

paratus, a sending tracer, a receiving pen, line wires connecting the same, rheostats comprising insulated plates connected up in series and arranged in line circuits, brushes connected to move with said tracer and operating over said plates, to complete circuits there-through, whereby the line current is varied, paper shifting mechanisms at the receiving and transmitting stations, means whereby said mechanisms are inoperative during the writing operation, and means actuated by such variations in the line current for actuating said receiving pen in synchronism with the movements of the tracer, as and for the purpose set forth. 12th. In a telautographic apparatus, a sending tracer, a receiving pen, a line wire connecting the same, a rheostat arranged in the line circuit, and comprising a support, a series of insulated plates connected in series by high resistances, said plates having projections arranged to be received in seats in said support, and a bar for clamping said projections in said seat, in combination with a brush connected to move with said tracer and operated over said plates, and means arranged in the line circuit and actuated by the variations in line current for operating the receiving pen in synchronism with the movements of the tracer, as and for the purpose set forth. 13th. In a telautographic apparatus, a tracer, a receiving pen, a line wire connecting the same, rheostat arranged in the line circuit, and comprising a support having a dove-tailed seat, insulated plates having dove-tailed projections, adapted to be received in said seats, said plates being connected in series by high resistances, in combination with a brush connected to move with said tracer and operating over said plates, and means arranged in the line circuit for operating the receiving pen in synchronism with the movements of the tracer. 14th. In a telautographic apparatus, a tracer, a receiving pen, a line wire connecting the same, a rheostat comprising insulated plates, each having a projection, said projections arranged in staggered relation with respect to each other, the projections of adjacent plates being connected in series by a high resistance, in combination with a brush connected to move with said tracer, and means arranged in the line circuit and actuated by variations in the line current for operating the receiving pen in synchronism with the tracer, as and for the purpose set forth. 15th. In a telautographic apparatus, a paper-shifting mechanism, including a swinging frame, clamping jaws carried thereby and arranged to grasp the edge of the paper, and electro-magnetic means for swinging said frame and opening and closing the jaws, as and for the purpose set forth. 16th. In a telautographic apparatus, a paper-shifting mechanism, including a swinging frame having lugs, clamp arms co-operating with said lugs to grasp the edges of the paper therebetween, and electro-magnetic means for swinging said frame and rocking said arms, as and for the purpose set forth. 17th. In a telautographic apparatus a paper-shifting mechanism comprising an electro-magnet, a swinging frame carrying the armature of said magnet, said armature being pivotally mounted in said frame and carrying clamp arms for engaging and gripping the edges of the paper, and means for energizing said magnet, whereby said armature is rocked to clamp the edges of the paper, and said frame is swung to advance the paper, as and for the purpose set forth. 18th. In a telautographic apparatus, a paper-shifting mechanism comprising an electro-magnet, a pivotally mounted armature for said magnet, a swinging support in which said armature is pivotally mounted, clamp arms carried by said armature and arranged to engage and release the edges of the paper, means for normally holding said clamp arms released and said support retracted, and means for energizing said magnet, as and for the purpose set forth. 19th. In a telautographic apparatus, a paper-shifting mechanism comprising an electro-magnet, a swinging frame, an armature for said magnet, pivotally mounted in said frame, stops between which said frame swings, means for normally maintaining said frame in one limit of its movement, clamping jaws actuated by the rocking movement of said armature, and means for energizing said magnet, as and for the purpose set forth. 20th. In a telautographic apparatus, a paper-shifting mechanism comprising an electro-magnet, a swinging frame, an armature for said magnet, pivotally mounted in said frame, said armature having clamping arms arranged to clamp the edges of the paper, a spring connected to said armature to hold the same in position to release the paper and said frame in retracted position, and means for energizing said magnet, as and for the purpose set forth. 21st. In a telautographic apparatus, a paper shifting mechanism comprising an electro-magnet, a curved pole piece therefor, a movable armature arranged to be attracted towards and to move over said pole piece, clamping device actuated by said armature and adapted to engage the paper to be shifted, and means for energizing the electro-magnet, as and for the purpose set forth. 22nd. In a telautographic apparatus, a paper shifting mechanism comprising an electro-magnet having a curved pole piece, a swinging frame, an armature pivotally mounted in said frame and having clamping jaws arranged to engage and grip the edges of the paper, means for normally holding said frame retracted with said armature over the smaller part of said pole piece, whereby said clamping jaws are released, and means for energizing said magnet, as and for the purpose set forth. 23rd. In a telautographic apparatus, a sending tracer, a receiving pen, and a line circuit connecting the same, in combination with a main switch for controlling said circuit, comprising a rocking piece having insulated metal plates connected to the line wires, contact springs or fingers arranged to engage said plates, and means actuated by the tracer for controlling the movements of

