No. 15,021. Improvements on Railway, Telegraph and Semaphore signals.

(Perfectionnements aux signaux télégraphiques et sémaphores des chemins de fer.)

William W. McLellan, Newcastle, N.B., 24th June, 1882; for 5 years.

Claim.—The combination of the several parts, signal board B, lamp C, levers D F, weight rod G, cord H, stop I, shaft J and pulley K L, to be attached to the bar or post A.

No. 15,022. Improvements on Pantaloon Protectors and Toe Pieces for Boots and Shoes, and Machine for Attaching Them.

(Perfectionnements aux protecteurs des pantalons et aux carres des chaussures, et machine pour les poser.)

Judson L. Thomson, Syracuse, N. Y., U. S., 16th June, 1882; for 5 years.

Claim.—1st. A pantaloon protector consisting essentially of a plate adapted to be secured to the heel of a boot or shoe, and an arm hinged on said plate and restrained from deflecting below a horizontal position, except to spring back again, by a shoulder on the attaching plate. 2nd. A pantaloon protector consisting of an attaching plate and an elastic arm hinged on said plate and prevented from deflecting below a horizontal position by a support on the attaching plate. 3rd. The combination of the plate *a* formed with the loop *b* and with the lateral extension *c* on the ends of said loops, the wire bale *d* hinged in the loop *b* and restrained from deflecting below a horizontal position, by the extensions *c* aforesaid, and the attaching screw or screws *u*. 4th. The combination of the plate *a* provided with the step *s* and with the loop *b*, the latter having the shoulders *c*, the bale *d* hinged on the said loop, and the washer *v* provided with rivets *r*. 5th. The combination of the plate *a* formed with the spurs *u* and with the loop *b* having the lateral extension *c*, the bale *d* hinged in said loop, the whole attached by the screws *u*. 6th. The plate A formed with the projection *e* at its upper end, and provided with the vertical slots *f f* and having its base adapted to rest on the heel of the shoe, and the washer *g* provided with clinches *h h*, all combined and applied to the shoe. 7th. The plate A having projections *e* resting with its end on the plate A and against the clinches *h h*. 8th. The plate A having its extension *e* adapted to rest upon the clinches *h h*, when in place upon the shoe. 9th. In combination with the upsetting die D, the flange P and guide *c* arranged moveably in said plunger and provided with lugs *n n*. 10th. In combination with the upsetting die D, the plunger P and guide C arranged movable in said plunger, and the spring *s* arranged to hold said guide projecting above the plunger. 11th. The combination of the arms B B1, the upsetting die D, pivoted arm E, lever L and the plunger P on the free end of the arm E. 12th. In combination with the arms B B1 and the plunger P, the upsetting die D pivoted on the arm B1 and provided with a locking device for retaining it in its operative position over the plunger. 13th. In combination with the plunger P, the standard arm B1 provided with the stop pin *b*. 14th. In combination with the plunger P, the die D provided with the recess *c* and lugs *d d* respectively, at opposite sides of the said recess. 15th. The combination of the concavo-convex arm B, the arm B1 over the arm B and provided with the hole *a*, the bell crank lever E pivoted on the standard and having one arm extended under the arm B, and provided at its end with the plunger P, the guide C arranged movably in the plunger and provided with lugs *d d*, the spring *s*, the die D pivoted on the arm B1 and provided with the stop pin *b* and with the recess *c*, and the lever L.

No. 15,023. Improvements on Dynamo-Electric Machines.

(Perfectionnements aux machines électro-dynamiques.)

Henry B. Sheridan, Cleveland, Ohio, U. S., 26th June, 1882; for 15 years.

Claim.—1st. The armature core D constructed, as described, of a hollow-iron ring nearly rectangular in its cross section, and with sides converging or inclined inward, from the convex side toward the concave side. 2nd. The armature core D constructed of a hollow iron ring having corresponding openings H I in its convex and concave sides and projections forming channels of uniform width upon its inclined or converging sides. 3rd. The armature core D constructed of a hollow iron ring having upon its sides projections J K of different thicknesses, alternating with each other and projecting beyond the concave side of the core, the projections J being made V-shaped or with sides converging to an edge, and the projections K being made with slightly inclined or converging sides and V-shaped ends, whereby channels or grooves of uniform width are formed to receive the helix coils. 4th. The combination, with the armature core D having lugs N and the armature shaft C, of the hubs P having flanges O, whereby the said armature will be firmly connected with the said shaft. 5th. The combination, with the armature and the armature shaft C, of the stationary magnet cores E and the helices F, the said cores being placed spirally around the armature shaft, and at an inclination with the said armature shaft, and the said helices being wound with their coils parallel with the magnetic field of force.

No. 15,024. Improvements on churning apparatus.

(Perfectionnements aux appareils à baratter.)

Benjamin F. Moore and George Cruikshank, Heathcote, Ont., 26th June, 1882; for 5 years.

Claim.—1st. The combination, with the frame 3, of the base 4, straps 6, levers 5, vertical bars 18, connected at top by a horizontal bar, levers 12, sliding in pivoted boxes 13, bars 14, foot bar 15 and hand frame 17. 2nd. In combination with a frame 3 provided with a combination of levers, a churn 1 and dasher rod 2, both operating reciprocally, whereby the descent of the churn causes the dasher rod to rise, and the manual operation of the levers raises the churn and depresses the dasher rod simultaneously.

No. 15,025. Improvements in Drawers and tights.

(Perfectionnements aux caleçons et vêtements collants.)

Robert M. Appleton, Lake Village, N. H., U. S., 26th June, 1882; for 5 years.

