

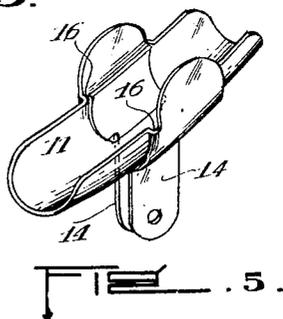
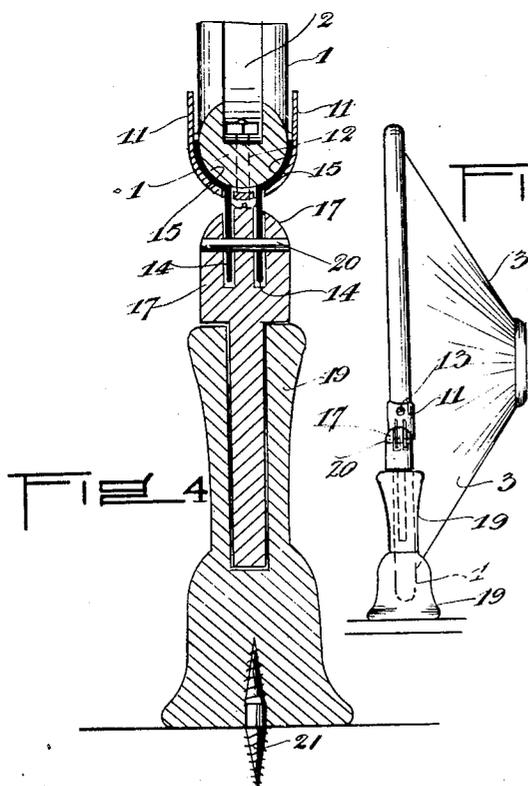
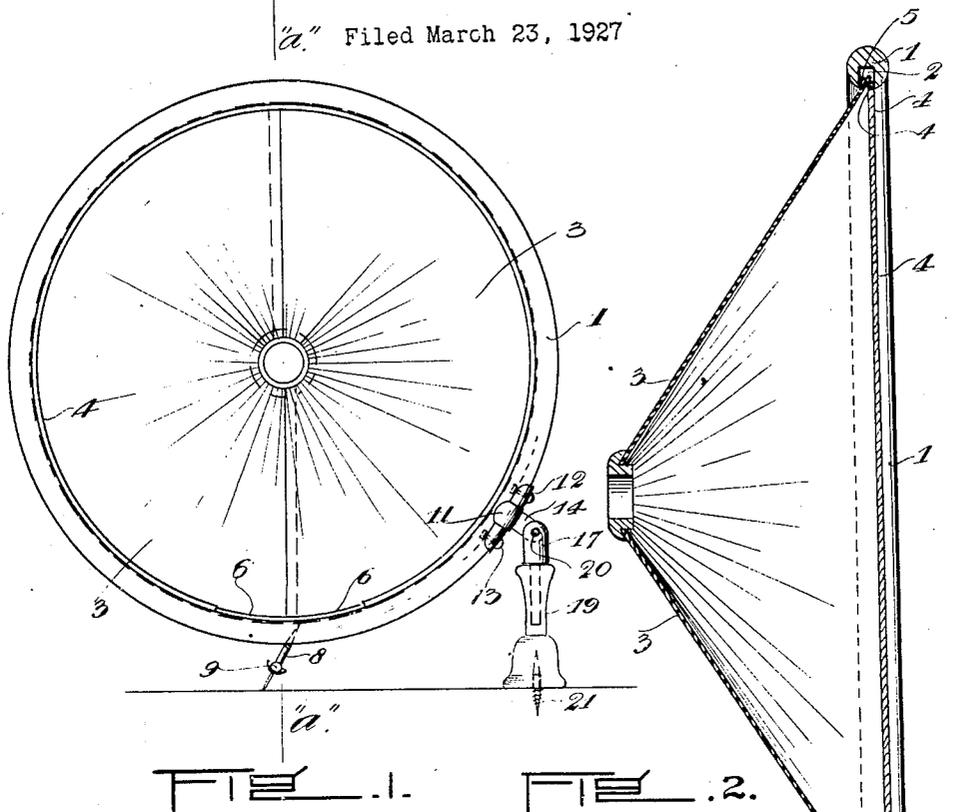
Sept. 17, 1929.

C. H. DAVIS

1,728,668

REPRODUCER OF PHONOGRAPHS

"a" Filed March 23, 1927



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INVENTOR

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ATTYS.

