

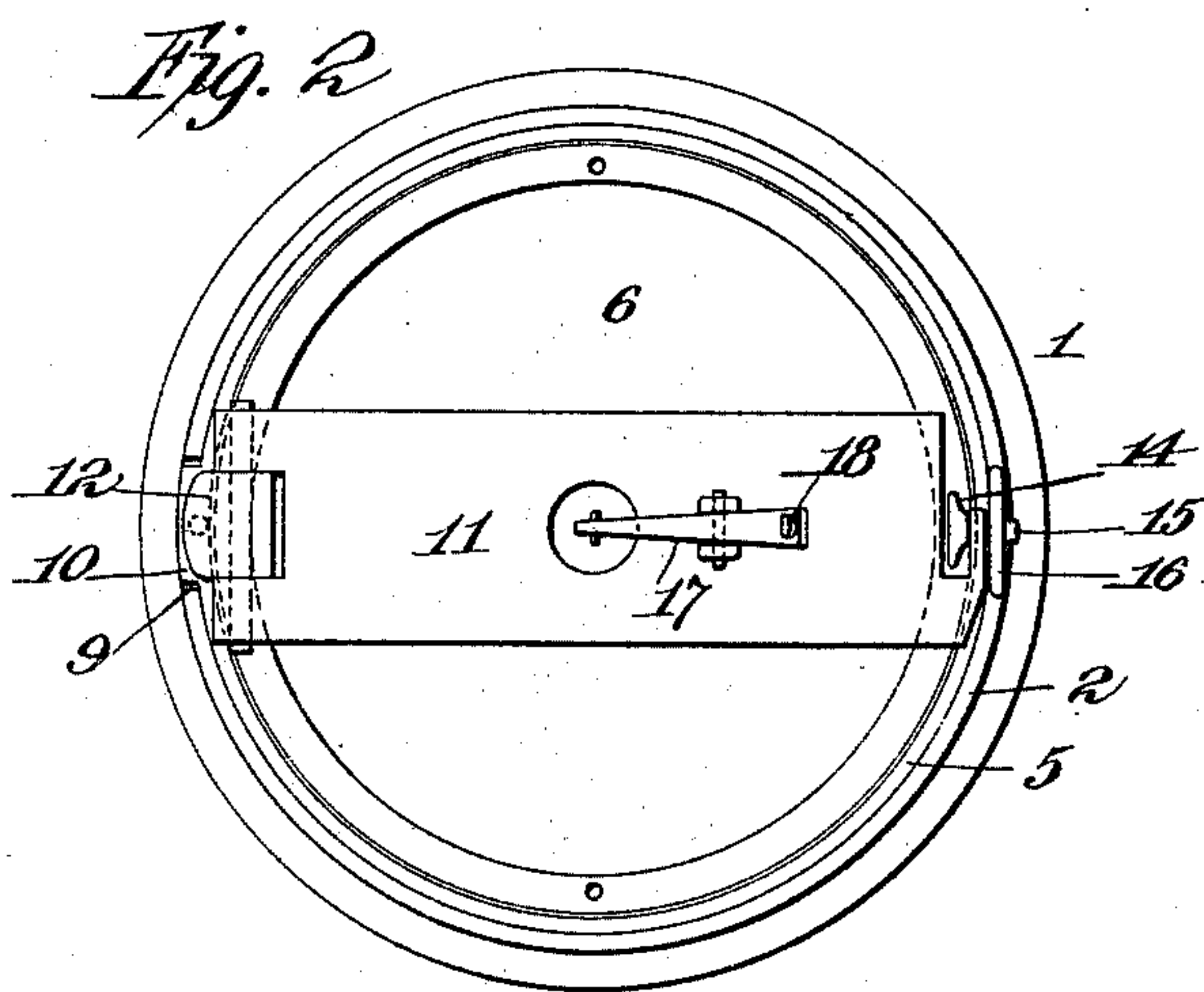
