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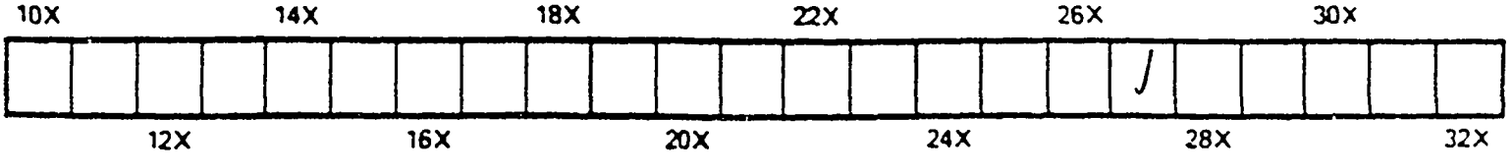

The Canadian Patent Office Record

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CONTENTS.

INVENTIONS PATENTED.

No. 14,308. Improvement in Egg and Fruit Carriers. (*Perfectionnement des appareils à transporter les œufs et les fruits.*)

John J. McIntire, Oakland, Cal., U.S., 3rd March, 1882; for 5 years.

Claim.—1st. In combination with the strips A having slits to receive the cross strips C, the narrow locking strips adapted to pass through the perforations of both the strips A and C and hold such strips in place. 2nd. In combination with the strips A having slits extending for nearly its width, the strip C with narrow slits at the point where it intersects with the strips A, and the locking strip D passed through both strips at their intersection and extending alternately on opposite sides of the strip A.

No. 14,309. Gang Plough.

(*Charrue à socs multiples.*)

Christopher Grattan, Stockton, Cal., U. S., 3rd March, 1882; for 5 years.

Claim.—1st. A gang plough consisting of the diverging plough frames or beams A with the opposing series of right and left ploughs secured to the two beams respectively, said frame being jointed or hinged at D, in combination with the wheels F P, arm S, whereby the front, centre and rear of the machine are supported independently. 2nd. The diverging jointed plough frame *a b* with its oppositely placed plough and the wheels F P S, in combination with the levers J R T with their retaining racks, whereby the front, centre and rear of the plough frame may be elevated or depressed. 3rd. The V-shaped plough frame *a b* jointed at D and having its forward portion supported upon the wheels F P, and the rear portion provided with the wheels S, in combination with the lever T, and rack K, whereby the rear portion of the frame *b* with its wheels S may be elevated from the ground.

No. 14,310. Improvements on Steam Traps.

(*Perfectionnements aux trappes de vapeur.*)

John Ponder, New Orleans, La., U.S., 3rd March, 1882; for 5 years.

Claim.—1st. In combination with the trunnions R R^1, pipes S S^1 vessel T and weighted lever, a railway V over which operates a metal ball. 2nd. The tank C provided with pipes X O P, the pipe O connected with pipe F having a valve *g*. 3rd. In a steam trap, tank C, pipes X O P F and valves x_1 *g q*. 4th. In combination with tank C and its supply and discharge pipes and valves, the lever *u*, pipes S S_1, vessel T and trunnions R R_1.

No. 14,311. Improvements on Carriage Bows. (*Perfectionnements aux branches des soufflets de voitures.*)

Henry E. Willson and Winslow L. Fay, Elyria, Ohio, U.S., 3rd March, 1882; for 5 years.

Claim.—1st. The shank *a*, the metallic side pieces *c c* welded thereto, and filler *d*. 2nd. The combination of the grooved filler *d* with the metallic strips *h*, for fastening the covering to a carriage bow.

No. 14,312. Medicinal Compound Called "White Oil." (*Composé médécinal dit "huile blanche."*)

Charles E. Williams, Wingham, Ont., 3rd March, 1882; for 5 years.

Claim.—A compound of liquor ammonia, seal oil, oil origanum, turpentine and methylated spirits.

No. 14,313. Improvements on Flower Stands. (*Perfectionnements aux jardinières.*)

Caroline A. Storey, Halifax, N.S., 3rd March, 1882; for 5 years.

Claim.—1st. The arrangement and combination of the shelves *g* g_1 g_1, having the pot holes *i*, with the pan *c* having a central opening *d* sleeve *e* fixed to the bottom of the pan *c* around said opening and the tap *j*. 2nd. The flower stand bracket composed of the shelves *g* g_1 g_{11} with their pot holes *f* f_1 f_{11}, pan *c*, sleeve *e* and tap *j*, in combination with a stock composed of the claws *a* and pivot *b*. 3rd. The combination of a flower stand bracket having the shelves *g* g_1 g_1, and pan *c* arranged as shown with the rod *h* passing through the central openings in the pan *c*, and the top shelf g^{11}.

No. 14,314. Machine for Bundling Kindling Wood. (*Machine pour fagoter le menu bois.*)

William A. Allen, Jersey City, N. J., U. S., 3rd March, 1882; for 5 years.

Claim.—1st. The combination of the driving shaft F, the loose driving pulley G having clutch teeth H, the double clutch I adapted to be moved in either direction to engage with clutch H, the clutch lever J having roller N, the hand lever K, the pinion E, wheel D, double cam M, lever P having roller O and push plate V, whereby the machine can be readily thrown into and out of gear. 2nd. The combination, with the vertically slotted form or holder X, of the curved and slotted follower Y, and the push plate V and suitable mechanism for operating said parts. 3rd. The combination, with the form or holder X, and the cam M connected with the large gear wheel D, of the lever P, the sliding shaft T, spring W, and the push plate V, whereby the said push plate will be moved forward to push the bundle of wood from the form or holder by the revolution of the said gear wheel.

No. 14,315. Machine for Sawing Kindling Wood. (*Machine pour scier le bois menu.*)

William A, Allen, Jersey City, N. J., U. S., 3rd March, 1882; for 5 years.

Claim.—The combination, with the table B and the set of parallel saws D, of the guard place *c* of a width about equal to the diameter of the saws and arranged directly over the said saws, and the holding springs *d* having one end secured to the underside of the forward edge of the said guard, and the free ends inclined downward and extending a little beyond the rear edge of the said guard.

No. 14,316. Improvements on Injectors.

(*Perfectionnements aux injecteurs.*)

Louis Shutte, Philadelphia, Pa., U. S., 3rd March, 1882; for 5 years.

Claim—1st. In a duplex injector, the combination of two separate steam inlet valves, and a loose bar or lever connecting said valves, all inclosed within the injector, and an operating device located on the outside of the injector, and united with the device connecting the valves. 2nd. The combination of two steam admission valves, a loose bar or lever forming a direct connection between said valves and starting valve and a rigid direct connection between the starting valve, and the bar which connects the steam valves. 3rd. The injector consisting of two parts, one discharging into the other, steam valves controlling said parts and connected by a loose bar, a starting valve, and an operating lever connected by rods or links directly with the starting valve and with the loose connecting bar. 4th. An operating lever pivoted to a jointed support and provided with eccentric lugs, and links encircling said lugs and connected directly with the starting valve, and operating stem of the steam valves.

No. 14,317. Improvements in the Method of Manufacturing Alumina. (*Perfectionnements dans la fabrication de l'alumine.*)

James Webster, Solihull, Eng., 3rd March, 1882; for 5 years.

Claim.—1st. In extracting the chief portion of the sulphur, hydrochloric acid, and other impurities from the compound whole in a

heated state by means of a jet or jets of steam and atmospheric air combined, and the method of performing the same. 2nd. The improved process, as a whole, of manufacturing alumina, from alum, or other sulphates of alumina, or salts of alum.

No. 14,318. Improvements on Machines for Moulding in Wood. (*Perfectionnements aux machines à mouler dans le bois.*)

Freeman Hanson, Hollis, Me., U.S., 3rd March, 1882; for 5 years.

Claim.—1st. The combination of the horizontal shaft *a*, bevel gears *c d*, vertical shaft *e*, pivoted step lever *f*, and table *g*. 2nd. The rotary removable table *g*, capable of being raised and lowered. 3rd. The reciprocating carriage g^2 having also a vibratory motion and a rotary cutter head *h*. 4th. The combination of the eccentric *i*, link *j*, and reciprocating carriage g^2. 5th. The combination of the eccentric *i*, link *j*, reciprocating carriage g^2, and vibrating track R.

No. 14,319. Improvements on Rotary Pumps and Ventilators. (*Perfectionnements aux pompes et aux ventilateurs rotatoires.*)

Lucien B. Villebonnet. Nancy, France, 3rd March, 1882;

Claim.—The construction of a rotary pump or ventilator consisting of two wings rotating at varying angular velocities, and which are driven by link rods of a wheel placed eccentrically to the axis of the cylinder, so that one wing always separates the inlet from the outlet port, and neither wing can enter either of the arcs between the ports before the other has quitted it.

No. 14,320. Improvements on Telephones.

(*Perfectionnements aux téléphones.*)

William Hubbard, Elgin, Ill., U.S., 3rd March, 1882; for 5 years.

Claim.—1st. In an acoustic telephone, a diaphragm provided with means for the attachment of wires to both of its front and rear sides, whereby the instrument is adapted to the purpose of an exchange, and other purposes. 2nd. In an acoustic telephone instrument having a front plate C with a central opening and a raised rim and shoulder *c*, whereby the internal chamber increases in size from the central opening toward the shoulder. 3rd. In an acoustic telephone instrument, the combination of the back plate, the diaphragm, and the dishing front plate having the central opening, a removable cap to inclose and confine the air in front of the front plate, said cap having a tapering tubular opening at its centre, and tubes which communicate with the diaphragm. 4th. The combination of the back plate, the diaphragm, the front plate and the cap, said cap having a tapering central tubular opening with a removable plate for closing it. 5th. In an acoustic telephone, the combination, with the wire F, of the tubing *a*5 composed of rubber, or other non-resonant substance, and enclosing the former.

No. 14,321. Improvements on Rollers for Covering Pamphlets and Books.

(*Perfectionnements aux rouleaux pour couvrir les brochures et les livres*)

Emma L. Miller and William H. Bohrer, Washington, D. C., U. S., 3rd March, 1882; for 5 years.

Claim.—1st. In a device for attaching covers to books, pamphlets, etc., after the application of paste thereto, consisting of two rollers, one arranged at right angles to the other, and both supported in a suitable frame. 2nd. In a device for pressing and attaching covers to pamphlets, books, etc., the combination of a frame work or handle with two rollers, supported therein at right angles to each other, one roller being made adjustable endwise whereby the device may be adapted for pamphlets of different thickness. 3rd. In a hand tool for pressing pamphlet covers, the combination of rolling surfaces at right angles to each other, one to act upon the side face and the other upon the edge of the pamphlet or book. 4th. In a device for pressing covers upon pamphlets, etc., the combination of a roll to act upon the edge of the pamphlet, and a second roller to operate upon the side of the same, the latter having its end bevelled or rounded. 5th. In combination with the body C, the roller B, the roller A, its supporting spindle and the adjusting screw G.

No. 14,322. Improvements on Stamp Cancellers and Daters. (*Perfectionnements aux machines à maculer et dater les timbres postes.*)

Hiram F. Gaines, Rouse's Point, N.Y., U.S., 3rd March, 1882; for 5 years.

Claim.—1st. In a cancelling stamp, the combination, with a suitable means of attachment to a handle A, of the cylinder C, collar sleeve F, head G and a spring H, the head provided with an abrasive surface and having an axial motion imparted by spiral grooves F F1 by impact of the head G with the paper stamp, and the yielding of spring H, whereby the face of the stamp will be torn and defaced for cancellation. 2nd. In a dating and cancelling hand stamp, the combination, with a suitable means for the attachment of a handle A, of a block D, having a socket to receive the stem of a dating stamp secured therein by set screw I and cylinder C, collar sleeve F, head G having an abrasive face, and yielding and rocking axially to destroy the paper stamp and apply a date in proximity thereto.

No. 14,323. Folding Washstand.

(*Lavabo pliant.*)

Sydney Kinder, Amherst, (Assignee of David O. Parker, Liverpool,) N.S., 3rd March, 1882; (Extension of Patent No. 1357.)

No. 14,324. Improvements on Bay Windows.

(*Perfectionnements aux fenêtres en saillie.*)

William S. Garrison, Cedar Falls, Iowa, U.S.. 6th March, 1882: for 5 years.

Claim.—1st. The combination of the blinds or sections of a blind B D and E, and the projecting floor C, the portion B being pivoted so as to be easily turned upon its journals, the arrangement of the parts with reference to each other being such as described, whereby they may be converted into a bay window and the parts D and E be made to serve as blinds for an ordinary window. 2nd. The combination of the projections A C, the pivoted blind B and the swinging blinds E and E with the frame of the window.

No. 14,325. Improvements on Stove Carriers. (*Perfectionnements aux porte-poêles.*)

George Dee, Dixon, Ill., U.S., 6th March, 1882; for 5 years.

Claim.—1st. The clutch B and sleeve A, the clutch being provided with teeth on its upper edge. 2nd. The combination of the sleeve A and clutch B with a lifting bar adapted to be run through the sleeve.

No. 14,326. Method and Apparatus for obtaining Starch from Grain for the Manufacture of Grape Sugar and Other Products. (*Méthode et appareil pour extraire l'amidon du grain pour la fabrication du sucre de raisin et autres produits.*)

Thomas A. Jebb and William T. Jebb, Buffalo, N. Y., U. S., 6th March, 1882; for 5 years.

Claim.—1st. An improvement in extracting starch from grain, the method which consists in first, reducing the grain with water, and then subjecting the reduced material to pressure, whereby the starch water is pressed out and separated from the bran and other coarse material. 2nd. In an improvement in the art of extracting starch from grain, the described method consisting in first, coarsely disintegrating the grain, and then reducing the grain in a separate machine to the proper degree of fineness, and then separating the starch water from the grain by pressure. 3rd. As an improvement in the art of extracting starch from grain consisting in first, reducing the grain with water, then separating the starch water from the grain by pressure, and then treating the starch water for the production of the desired product, the material passing through the several stages of the process continuously and without interruption. 4th. As an improvement in the art of extracting starch from grain, the described method which consists in first, reducing the grain with water, then separating the starch water from the grain by pressure, and then separating the remaining impurities from the starch water by sifting. 5th. As an improvement in the art of extracting starch from grain, the described method which consists first in reducing the grain with water, then separating the starch water from the bran and other coarse material, and treating the starch water for obtaining the desired product, then regrinding the bran and other coarse material and extracting the starch from this ground material separately. 6th. In an apparatus for extracting starch from grain, the combination of a reducing mechanism, whereby the grain is reduced to the desired degree of fineness with water, and a separating machine composed of an endless perforated or porous apron, and pressure rollers, whereby the starch water is separated from the coarse particles. 7th. In apparatus for extracting starch from grain, the combination of a reducing mechanism, whereby the grain is reduced to the desired degree of fineness, a separating machine whereby the starch water is separated from the bran, etc., and a subsequent separator whereby the remaining impurities are separated from the starch water. 8th. In an apparatus for extracting starch from grain, the combination of a reducing machine, whereby the grain is reduced to the desired degree of fineness, a separating machine whereby the starch water is separated from the bran, etc., and a subsequent separator which receives the tailings from the first separator, and which separates the remaining starch from the bran and the offal. 9th. In an apparatus for extracting starch from grain, the combination of a steep tube B preluminary disintegrator C, grinding mill D, receiver E, separator G and subsequent separator L.

No. 14,327. Improvements in the Construction of Vessels and in the Apparatus Employed Therein, parts of Which are also Applicable to Other Structures. (*Perfectionnements dans la construction des vaisseaux et aux appareils pour cet objet, dont partie applicable à d'autres constructions.*)

C. A. H. C. de Winter, Paris, France, 6th March, 1882; for 5 years.

Claim.—1st, The system or mode of constructing ships or vessels by forming them essentially of saleable material. 2nd. The improved machine tools for shaping the wood and facilitating the operation of construction. 3rd. The impermeable wall formed of hard wood in a natural state, and soft green wood dried, compressed and interposed, constituting the sides and bottom of the ship, or employed for other structures. 4th. The combination of the consolidating iron work for binding together the whole of the hull and the cargo. 5th. The mode of construction consisting in building up the envelope, that is to say the sides of the ship around the cargo.

No. 14,328. Improvements in Middlings Purifiers. (*Perfectionnements aux épurateurs des gruaux*)

Nicolas Weber, La Porte, Ind., U. S., 6th March, 1882; for 5 years.

Claim.—1st. In a middlings purifier, a horizontal rotating screen of disk form and means for imparting a vibratory motion thereto. 2nd. The combination of a suspended rotating screen having a central hub or boss, an eccentric located at one side of the hub, and a

rod or pitman extending from the eccentric to the hub, whereby the rotation of the eccentric produces a vibration of the screen. 3rd. The combination of the casing A communicating with an exhaust chamber, a series of screens mounted in said casing travelling discharge beds located below the screens, and air tight diaphragms independendent of the discharge beds located between the respective screens, whereby a separate chamber for each screen is provided.

No. 14,329. Improvements on Horse Shoes.

(*Perfectionnements aux fers à cheval*)

John D. Billings, New York, N. Y., U. S., 6th March, 1882; for 5 years.

Claim.—1st. A horse shoe having a continuous calk of varying width in different parts. 2nd. A continuous tapered calk diminishing in width from near the toe to the heels. 3rd. A continuous tapered calk diminishing in width from near the toe to the heels, and bevelled on its inner edge from the upper face of the shoe, to the lower face of the calk. 4th. A horse shoe having a flat upper face and a continuous bevelled and tapered calk.

No. 14,330. Improvements on Machines for Breaking Pig Iron. (*Perfectionnements aux machines à concasser le fer en gueuses.*)

Theodore A. Blake, New Haven, Ct., U. S., 6th March, 1882; for 5 years.

Claim.—1st. The combination of the bed with a single rib or breaking point over which the pig is placed and the reciprocating slide above, provided with two ribs or breaking points to bear upon the pig, one in front of and the other in rear of the rib or breaking point below. 2nd. The combination of the bed with a single rib, or breaking point over which the pig is placed and the reciprocating slide above provided with two ribs or breaking points to bear upon the pig, one in front of, and the other in rear of the rib, or breaking point below with a feeding bench, the surface of which is above or flush with the upper surface of the lower bearing point, and upon which the pig is placed to be fed to the machine. 3rd. The combination of the bed with a single rib or breaking point over which the pig is placed, and the reciprocating slide above provided with two ribs, or breaking points, to bear upon the pig, one in front and the other in rear of the rib or breaking point below, with a feeding bench the surface of which is above, or flush with the upper surface of the lower bearing point and upon which the pig is placed to be fed to the machine, and a stop to govern the length of the piece to be broken. 4th. The combination of the bed with a single rib or breaking point over which the pig is placed, and the reciprocating slide above provided with two ribs, or breaking points to bear upon the pig, one in front and the other in rear of the rib or breaking point below, and a feeding bench constructed to yield against the breaking pressure. 5th. The combination of the bed with a single rib, or breaking point over which the pig is placed, and the reciprocating slide above provided with two ribs or breaking points to bear upon the pig one in front and the other in rear of the rib or breaking point below, and a feeding bench constructed to yield againt the breaking pressure, and a stop to govern the length of the piece to be broken. 6th. The combination, of the anvil forming a single breaking point in which the pig rests a stationary holder above the pig in rear of the anvil, and a reciprocating breaker in front of the anvil. 7th. The breaking block or blocks provided with a rubber spring to receive the transverse strain produced in breaking the pig.

No. 14,331. Improvements on Electric Telegraphs. (*Perfectionnements aux télégraphes électriques.*)

Sir James Anderson and Benjamin Smith, London, Eng., 6th March, 1882; for 15 years.

Claim.—1st. The combination, with two telegraph circuits, of one set of instruments, a recorder or other receiver instrument, a transmitting key and a switch, the whole being so arranged that messages, arriving by either cable may be received on the same recorder, or receiving instrument, and forwarded by the key along the other cable, 2nd. The improved switch, figs. 3 4. 3rd. The method of combining two telegraph circuits by a wheat-stone bridge, or differential arrangement with a transmitting key and recorder, or other receiving instrument interposed so that the recorder registers signals arriving by either cable and is unaffected by the operation of the key. 4th. The improved switch, fig. 8. 5th. The combination of apparatus for the conjoint working of two duplexed cables fig. 9.

No. 14,332 Improvements on Door Fastenings. (*Perfectionnements aux fermetures des portes.*)

Charles A. Crongeyer, Detroit, Mich., U. S., and George W. Busch, Walkerville, Ont., 6th March, 1882; for 5 years.

Claim.—1st. A door fastener made and consisting of a metal strip having a hook at one end combined with a latch mounted on this strip. 2nd. The combination, with a strip provided with a hook end, of a rod pivoted to this strip, and a latch mounted on this pivoted rod. 3rd. The combination, with the strip A provided with a hook end B, of the rod C, pivoted to the strip A, and of a U-shaped piece, or latch D mounted loosely on the rod C. 4th. The combination, with the strip A, provided with a hook end B, of the rod C, the U-shaped piece D and of devices for locking this piece D on the rod C. 5th. The combination, with the strip A provided with a hook end B of the pivoted threaded rod C, the U-shaped piece D and the locking nut F. 6th. The combination, with the strip A provided with a hook end B of the pivoted rod C, the U-shaped D and the arm L of the same. 7th The combination, with the strip A provided with a hook end B, of the pivoted rod C, the U-shaped piece D and the pivoted arm L provided with a groove N.

No. 14,333. Improvements on Machines for Thrashing and Cleaning Grain.

(*Perfectionnements aux machines à battre et nettoyer les grains.*)

Jacob Miller, Canton, Ohio, U.S., 6th March, 1882; for 5 years.

Claim.—1st. In a thrashing and separating machine, the combination of the thrashing cylinder B^1 with the carrier D^1, and overhanging beater E^1 located at the rear end of, and above the carrier D, whereby the loose grain is prevented from flying or hopping out of the machine or over the lower beaters, 2nd. In combination with the carrier D^1, the overhanging beater E^1 and beaters *b b b*, whereby the straw and grain is deflected downward after it leaves the carrier, and upward and onward by the beaters *b b b*. 3rd. The combination of the short carrier D^1 and floor E, with the overhanging beater E^1, beaters *b b b*, vibrating table F, open straw carrier L^1, and the extension M. 4th. In combination with the shaking table or carrier L^1 supported at its rear end by the inclined links *d*, the upwardly inclined slotted extension M supported at its front end by the links *d* and. at its rear end, by the links inclined at a greater angle that the links *d*, whereby the straw is given an upward toss in discharging it from the machine, and the grain thrown forward on to the riddles. 5th. The combination, with the cylinder and carrier, of the trough or spout w^1 located immediately behind the cylinder post and extending nearly down to the carrier D^1, whereby an upward draft from the cylinder is prevented from passing up through said trough. 6th. The castings or bell crank levers *n* provided with enlarged portions n^{III}, and in combination with a shaker or shakers, to balance the upper carrier. 7th. The bell crank levers or castings *n* provided with enlarged portions n^{IIIII}, in combination with the shoes O and riddle N^1, rods *s*, arm r^{IIII}, rods r^{IIII}, whereby the weight of the carrier or shaker L^1 and table F is counterbalanced, and the vibrating parts of separator nicely adjusted. 8th. The combination of the shaft *k* provided with the crank arms m^1, with the weighted rods m^{III}, table F, carrier L^1, bell crank lever n^1, -rods *s*, shoes O N, and riddle N^1, whereby the parts, *viz.*; the table F, carrier L^1, shoes O N and riddle N^1, have a simultaneous and uniform reciprocating motion imparted to them.

No. 14,334. Improvements on Machines for Embroidering and Ornamenting Rugs. (*Perfectionnements aux machine à broder et orner les nattes.*)

Ebenezer Ross, Wanseon, Ohio, U. S., 6th March, 1882; for 5 years.

Claim.—1st. The blocks A and B adapted to slide against each other and provided respectively with the needle G and spring L. 2nd The needle G having a flattened shank to engage the flat spring L. 3rd. As an improvement in embroidering machines, the block A having needle G, spool bracket H and slotted flanges D, in combination with the sliding block B having spring L.

No. 14,335. Improvements on Rotatory Engines. (*Perfectionnements aux machines rotatoires.*)

George W. Dudley, Waynesborough, Va., U.S., 6th March, 1882; for 5 years.

Claim.—1st. The segmental exhaust valves having segmental lips at their ends, in combination with the valve chambers having recesses at the sides of the valves, and a reversing valve located in the valve seat. 2nd. The segmental exhaust valves having their journals projecting through the walls of the valve chambers, in combination with levers secured to the outer ends of said journals, and adapted to be operated by a cam which rotates with the piston. 3rd. The segmental piston, in combination with a disk having tangential solid projections formed on its periphery, between which the piston is secured, and radial ports issueing through said projections to the steam chamber. 4th. The reverse-valve located within a hollow shaft and provided with a pin which moves in a slot in said shaft, in combination with a sliding clutch collar having a spiral groove into which the said pin projects, and the disk having two radial ports. 5th. The combination, with the segmental piston, of angular metal packing plates adapted to be arranged in rectangular form in suitable recesses made about the ends of the piston.

No. 14,336. Improvements on Milk Coolers.

(*Perfectionnements aux garde-lait.*)

David M. Macpherson. Lancaster, Ont., 6th March, 1882; for 5 years.

Claim.—1st, The combination of the receiving pan A, truncated cooler B and distributor C, for deodorizing, cooling and aerating the milk. 2nd. The receiving pan A provided with a tubular opening H, in combination with the cooler B, having a cone bottom I, and distributor C. 3rd. The truncated cooler B having near its base a trough K, in combination with pan A having lip or outlet E, and tubular outlet G, whereby the milk can be diverted to a point diametrically opposite to the lip, to cause it to circulate under the bottom of the cooler. 4th. The distributor C having an annular perforated bottom and provided with a strainer O, in combination with a truncated cone cooler B, whereby the milk is strained and distributed in a thin film over the cooler, and aerated, deoderized and cooled.

No. 14,337. Improvements on Watch Regulators. (*Perfectionnements aux régulateurs des montres.*)

John A. Awalt, Anderson, Ind., U.S., 6th March. 1882; for 5 years.

Claim.—1st. As a new article of manufacture, and adapted to be applied to any watch now in use, the perforated and bifurcated frame C, combined with the perforated and threaded rod D and threaded nut E. 2nd. The combination of the perforated and bifurcated frame C, the perforated and threaded rod D and the threaded nut E, with the bridge A and regulator arm B.

No. 14,338. Electrical Apparatus for Stopping Railway Trains, Signalling, &c. (*Appareils électrique pour arrêter les trains des chemin de fer, pour les signaux, & .*)

William C. Shaffer, Philadelphia, Penn., U.S., 6th March, 1882; for 5 years.

Claim.—1st. An electrically operated device and a locomotive engine having mechanism adapted to be engaged by a projecting part of said device, whereby, when the electric circuit is broken, the projection presents a rigid contact to a passing train and operates the aforesaid mechanism so that the engine or train is stopped, or an alarm sounded, or both, and, when the circuit is closed, the electric controlled projection is rendered inoperative. 2nd. A locomotive engine or train provided with mechanical devices which are connected to the steam valve, or steam supply of the engine, and adapted to be operated by devices controlled by electric circuits so that, in the event of danger, the circuits are broken and the devices controlled by the electric circuits are automatically set to operate the devices connected to the steam supply of the engine, whereby the steam is cut off and provision thus made for automatically stopping the train. 3rd. A locomotive engine provided with mechanical devices which are connected to the brake mechanism and adapted to be operated by devices controlled by electric circuits so that in the event of danger the circuits are broken, and the devices controlled by the electric circuits are automatically set to operate the mechanical devices of the engine, whereby the brake mechanism is operated and provision thus made for automatically stopping the train. 4th. An electric device for automatically stopping trains, sounding an alarm, &c. in combination with a signal box and an annulus connected to the armature of the electric device. 5th. In combination with an arm carried by a moving train and operating mechanism which stops the same, a device on the line of way which engages with said arm, locking mechanism for holding said device rigid, an electric circuit and devices caused by the breaking of said circuit to actuate said locking mechanism. 6th. In combination with a switch and a circuit breaking device attached thereto, an electro-magnet and armature controlled by said switch, an arm which is rigid when said circuit is broken, locking devices for said arm controlled by said magnet, and an arm carried by the train and brakes, or other stopping mechanism operated by the latter arm. 7th. An arm carried by a train and operating the brakes or other stopping mechanism thereof, in combination with a stationary device for engaging with said arm, an electro-magnet circuit wires and circuit breaking devices and armature operated in one direction by said magnet and by gravity or spring, etc., in the opposite direction, and locking devices engaged or operated by said armature, whereby the breaking of the electric circuit will cause the locking of the device that engages with the arm or levers. 8th. A rigid device for engaging with a brake operating arm carried by a locomotive, in combination with mechanism for mechanically locking said device when the electric circuit is broken, an electro-maguet which is arranged to unlock the same when magnetized, the circuit wires of said magnet and an arm arranged to be struck by an attachment of a passing train, so as to close said circuit and effect such magnetization and unlocking. 9th. The combination, with a rigid arm along the track for operating breaks or signals, and devices for mechanically locking said arm in position for operation, of an electro-magnet which is arranged to unlock said arm when magnetized and an arm arranged to be struck by a passsing train, so as to close the circuit and effect such magnetization. 10th. The combination, with the shaft M^1, of a foot *m*, the arm K, the circuit breaking lever G, magnet E, electric connections and the locking lever, whereby the breaking of the circuit causes the locking of the foot. 11th. The bent lever L, the arm G^1, the lever G, the arm K, the arm Q, the armature F, the magnet E, the lever V and circuit making devices operated thereby, which cause the magnetizing of said magnet, when the arm U is struck by an attachment of a passing train, and thereby return the parts to their normal position. 12th. A locomotive engine or train provided with the movable arm or bar N, said bar being attached to levers or mechanism connected to the whistle, the steam air or other brake and steam feed pipe of the engine, and adapted to operate with electric circuit breaking devices and necessary appliances. 13th. The combination, with lever Y and a signal apparatus operated thereby, of armature F attached to said lever, electro-magnet E, arm Q on shaft M, circuit wires for said magnet, and circuit breaking devices to signal danger when the circuit is broken.

No. 14,339. Improvements in Permutation Lock Dials. (*Perfectionnements aux cadrans des serrures à combinaison.*)

George M. Hathaway, Jersey City, N. J., U. S., 7th March, 1882; for 5 years.

Claim.—1st. In a permutation lock, a concealed auxiliary pemutation lock within the main dial, adapted to lock said main dial against manipulation. 2nd. In a safe lock, the combination of duplex dials, spindles, disks and knobs, one concealed within the other, and one adapted to lock the dial of the other, when the combination is off. 3rd. The combination of the main dial A and knob A^1 and a main locking mechanism, with the auxiliary locking mechanism, the bolt F, spindle and auxiliary knob and dial concealed within the knot A^1 and duplex spring E.

No. 14,340. Improvements on Self-Levelling Berths. (*Perfectionnements aux lits suspendus.*)

The Brunswick Ship Berth Company, (Assignee of Dana Parks,) Boston, Mass., U. S., 7th March, 1882; for 15 years.

Claim.—1st. In as elf-levelling berth, the frame A, the ends of which form the head and foot boards of the berth proper, and bottom B suspended on separate axes, the frame A being suspended from scale beams a^1 at head and foot, and the bottom B forming the bottom of the berth, being suspended from the side pieces of frame A. 2nd. The frame A suspended by means of straps *a* from the scale beams a^1 journalled on the bulk heads, in combination with bottom B, suspended by means of straps *b* from the scale beams b^1 journalled on the side boards of the frame A.

No. 14,341. Process for the Manufacture of Bows, Scarfs, &c. (*Mode de confection des boucles, écharpes, &c.*)

Norah McCormick, Toronto, Ont., 7th March, 1882; for 5 years.

Claim.—In placing between the seams of the material, pieces of gutta percha tissue, and applying thereto a hot iron for the purpose of causing the said tissue to seal the seams.

No. 14,342. Improvements in Pumps. (*Perfectionnements dans les pompes.*)

John B. Drake, Goshen, Ind., U. S., 7th March, 1882; for 5 years.

Claim.—1st. In a drain tube to prevent freezing, having a valve seat, a valve, and means for automatically closing the same when the bucket is applied. 2nd. In a drain tube a valve seated therein, a lever for receiving the bucket, and a connecting rod for operating the valve. 3rd. In a drain tube, a valve seated therein, lever for receiving the bucket, a connecting rod for closing the valve, and a spring for opening the valve.

