

No. 793,541.

PATENTED JUNE 27, 1905.

L. F. ROSE.
ELECTRICAL ANNUNCIATOR.
APPLICATION FILED MAY 3, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

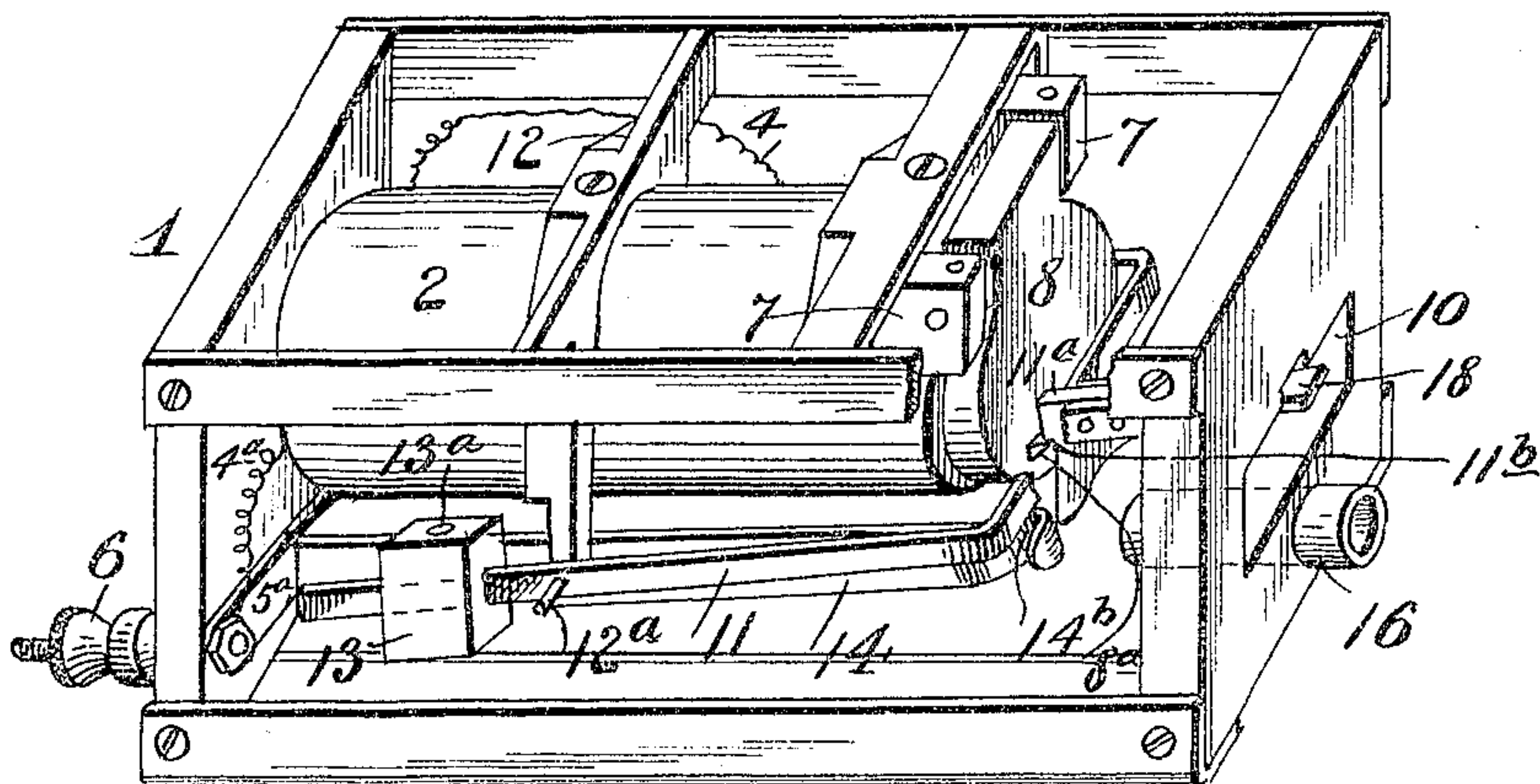


Fig. 3.

