

(No Model.)

2 Sheets—Sheet 1.

J. MARET & W. L. DE GRAFF.
TELEGRAPH SOUNDER.

No. 486,051.

Patented Nov. 8, 1892.

Fig. 1.

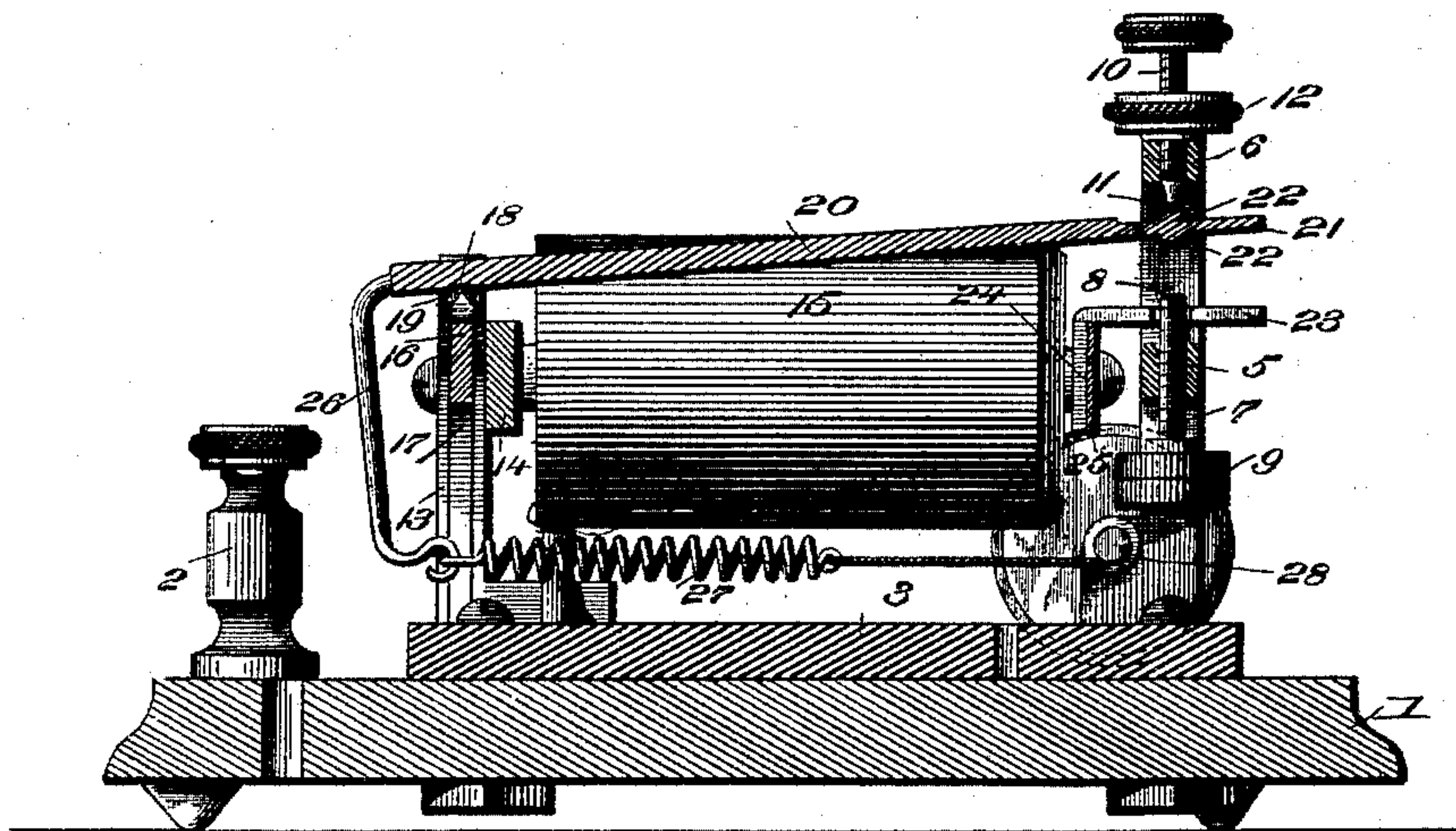
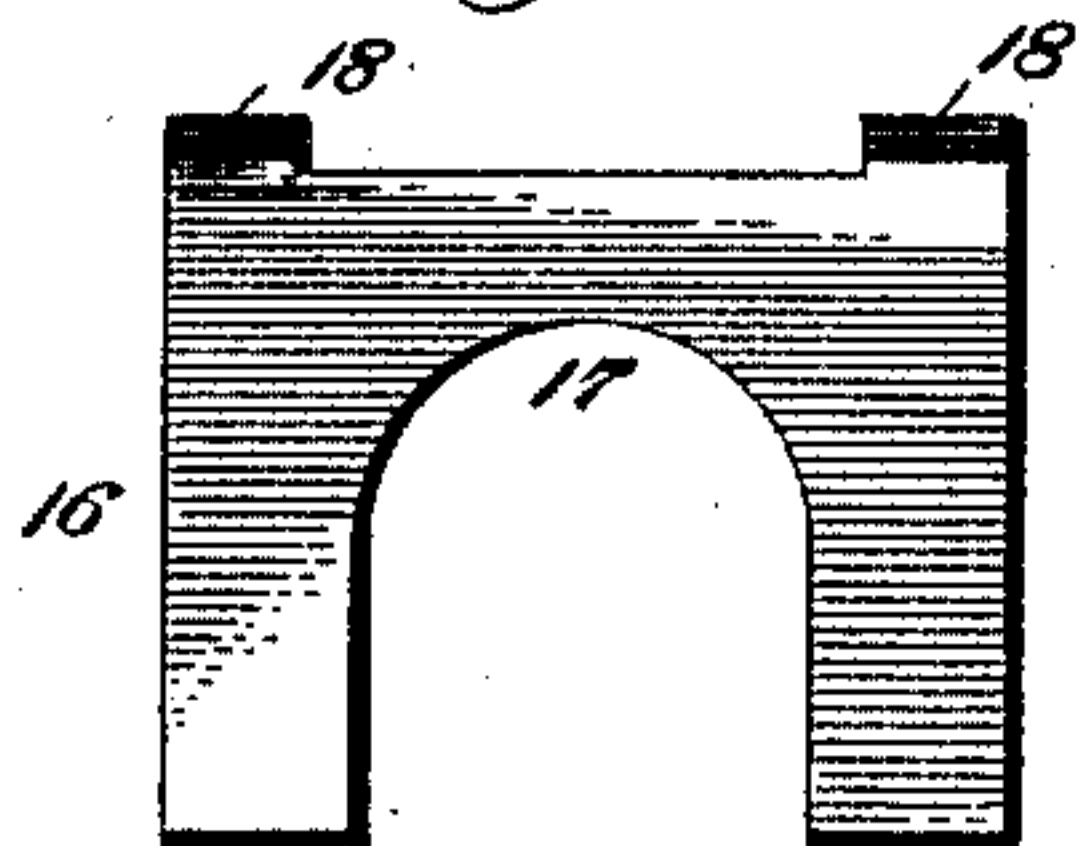


