tube C open at both ends, whereby heat from the burner is cut off from the oil in the fount by a space through which air may ascend, for the purpose described. 2nd. The combination of the fount B, jacket D and double walled wick-tube C, open at both ends, and closed at the bottom by an annular ring D_1, and provided with a tubular feed E opening through the jacket, whereby oil will be taken solely from near the bottom of the fount, for the purpose set forth. 3rd. In combination with the double-walled wick-tube C, open at both ends, having ratchet wheel G, of the surface perforated tubular wick-holder K, as set forth. 4th. The combination, with the double-walled wick-tube C, open at both ends, of the perforated tubular wick-holder K, and ring L for holding the wick, as set forth. 5th. The combination, with the jacket D, and wick-tube C, of the wire M, spring P and spreader O, for extinguishing the flame as set forth. 6th. The basket R, in combination with a tubular wick-tube C, and tubular lamp stand A for catching cinders from the burner, as set forth. 7th. The combination of the hollow stand A, fount B, jacket D, tubular double-walled wick-tube C, centrally open at both ends and extending through the jacket ratchet wheel G, perforated tubular wick-holder K, and depressable extinguisher, consisting of the wire M, spring P and spreaded O, as set forth.

No. 21,590. Autographic Telegraph Instrument and Circuit. *(Instrument et Circuit de Télégraphe Autographique.)*

Sylvester P. Dennison and Robert D. Radcliffe, New York, N. Y., U.S., 4th May, 1885; 5 years.

Claim.—1st. An automatic autographic telegraph instrument, having the operating stylus or electrode vibrating over the surface of the substance on which the message is written or to be recorded, attached to or connected with an armature so pivoted or arranged in the field of an electro-magnet fixed to one pole of a permanent magnet, that when the said electro-magnet is placed in a line and actuated by certain changes of polarity introduced into the current on such line, the said armature will oscillate or move from side to side in obedience to the influence of the said changes, substantially as herein described. 2nd. An automatic autographic telegraph instrument, having the operating stylus or electrode vibrating over the surface of the substance on which the message is written, or is to be recorded, attached to or connected with an armature polarized by a helix and so pivoted or arranged in the field of a permanent magnet, or magnets, that when the said armature is placed in a line and actuated by certain changes of polarity introduced into the current on the said line, it will oscillate from side to side in obedience to the influence of the said changes, substantially as herein shown and described. 3rd. An automatic autographic telegraph instrument, having the electrode or stylus which vibrates over the surface of the substance on which the message is written, or is to be recorded, attached to or connected with the armature of a hollow electro-magnet, so arranged that when the said electro-magnet is placed in a line and actuated by certain changes of polarity introduced into the current on the said line, the said armature will oscillate in obedience to the influence of the said changes of polarity, substantially as herein described. 4th. The combination of an operating stylus or electrode, a connecting arm, an armature either of a hollow electro-magnet or an electro fixed to one pole, of a permanent magnet or an armature polarized by a helix pivoted or arranged to oscillate in the field of a permanent magnet, or magnets, with a means for reversing the polarity of the line into which the said electro-magnets or polarized armature are placed, substantially as herein set forth and described. 5th. The vibrating stylus or electrode attached to or connected with the armature of a hollow electro-magnet, or of an electro-magnet fixed to one pole, of a permanent magnet or an armature polarized by a helix and arranged to oscillate in the field, of a permanent magnet or magnets, both the stylus and electro-magnet or polarized armature being placed in the main line circuits, in combination with a means for reversing the polarity of the current, whereby the changes of polarity cause the vibrations of the stylus and the circuit is preserved for the transmission of the message's impulses, substantially as set forth. 6th. The combination of the following parts: means for reversing the polarity of the current of the main line, and the electro-magnet fixed to one pole of a permanent magnet or a hollow electro-magnet, with an armature arranged in either case to oscillate as the said electro-magnets are actuated by the said changes of polarity, or an armature polarized by a helix and pivoted in the field of a permanent magnet, the contact spring J and the relay points $g\,g$ by which the feed mechanism actuated and brought into exact unison with the changes of polarity on the line and the vibrations of the operating stylus or electrode, substantially as described. 7th. The combination of the electro-magnets U, U_1, with the relay points g, g, and the contact spring J, operated by the armature attached to the stylus by which the said magnets are alternately energized, and by the connected armatures T, T_1, a rocking motion given to the shaft h, substantially as described. 8th. The combination of the mechanism for feeding either of the two strips of paper under the electrodes, consisting of the electro-magnets U, U_1, the tilting connected armatures T, T_1, the shaft h, the rocking lever S, the pawls k, k_1, the connecting levers u, v, the escapement V, the ratchet-wheel R, the drums O, O_1, the friction rollers P, P_1 and the cam lever o by which one of the said rollers is made to engage with its drum while the other is withdrawn, substantially as herein described. 9th. The pole changer q, consisting of three plates on the periphery of a rocking wheel, and two contact rollers, the motion necessary to operate it being imparted by a force other than that of the current passing through it, substantially as herein shown and described. 10th. The combination of the feed mechanism, operated by a local circuit and the pole changer q for reversing the current on the main line whereby the said current is not taxed to reverse its own polarity, and at the same time the motions of the various parts, and the action of the main and local circuits is made reciprocal and the operation of the entire machine automatic, substantially as herein set forth and described. 11th. The combination, in one machine, of two electrodes or styluses, with their operating armatures, and magnets, with a single feed mechanism having two feed drums, and friction rollers, the several parts connected by a switch or circuit controlling mechanism, whereby either stylus or electrode may be operated at will, and the same machine be thus used for transmitting and receiving, substantially as herein set forth and described.

