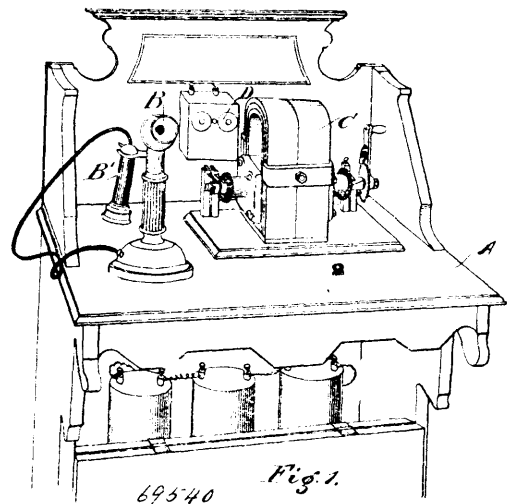


substantially as described. 12th. In a machine for drawing in warp threads, the combination of the oscillating and traversing heddle eye separating arm and its bifurcated reciprocating carriers, the reciprocating wedge-shaped slides adapted when closing together, to engage the heddle eye between them, and carry it outward into the path of the needle, and the two oppositely arranged pairs of reciprocating fingers coupled together to move simultaneously in the same direction, one pair of said fingers operating to hold the heddle eye against the wedge-shaped slides while the needle is passing through said eye, and the opposite pair of fingers having inwardly inclined pointed ends adapted to pass behind the heddle eye, and force the same to the outer ends of the eye holding jaws, and hold it in position during the withdrawal of the wedge-shaped slides, substantially as described. 13th. In a machine for drawing in warp threads, the combination with the platform having a space or channel between them, and eye holding jaws at the end of said channel, and the reciprocating wedge-shaped slides arranged on opposite sides of said channel, and adapted when closing together, to engage the heddle eye between them and carry it outward into the path of the needle, of the two oppositely arranged pairs of reciprocating fingers coupled together to move simultaneously in the same direction, one pair of said fingers operating to hold the heddle eye against the wedge-shaped slides while the needle is passing through said eye, and the opposite pair of fingers having inwardly inclined pointed ends adapted to pass behind the heddle eye and force the same to the outer ends of the eye holding jaws, and hold it in position during the withdrawal of the wedge-shaped slides, substantially as described. 14th. In a machine for drawing in warp threads, the combination with the platforms having a space or channel between them, and eye holding jaws at the end of said channel, of the reciprocating wedge-shaped slides arranged on opposite sides of said channel and moving simultaneously toward and from each other, said slides when closing together engaging the heddle eye between their angular faces and forcing it outward between the eye holding jaws into the path of the reciprocating needle, substantially as described. 15th. In a machine for drawing in warp threads, the combination with the platforms having a space or channel between them, and eye holding jaws at the ends of said space, of the reciprocating wedge-shaped slides arranged on opposite sides of said channel, the front angular ends of the slide on one side of the channel being mortised, and the front ends of the opposite slide having tongues adapted to enter said mortises as the slides are closing together, substantially as described. 16th. In a machine for drawing in warp threads, the double wedge-shaped reciprocating slides, each composed of two members spaced apart, and secured to a block sliding in a slot in the adjacent platform, the two members of the slide on one side being mortised or grooved horizontally, and the two members of the opposite slide having tongues adapted to enter said mortises or grooves as the ends of the slides are closing together, substantially as described. 17th. In a machine for drawing in warp threads, the combination with the platforms having a space or channel between them, and eye holding jaws at the end of said channel, of the reciprocating wedge-shaped slides arranged on opposite sides of said channel, and moving simultaneously toward and from each other, said slides when closing together, engaging the heddle eye between their angular faces, and forcing it outward between the eye holding jaws in the path of the reciprocating needle, and the oppositely arranged pairs of fingers for holding the heddle eye against the outer edges of the wedge-shaped slides and in the path of the needle while being threaded, and subsequently forcing said eye out of the path of the needle and holding it at the ends of the jaws while the wedge-shaped slides are being drawn back, and means for actuating said slides and fingers, substantially as described. 18th. In a machine for drawing in warp threads, the combination with the platforms and the reciprocating wedge-shaped slides, of the two oppositely arranged pairs of reciprocating fingers coupled together to move simultaneously in the same direction, one pair of said fingers operating to hold the heddle eye against the wedge-shaped slides while the needle is passing through said eye, and the opposite pair of fingers having inwardly inclined pointed ends adapted to pass behind the heddle eye, and force the same to the outer ends of the eye holding jaws, and hold it in position during the withdrawal of the wedge-shaped slides, substantially as described. 19th. In a machine for drawing in warp threads, a detachable warp-holding frame mounted on an independent swinging support, whereby it may be swung outward from the main portion of the machine, substantially as described. 20th. In a machine for drawing in warp threads, a detachable warp-holding frame mounted upon an independent swinging support and joined thereto, whereby it may be inclined at an angle to said support, means for holding the frame in its inclined position, and a fastening device for securing said warp-holding frame to the main frame when swung up into place, against the same, substantially as described. 21st. In a machine for drawing in warp threads, a detachable warp-holding frame mounted upon a swinging support and joined thereto, whereby it may be inclined at an angle when swung outward away from the machine, a lever for inclining said warp-holding frame, and means for holding said frame when inclined, substantially as described. 22nd. In a machine for drawing in warp threads, the swinging supporting frame pivoted at its lower end, and provided at its upper end with a horizontal rock shaft having arms secured thereto, the warp holding frame secured to said arms, a lever secured to the rock shaft, whereby the warp-holding frame

