

June 12, 1951

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2,557,031

AUTOMATIC RECORDING APPARATUS

Filed April 5, 1948

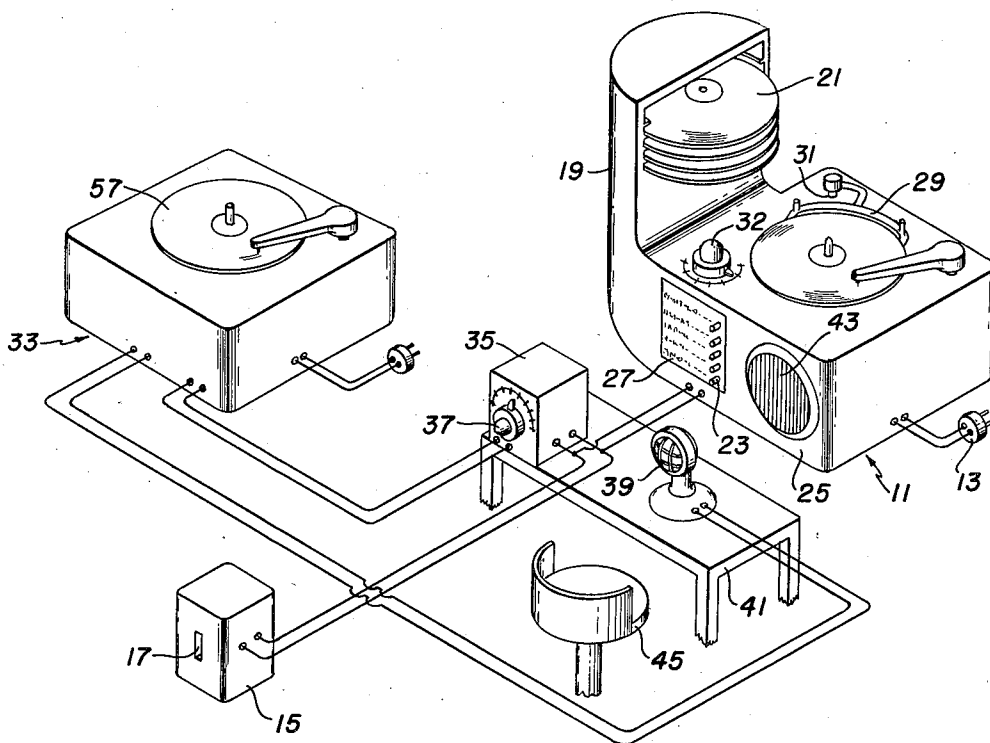


FIG. 1

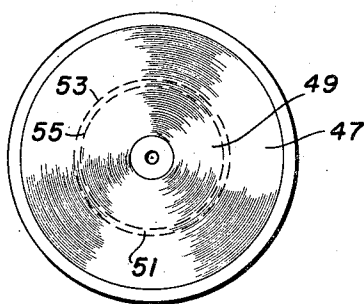


FIG. 2

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2,557,031

AUTOMATIC RECORDING APPARATUS

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Application April 5, 1948, Serial No. 18,886

3 Claims. (Cl. 274-1)

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My invention relates to recording apparatus, and more particularly to an automatic, coin-operated, recording apparatus including an arrangement for providing preselected instrumental background or accompaniment for vocal or other acoustic offering of a user.

Recording apparatus of the coin- or check-operated type are known wherein a user, by depositing a suitable coin or check in a receptacle provided therefor, initiates operation of an automatic recordation device so that the vocal or acoustic output of the user may be recorded on a disc or other record. U. S. Patent No. 1,772,990 to J. D. Feher, for "Sound Recording Apparatus," granted August 12, 1930, is illustrative of the prior-known apparatus. Such apparatus are useful to provide records of speech, such as messages for mailing or other future use, or dictation for transcription by public stenographers, or other purposes.

For the entire class of users of such apparatus who desire to make recordings of solo acoustic offerings such as singing of songs, playing of musical instruments, or declamation of dramatic works, the prior-known recording devices are inadequate, since no provision is made therein for the presentation of suitable instrumental accompaniment or background. Accordingly, it is a principal object of my invention generally to improve the art of automatic recording apparatus by the elimination of the aforesaid inadequacy thereof.