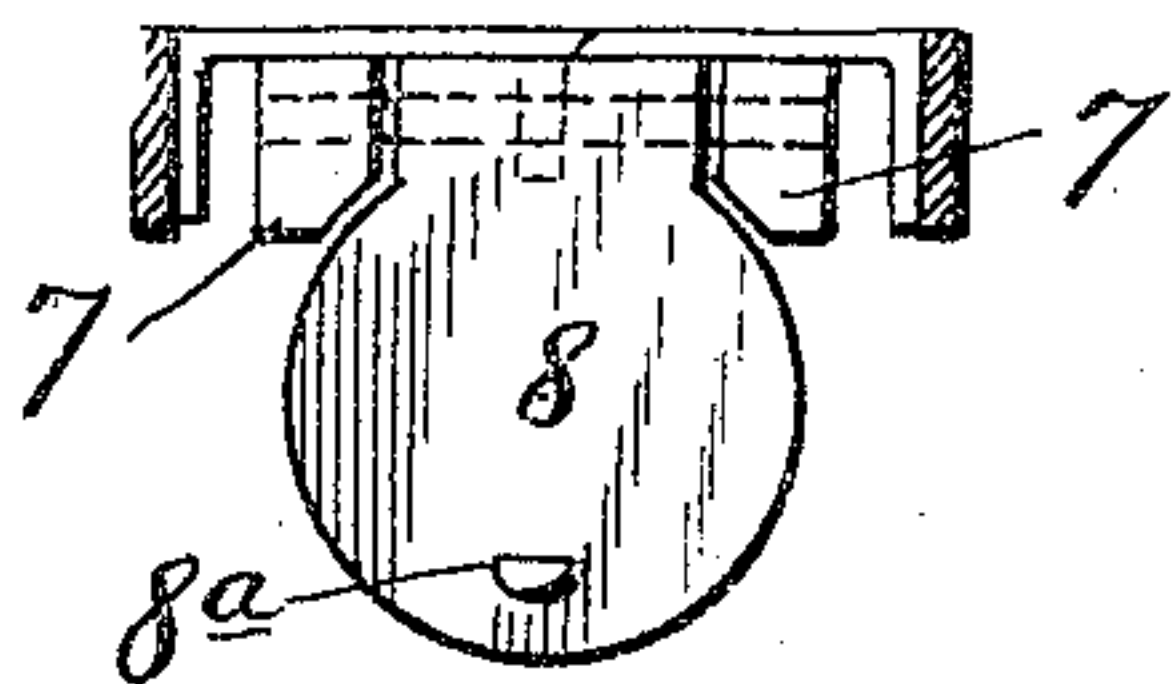
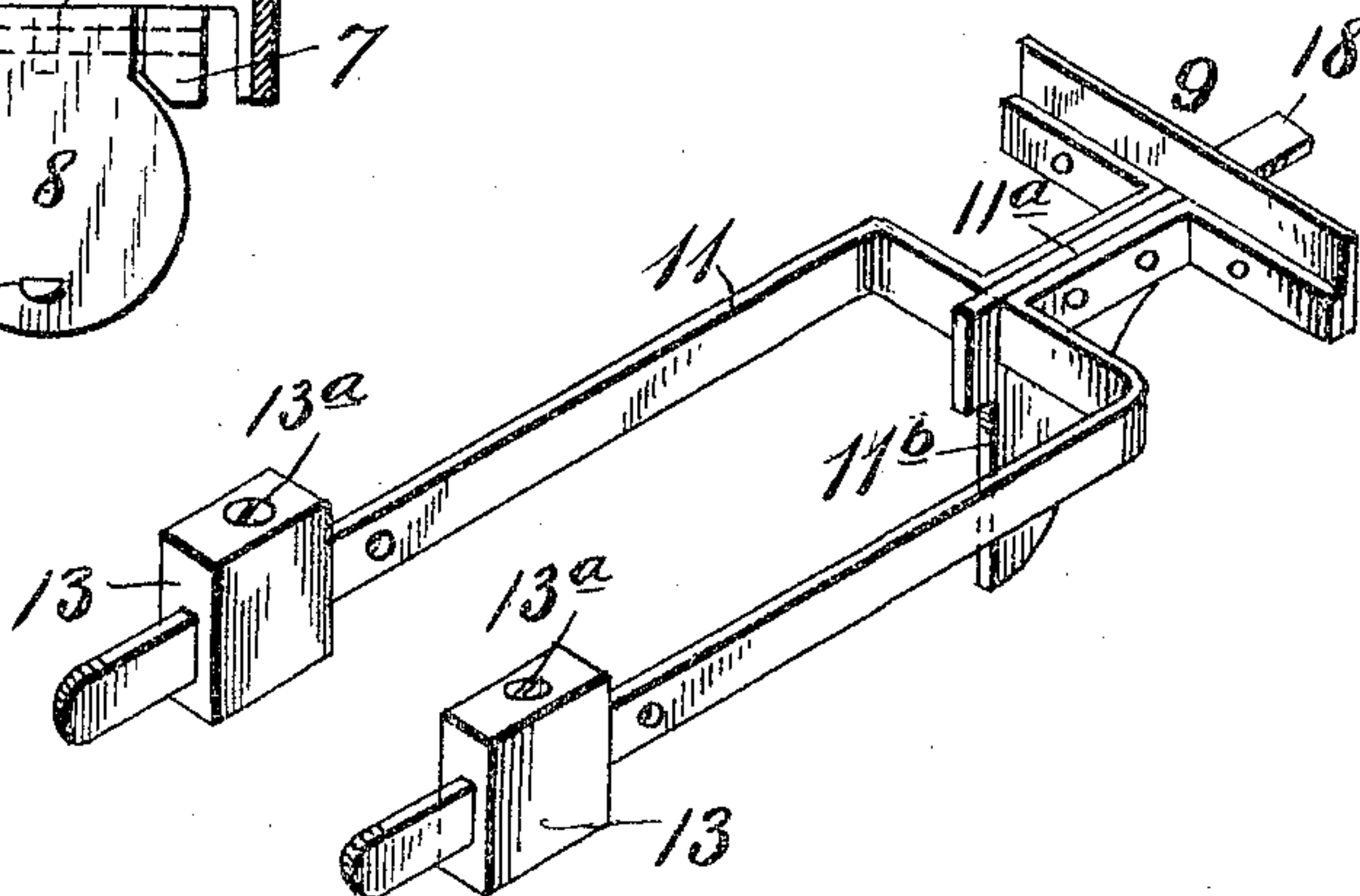


