

[54] TALKING ALARM CLOCK

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[58] Field of Search 58/14, 16; 35/39; 40/28.1

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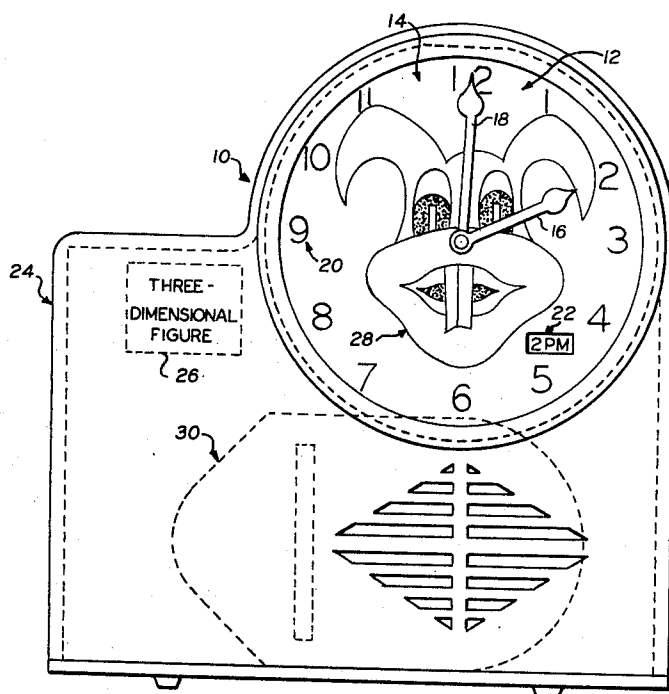
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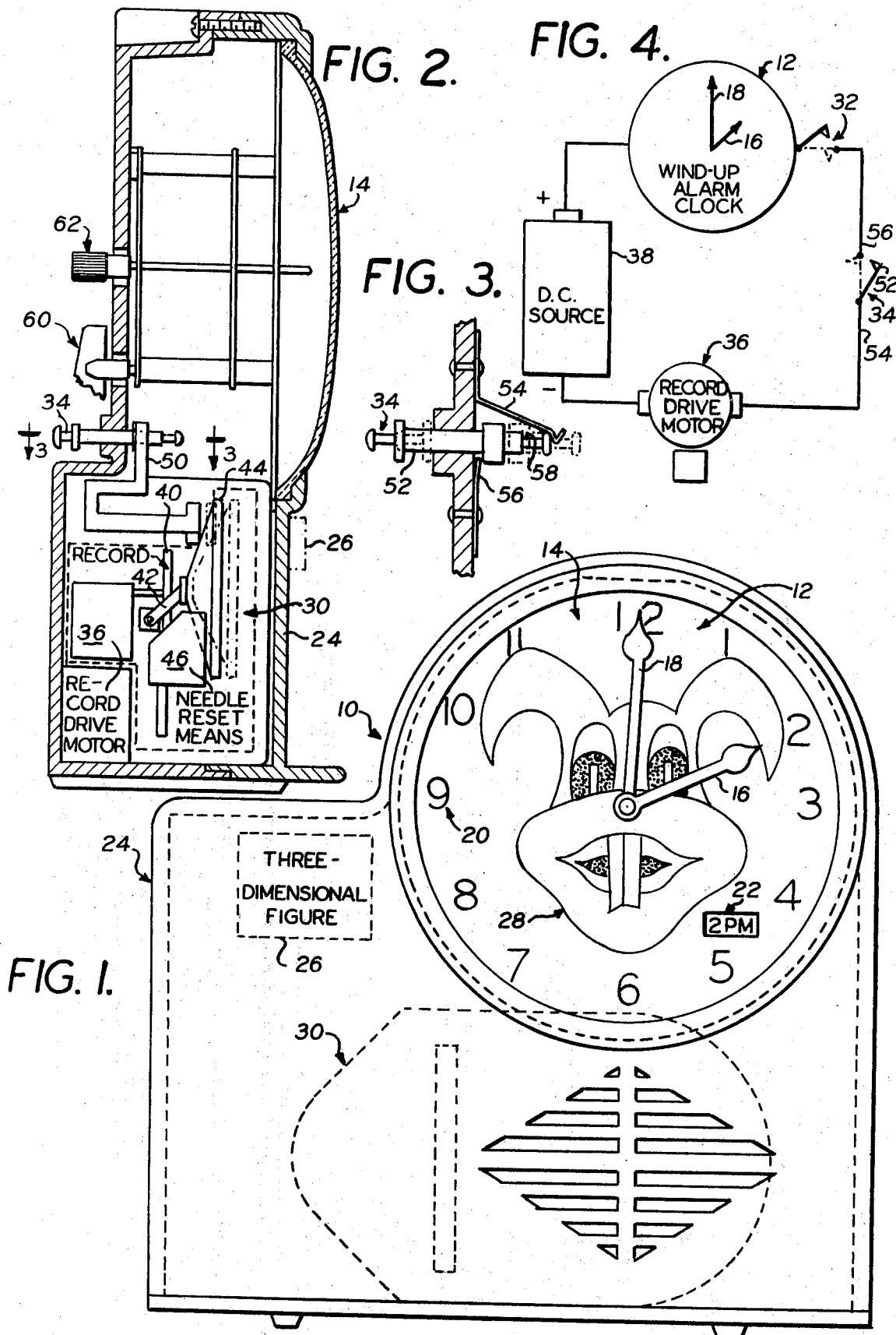
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[57] ABSTRACT

