

No. 12,404. Improvements on Swivel Ploughs.*(Perfectionnements aux charrues tourne-oreille.)*

Jeremy P. Holley, Farmington, Me., U. S., 24th February, 1881; for 5 years.

Claim.—1st. The coulters sheaths I, and the rounded plate K upon the beam and between the sheaths, in combination with the coulters and pivoted bar for lifting the coulters. 2nd. The beam A, coulters G, pivoted bar H, sheaths I and chain L, in combination with a reversible plough.

No. 12,405. Improvements on Hatters' Irons.*(Perfectionnements aux fers des chapeliers.)*

Francis C. Taylor, New York, U. S., 24th February, 1881; for 5 years.

Claim.—1st. The iron A having face f, and one or more concave surfaces g h having a bead or beads i, in combination with a suitable handle connected thereto in a manner as will admit the reversibility of said iron. 2nd. The combination, with the iron A, of the handle B, screw c and sliding bolt d.

No. 12,406. Improvements on Chairs.*(Perfectionnements aux chaises.)*

Newton Brown and John H. Hicks, Paradise, N. S., 24th February, 1881; for 5 years.

Claim.—1st. A chair composed of seat E, bearing on rear legs secured flatwise at about a right angle to inclined flat sides A A, and supported rearwardly by flat strips G G secured to flat rails B F.

No. 12,407. Improvements on Regulators for Electric Lamps.*(Perfectionnements des régulateurs des lampes électriques.)*

Edwin J. Houston, Philadelphia, Pa., and Eliha Thomson, New Britain, Ct., N. S., 24th February, 1881; for 5 years.

Claim.—1st. A shunt electro magnet whose current is derived from that traversing the arc provided with an armature adjustable with respect to said magnet, and the motion of which armature is employed solely to open and close an electric contact, which contact, when made or broken, serves in connection with suitable mechanism provided therefor to adjust the position of the carbon-electrodes. 2nd. The combination of an electro-motor acting to separate the electrodes, with a shunt-magnet separately acting to open and close an electric contact, the separation of the electrodes by said motors being sustained until, by an increase in the arc resistance, the power of the shunt-magnet is sufficiently increased to close the aforesaid electric contact, and thereby divert the electric current from the motor which, ceasing to act, permits the approach of the carbon-electrodes. 3rd. An electro-magnetic device traversed by a current derived or shunted from that of the carbon electrodes, the increase or decrease in the strength of which makes or breaks an electric contact, said contact completing a branch or shunt around an electro magnetic device traversed by the direct current, or a portion thereof, which latter electro-magnetic device alone adjusts the position of the carbon electrodes during normal operation. 4th. An adjustable spring S, the degree of elastic force of which, acting in opposition to the magnetic power of a shunt magnet K, determines the moment of closing the contacts p q, in virtue of an increased power of the shunt magnet, due to an increased arc resistance, consequent on an increased length of arc. 5th. The separating device M N, the intervals of action of which are controlled by an electric contact, the closing and opening of said contact being dependent directly upon variations in the power of a shunt electro-magnet K, whose variations are themselves dependent upon variations in the arc resistance. 6th. The rod R supporting an electrode narrowed at Z. 7th. The combination of the shunt-magnet lever L and roller lever Li, so as to relieve the rod R of its support on an abnormal increase in the strength of the shunt-magnet.

No. 12,408. Improvements on Nailing Machines.*(Perfectionnements aux machines à clouer.)*

The Corrugated Wire Fastening Company, (Assignee of Albion Knowlton), Boston, Mass., U. S., 24th February, 1881; for 5 years.

Claim.—1st. In a nailing machine, the wire feeding mechanism, combined with length gauging cam having a surface to determine the extent of movement of the wire feeding mechanism for nails of different length. 2nd. The wire feeding and cutting mechanism combined with the adjustable length gauging cam, and lever operated by it, to release the hold of the wire feeding mechanism from the wire and operate the cutter to sever the said wire. 3rd. The adjustable rotatable length gauging cam provided with the tapering face 2, and surface 8 combined with the lever m, and its roller 4 having a rounded face. 4th. The wire feeding roller r, supported by the arm z, combined with the cutter bar, actuating lever adapted to move the said roller away from the roller z, and stop the wire feed as the cutter begins to sever the wire. 5th. The cutter bar n, and its hardened steel tube adapted to serve as the carrier to place the nail in line with the driver, combined with a stationary cutter to co-operate with the said tube in the bar n. 6th. A cutter bar provided with a hardened steel tube, to co-operate with a stationary cutter to sever a nail from a wire, and carry it into position below the driver h to be driven, combined with the driver and driver-bar, and shoe feeding mechanism. 7th. An intermittently operating wire feeding mechanism adapted to feed the wire for a greater or less distance, according to the desired length of the nail, combined with a carrier having a hardened steel cutter, and a co-operating stationary cutter to sever the wire, at right angles to its length and place it in a position to be driven.

No. 12,409. Improvements on Condensers.*(Perfectionnements aux condensateurs.)*

Israel R. Blumenberg, Washington, D. C., U. S., 24th February, 1881; for 5 years.