Claim.—1st. In circular seamless leg drawers or tights, the combination, with the knitted leg parts, of the body and thigh parts knit in tuck-stitch, and the knee parts knit in plain stitch. 2nd. In circular seamless drawers or tights, the combination of the body and thigh parts knit in tuck-stitch, the knee parts knit in plain stitch, and the leg parts knit partially in plain and partially in tuck-stitch. 3rd. In circular seamless leg drawers or tights, for men, women, and children wear, the combination of the body and thigh parts, knit in tuck-stitch, the knee parts down to the ribbed band in plain stitch. 4th. In circular seamless leg drawers or tights for men, women and children wear, the combination of the body and thigh parts, knit in tuck-stitch, the knee parts and down to the ribbed band in plain stitch with widely separated tuck-stitch.

No. 15,026. Improvements on Machinery for manufacturing wire fastening for securing corks in bottles.

(Perfectionnements aux machines à faire les ligatures en fil métallique pour assujétir les bouchons des bouteilles.)

Orril R. Chaplin, Daniel C. Knowlton and William R. Macleod, Boston, Mass., U.S., 26th June, 1882; for 15 years.

Claim.—1st. The combination, with cogged hub B1 and feed rolls B C, of the compound intermittent gear D and its actuating shaft, the gear D constructed as shown to increase or diminish the cogged portion of its periphery and feed forward a greater or less length of wire. 2nd. The rod K4, cam K7 and connecting link or lever, in combination with the perforated cutters K K1. 3rd. The conductor G provided with a hinged lid or cover, in combination with the movable cutter K1 and its actuating mechanism which acts to raise the lid G1, and the spring *a* which exerts pressure on the lid to keep it closed. 4th. The conductor G in combination with the reciprocating J *j*, toggle clamps *d2 d2*, connection *p2*, rod *p* and cam *p6*. 5th. The seizing and twisting clamps *d2 d2* and the toggles, connecting rod, lever and cam, which operate to open and close the clamps, in combination with the shaft *m* provided with pinion *j3*, upright shaft *m1* provided with gears *j4 j6*, and the cogged segment on the periphery of cam wheel M operating together to cause rotation of the shaft *m*, and consequently of the clamps, and to twist the wire. 6th. The combination of the toggle twisting clamps *d2 d2* with the connecting rod *p2*, lever *p* and cam *p6* which operate to open and close the clamps. 7th. The combination of the toggled twisting clamps *d2 d2*, shaft *m*, pinion *j3*, gear *j4*, upright shaft *m1*, gear *j6* and cogged segments *j7* set fast on the periphery of cam wheel M, which operate to revolve the clamps *d2 d2*. 8th. The toggle clamps *d3 d3*, head *r3* and spindle *r4*, in combination with connection *s1*, connecting lever *s2* and cam *s6*. 9th. The toggle clamps *d3 d3*, head *r3* and spindle *r4*, in combination with link *r2*, rod *r* and its actuating cam. 10th. The combination of toggle clamps *d3 d3*, head *r3*, spindle *r4*, connection *s1*, lever *s2*, cam *s6*, link *r2*, rod *r* and its cam. 11th. The clamps *d2 d2*, toggles *p3*, connection *p2*, rod *p* and its actuating cam, in combination with toggled clamps *d3 d5*, connection *s1*, lever *s2* and its actuating cam *s6*. 12th. The reciprocating frame J *j* with its rock shaft *n*, lever *o*, link O10 and cam O4, in combination with seizing and twisting clamps *d2 d2* and their toggles *p3 p4*, connection *p2* and rod *p* with its actuating cam. 13th. The combination of carrying head *p1* with the shaft *v5* and its gear, and the sector *v7*, and cam *v2*, which operate to semi-rotate the head. 14th. The carrying head P1, in combination with the shaft *v5*, and mechanism to semi-rotate the head, and the cam-shaped edge V, spring *g12* and link *g13*, which operate to tilt the head. 15th. The carrying clamps *d5 d5* and their toggles, in combination with frame *g*, toggle arm *g3 g4*, connecting rod *g11*, lever *q* and actuating cam *q5*. 16th. The carrying head P1 and its operating mechanism, in combination with clamp *d2*, toggles *p3*, connection *p2*, rod *p* and actuating cam. 17th. In combination with the mechanism for cutting and twisting, cam *q6*, lever *q*, feed pawl *w*, retaining pawl *w1* and ratchet R2. 18th. The ratchet wheel R2 provided with notch *w3* and feed pawl *w*, and its lever and cam, in combination with retaining pawl *w1*, stop motion pawl *w4*, rock shaft *w5*, lever *w6* and clutch T for stopping the machine. 19th. The safety pawl trip lever T1, in combination with the ratchet wheel R2, stop motion pawl *w4* and feed pawl *w* to free the feed pawl from the ratchet whenever the stop motion is engaged in the notch.

No. 15,027. Wheel Rake.

(Râteau à roues.)

William H. Patten, Samuel P. Young and Charles D. Young, Niagara Falls, N. Y., U. S., 27th June, 1882; (Extension of Patent No. 7626.)

No. 15,028. Improvements on Burial Cases.

(Perfectionnements aux cercueils.)

The Ontario Glass Burial Case Company, Ridgetown, Ont., (assignee of Joseph Askins, Elida, Ohio, U. S.,) 27th June, 1882; (Extension of Patent No. 7863,)

No. 15,029. Improvements on Burial Cases.

(Perfectionnements aux cercueils.)

The Ontario Glass Burial Case Company, Ridgetown, Ont., (assignee of Joseph Askins, Elida, Ohio, U. S.,) 28th June, 1882; (Extension of Patent No. 7863.)