Another object of my invention is to provide a novel automatic recording apparatus including means for supplying instrumental accompaniment for simultaneous recordation with the vocal offering of the user.

Still another object is to provide such an automatic recording apparatus, which is adapted to be tripped into operation by coin or other check means.

In accordance with my invention, there is provided an automatic sound reproducing apparatus having a plurality of especially designed and prepared records any one of which may be selected by a user for supplying a desired instrumental accompaniment. An automatic recording apparatus is disposed adjacent the reproducing apparatus so that the combined acoustic outputs of the user and of the recording of accompaniment may be simultaneously recorded on a record to be discharged and delivered to the user.

A further object of my invention lies in the provision of a novel record and method of pre-

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paring the same for use with the above-mentioned recording apparatus of this invention.

Such a record desirably is formed with a first part having a solo vocal or other acoustic production accompanied by instrumental background accompaniment, and a second part having only the instrumental accompaniment. Thus, by providing a time-delay device in circuit with the recording apparatus, the first part of the record may be reproduced and heard by the user, thereby enabling the latter to ascertain the mode of presentation of the work while the recorder is maintained in inoperative condition. At the completion of the first part of the accompaniment record, the recording apparatus is tripped into operation simultaneously with the reproduction of the second part of the accompaniment record, and the user may now perform as by singing or playing solo instrument part for simultaneous recording with the accompaniment.

Another object of my invention is to provide an automatic recording apparatus as hereinabove described, wherein means are included for adjusting the range of audio frequencies of the accompaniment to accommodate the natural range of the user's voice. This feature permits the use of the apparatus by persons whose comfortable ranges of voice pitch are distributed throughout the ordinary human voice spectrum.

Other and further objects of my invention will be apparent from the specification hereinafter following by reference to the accompanying drawing, in which:

Fig. 1 is a diagram of a recording apparatus embodying my invention, and

Fig. 2 is a plan view of a record according to another feature of the invention.

In carrying out the invention, there is employed an automatic record player 11, which may be of any suitable conventional design adapted to be energized from an ordinary power supply, such as a 110 volt line (not shown), to which electrical connection is made by plug 13. As is well known, such record players, when intended for public use, may be provided with suitable coin- or check-operated switches, here shown at 15, and having a coin-receiving slot 17.

Record player 11 is also provided with a cabinet 19 for housing a plurality of records 21 any one of which may be preselected for reproduction as by closing a corresponding one of a plurality of push-button switches 23 conveniently mounted on the front panel 25 of the record

player 11. An indicia card 27 bearing the titles of the records 21 is provided for enabling the user to make selection of a desired record to be reproduced.

For shifting the selected record from the cabinet 19 to the turntable of the record player, any suitable record-shifting means, as bracket 29, carried by a vertically translatable, and horizontally rotatable shaft 31, may be provided and actuated by suitable motive means (not shown) for removing a pre-played record from the turntable, replacing same in cabinet 19, and taking a selected record from cabinet 19 and depositing it on the turntable, in response to circuit actuation by pressing push button 23. The rotational speed of the turntable is adjustable within limits by means of manually operable adjustment means 32 which is effective to increase or decrease the number of revolutions per minute of the turntable.

The apparatus of this invention also comprises a recording device 33, which may be of any suitable conventional design, such as disclosed in the above-mentioned Feher patent to which reference is made for a full description thereof.

Connected between the record player 11 and the recording device 33 is a timing mechanism 35, which may be in the form of any suitable electrically operated clock timer having an externally mounted, manually adjustable interval setter 37, whereby a user or operator may select any desired time interval, of the order of 1-3 minutes, to introduce a corresponding time delay between the actuation of the record player 11 and the recorder 33, for purposes that will presently appear.

A microphone 39, preferably an acoustic pick-up device, is disposed on a table 41 or other suitable support, in alignment with loudspeaker 43 of the record player 11 and the user, who, if it is deemed desirable, may occupy chair 45.

It will be understood that the components of my recording apparatus, while shown in Fig. 1, as separately housed, individual units, may be assembled in a unitary cabinet or housing and enclosed in a suitable sound room (not shown).

