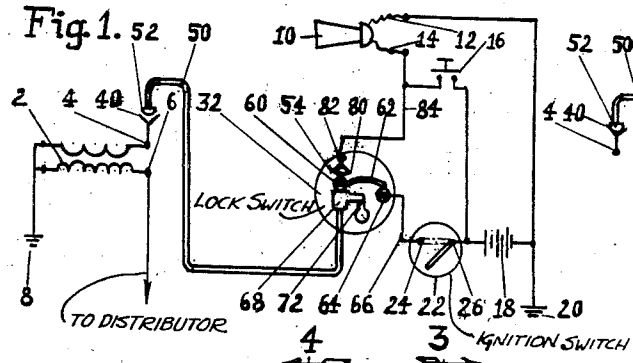
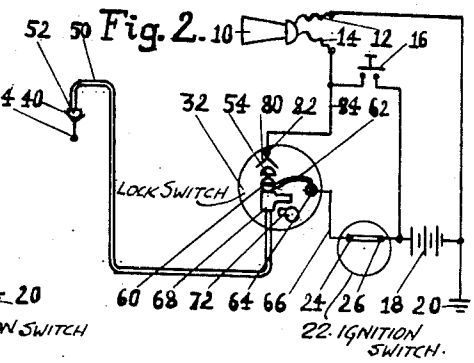
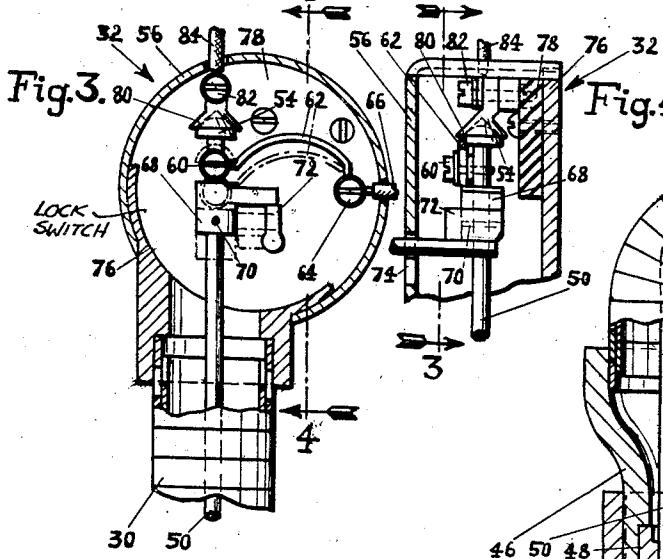
Dec. 2, 1952 A. EBERHARDT 2,620,387

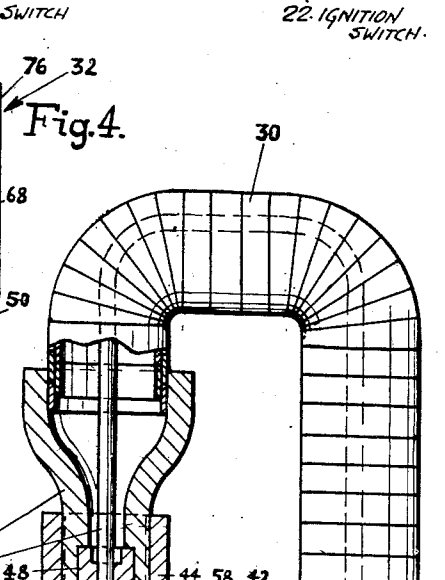
AUTOMOBILE THEFT PREVENTING IGNITION ATTACHMENT

Filed Nov. 2, 1950









INVENTOR.
Arthur Eberhardt
BY Henry J. R. Metzler
Attorney

Patented Dec. 2, 1952

2,620,387

UNITED STATES PATENT OFFICE

2,620,387

AUTOMOBILE THEFT PREVENTING IGNITION ATTACHMENT

Arthur Eberhardt, Sao Paulo, Brazil

Application November 2, 1950, Serial No. 193,563

2 Claims. (Cl. 177—314)

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The present invention relates to improvements in devices for the prevention of theft of automobiles, motorcycles, trucks, aeroplanes and other automotive vehicles as well as motor boats and, more specifically, to a new and improved automobile theft preventing ignition attachment.

