G. L. WILLETT.

TALKING MACHINE.

APPLICATION FILED FEB. 28, 1921.

1,388,626. Patented Aug. 23, 1921.

FIG. 1.

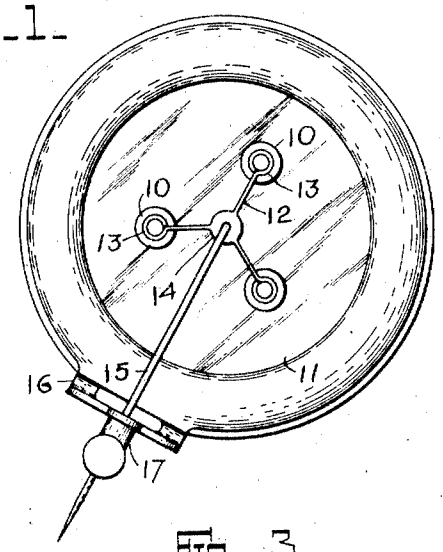


FIG. 2.

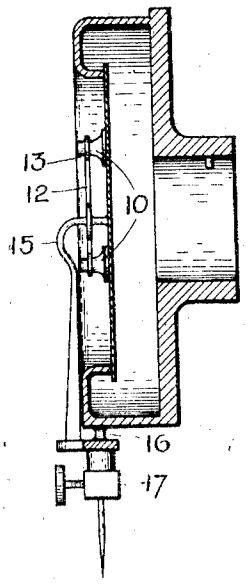


FIG. 3.

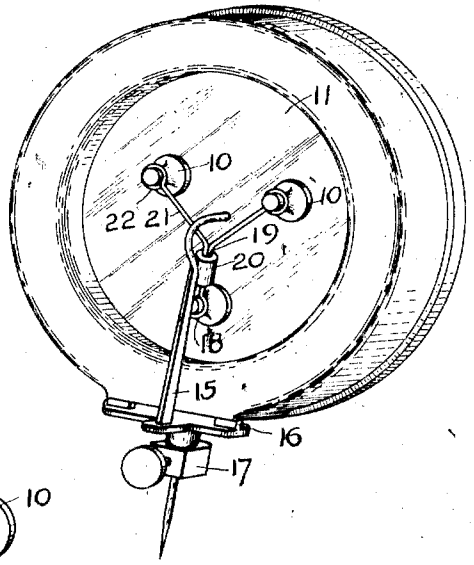
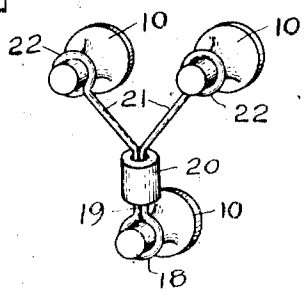


FIG. 4.



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TALKING-MACHINE.

1,388,626. Specification of Letters Patent. Patented Aug. 23, 1921.

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To all whom it may concern:

Be it known that I, GUY L. WILLETT, a citizen of the United States of America, residing of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Talking-Machines, of which the following is a specification.

This invention relates to sound reproducing instruments and has special reference to a phonograph reproducer.

One important object of the invention is to provide an improved general construction of devices of this character.

A second important object of the invention is to provide an improved means of connecting the stylus arm to the diaphragm of a phonograph reproducer.

A third important object of the invention is to provide an improved means for reinforcing the connection between an ordinary stylus arm and the diaphragm in a phonograph reproducer.

With the above and other objects in view, as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described; illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:—

Figure 1 is a face view of the improved reproducer.

Fig. 2 is a section taken diametrically therethrough.

Fig. 3 is a perspective view of a modification showing its use with a reproducer having the stylus arm connected in the usual manner, the device being used to reinforce the connection.

Fig. 4 is a perspective view of that portion of the device constituting the diaphragm attachment.

In the different forms of the invention shown there are employed three posts 10 which are mounted on the diaphragm 11 by the employment of one of the usual cements. These posts 10 are arranged in triangular form, the triangle preferably being an equilateral triangle having its center coincident with the center of the diaphragm.

In the form shown in Figs. 1 and 2 the posts 10 are connected by a three armed spider, the arms 12 of which terminate in eyes 13 surrounding and solidly gripping the respective posts 10. These arms converge to a central disk 14 through which passes one end of the stylus arm 15, the said end extending to and being secured to the diaphragm 11.

This stylus arm is provided with any suitable form of fulcrum as shown at 16 and carries the usual needle holder 17. That portion of said stylus arm which passes through the disk 14 is rigidly connected thereto as by soldering, brazing or any other convenient method of manufacture.

In the form shown in Figs. 3 and 4 the three posts are connected by a wire spider formed of a single length of wire doubled at its center to provide a post embracing eye 18, the parts of the wire adjacent this eye being arranged in parallel relation as shown at 19 and held in that relation by a cuff 20 corresponding to the disk 14 and, like it, rigidly connected to the stylus arm 15 and in the same manner. Beyond the cuff 20 the wire ends diverge as at 21 and terminate in post engaging eyes 22.

Preferably the posts are made of hard rubber or the like while the spider is made of metal, copper or brass being suitable for the purpose.

This construction thus provides a strong connection between the stylus arm and diaphragm, the connection having the characteristics of a tripod.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that minor changes may be made in the form and construction of the invention without departing from the principles thereof. It is not, therefore desired to confine the invention to the exact from herein shown and described, but it is wished to include all such as properly come within the scope claimed.

Having thus described the invention, what is claimed as new, is:—

1. In a phonograph reproducer, a diaphragm, a stylus arm, a triad of posts fixed to the diaphragm in triangular relation, and a three armed spider having eyes at the ends

of its arms embracing and gripping the posts, said spider further being firmly connected to the stylus arm.

2. In a phonograph reproducer, a diaphragm, a stylus arm, a triad of posts fixed to the diaphragm in triangular relation, a spider formed of a length of wire having terminal eyes engaging two of said posts and a central eye engaging the third post, the portions of the wire adjacent the central eye extending parallel and then diverging to the terminal eyes whereby to form a three armed spider, and a cuff on the parallel portions of the wire and having rigid connection with the stylus arm.

In testimony whereof I affix my signature.

GUY L. WILLETT.