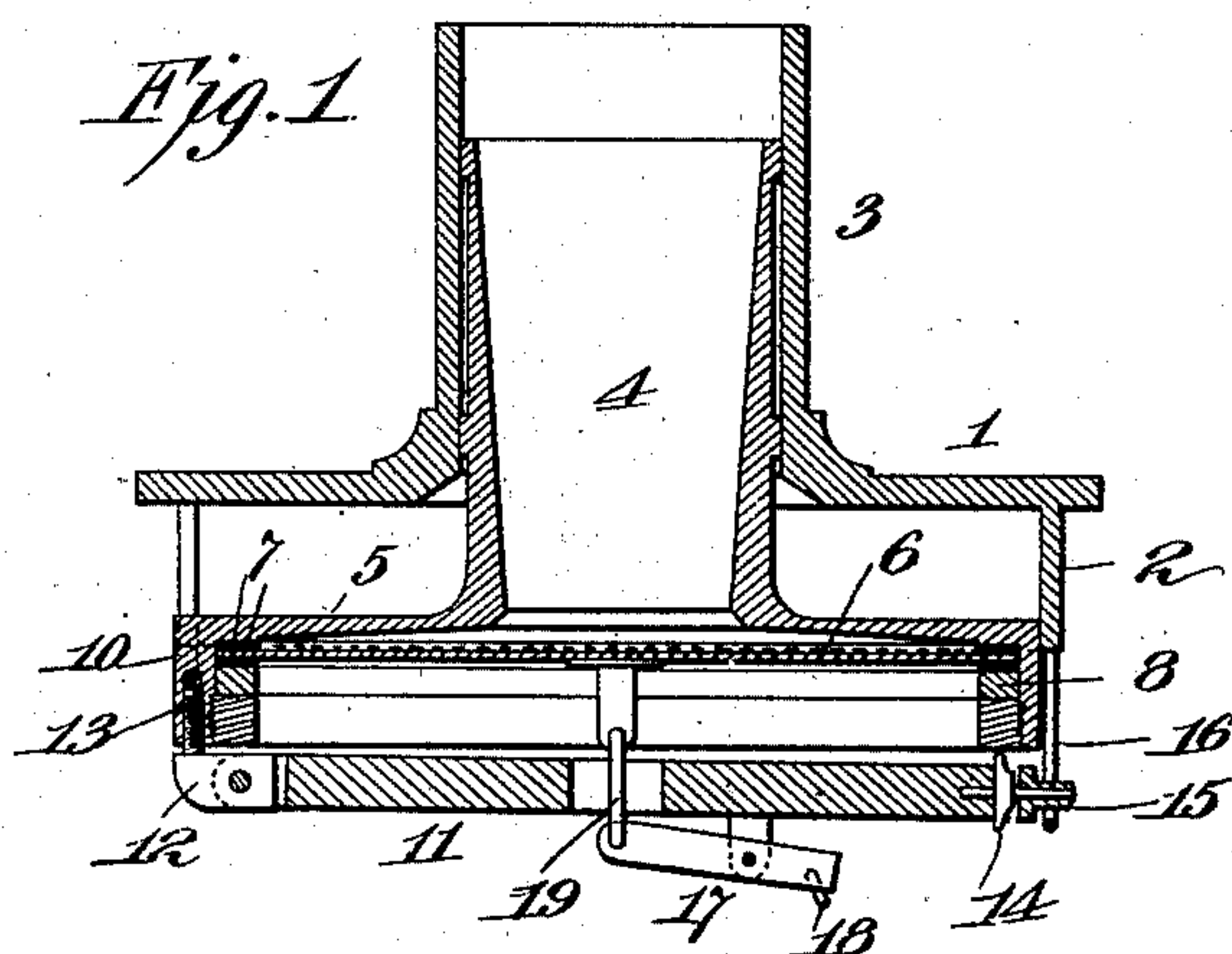
No. 698,602.

