

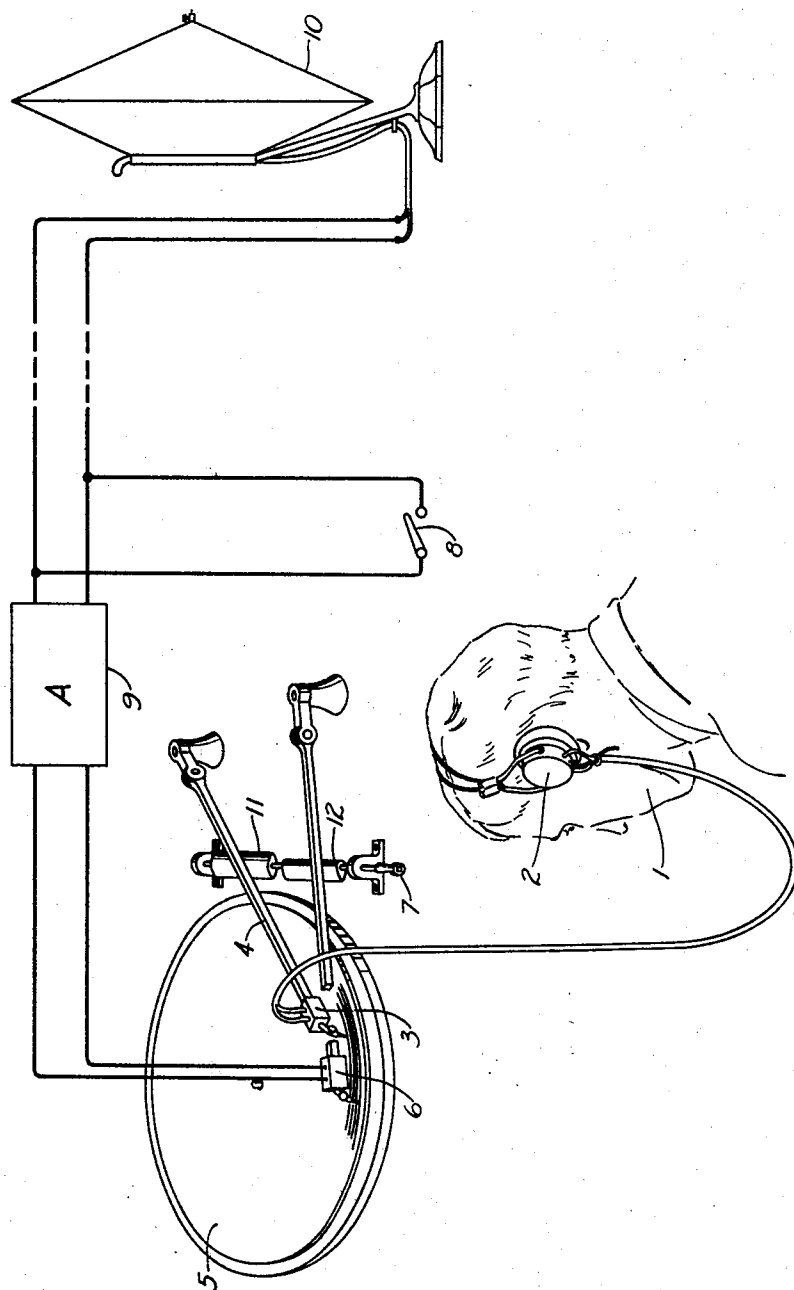
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SOUND REPRODUCING SYSTEM

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SOUND REPRODUCING SYSTEM

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This invention relates to sound reproduction and has for its object the elimination of noise due to record irregularities during intervals, such as at the beginning of the record, when no recorded sounds are being reproduced.

In accordance with the general features of the invention a supplementary reproducer coupled to a local receiver is adapted to engage the record a suitable interval ahead of the main reproducer. A predetermined time after reproduction has begun in the local circuit the main receiver is energized at substantially the instant that reproduction of the recorded speech or music begins. The supplementary reproducer is then disengaged from the record to prevent unnecessary wear.

This method of eliminating surface noise is particularly useful in electrical reproducing systems employing high amplification such as those used for public entertainment but would, of course, be equally applicable to mechanical systems. Since the sole function of the supplementary reproducer is to advise the operator in advance that the main reproducer is approaching the beginning or end of a blank portion of the record, it may be of any well known type depending upon the system in which it is used. In some cases a simple acoustic pick-up and a horn would be satisfactory while in others an electrical reproducer with a headset for the operator might be preferable.

In the drawing one form of electric reproducing system is shown for the purpose of illustrating this invention. The system operator 1 has a headset 2 connected to the monitoring reproducer 3 which is carried by the pivotally mounted supporting arm 4 so as to make contact with sound record 5 one or two grooves ahead of the main reproducer 6.

When a record is about to be reproduced both pick-up devices 3 and 6 are brought into contact with the revolving record by turning the reproducer switching device 7 from the right to the position in which it is shown. At this time switch 8 is closed across the output circuit of the amplifier 9 so that although circuit noise is heard by the operator through his headset no sound is emitted by the main

reproducer 10. When reproduction of the record begins in the monitoring circuit the operator knows from previous experience very approximately when the main receiver should be energized. After the proper interval then he opens switch 8 and speech or music is heard immediately from the receiver 10 without the usual preliminary noise.

In some cases it may be desirable also to deenergize the receiver during pauses in the production and it will be obvious from the above description that the operator could in this way improve reproduction considerably. When the monitoring reproducer is not in use it may be disengaged from the record to prevent unnecessary wear by turning switch 7 to the left so that double ended cam 11 lifts the reproducer 3 but cam 12 being single ended as indicated permits reproducer 6 to remain in contact with the record.

While this invention has been described with reference to a particular system it is obvious that many modifications will occur to one skilled in the art, for example, instead of short-circuiting the amplifier the main reproducer may be disengaged from the record whenever it is desired to deenergize the receiver 10. It is intended therefore that the invention shall be limited only by the scope of the following claims.

What is claimed is:

1. The method of eliminating noise in the reproduction of a sound record which consists in reproducing the record for monitoring purposes and separately reproducing for entertainment purposes only those portions of the record upon which matter has been recorded as indicated by the monitoring reproduction.

2. In a sound reproducing system, a record, means for reproducing the record comprising a main pickup device and a receiver, and means for eliminating extraneous noise in the reproduction during intervals when no recorded matter is being reproduced comprising means for deenergizing the receiver during such intervals and a monitoring system for anticipating the intervals including a second pickup device in spaced relation to the main pickup and a monitoring receiver for

reproducing the record prior to reproduction by the main pickup.

3. In a sound reproducing system, a record, a main reproducer engaging the record, a main receiver associated with the reproducer, and means for eliminating scratch noise in the reproduction during intervals when no recorded matter is being reproduced comprising a monitoring reproducer reproducing the record an appreciable time interval in advance of the main reproducer, receiving means associated with the monitoring reproducer, and means for deenergizing the main receiver.

15 In witness whereof, I hereunto subscribe my name this 12th day of July, 1928.

JOHN C. BENJAMIN.

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