No. 14,343. Improvements on Steam Boiler Furnaces. (*Perfectionnements aux foyers des chaudières à vapeur,*)

George H. Watson, Louis, Mo., U. S., 7th March, 1882; for 5 years.

Claim.—1st. The combination of a boiler furnace, a feed water pipe running horizontally in front of said furnace, and branch pipes extending from said feed water pipe to form a water pipe to form a water grate, and water sides for said furnace. 2nd. In a boiler furnace, a double series of water tubes diverging from the feed water tube to form water grate bars, and coiled adjoining the side walls of the furnace, and connected with the boiler. 3rd. The combintion of the boiler furnace, the feed water pipe tubes branching from said pipe, coiled in the furnace and connected with the boiler, tubes diverging from said branches and connected with the boiler and valves $N N^1 O O^1 P P^1 Q Q^1$ and $R R^1$. 4th. The combination of one or more boiler furnaces, the feed water pipe having hand valve and check valve, and the system of generating and feeding pipes and their valves.

No. 14,344. Improvements on Gas Apparatus. (*Perfectionnements aux appareils à gaz.*)

Alfred Wilson, Handsworth, Eng., 7th March, 1882; for 5 years.

Claim.—1st In apparatus for making gas, the novel combination of the retort A, combustion chamber B, solid hearth C, openings D D, crupper boxes M M and temporary bars O O. 2nd. The combination of the retort A, combustion chamber B, solid hearth C, openings D D, tuyere F with dip pipe P, and water box Q. 3rd. The combination of the retort A, combustion chamber B, solid hearth C, openings D D, cruppers boxes M M, temporary bars O O, tuyere F with dip pipe P and water box Q. 4th. The combination of the retort A, combustion chamber B, solid hearth C, openings D D, crupper boxes M M, temporary bars O O, tuyere F with dip pipe P and water box Q, feeding cone H and doors L L,

No. 14,345. Improvements on Coal Stoves. (*Perfectionnements aux poêles à charbon.*)

John W. Elliott, Toronto, Ont., 7th March, 1882; (Extension of Patent No. 7182.)

No. 14,346. Improvements in the Art of Forging Hammers. (*Perfectionnements dans l'art de forger les marteaux.*)

David Maydole, Norwich, N.Y., U.S., 7th March, 1882; (Extension of Patent No. 7228.)

No. 14,347. Improvements on Meat Choppers. (*Perfectionnements aux hache-viande.*)

Martin L. Edwards Salem, Ohio. U. S., 7th March, 1882; for 5 years.

Claim.—1st. The combination of an intermittently rotating chopping block with a standard having a davit head B, and the open guide box C, the endwise slide bar E carrying the knives, and the toggle arms *b c* carrying said slide, the said davit head and guide box overhanging the tub with the slide bar, and the toggle-arm davit connections in vertical line in front of said standard. 2nd. The combination of a rotary chopping block with a cross-head carrying the knives, and having the shouldered and bevelled face-projection, with a vertically reciprocating slide having the shouldered and bevelled face-socket within which said cross-head projection is secured. 3rd. The combination, with the toggle-arms *b c*, of the reciprocating slide E carrying the cross-head for the knives, and the standard davit-head C, with the adjustable screw-stem G connecting the upper toggle-arm *c* with said davit-head and the toggle crank connecting rod H, whereby the knife carrying cross-head is adjusted through the toggle-arms and their connecting-slide. 4th. The davit-head standard, the guide box C, the bar slide E and the toggle-arms connected and arranged in front of said standard, with the guide-box and toggle-arm davit-head connections overhanging the tub in vertical line, the slide and the guide-box being open or slotted, and the lower toggle-arm connected to the slide within the box free to flex therein, and in which the slide bar is supported in the direct line of the davit-head connection. 5th. The combination of the intermittently rotating chopping block with the standard having a davit-

head B and an open guide box C overhanging the tub, the endwise bar slide E, the toggle arms *b c* connecting said davit-head and slide in vertical line, the crank shaft I and the operating rod H, the latter passing through a slot *e* in the davit-head and connecting with the toggle-arms at a point between the overhanging davit-head and the guide box, and with the crank shaft on the back of said standard. 6th. The screw-stem G, for connecting the upper arm of the toggle joint *c* with the head of the standard.

No. 14,348. Improvements on Carriage Shaft and Pole Couplers. (*Perfectionnement aux armons des limonnières et des timons.*)

Charles H. Titus, Hampton, and George Barnes. Upham, N. B.. 7th March, 1882; for 5 years.

Claim.—The block A and set screw *d*, in combination with the clasp A.

No. 14,349. Improvements in Pumps. (*Perfectionnements dans les pompes.*)

John A. McMartin, Montreal, Que., 7th March, 1882; (Extension of Patent No. 8710.)

No. 14,350. Improvements in Pumps. (*Perfectionnements dans les pompes.*)

John A. McMartin, Montreal, Que., 7th March, 1882; (Extension of Patent No. 8710.)

No. 14,351. Improvements in Horse Car Pole Attachments. (*Perfectionnements aux ajustages des timons des voitures de tramways.*)

Samuel A. Ortis, Boston, Mass., U.S., 7th March, 1882; (Extension of Patent No. 7200.)

No. 14,352. Machine for Threading and Flanging Caps for Fruit Jars. (*Machine à fileter et rabattre les bouchons des pots à fruits*)

John A. Chadwick, Hamilton, Ont., 7th March, 1882; (Extension of Patent No. 7200.)

No. 14,353. Improvement in Telephone Transmitters. (*Perfectionnement des transmetteurs téléphoniques.*)

Charles F. Livermore, (Assignee of Samuel H. Bartlett and Henry E. Waite,) New York, U.S., 7th March. 1882; for 5 years.

Claim.—1st. In a telephone transmitter, a floor of cork or equivalent material, provided with a contact button or electrode, and resting loosely in a supporting stand, in combination with socketed or recessed blocks of carbon or equivalent material, and a tripod or bar supported by said button and recessed blocks. 2nd. A floor of cork or equivalent material resting loosely on its supporting stand, in combination with a microphone suspended from its lower face, and receiving its disturbances through the molecular action in the corks, resulting from the action of the sound waves impinging upon its surface. 3rd. A floor of cork or equivalent material resting loosely in its supporting stand, in combination with a microphone consisting of a central hub or contact button, rods or bars radiating therefrom, and outer supports for said radial bars connected with each other and with the line wires.

No. 14,354. Improvement in Telephone Receivers. (*Perfectionnement des récepteurs téléphoniques.*)

Charles F. Livermore, (Assignee of Samuel H. Bartlett and Henry E. Waite,) New York, U. S., 7th March, 1882; for 5 years.

Claim.—The combination, with the bar magnet coil and a diaphragm of non-magnetic material, of a spring armature rigidly secured at one end, and bearing at its other end against the diaphragm, said armature being disconnected from the magnet, but in inductive proximity thereto.

No. 14,355. Improvements in Photographic Printing Frames. (*Perfectionnements aux formes d'impression photographique.*)

George S. Street and Edwin Buckland, Moncton, N.B., 7th March, 1882; for 5 years.

Claim.—The application of an air cushion to a photographer's printing frame, or frame for direct photography, in the application of the levers F F^{ii}, in combination with the hooks G G^{i} and the spring J, to a photographer's printing frame, or frame for direct photography, in the application of the boxes X to a photographer's printing frame, or frame for direct photography.

No. 14,356. Improvement in Continuous Recorders. (*Perfectionnement des compteurs continus.*)

John B. Moscrop, Stretford, Eng., 7th March, 1882; for 15 years.

Claim.—1st. The combination, in a recording apparatus, of a time mechanism, a rotary drum geared with said mechanism and provided with peripheral stud pins arranged in equidistant pairs, and diagram paper having corresponding holes to receive said pins, with a receiving reel to which said paper passes from said drum, and means for giving said reel a constant tendency to wind up said paper. 2nd. The combination, in a recording apparatus, of a time mechanism, a rotary drum geared with said mechanism and provided with peripheral stud pins arranged in equidistant pairs, corresponding with divisions of time, and diagram paper having corresponding holes and parallel transverse lines marking minor subdivisions of time. 3rd. In a marker comprising a marking wheel, an ink pad in contact with said wheel and means for limiting the rotation of said wheel to one direction. 4th. In a marker having a marking wheel, an ink pad in contact with said wheel, and means for limiting the rotation of said wheel to one direction, in combination with continuous diagram paper supported beneath said marker and propelled longitudinally thereunder, and means for reciprocating said marker transversely of said paper, said marking wheel being arranged to rotate in the line of reciprocation. 5th. The combination of a time mechanism, continuous diagram paper propelled longitudinally by said mechanism, a marker having a marking wheel, an ink pad in contact with said wheel and means for limiting the rotation of said wheel to one direction and adapted to reciprocate transversely of said paper, and mechanism for so moving said marker. 6th. An apparatus for recording the performance of a steam engine or other motor, the combination of a time mechanism, continuous diagram paper propelled longitudinally by said mechanism, a marker adapted to reciprocate transversely of said paper, and mechanism for so moving said marker, comprising a centrifugal governor driven by said engine or motor and constructed with ears or cams, a gravitating slide resting upon said cams, and a spring partly counterbalancing the weight of said slide through the medium of a connecting lever as means for transmitting proportionated motion to said marker.

No. 14,357. Improvements in Church Benches. (*Perfectionnements aux bancs d'église.*)

Charles Potter, Toronto, Ont., 8th March, 1882; (Extention of Patent No. 7187.)

No. 14,358. Improvements in Nail Machines. (*Perfectionnements aux machines à clou.*)

John A. Pillow and Randolph Hersey, Montreal, Que., (Assignees of Isaac Briggs, Middleborough, Mass., U.S.,) 8th March, 1882; (Extension of Patent No. 7179.)

No. 14,359. Improvements in Nail Machines. (*Perfectionnements aux machines à clou.*)

John A. Pillow and Randolph Hersey, Montreal, Que., (Assignees of Isaac Briggs, Middleborough, Mass., U.S.,) 8th March, 1882. (Extension of Patent No. 7179.)

No. 14,360. Improvements on Railway Switches. (*Perfectionnements aux aiguilles des railroutes.*)

Louis N. Bruner, Philadelphia, (Assignee of Robert P. Garsed, Morristown,) Penn., U. S., 8th March, 1882; for 5 years.

Claim.—1st. The combination, with a pair of cylindrical bellows and pistons which are loosely fitted within suitable casings, and connected by suitable means with the switch-rails of a switch, of an air or fluid pump adapted to be operated upon so as to cause the expulsion of air or fluid into said incased bellows, for the operation of the switch. 2nd. The switch lever Z, in combination with a pair of cylindrical bellows operated by air or fluid, by means of primary pistons, secondary pistons, and lock operating cranks. 3rd. The combination, with an air or fluid bellows, of a primary piston super-imposed thereupon, a secondary piston telescopically arranged within the primary piston, and a trigger affixed to the secondary piston, which both permit of the downward telescoping of the pistons and enable their conjoint upward movement. 4th. The combination, with the switch lever T, of the lock lever *d* and the slide bar Y. 5th. The combination, with the secondary pistons S S^{x}, of the cranks U U^{x} and the slide bar Y. 6th. The switch lever provided with a stop bar, in combination with an air cushion socket bar. 7th. Switch rails, in combination with an air cushion for stopping concussion in their throw. 8th. In an air or fluid pump of rubber or kindred material, in combination with a holder, casing or jacket of metal or other hard material adapted to retain the same in place, and to prevent its rupture under the action of its operating plunger. 9th. As a device for operating the plunger of an air or fluid pump, and in combination with the plunger rod *m* thereof, the lever arm or depresser D, located below the road bed and provided with a face projecting above said bed. 10th. The combination of a primary piston, a secondary piston and connecting mechanism, to form a compound piston adapted to operate rigidly in one direction and telescopically in the other. 11th. A T-shaped switch shifting lever provided with latches for locking the same at the end of either vibration, and a pneumatic or hydraulic apparatus arranged to vibrate the said lever in either direction, at will, and to withdraw the opposite latch. 12th. A fluid forcing piston having a supplementary piston attached thereto, and the latter being allowed an independent forward motion after the former stops. 13th. The arm or lever Z and the triggers or bolts F F^{x}, in combination with plungers, whereby said bolts are released in advance of the movement of said arm or lever. 14th. The pipe K, plungers or bellows and pumping mechanism, in combination with the tank L. 15th. The cylinder *f* provided with the cup *p* and perforations *n*. 16th. The fluid operated switch and pumping mechanism, in combination with one or more air chambers and a safety valve or valves. 17th. The switch having its stop bar K faced with, or formed of lead, or other soft material. 18th. The wheel or disk A A^{i} shiftable on the axle of the car or engine and operating the arms D, having a facing of lead or other soft material.

No. 14,361. Improvements in Cigarettes. (*Perfectionnements dans les cigarettes.*)

Lewis Ginter, Richmond, Va., U.S., 8th March, 1882; for 5 years.

Claim.—As a new article of manufacture, the cigarette having plain flat sides and rounded edges, formed by pressing from the round cigarette and having the particles of tobacco interlocked and firmly compressed.

No. 14,362. Improvements on Commode-Washstands. (*Perfectionnements aux lavabos-commodes.*)

William T. Egbert, Morristown, N.J., U.S., 8th March, 1882; for 5 years.

Claim.—1st. The combination of the commode seat and the washstand attachment, which is constructed to be be moved upward and downward relatively to said commode seat. 2nd. The combination of the commode seat, the washstand attachment covering the same and the counterpoise for the washstand attachment. 3rd. The combination of the commode seat with a washstand attachment constructed with a level top, and with a bottom inclined forward and downward. 4th. The wash-bowl with a lip at its rear side. 5th. The combination of the wash-bowl with a discharge pipe inclined forward, and with a straight overflow pipe, whereby both the discharge from the bowl and the overflow may be effected at the forward side thereof.

No. 14,363. Improvements on Pumps.

(*Perfectionnements aux pompes.*)

Miciah Walker, Port Huron, Mich., U.S., 8th March, 1882; for 5 years.

Claim.—1st. In a double acting force pump and in combination therewith, a vacuum chamber G, so arranged that the discharge of the suction pipe is in direct line with, and opposite the inlet into the vacuum chamber, for the purpose of keeping up a constant and even flow to the pump barrel at all positions of the plunger when in operation. 2nd. In a hollow plunger, and in combination therewith, a tight cylinder located within said hollow plunger, leaving a small annular space between it and the walls of the plunger, and in combination therewith, a drip through the plunger rod, all arranged for the purpose of reducing the bulk of the water, which may be pressed into the hollow plunger and allowing it to find its way out and through the drip in the piston. 3rd. In a displacement pump and in combination, the chambers K M and Q, the latter having an inward communication with the former *e*, and the chamber M having an outward communication with the chamber K through ports *i*, all of said ports being provided with valves. 4th. A pump and pump barrel within which the piston has a reciprocating motion formed of the perforated walls H, perforated valve rings L and heads B, the perforations in said walls and rings being provided with valves which, in the reciprocation of the piston, alternately close and disclose the ports. 5th. The recesses *e e*^{1}, in combination with the valves and ports.

No. 14,364. Improvements on Routing Machines. (*Perfectionnements aux machines à canneler.*

Reynolds T. White, Boston, Mass., U.S., 8th March, 1882; for 5 years.

Claim.—1st. The frame F supporting the rotating cutter spindle, in combination with the arm N and lever P, for the purpose of imparting a lateral movement to the cutter. 2nd. The movable support or table Q which supports the article operated upon, in combination with bell crank lever V, rod W and treadle U. 3rd. The laterally moving frame F carrying the cutter spindle D, in combination with the movable support or table Q.

No. 14,365. Improvements on Ploughs.

(*Perfectionnements aux charrues.*)

James I. Carter, Toronto, Ont., 8th March, 1882; for 5 years.

Claim.—1st. A hollow metallic plough beam, in combination with a plough adjustably connected to the plough beam by a single bolt, arranged to encircle and grip the plough beam. 2nd. In connection with a hollow metallic plough beam, a bracket made in two parts and rivetted or otherwise fastened to the plough beam, in combination with a block resting on the plough standard and having a longitudinal curved or convexed top, shaped to correspond with, and fit into the concaved bottom of the bracket. 3rd. In connection with a hollow metallic plough beam having a bracket fastened to it, a loop bolt formed to fit around the circumference of the plough beam, within a recess formed in the bracket and having a shank extending through, and below the bottom of the bracket, in combination with a block having a longitudinally curved top to fit into the curved bottom of the bracket, and a flat bottom to rest on the flat plough standard top, the said shank of the loop bolt passing through a longitudinally oblong hole in the block and a laterally oblong hole in the plough standard top. 4th. In a plough in which the standard is connected to the beam by a bracket, the combination of a jointer holder having its back end rounded off to fit into a recess formed in the front face of the plough beam bracket. 5th. In a plough in which the front end of the jointer holder is supported by a staple fitting over the top of the plough beam, a stud formed upon and projecting from the crown of the staple, in combination with a washer arranged to grip the surface of the plough beam. 6th. In connection with a plough beam, the combination of a loop bolt, formed to fit around the circumference of the beam and arranged to adjustably connect the plough to the beam. 7th. In connection with a plough beam, the combination of a block resting on the plough standard and having a longitudinal curved or convexed top shaped to correspond with, and fit into the concaved bottom of the bracket attached to the beam.

No. 14,366. Improvements on Fishing Line Floats. (*Perfectionnements aux flottes des lignes de pêche.*)

Charles M. Smith, New Haven, Ct., U. S.. 8th March, 1882; for 5 years,

Claim.—1st. The combination of the float and the line with a device carried by the float and adapted to grip, bite or firmly hold the float to the line, and to be automatically released and set free of such fastening function by contact with the rod in reeling the line. 2nd. The combination of the float and the line with a pivoted griping or fastening device and a holder therefor fixed in the float, the said griping device being adapted to be released and freed of the line in the arrest of the float in reeling the line.

No. 14,367 Improvements on Locomotives.

(*Perfectionnements aux locomotives.*)

John M. Taylor, Frederickton, N.B., 8th March, 1882; for 5 years.

Claim.—The tube C, and the heated window F in combination with the tube C.

No. 14,368. Improvement in Fences.

(*Perfectionnement dans les clôtures.*)

Levi McNall, Allegany, N.Y., U.S., 8th March, 1882; for 5 years.

Claim.—The combination of the parallel sided wooden posts, the horizontal rails having mortises and perforations in their ends to receive pivot-pins E, the wedges C and boards D intertwined with the three posts, and the pivot-pins E applied for connecting the panels.

No. 14,369 Improvements in Washing Machines. (*Perfectionnements aux laveuses.*)

Anthony W. Burke, Stayner, Ont., 8th March, 1882: (Reissue of Patent No. 12,823.)

Claim.—1st. In a washing machine in which a convex rubber is pivoted within an open chamber having a concaved corrugated bottom, the combination of a flattened surface centrally located on the bottom of the box, and projecting above or below the corrugations, for the purpose of causing the clothes to turn over when acted upon by the action of the rubber. 2nd. In a washing machine composed of an open chamber having a concaved corrugated bottom, the combination of a rubber having transverse bars longitudinally grooved and bevelled on their edges to form projecting angles. 3rd. In a washing machine, in which a convex rubber is pivoted within an open chamber having a concaved corrugated bottom, the combination of dash boards located at either end of the chamber and separated from the corrugations by an inclined board. 4th. In an open chamber having a concaved corrugated bottom, a convex rubber composed of transverse bars connected together at their ends by a plate provided with a pivot, in combination with vertical metallic guides provided with grooved wooden caps, for the purpose of permitting the free vertical movement of the rubber, without allowing it to jump out of place. 5th. In a washing machine provided with rollers for wringing the clothes, two standards rigidly secured opposite to each other, at one end of the clothes box, and having vertical slots cut downwardly from their top end to a point near the top end of the clothes box, at which point bottom bearings are formed to receive the spindle of the lower roller, in combination with a top roller resting on the one below it, and having top bearings formed for its spindle in the bottom end of blocks adjustably fitted into the vertical slots made in the standards, the said blocks being secured together by a cross-bar held in position by bolts and nuts so arranged in connection with a spring, that the required springing movement between the rollers is secured by the vertical adjustment of the upper roller. 6th. Rollers for wringing the clothes, two standards secured at one end of the clothes box at an outwardly inclined angle and having slots cut in them, to receive the spindles of the rollers, the lower one being provided with a crank and supported in stationary bearings, while the bearings of the upper roller are formed in blocks adjustably fitted into the vertical slots in the standards, and connected together by a cross bar, in combination with compression bolts arranged in connection with springs so as to permit the required adjustment of the upper roller while imparting necessary compression. 7th. In a washing machine having at one end a wringing attachment, the combination of vertical strips placed on the inside of each standard, so as to prevent the clothes coming in contact with the journals of the rollers. 8th. In a wringing attachment, a board placed immediately below the rollers and slanting towards the washing machine, in combination with a bevelled bar fixed to the said board parallel with, and fitting closely to the lower roller.

No. 14,370. Improvements on Preserving and Freight Cars. (*Perfectionnements aux chars pour la conservation du fret.*)

Orsemus G. Davis, Ludington, Mich., 8th March, 1882; for 5 years.

Claim.—1st. In a car having a stove room and a preserving room, the pipe T leading from the stove through the roof of the stove room, and having the damper U^1 located between the connections with the pipe U, in combination, the pipe U provided with dampers V^1 V^1 upon the rod V^2, leading from the pipe T into the preserving room and returning therefrom to the pipe T. 2nd. In a preserving car, the compartments surrounding the preserving room filled either with charcoal dust or with any other suitable non-conductible material. 3rd. In a preserving car, the interior car brake rod A *b* for operating the same in the stove room.

No. 14,371. Improvements on Suction and Force Pumps. (*Perfectionnements aux pompes aspirantes et foulantes.*)

Andrew J. Hopkins, Hamilton, Ont., 10th March, 1882; for 5 years.

Claim.—1st, The cylinder heads D E having a lug F to fixedly secure the cylinder A to the pump post G by bolts. 2nd. A pump composed of the heads D E having lugs F cast integrally therewith, and having a packing box I and collar J, cylinder A having an upward curved delivery B near the top into which the delivery pipe C screws, and the pump bucket composed of metal disks L M, intervening leather disk W clamped on the piston rod between a shoulder X and a nut P screwing on the end, the bucket having valves N provided with bars O. 3rd. A pump bucket composed of a disk of leather W between two metal disks L M, and valves N secured to the upper disks by rivets, both valves having a metal bar O, the whole clamped on the piston rod between a shoulder X thereon, and a nut

P screwing on the end. 4th. The handle S having trunions inserted in removable bearings U bolted to flanged brackets T secured to the pump post G.

No. 14,372. Improvement on Lumber Sorters. (*Perfectionement aux distributeurs du bois de sciage.*)

Evan T. Davies, Manistee, Mich., U. S., 10th March, 1882; for 5 years.

Claim.—1st. The combination, with the saw-mill delivery rolls, of the series of separate endless chain carriers made adjustable and adapted to deliver the lumber at varying distances. 2nd. The combination, with the rolls B, of the endless apron F and chains H extending at the lower and under rollers B, the connected crossheads M L attached to posts K, the shaft N, the pivoted skids O overlapping each other, and the endless chains Q passing over shaft wheels P and skid wheels R to operate together. 3rd. The combination, with the shafts J Y that carry the driving chain wheels J P, of the endless chains H Q of the gear-wheels S T and the shaft U, whereby the several endless chains are driven at the same time.

No. 14,373. Process and Machinery for Making Cruppers. (*Procédé et machine pour la fabrication des croupières.*)

Joseph Shaffer, Dayton, Ohio, U. S., 10th March, 1882; for 5 years.

Claim.—1st. The process for making leather cruppers by swaging and stretching the leather in a die, subjecting the same to pressure in a press, stitching the edges to form a tube, filling said tube with proper filling material, to give the crupper its proper sectional shape and rigidity, and finally bending and stretching the tube so filled to form the finished crupper. 2nd. In a machine for the manufacture of leather cruppers, the die A having an external gutter or channel and provided with the stretcher bar B, carrying clamping jaws C, in combination with the mandrel G adapted to fit into the gutter or channel of the die A. 3rd. The press consisting of a base-plate H with a die support F and provided with clamping jaws to embrace the intermediate die. 4th. The clamping and bending lever L provided with a gutter or channel *f* and carrying a stretching plate R, whereby the crupper is given its final shape.

No. 14,374. Improvements on Burglar Alarms. (*Perfectionnements aux alarme-voleurs*)

George G. Schwanz, (assignee of Jerome Giles,) South Bend, Ind., U. S. 10th March, 1882; for 5 years.

Claim.—As an article of manufacture, the flat steel U-shaped spring A, the short leg of which is provided with the nipple B and screw-holes *c*, and the long leg of which is provided with the aperture *d* and arranged, when not under strain, to rest upon the nipple B.

No. 14,375. Improvements on Ditching Machines. (*Perfectionnements dans les machines à fossoyer.*)

Joseph L. House, Hutchison, Min., U. S., 10th March, 1882; for 5 years.

Claim.—1st. In ploughs and similar machines or implements, a mould board, a portion of which is composed of sections adapted to be thrown outward to remove the earth when the plough becomes clogged. 2nd. The combination of the share C and hinged sections G_2 G_3 G_4. 3rd. The combination of the share C, angular side cullers b_1 b_2 and colters r_1 r_2. 4th. The combination of the share C, movable sections G_2 G_3 G_4 and curved plate F. 5th. The combination, with a ditching plough, of wheels H_2 H_3 and truck N_1 N_2 N_3, whereby, when the plough is reversed, it may be easily moved about. 6th. The combination of the share C, bottom plate R_1 and angular side plates R_2 R_3, with the frame of a ditching plough.

No. 14,376. Improvements on Waggons.

(*Perfectionnements aux wagons*)

James T. Gurney and Warren D. Smith, Boston, Mass., U. S., 10th March, 1882; for 5 years.

Claim.—The combination, with the bearer C, of the futchels D provided, at their front ends, with a step or steps H, and supported, at their rear ends, against upward thrust.

No. 14,377. Improvements in Garden Rakes.

(*Perfectionnements aux rateaux des jardins.*)

William Chaplin, St. Catharines, Ont., (Assignee of Warren A. Cowdery, Ashtabula, Ohio, U. S.,) 10th March, 1882; for 5 years.

Claim.—In a rake having its head sheared longtitudinally from its opposite ends, and the sheared portions bent around and welded together forming the rake head braces and tang of a single piece of metal.

No. 14,378. Improvement in Long Leg Boots. (*Perfectionnement des bottes à tiges.*)

Robert Church, St. Lambert, Que., 10th March, 1882; for 5 years.

Claim.—1st. The leg blank of the shape shown, forming diagonal side seam and having incision B. 2nd. In the leg blank of a long leg boot, the incision B broader at or near its upper end then at the edge of the blank. 3rd. In the leg blank of a long leg boot, the combination, with the incision formed in the rear thereof, of a piece C of scrap stock inserted under the blank and sewn thereto.

No. 14,379. Improvements in Mechanism for Imparting Motion from a Treadle or a Vibrating Motor. (*Perfectionnements dans le mécanisme à donner le mouvement à un moteur à pédale ou à oscillation.*)

James McDougall, Montreal, Que., 5th March, 1882; for 5 years.

Claim.—In a machine to which rotary motion is imparted from a treadle, the crank shaft carried at one end on a pin screwed into solid bearing, and at the other on a pin slipped into solid bearing, said pin having formed on it a flattened surface on which works set screw, securing it in place, and being pressed outwards by spring contained in bearing.

No. 14,380. Improvements on Dynamo-Electric Machines. (*Perfectionnements aux machines electro-dynamiques.*)

The European Electric Company, (Assignee of Charles A. Hussey, New York, U. S., 10th March, 1882; for 5 years.

Claim.—1st. The combination, in a dynamo-electric machine, of a field magnet and an armature, severally having cores composed of arc-shaped portions wound with wire, intervening arc-shaped portions and radial portions connecting the two series of arc-shaped portions, the radial portions of both the field magnet and armature forming poles, polar extensions or consequent points and extending towards each other. 2nd. A field magnet, for a dynamo-electric machine, having a core composed of arc-shaped portions wound with coils of wire, intervening arc-shaped portions of shorter radii, and radial portions which connect the two series of arc-shaped portions. 3rd. The combination, with a dynamo-electric machine, of a field magnet having a core made of one integral piece of metal and an armature having a core composed of a number of pieces or plates of metal, both cores having a corresponding number of arc-shaped portions wound with wire, from which extend radial portions forming poles, polar extensions or consequent points. 4th. The combination, with a field magnet and armature, in a dynamo-electric machine, of means whereby a current of electricity may be made to traverse the coils of the field magnet from a source outside the machine, and the circuit between the coils of wire of the field magnet, and the coils of the armature may be severed to cause the machine to produce an alternate current or currents, or whereby the supply of electrcity to the coils of the field magnet, from an outside source, may be cut off, and the circuit established between the coils of wire of the field magnet and the coils of the armature, to cause the machine to produce a direct current of electricity. 5th The combination, with a field magnet and armature, in a dynamo-electric machine, of switches and suitable connecting wire, whereby a current of electricity from a source outside of the machine may be made to traverse the coils of the field magnet and circuit, between the coils of wire of the field magnet, and the coils of the armature may be severed, or the supply of electricity to the coils of the field magnet from an outside source may be cut off, and the circuit established between the coils of the field magnet and the coils of the armature. 6th. The combination, with a dynamo-electric machine and an outside circuit, of wires N communicating with the wires *b* of the field magnet, the wires *d* of the armature, the rings D D_1, the brushes E E_1, the wire *e e*, the switches K K_1 controlling communication between the wires *e* e_1 and the outside circuit, the commutator H to which the wires *d* of the armature also lead, the wires *g h*, the switch M, the wire *j*, the wire g_1, the switch M_1 and the wire *i*.

No 14,381. Improvements on Harvesters.

(*Perfectionnements aux moissonneuses.*)

Luther D. Sawyer, Jonathan Ames and Henry P. Coburn, (Assignees of Robert Christie,) Hamilton, Ont., 10th March, 1882; for 5 years.

Claim.—1st. The combination, with the rake head cam of a harvester, of the recess *f* in the lug E, and the same being made of chilled iron. 2nd. The combination, with the lug E of a harvester rake head cam A, of the chilled cast iron projecting bearing *g* to carry the pinion F. 3rd. In combination with the pinion F, the chilled annular projection *h*, the same operating in the chilled iron recess *f* and on the bearing *g*. 4th. In combination with the pinion F, the chilled iron face *a*.

No. 14,382. Improvements on Railway Switches. (*Perfectionnements aux aiguillères des railroutes.*)

Charles H. Logan and Leopold Meyer, Newark, N. Y., U. S., 10th March, 1882; for 5 years.

Claim.—1st. The combination of a rail of the main track bent to form the outside rail of the side track and an opposed rail of the main track, pointed and movably held in contact with the bent rail, and a stationary point forming the inside rail of the side track and suitable guide rails. 2nd. The combination, in a double or three throw switch, of the two movable points D D_1, the two fixed points E E_1 and suitably fixed guide rails. 3rd. The spring, with one or more spring plates fastened at one end and loose at the other, to compensate for expansion, in combination with a movable rail point and switch lever. 4th. The connection between the switch lever and rail point moving spring, consisting in a push bar moving loosely in a socket. 5th. In combination with the spring and push bar, the stand J and lever K. 6th. The brace *t* secured to the movable rail and extended under the flanges of the adjacent rail at either side.

No. 14,383. Improvements in Refrigerators.

(*Perfectionnements aux chars frigorifiques.*)

James T. Gurney and Samuel Little, Boston, Mass., U, S., 10th March, 1882; for 5 years.

Claim.—1st. In a refrigerator waggon the refrigerator chamber

having a door in its rear end, a chamber in the rear of the refrigerator chamber, the detachable tank frames adapted to be passed through said door into the refrigerator chamber, and provided with inwardly projecting arms or crosspieces and detachable fastening devices which connect said inwardly projecting arms. 2nd. The combination, with the ice tanks, of the detachable frames composed of the uprights, the inclined braces, the crosspieces extending inwardly from the tanks, and detachable fastening devices for connecting the tank frames. 3rd. In a refrigerator waggon, the combination, with the ice tank and the detachable tank frames constructed of the uprights, the inclined braces and the cross pieces *m m*^{1}, of the cross brace O, arranged to brace one tank frame against a corresponding opposite frame.

No. 14,384. Improvements on Upright Pianos (*Perfectionnemen'ts aux pianos droits.*)

William A. Lorenz, Hartford, Ct., U, S., 11th March, 1882: for 5 years.

