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W. B. EBERLY

ALARM FOR AUTOMOBILES

Filed Nov. 26, 1919

Fig. 2.

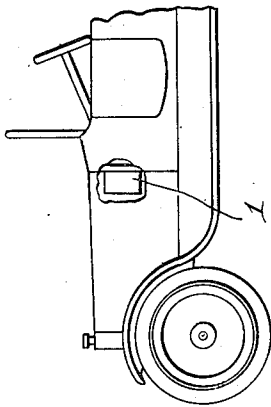
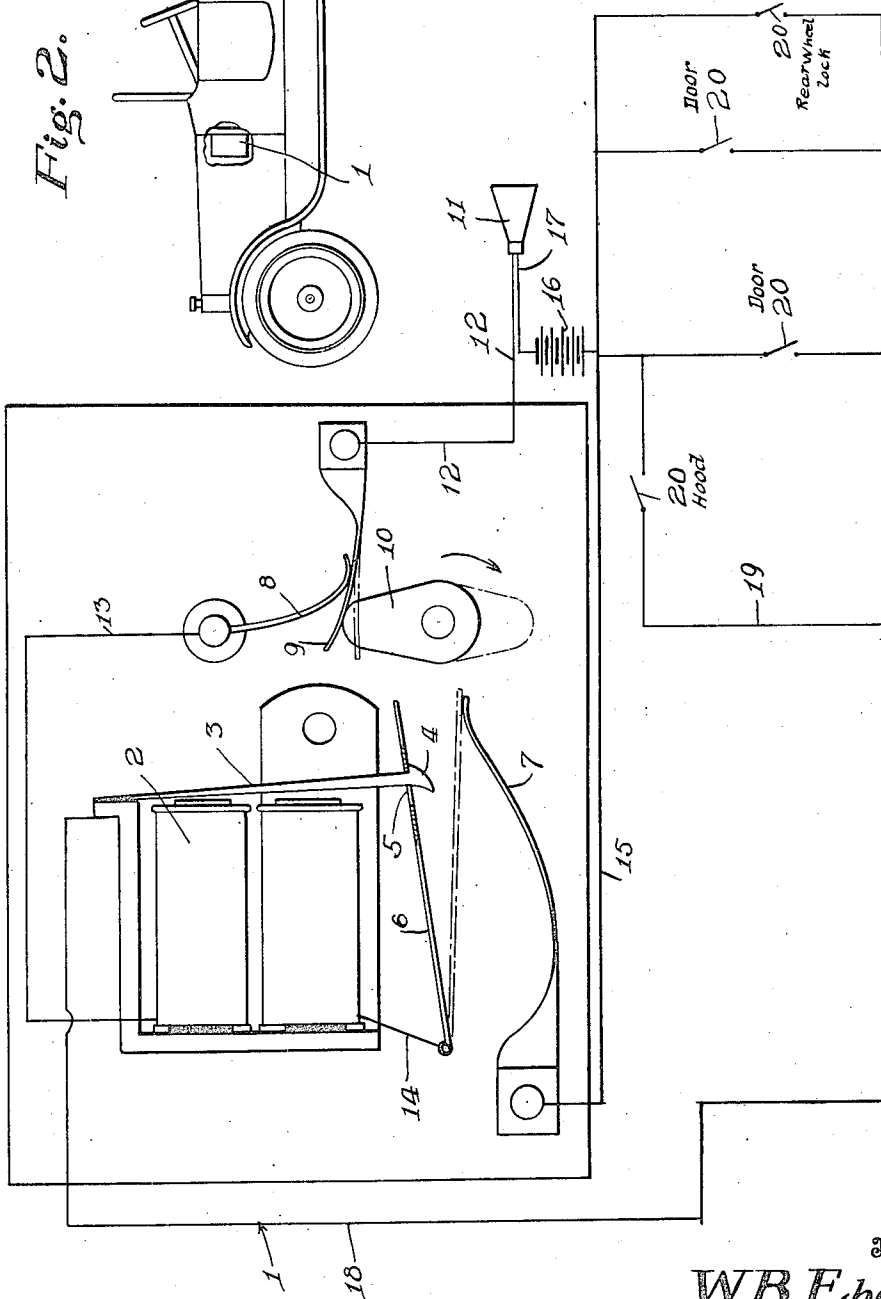


Fig. 1.

Witness

J. R. [Signature]

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UNITED STATES PATENT OFFICE.

WEIR B. EBERLY, OF MECHANICSBURG, PENNSYLVANIA.

ALARM FOR AUTOMOBILES.

Application filed November 26, 1919. Serial No. 340,789.

To all whom it may concern:

Be it known that I, WEIR B. EBERLY, a citizen of the United States, residing at Mechanicsburg, in the county of Cumberland and State of Pennsylvania, have invented a new and useful Alarm for Automobiles, of which the following is a specification.

