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2,547,074

AUDIENCE REACTION RECORDER

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Fig. 1.

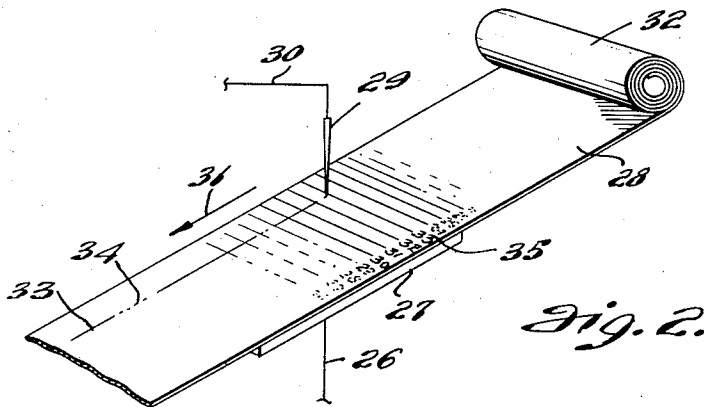
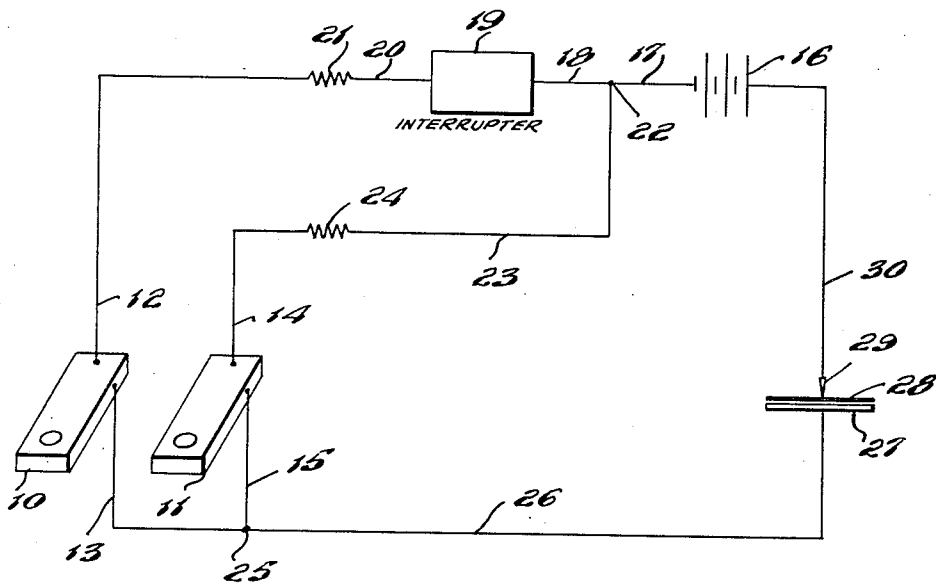


Fig. 2.

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AUDIENCE REACTION RECORDER

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2 Claims. (Cl. 346—74)

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The present invention relates to an electric signal and recording system, and has particular reference to an audience reaction determination system.

It is among the objects of the invention to provide a simple, readily installed, easily actuated, and conveniently tabulated audience reaction signal and recording system which is equally well adapted to small intimate gatherings or to large audiences.

Another object is to provide a simple system for readily obtaining an easily-readable record of audience approval, disapproval or indifference.

Still further objects and advantages will appear in the more detailed description set forth below, it being understood, however, that this more detailed description is given by way of illustration and explanation only and not by way of limitation, since various changes may be made therein by those skilled in the art without necessarily departing from the scope and spirit of the present invention.

In accomplishing the above objects it has been found convenient to utilize a suitable source of electrical power, such as the usual A. C. or D. C. power line; or batteries may be employed, if desired. At each position of a participating member of the audience there is a green button or actuator, which may be illuminated, to be pressed for approval, and a red button or actuator, which may also be illuminated, to be pressed for disapproval. The buttons will close circuits which lead to a recording tape or suitably sensitized strip or sheet upon which a trace may be recorded mechanically, or by heat, or by electric current.

Desirably, one circuit if closed will form a continuous trace, while the other circuit is provided with an interrupter to form a dotted or broken trace. A single trace either continuous or discontinuous will thus be created upon the tape or strip by a single recording instrument or stylus whose operation is responsive to actuation of the buttons by the audience member. Lack of a trace will indicate lack of interest or indifference on the part of the audience member.

Thus there is provided a convenient readily interpretable record, correlated with time, of the audience reaction to a performance of a radio presentation, television performance, motion picture, or the like. These traces—one for each member of the audience—may be placed closely together in parallel relation upon the tape or sheet which is graduated according to lapse of time so that a ready interpretation of the com-

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posite audience reaction to each part of the performance may be had.