Claim.—1st. In an upright piano-frame case, the movable panel *e*, in combination with the arms *g* and hook plates *i*. 2nd. A frame-case having an opening between the upper edge of the front *a* and the front edge of the top *d*, in combination with the movable panel *e*. 3rd. In an upright piano-case, the curved segmental portion *e* and pivoted arms *g*, combined with top *d*, front *a*, sides *c* and back *b*.

No. 14,385. Improvements on Sheet Metal Vessels. (*Perfectionnements aux ustensils en tôle.*)

Joseph Hale, Cheboygan, Mich., U. S., 11th March, 1882; for 5 years.

Claim.—1st. A sheet metal vessel provided with pockets, within which are inclosed zinc plates or zinc wire. 2nd. A zinc plate or wire inclosed in a pocket formed upon a sheet metal vessel, by means of which said vessel is converted into a galvanic battery.

No. 14,386. Improvements on Shaft Couplings. (*Perfectionnements aux embrayages des arbres de couche.*)

Charles Barber, Meaford, Ont., 11th March, 1882; for 5 years.

Claim.—1st. The concentrically fitting parts A D and interposed elastic cushions C, whereby, when both parts are independently keyed on the ends of opposing sections of a line shaft, each part will have a relative concentric motion by the cushions yielding to qualify impulsive movements from irregular or sudden causes. 2nd. The art or shell A having concentric sections G containing elastic cushions C and part D, or hub, fitting into the unoccupied part of the shell, 3rd. The combination of the shell A having concentric sections G, elastic packing C, hub D, having arms D^1, and cushions E.

No. 14,387. Improvement on Vehicle Springs. (*Perfectionnem nt aux ressorts des voitures.*)

Nils Nilson, Maple Plain, Min.. U. S., 11th March, 1882; for 5 years.

Claim.—1st. The combination of the side springs B B^1, of the body or box A, with the pivoted arms or levers C C^1, rods D D^1 levers F, arms H, hangers I and springs K K^1. 2nd. In combination, the vehicle box or body A provided with the side springs B B B^1 B^1 and hangers I I I I, rods or bars D D^1, having crosspieces C C C^1 C^1 and spur disks E, adjustable levers F F F^1 F^1, provided with recessed heads to fit the spur disks E, nuts *e*, rear axle G and front bolster N. 3rd. The combination of the vehicle box or body A provided with the front side springs B B^1, front hangers I I and central bent rod or yoke *i*, sectional rod D D^1, provided with the sleeve or coupling L and arms or crosspieces C^1 C^1, adjustable levers F^1 F^1, bolster N, pivoted axle G, and yielding brace arm M 4th. The combination of the vehicle box or body A provided with the rear springs B B, rear hangers I I and brace-rods *h h*, flattened spring bar or rod D, pivoted in said hangers I I and provided with the arms or crosspieces C C, adjustable levers F F, axle G, hinged connecting arms H H and spring K.

No. 14,388. Improvement on Washing Machines. (*Perfectionnement des laveuses.*)

George A. Dowswell, Dresden, Ont., 11th March, 1882; for 5 years.

Claim.—The combination, with the suds box A and rubber B, oscillating therein, of the hangers C C pivoted near the lower end to box A, on the outside, and having arms or trunions E, bearing on the edge of the box and passing into slots F, in the standards G.

No. 14,389 Improvements on Processes and Apparatuses for Making Horse Shoe Blanks. (*Perfectionnements aux procédés et aux appareils de fabrication des ébauches des fers à cheval.*)

Darius Wilcox, Derby, Ct., U. S,, 11th March, 1882; for 5 years.

Claim.—1st. The process of forming horse shoe blanks by stamping their ends successively between dies formed with paired matrices, having pockets adapted to gauge the length of the blank by means of the toe calk. 2nd. The process of forming horse shoe blanks in completely finished condition ready for bending by stamping their ends successively between dies formed with paired matrices, having pockets adapted to gauge the length of the blank by means of the toe calk, and passing them through trimming dies for removing the fins.

No. 14,390. Improvements on Processes and Apparatuses for Making Horse Shoe Blanks. (*Perfectionnements aux procédés et aux appareils de fabrication des ébauches des fers à cheval.*)

Darius Wilcox, Derby, Ct., U. S., 11th March, 1882; for 5 years.

Claim.—1st. The process of forming a horse shoe blank, in a completely finished condition ready for bending by stamping, its ends successively between dies in corresponding matrices, and passing it through trimming dies for removing the fins. 2nd. The combination of the dies A B formed with corresponding matrices of corresponding shape in reverse position, and the T or L-shaped adjustable gauge *G*.

No. 14,391. Improvements on Candy Boxes. (*Perfectionnement aux boîtes à bonbons.*)

James Henderson, London, Ont., 11th March, 1882; for 5 years.

Claim.—In combination with the cylindrical vessel A, the boxes C D E F arranged around central box B and radiating therefrom, so as to fill the whole of the inner surface of said vessel, while dividing it into separate compartments for packing candy therein.

No. 14,392. Improvements on Candy Boxes. (*Perfectionnements aux boîtes à bonbons.*)

James Henderson, London, Ont., 11th March, 1882; for 5 years.

Claim.— In a new method of packing candy, the combination of boxes B C D E F with outer cylindrical vessel A, for the division of said vessel without loss of space.

No. 14,393. Improvements on Pot Covers. (*Perfectionnements aux couvercles des marmites.*)

William F. Willmot, Craigvale, Ont., 11th March, 1882: for 5 years.

Claim.—1st. The construction of a pot cover out of one piece of tin. 2nd. The construction of handle B, clip C and corner E. 3rd. Cutting the piece between D and C up to F, thereby suiting said cover to any sized pot.

No. 14,394. Improvements in Paint Compounds. (*Perfectionnements aux agglomérés à peinture.*)

Charles Miller, Toronto, Ont., 11th March, 1882; for 5 years.

Claim.—A fine liquid mixed paint composed of boiled linseed oil, resin and linseed oil, naphtha, solution of potash, ground French zinc, white lead, china clay, asphaltum and lampblack.

No. 14,395. Improvements in Paint Compounds. (*Perfectionnements aux agglomérés à peinture.*)

Charles Miller, Toronto, Ont., 11th March, 1882; for 5 years.

Claim.—A fire and waterproof roof paint composed of petroleum tar, resin oil, lime water, solution of glue and sal-soda, powdered alum and copperas, potash and asbestos and venetian red.

No. 14,396. Improvements on Cant Dogs. (*Perfectionnements aux remards.*)

Hiram Peavey, Bangor, Me., U. S., 11th March, 1882; for 5 years.

Claim.—1st. The combined socket and pick B, the taper of said pick forming a substantial combination of the taper of the socket. 2nd. The combined socket and pick B formed in one piece and provided with the split *e*, flanges *f f* and screw bolt *h*. 3rd. The hook *g* having two or more points *j* K at different distances from its end. 4th. The combined socket and pick B, in combination with the hook *g* provided with two or more points *j* K.

No. 14,397. Improvements on Hasp and Other Staples. (*Perfectionnements aux crampes des morailloms et autres.*)

Granger Smith, Chicago, Ill., U.S., 11th March, 1882; for 5 years.

Claim.—1st. The staple having its longer leg screw-threaded, and its shorter leg provided with a foot E apertured to receive a screw. 2nd. In combination with a hasp, the staple having one of its legs the longer and screw-threaded, and the shorter leg provided with a foot intended to rest on the part to which the staple is applied, and to be arrranged to extend beneath the hasp, when the latter is in place thereon.

No. 14,398. Improvements in Churns. (*Perfectionnements dans les barattes.*)

Eugene S. Gibbs, Lyons, Iowa, Y. S., 11th March, 1882; for 5 years.

Claim.—1st. The comtinuation, with the adjustable beaters A, of the single V-shaped breaker F located at or near the centre of the churn, and arranged in relation to the beaters, so as to divide the cream currents and conduct them upward and outward toward the opposite ends or sides of the churn, to produce a partial vacuum in and to facilitate the churning of the cream.

No. 14,399. Improvements on Cross-cut Saws. (*Perfectionnements aux scies de travers.*)

Henry Westphal, Indianapolis, Ind., U. S., 13th March, 1882; for 15 years.

Claim.—A cross-cut saw having its cutting teeth arranged in sets, with a clearing tooth between each set, one set B B^1 being sharpened in the form shown to cut in one direction, the other set C C^1 being sharpened in like manner to cut in the other direction, and the clearing teeth D, being the clearing teeth ordinarily used in such saws.

No. 14,400. Improvements in Instruments for Receiving and Printing Secret Telegraphic Despatches.

(*Perfectionnements aux instruments pour recevoir et imprimer les dépêches télégraphiques secrètes.*)

Albert F. Johnson and Frank B. Johnson, Brooklyn, N.Y., U.S., 13th March, 1882: for 5 years.

Claim.—1st. A telegraphic receiving instrument provided with mechanism for printing a message upon a strip of paper G^1, while the same is fed longitudinally through the instrument by suitable mechanism, a second strip of paper G^2 and mechanism for sealing said second strip G^2 to the said strip G^1, for the purpose of concealing the printing upon the latter. 2nd. Mechanism for feeding a message strip G^1 longitudinally through the instrument, a printing wheel arranged and operated to print a message upon said message strip, a second strip of paper G^2 and mechanism for sealing the same upon the message strip G^1 before the latter passes from the instrument and a shield or plate i constructed to conceal the printing upon said message strip, while the same is travelling from the printing wheel to the point where the two strips are jointed and sealed together. 3rd. The combination, with the magnet o^1 and its armature, of the pawl or click e, ratchet wheel a, crank wheel f, rod h and shaft t^1 carrying the printing wheel.

No. 14,401. Improvements on Force Pumps.

(*Perfectionnements aux pompes foulantes.*)

John Harris, Canister, N.Y., U.S., 13th March, 1882; for 5 years.

Claim.—1st. The combination of the standard H, standard connections K N, horizontal and vertical pipes f h and l, all made of common gas pipe, and the gas pipe couplings d g and i to form a pump standard, water discharge and their connections. 2nd. The combination of the standard H, standard extensions K N, horizontal pipe b, air chamber L, horizontal and vertical pipes f h and l, all made of common gas pipe, and the gas pipe couplings a c d g and i to form the standard, air chamber water discharge and their connections.

No. 14,402. Improvements on Door Knob Alarms. (*Perfectionnements aux boutons-timbres de portes.*)

William F. Cook, Ivy Mills, Penn,, U. S., 13th March, 1882; for 5 years.

Claim—1st. The combination, with a door knob, of a clock work mechanism for producing an alarm, such mechanism being located within the knob and adapted and designed to be started when the knob spindle is turned, and to continue ringing after such spindle has come to a state of rest. 2nd. The combination, with a door knob and clockwork located within the same and designed and adapted to produce an alarm by means whereby the actuating devices can be set and be started, when the knob spindle is turned and locked, to be inactive when such spindle is turned, the alarm mechanism comprising spring gearing which will continue in operation, after said knob spindle has been turned and come to a state of rest. 3rd. The combination with the escutcheon H, knob C, internal clock work, gearing D and spindle B, of sleeve G, slide K, step d^2 and detent F, said parts being constructed and arranged for operation whereby, in one position of said slide, the parts will be set to start an alarm when the knob spindle is turned, and in the other position such spindle may be turned and the alarm remain inactive. 4th. In combination with knob C made in two sections C C, the slide K extending through said knob and forming a support for the movable section C. 5th. In combination with slide K, the pivoted locking lever K_3.

No. 14,403. Improvements in Permutation Locks. (*Perfectionnements aux serrures à combinaison.*)

George M. Hathaway, Jersey City, N.J.. U.S., 13th March, 1882; for 15 years.

Claim.—1st. In a permutation lock, a pawl for moving and locking the bolt combined with a socket spring, whereby said arm is made to engage the operating shaft, the recessed concentric rings and the operating ring adapted to permit said arm to manipulate said bolt and the both provided with recesses and slots. 2nd. In combination with a lock frame A having a series of concentric recesses C_1, the concentric rings C c c^1, the operating rings F f, the pawl arm B and bolt H provided with recesses, and the slot h_2, whereby the throw of said bolt is limited by the shank of the pawl arm and socket lug a_2. 3rd. The combination, with the primary and secondary locks having concentric recesses and concentric rings, of the connecting stem or shaft, the operating spring arms, the operating ring and the slotted and recessed bolt in the secondary lock. 4th. The main shaft E having serrations e, and the operating ring F f with the serrated screw, with the arm B having serrations b_3, and with a spring.

No. 14,404 Improvements in Telegraphic Transmitters. (*Perfectionnements aux manipulateurs télégraphiques.*)

Albert F. Johnson and Frank B. Johnson, Brooklyn, N. Y., U.S.. 13th March, 1882; for 5 years,

Claim.—1st. In an instrument for automatically transmitting telegraph despatches, the combination, with mechanism for operating a series of circuit closers arranged to connect with line wires that extend from the sending station to the receiving station, of the mechanism for indenting or impressing the messsage upon a strip of paper G, as it is being transmitted, and mechanism for feeding the said strip through the instrument, to receive said indentations or impressions. 2nd. The levers d d^1 d_2, levers l l_1 l_2 l_3 l_4, toothed wheels m and f_1, arm c_3 provided with the pawl c^1, bar p^2 provided with the detent p^1, pin c^4 and pawl e_5, in combination with the posts m m^1 m^2 m_3 m_4 m_5 and n n_1 n_2 n_3 n_4, and connecting wires y_1, line wires 1 2 3 4 and battery wire 5, switch r and wires q^1 and q^2. 3rd- The rods b b^1 b^2 b_3, strip G, plate w and feed rollers K_3 K_4, in combination with the levers d d^1 d_2, levers h h^1 h_2 h_3 h_4, toothed wheels m^1 and f_1, arm c_3 provided with the pawl c^1, bar p^2 provided with the detent p^1, pin c^4 and pawl c_5, for the purpose of indenting the message. 4th. The feeding device composed of the frame F provided with the set screws i i^1 i^2 i_3 i^4 and with the arms c, ratchet wheels e, feed rollers K_3 K_4 and plates w w^2. 5th. In combination with the mechanism for operating the levers h h^1 h_2 h_3 h_4, the letter wheel a rotated by the ratchet wheel f and pawl a^1, the pointer a_4 secured to the shaft E, and the index s operated by the rod s^2, on the hub of the wheel f_1. 6th. In combination with the mechanism for operating the levers h h_1 h_2 h_3 h_4, the rods e_1, eccentrics e^2 and pawls t.

No. 14,405. Improvements on Water Turbines. (*Perfectionnements aux turbines hydrauliques.*)

William B. Farrar, Greensborough, N. C., U.S., 13th. March 1882; for 15 years.

Claim.—1st. The conical top of the wheel case composed of segmental hood sections B, whereby they are adapted to fit and be detachably secured in place. 2nd. The hood sections B having their lower sides which overhang the rim of the wheel case, formed on the arcs of circles described in a vertical plane from the apexes of said hood sections. 3rd. The combination of the rim d having its inner edge bevelled, with the hood sections whose lower sides are inclined and arranged so that their inner surfaces coincide with such bevelled edge. 4th. The gates F having cylindrical lugs cast in one piece with them and tapped as shown, for attachment of the rods for adjusting said gates. 5th. The combination, with the sleeve I and lever H, having a vertical opening in its middle portion, of the screw pivots which pass through said sleeve and lever, and have their heads countersunk in the inner sides of the sleeve.

No. 14,406. Improvement in Loose Pulleys.

(*Perfectionnement dans les poulies folles.*)

William H. Essery, Toronto, and Stephen Webster, Hamilton, Ont., 13th March, 1882; (Extension of Patent No. 7215.)

No. 14,407 System of Transmitting Messages by Electricity. (*Système de transmission des dépêches par l'électricité.*)

Albert F. Johnson and Frank R. Johnson, Brooklyn, N,Y., U.S., 13th March, 1882; for 5 years.

Claim.—1st. The method of transmttting messages over the telegraphic line wires, and printing the same in alphabetical characters at the receiving station, that is to say: by first, putting the message into a form in which it is intelligible on inspection, second, using at the sending station the said unintelligible message, to automatically transmit electric impulses along the line wires to the receiving station, and third, automatically printing the message in ordinary alphabetical or typographical characters at the receiving station, directly through the medium of said electric impulses. 2nd. The system of mechanism for transmitting and receiving telegraphic dispatches, in such manner that the contents or imports of a dispatch cannot be ascertained by any person other than the one to whom it is sent, the said mechanism consisting of, firstly, devices operated in connection with a letter wheel having letters and characters thereon corresponding in kind, and in the order in which they are placed with the letters and characters on the printing wheel of the receiving instrument, by means of which the movements of the said receiving instrument are determined, secondly, a series of line wires and batteries connecting the receiving station with the sending station, and forming properly arranged electric circuits with the electro-magnets on the receiving machine, and thirdly, a receiving instrument automatically operated by mechanism connected with said magnets, through the medium of said electric circuits and provided with mechanism for printin gand sealing the message on a strip of paper, which is fed longitudinally through the instrument and concealed from view while the message is being printed. 3rd. In an electric telegraphic system of mechanism consisting essentially of the following parts, namely: a preparing machine constructed for indenting or impressing a message upon a strip of paper, or other suitable material, in a form that is unintelligible upon inspection, a transmitting machine operated automatically by said prepared message to open and close a series of electric circuits, connecting the said transmitting machine and the machine on which the message is received and printed, and a receiving machine provided with mechanism, for receiving and printing the message in ordinary alphabetical or typographical characters on a strip of paper fed longitudinally through the machine, said mechanism being operated directly by means of electric circuits. 4th. The strip G_1 formed and disposed thereon, for the purpose of automatically operhaving three or more lines or series of indentations or impressions ting both the printing wheel and also the mechanism for feeding forward the message strip in the receiving machine, through the medium of electric impulses. 5th. In a telegraphic receiving instrument provided with mechanism for feeding a strip of paper through the same, the combination of a shield or plate arranged in such manner as to conceal the said strip from view, while it is being passed through the machine, a quilt or cylinder upon which the said strip is received and wound as the message is printed thereon, and mechanism for rotating said quilt and winding the message thereon. 6th. The following elements in combination, namely: mechanism for feeding a strip of paper longitudinally through the machine, a printing wheel arranged and operated to print a message upon said strip in transverse lines, a shield or plate for concealing the printed strip from view, a quill or cylinder upon which said strip is received, wound and sealed, and mechanism for rotating said quill and winding the message thereon.

No. 14,408. Improvements on Nut Locks.

(*Perfectionnements aux arrête-écrous.*)

Dudley E. Jones, (Assignee of Marshall Wallace,) Little Rock, Ark., U.S., 13th March, 1882; for 5 years.

Claim.—1st. The combination, with the screw bolt A, of the tapering nut B having incisions C from the smaller end, and sleeve D fitting thereon and turning therewith, whereby the sleeve compresses the incised parts against the threads of the bolts, when in contact with the material to be bolted, to lock the nut from working loose. 2nd. A screw bolt A having a tapering nut B, with incisions C from the smaller end, and entering a sleeve D into which the nut is forced by turning the sleeve when in contact with the material to be bolted, whereby the threads of nut and bolt are compressed together.

No. 14,409. Improvements in Knitting Machines. (*Perfectionnements aux machines à tricoter.*)

William Esty, Laconia, N.H., U.S., 13th March, 1882; for 5 years.

Claim.—1st. A needle carrier formed of the flat plate A having a portion of its top edge cut away and provided with a groove in its side, in which the needle moves. 2nd. A needle carrier formed of the flat plate A, having a portion of its top edge cut away and provided with a groove in its side to carry a needle, and having its edges formed and adapted to work in grooves in the guide bars. 3rd. The combination, with the guide bars N N provided with vertical grooves in their inner sides, of the needle carriers formed of the metallic plates A, having the grooves in their sides for the reception of the needles, and the plate I, the said carriers being arranged in two series, the grooves of each series facing toward the centre of the machine, and the plate I being disposed between the two series in the centre of the machine. 4th. The combination with the guide bars N N having vertical grooves R formed in their inner sides and pattern mechanism, of the needle carriers formed of flat plates A having portions of their top edges cut away and provided with grooves for the needles, and the needles. 4th. The combination, with the guide bars N N having vertical grooves R formed in their inner sides, and the cam bar O, of the series of needle carriers, the needles and pattern mechanism, whereby the said carriers are raised and the needles caused to engage with the said cam bar at predetermined periods.

No. 14,410. Improvements in Dredging and Derrick Machines. (*Perfectionnements aux machines de dragueurs et de chèvres.*)

Ralph R. Osgood and James McNaughton, Albany, N.Y., U.S., 14th March, 1882; (Extension of Patent No. 7701.)

No. 14,411. Improvements in Dredging and Derrick Machines. (*Perfectionnements aux machines de dragueurs et de chèvres.*)

Ralph R. Osgood and James McNaughton, Albany, N. Y., U.S., 15th March, 1882; (Extension of Patent No. 7701.)

No. 14,412. Apparatus for Acetifying Alcoholic Wash and Maturing Spirits. (*Appareil pour acidifier les eaux alcoholisées et vieillir les spiritueux*)

Edward Luck, London, Eng., 15th March, 1882; for 5 years.

Claim.—1st. In apparatus for acetifying alcoholic wash or liquids, and for maturing spirits, the use of springs, cords or tapes, or textile fabrics suspended in the acetifying or maturing vessel, so as to form surfaces down which the wash, or alcoholic liquid, or spirit passes, while being subjected to the action of air or gas. 2nd. The combination of springs, cords, tapes or textile fabric forming surfaces for the cylinder to pass along, with upper and lower bars for support from which the said strings, cords, or their equivalents are suspended.

No. 14,413. Improvements in the Manufacture of Explosives. (*Perfectionnments dans la fabrication des matières explosibles.*)

Walter F. Reid, Stowmarket, and David Johnson, Chester, Eng., 15th March, 1882; for 5 years.

Claim.—Hardening grains of explosive powders containing nitrocellulose, or other solid organic nitro-compounds.

No. 14,414. Improvements on Apple Parers.

(*Perfectionnements aux peleurs des pommes.*)

John Clark, Pontiac, Mich., U.S., 15th March. 1882; for 5 years.

Claim.—1st. A rotating fork shaft, carrying a fork at each end, and adapted to reciprocate in suitable bearings. 2nd In combination with a hollow rotating shaft carrying a fork upon each end of the plunger I, reciprocating and extending entirely through said shaft, and provided at each end with a head working within the forks. 3rd. A rotating shaft, carrying a fork at each end and adapted to reciprocate in suitable bearings, and to reverse its rotary movement with each reciprocation. 4th. In combination with a rotating and reciprocating hollow fork shaft, the plunger H, sliding within said fork shaft, and adapted to be operated by the act of placing an apple on the fork shaft. 5th. In an apple-holder having a rotary and a forward motion, the bifurcated standard *n*, in combination with the thin sheet metal knife O, having its end securely bolted to the standard, while the two arms of said standard are pressed together, whereby the knife is tightly strained in the standard, when the pressure is removed. 6th. In combination with the fork shaft C, provided with a key seat *c* and cut away portions *d e*, the bevel pinion D provided with a hollow hub E and a slip-key *a*. 7th. The shaft C having a fork at each end and provided with a screw thread C, a key seat *c* and cut away portions *d e*, in combination with the threaded bearing E, the hub E provided with the slip pin *a*, the knives O O and suitable devices for rotating the shaft C. 8th. The rotating and reciprocating shaft C, having a screw-thread at one end, and provided with a key seat C and cut away portions *d e*, in combination with the hub E, the pin *a* sliding in a hole in said hub, and the spring band *b*, for holding the pin towards the shaft. 9th. An apple parer, wherein the knife swings upon a plane parallel with the fork shaft.

No. 14,415. Improvements on Pocket Hangers for Hats and Coats. (*Perfectionnements aux porte-manteaux de poche.*)

Thomas McDonald, Austin. Texas, U. S., 15th March, 1882; for 5 years.

Claim.—As a new article of manufacture, a hat holder composed of the two parallel plates A, connected at each end by a rivet, and the two hooks B B^1 pivoted on said rivets and turned in opposite directions.

No. 14,416. Improvements on Telephones.

(*Perfectionnements aux téléphones.*)

James A. Lakin, Westfield, Mass., U. S., 15th March, 1882: for 5 years.

Claim.—The combination, in an electric telephone system having no magnet, of an induction coil and a transmitter, and battery inclined in the primary circuit of said coil, and a receiver having two diaphragms with a condensing chamber between, inclined in the secondary circuit of said coil, and two sound tubes extending out from the sound chamber of said receiver and adapted to be applied to the ears while speaking into the transmitter, said receiver, with its sound tubes and the transmitter, being all arranged in the same enclosing case.

No. 14,417. Improvements in Trusses. (*Perfectionnements aux bandages herniaires.*)

John R. Alexander, Montreal, Que., 15th March, 1882; (Extension of Patent No. 7259.)

No. 14,418. Improvements in Trusses. (*Perfectionnements aux bandages herniaires.*)

John R. Alexander, Montreal, Que., 16th March, 1882; (Extension of Patent No. 7259.)

No. 14,419. Improvements in Car-Couplings. (*Perfectionnements aux accouplages des chars.*)

Milton R. Thurber and James E. Carmalt, Scranton, Penn., U. S., 16th March, 1882; for 15 years.

Claim.—1st. The combination, with the drawhead, of the hinged latch and the pivoted angular lever having the arms b^1 b^2, and carrying the pin C, said arm b^2 being arranged at an acute angle to the pin C. 2nd. The combination, with the draw-head having the recess A^1 in its upper part of the latch D, constructed and hinged in the lower part of the draw-head, and the pivoted angular lever carrying the pin, whereby the pivoted latch is adapted to operate within the draw-head and is protected from the weather. 3rd. The combination, with the draw-head having the elongated openings in its sides and the latch and angular lever carrying the pin, of the cross bolt *e*, the lever plate and its cams, and the stops on the sides of the draw-head. 4th. The draw-head having the angular lever pivoted to it, and provided with the shoulders $a\ a^1$ for protecting the arm b^2 of said lever frame being jammed by the link. 5th. The pin C, provided with the projection on its rear side, near its base, for the purpose of holding the link so that it will be presented properly to the draw-head of an adjacent car of the same or different height.

No. 14,420. Improvements in Reverting Dampers for Stove Pipes and Drums. (*Perfectionnements aux régistres à retour pour les tuyaux de poêles et les poêles sourds.*)

Samuel G. Searight and William H. Seagright, Butler, Ind., U. S., 16th March, 1882; for 5 years.

Claim.—1st. A damper for stove pipes and drums consisting of a box or chamber having valves at its ends, which, when closed, prevent direct passage through the chamber and also cut off direct passage through the pipe or drum in which the device is located, and having openings in its opposite sides, by means of which an indirect passage is afforded through the box or chamber when the valves are so closed. 2nd. A chamber adapted to be inserted within the pipe or drum valves, adapted to close the ends of the chamber and to project laterally on opposite sides against the inside of the pipe or drum, and openings in opposite sides of the chamber near the valves. 3rd. A chamber adapted to be inserted within the pipe or drum valves which operate to close the ends of the chamber, and which project laterally on opposite sides against the inside of the pipe or drum openings in opposite sides of the chamber near the valves, and means for opening and closing the valves simultaneously. 4th. The combination, with the chamber B having the opening b^3 b^4 in its opposite sides, of the hinged valves C D and means for connecting and operating them simultaneously. 5th. The combination, with the box or chamber B having the side openings, of the valves C D, the arms $f f^1$ and the connecting arm f^2. 6th. The chamber or box B formed of the flanged end sections, and the flat side sections rivetted to the flanges of the

and sections. 7th. The combination, with the stove pipe or drum, of the chamber B having the openings in its opposite sides, the valves D D, the rod c carrying the valves C and affording means whereby the attachment is held in the pipe, and also for operating the valves.

No. 14,421. Improvements on Centrifugal Machines. (*Perfectionnements aux machines centrifuges.*)

The Burmister and Wains Maskin and Skibsyggeri, Copenhagen, (Assignee of Carl Peterson and Lars C. Nielsen, Roeskilde,) Denmark, 16th March, 1882; for 5 years.

Claim.—1st. In a centrifugal machine, the annular plate *e*, located a short distance below the annular top plate or cover *g* of the centrifugal vessel or receiver *a*, whereby a horizontal annular chamber *e* is produced having lots or inlets *i* impinging upon the outer wall of the vessel *a*. 2nd. The annular plate *e* located a short distance below the annular top plate or cover *g* of the centrifugal vessel or receiver *a* and provided, on its under side, with the curved flange or roller *j*, whereby two ring-formed chambers *i* and j^1 are formed in the top part of the centrifugal vessel or receiver *a*, concentric with one another and with said receiver. 3rd. The combination of the centrifugal or receiver *a* having the horizontal ring-formed chamber e^1 provided with inlets *i* and stationary discharge pipe f^1, adjustable in the direction of its length and curved at its inner end, to form a tapering mouth piece which projects into the ring-formed chamber e^1. 4th. The combination of the centrifugal vessel or receiver *a* having the horizontal concentric ring-formed chambers e^1 and j^1 and stationary discharge pipe f^1 f^{11}, adjustable in the direction of their length and curved at their inner ends, to form a tapering mouth piece which project respectively into the ring-formed chambers e^1 and j^1. 5th. The combination of the stationary safety jacket *b*, having cover *c*, centrifugal vessel or receiver *a* mounted within said safety jacket and having annular chamber e^1 and j^1 and curved discharge pipes f^1 f^{11} mounted adjustably upon the cover *c* of the safety jacket. 6th. The combination of the discharge pipe f^1 having a screw-threaded section f^2 and flanged bed plate *k*, grooved nut *n* having thumb-disk *t*, nut-box or bearing *g* having stop screw *v*, and fixed head piece *l* provided with parallel grooves for the reception of the adjustable plate *k*.

No. 14,422. Improvements in Furniture.

(*Perfectionnements dans les meubles.*)

Oliver S. Garretson, Buffalo, N. Y., U. S., 16th March, 1882; for 5 years.

Claim.—1st. The combination, with a slat board or other wooden part B provided with a dovetail groove *c*, of the frame A constructed with a dovetail rib or flange resting against one side of the groove *c* and provided on its opposite with one or more recessed or depressed inclined key-ways *e*, and one or more wedge keys F, adapted to be driven between the key-ways of the frame and the adjacent side of the groove *c*. 2nd. The frame A constructed with a dovetail rib or flange adapted to rest against one side of the groove *c* and provided with one more recessed or depressed inclined key-ways *e* and one or more projecting lips *g*, made shorter than the key-way and arranged over the least depressed portion of the key-way, whereby an opening is formed opposite the most depressed portion of the key-way, through which the key can be inserted and removed. 3rd. The combination, with the frame A constructed with a laterally projecting lip or flange *g*, of the wedge key F engaging under the lip *g* and provided with a laterally projecting lip or flange *h* which overlaps the edge of the wood. 4th. The combination, with a slat board, or other wooden part B provided with a dovetail groove *c*, of the frame A constructed with a dovtail rib or flange resting against one side of the grove *c* and provided on its opposite side with one or more recessed or depressed inclined key-ways *e*, and one or more projecting lips *g* made shorter than the key-ways and arranged over the least depressed portion of the key-ways, and one or more wedge key F having a laterally projecting lip or flange *h*. 5th. The frame A constructed with a dovetail rib or flange, adapted to rest against one side of the groove *c* and provided on its opposite side with one or more depressed key-ways *e*, and an opening arranged opposite the most depressed portion of each key-way, through which the key is inserted or removed in a lateral direction, or at right angles to the direction in which it is driven.

No. 14,423. Improvments in Gas Generators. (*Perfectionnements aux générateurs à gaz.*)

Joseph Flannery, Philadephia, Penn), U., S., 16th March, 1882; for 5 years.

Claim.—The combination of the four vertical chambers located in a single frame work and connected by pipes. 2nd. The combination of the four vertical chambers, which are connected together by means of pipes, one of the pipes being provided with a valve, whereby the two sets of chambers can be disconnected, and each seat operated independently of each other, for the production of a non-luminous heating gas and a luminous gas. 3rd. A series of vertical chambers which are connected together by pipes, the retorts passing through the chamber B and heated by the products of imperfect combustion from the chamber A, for the purpose of superheating the steam and distilling the carbonaceous material. 4th. The combination of a series of chambers, which are connected by pipes, one of the chambers of which series is adapted to receive a fire of carbonaceous material in its bottom and is provided with a series of perforated plates in its top, so as to expand and fix the gas as it passes through the plates. 5th. The combination of the four chambers, built side by side in the same casing with their connecting pipes which are built inside of the frame work, for the purpose of preventing the radiation of head and enabling the two generating chambers to be placed side by side. 6th. In a hydro-carbon gas generator, the combination of the chamber A, the pipe D^1 leading from the top of the chamber into the bottom of the chamber B and the gas jet O located at or near the mouth of the pipe, whereby the carbonic oxide is ignited and prevented from accumulating in the top of the chamber B.