UNITED STATES PATENT OFFICE

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REPRODUCER OF PHONOGRAPHS

Application filed March 23, 1927, Serial No. 177,702, and in Australia December 29, 1926.

The invention relates to a type of phono-
graph reproducers in which sound vibrations
are imparted to a comparatively large ring
preferably of cane by a needle which is
5 clamped in a holder upon the ring and fol-
lows the sound groove of a disc record in
the ordinary manner. The ring has secured
within it the larger end of a conical amplifier
made of thin material. I have found that to
10 connect the amplifier to the ring by gluing
or other similar means is detrimental to the
quality of tone and the principal object of
the present invention is the connection of
the amplifier to the ring by such means and
15 in such way that good quality and volume
of tone result.

According hereto the ring has a groove
upon its inner circumference and the end
of the amplifier is wedged therein by cords
20 of twisted strands of cotton, silk or similar
fibre.

There is also provided a bracket for con-
necting the ends of the material from which
the ring is produced, and which bracket also
25 forms one of the elements in apparatus for
supporting the reproducer while in use.

In the accompanying drawings:—

Figure 1 is a front elevation.

30 Figure 2 is an enlarged vertical cross sectional
view through the frame and amplifier.

Figure 3 a side elevation.

Figure 4 is an enlarged vertical sectional
detail showing the bracket, spindle head,
spindle and pillar when assembled.

35 Figure 5 is a perspective view of the con-
necting bracket.

The ring 1, preferably of cane or wood, but
which may be of other material such as vul-
canite or celluloid, has a groove 2, which re-
40 ceives the end of a conical amplifier 3 of thin
material such as wood veneer. The cords 4
and 5 of twisted silk are wedged and glued
into the groove upon the inside and outside
of the amplifier, the edge of which preferably
45 should not contact with the bottom of the
groove.

Cane wedges 6 are used to reinforce the
ring and also to assist in the conduct of vi-
50 bration, at the place where a needle holder 8
is located. The needle holder has a binding

screw 9 which clamps the needle in a socket
in the holder and an integral screw threaded
portion which screws into the ring at the
angle suitable for the needle.

Referring now more particularly to Fig- 55
ures 3 to 5. A bracket 11 fits the curve of the
ring and is secured thereto by the bolts 12
and 13. When the ring is not continuous
but produced by bending a rod the bracket
forms a medium for connecting the ends. 60

The ears 14 pass through slots in the
bracket and each has a curved extension 15
which fits a recess 16 in the bracket and is
firmly held therein between the bracket and
the ring. 65

The ears project through the bracket and
are hinged in the head 17 of a supporting
spindle 18, turnable freely in a vertical hole
in the pillar 19. The underside of the head
contacts with the top of the pillar. A pivot
70 pin 20 passes through holes in the ears and
through corresponding holes in the head,
thereby permitting free movement of the
reproducer in a vertical arc. 65

A wood screw 21 is employed to secure the
pillar to the phonograph machine. It is
75 deemed preferable to use the cord wedges
upon both the inside and outside of the am-
plifier, but if desired the cord may be used
only upon one side its place upon the oppo-
site side being supplied by wedges resembling
80 the wedges 6 spaced at intervals around the
ring.

I claim:—

1. An acoustic device wherein is combined 85
a ring having a groove on its inner circum-
ference, an amplifier the outer periphery
whereof is located in the groove, fibre cord
wedging the amplifier within the groove, and
90 a needle holder secured to and connected
solely to said ring.

2. An acoustic device including in com-
bination a ring having a groove on its inner
circumference, an amplifier the outer pe- 85
riphery whereof is located in the groove, fibre
cord wedging the amplifier within the groove,
a needle holder secured to and connected
solely to the ring and wedging means of
substantially rigid material located in the 100

groove adjacent where said needle holder is located.

3. An acoustic device including in combination a ring having a groove on its inner circumference, an amplifier the outer periphery whereof is located in the groove, means for wedging the amplifier within the groove and a needle holder secured to and connected solely to said ring.

4. An acoustic device including in combination a ring having a groove on its inner circumference, an amplifier the outer periphery whereof is located in the groove, means for wedging the amplifier within the groove, a needle holder secured to and connected solely to said ring, a bracket connected to said ring, a spindle, means for pivotally mounting said bracket on said spindle, and a pillar having a hole therein extending substantially vertically thereof which receives said spindle.

In testimony whereof, I have this 25th day of February, A. D. 1927 signed my name to this specification.

CLAUDE HUDSON DAVIS.

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