J. B. WILLSEA.

ALARM.

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1,067,159.

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Fig. 1.

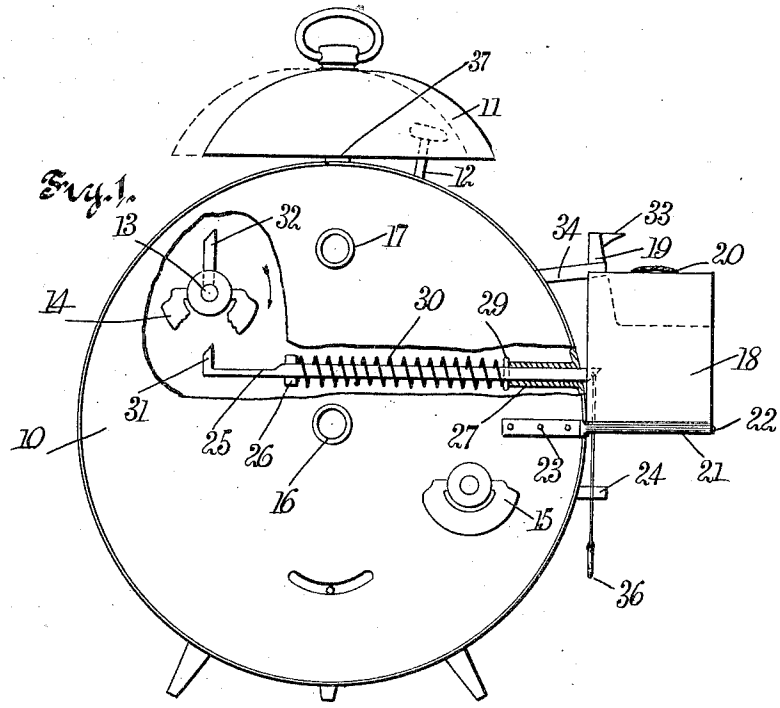
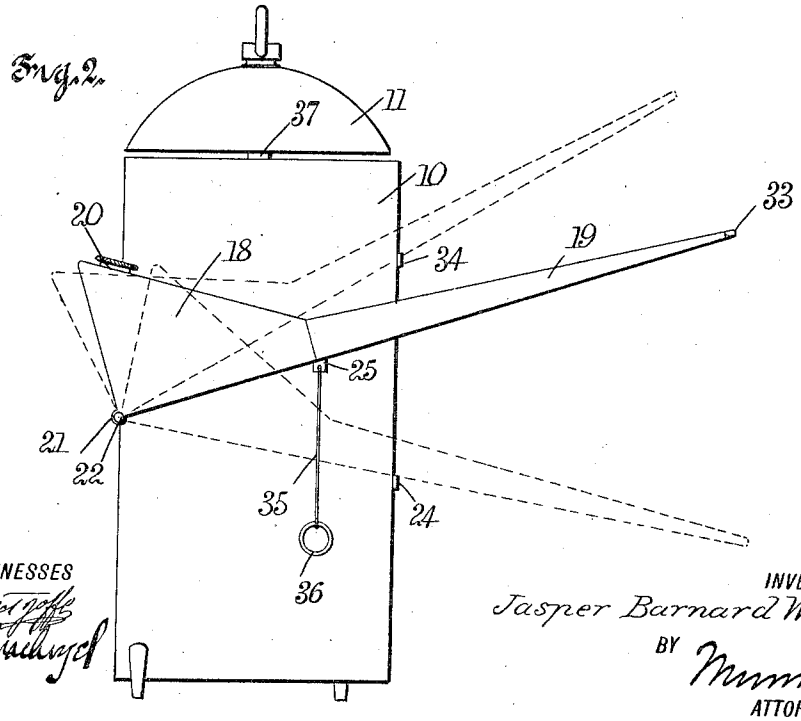


Fig. 2.



WITNESSES

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ALARM.

1,067,159. Specification of Letters Patent. Patented July 8, 1913.

Application filed April 2, 1912. Serial No. 688,027.

To all whom it may concern:

Be it known that I, JASPER BARNARD WILLSEA, a citizen of the United States, and a resident of Fruita, in the county of Mesa and State of Colorado, have invented new and useful Improvements in Alarms, of which the following is a full, clear, and exact description.

This invention relates to alarms for arousing sleeping persons and for other like purposes, and has reference more particularly to the combination with an alarm clock having alarm-operating mechanism, of a gravitationally operable reservoir for fluid adapted to drip upon the person of the sleeper to awaken him, and means for maintaining the reservoir in a normally inoperative position, the last-mentioned means being releasable by the alarm-operating mechanism.

The object of the invention is to provide a simple, inexpensive and efficient alarm which can be readily used with the ordinary alarm clock, which can be used in combination with the audible alarm of the alarm clock or independently of the same, which is effective and positive in operation, by means of which a sleeper can be awakened with certainty, and without the necessity for alarming or awakening others within the reach of the sound of an audible alarm, and which can be rendered inoperative when it is desired to use the audible alarm alone.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claim.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views, and in which—

Figure 1 is a rear elevation of an alarm clock having an embodiment of my invention applied thereto, and with certain of the parts broken away to show the construction of certain of the details of construction; Fig. 2 is a side elevation of the alarm clock showing the fluid reservoir in other positions in dotted outline.