One object of the present invention is the provision of a device of the character described which hermetically encloses into a steel casing the ignition coil and which provides for a sturdy steel tube enclosing the conduit that runs from the ignition coil to a special safety lock, which—in addition—to the usual ignition lock is mounted on the dashboard or on any other suitable part of the vehicle where it can be reached conveniently by the operator.

Another object of the present invention is the provision of a device of the character described which permits the operator of a parked vehicle to lock the electrical system of the vehicle by a second lock—in addition to the usual ignition lock switch—in such a manner that the electrical connection between the usual ignition lock switch and the ignition coil is interrupted and simultaneously an electrical connection between an electrically actuated signal, such as a horn or a buzzer, and the usual ignition lock switch is closed, so that a thief, who by means of a skeleton key has closed the usual ignition lock switch, still has not yet closed the ignition circuit but only the alarm circuit, with the result that the horn or buzzer will sound an alarm for aiding in the speedy discovery of the attempted theft. Said second lock preferably being installed at a place where it is not expected to be, for instance beneath a removable ornamentation on the dashboard, or within the glove compartment, or the like.

A further object of the present invention is the provision of a device of the character described which is simple in construction, which consists only of a few inexpensive parts that can be assembled easily, and which can be installed into any vehicle within a comparatively short period of time, but which is also durable, sturdy, and well adapted to withstand the rough usage to which devices of this type ordinarily are subjected.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of

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parts without departing from the spirit of the invention as claimed.

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

In said drawing:

Figure 1 is a wiring diagram showing the switches in positions in which the ignition circuit is interrupted, and the alarm circuit ready to be closed by switching on the usual ignition lock switch;

Figure 2 is a partial wiring diagram showing the switches in positions in which the ignition circuit is closed, and the alarm circuit interrupted irrespective of the position of the usual ignition lock switch.

Figure 3 is a detailed sectional view of the aforementioned second lock switch on the line 3—3 of Figure 4;

Figure 4 is a fragmentary sectional view on the line 4—4 of Figure 3; and

Figure 5 is a fragmentary side elevation and vertical sectional view of the ignition coil and conduit encasing.

Similar reference characters refer to similar parts throughout the several views.

In the drawing the numeral 2 denotes an ignition coil having terminals 4 and 6 and being grounded at 8 (Figure 1) in the usual manner. In Figures 1 and 2 the numeral 10 denotes an electrically actuated signal such as a buzzer, or a horn or the like from which extend preferably flexible terminal wires 12 and 14; the numeral 16 denotes a push bottom switch for closing the alarm circuit; the numeral 18 denotes a battery or any other suitable source of current, which is grounded at 20; and the numeral 22 denotes the usual ignition switch having terminals 24 and 26 and being provided ordinarily with a key-operated locking mechanism (not shown). The aforementioned parts, in the manner indicated in the drawing or in any other suitable, well-known manner, belong to the standard equipment of automotive vehicles and form no part of my present invention, except the signal device which may be a separate and specific part of my new and improved theft preventing attachment although the horn as ordinarily installed in a vehicle may be used in connection with my attachment, as is indicated in Figures 1 and 2.

The main parts of my new and improved automobile theft preventing ignition attachment are a tamper-proof housing 28 for the coil 2, a likewise tamper-proof tubular member 30, and a preferably lockable change over switch 32 from which the member 30 extends to the housing 28.