The method and apparatus for providing a wake-up alarm signal from an alarm clock having a face for displaying time indicia thereon and an identifiable character having an associated voice characteristic adjacent the time display wherein a prerecorded spoken wake-up message corresponding to and identifiable with this character for simulating a voice associated therewith as said wake-up alarm signal is provided at a preset time in response to the arming of an alarm circuit. This message may be repetitively provided until the alarm circuit is disabled. The message may be reproduced from a record by the engagement of the transducer, such as a needle, with a diaphragm. When the alarm circuit is disabled, a member on the alarm switch engages the diaphragm to disengage the contact between the diaphragm and the needle, the message can no longer be reproduced until such engagement is reestablished by movement of the switch to arm the alarm circuit. The needle is spring loaded to return to starting point of the message when the diaphragm is disengaged from contact with the needle.

5 Claims, 4 Drawing Figures





TALKING ALARM CLOCK

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to alarm clocks having prerecorded pick-up alarm signals provided therefrom.

2. Description of the Prior Art

Prior art alarm clock usually of the type which provide an annoying verbal or visual alarm in response to the occurrence of a preset time. Such a signal is normally purposely disturbing so as to arouse the user from sleep. In order to avoid this initial disturbing awakening from sleep, alarms have been utilized in what is commonly termed clock radios which are turned on to the occurrence of the preset time so as to soothe the user awake. Normally, in such clock radios, additional disturbing audible alarm will be sounded at a preset interval after the initial activation of the radio portion of the alarm. Other prior art devices utilized in the combination of an alarm clock in a playback device, such as the use of an alarm clock to turn on a phonograph or the use of a clock to actuate the playback of prerecorded chime sounds at regular intervals are well known, such as disclosed in U.S. Pat. Nos. 1,337,760; 1,782,378; 3,376,700; 3,420,051; and 3,507,110. Prior art alarm clocks, however, do not provide a prerecorded wake-up message of specified content while such as a message corresponding to the voice associated with an identifiable character on the face of the alarm clock.

SUMMARY OF THE INVENTION

A method and apparatus for providing a wake-up alarm signal which is a prerecorded spoken wake-up message corresponding to and identifiable with a character adjacent the time display on an alarm clock for simulating a voice associated with such character is provided. Such method includes the steps of providing such an alarm clock having an identifiable character with an associated voice characteristic adjacent the time indicia display on the clock, arming an alarm circuit to provide such alarm signal when the time display corresponds to a preset time and providing the prerecorded spoken wake-up message corresponding to and identifiable with this character at the preset time in response to the armed alarm circuit. Such message can be repetitively provided until it is discontinued.

