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W. H. HOSCHKE.

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TONE ARM CONNECTION FOR TALKING MACHINES.

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1,155,064.

Patented Sept. 28, 1915.

Fig. 1

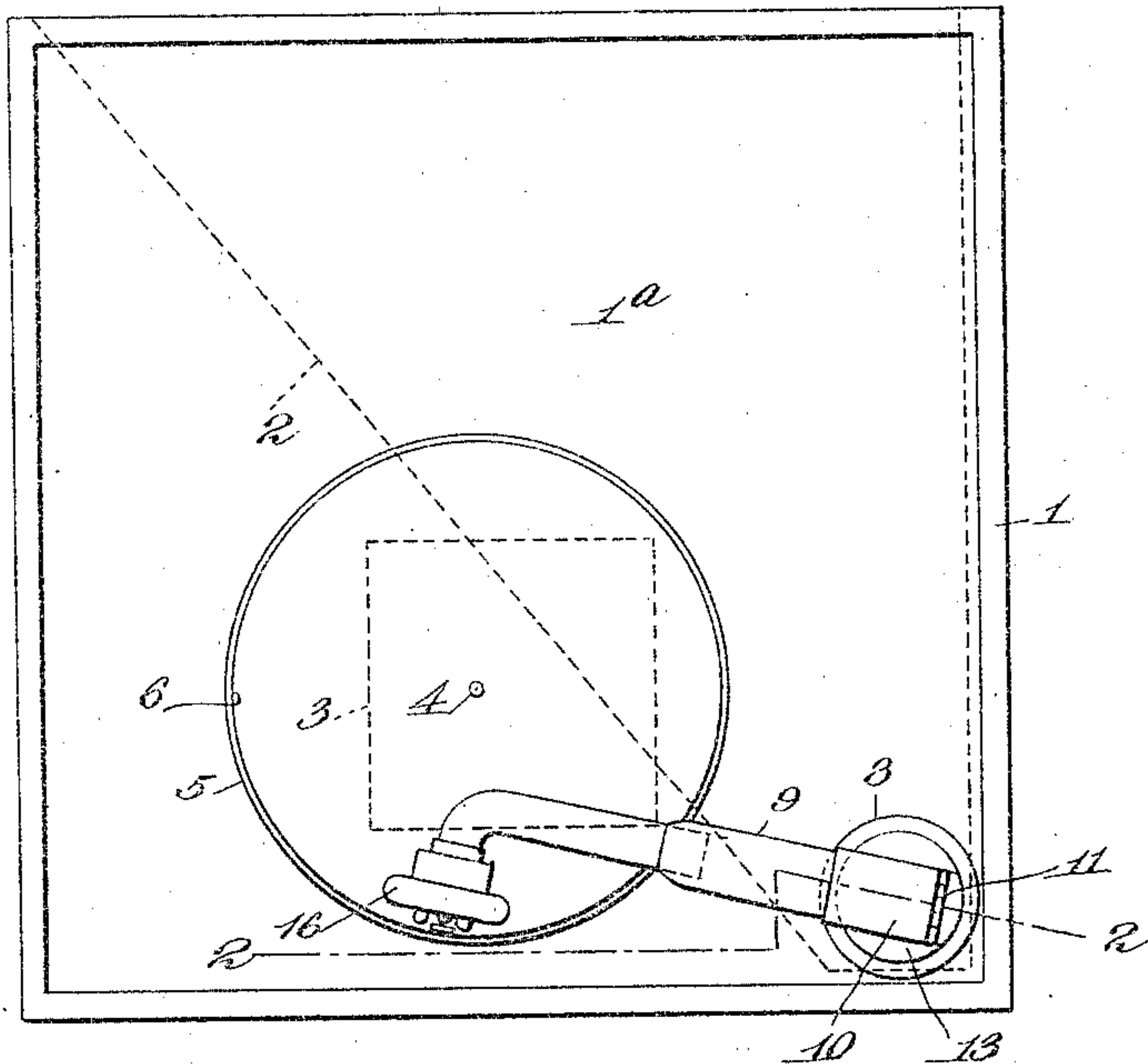


Fig. 3

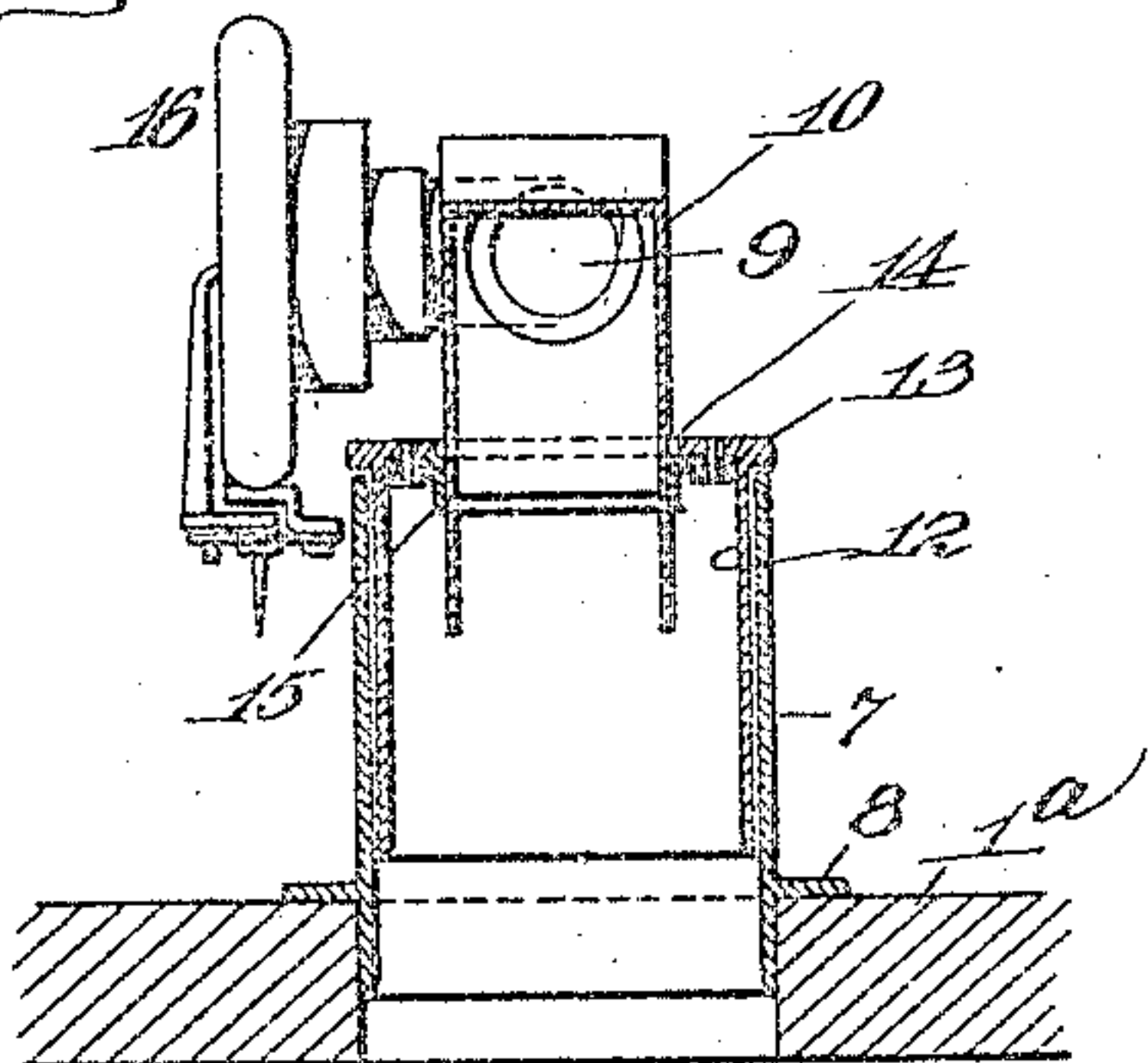
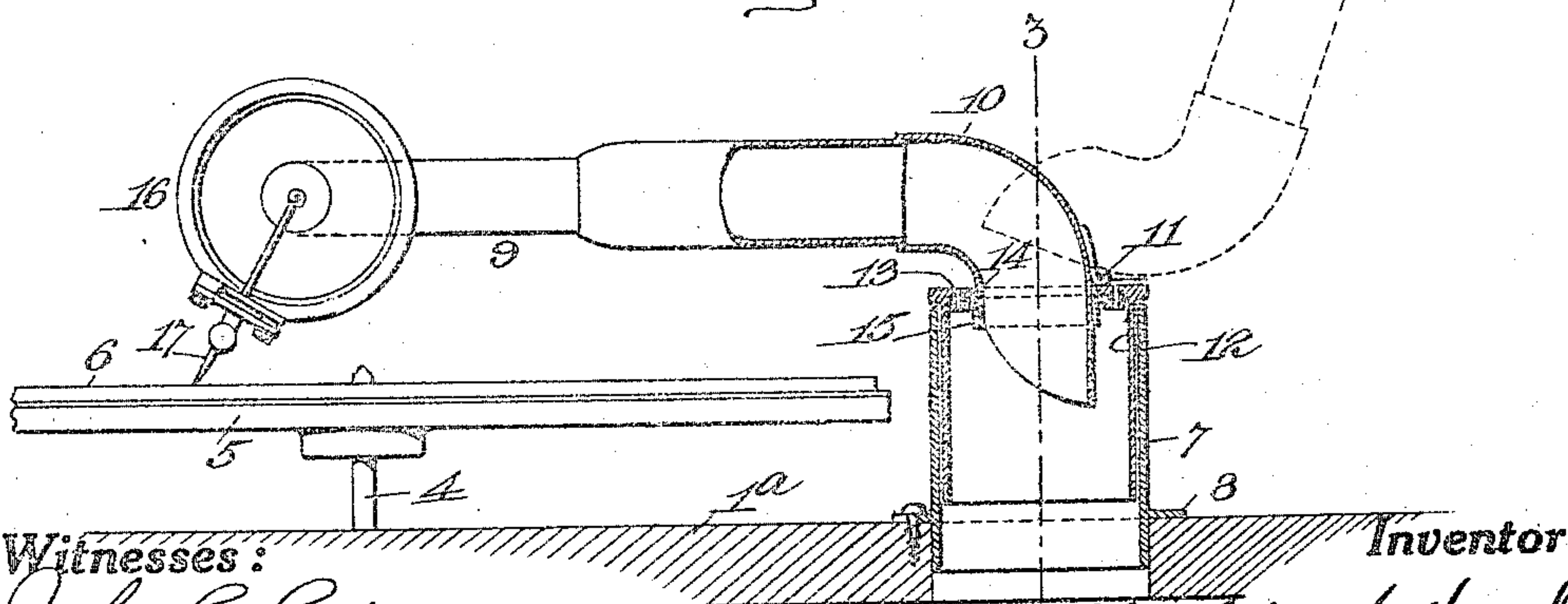