Before proceeding to a more detailed explanation of the invention it should be clearly understood that while the device is preferably associated with an alarm clock of the ordinary type it can also be employed in combination with other alarm mechanisms which provide suitable means for releasing the gravitationally operable reservoir. The reservoir may be filled with water or other fluid, and the device should be so positioned that when the reservoir is released the escaping fluid will fall upon the person of the sleeper and thus awaken him. As soon as this has occurred the reservoir may be moved into an inoperative position so that the flow of the fluid may be stopped. The arrangement is such that after the reservoir has been released the alarm mechanism of the clock is no longer operative with respect to the reservoir, and the operation of the fluid alarm is therefore not a continuous one as is that, for example, shown in United States Patent No. 879,637. My invention is, additionally distinguished from the device disclosed in the patent referred to in that the fluid reservoir of my alarm is gravitationally operable and can, furthermore, be used without the audible alarm of the clock. Certain of the details of construction shown for example herewith form no part of the invention and can be varied, in accordance with individual preference and special conditions, without departing from the underlying spirit of the invention.

Referring more particularly to the drawings I have shown for example, an alarm clock having the usual casing 10, an alarm bell 11, a hammer 12 therefor, and alarm-operating mechanism including a winding shaft 13. The winding shaft can be turned by means of the usual pivoted head or wind 14. A similar wind 15 is provided for winding up the mainspring of the clock. The clock also includes the customary setting device 16 for the hands, and a second setting device 17 for the alarm movement. The details of construction of the clock mechanism and the alarm mechanism are, for the sake of simplicity, not illustrated, and they may be of any preferred or common type.

I employ a reservoir 18 having an extended spout, and an escape outlet 19 preferably of tapered form and so constructed that in a predetermined position of the reservoir the fluid therein will escape through the spout and from the same in large drops. The reservoir is of suitable size and is provided with a capped filling inlet 20. At the rear, lower edge it is provided with a transverse sleeve 21 which receives a pivot pin 22 secured by means of rivets 23 or in any

other suitable manner to the clock casing. The sleeve and the pivot pin form a hinge which permits the reservoir to rock up and down. The arrangement is such that the reservoir tends gravitationally to assume a position so that the fluid will escape from the spout. Upon the clock casing is provided a stop 24 which limits the downward movement of the reservoir as is shown in dotted outline in Fig. 2.

Mounted within the clock casing and movable in the direction of its length is a keeper 25 slidably arranged in guides 26 and 27. The latter is in the form of a tube and has an opening registering with an opening in the wall of the casing so that the keeper can project from the wall of the casing into operative relation with the reservoir. The keeper has a rigid collar 29 and a spring 30, which engages the collar and the guide 26 so that the spring tends normally to project the keeper. At the inner end the keeper has a laterally disposed stud 31 adapted to be engaged by a finger 32 mounted upon the shaft 13, so that as the shaft revolves, the keeper will be retracted against the tension of the spring.

In a normal position, the reservoir is arranged resting upon the projecting end of the keeper so that the spout is elevated and the fluid will not escape from the reservoir. When the alarm mechanism is operated in the usual manner the keeper is retracted and the reservoir swings downward into a position against the stop 24, so that fluid will escape therefrom and fall upon the person of the sleeper to awaken him. I prefer to provide the end of the spout 19 with a laterally disposed enlargement 33 in order to insure the escape of the fluid in the form of large globules or drops. The casing above the reservoir has a stop or keeper 34 which serves to hold the reservoir in a position such that it will not be released by the alarm-operating mechanism in case it is desired to employ the audible alarm only. It will be noted that the end of the keeper is beveled so that when it is desired to reset the fluid alarm the reservoir can be moved upward and past the keeper, which is displaced against the tension of the spring. I prefer to associate with the keeper, as is shown in Fig. 2, a flexible member 35 having at the end a ring 36 so that if by any chance the alarm mechanism should stop with the finger 32 in engagement with the extension 31 of the keeper, and the latter in a retracted position, the keeper can be drawn forth into an operative position so that the reservoir can be reset.

It will be readily understood that the audible alarm of the clock can be rendered inoperative in different ways. I have shown for example herewith, a bell 11 arranged eccentrically with respect to its supporting member 37. Consequently, when the bell is turned in one position it will be struck by the hammer 12 when the same is operated. If it is turned partly around, however, the adjacent portion of the bell will be out of reach of the hammer and the bell will not ring when the alarm mechanism is operated.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:—

The combination with an alarm clock, having a casing and alarm operating mechanism therein, of a gravitationally operable reservoir associated with the lateral surface of said casing; a slidable member within said casing and normally projecting out of the lateral surface of said casing and engaging said reservoir and keeping same in an inoperative position; means whereby said alarm operating mechanism draws said slidable member into the casing and thereby releases said reservoir which remains in said released operative position until raised manually and a flexible member associated with said slidable member for normally forcing same out of the lateral surface of said casing.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JASPER BARNARD WILLSEA.

Witnesses:

OCER O. FELLOWS,

LEE L. TRAVIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."