

being combined and arranged substantially as described. 19th. In a brush making machine, substantially such as described, a device for connecting the boring device and tufting device with the pattern device in such a manner that they may be operated in unison, consisting of the rocker, shaft 25, pitman 26, lever L, pitman 27, lever G, arm 28, clutch 29, pulley C, shaft B and operative mechanism, the parts being combined and arranged to operate substantially as described. 20th. In a brush making machine, substantially such as described, the combination of a pattern device, a tufting device and a device for adjusting the boring device horizontally in respect to the pattern device, consisting of the rods 30, cranks 31 screws 32 and frame 34, substantially as described. 21st. In a brush making machine, substantially as described, a shipping device for stopping the operations of the boring and tufting devices, consisting of the lever 35 having the stud 41, bar 39 having slots 40 and 42, lever L, shaft 25, pitmans 26 and 27, lever G, clutch 29 and disk P having the cam 38 and operating substantially as set forth. 22nd. In a brush making machine, substantially such as described, the tufting socket 17 provided, with the slot 68, formed partially in the cross-head 19 and partially in the body of the socket 17 to receive the edge of the plunger 16 and end of the wire 61, substantially as set forth. 23rd. In a brush making machine, substantially such as described, the treadle 69, in combination with the lever 35 and bar 39 having the slots 41 and 42, substantially as and for the purpose specified.

No. 22,090. Electric Cut-out for Loops in which Incandescent, or other Electric Lamps, Motors and Appliances are Attached. (*Interrup-teur Electrique pour les Anneaux dans les quels les Lampes Incandescentes ou autres, les Moteurs et les appareils Electriques sont Attaches.*)

William M. Thomas and the Grand Rapids Electric Light and Power Company, Grand Rapids, Mich., U.S., 15th July, 1885; 10 years.

Claim.—1st. The combination, substantially as set forth, of the main circuit, the double wound helix in which the electric current from the main line is normally divided, the loop circuit, a series of lamps or other electrical appliances contained in the loop conductors for conveying one branch or division of the current to a given number of the lamps or other appliances, conductors for conveying the other division of the current to the remaining appliances, and a shunt circuit, substantially such as described, whereby the entire current is shunted and cut out from all the appliances whenever a disturbance or disarrangement occurs in one branch of the loop circuit. 2nd. The combination, substantially as set forth, of the main circuit, the double-wound helix in which the electric current from the main line is normally divided, the core of the helix, its armature, the loop-circuit, an electrical connection between the loop and the main line, an electrical conductor joined to one branch of the circuit between the helix and the loop and to the core, and an electrical connection between the armature and the main line, whereby the entire current will normally pass into the loop, but will be shunted and cut out from the loop whenever a disturbance or disarrangement occurs therein.

No. 22,091. Improvements in Making Nails. (*Perfectionnements dans la Fabrication des Clous.*)

The Russell and Erwin Manufacturing Company, New Britain (Assignee of Horace K. Jones, Hartford, Ct., U.S., 16th July, 1885; 5 years.

Claim.—1st. The within described nail stock, consisting of a continuous metallic rod or wire, having formed on its periphery throughout its entire length, for the purpose specified, a spiral rib whose upper face is approximately at right angles to the longitudinal centre of said rod or wire. 2nd. A headed and pointed round wire nail, having a shank spirally barbed throughout its length, substantially as described. 3rd. A headed round wire nail, having a shank spirally barbed throughout its length, and an angular point, substantially as described.

No. 22,092. Improvements in Making Nails. (*Perfectionnements dans la Fabrication des Clous.*)

The Russell and Erwin Manufacturing Company, New Britain (Assignee of Horace K. Jones, Hartford, Ct., U.S., 16th July, 1885; 5 years.

Claim.—1st. The within described "nail stock," consisting of a continuous metallic rod or wire having its periphery throughout its entire length formed with barbs arranged concentric with said rod or wire, the upper face of each of said barbs being approximately at right angles to the line of wire, all for the object specified. 2nd. As a new article of manufacture, a suitably headed and pointed drive nail, whose body portion is formed with a series of concentric barbs or cones, the end of said barbs or cones which confronts the head of the nail being approximately at right angles to the longitudinal centre of said body, substantially as described and for the purpose specified.

No. 22,093. Apparatus for Raising Water, etc. (*Appareil pour Elever l'Eau, etc.*)

Cuthbert Burnett, Hartlepool, Eng., 16th July, 1885; 5 years.