Fig. 5.



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(No Model.)

2 Sheets—Sheet 2.

J. MARET & W. L. DE GRAFF.
TELEGRAPH SOUNDER.

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Fig. 2.

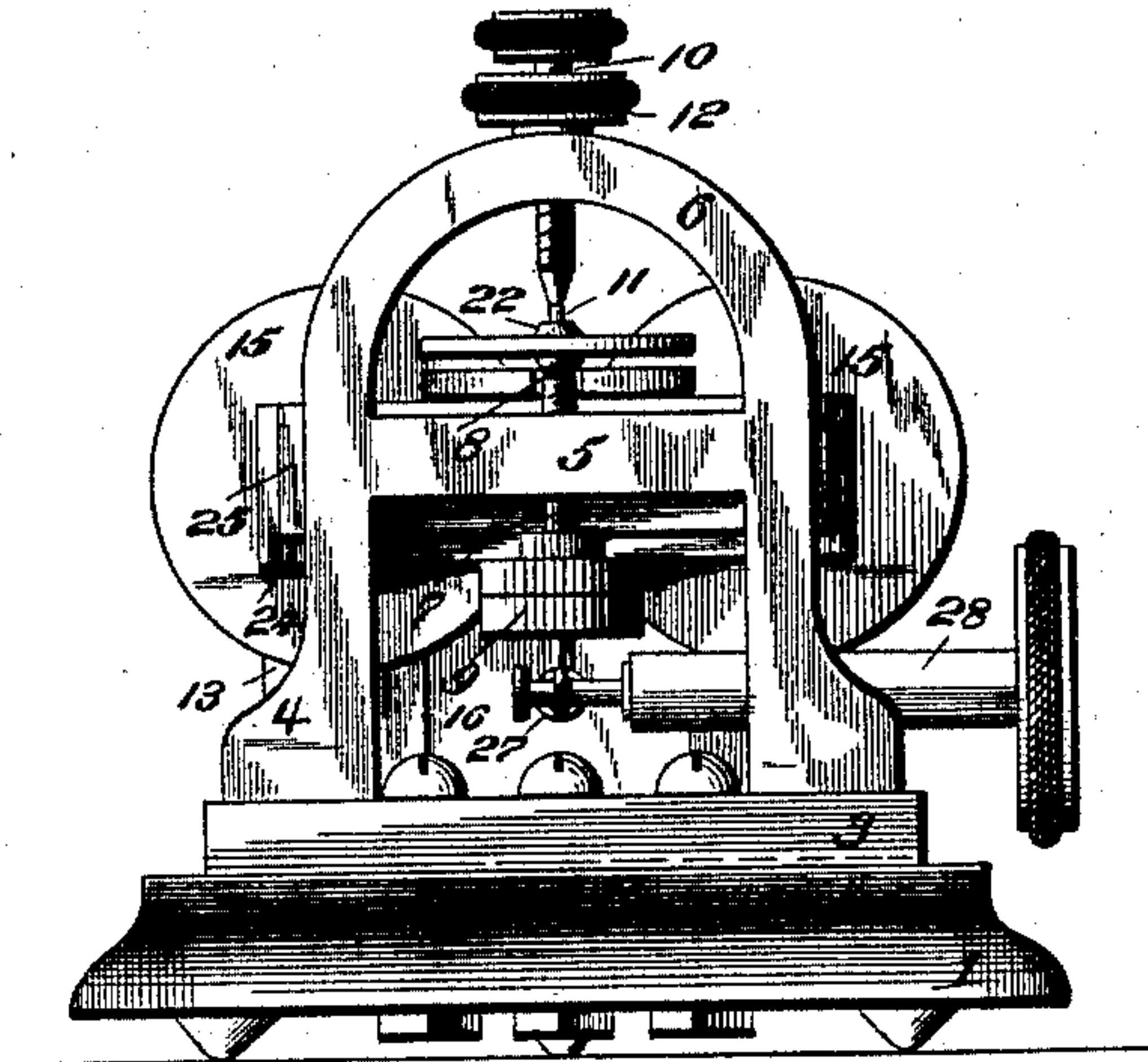


Fig. 3.