said rocking piece, as and for the purpose set forth. 24th. In a telautographic apparatus, a sending tracer, a receiving pen, a line circuit connecting the same, in combination with a main switch comprising a movable piece having contact places, fixed fingers or springs, into engagement with which said contact plates may be moved, a projection carried by said movable piece, an auxiliary contact arranged to be engaged thereby, a paper shifting mechanism, a circuit therefor, said circuit arranged to be controlled by said projection and auxiliary contact, and means actuated by the tracer for operating said switch, as and for the purpose set forth. 25th. In a telautographic apparatus, a movable receiving pen, in combination with an independent inking device therefor, comprising a reservoir, a basin communicating therewith, whereby the ink is maintained at an uniform level therein, said pen arranged to be moved into and out of said basin, as and for the purpose set forth. 26th. In a telautographic apparatus, a receiving pen comprising a bowl and a stem having a fine orifice communicating therewith, and means for movably supporting said pen, in combination with an ink reservoir, a basin communicating therewith, said pen arranged to be moved into and out of said basin, as and for the purpose set forth. 27th. In a telautographic apparatus, a receiving pen, a platen upon which said pen operates, electro-magnet means whereby said pen may be brought into contact with the surface of the paper resting on said platen or raised therefrom, a circuit for said means, a relay for controlling the circuit of said means, and a condenser arranged in the circuit of said relay, as and for the purpose set forth. 28th. In a telautographic apparatus, a receiving pen, a platen therefor, a sending pen and a platen therefor, electrical devices for controlling the movements of said receiving pen towards its platen, a relay for controlling the circuit of said electrical devices, a condenser arranged in the circuit of said relay, and means actuated by the pressure of the sending pen on its platen for controlling the circuit of said relay, as and for the purpose set forth. 29th. In a telautographic apparatus, a receiving pen, or pen arms containing or carrying magnetic material, normally out of contact with its record paper, a magnet arranged adjacent to the record paper, and a circuit therefor, whereby when said magnet is energized said pen is attracted to contact with its record sheet, as and for the purpose set forth. 30th. In a telautographic apparatus, a transmitting pen, a receiving pen, line wires connecting the same, platens upon which said pens operate, said receiving pen containing or carrying magnetic material and normally out of contact with its platen, an iron core arranged behind said platen, a coil therefor, a circuit for said coil, and means actuated by the pressure of the transmitting pen on its platen for completing the circuit of said coil, as and for the purpose set forth. 31st. In a telautographic apparatus, a transmitting pen, a receiving pen, and line wires connecting the same, electrical devices for causing said receiving pen to contact with its record paper, a relay controlling the circuit of said electrical devices, an induction coil having its secondary winding arranged to bridge said line circuit, and means actuated by the pressure of the transmitting pen on its record paper for completing the circuit of the primary of said induction coil, as and for the purpose set forth. 32nd. In a telautographic apparatus, a transmitting pen, a receiving pen, line wires connecting the same, electrical devices for controlling the approach of the receiving pen to its record paper, a relay arranged to control the circuit of said electrical devices, an induction coil having its secondary winding arranged to bridge said line circuit, a condenser arranged in said secondary circuit, and means actuated by the pressure of the transmitting pen on its record paper for completing the circuit of the primary of said induction coil, as and for the purpose set forth. 33rd. In a telautographic apparatus, a paper shifting mechanism at the sending station and a paper shifting paper at the receiving station, a line circuit connecting the stations, a local circuit for each paper shifting mechanism, a relay arranged in the line circuit for controlling the circuit of the paper shifting mechanism at the receiving station, and a switch arranged at the sending station for simultaneously breaking the line circuit and making the local circuit of the paper shifting mechanism at the sending station, as and for the purpose set forth.

No. 69,213. Telautograph. (*Télautographe.*)

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Claim.—1st. In a telautograph, a master switch adapted to be moved to one position for the transmission of a message, and to another position for receiving a message, a signal device, a circuit therefor, said circuit arranged to be closed or opened coincidentally with the movements of the master switch, and means actuated coincidentally with the raising of the arm of the operator, after transmitting a message, for completing the signal circuit, whereby failure to restore the master switch to receiving position will be indicated, as and for the purpose set forth. 2nd. In a telautograph, a signal device, a circuit therefor, two pairs of separable contacts in said circuit, a master switch and an arm-rest, one of said pairs of contacts controlled by said master switch and the other pair controlled by said arm rest, as and for the purpose set forth. 3rd. In a telautograph, a signal device, a circuit therefor, two pairs of separable contacts arranged in said circuit, a moveable master switch arranged to control one of said pairs of contacts, and a moveable arm-rest arranged to control the other of said pairs of contacts, as and for the purpose set forth. 4th. In a telautograph, a signal