Claim.—1st. In pumps, the employment of a piston or diaphragm, in combination with a steam admission valve or valves, whereby the steam is admitted in such quantity that at any desired point before or on the completion of the stroke the pressure of the steam will fall to or below the pressure of the column of water in the rising main, when a portion or jet of same will return through the injection port, the said jet being controlled when desired either by the piston or otherwise, and so effect the condensation, all substantially as herein-

before described and illustrated with reference to the accompanying drawings. 2nd. In pumps, the employment of shifting valves for admitting a regulated or measured quantity of air during the stroke or at or near the completion of same, in combination with the steam admission valves, all substantially as described and illustrated with reference to the accompanying drawings. 3rd. In pumps, the employment of steam snifting valves, whereby steam is admitted instead of air for destroying the vacuum, in combination with the piston open to the atmosphere, all substantially as described and illustrated particularly with reference to Figs. 20, 22, 30 and 31 of the accompanying drawings. 4th. In combination, with a single acting pump body consisting of a base having a suction valve and injection pipe, its head consisting of a cylinder, piston, steam valves, an attachment with a snifting valve and steam way, of an air vessel provided at its base with a delivery valve and injection pipe, substantially as set forth. 5th. The general combination and arrangement of single and double acting pumps, together with the valves and mode of operating same, all substantially as hereinbefore described and illustrated with reference to the accompanying drawings.

No. 22,094. Druggist's Sieve.

(*Couloire de Droguiste.*)

Eliza E. Scott, Hamilton, Ont., 16th July, 1885; 5 years.

Claim.—1st. In a sifter, the cradle C consisting of the end disks secured together by perforated sheet metal bands a, and provided with spindles D, D, and crank handle E, substantially as specified. 2nd. In a sifter, the cylindrical revolving sifter G made to fit in the cradle C, and formed in two parts hinged together and provided with tongue and groove-ends b, b, a catch c, handles d, d, buttons e, e, and crank E, all constructed and arranged substantially as and for the purpose specified. 3rd. In a sifter, the combination of the cradle C and the sifter G, substantially as specified. 4th. In a sifter, in combination with the box A, cradle C and sifter G, of the sliding bottom H, as and for the purpose specified. 5th. In a sifter, the combination of the box A, B, cradle C, sifter G, crank E, spindles D, D, all constructed substantially as and for the purpose specified.

No. 22,095. Self-Binding Harvester.

(*Moissonneuse-Lieuse.*)

A Harris, Son & Co. (Assignees of John Harris and Josiah Lucas), Brantford, Ont., 16th July, 1885; reissue

Claim.—1st. In a self-binding harvester, the binding table A hinged at one side to the main frame, and provided with the usual binding attachments, and carrying the knoter mechanism, in combination with the brackets C, C, the former pivotally connected with the table and supporting the inner side thereof, the latter rigidly connected with the main frame and serving as supports for the outer end of the said table when in a normal position, the parts being constructed, arranged and operating substantially as and for the purpose specified. 2nd. In combination with the rods D, D, supporting the binding-table, its attachments and the knoter mechanism, the brackets C, C, the former having the frame rod D of of the binding table sleeved thereon, and the latter rigidly connected to the main frame to receive and support the rod D, when binding table is in a normal position, as and for the purposes set forth. 3rd. In a self-binding harvester, in which the binding table is hinged to the elevator frame, below an independent table secured to the elevator frame, and extending from the binder table to the conveying apron, one or more bolts being arranged to hold down the independent table, in combination with springs, as specified, so as to permit a slight upward movement of the independent table during the folding up of the binding table. 4th. In a self-binding harvester, in which the frame carrying the binding mechanism is hinged to the harvester, the divided packer-shaft, one portion thereof carried by the harvester, and the other portion carried by the hinged binder frame, a socket formed in the end of that portion of the packer-shaft carried by the harvester, in combination with a spring attached to that portion of the shaft on the harvester, and arranged to engage with the portion on the binder frame, substantially as and for the purpose specified. 5th. In a self-binding harvester, in which the frame carrying the binding mechanism is hinged to the main frame of the harvester, and adapted to be folded up to reduce the width of the harvester, the brackets C, C, arranged to support the said frame in its normal position, in combination with an arm pivoted on the bottom of the binder-frame, and arranged to support the frame when folded up, substantially as described. 6th. In a self-binding harvester, the feeding-table B, the brackets C, C, rigidly attached to the main frame, the rods D, D, carrying the binding-table, its attachments and the knoter mechanism, the rod D pivotally mounted within the brackets C, C, to permit the folding of the parts carried thereby, in combination with a cranked lever to impart a longitudinal movement to said rod, as and for the purpose set forth. 7th. In a self-binding harvester, one or more fingers attached rigidly to the main binder-shaft which operates the knoter and carries the ejecter finger, for the purpose of retaining loose grain while the sheaf is being formed.

No. 22,096. Fastener for Paper, etc.

(*Oeillet à Papier, etc.*)

Edward W. Ball, Worcester, Mass., U.S., and William J. Reid, London, Ont., 16th July, 1885; 5 years.

Claim.—As an improved article of manufacture, a metal paper fastener consisting of two wings B, B, and fastening-finger C, wings B and B standing at right angles to each other, and fastening-finger C standing at right angles to wing B, and parallel to plain wing B, substantially as and for the purposes set forth.

No. 22,097. Winding Coils used in Telephone Circuits. (*Enroulage des Bobines employées dans les Circuits des Téléphones.*)

Silvanus P. Thompson, Bristol, and Philip Jolin, Redland, Eng., 16th July, 1885; 5 years.