No. 9720. Improvements on Horse Collars.

(Perfectionnements aux colliers de cheval.)

George A De Zeng and Joseph Lang, Chicago, Ill, U S., 8th March, 1879, for 5 years.

Claim —1st The tilting pad B, when arranged between and pivoted laterally to the rigid side sections of a horse collar, 2nd. The vertically adjustable straps C C, in combination with the tilting pad B, the said pad being pivoted laterally to the said straps, all arranged with relation to each other and the body of a horse collar, 3rd. The body A, of a horse collar made in sections, the lower ends of the section being adjustably connected by means of the hook or bent lever G pivoted to one of the said ends, and the perforated ferrule F^1 applied to the other of the said ends; 4th. The combination of the removable bolts J J, the elongated and perforated nuts H^1 H^1, and the caps or pockets I I, the latter applied to a horse collar and all operating together in connection therewith and with each other, 5th. The combination of the body, A, made in sections, the pad B, the adjustable straps C C, carrying the pad B and applied to the upper ends of the sections of the body A, the lever G applied to the lower ends of one of the said sections, and the perforated ferrule F^1 applied to the lower end of the other of the said sections.

No. 9721. Improvements on Window Blind Rollers. (*Perfectionnements aux rouleaux des rideaux de fenêtres.*)

Joseph Higginbotham, Toronto, Ont., 8th March, 1879, for 5 years.

Claim —The combination of the hooked cogs with the enlarged centre bearing fixed pin and arm, operating as set forth.

No. 9722. Improvements on Window Fastenings. (*Perfectionnements aux arrête-croisés.*)

John B. Morris and Thomas S. Ireland, Cincinnati, Ohio U. S., 8th March, 1879, for 5 years.

Claim —1st. The improved sash lock or fastening comprising the notched and shouldered elevated disc C concentric with the pivot E, for the swinging latch bar F *f*, and the hinged pendant H for attachment to the lower sash, to operate with a stationary spur or cam hook upon the upper sash, 2nd In combination with the spur or cam hook G G^1, the swinging latch bar F *f*, having the heel or rear prolongation f^{11}.

No. 9723. Improvements on Paper Ruling Machines. (*Perfectionnements aux machines à régler le papier.*)

Edward W. Blackhall, Toronto, Ont., 8th March, 1879, for 5 years

Claim.—1st. The combination with the first or stationary head of a paper ruling machine, of one or more adjustable ruling heads arranged to be operated independently from a cam or cams, or by a suitable connection from the stationary head; 2nd. The combination of two or more separate ruling heads, so arranged, in connection with a travelling apron common to both, that the said heads may be operated automatically or by hand to produce ruled work at one passage of the paper through the machine, which would require two or more passages of the paper through an ordinary machine, 3rd The bar of the pen clamp provided with a metal sheathing: 4th. The under plate of the pen clamp faced with rubber or similar material, in combination with the wooden bar provided with metal sheathing carried over the bearings for pens; 5th. The combination of the clamp supporting bracket D^1, with threaded standard D and nuts *d d*; 6th. The laterally adjusting clamp screw connected to the clutch by a ball and socket joint, and supported on a bracket which is capable of vertical or longitudinal adjustment, 7th The pivoted bar E, supported on the frame of machine at one end, and provided with an adjusting screw at the other end, and connected to the clamp in such manner that the points of the pens may be tilted; 8th. The standard ruling head, supported on standards fitted to slides in such manner that the relative position of the heads may be altered; 9th The combination of the right and left threaded screw with the blocks F and H and their connections; 10th. The under pen roller provided with vertical and longitudinal adjustment, in combination with the pen clamp.

No. 9724. Apparatus for Cleaning the Bottoms of Ships. (*Appareil pour nettoyer les fonds des navires.*)

Ellis Cutlan, London, England, 10th March, 1879, for 5 years.

Claim —1st The general arrangement and construction of the improved apparatus for cleaning the bottoms of ships, 2nd. The employment of Archimedean screws, for automatically operating the brushes or scrapers or knives, by the passage of the ship through the water, 3rd The employment of guide or guage wheels, 4th. The peculiar construction of the adjustable brushes.

No. 9725. Improvements in Saw Setting Machines. (*Perfectionnements aux machines a donner la voie aux scies.*

William Dunn, Hamilton, Ont., 10th March, 1879, for 5 years.

Claim —1st In a saw setting machine, the combination of adjustable clamp jaws provided with recessed working faces, and an adjustable rest having a series of projections or corrugations on each side of its centre line adapted to fit between said clamp jaws, 2nd The combination, with the movable clamp jaw A^2 and standard A^3, of the adjusting bolts a^2 a^2 and slotted wedges *a a*, 3rd In a saw setting machine, two coupled peen levers, pivoted in an adjustable manner on opposite side of machine, in combination with adjustable striking blocks having one or more beveled edges of varying angularity, 4th In a saw setting machine, the quadrant lugs C C C C, secured to frame of machine to form guides for the peen levers and provided with pivot holes, whereby the pivotal connection of the levers may be adjusted to vary the set of the tooth, 5th The combination, with the coupled pivoted peen levers, of the feed plate F arranged to work with a reciprocating horizontal motion from the movement of the peen levers and at right angles thereto; 6th. The combination with the feed plate F of the spring *h* and pivoted pawl or draw hook H, 7th. In a saw setting machine, the removable independent support P constructed with a screw shank and two vertical axis provided with anti-friction rollers Z Z, horizontal anti-friction roller z^1 and nut or collar *p*, 8th. The improved saw setting machine described composed of the recessed adjustable jaws A^2 A^2, adjustable corrugated rest I, adjustable oscillating levers B B, *b* with peens b^2 b^2, plates D D guard I and devices F G H *h*, for operating the saw blade, 9th. In a saw setting machine the combination, with the reciprocating feed plate F, of an adjustable stop g^1 for regulating the travel of the feed.