No. 14,424. Improvements on Bottle, Jar, and Other Stoppers. (*Perfectionnements aux bouchons des bouteilles, pots, et autres.*)

Nathan Thompson, London, Eng., 16th March, 1882; for 5 years.

Claim.—Combining with a cap cover or stopper, a lever handle *c* pivoted thereto and formed with levers c^2, to act against the end of the bottle neck, or against a projecting ring or flange thereon.

No. 14,425. Improvements on Evaporators. (*Perfectionnements aux appareils évaporatoires.*)

John C Gunn, Knoxville, Tenn., U. S., 16th March, 1882; for 5 years.

Claim.—1st. The combination, with a stove or heater, of a casing G having smoke flues D, hot air flue I, shelves K, and cold air entrance Q. 2nd. The combination, with a suitable casing having vertical smoke flues, of the shelves or partitions K, having flanges L and flaps *m*, forming screens between the smoke flues, and the trays *n* supported upon said shelves.

No. 14,426. Improvement on Tuyeres. (*Perfectionnement dans les tuyères.*)

Oliver P. Clayton, Holly Springs, Ga., U. S., 16th March, 1882; for 5 years.

Claim.—The combination of the air chamber A, top C, adjustable rod H having a grate F at its top, stopper T and the means for rotating the rod backward and forward and raising the stopper.

No. 14,427. Spirometer. (*Spiromètre.*)

Mathieu Souvielle, Montreal, Que., 16th March, 1882; for 5 years.

Claim.—In an apparatus for facilitating the use of medicated inhalations, the combination, with a box provided with a double cover and inlet and outlet tubes or openings, of perforations or inlets arranged in the inside cover, for the admission of air to the interior of the box.

No. 14,428. Improvement on Swivels for Adjusting Pumps and Pump Rods in Deep Wells. (*Perfectionnement des perriers pour ajuster les pompes et les tiges des pompes dans les puits profonds.*)

Henry Cairns, Petrolia, Ont., 16th March, 1882; for 5 years.

Claim.—1st. The combination of the links C and F, with the clamp A. 2nd. The combination, of the slot plates H H, with the clamp A.

No. 14,429. Improvements for Hanging Lock Gates. (*Perfectionnements aux pentures des portes d'écluses.*)

Thomas B. Townsend, Ottawa, Ont., 17th March, 1882: (Extension of Patent No. 7265.)

No. 14,430. Apparatus for Gelatinizing Grain. (*Appareils pour convertir le grain en gélatine.*)

Edward Luck, London, Eng., 17th March, 1882; for 5 years.

Claim.—1st. In apparatus for the gelatinization or conversion of grain, the use of a revolving hollow shaft with hollow arms having inclined perforated faces, so that steam passing down the shaft and into the arms will issue through the perforations in a backward and downward direction. 2nd. The combination of parts with reference to the accompanying drawings, constituting apparatus for the gelatinization or conversion of grain. 3rd. The combination of the shaft B, arms C C^1 and perforated covers D.

No. 14,431. Improvement on Steam Engine Valve Gears. (*Perfectionnement des engrenages de soupapes des machine à vapeur.*)

James Scott, (Assignee of Elon A. Marsh,) Battle Creek, Mich., U.S., 17th March, 1882; for 5 years.

Claim.—In combination with the main driving shaft of an engine and the valve rod thereof, the intergearing cog wheels of equal diameter, one fixed on the driving shaft, and the other capable of a movement partially around the first mentioned wheel, the movable wheel having a wrist pin, to which the valve rod of the engine is connected, whereby the said valve rod is adapted to reciprocate the valve and operate the same to reverse the engine.

No. 14,432. Improvements on Sewing Machines. (*Perfectionnements aux machines à coudre.*)

George Doolitle, Bridgeport, and W. J. Bradley, New Haven, Ct., U. S., 17th March, 1882; for 5 years.

Claim.—1st. In a sewing machine attachment consisting of a tubular box or work holder adapted to contain a rope or congregation of strands of yarn, or other suitable material, mounted in boxes or bearings arranged upon a securing plate, said box or work-holder adapted to rotate in its bearings upon an axis at right angles to the needle, in combination with suitable intermediate mechanism between the work-holder and the driving mechanism of the machine, whereby a rotary feed is given to the rope or yarn contained in the tubular work-holder and short circumferential and intersecting diametric

stitches are made. 2nd. In a sewing machine attachment for the manufacture of yarn tufts, the plate B having mounted therein a tubular box *c*, provided with ratchet rings, and having means substantially for rotating said box *c*. 3rd. In combination with the tubular box *c* provided with ratchets *d*, the plate B, pawl carrier *e*, pawls *g h*, and suitable mechanism for vibrating the carrier *e*. 4th. In combination with the plate B, box *c* and the ratchets and pawls for giving rotary motion to the box *c*, the condensing tube I adapted to be secured within the box *c* and to rotate therewith. 5th. The box *c* having a feather groove at its outer end, and the tube I with a short feather K, in combination with the loose ring *l*, whereby the tube I and box *c* are rigidly connected. 6th. In combination with the tube I, the temple plate K, the two removably connected. 7th. In combination with the box *c* and tube I, and mechanism for producing rotary feed, the vibrating lever L provided with the hinged arm N having a spear O. 8th. In combination with the lever L pivoted to the bed plate A, the posts Q provided with stop screws P. 9th. The box *c* provided with two ring ratchets *d* having their working faces in opposite direction, the pawls *g h* arranged upon a common shaft in relation to each other, in combination with the spring arm *i* provided with teat for holding either pawl in working contact.

No. 14,433. Improvements in Tonic Beverages. (*Perfectionnements aux breuvages toniques.*)

Clemmons Parrish, Philadelphia, Penn., U. S., 17th March, 1882; for 5 years.

Claim.—The beverage composed of the phosphate and iron elements of Parrish's Chemical Food, aerated or carbonated water, and flavouring and colouring matter, bottled, securely corked and aged.

No. 14,434. Improvements in Overalls, Pantaloons, &c. (*Perfectionnements aux pantalons de voyage et autres, &c.*

George Frank and John Galligan, Kolamazoo, Mich., U. S., 17th March, 1882; for 5 years.

Claim.—1st. Overalls and like garments constructed with seamless backs, and having the point at which the inner leg seam terminates in the seat located in the rear of the centre of said seat. 2nd. Overalls and like garments, constructed with seamless backs composed of the rear and two front pieces with the point at which the inner leg seams terminate. 4th. Overall and like garments composed of a seamless rear piece, with point *e* and two front portions with parts *n n* and cut in circular form from *a* to *v*.

No. 14,435. Apparatus for Drying and Distilling Spent Dye Wood and Saw Dust, &c. (*Appareil de dessiccation et de distillation du bois de teinture épuisé et du bran de scie, &c.*)

Henrik C. F. Störmer, Christiania, Norway, 17th March, 1882; for 5 years.

Claim.—1st. In an apparatus for the drying of comminuted material, such as spent dye woods, spent tan bark, etc., the combination, with a vertical retort cylindrical shape mounted within a suitable furnace, and provided with a receiving hopper at the top and discharge hopper at the bottom, of a set or series of open overlapping cones, mounted upon a rotating vertical shaft, within the retort so as to leave an open annular space between the bottom of each cone and the wall of the retort and between the top rim of each cone, and the bottom rim of the cone next above. 2nd. The oven or furnace A having flues B, cylindrical retort C having the receiving hopper K, discharge hopper L, annular top plate H and discharge pipe I, vertical shaft D having the cones E and each provided with the shelves or ledges F F, means for rotating the shaft D and the vertically adjustable collar P, for regulating the outlet of the discharge hopper.

No. 14,436. Improvements in Gearings. (*Perfectionnements dans les engrenages.*)

Thomas T. Leacox, Imogene, Iowa, U. S., 17th March, 1882; for 5 years.

Claim.—1st. In a motor, the combination of a suitable driving power with the shaft C, the pinion D, shaft A, wheels B E and a suitable train of wheels, the power being applied to the large wheel B through the pinion D and transmitted to the gearing of the mill or machine to be driven.

No. 14,437. Improvements on Treating Fibrous Material. (*Perfectionnements dans le traitement des matières fibreuses.*)

The Society for the Manufacture of Wood Pulp, Grellingen, Switzerland, (Assignee of Joseph O. Klimsch, Vienna, Austria.) 18th March, 1882; for 5 years.

Claim.—The process of freeing fibrous material of any kind, from its incrustating and other foreign substances, by boiling them with a watery solution of ammonia in a closed vessel, with or without pressure.

No. 14,438. Improvements in the Manufacture of Vinegar. (*Perfectionnements dans la fabrication du vinaigre.*)

Benjamin E. Charlton, Hamilton, Ont., 18th March, 1882; for 5 years.

Claim.—1st. The process of enriching cider vinegar by adding thereto acetic acid free from mineral acid, and then rectifying the same by contact with a carbonaceous substance. 2nd. As an improved article of commerce, vinegar made by admixture of cider vinegar and acetic acid.

No. 14,439. Improvements in Steam Washing Machines. (*Perfectionnements aux machines à laver à la vapeur.*)

Richard S. Forbes, Albemarle, Ont., 18th March, 1882; for 5 years.

Claim.—1st. The reservoir A having in its top *a*, the perforations *a*¹, said reservoir being provided with feet *g*. 2nd. The combination of the reservoir A having the perforated top *a*, with the pipe B passing through it, the removable column C provided at its top with the cap *d*, openings *e* and vent tubes *f*.

No. 14,440. Improvements in Horse Collars. (*Perfectionnements aux colliers de cheval.*)

Lyman Guinnip, Chicago, Ill., U. S., 18th March, 1882; for 5 years.

Claim.—1st. In a horse collar, the independent parts or pieces B and 3. 2nd. In combination with the collar A or the two sections forming the same, the independent pieces B and 3, when interposed between the ends of the sections and attached thereto. 3rd. In combination with the two sections forming the collar proper, the arched neck-piece B, the metallic strap C having the hooks *a* formed integral therewith, and the metallic straps *a*¹ provided with the eyes *a*², adapting the same to engage with the hooks *a*.

No. 14,441. Improvements in Carriages. (*Perfectionnements aux voitures.*)

James T. Gurney and Samuel Little, Boston, Mass., U.S., 18th March, 1882; for 5 years.

Claim.—1st. In a carriage having the body mounted in rear of the front wheels, the combination, with the body and the front gear frame, of the connecting bracket G having the bottom part *e*, the seat part *c*, the connecting part *d* and the part *b*, extending downward from the seat and secured to the body. 2nd. The combination, with the body and the front gear frame, of the connecting bracket G having the lower part *a* beneath the end of the body, the bottom part *e* the seat part *c*, the connecting part *d*, and the vertical part *b* extending below the part *e* and bolted against the front of the body. 3rd. The combination, with the body, and the front gear-frame, of the bracket G having the bottom part *e*, the seat part *c*, the connecting part *d* and the part *b*, for bolting and the supplemental bracket H formed and attached to the bracket G.

No. 14,442. Improvements in Effecting the Protection of Iron and Steel Surfaces, and in Furnaces Therefor. (*Perfectionnements dans la manière d'effectuer la protection des surfaces de fer et d'acier, et dans les fournaises pour cet objet.*)

Frederick S. Barff, London, and George Bower, St. Neots, Eng., 18th March, 1882; for 5 years.

Claim.—The construction and arrangement of the furnace, whereby one and the same furnace is rendered suitable for effecting the production of a protective coating upon iron and steel surfaces by the several processes referred to.

No. 14,443. Improvement on Fences. (*Perfectionnement aux clôtures.*)

Isaac Corman, Lowell, Mass., (Assignee of David S. Buck, Middleville, Mich.,) U. S., 18th March, 1882; for 15 years.

Claim.—The combination, with a fence pannel, of the base or support B, composed of two sections *d d* articulated together, and having converging uprights or clamps *e e*.

No. 14,444. Improvements in Harrows. (*Perfectionnements aux herses.*)

Thomas H. Davies and Reuben S. Wilder, Fairview, N. Y., U. S., 18th March, 1882; for 5 years.

Claim.—A harrow frame composed of the long bars A, bent at intervals to form alternating angles, and the cross bars B having the jaws C on the under side, the cross-bars being secured at the vertices of the angles of the long bars.

No. 14,445. Improvements on Carriage Tops. (*Perfectionnements aux couvertures des voitures.*)

Ebenezer Miller, Fredericton, N. B., 18th March, 1882: (Extension of Patent No. 7274.)

No. 14,446. Process for Extracting Grease from Curriers' Whitening and and Trimmings. (*Procédé pour extraire la graisse des drayures et rognures des peaux.*)

Charles B. Davey, Toronto, Ont., 18th March, 1882; for 5 years.

Claim.—The process for the treatment of curriers' whitenings and trimmings, by hot water and steam, whereby a grease largely impregnated with tannic acid is recovered.

No. 14,447. Improvements on Tan Vats and Stirrers. (*Perfectionnements aux cuves et aux rables des tanneries.*)

Charles Flohr, Canisteo, N. Y., U.S., 28th March, 1882; for 5 years.

Claim.—In a tanning vat, the combination, with the hide suspend-

ing bars B and stirrers D E1, of the crossbars E, said bars E being designed to prevent contact between the suspended hides and the said stirrers.

No. 14,448. Improvements on Force Pumps.

(*Perfectionnements aux pompes foulantes.*)

Mark E. Collver, Simcoe, Ont., 18th March, 1882; for 5 years.

Claim.—The combination of a single double acting force pump cylinder with the entrance valves D D and discharge valves E E, placed near the top and bottom of the cylinder at opposite sides.

No. 14,449. Improvements in Pottery Moulding Machinery. (*Perfectionnements dans les appareils à façonner la poterie.*)

William H. Parsons, Montreal, Que., 18th March, 1882; for 5 years.

Claim.—1st. The mode of supporting the cores or insides parts of the vessel to be made of clay of other plastic material and the butt-shaped cores G H, with collapsing staves. 2nd. The combination of the two forcing cylinders, to prevent the waste of power being applied under the large piston to lift it. 3rd. The arrangement of the compound cranks and levers for locking up and disengaging the moulds N N and O O.

No. 14,450. Improvements on Paper-Safes.

(*Perfectionnements aux serre-papier.*)

Edward A. Crandell, Brampton, Ont., 18th March, 1882; for 5 years.

Claim.—A paper safe round in the back, or otherwise, having vertical and horizontal apertures for bags and papers.

No. 14,451. Improvements on Eave Troughs.

(*Perfectionnements aux goultières.*)

William F. Moulton, Burlington, Vt. U. S,, 18th March, 1882; (Extension of Patent No. 7255.)

No. 14,452. Improvements on Harrows.

(*Perfectionnements aux herses.*)

Archibald Campbell, Woodville, Ont., 21st March, 1882, for 5 years.

Claim.—1st. A harrow tooth A having a perforated head. 2nd. A harrow tooth A having a perforated head and provided with a fastening screw D. 3rd. The combination of the bull B with harrow tooth A having a perforated head, wedge key C and screw D. 4th. The combination of the bull B, with harrow tooth A sleeved thereon, and screw D. 5th. The combination of the bull B, with harrow teeth A A sleeved thereon, and wedge key C.

No. 14,453. Improvements on Floating Docks and Pontoons. (*Perfectionnements aux cales sèches et aux pontons.*)

Josiah L. Clark and John Standfield, Westminster. Eng., 21st March, 1882; (Extension of Patent No. 4840.)

No. 14,454. Improvements in Telephones.

(*Perfectionnements dans les téléphones.*)

The Candian Telephone Company, Montreal. Que., (Assignee of Thomas A. Watson, Everett, Mass., U.S.,) 21st March, 1882; for 5 years.

Claim.—1st. In a contact telephone, the combination of a diaphragm or vibratory plate, suspended to produce, under the influence of sound waves, free rectilinear vibrations and a rigid contact point. 2nd. In a contact telephone, a diaphragm or vibrating surface, which, instead of being rigidly clamped to the frame, is mounted on springs at a distance from the front piece or frame, and adapted by the elasticity of said springs to vibrate freely under the influence of sound waves, thereby varying its pressure on a rigid or immovable electrode or contact point. 3rd. The combination, in a contact telephone, of a spring supported diaphragm carrying one contact electrode of an electric circuit, and the rigidly mounted opposite or complimentary contact electrode. 4th. The combination, in a microphone telephone, of a diaphragm supported on springs at a suitable distance from the frame of the instrument and carrying one electrode, a rigid or immovable opposite electrode, and a mouth piece extending through the front of the casing and adjusted in close proximity to the diaphragm. 5th. The combination, with a spring supported diaphragm and electrode movable with it, of an adiustable complimentary electrode mounted on a rigid support.

No. 14,455. Improvements on Artificial Hands. (*Perfectionnements aux mains artificielles.*)

James R. Bowes, Pinkerton, Ont., 21st March, 1882; for 5 years.

Claim.—1st. In an artificial hand, the hooked plate F and hook *d*, the same also made in one piece and affixed to an artificial arm casing A B, the double hooked plate G *f* pivoted to the plate F *d* to form fingers. 2nd. In an artificial arm, the operating lever I attached to the hooked plate *f* G and plate frame E1 to operate the former. 3rd. In an artificial arm, the operating lever I made adjustable in two parts, one of which is provided with the slots *i i* and screws *o o* to lengthen or shorten it. 4th. In combination with the operating lever I and frame plate D, of the adjustable slotted sleeve *j*. 5th. In combination with an artificial arm, of the grain binding nippers J and hooked lever I attached to and operating the same. 6th. In combination with an artificial arm, the spring H. 7th. In an artificial arm, the hook *d*, placed to one side of the centre of the line of the arm. 8th. In an artificial hand and arm, the combination of the larger nippers F G, hook *d*, hook *f*, spring H, operating lever I, frame B, casing A, sleeve *j*, frame D D1.

No. 14,456. Improvements in Electric Lamps. (*Perfectionnements aux lampes électriques.*)

Joseph Olmsted, Montreal, Que., 21st March, 1882; for 5 years.

Claim.—1st. The combination, in an electric lamp, with the gravitating carrier, of a swinging frame, one or more gear wheels carried thereby and meshed with the said carrier, a stationary detent for intercepting the tilting of the frame at a predetermined point, an electro-magnet and movable armature in conjunction with one of said wheels by the action of which the feed and adjustment of the carbons is effected. 2nd. The combination, in an electric lamp, with the gravitating carbon carrier, of a swinging frame, one or more gear wheels carried thereby and meshed with the said carrier, a stationary detent for intercepting the tilting of the frame at a predetermined point, a magnet in the main circuit and a pivoted or swinging armature therefor wound with fine wire forming a part of a shunt or derived circuit, in conjunction with one of said wheels and by the movement of which, caused by the varying attraction of the magnet, the feed and adjustment of the carbons is effected. 3rd. In an electric lamp, an electro-magnet having its helix composed of wire forming the main circuit and its armature wound with a wire forming a shunt of high resistance, the direction of winding being such as to render the poles of the armature of the same magnetic polarity as that of the opposing poles of the magnet. 4th. The combination, in an electric lamp, of an electro magnet in the main or arc circuit, and an electro-magnet in a shunt or derived circuit, arranged to prevent similar poles to the magnet in the main circuit, one of the magnets being fixed, the other pivoted and connected with the feed mechanism. 5th. The combination, with the main magnet of an electric lamp, of a spring circuit closer and armature attached thereto, the said circuit closer being arranged to maintain a short circuit about the lamp when not attached by the magnet.

No. 14,457. Improvements on Ore Grinding and Amalgamating Machines. (*Perfectionnements aux machines à triturer et amalgamer les minerais.*)

Thomas A. Readwin. London, Eng., 21st March, 1882; for 15 years.

Claim.—1st. In a machine for grinding and amalgamating ore, wherein a pestle is caused to rotate about its own axis and to roll obliquely on the inner surface of a circular pan, by an arm carried by a driven vertical spindle, the combination, with said spindle, of hardwood or asbestos bearings and water as a lubricant. 2nd. In a machine for grinding and amalgamating ore, wherein a pestle is caused to rotate about its own axis and to roll obliquely on the inner surface of a circular pan, by an arm carried by a driven vertical spindle, the combination, with said arm and the pestle body, of a hard steel or phosphor bronze pestle axis, so fixed in said pestle body that it can be shifted endwise to compensate for wear, or removed when requisite for renewal or otherwise. 3rd. In a machine for grinding and amalgamating ore, a pan formed with an internal recess at its bottom, in combination, with a hard metal cup to contain mercury for use in the amalgamating process, said cup being such as can be easily removed and renewed. 4th. In a machine for grinding and amalgamating ore, a pan formed with an internal recess and a hole at its bottom, a hard metal cup to contain mercury, for use in the amalgamating process, a tapping hole for withdrawing matters from said cup, a screw for closing said hole in the pan bottom, an eye to said screw and a wire or equivalent fastening device passing through said eye and secured by lock and key to prevent unauthorized withdrawal of matters from the cup. 5th. In a machine for grinding and amalgamating ore, the combination, with pans *b*, pestles *g* and means for operating the same, of a trough *l*, screw feeder *m*, chutes or spouts *q* and means for regulating the quantity of ore delivered in a given time to each pan. 6th. In a machine for grinding and amalgamating ore, comprising a frame, vertical shaft *c*, means for driving the same. spindles *f*, pestles *g*, internally recessed pans *b*, steel or phosphor bronze cups *h*, eyed tap screws and means for locking the same, trough *l*, screw feeder *m*, chutes or spouts *q*, sliding doors *r*, overflow pipe *s*, to said trough overflow pipes *t* for water, ore and gauge to escape from pans *b*, troughs *f1 f1*, receiver *u* and water supply pipes *v*.

No. 14,458. Improvements on Electric Lamps. (*Perfectionnements aux lampes électriques.*)

William M. Thomas and Samuel W. Skinner, Cincinnati, Ohio, U.S., 21st March, 1882; for 5 years.

Claim.—1st. In combination with an electro-magnetic helix, connected at one end with the positive wire from the generator, and constituting the terminus thereof, one or more conductors which travel on naked tracks on the external peripheries of the convolutions of the helix, and have electrical connection with the positive electrode and mechanical attachment to the suction core. 2nd. In combination with an electro-magnetic helix, that constitutes the terminus of the positive wire from the generator, one or more conductors which travel upon naked tracks, on the peripheries of the convolutions and have electrical connection with the positive electrode and direct mechanical attachment, by means of adjustable fastening R to the suction core. 3rd. In the described combination, the stationary negative electrode *j* of refractory metal, the stationary electro-magnetic coil or helix C, constituting the terminus of the positive electrophore, the positive electrode N, one or more conductors U that traverse naked tracks *c* upon the pheripheries of the coil convolutions, and which have electrical connection with the positive electrode and direct mechanical attachment to the suction core. 4th. In combination with the electro-magnetic helix C *c*, the shifting conductors U, the positive electrode N and the suction core K, the adjustable counterpoise O P Q.

No. 14,459. Improvements on Transom Pivots. (*Perfectionnements aux pivots des dormants.*)

Melville E. Dayton, (Assignee of Francis V. Phillips,) Chicago, Ill., U.S., 21st March, 1882; for 5 years.

Claim.—1st. The combination, with a transom sash and its frame, of a combined pivot and lock, consisting of two pivotally connected plates, one of which is secured to the jamb, and one bearing a locking bolt or catch, and the other being adapted to furnish engagement with the same. 2nd. The combination, with the transom sash and jamb, of a sash plate C and jamb plate D pivotally connected, the sash plate being provided with a bolt and the latter provided with a series of holes, arranged in the arc of a circle about the pivot axis, to receive the bolt, whereby the transom may be secured either open or closed. 3rd In a transom pivot or hinge, the combination, with the sash plate C bearing the pivot E, external to the sash of the plate D, secured to the edge of the jamb and projecting to receive the pivot.

No. 14,460. Improvements on Nut Locks.

(*Perfectionnements aux arrête-écrous.*)

William H. Paige, Springfield, Mass., U.S., 22nd March, 1882; for 5 years.

Claim.—1st. In a lock nut *a*, sectional flange made on one of its faces, with openings between the sections, with the inner side of the sections on the same plane with the bore of the nut, and the exterior side of each section inclined to the interior side. 2nd. A sectional flange made on one of its faces, with openings between the sections, and the inner sides of the sections on the same plane, with the bore of the nut, and the exterior side of each section inclined to the interior side, and with one end of each section made thicker than the adjacent end of the next section. 3rd. A lock nut having on one of its faces a series of sectional flanges, with openings between the sections and the exterior of each section, made eccentric with reference to the axis of the bore of the nut.

No. 14,461. Improvements in the Manufacture of Stockings. (*Perfectionnements dans la fabrication des bas.*)

William Esty, Laconia, N.H. U.S., 22nd March. 1882; for 5 years.

Claim.—1st. Knitting the leg of the stocking down to the point where the foot is to commence in the usual manner. 2nd. Knitting the foot portions as a flat web, with selvage edges, and with suitable bulged projections for the toe and heel, and finally uniting the ends of such foot portion to the leg portion, and joining the selvage edges of the said foot portion by seaming.

No. 14,462. Improvements on Steam Radiators. (*Perfectionnements aux calorifères.*)

Louis C. Rodier, Detroit, Mich.. U.S., 22nd March, 1882; for 5 years.

Claim.—1st. The hollow radiator A, consisting of a single casting adapted to be set vertically and having within it a steam passane *i i i* leading from its horizontal feed pipe B upon one side of the diaphragm C to the top of said radiator, and down to a discharge opening upon the opposite side of said diaphragm. 2nd. In combination, the oblong base D having two projections on its top side, and the series of three or more vertical radiators A secured together side to side and having the steady blocks *t t* thereon, and forming a steam passage from one end of said series to the other end running from the bottom to the top, and from the top to the bottom in each radiator in succession.

No. 14,463. Improvements in Electric Lamps. (*Perfectionnements aux lampes électriques.*)

Thomas L. Kay, Hamilton, Ont., 22nd March, 1882; for 5 years.

Claim.—The carbon rod C, which is made of iron or steel, to work vertically in the brass or copper bush D, said bush having the insulated copper wire wound around it to form a magnet.

No. 14,464. Improvements on Wash Boards. (*Perfectionnements aux planches à laver.*)

Philemon T. Gates, New York, N.Y., U.S., 22nd March, 1882; for 5 years.

Claim.—As an improved article of manufacture, the reversible wash board composed of the frame provided with a series of wooden bars arranged transversely therein, and with a stiff corrugated sheet of metal C, interposed between the bars and exposed alternately upon opposite sides of the board.

No. 14.465. Improvements in the Preparation of Materials to be Employed for the Purpose of Electric Insulation. (*Perfectionnements dans la préparation des matériaux devant servir à l'isolement électrique.*)

John A, Fleming, Northingham, Eng., 22nd March, 1882; for 5 year

Claim.—The employment for the purposes of electric insulation, of wood deprived of its moisture and impregnated with paraffine wax, or with a mixture of paraffine wax and resin.

No. 14,466. Improvements on the Preparation of Materials to be Employed for the Purpose of Electric Insulation. (*Perfectionnements dans la préparation des matériaux devant servir à l'isolement électrique.*)

John A. Eleming, Nottingham, Eng., 22nd March, 1882; for 5 years,

Claim.—The preparation of materials to be used for the purposes of electric insulation, by the employment of wood or other vegetable fibrous material in a finely divided condition, desiccated and saturated, or impregnated with paraffine wax, or with a mixture of paraffine wax and resin, in conjunction, or not, with other substances, the whole being moulded under pressure.

No. 14,467. Improvements on Life Boats. (*Perfectionnements aux bateaux de sauvetage.*)

John H. Hatton. Covington, N.Y.. U.S., 22nd March, 1882; (Extension of Patent No. 7296.)

No. 14,468. Improvement in Harvesting Machines. (*Perfectionnement des moissonneuses.*)

John Watson, (Assignee of William S. Wilson.) Ayer, Ont., 22nd March, 1882; (Extension of Patent No. 14,157.)

No. 14,469. Improvement in Harvesting Machines. (*Perfectionnements aux moissonneuses.*)

John Watson, (Assignee of Willlam S. Wilson,) Ayer. Ont., 23rd March, 1882; (Extension of Patent No. 14,157.)

No. 14,470. Improvements on Rotary Motors. (*Perfectionnements aux machines rotatoires.*)

William J. Gurd, Sarnia, Ont., 23rd March, 1882; for 15 years.

Claim.—1st, A driving wheel having radial sliding buckets diametrically yoked in the position of one receded and the other projected from the face of the wheel, and journalled concentrically in a cylindrical wheel case provided with a fixed abutment D, intersecting the inlet and outlet orifices and in frictional contact with the wheel, and cams K K, for receding and projecting the buckets. 2nd. A rotary motor, wherein the receding and projecting of diametrically yoked buckets in the driving wheel is performed by cams, and in combination with a fixed abutment intersecting the inlet and outlet orifices and wheel case, in which case the wheel is concentrically journalled. 3rd. The cams I I fixed to the heads of the wheel case and engaging with the inner ends of the buckets, as a means for temporary locking the buckets when projected.

No. 14,471. Improvements on Trucks.

(*Perfectionnements aux camions.*)

John Esch, Milwaukee, Wis., U.S., 23rd March, 1882; for 5 years.

Claim.—1st. In a truck or heavy waggon, the combination of the hounds, sand bar, bolster and axle, with straps C_1 C_2 and F_1, and the lower circle grooved to fit over the hounds and sand bar. 2nd. The bolster A_1 and sand bar *e*, in combination with supporting pillars *b*. 3rd. The combination of the axle bolster hounds and circles of trusses E E and king bolt F. 4th. The combination, with rear axle and bolster, of trusses H H_1, securing straps *h* h_1, bracing straps K and the trusses L upon which the body rests. 5th, The combination of trusses L, strap H_2 and the bolster.

No. 14,472. Improvements in Halters.

(*Perfectionnements dans les licous.*)

Luther R. Stowell, Friendship, Wis., U. S., 23rd March, 1882; for 5 years.

Claim—The hitching-strap and nose band formed of a single piece doubled upon itself, the head strap, throat strap and loop comprising a halter, and hitching-strap formed of four pieces, the whole constructed and adapted to serve relatively to the buckles *a b c*, snaps *x*, and fly buckle *b*.

No. 14,473. Improvements in Tiling for Roofs, Floors, &c. (*Perfectionnements aux tuiles à toitures, planchers, &c.*)

John J. Williams, Fairnhaven. Vt., U. S., 23rd., March, 1882; for 5 years.

Claim.—1st. A tiling consisting of the tiles B having grooves or rebates C in their side and end edges, and the dowell plates D having their side edges bent over into U-form and fitted into the grooves or rebates C. 2nd. In tiling, the tiles B made with grooves in their side and end edges, and having the grooves in their end edges, the thickness of the said grooves, higher or lower than the grooves in their side edges, whereby the dowel plates in the side grooves can be continuous, and can be overlapped by the ends of the dowel plates in the end grooves. 3rd. In tiling, the dowel plates D made with their side edges turned over into U-form, whereby the said turned over edges will rest against the upper sides of the grooves in the tiles, in which the said turned over edges are placed to prevent water from passing around said edges. 4th. In tiling, the combination of metallic dowel plates D with the adjacent grooved edges of the tiles B, whereby the tiles are kept in proper relative position and the joints are made water-tight.

No. 14,474. Improvements on Paint and Other Cans and Tubes. (*Perfectionnements des bidons et tubes à couleurs et autres.*)

Frank R. Grout, Chicago, Ind., U. S., 23rd March, 1882; for 5 years.

Claim.—1st. In a cylinder cam or tube, the cylinder being provided with a spiral screw thread, and the bottom being a follower fitted to the screw thread of the cylinder. 2nd. In combination with a cylinder can or tube provided, in the body thereof, with an internal screw

thread, a follower fitted to such thread and provided with means for engaging a driver therewith, whereby the follower may be forced forward and the contents of the tube discharged.

No. 14,475. Improvements in Car Couplings.

(*Perfectionnements aux accouplages des chars.*)

Myron R. Hubbell, Wolcott, Vt., U. S., 23rd March, 1882; for 5 years.

