



# UNITED STATES PATENT OFFICE.

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

## IMPROVEMENT IN TELEGRAPHIC RECORDING INSTRUMENTS.

Specification forming part of Letters Patent No. 124,800, dated March 19, 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 Telegraphic Ink Recording Instruments; and the following is declared to be a correct description thereof.

This invention is made for marking upon a strip of paper in dots and dashes in ink at the receiving-station to correspond with the message composed in a strip of paper by perforations, and employed for producing pulsations at the transmitting-station. The present improvement relates to a roller vibrated by a magnet between the paper and an inking-wheel, said inking-wheel moving with sufficient velocity to apply ink to the periphery of said roller when in contact.

In the drawing, Figure 1 is a side view of the motor and the parts moving the inking apparatus, and Fig. 2 is an elevation of the ink recording device.

The motor which I prefer and employ consists of four helices, *a a*, acting upon a revolving armature sustained by the shaft *b*, the electrical pulsations to the magnets passing through the circuit-closing springs *d d* from a local battery, and the fan *e* and point *f* acting to regulate the speed, as in my patent No. 111,112, granted January 24, 1871.

The inking-wheel *h* is driven at a rapid speed by the gearing *k* to the shaft 2, and said wheel *h* is in contact with the inking-drum *m*, that has an elastic surface, saturated sufficiently with ink to keep the edge of the wheel *h* in proper condition. This wheel *h* is, by preference, made of hard rubber. The strip of paper passes around the roller *n*, being kept in contact by the pulley *p* and spring *q*, and the roller *n* is driven at a sufficiently slow speed by the pinion 3 gearing into the wheel *r* on the shaft 4 of said roller *n*. The pulsations of

electricity to be recorded pass through the electro-magnet *s*, either directly on the main line or through a branch circuit or local relay.

The armature *o* is upon the lever *t*, and the weight is balanced by a spring, *u*, or otherwise, and at the end of the lever *t* is the ink recording-roller *v*. In the normal position the spring *u* keeps this roller *v* in contact with the wheel *h*, but a pulsation of electricity in the magnet draws down the roller, making a mark upon the paper, and according to the duration of the pulsation so the ink-mark will be a dot or a dash. The periphery of the roller *v* should be of as great length as the longest dash, and the moment the magnetism ceases to hold down the roller *v* the same flies up into contact with the wheel *h* to receive more ink, and the speed of the wheel *h* should be such as to revolve the roller *v* once each time it comes in contact therewith, no matter how rapidly the pulsations are sent. An inking band might interpose between the roller *v* and paper, but I prefer the device shown.

I claim as my invention—

1. A roller raised and lowered by the action of an electro-magnet, and acting to impress ink upon a strip of paper in dots and dashes, substantially as set forth.
2. The inking-wheel *h*, in combination with the roller *v* and electro-magnet *s*, substantially as set forth.
3. The inking-wheel *h* and roller *v*, in combination with the electro-magnet *s*, for moving said roller *v*, and the magnetic motor for actuating the wheel *h* and paper-roller *n*, substantially as set forth.

Signed by me this 12th day of August, A. D. 1871.

T. A. EDISON.

Witnesses:

HAROLD SERRELL,  
CHAS. H. SMITH.