

[54] ALARM CLOCK

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[58] **Field of Search**..... 58/19, 21.15, 53

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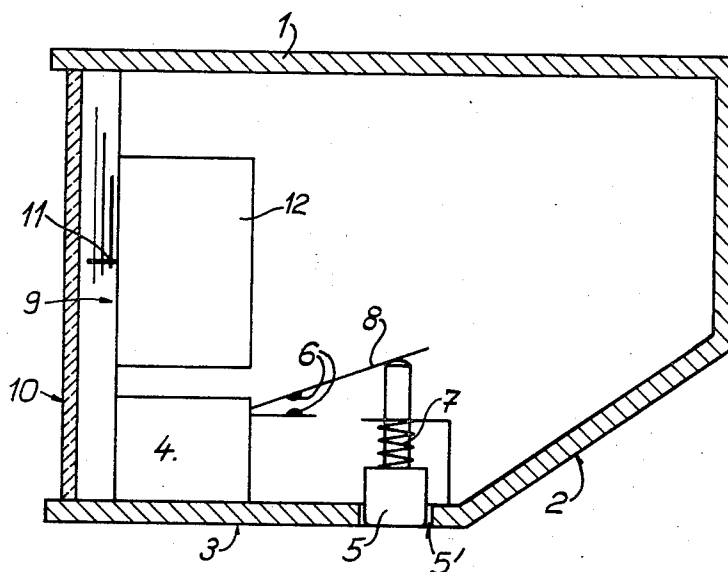
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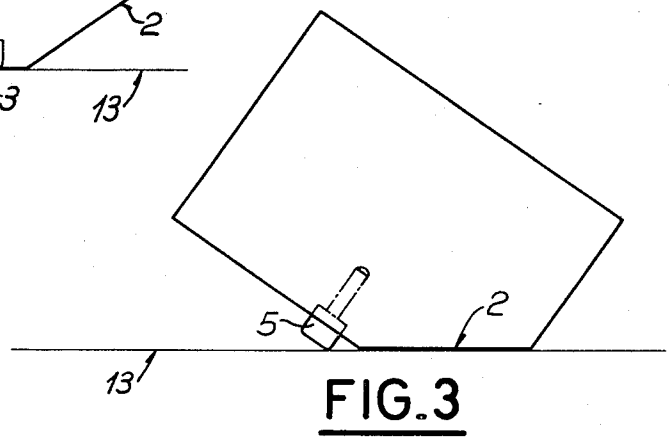
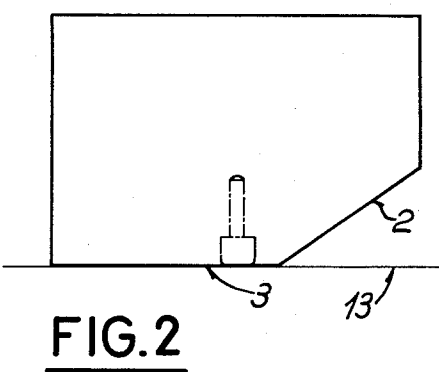
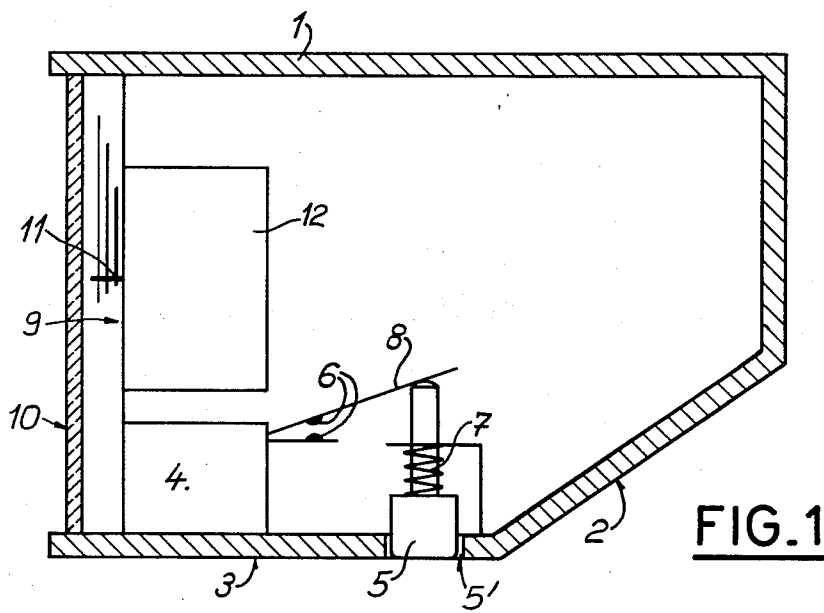
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ABSTRACT

An alarm clock has an alarm device which can be set in an operative or an inoperative condition by tilting the clock from one stable rest position to another.

5 Claims, 3 Drawing Figures





ALARM CLOCK

The invention relates to alarm clocks.

It has already been proposed to provide an alarm clock with a push button which is depressed when the clock is placed on a support surface so as to place the alarm device in an operative condition, i.e., so that an alarm signal will be given at a preset time. When the alarm rings, the user can stop the alarm signal simply by lifting up the clock, without having to locate and actuate the conventional alarm switch-off device. Whilst such a clock has undoubted advantages, it nevertheless has the drawback that unless the user actuates the conventional alarm switch-off device after having stopped the alarm signal by lifting the clock, when he places the clock back down the alarm signal is liable to be given again. The user must therefore either actuate the conventional alarm switch-off device, or must lay the clock down in a generally inconvenient position, e.g. on its dial face.

