Dec. 29, 1936. C. E. BROWN 2,066,092

CHIN OPERATED ALARM DEVICE

Filed Jan. 21, 1936

Fig. 1.

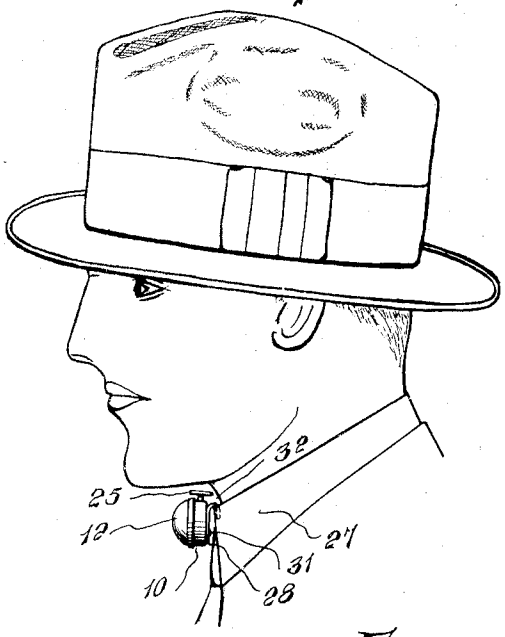


Fig. 2.

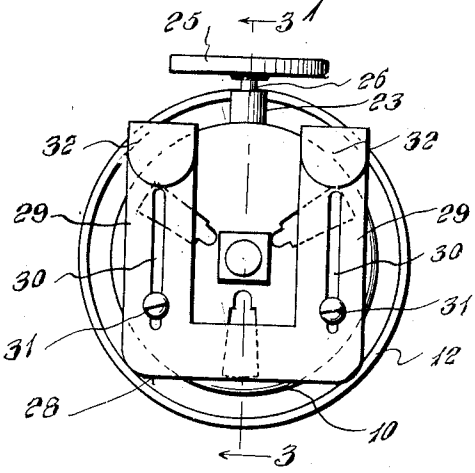


Fig. 3.

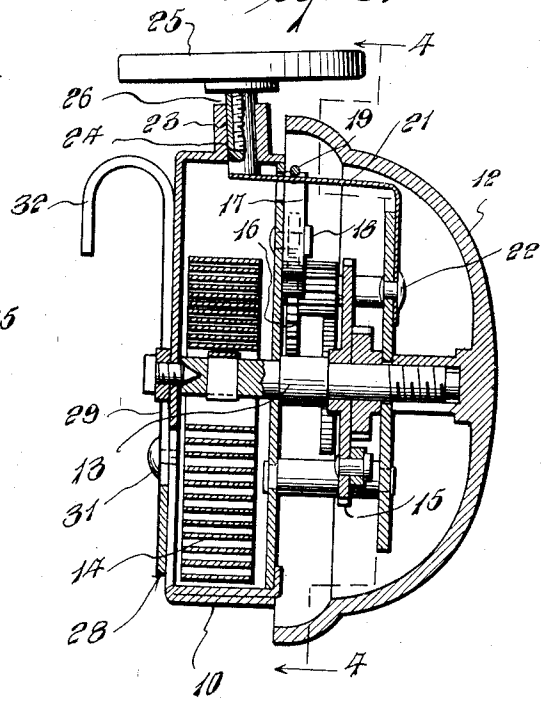
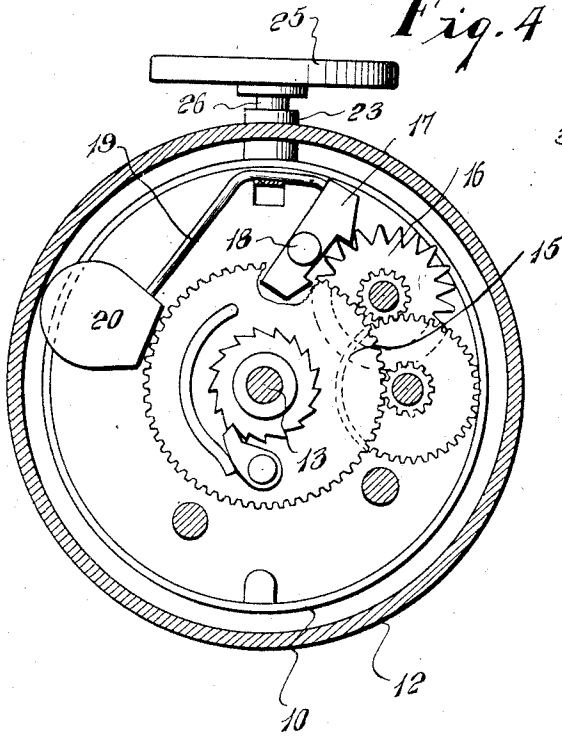


Fig. 4



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CHIN OPERATED ALARM DEVICE

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5 Claims. (Cl. 116—67)

This invention relates to a means which will prevent drivers of motor vehicles, other vehicles, pilots of air and seagoing craft, train engineers, watchmen and others from falling asleep when it is essential that they should remain awake and alert.

It is especially aimed to provide a structure which will operate when the user, usually in a sitting posture, becomes drowsy. Under such conditions he invariably nods, and through the noddings, the invention is operated.