The apparatus for providing such a wake-up alarm signal include armable means in the alarm circuit for enabling a message providing means portion of a playback means for the prerecorded message at a preset time corresponding to a predetermined time display on the clock face with the armable means being presettable prior to the preset time and trippable at the preset time to provide the spoken wake-up message. The armable means preferably include a presettable first bistable switch having a first position in which the alarm circuit is armed whereby the message providing means may be enabled in a second position in which the alarm circuit is disabled, the wake-up message only being provided when the first switch is in the first position. The armable means also include a second trippable bistable switch connected in series with the first switch, the second switch having a first position in which the alarm circuit is disabled and a second position in which the alarm circuit is enabled to provide the wake-up message. The second switch is operatively connected to the

time display means, such as hour hands on a clock face, and is trippable from the first position to the second position by the time display means at a position thereof corresponding to the preset time. The playback means preferably includes a record having the prerecorded message thereon, a transducer means, such as a needle, engageable with the record for picking up the message therefrom and a diaphragm engageable with the transducer for reproducing the message picked up thereby. The first switch further includes a member engageable with the diaphragm in the second position of the first switch for disengaging the diaphragm from the transducer to disable the reproduction of the prerecorded message. The transducer is engageable with the record in an initial position at the beginning of the message and advances to a final position at the completion of the message. Resilient means, such as a spring, are providing for biasing the transducer toward the initial position with the diaphragm engagement preventing the return of the transducer to the initial position. The portion of the first switch which engages a diaphragm enables the initial position return of the transducer whenever the first switch is in the second position. The playback means also preferably includes a second means engageable with the diaphragm and the transducer at the completion of the message for temporarily disengaging the diaphragm from the transducer for enabling the initial position return thereof. This second means enables the diaphragm to reengage the transducer and again reproduce the message upon return of the transducer to the initial position whereby the spoken wake-up message may be repetitively reproduced.

BRIEF DESCRIPTION OF DRAWING

FIG. 1 is a pictorial illustration of the front face of a wake-up alarm in accordance with the present invention;

FIG. 2 is a side elevation in section, partly in block with conventional elements being omitted for purposes of clarity, the embodiment illustrated in FIG. 1;

FIG. 3 is a fragmentary sectional plan view taken along line 3—3 of the switch illustrated in FIG. 2; and

FIG. 4 is a schematic diagram, partially in block, of the alarm circuit of the present invention illustrated in FIGS. 1 through 3.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings in detail and initially to FIGS. 1 and 2 thereof, a preferred embodiment of the wake-up alarm device, generally referred to by the reference numeral 10, of the present invention is shown. Preferably, the alarm device 10 comprises alarm clock 12, such as preferably a conventional wind-up alarm clock mechanism, having a clock face 14 a cyclically movable hour hand 16, a synchronously cyclically movable minute hand 18, a conventional array of time indicia 20 consisting of the numerals 1 through 12 disposed about the clock face 14 in cooperation with the hour and minute hands 16 and 18 to provide instantaneously display of the time and a window display 22 of the preset alarm time, such as 2 p.m. in the FIG. 1 illustration. The alarm clock 12 is preferably contained in a housing 24 which preferably may have a three dimensional FIG. 26 such as identifiable character such as Bugs Bunny which character may also be

graphically reproduced on the clock face 14 as illustrated by 28. Furthermore, if desired, the figurine of three dimensional or three dimensional FIG. 26 may be omitted and only the graphic reproduction 28 may be utilized, or, if desired a photograph may be utilized as the graphic representation 28. The housing 24 also preferable contains within the interior thereof a conventional talking device, such as the type commercially utilized for talking dolls or for the novelty termed "Laughing Box" and manufactured by Ozen Sound De-
 vices of Japan as a talking box model no. DT 9 which device is conventional and need not be described in greater detail hereinafter. This talking box is generally referred to by the reference numeral 30. Although the preferred alarm clock 12 is illustrated as a conventional analog clock having a hour hand display, if desired the box may be one of the type providing a digital display as long as a graphic representation and/or figuring of an identifiable character is provided adjacent the time indicia display.

