

L. GRIFFITH.
SOUND REPRODUCING DEVICE FOR TALKING MACHINES.
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971,442.

Patented Sept. 27, 1910.

Fig. 1.

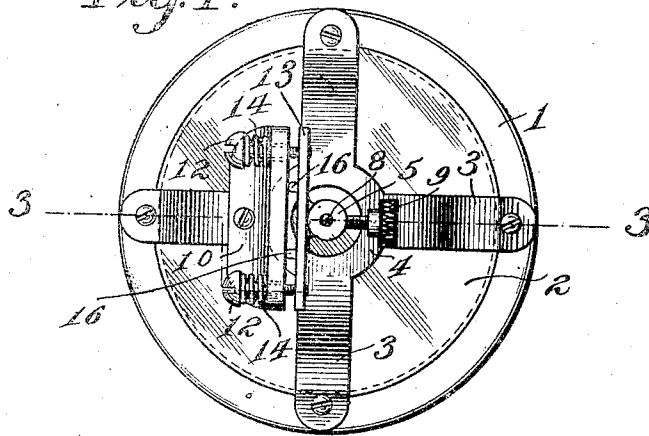


Fig. 2.

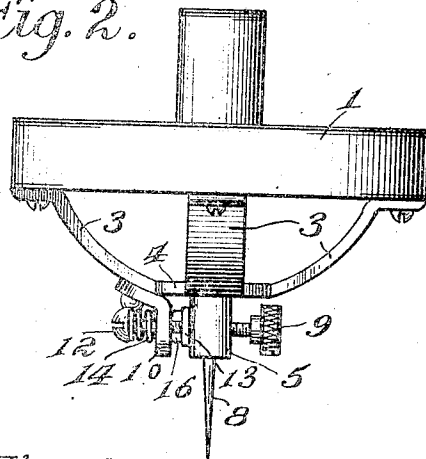
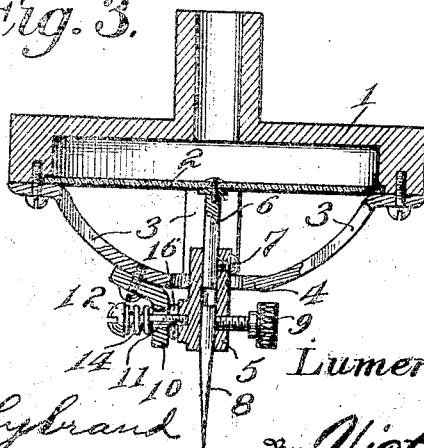


Fig. 3.



Witnesses

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LUMEN GRIFFITH, OF HUDSON, MICHIGAN.

SOUND-REPRODUCING DEVICE FOR TALKING-MACHINES.

971,442.

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To all whom it may concern:

Be it known that I, LUMEN GRIFFITH, a citizen of the United States, residing at Hudson, in the county of Lenawee and State of Michigan, have invented new and useful Improvements in Sound-Reproducing Devices for Talking-Machines, of which the following is a specification.

This invention relates to a sound reproducing device for talking machines and has for its principal object to provide a novel supporting means for the record needle or stylus and to so operatively connect such needle with the diaphragm of the sound box that a superior reproduction of sounds is possible.

Another object of the invention is to provide an extremely simple, practical and durable device of this character of such design that the parts are interchangeable and are so delicately adjusted and positioned that the records can be made finer in vibrating lines and perfect natural tones reproduced, and at the same time the weight borne by the record from the stylus or needle will be lessened with the result that the scratching sounds will be practically eliminated.

With these objects in view, and others as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawing, which illustrates one embodiment of the invention; Figure 1 is a plan view of the sound reproducing device. Fig. 2 is a side view thereof; and Fig. 3 is a section on line 3-3, Fig. 1.

Similar reference characters are employed to designate corresponding parts throughout the several views.

Referring to the drawing, 1 designates the sound box in which is supported the usual diaphragm 2 and attached to the box at the diaphragm side thereof is a supporting spider or frame 3 which has a hub 4 in which is loosely disposed a sleeve coupler or socket piece 5. The inner end of this coupler 5 receives the diaphragm needle 6, the connection being effected by a set screw 7. In the opposite end of the coupler is inserted the stylus or record needle 8, which is removably secured in place by a milled-headed screw 9. The needles 6 and 8 are disposed

in alinement and at right angles to the diaphragm 2, and the needle 8 will engage the record in radial or perpendicular relation thereto so that the vibration will be communicated to the diaphragm line from the record and longitudinally of the needles and coupler.

The coupler is mounted on the spider or frame 3 by means of a bracket 10 which has openings 11 through which loosely pass screws 12, the same passing through lugs or ears 13 extending from opposite sides of the coupler, and on the screws are stiff springs 14 that are held between the bracket 10 and the heads 15 of the screws and their tension can be adjusted by turning the screws. The coupler is spaced from the bracket by means of spaced projections 16 which engage the opposed face of the bracket and by mounting the coupler in this manner, it can move longitudinally in communicating the vibrations from the records to the diaphragm.

From the foregoing description taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention relates, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made when desired as are within the scope of the claims.

What I claim as new and desire to secure by Letters Patent is:—

1. The combination of a sound box, a diaphragm mounted thereon, a spider secured to the sound box and located at the side of the diaphragm opposite from the sound box, said spider having an opening arranged in line with the center of the diaphragm, a member having one end operatively related to the diaphragm, a tubular coupler extending through the opening of the spider and spaced from the edges of said opening, one end of the member extending into the coupler, means for securing the coupler and member together, a needle secured in the other end of the coupler, a bracket on the spider, members loosely mounted on the bracket and connected with the coupler, and springs on the last-mentioned members for yieldingly mounting the coupler.

2. The combination of a sound box, a dia-

phragm mounted thereon, a spider secured to the sound box and located at the side of the diaphragm opposite from the sound box, said spider having an opening arranged in
5 line with the center of the diaphragm, a member having one end operatively related to the diaphragm, a tubular coupler extending through the opening of the spider and spaced from the edges of said opening, one
10 end of the member extending into the coupler, means for securing the coupler and member together, a needle secured in the other

end of the coupler, a bracket on the spider having spaced elongated openings, screws extending through the openings engaged 15 with the coupler, and springs surrounding the screws and having their ends bearing on the heads of the latter and on the bracket.

In testimony whereof I affix my signature in presence of two witnesses.

LUMEN GRIFFITH.

Witnesses:

G. I. THOMPSON,
A. M. VOORHIES.