THOMAS A. EDISON.

Improvement in Printing-Telegraphs.

No. 128,131. Patented June 18, 1872.

Fig. 3.

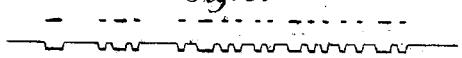


Fig. 2.

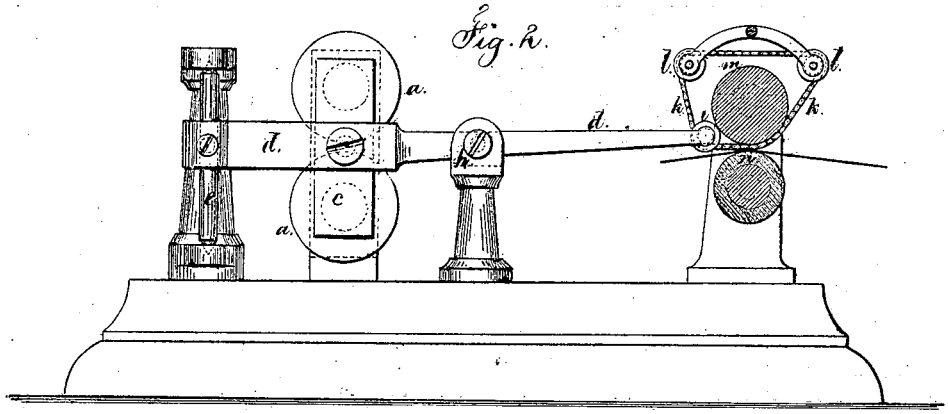
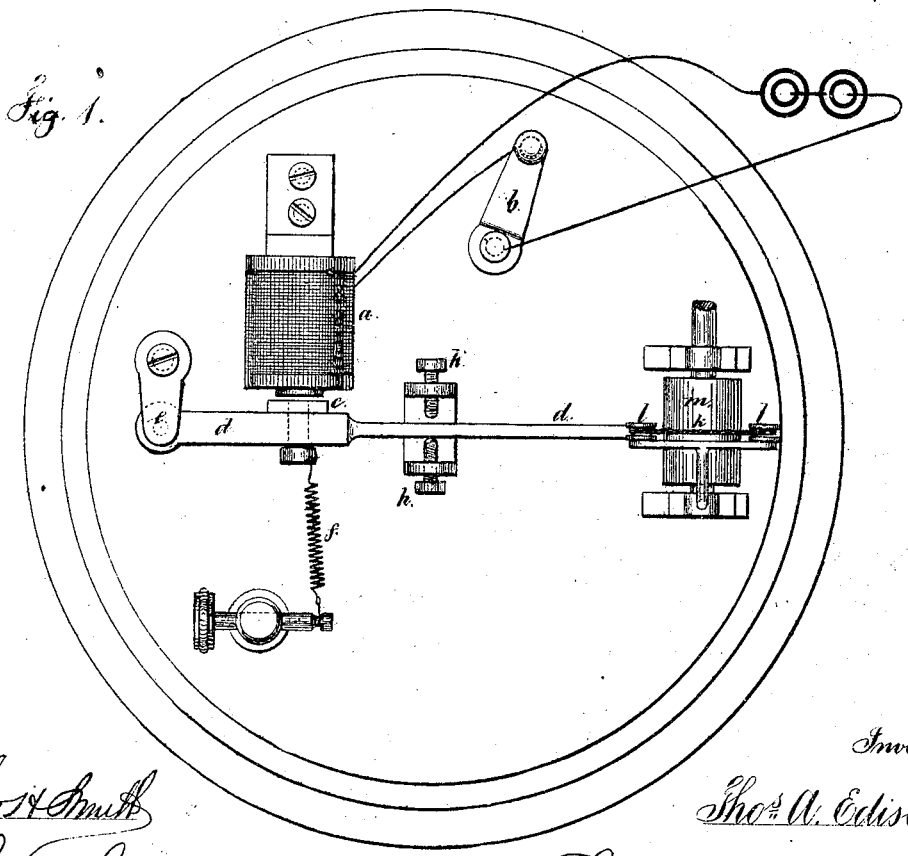


Fig. 1.



Witnesses

Chas. H. Smith

Harold Serrell

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UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN PRINTING-TELEGRAPHS.

Specification forming part of Letters Patent No. 128,131, dated June 18, 1872.

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Newark, in the county of Essex and State of New Jersey, have invented an Improvement in Magnetic Telegraphs, and the following is declared to be a correct description of the same.

The ordinary magnetic telegraph is provided with a lever and point, the latter being held in contact with the paper to make a mark therein. In this case the magnetic energy must be sufficiently powerful to give the required pressure of the point on the paper.

My invention is made for giving a record by embossing the paper in a waving or zigzag line, by pressure between a rigid and an elastic roller, by means of a cord or chain that is positioned by the action of an electro-magnet. When the magnet is not charged the cord or chain will give a straight embossed mark; when the magnet is energized by a short pulsation the cord or chain will be moved out and back to produce a short undulation or V-formed embossing; and when the pulsation is longer the undulation will be of greater length, thus indicating dots and dashes. A comparatively feeble current can be employed, and yet the embossing will be so bold that the communication might be read by the touch, or the strip of paper might be used in an automatic machine to actuate mechanism for printing or otherwise preparing the message for delivery, a device for this purpose being contemplated by me.

In the drawing, Figure 1 is a plan, and Fig. 2 an elevation, of the apparatus, the rollers being in section.

The electro-magnet *a* is of any usual character, and is energized by pulsations in an electric circuit. The finger-key *b* illustrates the means for opening and closing this circuit. The armature *c* swings with the lever *d* upon the fulcrum *e*, and is retracted by the spring *f*, or drawn back or repelled in any suitable manner. The amount of motion to the lever *d* is determined by the screw-stops *h*. At the end of the lever *d* is a small roller, *i*, or opening, through which passes the endless chain or cord *k*, that is suspended or guided by the rollers *l*, and passes through between the rollers *m* and *n*. These rollers *m* and *n* are revolved constantly, while the machine is in action, by any suitable mechanism, and the roller *n* should have an elastic covering, and the paper pass in between said roller *n* and the chain or cord *k*. As the rollers *m n* revolve and draw the paper along, the chain *k* will emboss or indent the paper in a straight line; but when the magnet *a* attracts the armature the chain will be drawn off and produce a zigzag line, as shown in Fig. 3, the long undulations representing dashes and the short ones dots, as indicated by the corresponding line of telegraphic characters.

I claim as my invention—

A chain or cord under control of an electro-magnet, and pressed into contact with the surface of the paper to produce a telegraphic character by embossing, substantially as set forth.

Signed by me this 26th day of April, A. D. 1872.

T. A. EDISON.

Witnesses:

GEO. T. PINCKNEY,

CHAS. H. SMITH.