T. A. EDISON.

Chemical Telegraphs.

No. 141,774. Patented August 12, 1873.

Fig. 2.

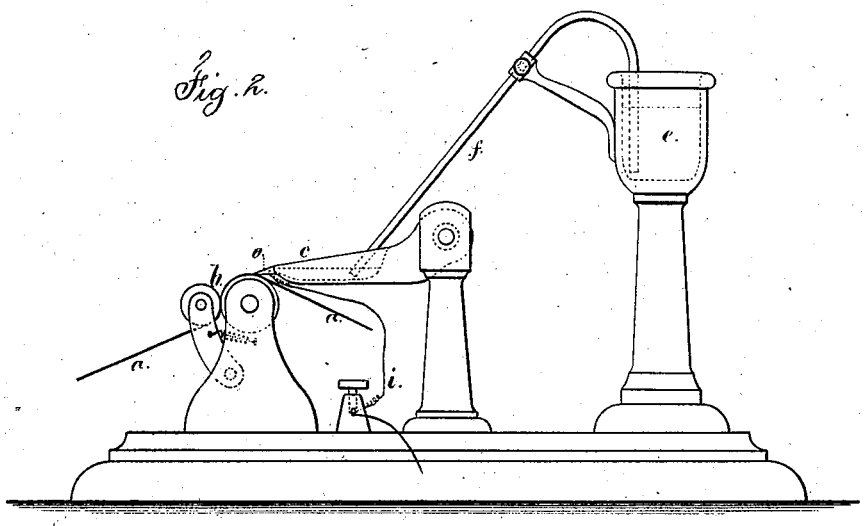
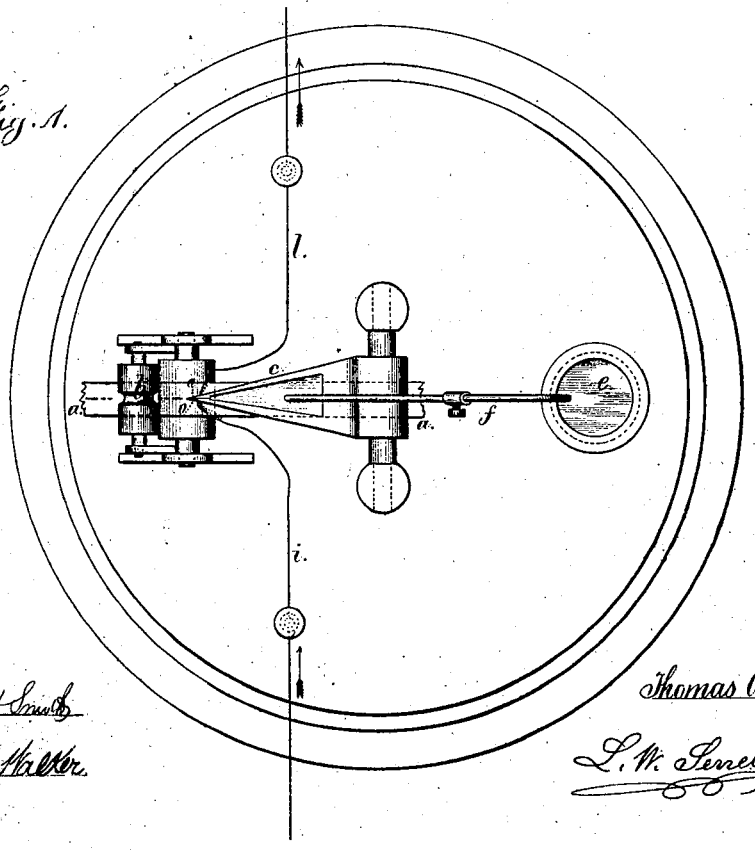


Fig. 1.



Witnesses,

Chas. F. Smith

Geo. B. Walker.

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L. W. Serrell

atty.

UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF NEWARK, NEW JERSEY, ASSIGNOR TO HIMSELF AND GEORGE HARRINGTON, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN CHEMICAL TELEGRAPHS.

Specification forming part of Letters Patent No. **141,774**, dated August 12, 1873; application filed March 13, 1873.

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 Improvement in Chemical Telegraphs, of which the following is a specification:

My invention relates to a chemical telegraph in which the paper is moistened as it runs through the machine, and receives the mark from the electric action upon the chemical ingredients employed. I make use of a trough or pen similar to a paper-ruling pen, and I supply to the same the chemical solution by a siphon, or otherwise, so that the strip of paper is moistened in a line immediately before or at the time that the mark is made, and the electrodes or contact-points are applied to the surface, either contiguous to the place where the liquid solution issues upon the paper, or more or less remote from the same. Thereby the decomposition of the liquid will be effected just as the same issues from the pen upon the paper, or after the solution has reached the paper and before it becomes entirely dry.

In the drawing, Figure 1 is a plan of the instrument, and Fig. 2 is a side view of the same.

The strip of paper *a* is drawn along by the rollers *b* in any of the known modes employed in automatic telegraphy. The solution is applied to the surface of the same by a ruling-pen, such as used by draftsmen, or in paper-ruling machines.

I have shown the pen *c* as a trough-shape, tapering down to the end that rests upon the paper, and into this trough the chemical solution is either placed or supplied from a fountain or reservoir, *e*, by a siphon, *f*, or otherwise.

The wires *i l*, that are in the telegraphic circuit, and through which the electric pulsations pass, are connected to two points or electrodes, *o o*, that are sufficiently close together to act upon the moist solution and decompose the same and leave the mark upon the paper, and these are placed where they will act upon the solution itself just as it issues from the pen upon the paper, or else upon such solution in the paper while it remains in a moist condition, thus insuring the proper mark and employing but a small quantity of solution.

I am aware that the strip of paper has been moistened in a narrow line by a roller immersed in the chemical solution, so as to apply the same to the paper before coming into position to receive the mark; but the paper offers a great resistance to the current, not being moistened entirely through by the time it reaches the stylus. By employing circuit-points at the surface at opposite sides of the moistened line this is avoided.

I claim as my invention—

The circuit-points or electrodes *o o*, connected with the wires *i l* and applied at each side of the line of chemical solution upon the surface of the paper, substantially as set forth.

Signed by me this 7th day of March, A. D. 1873.

THOMAS A. EDISON.

Witnesses:
GEO. T. PINCKNEY,
CHAS. H. SMITH.