Fig. 2.



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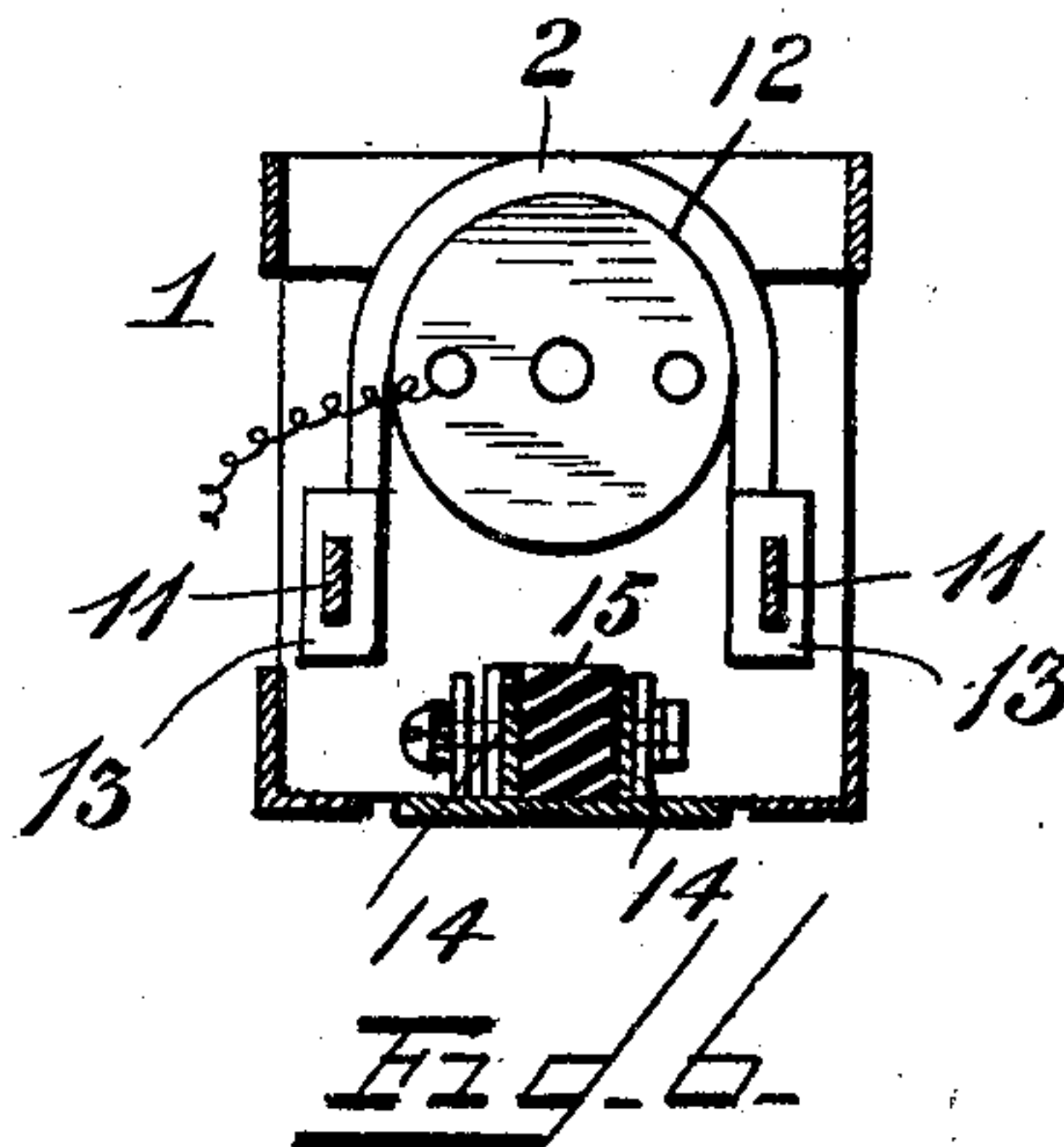
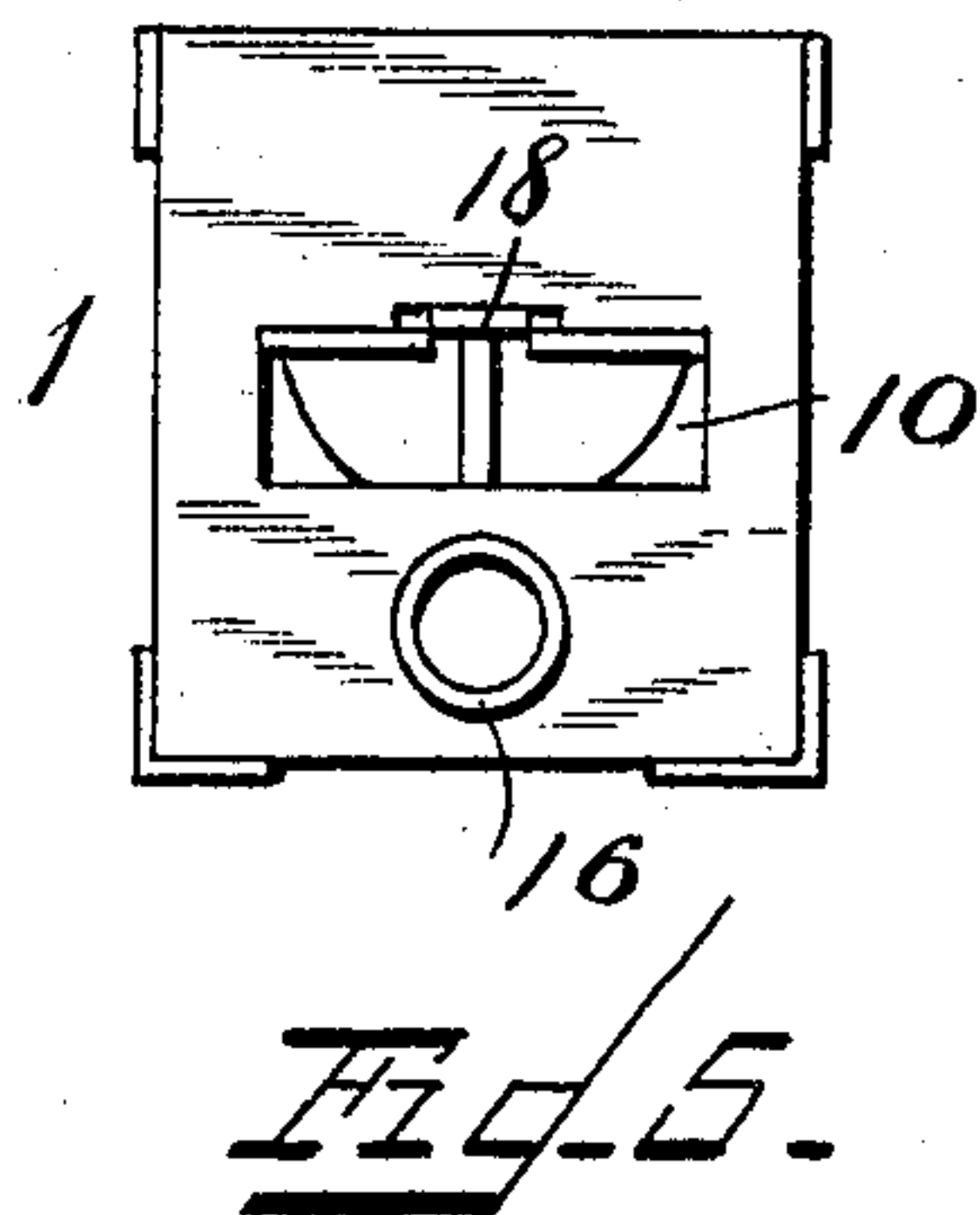
