

J. A. HUNT.
 NEEDLE FOR SOUND REPRODUCING MACHINES.
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1,312,848.

Patented Aug. 12, 1919.

Fig. 1.

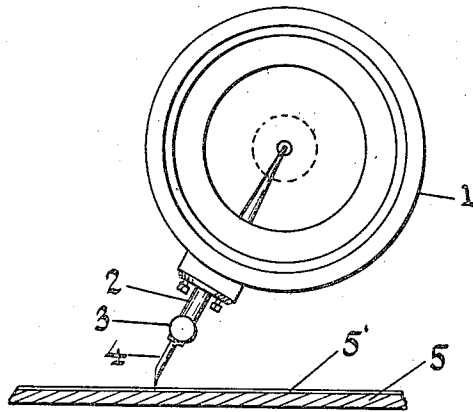


Fig. 3.

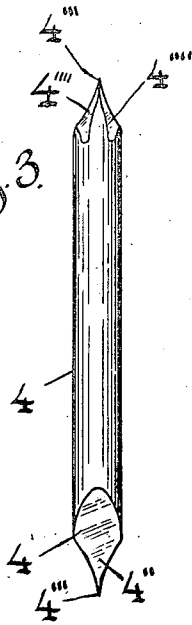


Fig. 2.

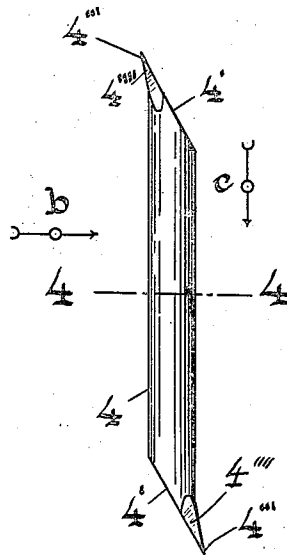


Fig. 4.



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NEEDLE FOR SOUND-REPRODUCING MACHINES.

1,312,848.

Specification of Letters Patent.

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Application filed January 14, 1918. Serial No 211,714

To all whom it may concern:

Be it known that I, JONATHAN A. HUNT, a citizen of the United States residing at Salem, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Needles for Sound-Reproducing Machines, of which the following is a specification.

My invention relates to a needle for disk sound reproducing machines.

The object of my invention is to provide an improved needle, for sound reproducing machines, which will outwear, and give better results than needles now ordinarily used.

My invention consists in certain novel features of construction of my improved needle for sound reproducing machines, as will be hereinafter fully described.

Referring to the drawing:—

Figure 1 is a side elevation of a sound reproducing sound box, and a sectional view of a sound record disk, and shows my improved needle in operable position.

Fig. 2 shows, on a much enlarged scale, the needle shown in Fig. 1, detached.

Fig. 3 shows the needle shown in Fig. 2, looking in the direction of arrow *b*, same figure, and

Fig. 4 is a cross section through the needle, on line 4, 4, Fig. 2, looking in the direction of arrow *c*, same figure.

In the accompanying drawing, 1 is a sound reproducing box, which may be of any ordinary construction, and such as is used in connection with sound reproducing machines which use flat disk records. 2 is the needle holding socket of the sound box, and 3 the clamp screw, which acts to engage and hold the needle 4 in place in the socket 2. 5 is a detached sectional portion of the flat disk or record, which has a groove 5' in the upper surface thereof, into which the point of the needle 4 extends.

I will now describe my improvements in the needle.

The needle 4 is preferably made of metal, and of circular shape in cross section, as shown in Fig. 4.

The needle 4 has preferably an operating or record engaging end, at one or each end

thereof, so that it may be reversible, and either end may be used to engage the disk.

The end of the needle 4 is made inclined, or of diagonal shape in cross section, and has a curved and oval shaped outline on the flattened portion thereof at its upper part, as shown at 4', Fig. 3, and a tapering and wedge shape outline at its lower part 4'', terminating in a sharp pointed end 4'''. The lower wedge shape part 4'' is bent outwardly or offset, to extend beyond the plane of the needle 4, as shown in Fig. 2, and the surface thereof, on the side opposite the flat side, has preferably two flattened portions 4''', one on each side of the point, making a wedge shape point, as shown, on the upper end of the needle 4 in Fig. 3, which point is of triangular shape in cross section.

The pointed wedge shape end 4''', on the needle 4, of the construction above described, forms the engaging point of the needle, to extend into the groove 5' in the disk 5, as shown in Fig. 1.

My improved needle 4 is preferably made of metal, of circular shape in cross section, and with an operating end on each end of the needle, but if preferred, my improved needle may be made of some other material, and of some other shape in cross section, and with an operating end only on one end of the needle.

It will be understood that the details of construction of my improved needle may be varied if desired, and it is intended to be used in any kind of sound reproducing mechanism.

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

A needle for sound reproducing machines, of circular shape in cross section, with a flattened section at its end, and a projection of wedge shape forming the engaging end, offset from the plane of the body of the needle.

JONATHAN A. HUNT.

Witnesses:

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