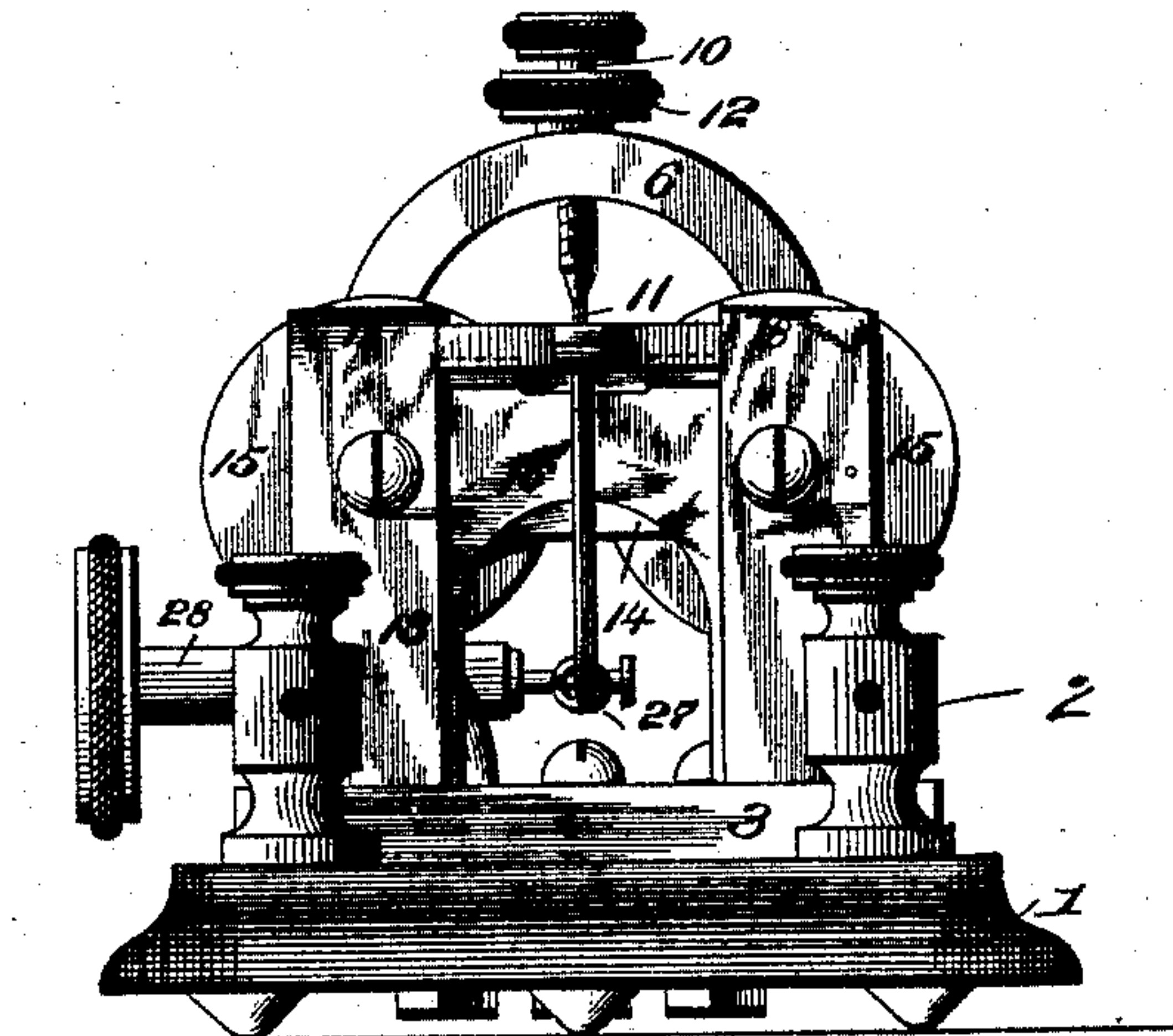
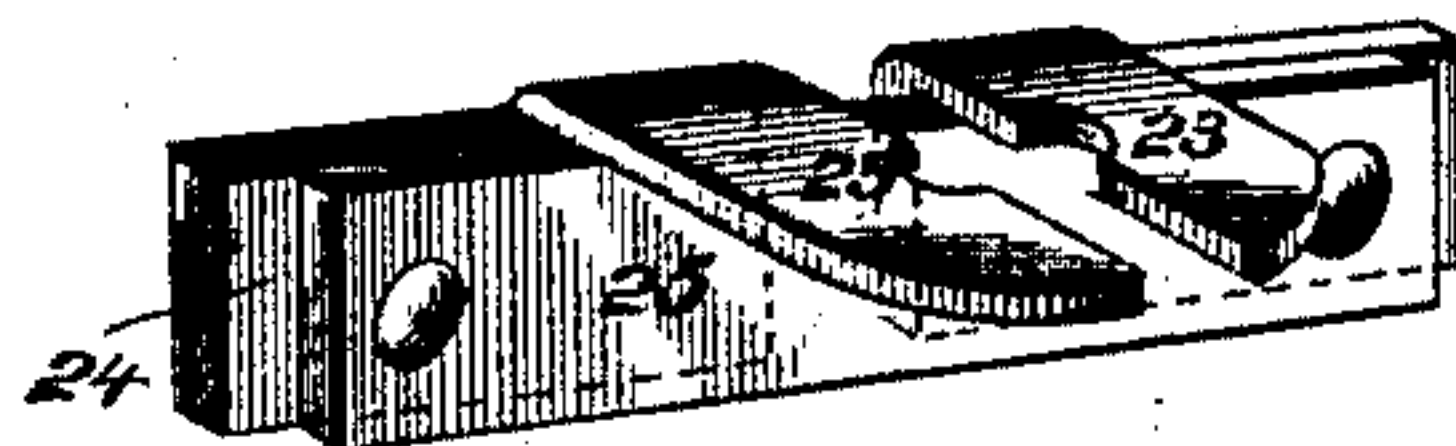


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES MARET, OF MOUNT VERNON, KENTUCKY, AND WILLIAM LOVELAND DE GRAFF, OF HOMER, MICHIGAN.

TELEGRAPH-SOUNDER.

SPECIFICATION forming part of Letters Patent No. 486,051, dated November 8, 1892.

Application filed August 4, 1891. Serial No. 401,676. (No model.)

To all whom it may concern:

Be it known that we, JAMES MARET, residing at Mount Vernon, in the county of Rock Castle and State of Kentucky, and WILLIAM LOVELAND DE GRAFF, residing at Homer, in the county of Calhoun and State of Michigan, citizens of the United States, have invented certain new and useful Improvements in Telegraph-Sounders; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in telegraph-sounders, and refers especially to a "main-line" sounder; and one object of our invention is the provision of a sounder of this character which will be far superior to sounders in use in that it will produce a more clear and distinct sound, and thereby be easily read, and a sound which will be more musical or pleasant to the ear.