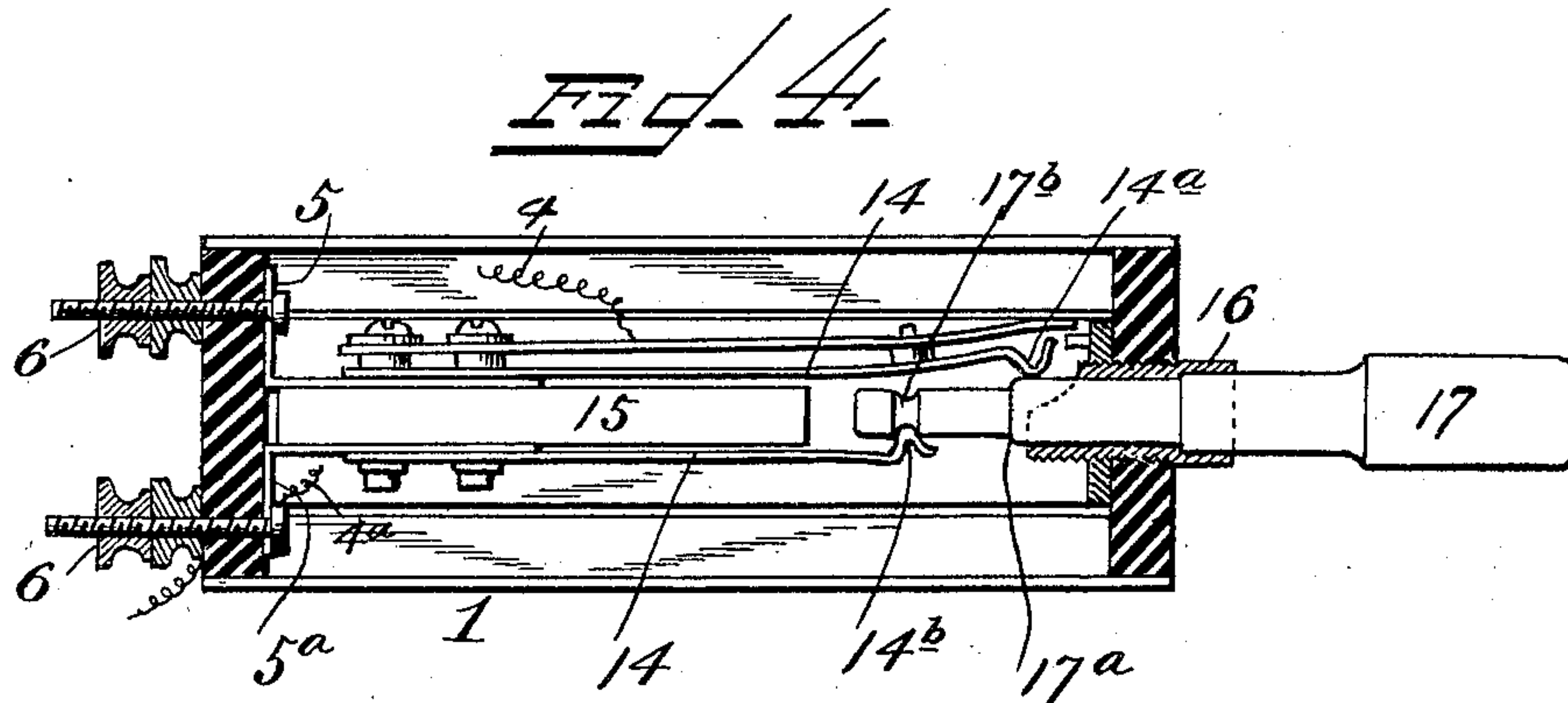
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