An object of the invention is to provide an alarm clock in which switching of the alarm device between an operative and an inoperative condition can be achieved simply by tilting the clock between two positions in both of which positions the dial face of the clock is oriented so as to conveniently display the time.

An alarm clock according to the invention comprises a case having a generally planar dial face including time indicating means. The case has discrete first and second rest surfaces defined by first and second planes intersecting at an obtuse angle along a line parallel to the general plane of the dial face, and the dial face includes a major axis lying in a plane perpendicular to the general plane of the dial face and perpendicular to said first and second planes. The first and second rest surfaces respectively form means for supporting the clock on an underlying generally horizontal support surface in stable first and second positions, in both of which first and second positions said plane of the major axis is disposed perpendicular to the underlying support surface. The clock also includes an alarm device and means for switching the alarm device between an operative and an inoperative condition when the clock is moved from one of said first and second positions to the other.

An embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

FIG. 1 is a schematic cross-section through an alarm clock; and

FIGS. 2 and 3 are schematic side elevational views of the alarm clock in two positions.

The alarm clock shown includes a case 1 having discrete first and second planar rest surfaces 2 and 3 respectively, surfaces 2 and 3 intersecting at an obtuse angle along a line parallel to the general plane of a dial face 9. Dial face 9 is covered with a glass 10 and has time indicating means including conventional hands 11 cooperating with marks on the dial face 9. Hands 11 are driven by a schematically shown electric clockwork mechanism 12. The cross-section of FIG. 1 is taken through the major 12 o'clock - 6 o'clock axis of dial face 9, which axis lies in a plane perpendicular to the planes of rest surfaces 2 and 3.

The center of gravity (not shown) of the clock is disposed perpendicular to both rest surfaces 2 and 3 whereby the rest surfaces 2 and 3 form means for sup-

porting the clock on an underlying horizontal support surface in two stable positions shown in FIGS. 2 and 3 respectively. In both of these positions, said plane of the major 12 o'clock - 6 o'clock axis of the dial face 9 lies perpendicular to surface 13, so that the clock is in a position in which the indicated time can be read conveniently.

The clock also includes a schematically shown electric alarm device 4 which is in an operative condition, i.e., able to give a sonorous alarm signal at a preset time, when a contact 6 is closed, and is in an inoperative condition when contact 6 is open.

Contact 6 is operated by a push button 5 passing through an aperture 5' in surface 3, button 5 being urged by a compression spring 7 and by a resilient blade 8 of contact 6 from a retracted position (FIGS. 1 and 2 in which the button 5 is flush with the surface 3, to a withdrawn position (FIG. 3) in which it protrudes from surface 3.

When the clock is placed with its rest surface 2 on a horizontal underlying support face 13, button 5 is free to move out to its withdrawn position, as shown in FIG. 3. The contact 6 is thus closed and the alarm device is in the operative condition, in which an alarm signal is given at a preset time.

When the user desires to place the alarm device 4 into inoperative condition, either during production of an alarm signal or to avoid production of an alarm signal, the clock is simply tilted towards the position shown in FIGS. 1 and 2. During tilting, button 5 applies against surface 13 and the weight of the clock causes button 5 to retract against the action of spring 7 and blade 8. When the clock comes to rest on surface 3, blade 8 is raised and contact 6 is open so that the alarm device is in the inoperative condition.

The described alarm clock is extremely practical since the tilting movement required for placing the alarm device in the operative or inoperative condition can be achieved very easily. Moreover, a simple observation of the position of the clock is sufficient to indicate whether or not the alarm device is set to operate.

As a variation, the button 5 could be replaced by a gravity operated contactor disposed inside case 1, for example a miniature contactor having a drop of mercury which is displaced when the clock is tilted between the described positions.

As another variation, the case 1 could be pivotally mounted on a support plate about an axis along the line of intersection of surfaces 2 and 3. Magnetic or other means could then be provided for firmly holding the clock in one or both of the previewed positions, instead of relying upon a particular location of the center of gravity of the clock.

What is claimed is:

1. In an alarm clock: means when enabled for generating an alarm signal at a preselected time; and means for enabling and disabling the alarm signal generating means and for simultaneously indicating the enabled and disabled status thereof comprising a clock housing having two discrete planar surfaces at oblique angles with one another and each surface defining a stable rest position for the clock and said clock housing positionable on one of said planar surfaces to thereby enable said alarm signal generating means and indicate the enabled status by one orientation of said clock housing and positionable on the other of said planar

3

surfaces to thereby disable said alarm signal generating means and indicate the disabled status by another orientation of said clock housing.

2. In an alarm clock according to claim 1, wherein said two planar surfaces are adjoining and said clock housing is pivotable on the line joining the two planar surfaces.

3. In an alarm clock according to claim 1, further comprising a clock face and wherein one of said planar surfaces is perpendicular to the plane of said clock face.

4. In an alarm clock according to claim 1, wherein

4

said means for enabling and disabling includes a switch having a pushbutton projecting from said other planar surface when said clock housing is positioned on said one planar surface and movable to a position wherein the pushbutton is flush with said other planar surface when said clock housing is positioned on said other planar surface.

5. In an alarm clock according to claim 1, wherein said means for enabling and disabling includes a gravity actuated switch.

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