To attain the object stated, our invention consists of the improved sounder herein illustrated, described, and specifically defined, and distinguished by the claims.

In order that the construction, operation, and advantages of our improvements may be fully understood, we would invite attention to the accompanying drawings, in which—

Figure 1 represents a longitudinal sectional view of our sounder. Figs. 2 and 3 represent front and rear end views thereof. Figs. 4 and 5 represent detail views.

Referring by numerals to the drawings, in which similar numerals denote corresponding parts in all the figures, the numeral 1 designates the wooden support or base, at one end of which are located the binding-posts 2 for receiving the circuit-wires. On the base 1 is secured the metal base-plate 3, from one end of which rises the standard 4, having the intermediate cross-bar 5 and the upper closed end or cross bar 6, and in the intermediate cross-bar is mounted the lower contact-screw 7, having the iron contact-point 8, and is retained at any desired adjustment by the jam-nut 9, and in the upper cross-bar 6 is mounted the contact-

screw 10, having the iron contact-point 11, and this screw is retained at any desired adjustment by the jam-nut 12. From this construction it will be seen that the contact-screws can be adjusted with reference to each other and the armature as may be desired, and the iron points form a better contact-point, as we have found by experience. On the rear end of the base-plate rise the posts 13, to which the bar 14, connecting the cores 15 of the electro-magnet, is secured, and to the posts is secured the rear end plate or support 16. This plate or support 16 is provided with an arch 17 and with the knife-edge 18, which forms a bearing for the transverse bar 19, connected to the armature-rod 20, having the disk or circular armature 21 at the front end. The armature is made of soft iron and is formed with the contacting projections 22, adapted to engage the contact-points, and the armature is arranged above the outwardly-bent ends 23 of the poles 24, which are connected by the bar 25, of non-magnetic material, and this bar rigidly secures the posts together, as is evident. The rear end of the armature-rod is formed with or connected to an arm 26, having a hook at the lower end, to which is connected the rear end of the adjusting-spring 27, and the other end thereof is connected to the adjusting-rod 28, mounted in a post secured to the base-plate.

It will be seen that the ends of the poles lie at a right angle to the main portion and centralize or concentrate the magnetism directly under the armature, and the armature being round presents a large surface and insures such action of the current thereon as to produce a loud, clear, distinct, and musical sound. It will also be seen that the armature-rod is mounted on a knife-edge bearing, rendering the same very sensitive and capable of ready action, and that the spring connection is very easily adjusted to meet the desired requirements.

We would have it understood that we reserve the right to make minor changes in the construction and arrangement of parts without departing from the scope of our invention or sacrificing any of the advantages thereof.

We claim—

1. In a telegraph-sounder, the combination

of a base-plate, an electro-magnet mounted thereon, having the poles connected by a bar of non-magnetic material, but separated at their ends, and an armature-rod having an enlarged armature arranged above the ends of the poles and contact-points.

2. In a telegraph-sounder, the combination of a base, a base-plate thereon, posts rising from the plate, an electro-magnet mounted on the posts, having the poles connected near their rear ends connected by a bar of non-magnetic material and having the front ends extending outward therefrom, a standard mounted on the base-plate, an upper and lower contact-screw in the standard, an armature-rod having a knife-edge bearing and an enlarged armature located above the ends of the magnet, and an adjusting-screw for the armature.

3. In a telegraph-sounder, the combination of a base having binding-posts, a base-plate thereon, an electro-magnet having poles connected at their inner portions by a bar of non-magnetic material, the outer ends of which are separated and extended outward, adjustable contact-points, an enlarged striking-armature above the inner ends of the poles

having the rod, the support having the knife-edge bearing for the rod, and the adjusting-spring.

4. In a telegraph-sounder, the combination of an electro-magnet, poles connected by a bar of non-magnetic material, connected and having their ends separated, an armature-rod having an armature arranged above the ends of the poles, adjustable contact-points, and an adjusting-spring for the armature.

5. In a telegraph-sounder, the combination of a base, an electro-magnet thereon, the poles connected to the cores of the magnet and having the extended separated ends, the bar of non-magnetic material connecting the inner portions of the poles, the armature arranged above the extended ends of the poles, the adjusting-spring for the armature, and the contact-points.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES MARET.

WILLIAM LOVELAND DE GRAFF.

Witnesses:

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