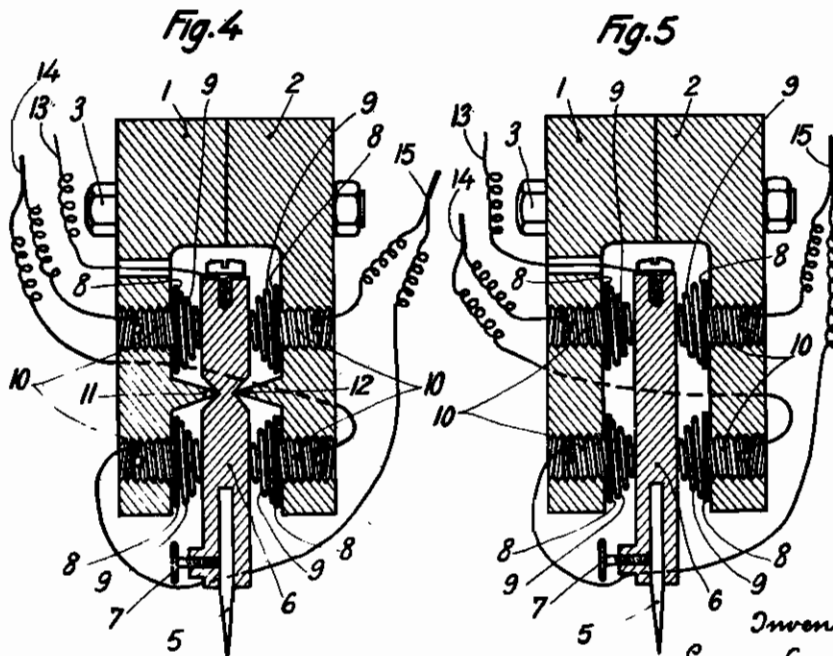
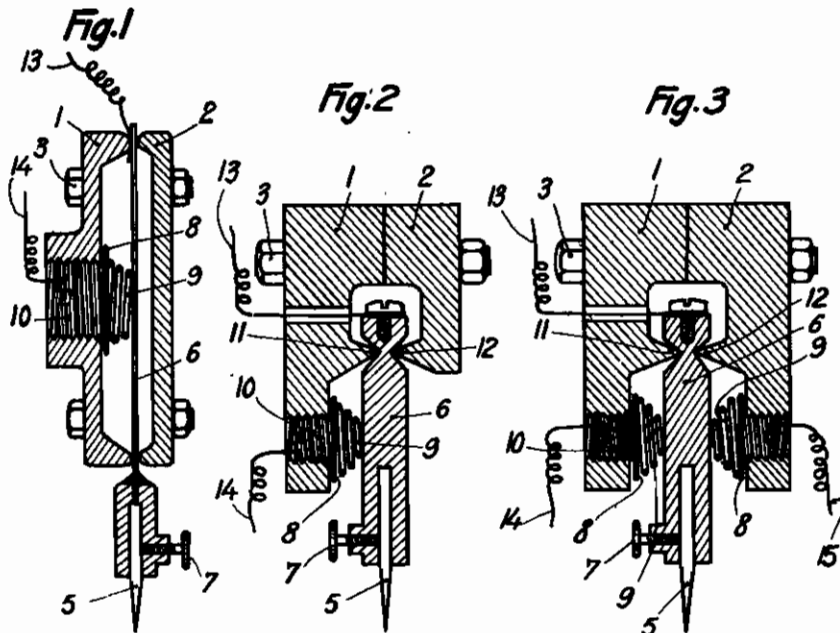


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MECHANICAL-ELECTRICAL SOUND REPRODUCER
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MECHANICAL-ELECTRICAL SOUND REPRODUCER

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in the Alien Property Custodian

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The invention relates to a mechanical-electrical sound reproducer for groove talking machines.

For said machines use is generally made of magnet or crystal sound reproducers (known as "pick-ups") the disadvantages of which, as regards weight and fragility, are known, and the sound-giving efficiency of which becomes weaker with use.

Said disadvantages are avoided in the sound reproducer which forms the subject matter of the invention which is essentially characterized by the fact that the vibrations of its needle (or sapphire point) act, through the moving component which supports it, on one or more potential modifiers each constituted by a flexible metal blade or spiral the pressure of which, separately adjustable for each modifier, causes a more or less extensive contact on a conducting surface; each modifier being traversed by an exciting current which is thus modulated by the vibrations of the moving component, which exciting current may be provided by a cell, an accumulator or rectified current while the modulated current may then be transformed so as to be sent to the amplifier.

It is therefore the mechanical vibrations of the needle or of the sapphire point caused by its friction in the grooves registered on the disk or cylinder of the talking machine which are here directly utilized for the purpose of acting on the potential modifier or modifiers.

It will be readily understood that the trepidations of the apparatus as a whole thus have no effect on sound production and that the sound is modulated solely by the vibrations of the moving component.

The attached figures show non-restrictive examples of forms of embodiment of the invention. Figure 1 is a sectional view of a reproducer the moving component of which is constituted by a diaphragm or blade capable of flexing. Figures 2 to 4 are views of reproducers in which the moving component, which is itself

rigid, is articulated about knife-edges: Figure 2 is an embodiment including a single modifier, Figure 3 is an embodiment with two opposed modifiers, Figure 4 is an embodiment with four opposed and balanced modifiers. Figure 5 is a variant of Figure 4 in which the moving component is not articulated about knife-edges but merely held by the flexible spirals of the modifiers.

In said figures the same numerals indicate the same components: 1 and 2 are the two portions of the housing made of an insulating substance assembled by bolts 3; 5 is the needle which is rendered solid with moving component 6 by means of binding screw 7; 8 are capsules of a resistant conducting substance such as agglomerated carbon, 9 are conical metal spirals the contacting surface of which, with 8, varies with the oscillating of 6 and on each of which the pressure can be adjusted by a cap 10 screwed into the housing.

In the example in Figure 1 the moving component is constituted by a flexible blade or diaphragm squeezed between the two portions of the housing; in Figures 2 to 4 the moving component is solid and articulated about knife-edges 11 and 12 which are integral with the two portions of the housing; in Figure 5 the solid moving component is held by the flexible spirals of the modifiers.

The current to be modulated is led, on the one hand, to the moving component by wire 13 and, on the other hand, by wire 14 to cap 10 which is assumed to be conducting, both said components thus being in contact by means of the spiral 9 and capsule 8 forming a resistance. In the case of Figure 3, a third wire 15 connects the second cap 10 to a compensated mounting (push-pull). In the case of Figures 4 and 5, wire 14 leads to two caps 10 diametrically opposed with respect to the centre of oscillation of 6 whereas wire 15 leads to the other two caps 10.

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