Patented Apr. 29, 1902.

P. WEBER.  
PHONOGRAPHIC REPRODUCER.

(Application filed Feb. 6, 1901.)

(No Model.)



Witnesses:

*Geo. F. Coleman*  
*Geo. R. Taylor*

Inventor

*Peter Weber*  
by *Alvin Edmunds* Att'ys.



# UNITED STATES PATENT OFFICE.

PETER WEBER, OF EAST ORANGE, NEW JERSEY.

## PHONOGRAPHIC REPRODUCER.

SPECIFICATION forming part of Letters Patent No. 698,602, dated April 29, 1902.

Application filed February 6, 1901. Serial No. 46,170. (No model.)

*To all whom it may concern:*

Be it known that I, PETER WEBER, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Phonographic Reproducers, (Case C,) of which the following is a specification.

My invention relates to improvements in reproducing apparatus for phonographs and allied talking-machines; and my object generally is to simplify the construction, reduce the expense, and improve the operation of such devices.

In order that the invention may be better understood, attention is directed to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a vertical sectional view of my improved reproducer, and Fig. 2 a bottom view of the same.

In both of the above views corresponding parts are represented by the same numerals of reference.

The body of the reproducer comprises a disk 1, having an annular flange 2 and a neck 3 cast therewith. The usual listening-tubes are fitted within or over the neck. Mounted to slide vertically within the neck 3 is a tube 4, cast at its lower end with a flanged disk 5, the latter forming the usual compensating weight. This disk carries the diaphragm 6, made, preferably, of glass and clamped in place between elastic gaskets 7 7 by means of a clamping-ring 8. By guiding the tube 4 in the neck 3 and the disk 5 within the flange 2 the disk-like compensating weight 5 and its contained diaphragm will be permitted to move only in a vertical direction. The flange 2 is provided at one side with a slot 9, fitting within which is an extension 10 on the flange of the compensating weight 5, whereby the compensating weight will be prevented from partaking of rotary movements in operation.

Extending diametrically across the bottom of the compensating weight and below the diaphragm is an auxiliary weighted lever 11, which at one side is pivoted or hinged to the head 12 of a threaded shank 13, the latter being screwed into the flange of the weight 5, but not being screwed entirely home, so that the auxiliary lever can move laterally with

respect to the diaphragm. At its other end the auxiliary weighted lever is provided with an antifriction-roller 14, which when the device is in operation bears against the lower edge of the flange of the compensating weight and at its extreme end is provided with a stud 15, received within a loop or yoke 16, depending from the flange 2, as shown. Pivoted to the auxiliary lever 11 is a lever 17, carrying a suitable reproducing-stylus 18 at one end and connecting at its other by means of a link 19 to the diaphragm 6.

In operation the downward movement of the auxiliary weighted lever 11 will be retarded by the yoke or loop 16 and the compensating weight 5 will rest upon and be supported by the antifriction-roller 14. If there are any diametrical variations or eccentricities in the record, the auxiliary lever, diaphragm, and compensating weight will be bodily moved upward or downward to always keep the reproducing-stylus in proper engagement with the record and with the requisite pressure. The inertia of these parts, however, prevents them from responding to the very rapid vibrations of the sound-record, which in consequence result only in the vibration of the diaphragm. Any longitudinal variations in the record will be accommodated and accurate tracking secured by reason of the lateral variations of which the auxiliary lever 11 is capable with respect to the pivot 13, in which movements the roller 14 will obviously be moved with respect to the flange of the compensating weight.

The whole device is effective in operation, simple in construction, and can be very economically made.

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

1. In a phonographic reproducing device, the combination of a disk-like body, a compensating weight movable vertically with respect to the same, a diaphragm carried by and bodily movable with said weight, an auxiliary lever universally pivoted to the compensating weight, and a reproducing device carried by said lever and connected to the diaphragm, substantially as set forth.

2. In a phonographic reproducing device, the combination of a disk-like body, a com-



compensating weight movable vertically with respect to the same, a diaphragm carried by and bodily movable with said weight, an auxiliary lever universally pivoted to the compensating weight, a reproducing device carried by said lever and connected to the diaphragm, and a yoke for limiting the downward movement of said lever, substantially as set forth.

3. In a phonographic reproducing device, the combination of a disk-like body having an integral neck, a tube vertically movable in said neck, a compensating weight carried by said tube within the body, a diaphragm carried by and bodily movable with the compensating weight, an auxiliary lever universally pivoted to said compensating weight beneath the diaphragm, and a reproducing device pivoted to said lever and connected to the diaphragm, substantially as set forth.

4. In a phonographic reproducing device, the combination of a disk-like body having an integral neck, a tube vertically movable in said neck, a compensating weight carried by said tube within the body, a diaphragm carried by and bodily movable with the compensating weight, an auxiliary lever pivoted to said compensating weight beneath the diaphragm and capable of lateral movement

with respect thereto, a reproducing device pivoted to said lever and connected to the diaphragm, and an antifriction-roller interposed between the free end of said lever and the compensating weight, substantially as set forth.

5. In a phonographic reproducing device, the combination of a disk-like body having an integral neck, a tube vertically movable in said neck, a compensating weight carried by said tube within the body, a diaphragm carried by and bodily movable with the compensating weight, an auxiliary lever pivoted to said compensating weight beneath the diaphragm and capable of lateral movement with respect thereto, a reproducing device pivoted to said lever and connected to the diaphragm, an antifriction-roller interposed between the free end of said lever and the compensating weight, and a yoke for limiting the downward and lateral movements of said lever, substantially as set forth.

This specification signed and witnessed this 30th day of January, 1901.

PETER WEBER.

Witnesses:

HARRY F. MILLER,  
J. H. MORAN.