MELOON, East Cambridge, Mass., U. S., 22nd March, 1875, for 5 years: "Wood Planing Machine." (Machine à raboter le bois.)

*Claim.*—The cutter-shaft *B*, having a simultaneous lateral and rotary motion.

No. 4528. EDGAR CLIFF, Pickering, Ont., 22nd March, 1875, for 5 years: "Rein-holder." (Porte-guides de cheval.)

*Claim.*—The combination of the spring *B*, with the frame *A*, together with the mode of attaching the same to the dash-board.

No. 4529. JAMES N. EDY, (Assignee of H. Bolton), Brantford, Ont., 22nd March, 1875, for 5 years: "Motive Power." (Pouvoir moteur.)

*Claim.*—1st. The ratchet wheel *I*, having sixteen or any number of teeth made so that one revolution of shaft *D*, will move the ratchet wheel one tooth, also the application of pawl *P*, which drives ratchet wheel by eccentric *O*; 2nd. The spring *V*, between and fastened to ratchet wheel *I*, and wheel *K*, to drive the machine, it may be coiled or otherwise as required, also the application of ratchet or stop wheel *M*, and pawl *Q*; 3rd. The application of

pinion *F*, and wheel *X*, driven by coiled spring *V*, to assist eccentric *O*, and pawl *P*, in driving up ratchet-wheel *I*; 4th. The combination of loose pulley *a*, having a wheel attached to it the same size as wheel *b*, on shaft *D*, to reduce the speed of pulley *a*, when required.

No. 4530. ADAM CANT, Galt, Ont., 23rd March, 1875, for 5 years: "Improvements in Wood Planing Machines." (Perfectionnements aux machines à raboter le bois.)

*Claim.*—1st. The endless rotary bed *B*, consisting of the alternately arranged slats *C*, with double ended male lugs *C*, cast thereon; 2nd. The driving wheel *F*, with teeth and shoulder *f*, in combination with the projections *H*, and *G*, and lugs *C*; 3rd. The slat *B*, with male and female lugs *C*, and *G*, cast thereon.

No. 4531. ALBERT A. POPE, Boston, Mass., U. S., (Assignee of H. M. Quackenbush), 23rd March, 1875, for 5 years: "Improvements on Air Guns and Pistols." (Perfectionnements aux fusils et aux pistolets à air.)

*Claim.*—1st. The sliding barrel *D*, and cylinder *A*, in combination with the spring-impelled plunger *G*, and rod *C*, connecting the plunger with the barrel for operation; 2nd. In combination with the barrel and plunger rod, the adjustable clasp *I*; 3rd. The cap *f*, with its stud *g*, in combination with the spring *H*, rod *c*, and barrel *D*.

No. 4532. DERRICK ALLARD, St. Albans, Vt., U. S., 23rd March, 1875, for 5 years: "A Smoke Stack." (Une cheminée.)

*Claim.*—1st. The variable inside pipe *B*, terminating in a funnel shaped mouth *H*, and a reversed flange *a*, the spiral grooved reversed plates *N*, and *Y*, having an interspace *b*, between them, the open space *F*, the lower guide *S*, and the *V*-shaped flange *T*; 2nd. In combination with the variable inside pipe *B*, the rack *E*, and pinion *D*, the guide-rods *G*, *G*, *G*, the cone *K*, and the stack *A*.

No. 4533. JAMES McELROY, Arkona, Ont., 23rd March, 1875, for 5 years: "Table-Leaf Support." (Porte-plant de table.)

*Claim.*—The spring *D*, in combination with the supporting arm *B*, and yoke *A*.

No. 4534. MATTHEW BIRD, London, Eng., 23rd March, 1875, for 5 years: "Waterproofing and otherwise improving the condition of Leather." (Mode de traitement du cuir pour le rendre imperméable, &c.)

*Claim.*—The process of water proofing and otherwise improving the condition of leather by heating it and causing it to absorb or imbibe the mixture of paraffine or wax and pitch, its treatment with that mixture and its after treatment.

No. 4535. GEORGE WALKER, Erie, Pa., U. S., 23rd March, 1875, for 5 years: "Improvements on Clothes Wringers." (Perfectionnements aux essoreuses à linge.)

*Claim.*—1st. The combination in a folding clothes wringer frame of the parallel bars *A*, *A*, and *E*, *E*, uprights *D*, *D*, and *G*, *G*, toned bars *C*, *C*, *C*, braces *H*, *H*, provided with metal plates *a*, *a*, and the rack bars *b*, *b*; 2nd. The combination with the wringer-rollers *I*, of the slotted and flanged plates *P*, *P*, provided with the guard-flanges *m*, *m*, and the perforated board *R*; 3rd. The plates *d*, provided on both sides with right-angular flanges *c*, in combination with the uprights *G*, *G*, and bars *E*, *E*; 4th. The stop bar *S*, applied in combination with the uprights *G*, *G*, and bars *E*, *E*; 5th. The plate *h*, in combination with the rollers *I*, *I*; 6th. In combination with the plates *h*, *h*, the cross-bar *K*, pivoted to bar *L*, and lever *M*.

No. 4536. JULIUS A. PEASE, Boston, Mass., U. S., 23rd March, 1875, for 5 years: "Improvements on Lamps." (Perfectionnements aux lampes.)

*Claim.*—In combination with a reservoir of a lamp having central tube *E*, the cap or flame-spreader *F*, having a downward extending tube *J*, in combination with the cup *I*, and wick-tube *G*