

The combination of the hasp B having recess G, figured surface H and lock chamber *x*, the shank E, plate F and hinged plate F¹, the disks D D¹ having pins and recesses, the spring J, pawl K and lock bolt L L¹, 6th. The combination of the locking bolt P having the pawl arm S formed in one piece therewith, the disk O² operating disk O¹ and a proper spring. 7th. The combination of the compound spring Q socketed at *q* and having the arms *q*¹, the stud R, lock bolt P and pawl arm S formed in one piece, and the operating disks and shank.

No. 13,339. Improvements on Military Accoutrements. (*Perfectionnements aux accoutrements militaires.*)

William S. Oliver, Halifax, N. S., 29th August, 1881. (Extension of Patent No. 6,781.)

No. 13,340. Improvement on Water Lifters. (*Perfectionnements aux éleveurs d'eau.*)

Benjamin B. Brewer, Sacramento, Cal., U. S., 30th August, 1881; for 5 years.

Claim.—1st. A submerged tank with a supply pipe and supply valve. 2nd. The submerged tank A with supply pipe B, discharge pipe C, supply valve D and supporting rods E E, in combination with a steam boiler or air pump.

No. 13,341. Improvements on Stigmographs. (*Perfectionnements aux stigmographes.*)

John Gast, Brooklyn, N. Y., U. S., 1st September, 1881; for 5 years.

Claim.—The stigmograph composed of rubber, sulphur, zinc white and soapstone.

No. 13,342. Improvements on Saw-Mills. (*Perfectionnements aux scieries.*)

William M. Wilkin, East Saginaw, Mich., U. S., 1st September, 1881; for 5 years.

Claim.—1st. The gate or saw frame, pivoted at top and bottom in sliding blocks, which move in slides set at an angle to each other, said slides being attached to cheek, which vibrate like a pendulum. 2nd. The gate or saw frame, pivoted at top and bottom in blocks which slide in guides set at different angles, and attached to cheeks pivoted so as to vibrate horizontally, in combination with an eccentric on the drive shaft, and a rock shaft and proper connection for giving to said cheeks the said vibrations. 3rd. The combination, with the vibrating cheeks pivoted at their upper ends to the main frame, provided with rearwardly projecting ears *b* and having guides *m n*, of the shaft E, eccentric *h* and suitable connecting mechanism. 4th. The combination, with the vibrating cheeks F pivoted at their upper ends to the main frame, and carrying two sets of guides *m n* arranged at different angles to a vertical line, of the shaft E carrying the eccentric *h*, rod *i*, crank *k*, rock shaft *c*, cranks *d* and rod *e*.

No. 13,343. Improvements in Log Canters. (*Perfectionnements aux canards.*)

Robert Weir and Loftus N. Keating, Muskegon, Mich., U. S., 1st September, 1881; for 5 years.

Claim.—1st. In combination with the moving bar of an apparatus for canting logs, the shaft K and double incline L mounted in brackets J J, and the means for imparting to said shaft and incline a semi-rotating and swinging movement. 2nd. In an apparatus for canting logs, the toothed bar F provided with brackets M and friction roll *h*, in combination with the swinging double incline L, for the purpose of imparting an oscillatory movement to said bar. 3rd. In combination with the moving bar of an apparatus for canting logs, the shaft K and double incline L mounted in brackets J J, the segment wheel N, pulleys *c c*, and rope *d* having weight O, for imparting a swinging movement to said shaft and incline and an oscillatory movement to the bar. 4th. In an apparatus for canting logs, the combination of the toothed bar F pivoted to the sliding cross head E between the upright guides D D and pivoted below its fulcrum with the bracket M and friction roll *h*, the shaft K and double incline L mounted in brackets J J, the segment wheel N, pulleys *c c* and weighted rope *d*, for imparting an oscillating movement to said bar, or leaving it free to move in a vertical direction.

No. 13,344. Improvements on Hat Felting Machines. (*Perfectionnements aux machines à feutrer les chapeaux.*)

William A. Baglin and John Gray, Brooklyn, N. Y., U. S., 1st September, 1881; for 5 years.

Claim.—1st. The method of felting hat bodies, by placing them within the perforated flexible tubes and mechanically subjecting said tubes, while carried around and rolled within a surrounding casing, to alternating squeezing action. 2nd. In combination with the drum, the case which encloses said drum, the annular space between the case and the drum, the elastic felting tubes, and mechanism for imparting motion to the drum. 3rd. The combination of the drum, the case which encloses said drum, the annular space between the case and the drum, the elastic felting tubes, the feed apron, and mechanism for imparting motion to the drum and the feed apron. 4th. The combination of the drum, the case which encloses said drum, the annular space between the case and the drum, the elastic felting tubes, the hot water tank, and mechanism for imparting motion to the drum.

No. 13,345. Improvements in the Manufacture of Hollow Ingots or Tubes of Cast Steel. (*Perfectionnements dans la fabrication des lingots creux ou tubes en acier coulé.*)

Cyrus B. Morse, Blunedback, N. Y., U. S., 1st September, 1881; for 5 years.