No. 21,591. Wire Strainer for Wire Fences. *(Machine à Tendre le Fil de Fer à Clôtures.)*

Joseph E. Pounds, Kew, (Assignee of Charles O. R. Walker, Coolart,) Victoria, 4th May, 1885; 5 years.

Claim.—1st. A wire strainer, consisting of a metallic roller having a central portion upon which the wire is wound of less diameter than its ends, which latter are provided with openings a^1 and recesses a^2, extending from said openings, substantially as and for the purpose specified. 2nd. A wire strainer, consisting of a metallic roller, having a central portion upon which the wire is wound of less diameter than its ends, in which latter are formed openings a^1, a recess a^2 extending from said openings, and a slot a^3 registering with said recess, substantially as and for the purpose specified. 3rd. A wire strainer, consisting of a hollow metallic roller, having a central portion upon which the wire is wound of less diameter than its ends, in combination with a fence post and wire, substantially as and for the purpose specified. 4th. A wire strainer, consisting of a hollow metallic roller, having a central portion upon which the wire is wound of less diameter than its ends, and its hollow axis formed angular in section, substantially as and for the purpose specified. 5th. A wire strainer, consisting of a roller having a central portion of less diameter than its ends, and provided in said ends with radial openings, in combination with a retaining device constructed to bite into or embrace the fence post to which it is applied, substantially as and for the purpose specified.

No. 21,592. Manufacture of Shoes. *(Fabrication des Souliers.)*

William A. Reed, Westborough, Mass., U.S., 4th May, 1885; 5 years.

Claim.—1st. The described method of forming the upper of a shoe, consisting in first cutting a blank in the form shown, then splitting the blank from the heel by an inclined cut to the proper point, and then forming the sides and counter out of the upper and lower sections with the thicker edges at the bottom, all substantially as described. 2nd. A shoe upper, formed of one piece, split in the rear portions, and having the edges of unequal thickness, said split portions constituting the sides and counters with the thicker edges at the bottom, all substantially as described.

No. 21,593. Automatic Shunt for Telephone Lines. *(Commutateur Automatique pour Téléphones)*

George F. Lutringer, (Assignee of Charles D. Wright and Charles A. Fisher,) Petersburg, Ill., U.S., 5th May, 1885; 5 years.

Claim.—1st. In a telephone line, an automatic resistance and retardation reducer, consisting of an electro-magnet placed in the line, and connected with the large signalling magnet of a spring, placed opposite the ends of the cores of the electro-magnet, and carrying the armature of said magnet, and of a binding screw against which the end of the spring rests, the binding screw and the spring being connected with the line wires, or wire leading to the line wires at opposite sides of the signalling magnets, substantially as herein shown and described. 3nd. The combination, with a telephone line, of the signalling magnet A, the electro-magnet B, connected with the signalling magnet, the spring D and armature attached thereto, connected by a wire with the line leading from the corresponding magnet A to the next magnet B, and of the screw G against which the end of the spring D rests, which screw is connected with the wire a, connecting the corresponding magnet B with the corresponding magnet A, substantially as herein shown and described. 3rd. The combination, with the signalling magnet A, of the magnet B, the spring D, the armature F on the same, the blocks H, the screw G held in the same the wire k connecting the block H with a wire leading to one end of the magnet A, and the wire f connecting the spring D with the wire leading to the other end of the magnet A, substantially as herein shown and described. 4th. The combination, with a telephone line, of a signalling magnet for each station, and an electro-magnet and a spring for each signalling magnet, which magnet and spring automatically cut out the signalling magnet when the reverse current does not pass through the said electro-magnet by reason of the retraction of its armature against a back stop to close a short circuit around the signalling magnet, and automatically bring the said signalling magnet in circuit when the reverse current of unusual strength passes through the electro-magnet, substantially as herein shown and described.

No. 21,594. Fire-Escape. *(Sauveteur d'Incendie.)*

George H. Downie, (Assignee of Robert E. Downie,) Whitewater, Wis., U.S., 4th May, 1885; 5 years.

Claim.—1st. In a fire-escape, a slide composed of the independent parts arranged side by side with their inner faces flat and in contact, in combination with a suspended rope passing in and out through both parts of the slide, a carrier attached to one member of the slide and a lever pivoted at one end to one member of the slide, and having its fulcrum on the other member, substantially as and for the purposes set forth. 2nd. In a fire-escape, the rope A, in combination with a slide member C, provided with apertures C and boss C_1, the companion slide member D, provided with apertures d and bosses d_1, and the bail E attached to one member of the slide, substantially as and for the purpose set forth. 3rd. In a fire-escape, suspended rope A, in combination with the slide B, composed of two members C and D, constructed substantially as specified, the bail E attached to one of the members of the slide and the lever C, substantially as and for the purposes set forth.

No. 21,595. Shutter Bolt and Fastening. *(Goupille et Loquet de Contrevent.)*

John Von Hollen, Charleston, S.C., U.S., 6th May, 1885; 5 years.