

electric current of suitably low voltage through the fused mass, thereby electrolyzing the same, substantially as and for the pur-

Fig. 1.

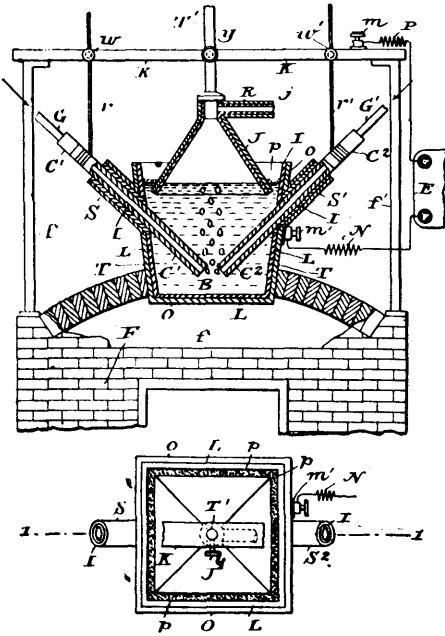


Fig. 2. 69211

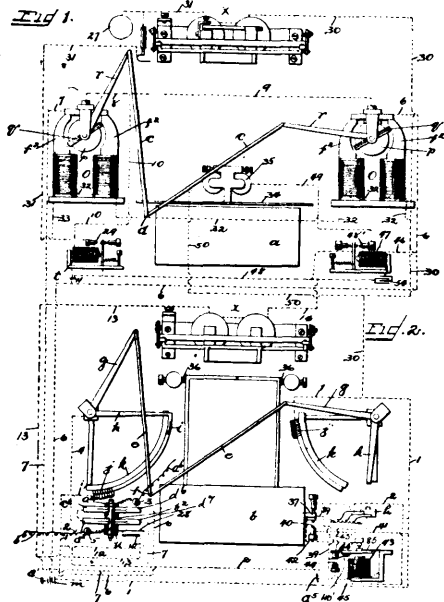
poses set forth. 5th. As an improvement in the art of manufacturing aluminium, the herein described process, which consists in forming a bath by fusing together fluorids of aluminium, and of alkaline metal, adding to the bath in suitable quantity carbon disulfid, together with alumina, and then passing an electric current of suitably low voltage through the fused mass, thereby electrolyzing the same, substantially as and for the purposes set forth. 6th. As an improvement in the art of manufacturing aluminium, the herein-described process which consists in forming a bath by fusing together the fluoid of aluminium and the fluoid of sodium, adding to the bath in suitable quantity carbon disulfid and alumina, and then passing an electric current through the fused mass, thereby electrolyzing the same, substantially as and for the purposes set forth.

No. 69,212. Telautographic Apparatus.
(Appareil télautographique.)

Foster Ritchie, 97 Gresham Street, London, England, 2nd November, 1900; 6 years. (Filed 4th September, 1900.)

Claim.—1st. In a telautographic apparatus, transmitting appliances, including a tracer, receiving appliances arranged at a distant station, a line wire connecting these appliances, a rheostat comprising resistance coils, said coils being arranged in series in said line circuit, an arm connected to move with said tracer and carrying a brush arranged to move over said rheostat, whereby the line current is varied in strength, paper shifting mechanisms at the receiving and transmitting stations, and means whereby said mechanisms are inactive during the writing operation, and means arranged at the receiving station, and actuated by the variations in strength of the line current, for actuating the receiving appliances, as and for the purpose set forth. 2nd. In a telautographic apparatus, a transmitting tracer, a receiving pen, line wires connecting the same, a rheostat comprising resistance coils arranged in series in the line circuits, brushes connected to move coincidentally with the tracer over said rheostat, whereby the strength of the line currents is varied when said tracer is moved, an electrical apparatus arranged to actuate the receiving pen, said electrical apparatus arranged in the line circuit, and effected by the variations in current strength, paper shifting mechanism at the receiving and transmitting stations, and means whereby said mechanisms are inactive during the writing operation, as and for the purpose set forth. 3rd. In a telautographic apparatus, a transmitting tracer, a receiving pen, line wires connecting the same, jointed rods to which said tracer is connected, arms connected to said rods and carrying brushes, resistance arranged in series in the line circuits, and over which said brushes operate, in combination with means operated by the variations in current strength thus sent in line for duplicating in the receiving pen the movements of

said tracer, paper shifting mechanisms at the receiving and transmitting stations, and means whereby said mechanisms are inactive



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during the writing operation, as and for the purpose set forth. 4th. In a telautographic apparatus, a transmitting tracer and receiving pen, line wires connecting the same, means actuated by the movements of said tracer for varying the strength of the current sent to the line, rocking coils connected to the receiving pen for actuating the same, magnetic fields in which said coils operate, said coils being included in the line circuits, paper shifting mechanisms at the receiving and transmitting stations, and means whereby said mechanisms are inactive during the writing operation, as and for purpose set forth. 5th. In a telautographic apparatus, a sending tracer, a receiving pen, line wires connecting the same, jointed rods connected to said pen, pivotally mounted coils having arms respectively connected to said rods, said coils being respectively arranged in the line circuits, fields for each of said coils, and means actuated by the movements of said tracer for varying the strength of the line currents, as and for the purpose set forth. 6th. In a telautographic apparatus, a sending tracer, a receiving pen, line wires connecting the same, pivotally mounted coils respectively arranged in the line circuits and respectively connected to the receiving pen, and co-operating to effect the movements of said pen, means for yieldingly maintaining said coils in one limit of their rocking movements, magnetic fields for said coils, and means actuated by the movements of said sending tracer for varying the strength of the currents sent to the line wires, as and for the purpose set forth. 7th. In a telautographic apparatus, a sending tracer, a receiving pen, line wires connecting the same, pivotally mounted coils respectively arranged in the line circuits and respectively connected to the receiving pen, and co-operating to effect the movement of said pen, springs arranged to normally hold said coils in one limit of their movement, magnetic fields for said coils, and means actuated by the movements of said sending tracer for varying the strength of the currents sent to the line wires, as and for the purpose set forth. 8th. In a telautographic apparatus, a sending tracer, a receiving pen, line wires connecting the same, pivotally mounted coils respectively arranged in the line circuits and respectively connected to the receiving pen, and co-operating to effect the movement of said pen, magnetic fields for said coils, means actuated by the movements of said tracer for varying the strength of currents sent to the line wires, and means for retarding the rocking movements of said coils, as and for the purpose set forth. 9th. In a telautographic apparatus, a sending tracer, a receiving pen, line wires connecting the same, pivotally mounted coils arranged in the line circuits and connected to the receiving pen, magnetic fields for said coils, means actuated by the movements of said tracer for varying the strength of the currents sent to the line wires, and a dash pot arranged to retard the rocking movement of said coils, as and for the purpose set forth. 10th. In a telautographic apparatus, a sending tracer, a receiving pen, line wires connecting the same, stationarily mounted iron cores, magnets having pole pieces surrounding said cores, coils pivotally mounted and interposed between said cores and pole pieces, said coils being arranged in the line circuits and connected to the receiving pen, and means actuated by the movements of the sending tracer for varying the strength of currents sent to the line wires, as and for the purpose set forth. 11th. In a telautographic ap-