The invention also consists in certain new and original features of construction and combination of parts hereinafter set forth and claimed and as to its other objects, features, and advantages, the mode of operation and manner of its organization, these, inter alia, may be better understood by referring to the following description considered in connection with the accompanying drawings forming a part thereof, in which:

Fig. 1 is a diagrammatic view showing one form of the electric circuits which may be utilized;

Figure 2 is a diagrammatic perspective view showing the manner of recording the audience reaction upon the tape or sheet.

In Fig. 1, the manually actuatable device 10 for disapproval, and 11 for approval, may be push buttons, piano keys or other actuators conveniently arranged in front of each participating member of the audience. The actuators may be positioned on the arms of the seat or designed to be held in the hands of the audience member, so that they may be conveniently manipulated to close the circuit between the conductors 12 and 13 in one case, or between the conductors 14 and 15 in the other case.

The electrical source of power 16 (which may be a battery, as shown, or any suitable A. C. or D. C. power source) is connected by the conductors 17 and 18, the interrupter 19, and the conductor 20, to the resistance 21. From the junction 22 the conductor 23 leads to resistance 24. The resistances 21 and 24 are connected to the conductors 12 and 14 respectively, which lead to the actuators 10 and 11 respectively.

The conductors 13 and 15 join at 25 with the conductor 26 which leads to the plate 27, composed of electrically conductive material. Over the plate slowly moves the suitably sensitized tape or sheet 28 upon which rests the stylus or trace making instrument 29. The instrument 29 is connected by the conductor 30 to the other side of the power source 16. The elongated sensitized strip 28 is caused to move in the longitudinal direction 31, from the supply roll 32, by a suitable motive means (not shown), and the rate of advancement is uniform.

The strip 28 has markings thereon to indicate the time intervals elapsed during the continuance of the performance, and these graduations 35 are preferably calibrated by minutes and seconds. The trace produced by the stylus 29 will have con-

tinuous portions 33 (e. g., indicating approval and resulting from actuation of button 11) and interrupted or discontinuous portions 34 (indicating disapproval and resulting from actuation of button 10). Absence or complete discontinuity of trace will indicate lack of interest.

A large number of marking devices or styli 29 may be arranged side by side so that a relatively narrow strip of recording paper may carry the recorded reaction of a relatively large audience. This will enable accurate appraisal of the audience reaction by running a frame or a transversely slotted scanning member down along the resultant record to note the blank spaces; interrupted traces and continuous traces.

The resistance of the elements 24 and 24 may vary widely but generally a 5000-ohm resistance in series with a 110 volt line will most satisfactorily burn a clear dark trace by resistance heating of the sensitized paper without burning through the paper 23.

The interrupter 19 saves the necessity of having complete separate circuits and additional instruments or styli 29 for recordation of approval or disapproval. The interrupter 19 may be of any known character, and may for example include a solenoid with an interrupter relay or gear actuating a micro-switch and opening or closing the circuit every second or half second.

The recording strip used may also be of any known type. For example, it may consist of a sulphite-base paper or a kraft paper impregnated with sodium nitrate dissolved in an alcohol of low volatility and low hygroscopicity such, for example, as triethylene glycol. The paper may be impregnated with the electrolytic solution by moistening the surface thereof or in any other suitable way. The recording medium may be applied, for example, by dusting lead thiosulphate powder upon the surface of the paper. The marks produced on the paper are black, and the record simulates ordinary printing.

The electrolyte with which the paper is impregnated may include potassium iodide, sodium formate, sodium benzoate, sodium bromide, iron chloride, or meta-nitrobenzene sulphonic acid. The preferred electrolyte made up of sodium nitrate and tri-ethylene glycol causes the paper to have a relatively high conductivity and does not have any appreciable discoloring effect upon the paper. The alcoholic solvents mentioned cause the electrolyte to remain in solution in the paper for an indefinite time.

As many changes could be made in the electric signal and recording system, and many apparently widely different embodiments of this invention could be made, all without departing from the scope of the claims, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having now particularly described and ascertained the nature of the invention, and in which manner the same is to be performed, what is claimed is:

1. An audience reaction recorder comprising a source of electric power, a pair of switches for manual operation connected in parallel with said source to provide separate circuits one of which includes an automatic periodic interrupter, means for moving a recording strip continuously, a conducting metal plate over which said strip passes, a stylus for marking on said strip when energized, and means connecting said stylus and said plate in series with said source of power and each of said switches.

2. An audience reaction recorder as set forth in claim 1 wherein said stylus is positionally fixed in relation to said moving recording strip and said means for moving the recording strip imparts movement in longitudinal direction thereto, whereby manual actuation of said switches produces on said recording strip a single longitudinal trace whose continuity and discontinuity, as well as its complete absence, serve as a distinguishable record of the reaction of an audience member.

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