This invention relates to a burglar alarm for use in connection with automobiles, one of its objects being to provide an alarm which will be sounded when any movable part of the automobile is shifted by an unauthorized person, it being impossible to stop the sounding of the alarm until the owner or driver of the car can insert a proper key for the purpose of breaking the electric circuit to the alarm.

A further object is to provide a device of this character adapted to be placed inside of the hood of the automobile, where it cannot be reached except by raising the hood, it being intended to connect a switch to the hood so that when the hood is raised by an unauthorized person after the alarm has been set, the alarm will be sounded.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawing the preferred form of the invention has been shown.

In said drawing

Figure 1 is an elevation of the mechanism, parts being shown in diagram and two positions of the circuit closures being indicated by full lines and dotted lines respectively.

Figure 2 is a side elevation, on a reduced scale, of a portion of an automobile and showing the location of the apparatus under the hood.

Referring to the drawing by characters of reference 1 designates a housing adapted to be secured to the front of the dash of the automobile and under the hood where it cannot be reached except by raising the hood. In this casing is arranged an electromagnet 2 the armature 3 of which has a head 4 adapted to project through an opening 5

formed within a spring strip 6 constituting a circuit closer so as to hold said strip elevated out of normal position, as shown in full lines in Figure 1. Arranged under this strip 6 is another spring 7 constituting a contact and which is adapted to be engaged by the strip 6 when said strip is released from the armature 3. This position of the parts is shown by dotted lines in Figure 1. Another spring strip 8 is mounted in the casing directly above but normally out of contact with a spring strip 9. A cam 10 is mounted for rotation in the casing and in the direction indicated by the arrow in Figure 1. It is designed to rotate this cam by means of a key insertible through the dash by the driver.

A siren or other alarm indicated at 11 is adapted to be arranged under the hood and is electrically connected by a conductor 12 to the strip 9. Another electrical conductor 13 extends from the strip 8 to one terminal of the magnet 2 while the other terminal of the magnet is connected as at 14 to the strip 6. The strip 7 has an electrical conductor 15 extending therefrom to a battery 16 which, in turn, is connected to the siren 11 by a conductor 17. The armature 3 has an electrical conductor 18 connecting it to the conductor 15 and this conductor 18 is provided with shunts 19 in which are arranged circuit closers or switches 20 which can be located at different points on the motor vehicle. For example one of these switches can be arranged at each of the side doors, another upon the tire holder located either at the side or back of the vehicle, another under the hood so that should the hood be raised the switch would be closed. In fact switches can be located wherever desired, a different shunt being provided for each. Thus after the parts have been set, should any one of the movable portions of the machine be shifted out of normal position, one of the switches 20 would be closed.

When the user of the machine inserts a key into engagement with the cam 10 and rotates said cam in the direction indicated by the arrow in Figure 1, the cam will first come against the strip 6 and lift it into engagement with the armature 3. The cam will then be brought into position against the strip 9 and will lift it into contact with strip 8. The key is then removed leaving the parts all set. Should any one of the movable parts of the machine be shifted by

an unauthorized person the switch 20 controlled thereby would be closed. This would cause the current to be set up from the battery 16 through the shunt 19 to conductor 18, to the armature 3, to the strip 6, to the electromagnet 2, to the conductor 13, strips 8 and 9, conductor 12, siren 11 and conductor 17. Thus the electromagnet will be promptly energized and at the same time the siren will be sounded. As soon as the electromagnet is energized it will attract its armature and release strip 6 which will drop into contact with strip 7. Thus another circuit will be set up from the battery 16 through the conductor 15, the strips 7 and 6, thence through the magnet 2, conductor 13, strips 8 and 9, and the conductors 17 and 12 to the siren. Consequently the siren will continue to sound even though the switch 20 should be shifted to open position and this sounding of the siren will continue until the holder of the key inserts it and rotates the cam 10 so as to break the contact between the strips 8 and 9. The parts can again be set by repeating the foregoing operation, the rotation of the cam 10 lifting the strip 6 into engagement with the armature and also lifting the strip 9 into contact with the strip 8.

What is claimed is:—

The combination with an automobile, of a housing secured to the dash and mounted under the hood of the engine, an electro-

magnet within the housing, a shiftable contact strip, an armature normally spaced from the magnet and engaging said contact strip to support one end thereof, a contact strip normally spaced from but in position to be engaged by the supported strip, an audible signal device, a source of electrical energy connected thereto electrically, contacts included in a circuit between the signal device and the electromagnet, a cam for holding the last named contacts normally together, one of said contacts being movable away from the other contact when the cam is shifted out of normal position, and a switch shiftable by the movement of a portion of the automobile for closing the circuit through the last named contacts while supported together, thereby to energize the electromagnet and release the shiftable contact strip for engagement with the contact strip thereunder to complete a circuit to the audible signal independently of subsequent movement of the switch, said cam being movable to engage the released shiftable contact and return it into engagement with the armature.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WEIR B. EBERLY.

Witnesses:

A. E. SIEBER,
ANDREW M. BODY.