Claim.—1st. As a new article of manufacture, a cast steel ingot or tube, which is produced as described. 2nd. The peculiar construction and arrangement of mould and its appurtenances. 3rd. The method of reducing and elongating tubular, annular or hollow cylindrical bodies of cast steel, by operating upon them at three equi-distant points under the same blow. 4th. The recessed anvil having two faces inclined at an angle of about sixty degrees, whereby a blow from a hammer upon a body in the recess will affect the body at three equi-distant points simultaneously, in the swaging operation. 5th. The seamless wrought hollow metal axle or body, the interior wall of which conforms in general outline with its exterior shape.

No. 13,346. Improvements on Machines for Polishing Buttons. (*Perfectionnements aux machines à polir les boutons.*)

Dilman B. Shantz, Berlin, Ont., 1st September, 1881; for 5 years.

Claim.—In a button machine, the combination of a centrally bored die or chuck O, piston Q and spring S.

No. 13,347. Improvements on Hand Trucks. (*Perfectionnements aux camions à bras.*)

William H. B. Morgan, Bridgetown, Ont., 1st September, 1881; for 5 years.

Claim.—The combined attachment of carriage A A with the roller chains and shaft.

No. 13,348. Improvements in Carpet Stretchers. (*Perfectionnements aux tendeurs des tapis.*)

Alexander Mitchell, Fredericton, N. B., 1st September 1881; for 5 years.

Claim.—The combination of the parallel bars A A perforated at *f* and having solid cross head B, and re-enforcing strap C, hinged block or shoe D armed with spur or spurs *d*, adjustable fulcrum pin *e* and lever E having head J, and toothed plate G.

No. 13,349. Improvement in the Manufacture of White Lead. (*Perfectionnements dans la fabrication du blanc de plomb.*)

William Thompson, Lime House, L. E., Eng., 1st September 1881; for 5 years.

Claim.—1st. The process of converting metallic or blue lead into white lead, that is to say, submitting metallic lead in a closed chamber to the combined action of acetic acid, vapour and atmospheric air, in a temperature ranging from 90° to 120° Fahrenheit, or thereabouts, for one sixth to one fourth of the time required for completing the conversion of the lead, and subsequently supplying to the closed chamber, in addition to the acetic acid vapour, carbonic acid gas and atmospheric air, and maintaining the supply until the conversion is completed, the admission of the air and gas being so controlled as to provide for their diffusion through the chamber without the creation of disturbing currents. 2nd. The arrangements of apparatus consisting of the pipes D D D and the globes or chamber D, for supplying atmospheric air and carbonic acid gas to the converting chamber, and diffusing the same through the chamber in a heated state. 3rd. In combination with the converting chamber, the apparatus for clearing, by the aid of an exhaust or partial vacuum, the converting chamber of gas and vapours, and condensing the same preparatory to opening the chamber for the removal of the white lead.

No. 13,350. Improvements on Sewing Machines. (*Perfectionnements aux machines à coudre.*)

Joseph Bond, jr., Philadelphia, Penn., U. S., 1st September, 1881; for 5 years.

Claim.—1st. A sewing machine in which the following elements are combined, namely: first, a fixed shuttle or spool case, second, uniformly rotating hook for carrying the needle thread round the spool case, third, a reciprocating needle, fourth, mechanism whereby the hook is turned to the extent of one revolution, while the needle makes one complete up and down movement, and fifth, a device for taking up the needle thread, tightening the stitch, and releasing the said thread during one revolution of the hook. 2nd. The combination of the fixed spool case and rotating hook of a sewing machine, with thread guides and rotating hook *a* for taking up and releasing the needle thread, said hook having an inclined back, whereby the automatic casting off of the loop is effected as the hook rotates. 3rd. The combination of reciprocating needle, a hook rotating in a circular path and a spool case held in a position eccentric, in respect to the said circular path of the hook. 4th. The combination of the rotating hook *a*, the thread guide *d* and a device *c* for automatically releasing and retaining the thread controlled by the hook. 5th. The combination of the fixed shuttle or spool case, the rotating hook *b* and rotating thread controlling hook *a* with the adjustable thread guiding plate G. 6th. The combination of the slotted needle bar B, the driving shaft having a disk O and the crank pin J projecting through the slot of the needle bar and beyond the same, for receiving the disk A. 7th. The combination of the head N of the stationary arm of the machine, and a detachable plate N¹ with the slotted needle bar, the rotating hook *a* attached to a disk or arm situated outside the detachable plate and secured to the pin through the medium of which the driving shaft operates the needle bar. 8th. The combination of the shaft J K with a rod D connecting cranks on the two shafts together, and with a laterally sliding guide L adapted to the said rod. 9th. The combination of the presser bar with an elastic rod or shaft, provided with an eccentric or cam adapted to the upper end of the said presser bar, and serving as a medium through which the bar may be operated, and of imparting pressure to the bar. 10th. The combination of the presser bar with an elastic rod or shaft having a cam or eccentric adapted to the said bar and two bearings for the said shaft or rod, one bearing being adjustable for causing the shaft to exert more or less pressure on the presser bar. 11th. A feeding device consisting of a bar