Claim.—1st. The combination of the draw-head, having the opening in its top wall and the recesses or bearings for the trunions of the latch, with the latch and its trunnions made in one piece, and the cap piece covering the opening in the top of the draw-head and operating to hold the latch trunnions in their recesses. 2nd. The hinged latch having the pin support bevelled downward from front to rear. 3rd. The combination, with the draw-head, of the hinged latch having its support bevelled downward from front to rear, and the coupling pin. 4th. The combination, with the pin of the rod E and its offset *i*, and the shoulder K, of the socket K. 5th. The combination, with the pin of the rod E, the stop collar *h* on the rod with the arm F, the offset on the rod and the shoulder, of the socket K.

No. 14,476. Improvements on Glass Pipe Machines. (*Perfectionnements aux machines à tuyaux de verre.*)

Edward B. McIntosh, Brooklyn, N. Y., U. S., 23rd March, 1882; for 5 years.

Claim.—1st. The lower removable part P_2 of the mould, in combination with the stationary part P and removable part P_1. 2nd. In a machine for moulding glass pipe, the combination of the auxiliary plunger C_1 with main plunger C and mould B, said mould having its base portion *h* of greatest diameter and one section of the wall forming this portion of greatest diameter hinged as at m_1 out of the vertical lines of the hinges *m* of the mould. 3rd. The slotted arm *t*, in combination with the mould E, whereby the hinged part P_2 of the mould is allowed to open and close simultaneously with the part P_1, without straining or binding upon the hinges.

No. 14,477. Improvements on Folding Chairs, Tables, Camp-Beds, &c. (*Perfectionnements aux pliants, tables, lits de camp, &c.*)

Alexander G. Cole, Ottawa, Oct., 23rd March, 1882; for 5 years.

Claim.—1st. In a crossed leg pivotal miter joint for holding chairs, tables, camp beds, &c., composed of the pieces B C connected endwise out of alignment and at a distance apart, by side straps D D and the through leg A interveningly pivoted by pin E. 2nd. In combination with the legs of a folding table, chair, washstand, &c., a casting having the portions *g* I J.

No. 14,478. Improvements on Vehicle Springs. (*Perfectionnements aux ressorts des voitures.*)

Selden A. Bailey, New York, N. Y.. U. S., 23rd March, 1882; for 5 years.

Claim.—In a side bar vehicle, the combination of the side bars A A with the vehicle body provided, on its bottom near its ends, with the followers E M_3 each having a seat and two curved projections G G apart from each other and from the centre, and the steel straps, springs F F having horizontal upper ends and straight downwardly inclined bodies.

No. 14,479. Improvements on Machines for Scalding and Sticking Fur to Felt Hat Bodies. (*Perfectionnements aux machines à donner la chaude et la dorure aux capades des chapeaux de feutre.*)

Sara A. Mallory and Charles A. Mallory, Danbury, Ct., U. S., 24th March, 1882; for 5 years.

Claim.—1st. In a scalding and sticking machine, consisting of a vat or tub to contain scalding water and inclosed within said tub, so as to be wholly or partly submerged in the water, a series of ribbed or fluted rollers arranged on a curved line transversely, so as to form an open top receptacle with a moving bottom combined with suitable mechanism, whereby a rotary movement may be imparted to said rollers simultaneously and in the same direction. 2nd. The vat or tub B and the ribbed or fluted rollers A A A, arranged in a circular curve transversely, combined with the pinions D D D, attached to said rollers respectively, and in mesh with said pinions a driving gear wheel E, common to them all. 3rd. The method of scalding and sticking naps to hat bodies, which consists in gently rolling and manipulating the same in scalding water on open rollers without superposed pressure.

No. 14,480. Improvements on Cooking Stoves and Ranges. (*Perfectionnements aux fourneaux et aux landiers de cuisine.*)

Giles F. Filley, St. Louis, Mo., U. S., 24th March, 1882; for 5 years.

Claim.—1st. A cooking stove or range oven, having one or both of its doors provided with wire gauze or finely perforated metal. 2nd. A cooking stove or range oven, having one or both of its doors provided with wire gauze or finely perforated metal, such gauze or metal extending up and down the upper part, and also up and down the lower part of the door. 3rd. In a cooking stove or range, the oven B having an inner perforated door C and an outer imperforated door D.

No. 14,481. Improvements on Balance Slide Valves. (*Perfectionnements aux tiroirs de vapeur équilibrés.*)

Townsend Poore and Arthur H. Lee, Scranton, Penn., U. S., 24th March, 1882; for 5 years.

Claim.—1st. The combination, with a steam engine provided with a slide valve having compartments, and with a seat having all its ports covered by said valve, whereby live steam from the boiler is conveyed through separate channels, both into the steam ways of the engine, and into the steam chest, and the major portion of such steam exhausted as usual, while the steam from the chest is exhausted more freely than admitted, and thus the pressure above and below the slide valve, so equalized as to balance, or nearly balance the valve. 2nd. The combination, with the slide valve, its seat and the means by which the steam for working the engine and balancing the slide valve is admitted and controlled, of an auxiliary valve by which the slide valve is relieved from the effects of a vacuum when the steam is shut off and the engine still moving. 3rd. The combination, with the slide valve, its seat and the means by which the steam for working the engine and balancing the slide valve is admitted and controlled of an auxiliary exhaust valve. 4th. The combination of a check valve *n* with the slide valve, its seat, and the means by which the steam, for working the engine and balancing the slide valve, is admitted and controlled.

No. 14,482. Improvements in Car Brakes.

(*Perfectionnements aux freins des chars.*)

Adélard F. Martel. Montreal, Que., 24th March, 1882; for 5 years.

Claim.—1st. The coupling K composed of the parts *i j* provided respectively with spring *l* and stud *m*, and adapted to move lengthwise upon the shaft sections to which they are applied. 2nd. In combination with the operating shaft H, having prismatic ends of the coupling K applied thereto, and the chain *k* having its ends attached respectively to the coupling and the shaft, whereby the end movement of the coupling is limited, 3rd. In combination with the brakes and the drum G, of a spring connected with said drum. 4th. In combination with the drum or lever connected with the brakes and provided with an arm, of the chain I made fast to the car at one end and passing around a pulley on the arm to a winding shaft. 5th. The brake mechanism for cars consisting of the ordinary brakes, their operating-connecting rods, the drum G, spring *f*, chain I and shaft H. 6th. The combination, with the ordinary brakes of a car, of the drum G, spring *f*, chain I, shaft H, chain J, pulley *g* and windlasses.

No. 14,483. Improvements on Harvesters.

(*Perfectionnements aux moissonneuses.*)

Whiteley, Fassler and Kelly, (Assignees of William N. Whitely and William Bayley,) Springfield Ohio, U. S., 24th March. 1882; for 5 years.

Claim.—1st. The bracket secured to, and depending from a stringer 16 of the main frame of the harvester, in a suitable manner for attachment to an angle finger beam 1, thereby making a rigid connection between the parts 1 and 15, and permitting the finger beam to lie below the part 16 and yet on alignment therewith, for the purpose of bringing the finger beam closer to the ground without increasing the depth and thereby decreasing the strength of the supporting boxes of the master wheel shaft. 2nd. An elevator shoe secured to, and projecting outwardly from an angle finger beam 1, for the support of an upright 41 forming a part of the elevator frame, that projects forward past said angle finger beam. 3rd. The combination, of an angle finger beam 1, slide 13 and 14 securely attached to said finger beam, with the part 13 shouldering against a projection on said angle beam, for the purpose of determining its relative position to the fingers 2, and a crosshead 12 to which a sickle 3 is firmly secured. 4th. The combination journal box P. 5th. The combined journal and slide box Q, cast in one piece and used for the double purpose of sustaining one end of the tubes 69, and pinion shaft 66 for the purpose of sustaining the binder shaft and shifting it at will. 6th. A rack 151 secured to a tube 69 that slides in supports 71 and bifurcated casting R, in combination with a pinion 68 and a pivoted lever 67 67^c 67^a and f^a notched disk 65. 7th. A butt board 62 pivoted on the elevator 63, for the purposes of confining the grain and giving ready access to the binding mechanism, by providing for the quick removal of the part 61 of the binding table. 8th. A hinged plate or boards 64 secured to the elevator frame and having its free end lapping over the rear side of the binding table, in such a manner as to move with said table and bridge the space made by moving the binding table over front, when working in short grain. 9th. The combination of a pivoted butt board 62, a hinged head board 64 and a sheet metal deflector 60 for the purpose of confining and delivering the grain properly to the binding mechanism. 10th. A metallic grain band 93 93^a for bridging the space between the upper and lower roller, for transferring the grain from one to the other. 11th. A metallic grain band 93 94^a combined with the curved pieces 93^c, one of which is attached to the angle finger beam 1 and the other to the stringer 19. 12th. A double canvas elevator provided with driving and driven rollers, with the driving roller 35 located at the bottom of the compress belt, and the driven roller 34 at the top of the elevator belt, said rollers being driven by an endless chain 110 passing over and engaging with sprocket wheels 111 114 115 and 117 and idlers 116 and 118. 13th. A reel 72, supported by and running upon cranks 79 and 78 of a shaft 77, through the agency of a pipe box 80, said reel receiving its motion from chains engaging with sprocket wheels 85 87 88 and 80^a, which are actuated by bevel gear 81 and 82, 14th. A relief rake 92 pivoted to, and operated by a toothed crank wheel 90 and controlled in its course of travel by a radius rod 91, the wheel 90 being actuated by a toothed wheel 89, with which it meshes, and the gear wheel 89 receiving its motion from the bevel gear wheels 81 82 connected to the shaft 83, upon which the gear wheel 89 is fixed. 15th. An attachable and detachable front elevator board so arranged as to be readily removed. 16th. A binding table constructed and arranged whereby a part 61 of said table can be easily removed by the withdrawal of a pin 272. 17th. A binding machine adjustably hinged to the frame of a harvester by means of a box Q and a bifurcated piece R, through the agency of a tube 69 and centrally supported at its free end by a friction roller 143 upon which a tube 150 rests. 18th. A master wheel constructed with wooden spokes that support a felly 130, in combination with a draught rod 134 connecting said felly with a gear wheel 6, for the purpose of re-

lieving said spokes from the torsional strain they would otherwise be subjected to. 19th. An angle finger beam 1 connected to the divider board 24 by a metallic piece 285 having a configuration suitable for a double bolt head between the metallic 285 and angle finger beam 1 as well as for providing a rigid connection between the parts 27^a and 27^c, of the grain board 27. 20th. The butt relief packer 161, in combination with its co-operative packers 159 and 160. 21st. In combination with a binding arm, a tucker 201 provided with ears 206. 22nd. A hinged divider 168, at the back of a binding arm for the purpose of procuring a wider and more perfect division of the grain. 23rd. A tension device consisting of the pivoted piece 182, a box 183 provided with an eye 182_1, a spring 184 and a pivoted lever 191 provided with a torsional spring 192. 24th. A preliminary tension device consisting of the parts 179 180 and 181. 25th. An adjustable projection 234 bolted to the tier wheel 221, for the purpose of opening the tongue 218, of the knotter 227, always at the desired time after the parts have become worn, and adjustment becomes necessary. 26th. In combination with a revolving griper 197, a stationary strap 268. 27th. In combination with a revolving griper, a strap 268 provided with a notch 268^a for the purpose of holding the cord more firmly for the cutter 233 to act on.

No. 14,484. Improvements on Furnaces.

(*Perfectionnements aux fourneaux.*)

Robert L. Walker, Boston, Mass., U. S., 24th March, 1882; (Extension of Patent No. 7278.)

No. 14,485. Improvements on Steam Brakes.

(*Perfectionnements aux freins à vapeur*)

Chauncey E. Kendall, Buffalo, N.Y., 24th March, 1882; for 5 years.

Claim.—1st. The grooved pulleys 1 and 2, with the endless chain *b* thereon, arranged under the engine for driving the brake shaft, receiving power from the motors A and the pulleys 3 4 5 6 (arranged under a car) and with the endless chains thereon, for transmitting action from the brake shaft H to pulleys B D and C. 2nd. In combination, with any suitable devices for transmitting motion from the angling brake shaft H to grooved pulley 6 and in combination therewith, the chain wheel or pulley B, moving with pulley 6, having bevelled risers K K K and loose wheel D inside of pulley B, running on hub or barrel, forming part of said pulley B, the grooved wheel C on axle running in oblong slots *n*, in frame E, said wheel or pulley C also running in a saddle *m* having a spiral or other spring *s* on the stem m^1 thereof, and the endless chain G G_1. 3rd. In combination with the pulley B, pulley wheel D and pulley C, the endless chain G, one section or portion G_1 composed of large links, and the remainder G of smaller links. 4th. In combination with the frame E, the saddle *m* and stem *m*, and the grooved pulley C running therein on its own axle, said axle running in oblong bearings *n n* in frame E, and the spring *s* operating in connection with said saddle. 5th. The combination of the frame E, pulleys B D and C, with the latter running in slots *n* in frame E, and the spring saddle *m* m^1 *s*, endless chain C G^1 and the brake chain J connected thereto.

No. 14,486. Improvements in Packings for Axle Boxes and Bearings. (*Perfectionnements aux garnitures des boîtes de roues et des coussinets.*)

The Non-Combustible Lubricating Packing Company, Elizabeth, (Assignee of Francis Ricker and Henry Dennis, Berger Point,) N.Y., U.S., 24th March, 1882; for 5 years.

Claim.—A non-combustible packing for axle boxes and bearings, composed of flesh waste.

No. 14,487. Improvements in Machines for Welding Links. (*Perfectionnements aux machines à souder les chaînons.*)

Henry C. Szink, Altoona, Penn., and Charles L. Skinner, Baltimore, Ind., U.S., 24th March, 1882; for 5 years.

Claim.—The combination of a die, having a recess *a* and groove a^1, with a second die having a recess b^{11}, cavity b^1 and tongue *b*, the parts being adapted for co-action.

No. 14,488. Improvements on Hay Elevators. (*Perfectionnements aux monte-foin.*)

Joseph Dain, jr., Madville, Mo., U.S., 27th March, 1882; for 5 years.

Claim.—1st. The combination, in a hay stacking device, of the diagonal upper track beams F F, lower track beams diverging from beams F, and the guide beams I I parallel to the lower track beams with the carrier, having two sets of rollers travelling, the one upon the upper, and the other upon the lower track beams. 2nd. In a hay stacker, the combination of the tracks with the carrier, having teeth O provided with rearward projecting arms P, having slots Q forming bearings for the ends of a shaft mounted in pivoted arms and having rollers or castors. 3rd. The combination of the track having studs A^1 B^1, with the carrier having pivoted latches *s* and suitable operating mechanism.

No. 14,489. Improvement on Beach Seats.

(*Perfectionnement aux sièges de grève.*)

Samuel Tarante, Montreal, Que., 27th March, 1882; for 5 years.

Claim.—The combination and construction of frame, with the water proof apron check, strings and padded head rest.

No. 14,490. Improvements on Show Boxes.

(*Perfectionnements aux montres.*)

Justin J. Langlès, New Orleans, La., U.S., 27th March, 1892; for 5 years.

Claim.—1st. In a show box, a plate pivoted to the side of the box and slotted to receive an arm pivoted to the lid, whereby the said plate will act as a clutch upon the downward movement of the arm, but will permit of a free upward movement of the same. 2nd. In combination with the lid B and the removable frame A, the pivoted and slotted plate D, and the rod or arm E passing through the slot of the plate D, adapting the lid to be raised and automatically held at any desired point. 3rd. The lid B formed with the glass *b* and the frame A provided with the inside strips *a a*, in combination with the hinges C C formed of the angle or corner pieces *c c* and the pivoted and slotted plate D, and pivoted rod or arm E passing through the slot of the plote D, adapting the lid to be held at any desired point.

No. 14,491. Improvement in Piston Packing.

(*Perfectionnement dans la garniture des pistons.*)

Joseph Seeberger, West Troy, N.Y., U,S., 27th March, 1882; for 5 years.

Claim.—1st. In a piston packing, the continuous side rings C and C_1 so arranged, in connection with head and follower, that the steam may be admitted between them and a lateral motion given, said side rings within packing recess. 2nd. In combination with the side rings C and C_1 of the segmental packing rings D E and F operated by springs. 3rd. The combination of the T-shaped segments of the central ring E and plain rectangular segments of auxiliary side rings D and I as shown by cross section, said auxiliary ring being fitted to central ring and inwardly overlapped thereby.

No. 14,492. Improvements on Waggon Springs. (*Perfectionnements aux ressorts des wagons.*)

James L. Clark and Herbert M. Clark, Oshkosh, Wis., (Assignees of Walter R. Adams, Sherman, Ct.,) U.S., 23th March, 1882: for 15 years.

Claim.—1st. A waggon body A and side bar frame B C connected thereto by means of springs D, rigidly connected at one end to said side bars, combined with adjustable clamping clips F, whereby the effective or free length and strength of said springs may be independently varied. 2nd. The waggon body A and frame composed of bars B B and C C, combined with springs D D, which are made adjustable by means of the movable clamping clips F, and the cross springs E. 3rd. The side bar B combined with the spring D, the fixed end whereof is turned over, to inclose the end of said bar, and rigidly secured thereto.

No. 14,493. Improvements on Anti-Frictional Bearings. (*Perfectionnements aux coussinets à anti-friction.*)

Thomas R. Ferrall, Boston, Mass., U.S., 27th March, 1882; for 5 years.

Claim.—1st. The central sleeve bearing *a* with its internal lubricator receptacle a^{11}, combined with the rollers *b b b*. 2nd. The combination of central sleeve bearing *a*, its lubricator channel a^{11}, flanges a^{111} a^{11}, rollers *b b b* the regulators *d d* with their radial projections d^1 d^1 and the ring casing *c*, or its equivalent, and the annular plates *e e*, or their equivalents.

No. 14,494. Improvements on Card Teeth.

(*Perfectionnements aux dents des cardes*)

Thomas Kershaw and Herman E. Cunningham, Philadelphia, 27th March, 1882; for 5 years.

Claim.—1st. The combination of the roller A, with a series of teeth, each of which is bent at, or above the base, whereby its elasticity is increased. 2nd. The combination of the roller A, a series of teeth having bases B_1 arranged in respect to the roller, and a strip D of clothing material for confining the bases of the teeth to the said roller. 3rd. The combination of a strip of clothing material, with wires having bases and inserted in said material so as to interlock.

No. 14,495. Improvements in Wood Splitting Machines. (*Perfectionnements aux machines à fendre le bois.*)

Cyrus E. Grandy, Lorenzo C. Grandy and Harley E. Folsom, Lyndonville, Vt., U.S., 27th March, 1882; for 5 years.

Claim.—1st. The combination of the lever Y, rod X, bent lever W, conecting bar V, brackets T, one of which is slotted to receive screws U, the bearings P S, the roller R held from bar G by spring *a*, and the roller Q resting against bar G. 2nd. The combination, with the sliding bar G of the knife carrier, of the friction blocks I, the set screw J, the cam lever K, the connecting rod L, the lever *m*, the semi-circular plate N and the catch O, whereby the movement of the knife carrier can be stopped. 3rd. The combination, with the slotted rear end of the knife D, the cross head E and the upright bar G, of the bolt *f* and the rubber block *g*, whereby the end of the said upright bar is kept from being damaged by the shock, when the knife strikes the wood to be split. 4th. A wood splitting machine constructed with a knife arranged to fall by its own weight.

No. 14,496. Improvements on Knitting Machines. (*Perfectionnements aux machines à tricoter.*)

Richard I. Creelman (Co-inventor with Adam Kay,) and Robertson Creelman, Georgetown, Ont., March, 1882; (Reissue of Patent No. 10,193.)

Claim—1st. The combination of the needle cylinder, the extended needles and the recess A_1 provided with the bearing face C_1, to sustain needles in position. 2nd. The combination, with the needle cylinder,

of a retaining band C_1 placed at the base of cylinder. 3rd. The clasp band C_3, in combination with the machine cylinder provided with the groove C_2 and for the purposes of holding the needles in position for heel and toe work. 4th, The detachable cam plate D_2 and lever cam D_3 which holds cam plate, in combination with the cog ring and the needle cylinder. 5th. The combination, with the needle cylinder and needles of a knitting machine, of a cog ring or its equivalent provided with a bearing face or edge for the shanks of needles to travel upon, whereby the needles are exposed to view in operation, and so arranged that the cam plate can be detached and replaced without affecting the work or machine. 6th. The sliding cams D_4 D_4 supported in any suitable manner on the cam plate and arranged to move backward and forward. 7th. The movable tension cams D_7 D_7 fastened to the plate D_9, in combination with the eccentrically slotted disk D_{11} and the stationary stud D_{13}. 8th. The needle shank supporting band E, in combination with the cog ring and detachable cam plate of a knitting machine. 9th. The needle shank recess E formed at a lower level than, and parallel with the working level of the shanks of needles, for the purpose of permitting all, or any portion of the needles to be put out of action when desired. 10th. The spring cam E_2, in combination with the needle shank bearing band E provided with a passage leading to recess E_1. 11th. The adjustable differentially cogged wheel F or equivalent mounted on a spring support, in combination with the needle shanks and spring cam E_2. 12th. The sliding block E_4, in combination with the pivoted switch E_3. 13th. The switch E_3 and inclined block E_6, arranged to change the needles from the lower to the upper line of travel. 14th. The hinged latch E_7 arranged in connection with the needle cylinder shanks of needles and band E, to move the needles above the ordinary working level, to pass them down to the lower recess E_1 and to allow the needles to rise to their working level from the lower recess. 15th. The ribber arm J provided with the slotted socket J_2, in combination with the standard J_1 and adjusting collar J_3. 16th. The ribbing needle holder H and cam holder K with upwardly projecting hub, in combination with the arm J provided with the socket J_2. 17th. The ribber hub K_1 centrally recessed at the point of connection with the supporting arm J and perforated for the purpose of providing a passage for the yarn to feed the machine without interference from the ribbing support. 18th. The post H_2 or its equivalent, in combination with the ribber needle holder and the cam holder hub. 19th. The cam holder K recessed on its under face and provided with a bounding flange of such width as will permit of the insertion of the shanks of the needles, at any point around its circumference. 20th. The recessed cam holder K provided with the cam K_3 K_4 and K_5 when desired, arranged in relation to each other in such manner that the needles can be properly operated to knit, or all or a portion can be switched out of action and returned into action again as desired by the movement of the cam K_4. 21st. The switching cam K_4, in combination with the central cam K_5 or its equivalent. 22nd. The cams K_4 K_5, in combination with the cam K_3. 23rd. The pivoted ribber driver L_4 attached to the hub of the ribber and connected to the yarn carrier, or other operating part of machine, in such manner as to be readily detachable. 24th. The adjustable stop block H_3 in the ribber, in combination with the pivoted adjusting lever I on the machine cylinder. 25th. The adjustable lever lock I in combination with a needle cylinder of a knitting machine. 26th. The eccentrically slotted disk K, in combination with the cam holder and switch cam or cams provided with stud pins K as used with ribbing or ordinary knitting cams. 27th. The combination of the ribber cam-holder and cams, needle-holder and needles, ribber supporting arm and driving arm and a circular knitting machine. 28th. The combination, with the plate M provided with notched edge, of the bent hooks N, which hooks are pivoted in a groove on the edge of said plate, by means of the band N_1 or its equivalent, and flexibly retained in position by the elastic band O. 29th. The elastic band O and swinging hooks N, in combination with a receptacle when used as a setting up device for knitting machines. 30th. The combination, with a take-up lock, of the spring take up bar Q. 31st. The offset B, in combination with the long shank B_1 of knitting needles, to allow of the needles being raised for heel and toe work and still be held in position in a machine, when no cam cylinder post above bed is used to hold them. 32nd. The adjustable collar and set screw, in combination with the ribbing arm of a knitting machine. 33rd. In circular knitting machine designed for heel and toe work, and provided with a needle cylinder having extended needles, and a recess provided with a bearing face to sustain the needles in place, in combination with the cam plate D_2 and band E, forming a cam cylinder in which the hubs of the needles will be exposed after passing the operating cams. 34th. In a knitting machine, a stationary staple or projection P formed to guide the thread, in combination with a pivoted locking bar P_1 having its free end adjusted to bear against the stationary staple or projection, for the purpose of forming a yarn take up lock. 35th. In a circular knitting machine provided with ordinary cams for operating the needles, the lever cam piece E_7 operated by the lever E_8, in combination with the cam piece E_9 situated above the ordinary operating cams and arranged in conjunction with each other, for the purpose of elevating the necessary needles out of action for heel and toe work. 36th. In a knitting machine having a ribbing attachment, the needles of which work between the machine needles, the combination of mechanism which will adjust the one set of needles centrally with the other, after needles have been removed from the machine and their stitches transferred to the needles adjacent to them, for the purpose of narrowing the work passing through the machine. 37th. As an improvement in the process of manufacturing stockings or other similar work produced by a knitting machine, it commencing at the top of the stocking with all the cylinder needles and a sufficient number of the ribbing needles to give the desired width and, after knitting therewith to the point when it is desired to narrow, removing the stitches from the ribbing needles and transferring them to the machine needles, for the purpose of producing narrowed plain work after the ribbing is completed. 38th. As an improvement in the process of manufacturing stockings, or other similar work produced by a knitting machine, it commencing at the top of the stocking with all the cylinder needles and a sufficient number of the ribbing needles, to give the desired width and, after knitting therewith to the point when it is desired to narrow, removing a number of machine needles, corresponding with the number of ribbing needles and transferring their stitches to the adjacent machine needle, for the purpose of narrowing the work without altering the ribbing, except narrowing it by one stitch.

No. 14,497. Improvements on Packing Cans and Boxes. (*Perfectionnements aux bidons et aux boîtes d'empaquetage.*)

Joseph W. M. Shattuck, Albany, N. Y., U. S., 27th March, 1882; for 5 years.

Claim.—1st. The combination, with a packing can or box provided with an outer cover, of an inner cover attached to said can or box and provided with a transparent panel. 2nd. The combination, with the body A provided with an outer cover C, of the inner cover C, hinged beneath the outer cover B to the body A and provided with a detachable transparent panel c.

No. 14,498. Improvements in Roofing Plates. (*Perfectionnements aux carreaux à toitures.*)

Lorenzo Lane and Laurin D. Woodworth, Youngstown, Ohio, U. S., 29th March, 1882; for 5 years.

Claim.—1st. A roofing plate having flat bearing surfaces at the ends, a straight central portion and curved or angular portions. 2nd. A supplemental plate having the form of one half of the diamond-formed plate, separated longitudinally with the separated edge extended and bent at right angles.

No. 14,499. Improvements on Washing and Wringing Machines. (*Perfectionnements aux laveuses-essoreuses.*)

Henry S. Mclean, West River, N. S., 29th March, 1882; for 5 years.

Claim.—1st. The wooden rollers A A, with their covering of woolen cloth or flannel B, the barbs or hooks placed on ends of rollers for holding covering of rollers. 2nd. The combination, with the frame of wringer and the springs, of thumb and crank with the wooden covering B and the barbs c c.

No. 14,500. Improvements on Preserving Forage by Storing in Siloes. (*Perfectionnements dans la conservation du fourrage par l'emmagasinage dans les fosses.*)

Charles H. Roberts, Lloyd, N. Y., U. S., 29th March, 1882; for 5 years.

Claim.—The method of preserving dry or partly dried corn stalks for forage, by wetting the stalks with water or steam before or after they are placed in the silo, and compressing and packing them in the silo, in this wet or moistened state.

No. 14,501. Butter Package. (*Vaisseau pour le beurre.*)

Jeffery T. Ferris and Egbert R. Sheppard, Abercorn, Que., 29th March, 1882; for 5 years.

Claim.—1st. The manner of folding the wood veneer, cardboard or other material so as to make a package of oval shape, slightly flattened at the bottom, with concave ends, out of one piece of material. 2nd. The manner of fastening said package by means of the pieces D D and slots E E.

No. 14,502. Improvements on Digging Machines (*Perfectionnements aux machines à creuser.*)

James Parker, Stevenage, Eng., 29th March, 1882; for 5 years.

Claim.—1st. The hinged forkhead A, with wedge pieces M, fork bar C. 2nd. The support roller F and its accessories. 3rd. The reversing gearing consisting of the parts X 1 2 3 4, engaging with the pinions 4 and S. 4th. The removable angle iron felly Y, on the driving wheel Z.

No. 14,503. Compound for the Preservation of Organic Substances. (*Composé pour la conservation des substances organiques.*)

Frederick S. Barff, Kilburn, Eng., 29th March, 1882; for 5 years.

Claim.—The employment and use of a compound of boracic acid and glycerine, for and in the preservation of organic substances.

No. 14,504. Improvements on Butter Workers. (*Perfectionnements aux battes à beurre.*)

George A. Blanchard, Concord, N. H., U. S., 29th March, 1882; for 5 years.

Claim.—1st. The movable bed and pivoted segmental presser, connected and adapted to move with it, combined with the handle attached directly to the presser, to operate the said parts in one, and then, in the opposite direction in unison. 2nd. The pivoted segmental pressure and handle and movable bed, combined with the links e, each pivoted at one end to the presser, and at its other end to the bed, to thus cause the presser and bed to travel together in the same direction.

No. 14,505. Improvements on Sewing Machines. (*Perfectionnements aux machines à coudre*)

Daniel Mills, Philadelphia, Penn., U. S., 29th March, 1882; for 5 years.

Claim.—1st. The combination of the barbed needle and looper, and mechanism for actuating the same, with a rotating loop catching hook a^1, a shuttle and a shuttle driver made in two parts, adapted

to act upon the opposite ends of the shuttle, but disconnected therefrom. 2nd. The combination of the barbed needle and looper, and mechanism for actuating the same, with the rotating loop-catching hook a^1 and distending shield a^2, the shuttle and the two part shuttle driver disconnected from the shuttle. 3rd. The combination of the needle and shuttle, and mechanism for operating the same, with a loop-catching hook a^1 and means for rotating the same at a variable velocity. 4th. The combination of the barbed needle and looper and mechanism for actuating the same, with the rotating and longitudinally reciprocating loop-catching hook a^1, the shuttle and the two part shuttle driver disconnected from the shuttle. 5th. The combination of the frame of the machine, the needle and shuttle mechanism for operating the same, with the shaft a having a hook a^1 and shield a^2, and means for rotating said shaft at a variable velocity. 6th. The combination of the hook a^1 and means for rotating the same with the needle c, the looper g and mechanism for vertically reciprocating and partially rotating said needle. 7th. The combination of the sewing and feeding mechanism with the presser bar f^1 and its spring, the bearings f^2, the sleeve f^3, and a threaded rod adapted to act upon said sleeve, whereby the latter is caused to clamp the presser bar to its bearings or release it therefrom. 8th. The combination of the presser bar, bearing f^2, sleeve f^3, with threaded stem, threaded rod f^4, with collar f^6, arm f^7 and spring f^9, the bearing lug f^5 and the disks C^1, with cam f^8. 9th. The combination of the shuttle driver b^3 having a projecting stem, the thumb nut adapted to said stem, and the bar b^4 having a slot b^6 with enlarged inner end. 10th. The combination of a shuttle having an internal tension device, the regulating screw of which projects through the head of the shuttle with an open ended shuttle race, whereby access to the regulating screw can be had without removing the shuttle from the race. 11th. The combination of the shuttle having an internal tension device, the regulating screw of which projects through the head of the shuttle, with the open ended shuttle race and the detachable shuttle driver b^3. 12th. The combination of the frame A, the tubular shaft a a, shuttle race formed partly in said tubular shaft and partly in the frame beyond the end of the same, a shuttle b, a driver b^2 working within the shaft a a, briver b^3 adapted to that portion of the race which is within the frame, and the internal rod b^2 and external rod b^4, whereby said drivers b^2 b^3 are reciprocated.

No. 14,506. Improvements on Devices for Carrying Fruits. (*Perfectionnements aux appareils à transporter les fruits*)

George A. Cochrane, Liverpool, Eng., 29th March, 1882; (Re-issue of Patent No. 13,149.)

Claim.—1st. The method for storing and shipping fruit or vegetables by arranging such products so that the noxious gases exhaled thereby may descend to the lowest stratum, there to be absorbed by dry earth, or other absorbent material, and fresh air at the proper temperature supplied in their place. 2nd. The method of carrying or storing fruit on ship board or in warehouses, by isolating each fruit from the other in ventilating cases and placing these ventilating cases on perforated decks, or floors, above a vacant space from which the deleterious vapours can be removed.

No. 14,507 Improvements on Devices for Carrying Fruits. (*Perfectionnements aux appareils à transporter les fruits.*)

George A. Cochrane, Liverpool, Eng., 29th March, 1882; (Re-issue of Patent No. 13,149.)