LEONARD F. ROSE, OF WASHINGTON, IOWA.

ELECTRICAL ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 793,541, dated June 27, 1905.

Application filed May 3, 1904. Serial No. 206,178.

To all whom it may concern:

Be it known that I, LEONARD F. ROSE, a citizen of the United States, residing at Washington, in the county of Washington and State of Iowa, have invented new and useful Improvements in Electrical Annunciators, of which the following is a specification.

My invention relates to improvements in electrical annunciators, especially of the "drop" class.

Said invention has for its object principally to render the action of the parts of the annunciator highly or effectively sensitive or responsive as a call is sent in or telephoned and to simplify construction and otherwise promote facility and convenience; and to these ends said invention consists more particularly of certain structural features, substantially as hereinafter fully disclosed, and specifically pointed out by the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a perspective view thereof. Fig. 2 is a detached or detailed view showing more particularly the electromagnet-armature and its suspending or pivoting means. Fig. 3 is a like view of the drop or annunciator proper, showing its detailed construction. Fig. 4 is a horizontal section showing more especially the contact-springs engaged by the insertible and removable plug or circuit maker and breaker also in position. Fig. 5 is a front elevation with the drop or annunciator in operative or normal position. Fig. 6 is a transverse section produced just intermediately of the electromagnet and its support looking forward.

In the carrying out of my invention I provide a suitable frame or support 1, preferably as shown, and suitably secure therein an electromagnet 2 of any preferred construction and wired, as at 4 4^a, to plates or bars 5 5^a, connected to the circuit-wire binding-posts 6 6.

From a suitable bracket 7, secured to a cross-bar of the frame or support, is hung an armature 8, arranged or depending contiguously to one end or head of said electromagnet and normally standing a slight distance therefrom. Said armature has upon its forward

surface near the lower edge a stud or projection 8^a, the purpose of which will be presently apparent.