may be inclined at an angle, a ratchet wheel fast on the rock shaft, and a retaining pawl engaging said ratchet wheel to hold the frame in position when inclined, substantially as described. 23rd. In a machine for drawing in warp threads, the combination with the warp-holding frame and its clamping devices, of a warp-straightening device, consisting of a horizontal shaft journaled in the lower portion of the frame, and having a longitudinal rib or strip projecting radially therefrom, a U-shaped clamp fitting over said rib to hold the warp-threads thereon, a ratchet fast on said shaft, and a retaining pawl engaging said ratchet wheel to hold the shaft in place when turned to draw down the warp threads, substantially as described.

No. 69,540. Telephone Apparatus.

(Appareil téléphonique.)



David H. Wilson, Chicago, Illinois, U.S.A., 29th November, 1900; 6 years. (Filed 18th April, 1900.)

Claim.—1st. The combination in a telephone system of an induction coil provided with a primary and secondary coil wound upon a core, a permanent magnet provided with opposed pole pieces between which the core of the said coils is interposed so as to form part of the magnetic circuit of said permanent magnet, a transmitter, a receiver, and suitable electrical connections whereby the induction coil, transmitter and receiver are connected in circuit. 2nd. A telephone system comprising an induction coil, consisting of a core of magnetic material provided with two separate coils wound one on top of the other, a permanent magnet provided with opposed pole pieces, said core of magnetic material being mounted between said pole pieces so as to form part of the magnetic circuit of the permanent magnet, a transmitter, a receiver, an alarm device, and suitable electrical conductors connecting the parts in circuit. 3rd. An induction coil for telephone circuits and the like, comprising a permanent magnet having opposed pole pieces, two separate coils, one a primary coil and the other a secondary coil, wound upon a core of magnetic material, said core and coils mounted between said opposed pole pieces so as to form part of the magnetic circuit of the permanent magnet. 4th. An induction coil for telephone circuits and the like, comprising a permanent magnet formed with opposed pole pieces, two separate coils wound upon a core of magnetic material, said core and coils movably mounted between said opposed pole pieces so as to form part of the magnetic circuit of the permanent magnet, means for connecting one of said circuits with a telephone circuit and the other with a source of electric supply, and a switch interposed between the source of electric supply and the coil connected therewith. 5th. The combination in a telephone system of an induction coil consisting of a core of magnetic material having two separate coils wound thereon, a permanent magnet provided with opposed pole pieces between which said core and coils are rotatably mounted so as to form part of the magnetic circuit of the permanent magnet, a transmitter adapted to be connected in circuit with one of said coils, an alarm device adapted to be connected in circuit with the other coil, a receiver also adapted to be connected in circuit with said latter coil, and means associated with the circuits so that the alarm device may be connected in a circuit including said latter coil either with or without said receiver. 6th. The combination in a telephone system of an induction coil consisting of a core of magnetic material having two coils wound thereon, a permanent magnet provided with opposed pole pieces, between which said core and coils are rotatably mounted so as to form part of the magnetic circuit of the permanent magnet, one of said coils adapted to be connected with the source of electric supply and a telephone transmitter, the other coil adapted