Referring now to FIG. 4, a typical preferred schematic diagram of the preferred alarm circuit of the present invention is shown. The alarm circuit preferably includes the wind-up alarm clock 12, a bistable switch 32 connected in series with the timing mechanism of the clock 12 so as to be tricked by the upper position of the hour and minute hand 16 and 18 of the clock 12 from an open circuit condition illustrated in FIG. 4 to a close circuit condition illustrated by the dotted lines illustrated in FIG. 4. A presettable or armable bistable switch 34 is connected in series with switch 32. Switch 34 is closed to the position shown by the dotted lines in FIG. 4 when the alarm circuit is armed and is in the position shown by the dotted line when the alarm circuit is disabled as will be described in greater detail hereinafter. Switches 32 and 34 are connected in series to the conventional record drive motor 36 of the previously described conventional talking box mechanism 30 which motor is in turn connected in series to an energizing source such as a conventional dry cell battery 38. Thus, when both switches 32 and 34 are closed the circuit is completed between the battery source 38 and the drive motor 36 and the talking box 30 is energized so as to reproduce the prerecorded wake-up message. This prerecorded wake-up message corresponds to and is identifiable with the character 26 and/or 28 appearing adjacent the time display on the clock face 14. For example, if the character is "Bugs Bunny," the wake-up message could be as follows: "This is Bugs Bunny; time to get up." No other type of alarm signal is preferably provided and, preferably, this message is repetitively provided until the alarm is turned off. Although the message is being described as that of a cartoon character, if desired any prerecorded message, such as one recorded by the user in his own voice, with his picture appearing as a graphic representation 28 or the voice of a loved one in loved ones graphic representation 28 appearing on the clock face 14, may be utilized.

Referring now to FIGS. 2 and 3, the talking box 30 is shown in greater detail. The talking box 30 preferably comprises the record drive motor 36, a record 40 given thereby upon which the prerecorded message is contained, a phonograph needles transducer 42 engageable in the grooves of the record for picking up the message in conventional fashion, and a diaphragm 44 which reproduces the prerecorded message when in contact engagement with the needle 42. In addition,

the talking box 30 conventionally includes needle reset means 46 for raising the diaphragm and the needle 42 to permit the needle 42 to return to the start of the message. This is conventionally accomplished by the needle being spring biased towards this initial position the return only being prevented by the contact engagement of the diaphragm 44. This temporary needle reset means 46 is commercially available in the Ozen talking box previously described.

Switch 34 which arms the alarm circuit is illustrated in greater detail in FIG. 3 is a top plan view and is shown in side elevation in FIG. 2. Preferably the switch includes an extension member 50 which is illustrated in a predetermined configuration by way of example although any other configuration could be utilized. This extension member 50 contacts the diaphragm 44 when switch 34 is pushed in to disable the alarm circuit, this contact preventing the contact engagement of diaphragm 44 and needle 42 are raising the diaphragm 44 above the normal contact position. The diaphragm 44 is held in this position as long as switch 34 is in the position which is the alarm disable position. As previously mentioned, the needle 42 is spring biased towards initial position at the start of the message. Therefore, when switch 34 is pushed in to disable the alarm, diaphragm 44 is raised and the needle 42 will be returned to the initial position. This will occur at any time during the message so that if the alarm is turned off in the middle of the message, the next time the alarm is utilized it will be at the start of the message as opposed to the needle reset means 46 which only operates at the end or completion of the message in conventional fashion to return the needle 42 to the starting position at the completion of the message. Needle reset means 46 allows the message to be repetitively reproduced so that each time the message is completed, and needle 42 contacts the needle reset means 46, this causes the diaphragm 44 to be temporarily raised to permit the return of the needle 42 to the starting position. Thereafter, since needle 42 no longer contacts needle reset means 46, contacting engagement between the diaphragm 44 and the needle 42 is reestablished in this initial position so that the message may once again be reproduced. However, as was previously mentioned, with respect to switch 34, no such contact engagement is reestablished until the user mechanically pulls switch 34 out again to able or arm the alarm circuit.

Referring now to FIG. 3, switch 34 consists of a linearly movable plunger element 52 with a pair of electrical contact elements 54 and 56. Electrical contact elements 54 also functions as a conductive spring to hold the switch 34 in the out or armed position, as illustrated in FIG. 3 when the user places the switch in this position. When the switch is pushed in to disable the alarm circuit, element 54 enters a groove 58 in plunger element 52 in which element 54 free rides to avoid putting pressure on the diaphragm 30 while breaking the electrical contact between elements 54 and 56 so as to open or disable the alarm circuit of FIG. 4.