No. 9726. Improvements on Carpet Stretchers. (*Perfectionnements aux etendeurs de tapisserie.*)

Edward Stone, Waterloo, Que, 10th March, 1879, for 5 years.

Claim.—1st. The combination of the two bars A D sliding longitudinally one bar having jaws *b b* and a lever B and grab hook *c* operating intermediately and the other sliding thereunder provided with ratchets *d* with which the hook engages, so that by the movement of the lever B, the bars are extended endwise to stretch the carpet, 2nd. In combination with the bar D having ratchets *d*, and the bar A having pawl *e* and grab hook *c*, the pawl *e* pivoted between the jaws *b b* and engaging with the ratchets *d* for retaining the bars when extended, 3rd The extensible operating bar D having a head *a* provided with a card K to hold the carpet by its teeth in combination with the resistance bar A; 4th. The bar A with a head *f*, provided with teeth *g* having a hinged flap E to cover the teeth.

No. 9727. Horse and Cattle Check.

(Entrave de cheval et de betail.)

George D Chisholm, East Flamboro, and Samuel Creech, Hamilton, Ont. 10th March, 1879, for 5 years

Claim.—1st. The strap B fitted at one end to the right fore leg or foot of the animal, the other end of said strap passing through a ring or pulley A on the halter or neck strap, and fastened to the left foot or leg of the animal, for the purpose of a check to prevent cattle from jumping fences, 2nd The pulley A, boots D, and the lengthening buckles E, in connection with the strap B for the purpose of a check for cattle.

No. 9728. Spring Link for Draught Tugs.

(Chaînon a ressort pour les remorqueurs.)

John F Miller, Pittsburg, Pa, U. S, 10th March, 1879, for 5 years.

Claim.—1st. In a spring draught tug, the spiral spring A and return bends B C passing longitudinally through said spring, 2nd. The return bends B C, the shafts of which form segments of a circle and are provided with projecting flanges *b b c c* on the periphery of their free ends, 3rd. A link having all the parts locked together by swelling the projecting loop or loops to a width greater than the internal diameter of the spring, 4th The spiral spring A, confined on the barrel formed by the shafts of the return bends B C between the projections or flanges *b b* and *c c*, 5th A return bend having an eye cast on its projecting end and its free ends provided with projections cast thereon and standing outwardly from preventing it from pulling through the spring, 6th A return bend having its projecting end corresponding in width to the internal diameter of the spring said projecting end being capable of enlargement into an eye or hole.

No. 9729. Stove-Pipe Elbow Machine.

(Machine a coudes de tuyaux de poêles.)

Louis J. Hérard, Montreal, Que., 10th March, 1879, for 5 years.

Claim —1st. The combination of the claws *n n* and the discs *x y*, 2nd. The combination of the geared wheel *e*, quadrant of a wheel *f*, tube *c* connecting the geared wheel *e* and disc *j*.

No. 9730. Improvement in Buckles.

(Perfectionnement aux boucles.)

William J. Caines, Jr, Gonzales, Texas, U S, 10th March, 1879, for 5 years.

Claim —1st. The harness buckle composed of the frame *a a b c d* d_1 and tongues e and *f f*, hinged on the central cross bar, whereby the buckle is adapted to fasten different straps together, 2nd. A buckle composed of the rectangular frame A provided with the raised loop B at right angles with the frame A, the cross-bars C G and the central cross bar D to which are pivoted the tongues F F^1 and the tongue E, all opening on the upper side of the buckle, and the under side of said buckle being in the same plane, 3rd. The buckle formed of the side bars *a a* bent up at one end, the central and end bars *b c d* d_1, the side loops *g* g_1 and the tongues *e f f*.

No. 9731. Improvement in Boot and Shoe Soles. (*Perfectionnement aux semelles des chaussures*)

Jeremiah M. Watson, Sharon, Mass, U S 10th March, 1879, for 5 years.

Claim.—A shoe sole or heel having one or more of its lifts made by splitting the material composing it from one edge nearly to the opposite one and opening the parts into one plane with each, A shoe sole or heel lift made of a scrap or waste piece of material, split from one edge nearly to the opposite one and having the connected portions turned or folded out into one plane with each other.

No. 9732. Improvements in Refrigerators.

(Perfectionnements aux garde-manger.)

Allen M Murphy, Toronto, Ont., 10th March, 1879, for 5 years

Claim —1st A close flue C, leading from or near the top of the preserving room B through the ice chamber ceiling and thence through the roof or wall for the purpose of carrying off the heated and foul air of the preserving room and preventing its escape into the ice chamber, thus saving the wasteful melting of the ice, 2nd The ice chambers ceiling provided with openings D, which openings, in connection with outlets cut in the roof or side walls of the house above said ceiling, provide a means of escape for the moistened air of the ice chamber and produces a drier atmosphere in said ice