Claim.—1st A crate for fruit and vegetable matter apertured on all sides, and provided with means for holding and dividing its contents and ensuring ventilation in every direction. 2nd. The combination, with a crate apertured, of ventilated trays and compartments arranged to prevent the contact of one pieces of fruit with another. 3rd. As a new article of manufacture, an apertured crate fitted with perforated shelves or trays arranged so that each piece of fruit shall only be obliged to support its own weight, 4th. The combination, with a fruit crate provided with ventilating apertures, of projections or corner pieces C arranged so that when a number of crates are packed together, space for air will be maintained on every side. 5th. In a fruit or vegetable crate, the trays D formed of perforated bottoms d and compartments d^1 provided with notches or perforations d^2. 6th. The combination, with a fruit crate provided with trays D, of strips of perforated or notched cardboard, or analogous material. wound between and around each piece of fruit.

No. 14,508. Improvements in Signal Lamps. (*Perfectionnements dans les lamps d signaux.*)

Samuel Coxon, Toronto, Ont., 29th March, 1882: (Extension of Patent, No. 7287.)

No. 14,509. Improvements on Reed Organs. (*Perfectionnements aux orgues à tuyaux.*)

Andrew H. Hammond, Worcester, Mass., U. S., 29th March, 1882; (Extension of Patent No. 7363.)

No. 14,510. Improvements on Reed Organs. (*Perfectionnements aux orgues à tuyaux.*)

Andrew H. Hammond, Worcester, Mass U. S., 30th March, 1882; (Extension of Patent No. 7363.)

No. 14,511. Improvements on Water Closets. (*Perfectionnements aux cabinets à l'eau.*)

Robert Reach, Washington D.C.. U. S.. 30th March, 1882; for 5 years.

Claim.—An automatic valve located in a cylinder, having inlet and outlet water pipes I I_1, shoulders P P_1 and flange p operated by float K, in connection with piston F by opening and closing the opening e^{11}. 2nd. The combination, of the cylinders H H_1, metallic stopper and piston guide N, shoulders P P_1, flange p, piston F and float K. 3rd. The combination of the pipes S S^{11}, flange p, shoulders P P^1, cylinders H H_1, metallic stopper and piston guide N, piston F and float K. 4th. An automatic valve for supplying the bowl with a uniform quantity of water. 5th. A cylinder containing a float operated by water, for opening and checking the water supply. 6th. The combination of the bowl A, automatic check valve M and supply pipes I I_1. 7th. The combination of the safety pipe b, drain or waste pipe L_1, plunger B and bowl A. 8th. The combination of the ventilating pipes C W, safety pipe b, waste or drain pipe L and plunger B.

No. 14,512. Improvements in Sinks. (*Perfectionnements aux éviers*)

James Kilbourne, Columbus, Ohio, U.S., 30th March, 1882; for 10 years.

Claim.—1st. The sink made of a single sheet of wrought steel or iron, without joint seam or interior angle. 2nd. The seamless sink formed from a single sheet of wrought metal and provided with a neck a of malleable metal rivetted thereto.

No. 14,513. Improvements in Pulverizing Machines. (*Perfectionnements aux machines à triturer.*)

Stephen P. M. Tasker, (Assignee of Hermann B. Feldman,) Philadelphia, Penn., U.S., 30th March, 1882; for 5 years.

Claim.—1st. In an enclosing casing provided with an independent ball and with a means for giving the ball revolution with respect to the casing and an axial rotation, a separate con inuous metallic ball track made in one solid piece. 2nd. In combination with a casing through which is journalled a central shaft located at a point between the disks and engaged with said disks so as to revolve them. 3rd. In combination with a casing provided with a central shaft journalled therein, two oppositely placed sleeve journal surrounding and revolving with said shaft and surrounded as to their inner extremities, in combination with two disks likewise surrounding said shaft and fitted upon the rounded inner extremities of the sleeve journals so as to be capable of being rocked thereupon. 4th. In combination with a casing through which is journalled a shaft, two sleeve journals mounted upon, and revolving with the shaft and having rounded inner extremities, two disks fitted upon the rounded inner extremities of the sleeve journals, a clutch fitted upon the shaft, between the disks, revolving with the shaft and connected with the disks, and a spiral spring compressed between the opposing faces of the disks. 5th. A casing provided with a circular ball track and with a shaft journalled axially with respect to said ball track, two disks revolving with the shaft and free to rock with respect thereto, a spiral spring compressed between the opposing faces of the disks, and a ball resting upon the track and embraced between the disks. 6th. In combination with the externally tapered sleeve journals, the correspondingly tapered journal bearings, the journal boxes and the adjusting screws. 7th. In combination with the journal boxes, the sleeve journals, the packing ring and the packing collar. 8th. As a device for journalling the shaft of a pulverizing machine, the journal boxes, journal bearings, sleeve journals, packing ring, packing collar and means for tightening up the same, the arrangement being such that the revolving surfaces are tight against the pulverized material. 9th. In combination with the shaft and the sleeve journals fitted thereupon, the tightening up nuts. 10th. In combination with an enclosed casing, a continuous solid ball track, a ball, a driving shaft and means for giving the ball revolution around the ball track and an axial rotation.

No. 14,514. Improvements on Car Couplings. (*Perfectionnements aux accouplages des chars*)

Jefferson E. Barrett, Mount Vernon, Iowa, U.S., 30th March, 1882; for 5 years.

Claim.—1st. The bar D having two lugs D^1 D_1, recess D^2, and flanges D_3, in combination with a draw-head having the vertical slot C. 2nd. The bar D having a bent arm E_3 connected by a pintle with the oppositely extending levers F F. 3rd. The combination, with the draw-head A provided with a U-shaped groove A_1, of the bar D, the levers F, the connecting bars G and the brackets J projecting from the car H. 4th. The combination, with the draw-head A, of the bar D, the levers F, the plates L, each provided with a vertical slot K, and of the pivoted bars M provided with teeth N^1 N^2 N_3. 5th. The combination, with the plate L provided with a slot K, of the pivoted bar M provided with teeth N^1 N_2, etc., the guide plate Q and the latch P. 6th. The combination, with the plate L provided with a slot K, of the pivoted bar M provided with a series of teeth N^1 N^2, etc., and having its lower end M^1 bent rectangularly, and of the pivoted latch P provided with the lugs P^1 P^2 at the opposite ends. 7th. The combination, with the draw-head A, of the bar D provided with a series of apertures R, the slotted guide plate E^2, the latch T, the handle S and the levers F.

No. 14,515. Improvements on Rotatory Motors. (*Perfectionnements aux machines rotatoires.*)

William J. Gurd, Sarnia, Ont., 30th March, 1882; for 15 years.

Claim.—1st. A rotatory motor wherein the opening and closing of a series of pivoted wing pistons is performed by a circular guide way, and in combination with a stationary abutment. 2nd. In a rotatory motor and as a means for closing the pivoted wing pistons, the rubber faced wheel M. 3rd. In a rotatory motor and as a means for closing the pivoted wing pistons, the combination of the rubber faced wheel M and inclined slides or horns N. 4th. In a rotatory motor, the pivoted piston wings I, in combination with recesses L provided with the water axles f g. 5th. In a rotatory motor and in combination therewith, the abutment G provided with the leather flap b and spring plate H.

No. 14,516. Improvements in Carriage Axles.

(*Perfectionnements aux essieux des voitures.*)

Ludger Provancher and Thomas N, Brien, Denver, Col., U.S., 30th March, 1882; for 5 years.

Claim.—The combination of the axle A having the shoulders *a b c*, divided nut B, having flange B1 and faces *b1*, flanged ring C, washers or packing rings *d h e f*, axle box D having leather *d1* and oil groove *g*, and the cap E.

No. 14,517. Fire Bottom for Stoves, Grates and Furnaces. (*Boîte à feu pour les poêles, grilles et fourneaux.*)

Joseph S. Symmonds, London, Ont., 30th March, 1882; for 5 years.

Claim.—The combination of the bed plate A provided with flanges C C having dovetail grooves formed in them, the bed plate E provided with dovetail flanges F F, aprons J J and lever G.

No. 14,518. Improvements on Electric Burglar Alarms. (*Perfectionnements aux alarme-voleurs électriques.*)

Marion H. Kerner, New York, U.S., 31st March, 1882; for 15 years.

Claim.—1st. The combination of a main line, a main battery, one or more circuit closers adapted to shunt a portion of the main line to independent relays included in the main line circuit, one of which responds to an increase, and the other to a decrease in the normal strength of the current traversing said main line, and a signalling apparatus included in an independent local circuit, and capable of being actuated by either of said relays. 2nd. The combination of a main line, a main battery, a rheostat included in the main line circuit, one or more circuit closers adapted to shunt the portion of said main line including said rheostat, two relays included in the main line circuit, one of which responds to an increase, and the other to a decrease in the normal strength of the current traversing said main line, and a signalling apparatus included in an independent local circuit and capable of being actuated by either of said relays. 3rd. The combination of a main line, a main battery, a rheostat included in the main line circuit, one or more circuit closers adapted to shunt the portion of the main line including said rheostat, a second rheostat placed in a branch circuit and having a resistance either greater or less than that of the first rheostat, a switch for disconnecting the main line from one rheostat and connecting it with the other, and a detector for indicating the strength of current traversing the main line. 4th. The combination of a main line, a main battery, a rheostat included in the main line circuit, one or more circuit closers adapted to shunt the portion of the main line including said rheostat, a second rheostat having a resistance greater or less than that of the first one and placed in a branch line, a switch for disconnecting the main line from one rheostat and connecting it with the other, a detector for indicating the strength of current in the main line circuit, two relays included in the main line circuit, one of which responds to an increase, and the other to a decrease in the normal strength of the current traversing said main line, and a signalling apparatus under the control of either of said relays. 5th. The combination of a main line, a main battery, two rheostats, one or more circuit closers adapted to shunt one of said rheostats and not the other, and a switch whereby the resistance of either one of said rheostats may be removed from the main circuit at pleasure, but not both at the same time. 6th. The combination of a main line, a main battery, two relays included in the main line circuit, one of which having a lesser number of convolutions, responds to an increase, and the other having a greater number of convolutions responds to a decrease in the normal strength of the current traversing said main line, and a signalling apparatus under the control of either of said relays.

No. 14,519. Improvements on Belt Couplings. (*Perfectionnements aux joints des courroies.*)

Victor Rice, Olmsted Falls, Ohio, U.S., 31st March, 1882; for 5 years.

Claim.—1st. The clasps B, having the countersunk screw seat *d* in one leaf, and the screw-threaded burr *e* to receive the screw in the other, and the link D, in combination with the belt A.

No. 14,520. Improvements on Inhaling Apparatus. (*Perfectionnements aux inhalateurs.*)

Alexander J. Leslie, Cleveland, Ohio, U.S.. 31st March, 1882; for 5 years.

Claim.—An arc-shaped box provided with a detachable cover furnished with two inhaling nozzles or tubes, adapted to enter the nostrils, said box being provided with a perforated diaphragm and furnished with straps to secure it in place.

No. 14,521. Improvements on Fishermen's Reels. (*Perfectionnements aux tours des pêcheurs.*)

Franklin R. Smith and Willis R. Barnum, Syracuse, N.Y., U.S,, 31st March, 1882; for 5 years.

Claim.—1st. An automatic fisherman's reel actuated by a spring restrained main gear, concentric with the line spool and mounted loose on a stud fixed to the rod, a pinion fixed to the spool, and intermediate gears pivoted at points held stationary in relation to the rod, and midway between the geared peripheries of the main gear and pinion aforesaid, 2nd. An automatic fisherman's reel composed of a tubular main stud or post adapted to be affixed to a fishing rod, a spool having a rigid pintle journalled in said post, a pinion fixed to the spool or its pintle, a spur wheel mounted loose on the posts, a coil spring connected with the spur wheel and post respectively, an arm extended rigidly from said post, and an intermediate gear pivoted to said arm and engaging directly with both the aforesaid spur wheel and pinion. 3rd. The combination of a line spool provided in its side with a concentric recess, a combined actuating gear and spring case consisting of a circular disk nearly or quite flush with the rear edge of the spool, and having, projecting from its periphery into the cavity of the spool, a concentric rim or flange cogged or toothed at its free edge, and engaging wtih gears transmiting motion to the spool, and a coil spring enclosed by, and arranged to actuate aforesaid combined gear and case. 4th. In combination with the pivoted spool B, provided with the cavity R and pinion *c*, the combined spring case and actuating gear *d* having on its side a toothed concentric rim, and the coil spring S located in the said spring case, the combined guards and equalizers *e e e* fixed to, and radiating from the post *a*, and the intermediate gears *r r r* pivoted on said equalizers. 5th. In combination with the spool B, the line guide L consisting of an arm stamped out of sheet metal bent at right angles at the periphery of the spool, and having an eye or aperture punched in the projecting end.

No. 14,522. Improvements on Yarn Reels.

(*Perfectionnements aux dévidoirs.*)

Thomas H. Burrows, Springfield, Mass., U,S., 31st March, 1882; for 5 years.

Claim.—1st. The combination of the arms *c*, guides *d* and base 2nd. The combination ot the arms *c* having curved pieces *g*, with the guide *d*, pivoted rod *e* having thumb nut *i*, and base *a*.

No. 14,523. Improvements on Connecting and Disconnecting Links. (*Perfectionnements aux porte-mousquetons.*)

James Walker, Derby, Eng., 31st March, 1882; for 5 years.

Claim.—The construction of a connecting and disconnecting link in two parts, the one part swivelling on the other, the part A having projection H, and the part B having projection K, the two parts being connected by the pin D, the part B having a projection or rib E, and the part A having a corresponding recess into which the rib E fits, the part B having also a recess F into which a corresronding rib on the part A fits.

No. 14,524. Improvements on Envelopes.

(*Perfectionnements aux enveloppes.*

George Cox, London, Ont', 31st March, 1882; for 5 years.

Claim.—The envelope A in combination with the protector B.

No. 14,525. Improvements on Lubricators.

(*Perfectionnements aux godets graisseurs.*)

William K. Rhodes, Portland, Me., U.S., 31st March, 1882; for 5 years.

Claim.—1st. The cup *a* moving vertically up and down and acting to expel the lubricating compound through the duct or channel *c*. 2nd. The cup operating as described and having the valve *h*. 2nd. The base *b* with the duct or channel c, and either with or without the cooling chamber *g*.

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No. 14,643. Kinney Tobacco Company, New York, N. Y., Assignee, "Cigarette Mouth Piece," 27th May, 1882.

No. 14,644. A. McDougall, Cleveland, Ohio, "Tow Boat," 21st April, 1882.

No. 14,645. P. K. Dederick, Albany, N. Y., "Press," (Extension of Patent No. 7485,) 21st April, 1882.

No. 14,646. W. A. D. Bowman, Jersey, N. J., and A. W. Almqoist, Brooklyn, N. Y., "Spike machine," 24th April, 1882.

No. 15,647. P. Smith, Detroit, Mich., "Water Heater and Circulator," 24th April, 1882.

No. 14,648. G. H. P. Flagg, Boston, Mass., Assignee, "Edge Setter Tool Holder," (Extensionof Patent No. 7768,) 24th April, 1882.

No. 14,649. C. W. Dean, South Wareham, Mass., "Staples," 24th April, 1882.

No. 14,650. A. McDougall, Cleveland, Ohio, "Tow Boat," 24th April, 1882.

No. 14,551. J. Higgin and A. J. Higgin, Manchester, Eng., "Galvanic Batteries," 24th April, 1882.

No. 14,652. J. G. Stephens, Jersey City, N. J., "Vegetable Fibre," Re-issue of Patent No. 12,748,) 24th April, 1882.

No. 14,653. J. B. Danier, St. Athanase, Que., "Machine à fabriquer les cierges," (Prolongation de durée d'un bract,) 24th Avril, 1882.

No. 14,654. T. C. Hewitt, London, Ont., Assignee, "Metal Barb Fence," 24th April, 1882.

No. 14,655. C. T. Fitch, H. C Palmer and S. H. Cowles, Buffalo, N. Y., "Means for Protecting Lightning Arresters," 24th April, 1882.

No. 14,656. The Herbrand Company, Assignee, Fremont, Ohio, "Running Gear for Vehicles," 24th April. 1882.

No. 14,657. W. Haddock, J. Frank, Cincinnati, Ohio, and I. Frank, New York, N. Y., "Griping Attachments for Cable Railways," 24th April, 1882.

No. 14,658. J. E. Trenholm, Pointe de Bute, N.B., "Hay Presses," 25th April. 1882.

No. 14,659. W. Ellis, St Catharines, Ont., "Apparatus for Purifying Casks," 25th April, 1882.

No. 14,660. J. C. Waddell, Union City, Tennessee, "Broad Cast Sowers," 25th April, 1882.

No. 14,661. J. Sayvie, St. Marcel. Que., "Fastener for Doors, &c.," 26th April, 1882.

No. 14,662. J. P. Callan, Aurora, Ill., "Road Carts," 26th April, 1882.

No. 14,663. J. H. Atwater, Meaford, Minn., "Washing Machine," 26th April, 1882.

No. 14,664. R. S. Noyes, Brooklyn, N. Y., "Cork Cutters," 26th April, 1882.

No. 14,665. A. Newell., Chicago, Ill., "Reed Organs," 26th April, 1882.

No. 14,666. O. Haley and M. Teakles, Sussex, N. B., "Portable Upright Churn Power," 26th April, 1882.

No. 14,667. P. Armington, Providence, Rhode Island, "Steam Engine Governors," 26th April, 1882.

No. 14,668. J. G. Knichbaum, Youngstown' Ohio, "Hasp Lock," 26th April, 1882.

No. 14,669. S. E. Collins, Marion L. Carolina, "Water Purifying Apparatus," 26th April, 1882.

No. 14,670. C. Ingersoll. Beloit, Wisconsin, "Dishes for Grocers' Use," (Extension of Patent No. 7406,) 26th April. 1882.

No. 14,671. P. O'Brien, South Bend, Ind., "Electric Priming," (Extension of Patent No. 7382,) 26th April. 1882.

No. 14,672. W. Volk, Toronto, Ont., "Stoke Pipe Fitter and Lid Lifter, 27th April, 1882.

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No. 14,674. L. W. Washburn, Boston, Mass., "Process of Manufacturing Car Wheel." 27th April, 1882.

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No. 12,681. J. Olmsted, New York, N. Y., "Telephone Transmitters," 27th April, 1882.

No. 14,682. J. Reece, Boston, Mass., "Button Hole Sewing Machine," 27th April, 1882.

No. 14.685. A. Edwards, Summerset, Iowa, "Water Wheel," (Extension of Patent No. 7391,) 27th April, 1882.

No. 14,683. J. Terry, Mount Forest, Ont., "Car Coupling," 27th April, 1882.

No. 14,685. E. C. Flint, Saginaw, Mich., "Folding Chairs," 28th April, 1882.

No. 14,686. A. C. Campbell, North Esk, and Ritchie, New Castle, N. B., "Bolter and Resawing Machine," 28th April. 1882.

No. 14,687. A. G. Ramsay, Brantford, Ont., "Knives for Reapers and Mowers," 28th April, 1882.

No. 14,688. A. J. Nellis, Pittsburg, Penn., "Harrow and Cultivator," 28th April, 1882

No. 14,689. L. G. Thorp, Akaon, F. N. Wilcox, Cleveland, and C. O. Bartlett, Brickville, Ohio, "Oat Meal Machine," 28th April, 1882.

No. 14,690. The Foley Furniture Company, Assignee, Chicago, Ill., "Smoke Consumers," 28th April, 1882.

No. 14,691. F. Grinnell, Providence. Rhode Island. "Automatic Fire Extinguisher," 28th April, 1882.

No. 14,692. J. D. Winslow, Portland, Maine, "Lubricating Cups," 28th April, 1882.

No. 14,693. J. B. McCune and R. M. Wanzer, Hamilton, Ont., "Sand Moulding Machine," (Extension of Patent No. 7425,) 28th April, 1882.

No. 14,694. F. W. Hales, Charlottetown, P. E. I., "Ditching Machine," 28th April, 1882.

No. 14,695. W. A. Brickford, Brantford, Ont., "Compressed Air Force Pump," 28th April, 1882.

No. 14,696. R. M. Appleton, Lake Village, N. H., "Under Shirts," 29th April, 1882.

No. 14,697. E. Moore, Uxbridge, Ont., "Scufflers," 29th April, 1882.

No. 14698. T. Holland, Troy, N. Y., "Lubricators," 29th April. 1882.

No. 14,699. G. Stanley, Boston, Ont.. "Mosaics," 29th April, 1882.

No. 14,700 G. W. Baker Chicago. Ill., "Automatic Lubricating Apparatus," 29th April, 1882.

No. 14,701. H. Armington, Rhode Island, "Valves for Steam Engines," 29th April, 1882.

No. 14,702. M. Hurly, Quebec, Que., "Heat Distributor," 29th April, 1882.

No. 14,703. C. Cook, Winsted, Conn.. "Axles," 29th April, 1882.

No. 14,704. A. R. Moore, Charlotte. Mich., "Field Roller," 29th April, 1882.

No. 14,705. A. W. Wright, Stirling, Ont., "Churns," 29th April, 1882.

No. 14,706. J. Hurst, Augusta, Wis., "Trunks," 29th April, 1882.

No. 14,707. D. H. Sherman and J. Bishop, Wankegan, Ill., "Car Coupling," 29th April, 1882.

No. 14,709. E. E. Spencer, St. Armand East, and W. A. Morrison, Freligsburgh, Ont., "Heater," (Extension of Patent No. 7426,) 1st May, 1882.

No. 14,709. R. J. Horton, Massena, N. Y., "Fanning Mill and Grain Separator," (Extension of Patent No. 7403,) 1st May, 1882.

No. 14,710. C. Boss, (Assignee of T. Armstrong, Bathurst, N. B.,) "Preserving Chambers," (Extension of Patent No. 7430,) 1st May, 1882.

No. 14,711. The Toronto Reaper and Mower Co., Toronto, Ont., Assignee, Springfield, Ohio, "Gathering and Binding Machine," 1st May, 1882.

No. 14,712. J. L. Hermance, Toledo, Ohio, "Feed Mechanism for Circular Sawing Machines." 1st May, 1882.

No. 14,713. J. Fisher, Woodstock, N. B., "Thrasher and Separator," 1st May, 1882.

No. 14,714. L. L. Smith, Ansonia, Conn., "Process for Coating Wire," 1st Mty, 1882.

No. 14,715. H. W. Fowler, Chicago, Ill., "Spike Machine," 1st May, 1882.

No. 14,716. The Gilman Vertical Press Company, N.H., Assignees, Springfield, Mass., "Printing Press," 1st May, 1882.

No. 14,717. S. P. M. Tasker, Phil., Penn., "Dry Pulverizer," 1st May, 1882.

No. 14,718. W. A. Webber, Medford, Mass., "Toys," 4th May, 1882.

No. 14,719. J. H. Greenwood, Logan, Ohio., "Planer Chuck," 4th May, 1882.

No. 14,720. J. Dougherty, Mount Pleasant, Iowa, "Washing Machines," 4th May. 1882.

No. 14,721. J. Jameson, Newcastle, Eng., "Incandescent Electric Lamps," 4th May, 1882.

No. 14,722. I. Schneer, New York, N. Y., "Shirts," 4th May, 1882.

No. 14,723. J. Campbell, Windsor, Ont.. "Railway Tie Sawing Machine," 4th May, 1882.

No. 14,724. A. P. Campton, California, "Gates," 4th May, 1882.

No. 14.725. F. S. Olmsted and G. Huffman, Cedar Falls, Iowa, "Barrels," 4th May, 1882.

No. 14,726. F. B. Livingston, Morrisville, Vermont, "Process for Burning Lime," 4th May, 1882.

No. 14,727. C. Buckley, Menden, Conn., "Curtain Fixtures," 4th May, 1882.

No. 14,728. H. F. Campbell, Concord, N.H., "Hoop Planing Machines," 4th May, 1882.

No. 14,729. C. S. Upton and C. E. Coates, Spencerford, N.Y., Assignees, "Improvements on Halters," 4th May, 1882.

No. 14,730. W. M. Riggin and A. A. Riggin, Madisonville, Kentucky, Assignees, "Improvements in Tuyeres," 4th May, 1882.

No. 14,731. F. B. Williams and W. A. Williams, Chicago, Ill., "Folding Beds," 4th May, 1882.

No. 14,732. The Shaw Glove Company, Boston, Mass., Assignees, "Knitting Machine," 4th May, 1882.

No. 14,733. J. Rielly, Sherbrooke, Que., "Portable Houses," 4th May, 1882.

No. 14,734. A. Cordon and D. De Garno, Rochester, N.Y., "Mowing Machines," 4th May, 1882.

No. 14,735. P. S. Ewins, West Berkshire, Vermont, "Sap Evaporator," 6th May, 1882.

No. 14,736. J. Draper, Whitby, Ont., "Walxing Sticks," 6th May, 1882.

No. 14,737. A. Schneider, San Francisco, Cal.. "Magazine Fire Arms," 6th May, 1882.

No. 14,738. H. F. Campbell, Concord, N.H., "Hoop Splint Machine," 9th May, 1882.

No. 14,739. J. H. Turner, Fort Wayne, Indiana, "Feed Water Heater," 6th May, 1882.

No. 14,740. A. H. Watkins, Boston, Mass., "Vapor Burner," 6th May, 1882.

No. 14,741. H. S. Clark. Towanda, Penn., "Vehicle Spring," 6th May, 1882.

No, 14,742. D. F. Noyes, Lewiston, Maine, "Apparatus for Drying Wood," 6th May, 1882.

No. 14,743. J. Stuart, Brooklyn, N. Y., "Bustles," 9th Mas, 1882.

No. 13,745. S. Smith and J. L. Engle, Middleburgh, N,Y., "Mail Bag," 6th May, 1882.

No. 14,746. C. T. Schoen and C. Scott, Phil., Penn., "Railroad Car Spring," 6th May, 1882.

No. 14,747. E, A. Edwards, Los Angelos, Cal., "Hydro-carbon Burners," 6th May, 1882.

No. 14,748. D. H. Gowing, Syracuse, N.Y., Assignee, "Salt Water Evaporating Apparatus," 6th May, 1882.

No. 14,749. J. C. Knoeppel, Milwaukee, Wis., "Grate Bars," 6th May, 1882.

No. 14,750. J. H. Wagstaff, St. John, N. B., "Indexes," 8th May, May, 1882.

No. 14,751. C. Shuman, Rockford, Ill., "Neck Yoke Ring," 8th May, 1882.

No. 14,752. W. Bowker, Somerville. Mass., "Hoop Pole Sawing Machine," 8th May, 1882.

No. 14,753. J. Neff, Petersburgh, Ont., "Steam Valve," (Extension of Patent No. 7479,) 8th May, 1882.

No. 14,754. T. F. Hemmick, Reading, Pend., "Anti-Friction Roller Bearings." 8th May, 1882.

No. 14,755. M. Thibault, Ottawa, Ont., "Railway Fish Plate Bolt Fastener," 8th May, 1882.

No. 14,756. J. A. Graham, E. C. Rausch and A. L. Graham, Redwing, Minn., "Register and Ottoman," 8th May, 1882.

No. 14,757. A.O. Lemay dit Delorme, Montreal, Que., "Chaussures," 8th May, 1882.

No. 14,758. F. Crompton, Toronto, Ont., Assignee, "Corsets," 9th May, 1882.

No. 14,759. The American Paper Barrel Company, Hartford, Conn., "Pulp Barrel Head Machine," 9th May, 1882.

No. 14,760. H. W. Sheppard, N,Y., "Fire Shovel," (Extension of Patent No. 7450,) 10th May, 1882.

No. 14,761. S. S. Applegate, Camden, N.J., "Electric Alarm Apparatus," 10th May, 1882.

No. 14,762. C. Ross, Brooklyn, N.Y., "Pulverizer," 10th May, 1882.

No. 14,763. A. S. Evans, Kingston, Ont.. "Adjustable Invalid Chairs," 10th May, 1882.

No. 14,764. J. J. Robinson, Everett, Mass., "Signal Lanterns," 10th May, 1882.

No. 14,765. H. A. Matthews, Waterbury, Conn., "Stove Ornament," 10th May. 1882.

No. 14,766. S. P. M. Tasker, Philadelphia, Penn.. "Welding and Sizing tubes," 10th May, 1882.

No. 14,767. A. G. Waterhouse, N. Y., "Electric Lamps," 12th May, 1882.

No. 14,768. A. Pelchier, Washington, Columbia, and T. Luma, Los Lumas, New Mexico, "Pavement," 12th May, 1882.

No. 14,769. G. E. Sanford, Genoa, and E. G. Bonney, Eaton N. Y., "Time Piece Calendars," 12th May, 1882.

No. 14,770. C. LaDow, Albany, N. Y., "Sulky Harrow," 12th May, 1882.

No. 14,771. E. E. Whipple, Moline, Ill., "Harrows," 12th May, 1882.

No. 14,772. L. Miller. Akron, Ohio, "Grain Binder," 12th May, 1882.

No. 13,773. G. F. Godley, Philadelphia, Penn., "Spiral Spring," (Extension of Patent No. 7464,) 13th May, 1882.

No. 14,774. W. W. Whittaker, Gloversville, N.Y., "Car Axle Box," (Extension of Patent No. 7466,) 13th May, 1882.

No. 14,775. C. E. Lamson, Ypsilanti, Mich., Assignee, "Journal Boxes." 15th May, 1882.

No. 14,776. W. Cooley, Waterbury, Vermont, "Cheese Machine," 15th May, 1882.

No. 14,777. E. D. Cannan, Pleasant Valley, Conn., "Sleigh Shoe," 15th May, 1882.

No. 14,778. W. Hunter, Wawanosh, Ont., "Car Couplers," 15th May, 1882.

No. 14,779. T. F. Dunn, Saccarappa, Maine, "Machine for Making Cotton Batting," 15th May, 1882.

No. 14,780. W. E. Thompson, Pinckney, Mich.. "Car Couplings," 15th May, 1882.

No. 14,781. H. Hitchock, Lyons, Mich., "Combined Feeder." 15th May, 1882.

No. 14,782. G. Dynes, Ingersoll, Ont., Assignee, "Fifth Wheel for Vehicles," 15th May, 1882.

No. 14,783. G. Boivin, Montreal, Que.. "Moccasins," (Extension of Patent No. 7507,) 16th May, 1882.

No. 14,784. E. S. Bennett, Denver, Colorado, "Gold Separators," 16th May, 1882.

No. 14,785. A. Sanford, Oshkosh," Wis., "Ox Shoes," 16th May, 1882.

No. 14,786. W. Arrouquier and T. Barrett. Worcester, Mass., "Mortar and Plaster," 16th May, 1882.

No. 14,787. A. Loyden, Atlanta, Georgia, "Car Coupling," 16th May, 1882.

No. 14,788. G. O. S. Conway, Stonefield, J. Cooper and F. Fairman, Montreal, Que., "Automatic Griper Brake," 17th May, 1882.

No. 14,789. G. O. S. Conway, Stonefield, J. Cooper and F. Fairman, Montreal, Que., "Car Couplers." 17th May. 1882.

No. 14,790. G. W. Boyd, Marietta, Georgia, "Grave Vaults for Burial Caskets," 17th May, 1882.

No. 14,791. E. M. Doubleday, New York, N. Y., Assignee, "Fur-coated Fabrics," 17th May, 1882.

No. 14,792. J. Thierny, Detroit, Mich., "Modes for Casting Car Wheels," 17th May, 1882.

No. 14,793. H. P. Feister, Philadelphia, Penn., "Printing Machines," 17th May, 1882.

No. 14,794. P. Wallace, London, Ont., "Automatic and Grain Binder." 17th May, 1882.

No. 14,795. D. Patterson, Chatham, Ont., "Attachments to Harvesters," 17th May, 1882.

No. 14,796. J. Nelson, R. Emerson and W. A. Talcott, Rockford, Ill., "Knit Mittens," 17th May, 1882.

No. 14,797. N. Johnson, Jasper, N. Y., "Saw Swages," 17th May, 1882.

No. 14,798. J. I. Pellerin et H. Pellerin, Montreal, Que., "Prolongation de Patent No. 7510,) Mai, 17, 1882.

No. 14,799. F. Winslow, Salem, Mass., "Naumbreag Sole Buffer," (Extension of Patent No. 7484,) 17th May, 1882.

No. 14,800. M. B. Church, Grand Rapids Mich., "Plastic Material," 22nd May, 1882.

No. 14,801. C. D. Rogers, Providence, Rhode Island, "crews," 22nd May, 1882.

