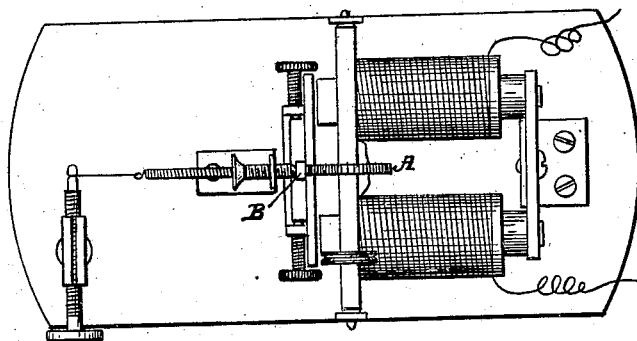


J. J. CLARK.  
Telegraphic-Relay Instrument.

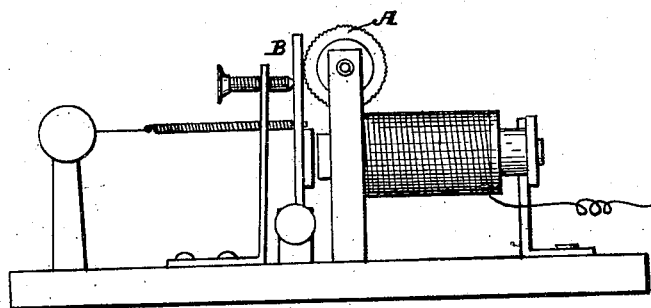
No. 46,639.

Patented March 7, 1865.

*Fig. 2.*



*Fig. 1.*



Witnesses:

*J. E. Shaw*

*Edward Brown*

Inventor:

*James J. Clark*

# UNITED STATES PATENT OFFICE.

JAMES J. CLARK, OF NEW YORK, N. Y.

## IMPROVEMENT IN RECEIVING-MAGNETS FOR TELEGRAPHS.

Specification forming part of Letters Patent No. **46,639**, dated March 7, 1865.

### *To all whom it may concern:*

Be it known that I, JAMES J. CLARK, of the city of New York, State of New York, have invented a new and useful Improvement in Telegraph-Instruments; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a side view, and Fig. 2 a top view.

The nature of my invention consists of an appliance by which a loud sound is produced by a very slight motion of the lever of the relay or receiving magnet.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I take a receiving-magnet of the ordinary form, and in place of either stop-screw (but preferably the front stop-screw, as shown in the drawings) substitute a revolving wheel, A, having a roughened edge.

The operation of my invention is as follows: The wheel A being made to revolve by clock-work or by any mechanical device, the closing

of the main circuit causes the lever B of the receiving-magnet to come into contact with the wheel A, and thus produce a sound.

Heretofore it has been necessary to give the lever of the receiving-magnet considerable play when it was necessary to produce a sound, but with my invention the lever needs but very little play. In fact, it may rest constantly against the wheel A, and yet, in consequence of the different degrees of pressure exerted, produce a sound when the circuit is closed different from the sound produced when the circuit is broken.

The wheel A may be either solid or hollow, or it may be covered with parchment and roughened with rosin or other like substance.

What I claim as my invention, and desire to secure by Letters Patent, is—

The revolving wheel A, with roughened edge, in combination with a telegraph receiving or main magnet, applied in the manner and for the purpose as hereinbefore specified.

JAMES J. CLARK.

Witnesses:

J. E. SHAW,

GEORGE BUCKLEY.