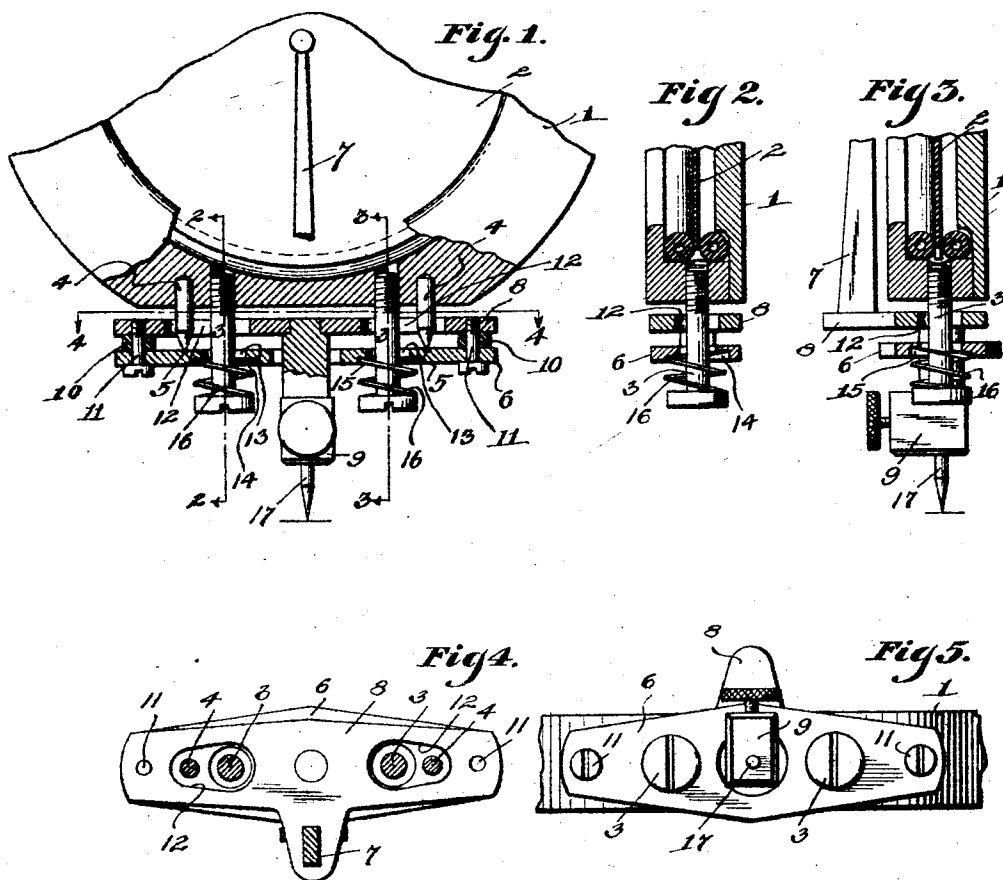


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C. SCRABIC
STYLUS BAR MOUNTING
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UNITED STATES PATENT OFFICE.

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STYLUS-BAR MOUNTING.

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To all whom it may concern:

Be it known that I, CARL SCRABIC, a citizen of the United States, residing at Urbana, in the county of Champaign and State of Ohio, have invented certain new and useful Improvements in Stylus-Bar Mountings, of which the following is a specification.

The present invention is directed to improvements in stylus bar mountings for sound boxes of talking machines.

The primary object of this invention is to provide a stylus bar mounting constructed and arranged in such manner that only true recorded undulations are transmitted to the diaphragm by eliminating any sympathetic co-vibrations from the mounting.

A further object of the invention is to provide a device of this character wherein the stylus bar has associated therewith a pair of complementary springs so arranged as to exert pressure on the stylus bar in opposed directions so that the stylus arm will exert balanced tension upon the diaphragm to more readily and accurately respond to the movement of the stylus arm.

With these and other objects in view, as will appear as the description proceeds, the invention consists in the novel features of construction, combinations of elements and arrangements of parts, and hereinafter to be fully described and pointed out in the appended claims.

In the accompanying drawing:

Figure 1 is a fragmentary front elevation of a sound box with parts broken away to more clearly illustrate the invention.

Figure 2 is a sectional view on line 2—2 of Figure 1.

Figure 3 is a sectional view on line 3—3 of Figure 1.

Figure 4 is a sectional view on line 4—4 of Figure 1, and

Figure 5 is a fragmentary bottom plan view of the device.

Referring to the drawing 1 designates the sound box casing having mounted therein in any approved manner the diaphragm 2, and having their upper ends threaded in the lower side of the sound box is a pair of head bolts 3, the purpose of which will appear later. A pair of depending fulcrum pins 4 are also secured to the lower side of the sound box and have their lower ends pointed for rocking engagement in the recess 5 formed in the plate 6. The stylus

bar 7 is connected with the stylus bar 8 and diaphragm as more clearly illustrated in Figure 3 of the drawing.

The stylus bar 8 has associated therewith the usual needle holder 9, said bar being disposed above the plate 6, and is held in spaced relation with the bar through the instrumentality of the sleeves 10 and screws 11, and since the sleeves are formed from non-resonant material all metallic sounds are eliminated.

It will be observed that the stylus bar 8 and plate 6 are formed with coinciding openings 12 and 13, respectively, the pins 4 passing through the former while the bolts 3 pass through both of said openings, the openings 12 being comparatively long so as to adequately accommodate the bolts and pins, as clearly shown in Figure 1 of the drawing.

The plate 6 has in its under surface annular sockets 14 and 15 the bases of which are inclined upwardly and in opposite directions and transversely of the plate as shown in Figures 2 and 3. Coil springs 16 embrace the lower ends of the bolts 3 and have their lower terminals resting upon the heads of the bolts, while their upper terminals engage in the respective sockets.

It will be observed that when the coil springs 16 are under tension that they will exert pressure upon opposite sides and at diagonally disposed points of the plate 6, and owing to the presence of the inclined bases of the sockets pressure of the bar will be equalized and the same retained in perfect balanced position, the pins 4 permitting the plate and bar to oscillate as the needle 17 travels in the record groove. Owing to the peculiar formation of the bases of the sockets the spring associated with the socket 14 when compressed will exert pressure on the stylus bar in one direction while the spring associated with the socket 15 will exert pressure in an opposed direction and consequently the pressure of the stylus arm is equalized so that the diaphragm will respond to reproduce fully all tones. To more clearly set forth the important feature of my invention attention is called to the fact that when the springs 16 are under tension there will be greater strength in the helices thereof which lie between the lowermost points of the inclines of the sockets and the heads of the bolts 3, the tendency being to

rock the bar 8 and plate 6 in opposed directions until the proper adjustment has been obtained. It will be observed that the stylus bar will be permitted to oscillate freely as the needle is subjected to the undulations in the record groove.

What is claimed is:

1. In combination with a sound box casing, a stylus bar connected therewith for oscillating movement, a plate rigidly connected with and capable of oscillating with the stylus bar, and a resilient means cooperatively associated with the plate for ex-

erting pressure upon opposite sides of the longitudinal axis of the bar and plate. 15

2. In combination with a sound box casing, a stylus bar connected therewith for oscillatory movement, a plate rigidly connected with the bar, said plate having sockets formed therein which have their bases inclined in opposite directions, a resilient means engaged in said sockets for exerting pressure upon the plate in opposed directions, as and for the purpose set forth. 20

In testimony whereof I affix my signature.

CARL SCRABIC.