For use as the plurality of records 21 to be reproduced by the recording apparatus hereinabove described, I provide a record, which, as shown in Fig. 2, comprises two parts 47, 49 spaced by a transition part 51, here shown included between dotted lines 53, 55.

The part 47, the first portion of the record to be reproduced, is made with a solo arrangement, either vocal or instrumental, superposed against a background of instrumental accompaniment.

The part 49, the last portion of the record to be reproduced, is made with the background of instrumental accompaniment only, the solo arrangement being deleted. If desired, or where it is deemed necessary for guidance of the user, the accompaniment may include one or more instruments carrying the melody.

The transition section 51 may be engraved with any suitable signal or message to the user to place the latter in "stand-by" or "get ready" condition.

Thus, it will be seen that in operation of the apparatus, the user, who desires to make a recording of his own vocal or other acoustic offering, deposits a coin or check in receptacle 15, places a record blank 57 on the recorder turntable, and assumes a position in front of microphone 39. It will be understood that where automatic recording apparatus is employed as the

element 33, the deposition of the blank on the recorder turntable is accomplished automatically. The user then selects a desired one of the records 21 by depressing an appropriate push button 23. An instruction card (not shown) suitably posted informs the user of the time required for the reproduction of the first part 47 of the selected record. In accordance with this information, the time interval setter is adjusted, whereupon the record player is actuated and the selected record is transferred to the turntable and reproduced. Throughout the interval of time required for the reproduction of the first part, the recorder 33 is maintained inoperative.

The user is thus permitted to hear the first part of the record 21 and to ascertain the mode of presentation as well as the range or pitch in which the selection is played. If the range is outside the comfortable range of the user, adjustment of the range may be made by means of the turntable-speed-adjustment means 32, which, if the speed is increased, causes an elevation of the register of the sounds, or, if the speed is decreased, causes a lowering of the register.

It will be noted that during the reproduction of part 47 of the selected record 21, the user may perform along with the recorded artist, any errors committed at this time being relatively unimportant, since the recording apparatus is, at this time, inoperative.

After the completion of the first part, the transition part 51 is reproduced, giving the user the stand-by signal. Thereupon, the second part 49 is reproduced supplying instrumental accompaniment for the vocal or other acoustic offering of the user. The accompaniment and the user's offering are combined in the microphone 39 for simultaneous recordation by the recorder 33.

The recording on blank 57 may be delivered to or taken by the user as a permanent record of his vocal or acoustic offering against a background of instrumental accompaniment.

While the foregoing description relates to a particular construction, it is to be understood that various modifications may be made in the assembly without departing from the scope of the invention as defined in the appended claims.

I claim:

1. Apparatus for making a reproducible sound recording consisting of an acoustic offering in accompaniment with the acoustic output of a recording, said apparatus comprising a record player having an audible acoustic output, a recording apparatus, a microphone operatively connected to said recording apparatus, said microphone being acoustically linked to the output of said record player and being available to also receive a separate acoustic offering, a switch connected both to said record player and to said recording apparatus for simultaneously actuating said record player to reproduce a recording and for rendering said recording apparatus operative to record the combined audible output of said record player and the separate acoustic offering, and a time delay mechanism connected between said switch and said recording apparatus for rendering the latter operative to record a predetermined interval after said record player has been actuated.

2. Apparatus for making a reproducible sound recording consisting of an acoustic offering in accompaniment with the acoustic output of a recording, said apparatus comprising a record player having an audible acoustic output, a recording apparatus, a microphone operatively con-

nected to said recording apparatus, said microphone being acoustically linked to the output of said record player and being available to also receive a separate acoustic offering, a switch connected both to said record player and to said recording apparatus for simultaneously actuating said record player to reproduce a recording and for rendering said recording apparatus operative to record the combined audible output of said record player and the separate acoustic offering, and a manually adjustable time delay mechanism connected between said switch and said recording apparatus for rendering the latter operative to record a predetermined interval after said record player has been actuated.

3. In the apparatus of claim 1, a manually controllable speed regulator operatively connected to said record player for controllably varying the speed of reproduction thereof.

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