No. 14,802. H. Mitchell, Boston, Mass., "Car Couplers," 22nd May, 1882.

No. 14,803. A. Giesecke, Buffalo, N.Y., "Baking Powder," 22nd May, 1882.

No. 14,804. C. Kinney, Windsor, Ont., "Pails," 22nd May, 1882.

No. 14,805. G. A. Drummond, Montreal, Que., "Inverting Continuous Current Filter," 22nd May, 1882.

No. 14,806. J. F. Mallinckrodt, Denver, Colorado, "Railway Brake," 22nd May, 1882.

No. 14,807. I. M. Rose, Norwalk, Conn., "Lighting Magazine," 22nd May. 1882.

No. 14,808. H. J. Miller, Goshen, N.Y., "Boring Machine and Tenon Cutter," 22nd May, 1882.

No. 14,809. E. Proutz, Beloit, Wis., "Printing Presses," 22nd May, 1885.

No, 14,810. J. D. Smith and F. M. Strong, Vergennes, Vermont, "Road Scrapers," 21nd May, 1882.

No. 14,811. E. Warne, Easton, Penn., "Concentrator and Separator," 22nd May, 1882.

No. 14.814 E. Warne, Easton Penn., "Separator and Concentrator," 22nd May, 1882.

N 14,813. J. Sutliff, Sr., Huntsville, Miss., "Motors." 22nd May, 188

No. 14,814. G. H. Watson, St. Louis, Miss., "Steam Generator and Feed Water Heater," 22nd May, 1882.

No. 14,815. R. Hodson, Abbey Road, Eng., "Rotary Engine," 22nd May, 1882.

No. 14,816. J. Elliott, London, Ont., Assignee, "Grinding Mills," 22nd May, 1882.

No. 14,817. G. L. Lewis, Phila., Penn., "Caustic Soda Process," 23rd May, 1882.

No. 14,818. J. A. Dupuis, Montreal, Que., "Bricks," 23rd May, 1882.

No. 14,819. S. Irwin, Lindsay, Ont., "Row Lock," 23rd May, 1882.

No. 14,820. F. Will, and H. L. Becker, Rochester, N.Y., "Bottle Stopper," 23rd May, 1882.

No. 14,821. N. Herrick, Champlin, Minn., "Trusses." 23rd May, 1882.

No 14,822. E. W. Gillett, Chicago, Ill., "Bluing Packages," 23rd May, 1882.

No. 14,823. H. C. Rice, Louisiana, Miss., "Filter," 23rd May, 1882.

No. 14,824. T. Taylor and W. W. Popplewell, Derby, Eng., "Elastic Fabrics," 23rd May, 1882.

No. 14,825. N, W. Herring, Millport, Penn., "Press," 22rd May, 1882.

No. 14,826. H. P. Kirkham, Brooklyn, N. Y., "Coffer Dams," 23rd May, 1882.

No. 14,827. E. M. Doubleday, N. Y., Assignee, "Process for Manufacturing Fibrous Fabrics," 23rd May, 1882.

No. 14,828. F. S. Scheffler, Richmond, Qde., "Switch," 25th May, 1882.

No. 14,829. H. M. Vaughan, Providence, Rhode Island, "Process for Coloring Fibrous Material," 25th May, 1882.

No. 14,830. H. W. Vaughan, Providence, Rhode Island, "Coloring Fibrous Material," 25th May, 1882.

No. 14,831. J. F. Burgdorf, Buffalo, N. Y., "Label Holder," 25th May, 1882.

No. 14,832. M. T. Shadduck, Shunk, Penn., "Tug Buckles," 25th May, 1882.

No. 14,883. A. M. Leslie, Cleveland, Ohio, "Sewing Machines," 25th May, 1882.

No. 14,834. T. C. Waller, Tilsonburgh, Ont., "Waggon Couplings,"

No. 14,835. W. Bowker, Somerville, Mass., "Hoop Sawing Machines," 25th May, 1882.

No. 14,836. G. Race, Norwick, N. Y., "Distilling Apparatus," 25th May, 1882.

No. 14,837. E. W. Bowslaugh, Grimsby, Ont,, Window Blinds," 25th May, 1882.

No. 14,838. J. Jameson, Newcastle, Eng., "Electric Lamps," 25th May, 1882.

No. 14,839. W. Scott, Hoosick Falls, N.Y., "Lamp Extinguisher," 25th May, 1882.

No. 14,840. M. Miller, Grand Rapids, Mich., "Sockets and Cock-Eyes for Traces," 25th May, 1882.

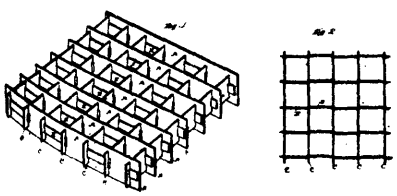
No. 14,841. W. Cooper, Jr., Strathroy, Ont., "Treadle Motive Power," 25th May, 1882.

THE

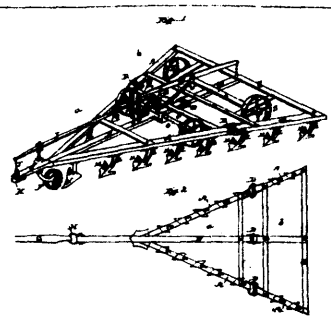
CANADIAN PATENT OFFICE RECORD.

ILLUSTRATIONS.

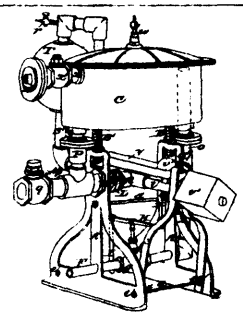
Vol. X. APRIL, 1882. No. 4.



14308 McIntire's Improvement in Egg and Fruit Carriers.

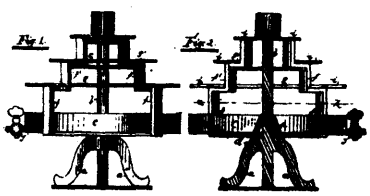


14309 Grattan's Gang Plough.

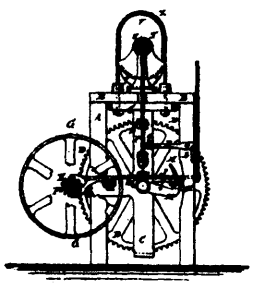


14310 Ponder's Improvements on Steam Traps.

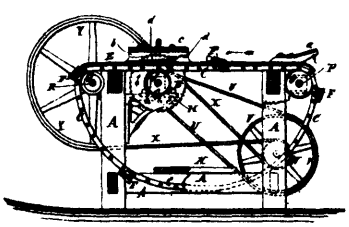
14311 Willson & Fay's Improvements on Carriage Bows.



14313 Storey's Improvements on Flower Stands.

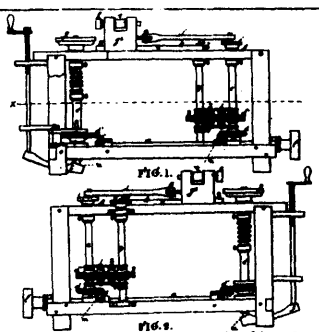


14314 Allen's Machine for Bundling Kindling Wood.

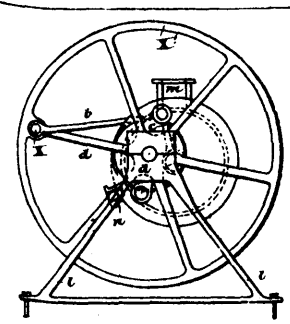


14315 Allen's Machine for Sawing Kindling Wood.

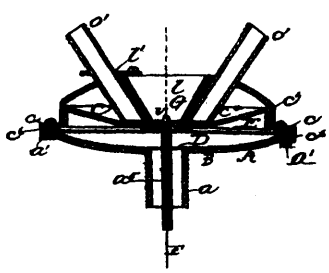
14316 Shutte's Improvements on Injectors.



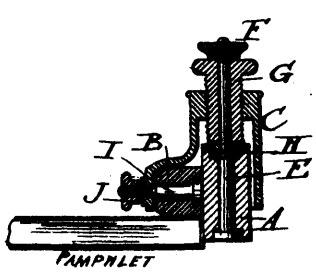
14318 Hanson's Improvements on Machines for Moulding in Wood.



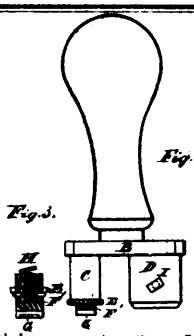
14319 Villebonnet's Improvements on Rotary Pumps and Ventilators.



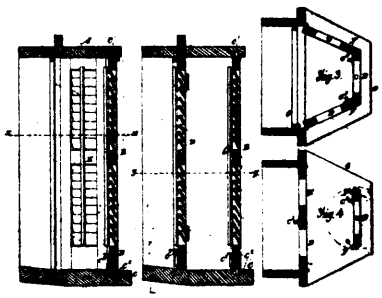
14320 Hubbard's Improvements on Telephones.



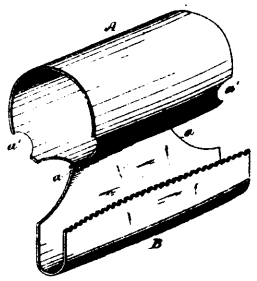
14321 Miller & Rohrer's Improvements on Rollers for Covering Pamphlets and Books.



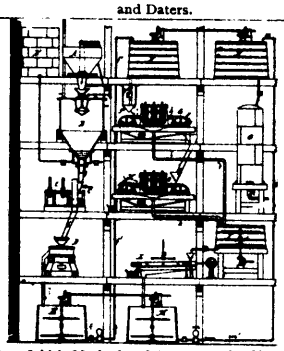
14322 Gaines's Improvements on Stamp Cancellers and Daters.



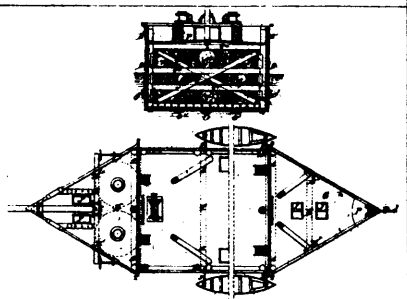
14324 Garrison's Improvements on Bay Windows.



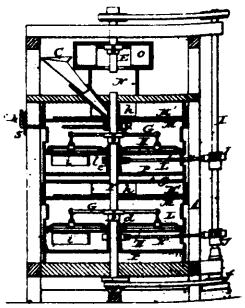
14325 Dee's Improvements on Stove Carriers.



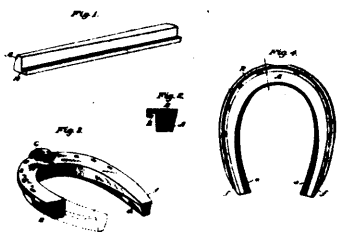
14326 Jebb's Method and Apparatus for Obtaining Starch from Grain for the Manufacture of Grape Sugar and other Products.



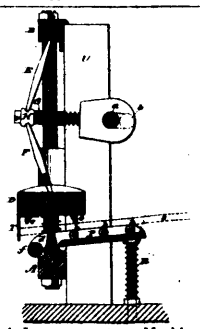
14327 De Winter's Improvements in the Construction of Vessels and in the Apparatus Employed therein, Parts of which are also Applicable to other Structures.



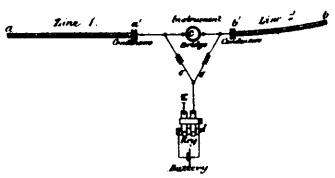
14328 Weber's Improvements in Middlings Purifiers.



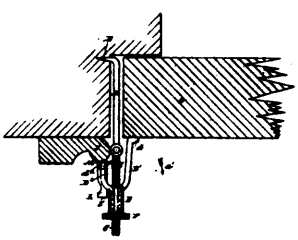
14329 Billings's Improvements on Horse Shoes.



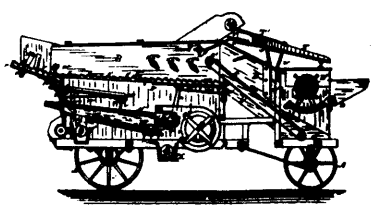
14330 Blake's Improvements on Machines for Breaking Pig Iron.



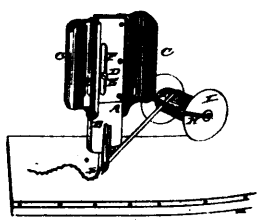
14331 Anderson & Smith's Improvements on Electric Telegraphs.



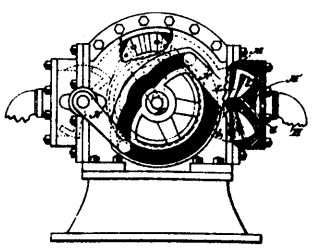
14332 Crongeyer's Improvements on Door Fastenings.



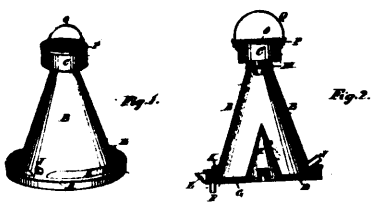
14333 Miller's Improvements on Machines for Thrashing and Cleaning Grain.



14334 Ross's Improvements on Machines for Embroidering and Ornamenting Rugs.

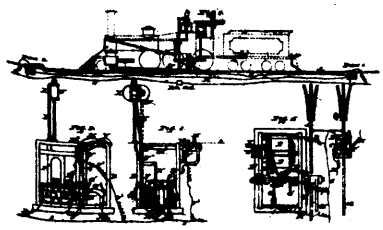


14335 Dudley's Improvements on Rotatory Engines.

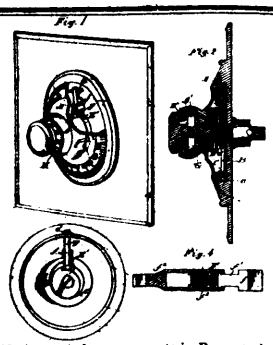


14336 Macpherson's Improvements on Milk Coolers.

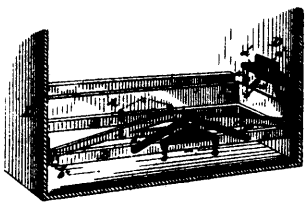
14337 Awalt's Improvements on Watch Regulators.



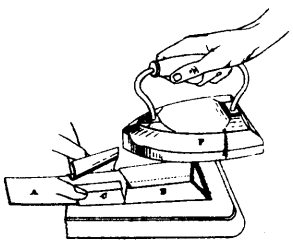
14338 Shaffer's Electrical Apparatus for Stopping Railway Trains, Signalling, &c.



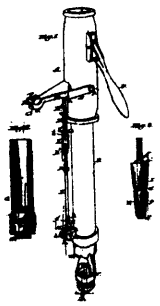
14339 Hathaway's Improvements in Permutation Lock Dials.



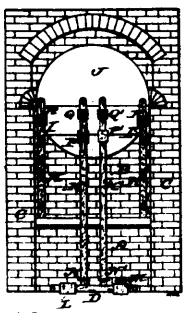
14340 Parks's Improvements on Self-levelling Berths.



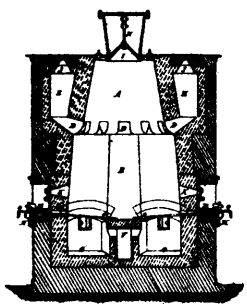
14341 McCormick's Process for the Manufacture of Bows, Scarfs, &c.



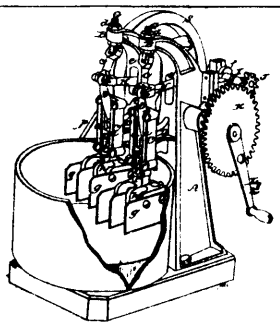
14342 Drake's Improvements in Pumps.



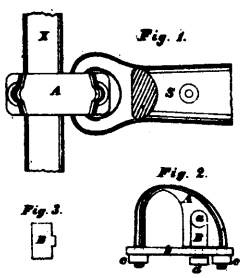
14343 Watson's Improvements on Steam Boiler Furnaces.



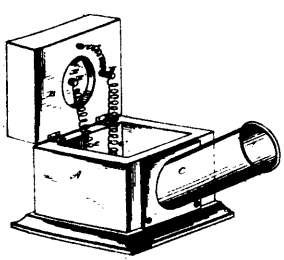
14344 Wilson's Improvements on Gas Apparatus.



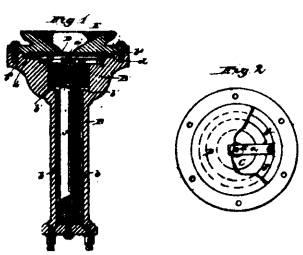
14347 Edwards's Improvements on Meat Choppers.



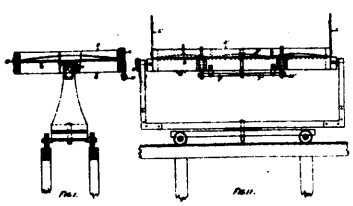
14348 Titus & Barnes's Improvements on Carriage Shaft and Pole Couplers.



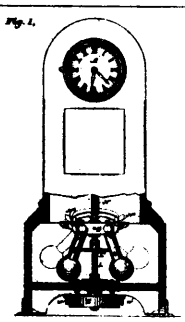
14353 Bartlett & Waite's Improvement in Telephone Transmitters.



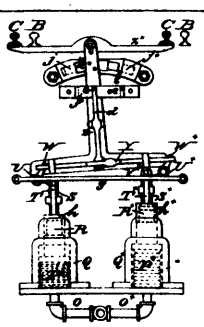
14354 Bartlett & Waite's Improvement in Telephone Receivers.



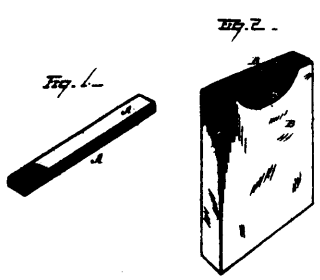
14355 Street's Improvements in Photographic Printing Frames.



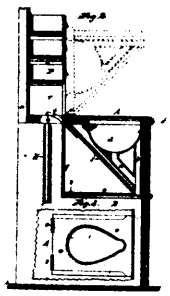
14356 Moscrop's Improvement in Continuous Recorders.



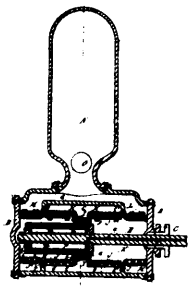
14360 Garsed's Improvements on Railway Switches.



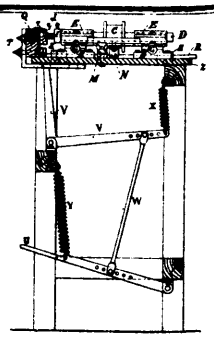
14361 Ginter's Improvements in Cigarettes.



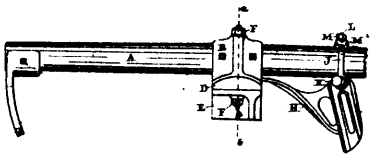
14362 Egbert's Improvements on Commode-Washstands.



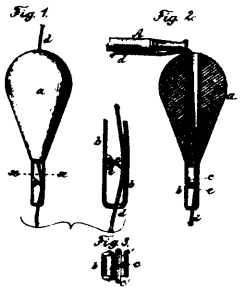
14363 Walker's Improvements on Pumps.



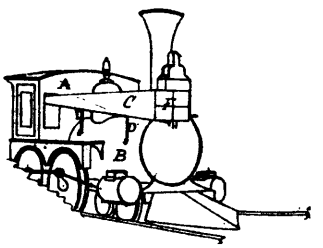
14364 White's Improvements on Routing Machines.



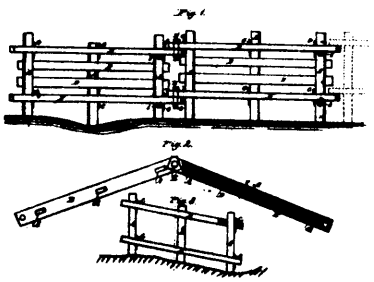
14365 Carter's Improvements on Ploughs.



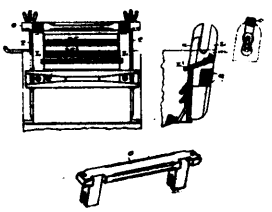
14366 Smith's Improvements on Fishing Line Floats.



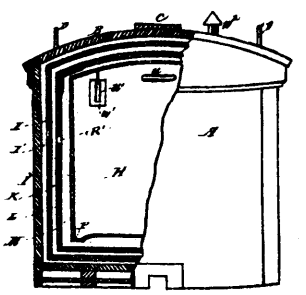
14367 Taylor's Improvements on Locomotives.



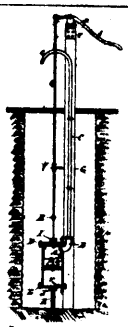
14368 McNall's Improvement in Fences.



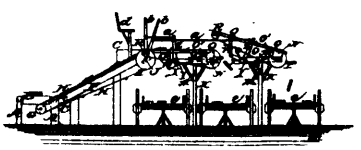
14369 Burke's Improvements in Washing Machines.



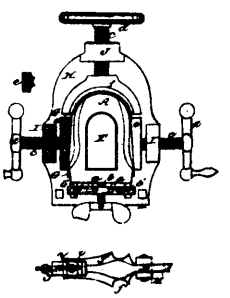
14370 Davis's Improvements on Preserving and Freight Cars.



14371 Hopkins's Improvements on Suction and Force Pumps.

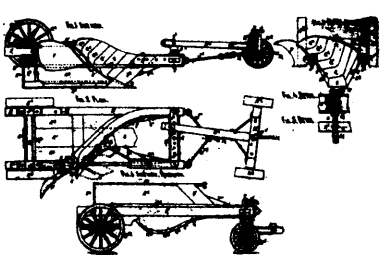


14372 Davies's Improvements on Lumber Sorters.

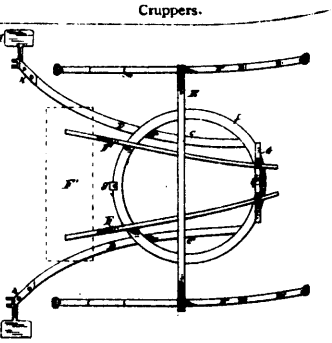


14373 Shaffer's Process and Machinery for Making Cruppers.

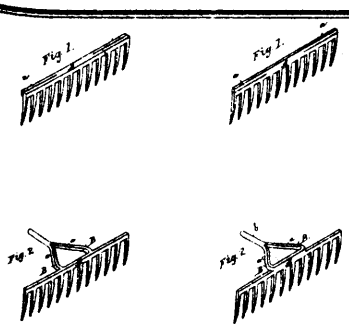
14374 Giles's Improvements on Burglar Alarms.



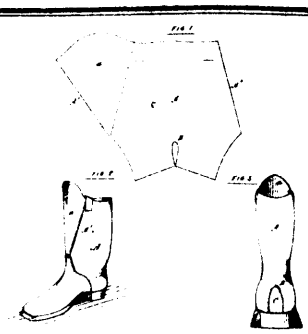
14375 House's Improvements on Ditching Machines.



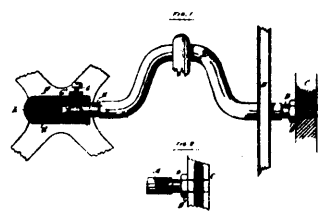
14376 Gurney & Smith's Improvements on Waggons.



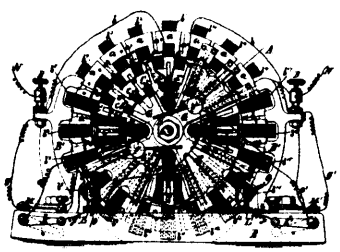
14377 Cowdery's Improvements in Garden Rakes.



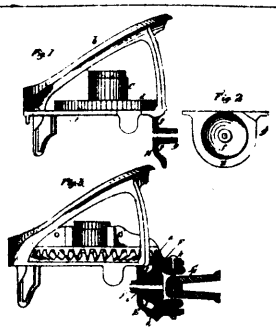
14378 Church's Improvement in long Leg Boots.



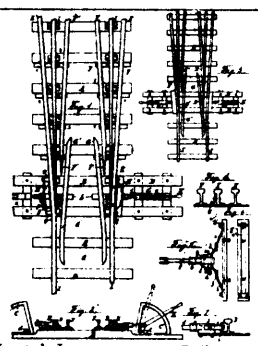
14379 McDougall's Improvement in Mechanism for Imparting Motion from a Treadle or a Vibrating Motor.



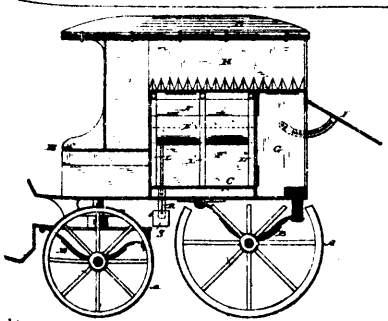
14380 Hussey's Improvements on Dynamo-electric Machines.



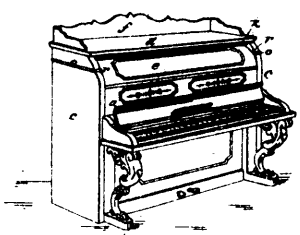
14381 Christie's Improvements on Harvesters.



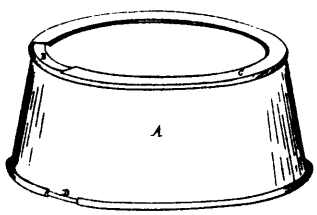
14382 Logan's Improvements on Railway Switches.



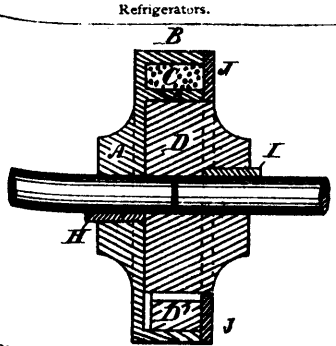
14383 Gurney's Improvements in Refrigerators.



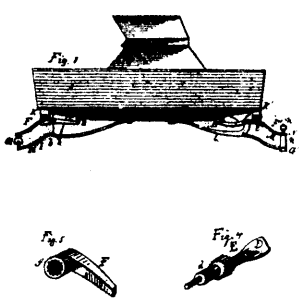
14384 Lorenz's Improvements on Upright Pianos.



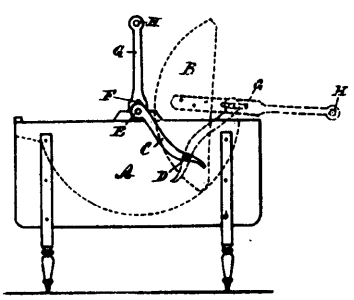
14385 Hale's Improvements on Sheet Metal Vessels.



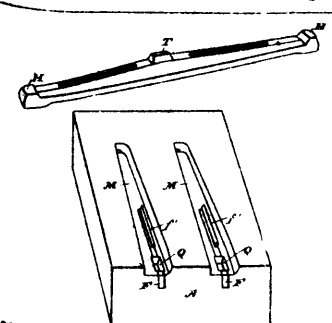
14386 Barber's Improvements on Shaft Couplings.



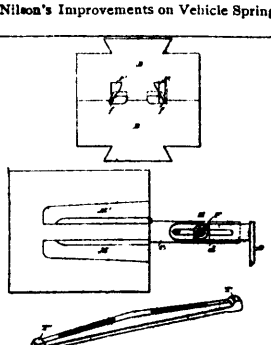
14387 Nilson's Improvements on Vehicle Springs.



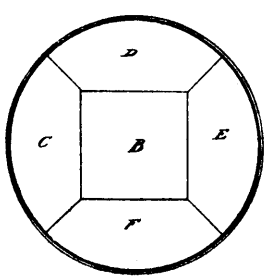
14388 Dowswell's Improvement on Washing Machines.



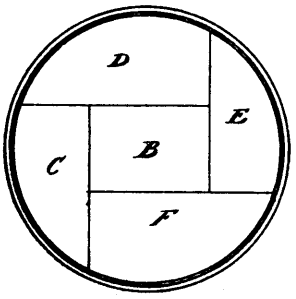
14389 Wilcox's Improvements on Processes and Apparatuses for Making Horse Shoe Blanks.



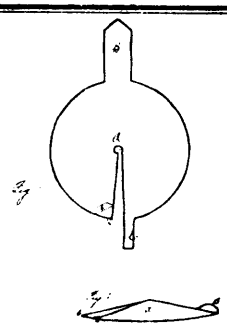
14390 Wilcox's Improvements on Processes and Apparatuses for Making Horse Shoe Blanks.



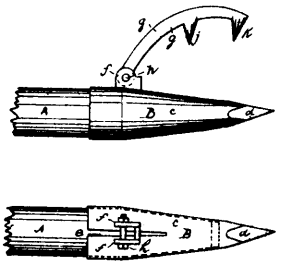
14391 Henderson's Improvements on Candy Boxes.



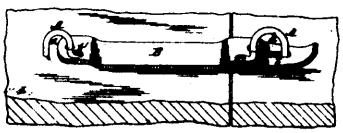
14392 Henderson's Improvements on Candy Boxes.



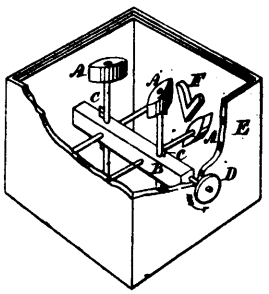
14393 Willmot's Improvements on Pot Covers.



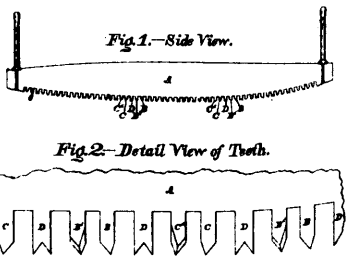
14396 Peavey's Improvements in Cant Dogs.



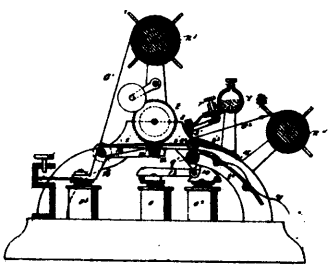
14397 Smith's Improvements on Hasp and other Staples.



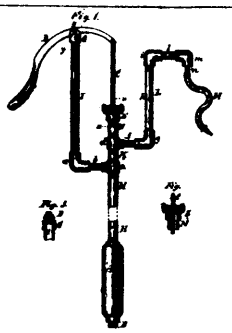
14398 Gibbs's Improvements in Churns.



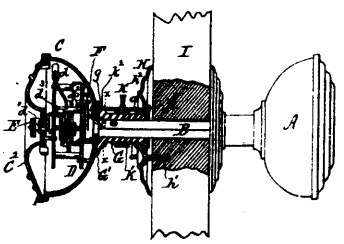
14399 Westphal's Improvements on Cross Cut Saws.



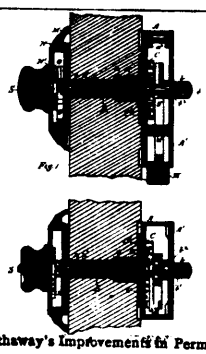
14400 Johnson's Improvements in Instruments for Receiving and Printing Secret Telegraphic Despatches.



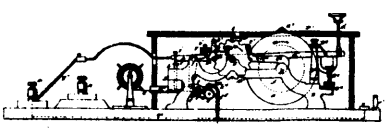
14401 Harris's Improvements on Force Pumps.



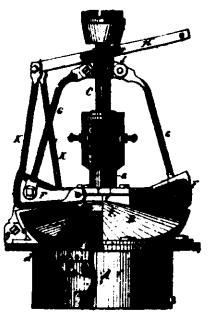
14402 Cook's Improvements on Door Knob Alarms.



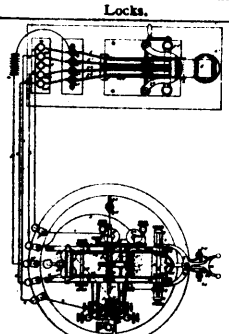
14403 Hathaway's Improvements in Permutation Locks.



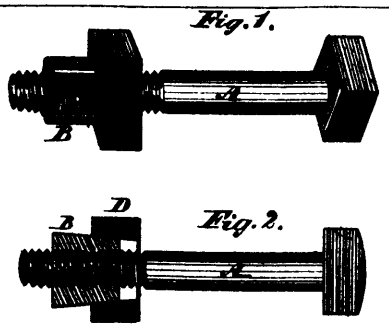
14404 Johnson's Improvements in Telegraphic Transmitters.