Fig. 2



Witnesses:

John L. Lotch.
M. Jones

Inventor

William H. Hoschke
by Harold H. More, attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM H. HOSCHKE, OF NEW YORK, N. Y., ASSIGNOR TO CRESCENT TALKING
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TONE-ARM CONNECTION FOR TALKING-MACHINES.

1,155,064.

Specification of Letters Patent.

Patented Sept. 28, 1915.

Application filed January 3, 1914. Serial No. 810,144.

To all whom it may concern:

Be it known that I, WILLIAM H. HOSCHKE, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, city and State of New York, have invented a certain new and useful Tone-Arm Connection for Talking-Machines, of which the following is a specification.

The object I have in view is to produce a tone arm for talking machines or the like which will provide an uninterrupted passage for the sound waves from the reproducer to the horn, resonator or other sound conveying means.

Another object is to produce a tone arm in which all the movable connections are outside the path of the sound waves.

A further object is to produce a tone arm wherein the moving parts are so proportioned and arranged as to offer the least possible resistance to the movements of the arm.

A further object is to produce a tone arm by means of which the needle socket may be rendered easily accessible to facilitate the insertion and removal of the needle.

These and further objects will appear from the following specification and accompanying drawings, considered together or separately.

My invention is illustrated in the accompanying drawings in which the same parts are designated by similar reference characters in all of the figures.

Figure 1 is a plan view partly in section of a talking machine with my invention illustrated and properly adjusted, and in working condition. Fig. 2 is a transverse section of the same taken on the line 2—2 of Fig. 1; and Fig. 3, is a detail section taken on the line 3—3 of Fig. 2.

In the drawings 1 represents a talking machine cabinet provided with a top 1^a. Within the cabinet and extending from one corner thereof is a horn or diffuser 2 of any preferred type. Carried within the cabinet is a motor 3 provided with a shaft 4 and a turntable 5. The turntable 5 carries a disk record 6 in the usual manner.

The top 1^a is perforated at one corner thereof and in this perforation is fitted a sleeve 7. The sleeve is provided with a flange 8 by means of which it is secured to the top. The sleeve offers communication to the smaller inner end of the horn or diffuser.

9 represents the tone arm which may be of any recognized construction. The inner enlarged end of the tone arm is provided with an elbow 10 which is hinged at 11 to the top 13 of an extension 12. The extension 12 is carried in the sleeve 7 with the projecting edge of its top 13 resting on the upper edge of the sleeve. The body of the extension 12 makes a loose fit with the bore of the sleeve, thereby facilitating the turning movement of the extension relatively to the sleeve. The top 13 of the extension is provided with an opening 14 through which the elbow 10 projects. The lower end of the elbow which projects into the extension when the tone arm is in its normal position is rounded on the arc of a circle of which the hinge 11 is the center so that the arm may be swung up away from the record. To the under side of the top 13 is secured a skirt 15 of leather or other suitable flexible material which forms a close contact with the lower end of the elbow when it is within the extension and prevents exit of sound waves from the top of the same.

The outer end of the tone arm is provided with the usual speaker or reproducer which carries a needle or other device for engagement with the record groove.

It will be seen that with my improved tone arm and connections the passage of the sound waves from the reproducer to the interior of the casing will be in a straight line and entirely unimpeded and free of obstructions. When it is desired to insert or remove a needle the arm may be swung back to the position shown in dotted lines in Fig. 2 so that the needle socket and set screw will be within easy reach and in the direct line of sight of the operator. This is an important feature of my invention, as in all previous devices with which I am familiar, the needle socket is always in close proximity to the record disk and in the shadow of the sides or cover of the casing, thereby rendering the operation of putting in or taking out a needle a more or less difficult and dangerous operation.

With my improvement, when it is desired to remove the tone arm from the machine it is simply necessary to lift the arm and with it the extension 12 from the sleeve 7 which may be accomplished without the use of even the simplest tools.

Throughout this specification and in the accompanying drawings, I have illustrated and described my invention in connection with a talking machine of the disk type, but
5 it is to be understood and it is obvious that my invention is equally applicable and adaptable to talking machines of the cylindrical type, and that I do not limit my invention to the disk type of talking machine.

10 In accordance with the provisions of the patent statute, I have described the principle of my invention together with the apparatus which I now consider to represent the best embodiment thereof, but I desire to
15 have it understood that the apparatus shown is merely illustrative, and that the invention can be carried out in other ways.

Having now described my invention, what I claim as new and desire to secure by
20 Letters Patent, is as follows:

In a talking machine the combination with a sound diffuser, and a sleeve communicating therewith, of a tubular sound arm, an extension to the arm, an end plate for the extension, a hinge carried by the end
25 plate and attached to the tone arm, an opening in the end plate through which the end of the tone arm projects, a skirt carried by the end plate and forming a close contact with the end of the tone arm, and a flange
30 on the extension, said flange resting on the sleeve.

This specification signed and witnessed this 27th day of December, 1913.

WILLIAM H. HOSCHKE.

Witnesses:

GEORGE W. BEHRENS,
THEODORE LUME.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."