Claim.—1st. A surface condenser, consisting of two standing diverging legs for the condensing liquid to ascend in one leg after the other, and having a corresponding interior tube system or chamber for the steam, vapour or

gas to descend in and to be thus condensed. 2nd. The chamber A A, made in the form of two slanting diverging legs for the ascent of the condensing water, and having at each end a tube plate C C, with connecting tube or tubes D D, for the descent of the fluid to be condensed, and also a bonnet B B, and inlet and outlet openings b b and c c. 3rd. A surface condenser, the outer chamber of which is made in the form of two slanting diverging legs, and constructed in halves for the convenience of making and for affording facility for adding an intermediate chamber.

No. 12,410. Fish Extract.*(Extrait de poisson.)*

Stephen L. Goodale, Saco, Me., U. S., 24th February, 1881; (Extension of Patent No. 5,764.)

No. 12,411. Process of Purifying Waxes, Resins, Gums and Fatty Matters.*(Procédé d'épuration des cires, résines, gommes et corps gras.)*

Louis G. Bertram, Brooklyn, N. Y., (Assignee of William Bell and Daniel T. Gray, executors of the will of William M. Sloane, New York, N. Y.) U. S., 26th February, 1881; for 5 years.

Claim.—1st. The process of purifying, cleaning and refining paraffine wax, other waxes, fatty matters, resins and gums, consisting in forming a solution thereof with naphtha or other solvent through heat and agitation, subsequently cooling and congealing the same, next subjecting the same to pressure, and then filtering, keeping the mass heated during the filtering.

No. 12,412. Improvements on Combined Steam and Air Engines.*(Perfectionnements aux machines à vapeur et atmosphériques combinées.)*

Edward M. Strange, Baltimore, Md., U. S., 26th February, 1881; for 5 years.

Claim.—1st. In combination, with a steam generator, an engine cylinder, one end of which is adapted as an air compressor to force air to the said generator, and with this view connected to the said generator, by means of a suitable air pipe having a valve therein opening towards the said generator, the other end of the said cylinder being connected to the steam space of the generator, through the medium of appropriate pipes and valve openings. 2nd. In combination with a steam generator, an engine cylinder, one end of which is in communication with the steam space of the said generator, the other end of the said cylinder being used as an air compressor, and adapted to force air to the steam pipe of the engine, or to the steam chest of the said engine. 3rd. In combination with a steam generator, an air compressing cylinder surrounded or partially surrounded by a water jacket, the water of which has means of communication with the water in the boiler, or with the other source of water supply, and also with the steam of the boiler at boiler or cylinder pressure. 4th. In combination with a steam generator, an air compressing cylinder surrounded, or partially surrounded by a water jacket, the water of which is in communication with the steam from the said boiler. 5th. In combination with an engine cylinder, an air compressing cylinder surrounded by a water jacket, with appropriate pipes for conducting the compressed air and the steam generated in said water jacket, by the heat from the compressed air to the said engine cylinder.

No. 12,413. Improvements on Button Fasteners.*(Perfectionnements aux queues des boutons.)*

William H. Sproston, Birmingham, Eng., 26th February, 1881; for 5 years.

Claim.—1st. As an improved article of manufacture, a button fastener integrally composed of the disc A, prongs B B, with hooked terminations C C, bent laterally together, to hold the shank of a button.

No. 12,414. Improvements on Boot Soles.*(Perfectionnements aux semelles des bottes.)*

Findlay McKellar, Tiverton, Ont., 26th February, 1881; for 5 years.

Claim.—1st. The wooden sole. 2nd. The mode of attaching the sole to the upper.

No. 12,415. Improvements in Egg Carrier Trays.*(Perfectionnements aux boîtes à oeufs.)*

John T. Fogg, Garland, Me., U. S., 26th February, 1881; for 5 years.

Claim.—1st. An egg carrier tray composed of interlocking strips and four outside strips united at the corners with flexible folding hinges, constructed so as to present no projecting ends of the various strips. 2nd. The combination of the strips A A, having slots a a at the strips B B with their slots b b b, and strips C C with their slots c c, all interlocked and hinged to the surrounding frame D D. 3rd. The combination of the interlocking strips A B C, with the four strips D D which are hinged together and provided with blocks or guards F F.

No. 12,416. Improvements on Sewing Machines.*(Perfectionnements aux moteurs des machines à coudre.)*

Joseph V. Morton, Winchester, Ky., U. S., 26th February, 1881; for 5 years.

Claim.—1st. The combination, with the treadle D, of the hand lever F the connecting rod H, and the adjustable rod I, whereby the sewing machine can be driven by hand power or foot power, or by hand and foot power combined. 2nd. The combination with the hand lever F, of the jointed hand piece L, and the spring catch bolt M N, whereby the hand piece, when not in use, can be turned down out of the way.

No. 12,417. Improvements on Fire-Escapes.*(Perfectionnements aux sauteurs d'incendie.)*

Charles Barlow, Cookshire, Que., 26th February, 1881; for 5 years.

Claim.—1st. The cylinders A A containing the gas or fluid, and the pis-