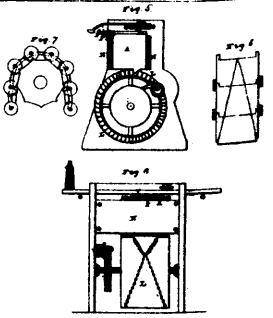
14405 Farrar's Improvements on Water Turbines.



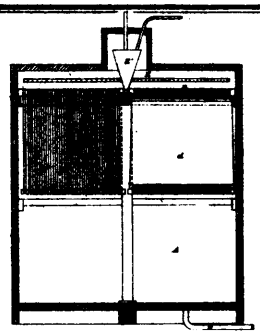
14407 Johnson's System of Transmitting Messages by Electric Telegraph.



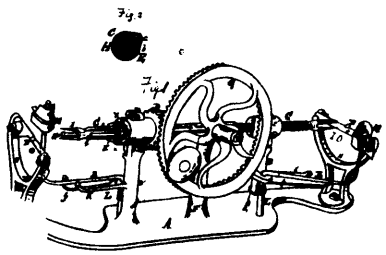
14408 Wallace's Improvements on Nut Locks.



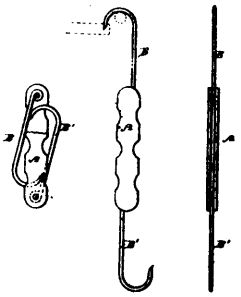
14409 Esty's Improvements in Knitting Machines.



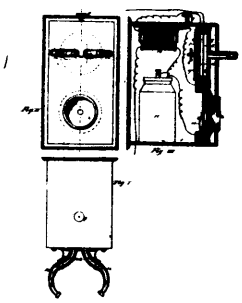
14412 Luck's Apparatus for Acetifying Alcoholic Wash and Maturing Spirits.



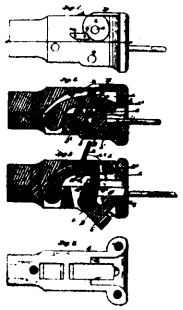
14414 Clark's Improvements on Apple Parers.



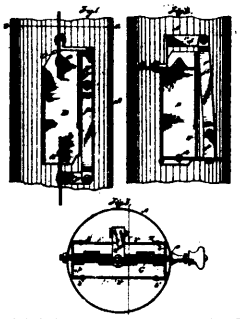
14415 McDonald's Improvements on Pocket Hangers for Hats and Coats.



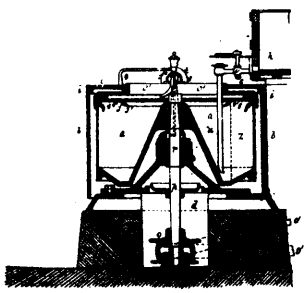
14416 Lakin's Improvements on Telephones.



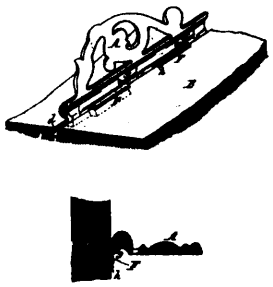
14419 Thurber's Improvements in Car-Couplings.



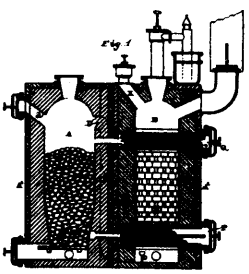
14420 Searight's Improvement in Reverting Dampers for Stove Pipes and Drums.



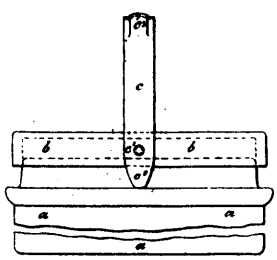
14421 Petersen & Nielsen's Improvements on Centrifugal Machines.



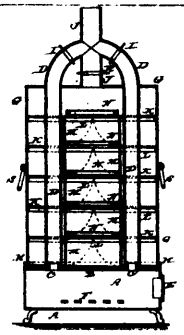
14422 Garretson's Improvements in Furniture.



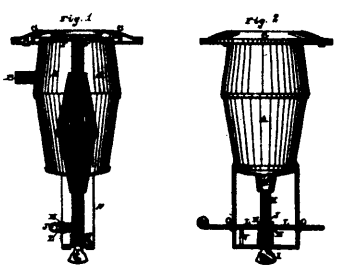
14423 Flannery's Improvements in Gas Generators.



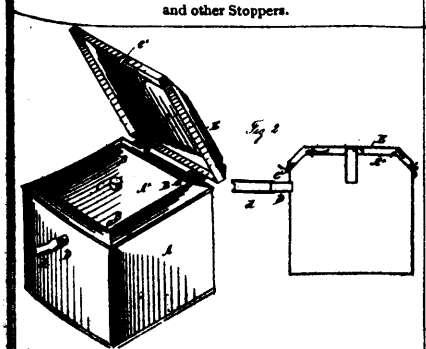
14424 Thompson's Improvements on Bottle, Jar and other Stoppers.



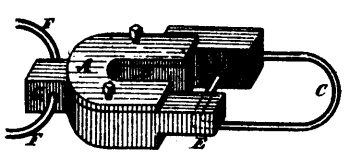
14425 Gunn's Improvements on Evaporators.



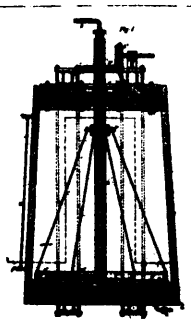
14426 Clayton's Improvements in Tuyeres.



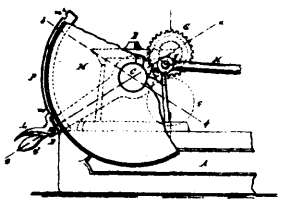
14427 Souvielle's Spirometer.



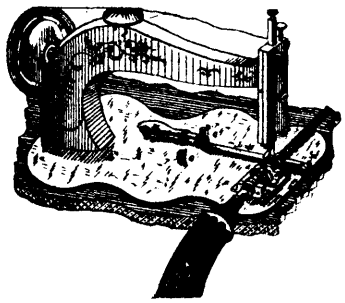
14428 Cairns's Improvement on Swivels for Adjusting Pumps and Pump Rods in Deep Wells.



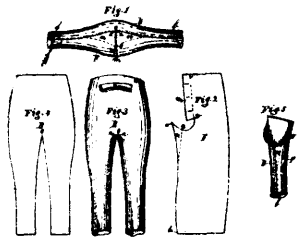
14430 Luck's Apparatus for Gelatinizing Grain.



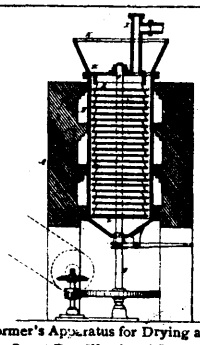
14431 Marsh's Improvement on Steam Engine Valve Gears.



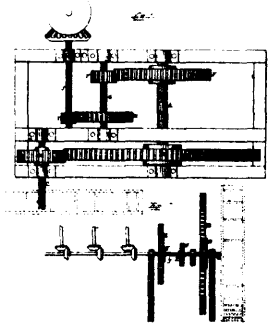
14432 Doolittle's Improvements on Sewing Machines.



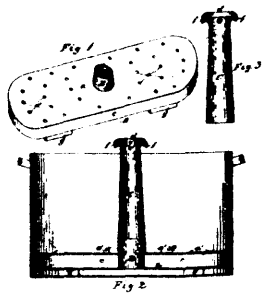
14434 Frank & Galligan's Improvements in Overalls, Pantaloons, &c.



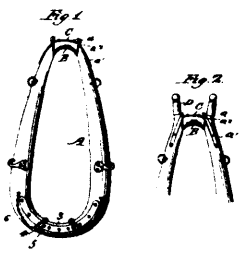
14435 Stormer's Apparatus for Drying and Distilling Spent Dye Wood and Saw Dust, &c.



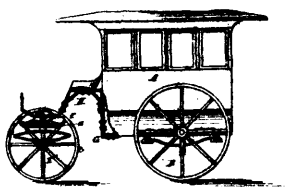
14436 Leacox's Improvements in Gearings.



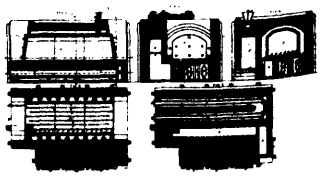
14439 Forbes's Improvements in Steam Washing Machines.



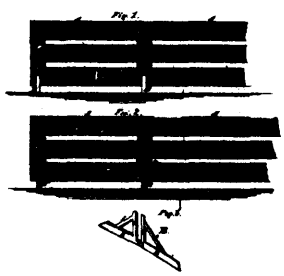
14440 Guinnip's Improvements in Horse Collars.



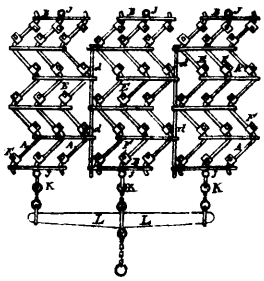
14441 Gurney's Improvements in Carriages.



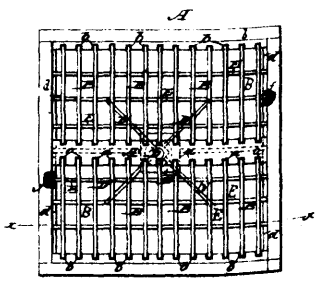
14442 Barff & Bower's Improvements in Effecting the Protection of Iron and Steel Surfaces and in Furnaces therefor.



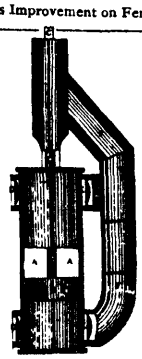
14443 Buck's Improvement on Fences.



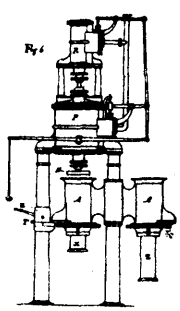
14444 Davies's Improvements in Harrows



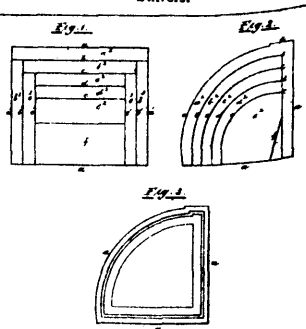
14447 Flohr's Improvements on Tan Vats and Stirrers.



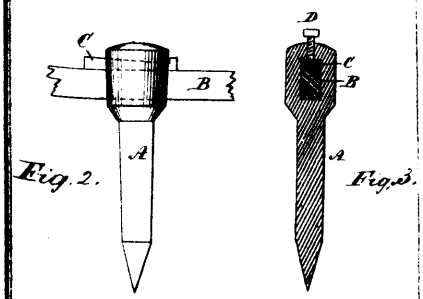
14448 Collver's Improvements on Force Pumps.



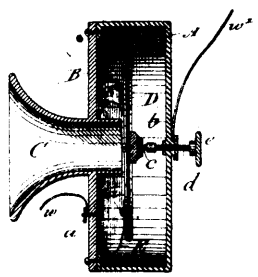
14449 Parsons's Improvements in Pottery Moulding Machinery.



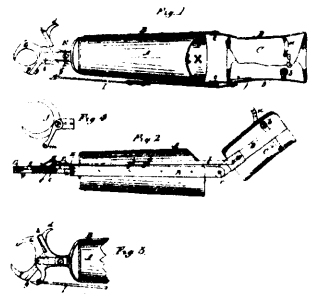
14450 Crandell's Improvements on Paper Safes.



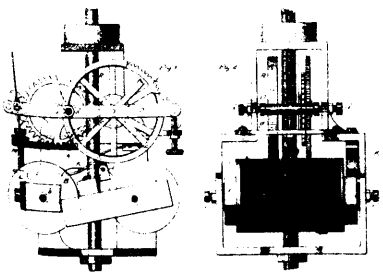
14452 Campbell's Improvements on Harrows.



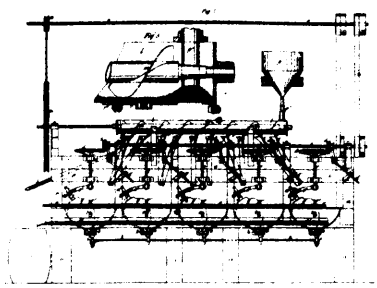
14454 Watson's Improvements in Telephones.



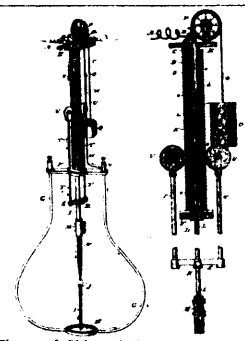
14455 Bowes's Improvements on Artificial Hands.



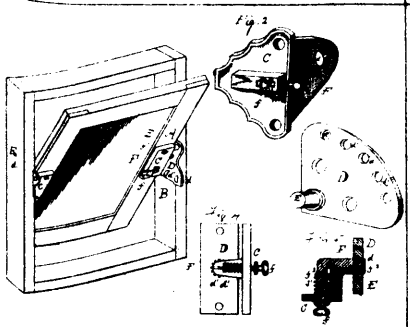
14456 Olmsted's Improvements in Electric Lamps.



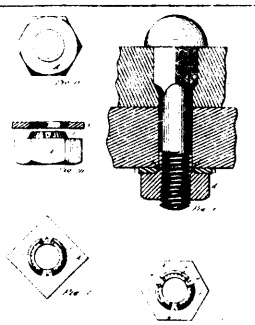
14457 Readwin's Improvements on Ore Grinding and Amalgamating Machines.



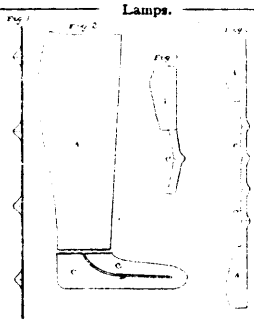
14458 Thomas & Skinner's Improvements on Electric Lamps.



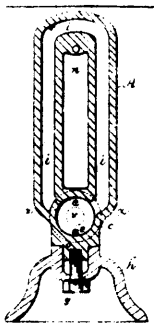
14459 Phillips's Improvements on Transom Pivots.



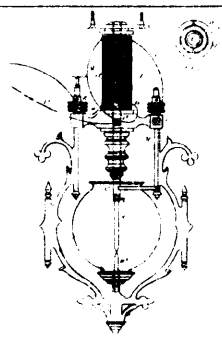
14460 Paige's Improvements on Nut Locks.



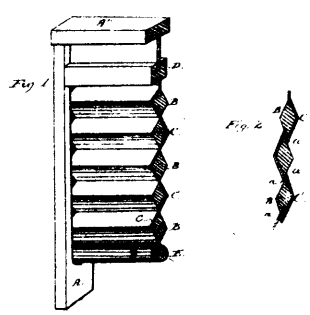
14461 Esty's Improvements in the Manufacture of Stockings.



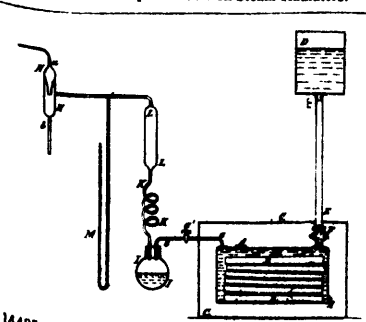
14462 Rodier's Improvements on Steam Radiators.



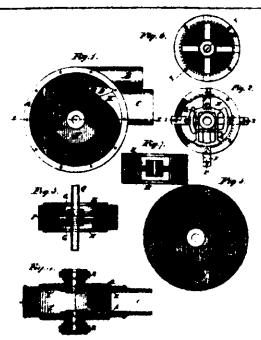
14463 Kay's Improvements in Electric Lamps.



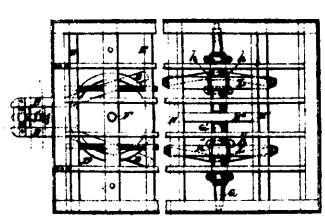
14464 Gates's Improvements on Wash Boards.



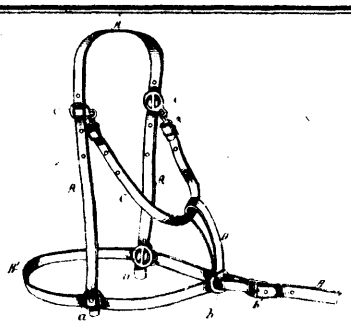
14465 Fleming's Improvements in the Preparation of Materials to be Employed for the Purposes of Electric Insulation.



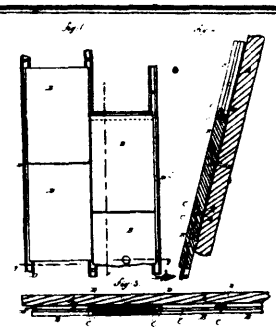
14470 Gurd's Improvements on Rotary Motors.



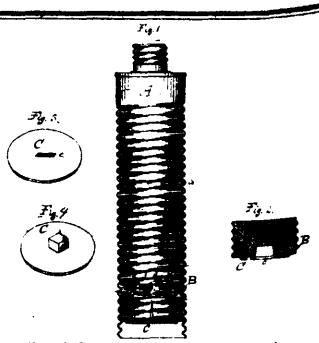
14471 Esch's Improvements on Trucks.



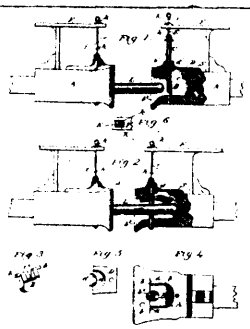
14472 Stowell's Improvements in Halters.



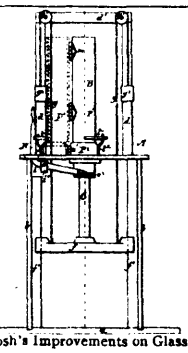
14473 Williams's Improvements in Tiling for Roofs, Floors, &c.



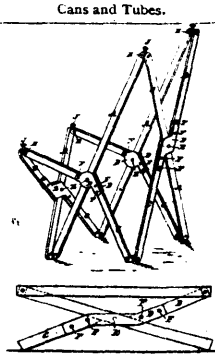
14474 Grout's Improvement on Paint and other Cans and Tubes.



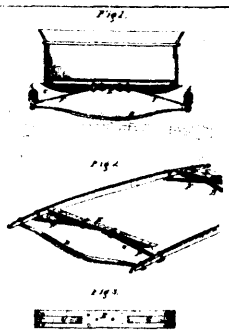
14475 Hubbell's Improvements in Car-Couplings.



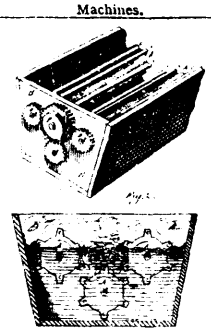
14476 McIntosh's Improvements on Glass Pipe Machines.



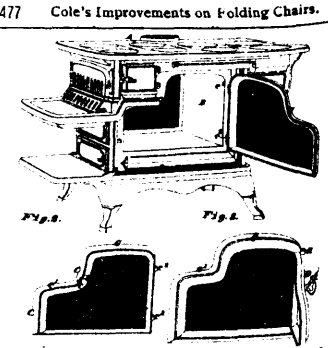
14477 Cole's Improvements on Folding Chairs.



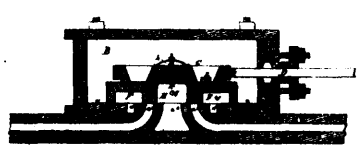
14478 Bailey's Improvements on Vehicle Springs.



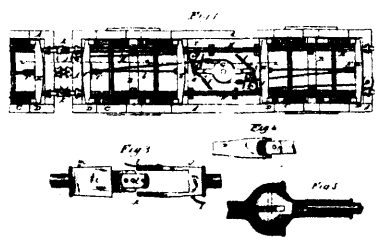
14479 Mallory's Improvements on Machines for Scalding and Sticking Fur to Felt Hat Bodies.



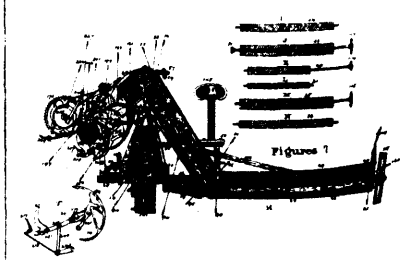
14480 Filley's Improvements on Cooking Stoves and Ranges.



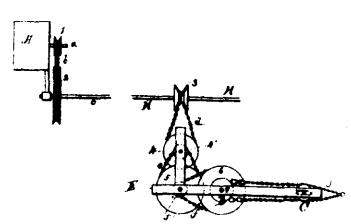
14481 Poore's Improvements on Balance Slide Valves.



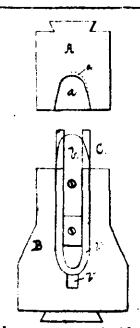
14482 Martel's Improvements in Car Brakes.



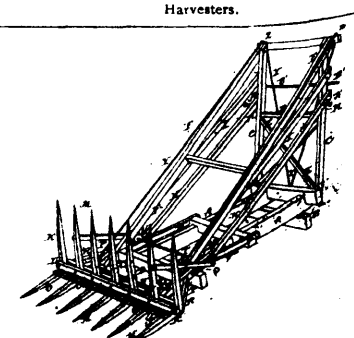
14483 Whiteley & Bayley's Improvements on Harvesters.



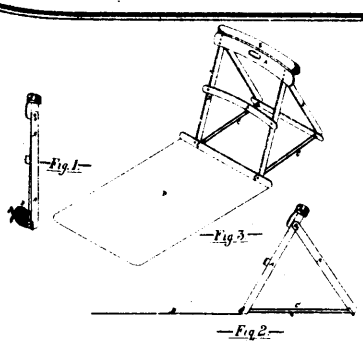
14485 Kendall's Improvements on Steam Brakes.



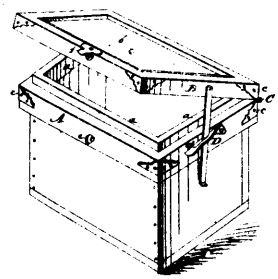
14487 Szink's Improvements in Machines for Welding Links.



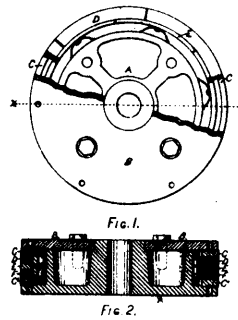
14488 Dain's Improvements on Hay Elevators and Stackers.



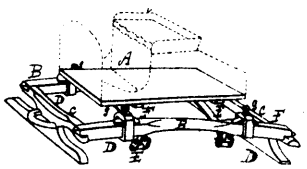
14489 Tarante's Improvements on Beach Seats.



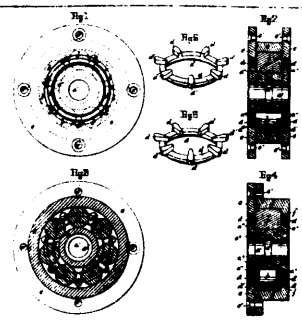
14490 Langlès's Improvements on Show Boxes.



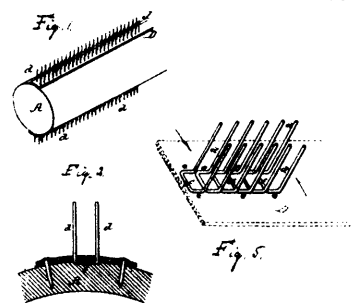
14491 Seeberger's Improvement in Piston Packing.



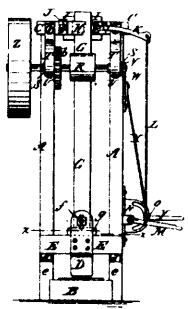
14492 Adams's Improvements on Waggon Springs.



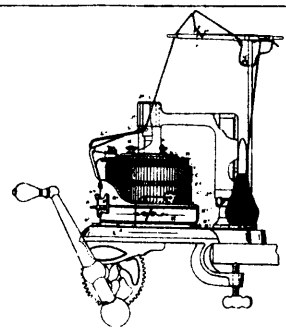
14493 Ferrall's Improvements on Anti-Frictional Bearings.



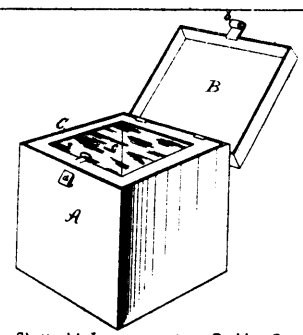
14494 Kershaw & Cunningham's Improvements on Card Teeth.



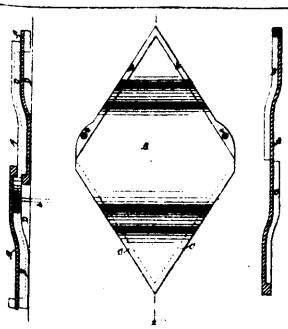
14495 Grandy & Folson's Improvements in Wood Splitting Machines.



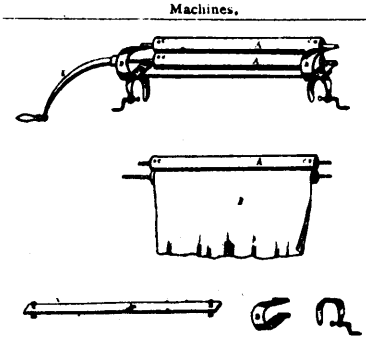
14496 Creelman & Kay's Improvements on Knitting Machines.



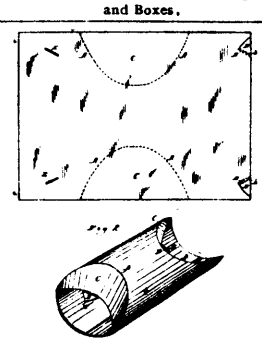
14497 Shattuck's Improvements on Packing Cans and Boxes.



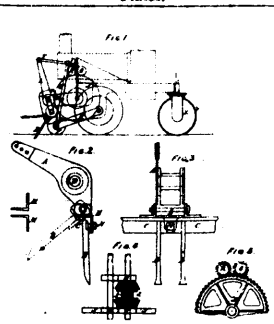
14498 Lane & Woodworth's Improvements in Roofing Plates.



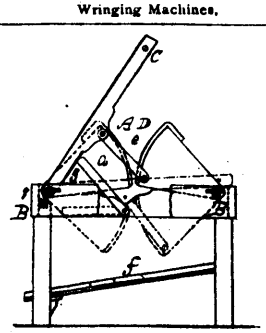
14499 McLean's Improvements on Washing and Wringing Machines.



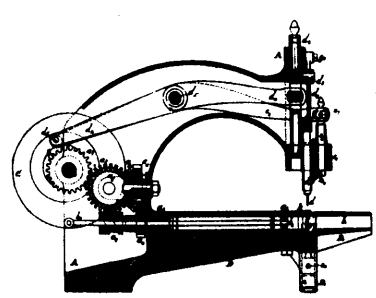
14501 Ferris & Sheppard's Butter Package.



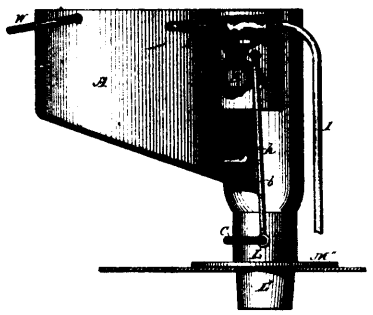
14502 Parker's Improvements on Digging Machines.



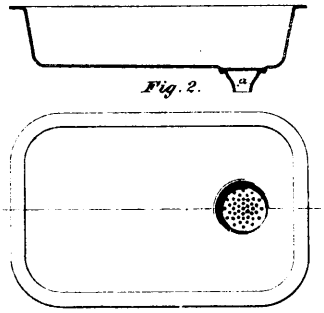
14504 Blanchard's Improvements on Butter Workers.



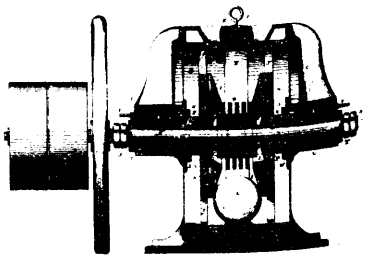
14505 Mills's Improvements on Sewing Machines.



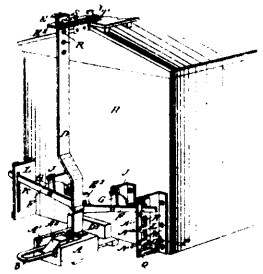
14511 Reach's Improvements on Water Closets.



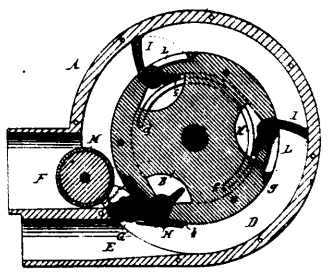
14512 Kilbourne's Improvements in Sinks.



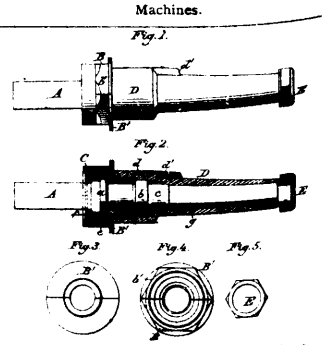
14513 Feldmann's Improvements in Pulverizing Machines.



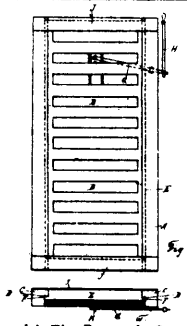
14514 Barrett's Improvements on Car-Couplings.



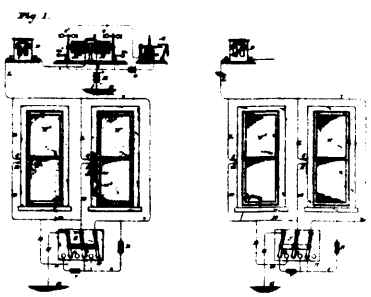
14515 Gurd's Improvements on Rotatory Motors.



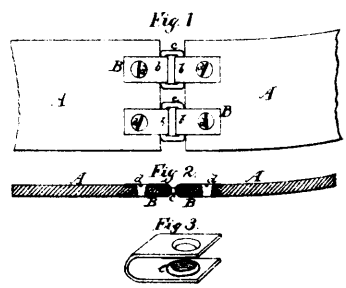
14516 Provancher's Improvements in Carriage Axles.



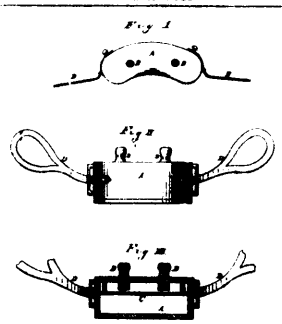
14517 Symmonds's Fire Bottom for Stoves, Grates and Furnaces.



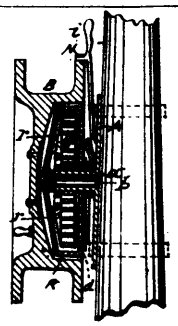
14518 Kerner's Improvements on Electric Burglar Alarms.



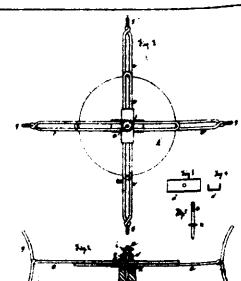
14519 Rice's Improvements on Belt Couplings.



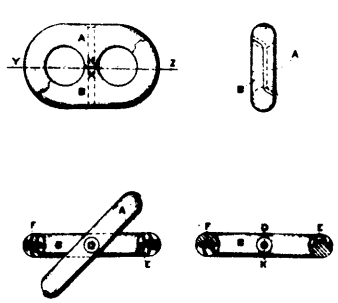
14520 Leslie's Improvements on Inhaling Apparatus.



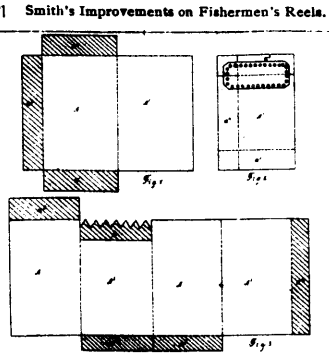
14521 Smith's Improvements on Fishermen's Reels.



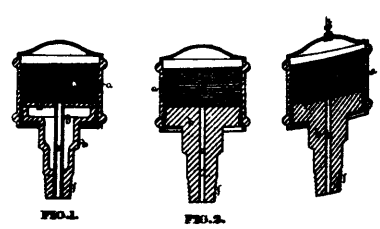
14522 Burrowes's Improvements on Yarn Reels.



14523 Walker's Improvements on Connecting and Disconnecting Links.



14524 Cox's Improvements on Envelopes.



14525 Rhodes's Improvements on Lubricators.