More specifically it is aimed to provide an alarm, which will be operated by the chin, engaging or depressing a contact or trigger of a mechanical or electric bell, buzzer or the equivalent.

It is especially aimed to provide construction whereby the device may be worn on the collar and adjusted to conform to the height of the neck and the distance of the chin with respect thereto and with respect to the device.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawing illustrating an operative embodiment.

Drawing:—

Figure 1 is a view showing the improvement in use;

Figure 2 is a rear view of the device;

Figure 3 is a central vertical section taken on the line 3—3 of Figure 2, and

Figure 4 is a vertical section taken on the plane of line 4—4 of Figure 3.

Referring specifically to the drawing wherein like reference characters designate like or similar parts, 10 designates a casing adapted to remain stationary and 12 represents a bell connected to a shaft or arbor 13 journaled in the casing and to which shaft and casing, a spring 14 is fastened. The spring motor 14 is adapted to be wound through the manual turning of the bell 12 and the shaft at 13, through a train of gearings 15, and upon unwinding of the spring 14, the same is adapted to rotate a cap at 16, which vibrates a lever 17, pivoted to the casing at 18 and from which an arm 19 extends, terminating in a clapper or striker 20 adapted for connection with the interior of the bell 12 to sound an alarm. This bell or alarm device specifically constitutes no part of my invention but has been shown merely as one type of bell, alarm signal or the like which may be used pursuant to the invention.

The tendency of the apparatus is to operate the striker 20 when the arm 19 is free or unrestrained. To normally prevent operation, a detent 21 is provided, being in the nature of a relatively stiff spring L shaped having one arm fastened as by a rivet 22, to a part of the casing. The other arm of the detent 21 is disposed beneath and in engagement with the arm 19, normally maintaining it inactive.

Slidably mounted in a boss 23 at the top of the casing 10 is a stem 24 whose lower end contacts the detent 21. A button plunger 25 is screw-threaded as at 26 to the stem 24.

The device is adapted to be worn on the collar and at the front directly over the necktie, so that movement of the chain of the wearer will engage the button 25, thereby depressing the stem and detent, releasing the arm 19 and permitting vibration of the striker 20 and consequent sound of the alarm or the like.

In order to fasten the device to the collar, such as is shown at 27 an attaching plate is shown at 28. This plate is generally of U shape, having vertical parallel arms 29 provided with slots 30 through which screws 31 are passed and screw-threaded in the casing 10. The arms 29 at their upper or free ends terminate in hooks 32 which hook over the upper edge of the collar and thus position the device.

In the use of the device, the should-be wearer nods, his chin being in line with the button 25 will fall against the button, thus depressing the stem and detent, releasing striker means 19—20 which will sound an alarm and awaken him.

Various changes may be resorted to provided they fall within the spirit and scope of the invention. It will be realized that any suitable means may be used to attach the device to or adjacent to the collar, to or adjacent the neck of wearer and that any suitable signal or alarm device may be substituted for that shown. It will also be understood that the parts may be variously proportioned as desired. The plate 28, may be adjusted and the hooks 32 bent, to best adapt the device to assume various positions according to the size of the wearer and position of his collar and that the plunger may further be adjusted since the stem 24 and button 25 are screw-threaded connections enabling extension thereof.

I claim as my invention:—

1. In combination, a shirt neck band, alarm means, and means to support the alarm means on the shirt neck band adjacent to the chin of a wearer in position to be engaged by the chin, and a control element for the alarm means engageable by the chin of the wearer through nodding by him.

2. A device of the class described comprising an alarm mechanism, means attached thereto to suspend the same from the shirt neck band of a wearer in position to be engaged by the chin of said wearer, said alarm mechanism including striker means, a device to operate the striker means engageable by the chin of the wearer comprising a detent, and a plunger operable to displace said detent, said plunger having relatively adjustable parts for the purpose specified.

3. A device of the class described comprising an alarm mechanism, means attached thereto to suspend the same from the shirt neck band of a wearer in position to be engaged by the chin of said wearer, said alarm mechanism including striker means, a device to operate the striker means engageable by the chin of the wearer comprising a resilient detent, a plunger operable to displace said detent, said plunger comprising a stem engaging the detent and a button having a part screw threaded adjustably to said stem.

4. A device of the class described comprising an alarm mechanism, means attached thereto to suspend the same from the shirt neck band of a wearer in position to be engaged by the chin of said wearer, said alarm including striker means, a device to operate the striker means engageable by the chin of the wearer comprising a detent, a plunger operable to displace said detent said plunger having relatively adjustable parts for the purpose specified, said suspending means comprising a plate having an elongated slot, fastenings passing through said slot to the alarm device, and said plate having a hook at the upper end thereof.

5. A device of the class described comprising an alarm mechanism, means attached thereto to suspend the same from the shirt neck band of a wearer in position to be engaged by the chin of said wearer, said alarm including striker means, a device to operate the striker means engageable by the chin of the wearer comprising a resilient detent, a plunger operable to displace said detent, said plunger comprising a stem engaging the detent and a button having a part screw threaded adjustably to said stem, said suspending means comprising a plate of U-shape providing parallel arms, said arms having elongated slots, screws fastened through said arms to the alarm device, and said arms at their upper ends terminating in hooks.

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