Thus, summarizing the operation of the device, to arm the alarm, switch 34 is pulled out the position illustrated in FIG. 3 and the dotted line position illustrated in FIG. 4. This position, diaphragm 44 is in contact engagement with needle 42. However, the record drive motor 36 has not yet been energized so no message is provided. The wind-up alarm clock 12 is conventionally set to a preset time, such as 2 p.m.. When the hour

and minute hands 16 and 18 display 2 p.m. on the face of the clock, this causes switch 32 to be tripped which completes the series circuit between the record drive motor 36 and the battery source 38. This energizes the record drive motor 36 and causes the prerecorded message on record 40 to be reproduced through the diaphragm 44. This message is repetitively reproduced, the needle 42 returning to the starting position each time the message is completed and it contacts the needle reset means 46 as previously described, until the user is awakened and turns off the alarm by pushing in switch 34 so as to disable the alarm circuit. The balance of the structural arrangement illustrated in FIG. 2 is conventional and need not be described in greater detail hereinafter, such as the conventional wind-up mechanism 60 for the alarm clock 12 or the conventional mechanism 62 for moving the hour and minute 16 and 18 on the clock face as well as the conventional mechanism for setting the alarm (not shown).

Thus, utilizing the present invention, a wake-up alarm signal consisting of a prerecorded spoken wake-up message corresponding to and identifiable with the character appearing on the face of or adjacent the face of the alarm clock to simulate the voice of this character as a wake-up alarm message at a preset time in response to the arming of an alarm circuit may be provided.

It is to be understood that the above described embodiment of the invention is merely illustrative of the principles thereof that numerous modifications and embodiments of the invention may be derived within the spirit and scope thereof.

What is claimed is:

1. An apparatus for providing a wake-up alarm signal comprising a housing including an alarm clock means mounted in said housing and having a face for displaying time indicia thereon, said clock including means for displaying said time indicia on said face; an identifiable character having an associated voice characteristic located adjacent said time display means; playback means mounted within said housing, said playback means including a prerecorded spoken wake-up message corresponding to and identifiable with said character for simulating a voice associated with said character as said wake-up alarm signal and means for providing said prerecorded spoken message; an alarm circuit comprising armable means for enabling said message providing means at a preset time corresponding to a predetermined time display on said clock face, said armable means being presettable prior to said preset time and trippable at said preset time to provide said spoken wake-up message.

2. An apparatus in accordance with claim 1 wherein said armable means comprises first switch means presettable to arm said alarm circuit, said presettable first switch having a first position in which said alarm circuit is armed whereby said message providing means may be enabled and a second position in which said alarm circuit is disabled, said wake-up message only being provided when said first switch is in said first position, and a second trippable switch connected in series with said first switch, said second switch having a first position in which said alarm circuit is disabled and a second position in which said alarm circuit is enabled to provide said wake-up message, said second switch being operatively connected to said alarm clock means and being trippable from said first position to said second position by said alarm clock means at a position thereof corresponding to said preset time.

3. An apparatus in accordance with claim 2 wherein said playback means comprises a record having said prerecorded message thereon, a transducer means engageable with said record for picking up said message therefrom, and diaphragm means engageable with said transducer means for reproducing said message picked up thereby, said first switch further comprising first means engageable with said diaphragm in said second position of said first switch for disengaging said diaphragm from said transducer means to disable the reproduction of said prerecorded message.

4. An apparatus in accordance with claim 3 wherein said transducer means is engageable with said record in an initial position at the beginning of said message and advances to a final position at the completion of said message said playback means further including resilient means for biasing said transducer means toward said initial position, said diaphragm engagement preventing the return of said transducer means to said initial position, said first switch diaphragm engageable means enabling said initial position return whenever said first switch is in said second position.

5. An apparatus in accordance with claim 4 wherein said playback means further comprises second means engageable with said diaphragm and said transducer means at the completion of said message for temporarily disengaging said diaphragm from said transducer means for enabling said initial position return, said second diaphragm engageable means enabling said diaphragm to reengage said transducer means and again reproduce said message upon return thereof to said initial position whereby said spoken wake-up message may be repetitively reproduced.

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