

H. VAN HOEVENBERGH.

Telegraph Sounders.

No. 141,966.

Patented August 19, 1873.

Fig. 2.

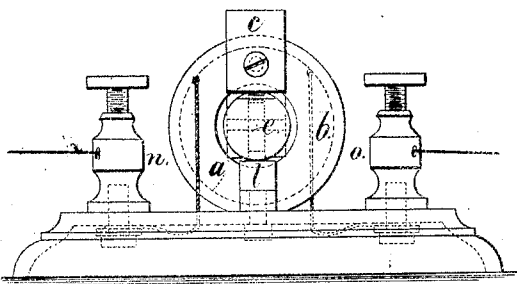
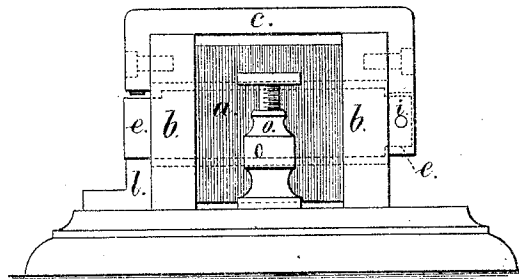


Fig. 1.



Witnesses.

Chas. H. Smith
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Inventor.

Henry Van Hoevenbergh

per Lemuel M. Terrell
att'y.

UNITED STATES PATENT OFFICE.

HENRY VAN HOEVENBERGH, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN TELEGRAPH-SOUNDERS.

Specification forming part of Letters Patent No. **141,966**, dated August 19, 1873; application filed May 9, 1873.

To all whom it may concern:

Be it known that I, HENRY VAN HOEVENBERGH, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Telegraphic Sounding-Instruments, of which the following is a specification:

Telegraphic sounders have been made with a helix around a core, forming one leg of a magnet, and to the other leg an armature is hinged and vibrates against two posts or stops by the action of the electro-magnetism and a spring.

My invention is made for dispensing with a spring, lessening the expense of the sounder, insuring greater clearness in the sound, and lessening the resistance of the sounder in the line. I accomplish these objects by using a loose core that is hinged to a metallic bow extending from one end to the other of the helix, and forming part of the electro-magnet, so that when the core is magnetized by the surrounding helix, and the bow by induction, the moving end of the core and the bow attract each other, and the core, rising, strikes the end of the bow, producing the sound, and when the circuit through the helix is broken the core drops upon a stop, producing the secondary sound so necessary in telegraphing by sound. I find that with this construction of instrument a single helix of comparatively large wire is sufficient to produce the sound with a feeble current; thereby the resistance of the helix is lessened, and the core is demagnetized with greater rapidity, and it is unnecessary to provide any adjustments, the sounder working with varying currents.

In the drawing, Figure 1 is a side view of this instrument, and Fig. 2 is a view endwise of the core.

The helix *a* is of the desired size and character, and at the ends of the same are the non-conducting heads *b b*. The bow *c* is, by preference, attached to these heads *b*, and to one end thereof the core *e* is connected by the hinge *i*, and at the other end the core vibrates between the bow and a stop, *l*. The binding-screws *n o* are provided as usual. The stop *l* should be of brass or non-magnetic metal, and upon the end of the bow *c* there should be a small brass plate to prevent the core and bow adhering to each other.

The operation will be understood by the foregoing: When the circuit is closed through *a* the moving core strikes against the end of the bow; the duration of the pulsation determines the time before the core falls, and produces the secondary sound upon the stop *l*.

I claim as my invention—

1. The loose core *e*, hinged to the stationary bow *c* and vibrating between the bow *c* and stop *l*, substantially as set forth.

2. An electro-magnetic sounding-instrument made with a loose core within the helix, substantially as set forth.

3. An electro-magnetic sounding-instrument made with a core that is raised by magnetism and drops by gravity, substantially as set forth.

Signed by me this 6th day of May, 1873.

HENRY VAN HOEVENBERGH.

Witnesses:

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