The annunciator or shutter 9, bearing a numeral or other information arranged to be exposed through an aperture or opening 10 in that end of the support 1, is carried by the longer or forward arms of pivoted lever members 11, having secured between their forward end portions a preferably non-conducting pendant or projection 11^a, having a downward-facing shoulder 11^b, adapted to engage the stud or projection 8^a of the armature 8. Said lever members 11, relatively fixed—as, for instance, by the fastenings securing the part 11^a therebetween, as above noted—are fulcrumed near their rear ends upon pivot-studs 12^a, projecting laterally from a yoke-like piece 12, secured to a cross-bar of the frame, whereby said lever members conjointly constitute a common lever. Upon the shorter arms of said lever members are adjustably or slidably arranged counterbalancing-weights 13, adapted by binding-screws 13^a, employed in connection therewith, to be held to said lever members at the required points of adjustment, according to the sensitiveness it may be desired to impart to said common lever, as in permitting the tripping of the latter by a slight electrical impulse and the consequent ready and effective dropping and exposure of the annunciator.

Contact-springs 14, having their rear ends suitably secured to a non-conducting member or part 15, suitably secured in the frame or support 1 and contacting with the binding-post plates or bars 5 5^a, have at their forward free ends angular terminals 14^a 14^b, respectively, said angular terminals extending one beyond the other, the more forward one being arranged within the plane of the plug-receiving socket 16 for a purpose presently made apparent.

A plug or circuit maker and breaker 17, equipped with suitable insulation to permit handling, has its inner conducting end portion provided with a shoulder 17^a and an annular groove 17^b for engagement with the terminals 14^a and 14^b of the contact-springs 14,

respectively, as said plug is inserted through the socket 16 and pushed thereinto to its maximum limit.

It will be noted that when a call is received, assuming that the part 11^a of the annunciator is engaging the part 8^a of the armature 8, holding the former elevated or obscured, the armature will be effectively attracted to the electromagnet by the electrical impulse thus sent through the latter, although it be very slight, permitting the weight of the annunciator to overcome the counterbalances upon the rear ends of the lever members and effect the exposure of the annunciator proper. The operator now calls for number and when announced the required plug, as 17, is introduced into the socket 16, establishing the circuit by the engagement of the angular terminals 14^a 14^b of the springs 14 with said plug, as at 17^a 17^b, and allowing the carrying on of the requisite telephoning. At the conclusion and caller rings "off" said plug is withdrawn, and the armature assumes its initial position, again effecting engagement with the annunciator-lever pendant at 8^a 11^b, retaining the former elevated or obscured in readiness for the repetition of a like operation.

It will be noted that the forward end of the annunciator proper has a finger-piece 18 projecting through the exposing-aperture 10, whereby the same may, by the use of the finger, be reengaged with the magnet-armature, if desired, in lieu of effecting this by the use of the plug. Also it is observed that while by producing the part 11^a of non-conducting material the current is prevented from passing directly across from one member or part to the other, thus interfering with the proper course of the current, yet said part 11^a may be produced of conducting material and serve my purpose.

I claim—

1. In a device of the character described, the combination of a shutter or annunciator

proper, electrical appliances for utilizing an electrical current for tripping said shutter, counterbalanced lever members having fixed between the ends of their longer arms an outward-extending bar bearing said shutter or annunciator, said bar having at its inner end a pendant and a down-facing shoulder, said shoulder adapted to engage a lug upon the magnet-armature and said pendant adapted to be engaged by means effective for establishing connection between said shoulder and lug.

2. In a device of the character described, the combination of a shutter or annunciator proper, electrical appliances for utilizing an electrical current for tripping said shutter, lever members having fixed between the ends of their longer arms an outward-extending bar bearing said shutter or annunciator, said bar having at its inner end a pendant and a downward-facing shoulder, the latter adapted to engage a lug upon the magnet-armature, and the former adapted to be engaged by suitable means effective for establishing connection between said shoulder and lug.

3. In a device of the character described, the combination of a shutter or annunciator proper, electrical appliances for utilizing an electrical current for tripping said shutter, lever members equipped with sliding counterbalances and having fixed between the ends of their longer arms an outward-extended bar having at its inner end a pendant and a downward-facing shoulder, the latter adapted to engage a lug upon the magnet-armature, and the former adapted to be engaged by suitable means effective for establishing connection between said shoulder and lug.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEONARD F. ROSE.

Witnesses:

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