A conduit for connecting the terminal 4 of the coil 2 to the switch 32 is extended through the member 30, and the switch 32 is adapted for connecting in its first position the terminal 4 to the terminal 24 of the ignition switch 22, and in its second position for connecting the terminal 14 of the signal 10 to the terminal 24 with the ignition circuit interrupted. While the construction of the switch 32 and the housing 26 as well as the manner of connecting either the terminal 4 or the terminal 14 to the terminal 24 can be carried out in various suitable ways, I have shown in the drawing the following preferred arrangement: The housing 26 can be made as a cylindrical member of steel or the like having an open end and a closed end portion which is provided with a perforation 34, and having in its wall portions the perforations 36 and 38. Through the perforation 34 extends the terminal 6 of the coil 2; through the perforation 36 extends a bracket (not shown) for holding the coil 2; and the perforation 38 is adjacent a contact member 40, which is secured to the terminal 4. A sleeve 42 is secured, preferably by welding, to that portion of the housing 26 which surrounds the perforation 38, and a tube 44 is screwed into the sleeve 42 or is otherwise firmly secured thereto. A pipe connection member 46 preferably is screwed into the member 44 and has secured to its upper portion, by welding or the like one end of the tubular member 30, which may be somewhat flexible for facilitating the installation of the device into a vehicle. A bushing 48 is secured within the member 46, and a bent conductive rod 50 is slidable in the bushing 48. The rod has at its ends contact members 52 and 54, and is extended through the member 30, whose other end is secured to the casing 56 of the change over switch 32. A spring 58 preferably is interposed between the parts 48 and 52 for forcing the latter into the funnel-shaped opening of the contact member 40.

Within the casing 56 there is secured to the rod 50, at 60, one end of a flexible conduit 62, whose other end is connected at 64 to a wire 66, which is connected to the terminal 24. A lever member 68 of insulating material is secured to the rod 50 by means of a pin 70 or the like, and is so located that it can be engaged by a cam 72 which may be operated by a key or the like, that can be inserted into the casing 56 through a key hole 74 (Figure 4). The connection 64 preferably is separated from the bottom 76 of the casing 56 by means of a piece 78 of insulating material, and a terminal 80 is secured to the piece 78 and is connected at 82 to a wire 84 that is connected to a terminal of the alarm signal 10.

If the vehicle is parked, the various parts of the device are in the position shown in full lines in Figures 1, 3, 4 and 5, and the ignition switch 22 is off. Thus there are the following two electric circuits: First, from the grounded (negative) terminal of the battery 18 to the wire 12, the horn 10, the wire 14, to the open horn push bottom switch 16, and back to the positive terminal of the battery 18. Second, from the positive terminal of the battery 18 to the terminal 26 of the open switch 22, then from the terminal 24 through the wire 66 to the terminal 64, then through the flexible conduit 62 and the conductive rod 50 to the contact member 52, which is in spaced relation to the contact member 40. The latter being connected to the terminal 4 of the ignition coil 2, which is grounded at 8 and whose terminal 6 is connected to the distributor

(not shown) in the usual, well-known manner. Should a thief manage to close the ignition switch 22, as is indicated in dash-and-dotted lines in Figure 1, the contacts 40 and 52 are still in spaced relation to each other, so that the ignition circuit is interrupted, but the alarm circuit is closed because the contact 54 touches the contact 80, so that now the following electric circuit is closed: From the positive terminal of the battery 18 to the terminal 26 of the switch 22, to the terminal 24, through the wire 66 to the terminal 64, through the flexible conduit 62, the closed contacts 54 and 80, the wires 84 and 14 to the horn 10, and through the wire 12 to the ground (20), to which the negative terminal of the battery 18 is connected.

In order to operate the vehicle, the cam 72 is turned about ninety degrees relative to its position of Figures 1, 3, and 4 to the position shown in Figure 2, so that the spring 58 forces the contact 52 into the contact member 40 and moves the rod 50 into a position in which the contact 54 is in spaced relation to the contact 80. In this last mentioned position the alarm circuit is interrupted, and the ignition circuit is closed after closing the switch 22, so that now an electric current will flow from the positive terminal of the battery 18 through the closed switch 22, the wire 66, the conduit 62 and the rod 50 to the terminal 40 of the ignition coil 2, and then through the latter and through the wire 6 to the distributor as well as through the ground (8) back to the grounded negative terminal of the battery 18.

Since certain changes may be made in the above article and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent in the United States is:

1. In an automotive vehicle which is provided with an ignition switch, an ignition coil, a distributor and a storage battery, an electrically actuated alarm signal, and, a conductive rod connecting one terminal of the ignition switch to said coil, a theft preventing attachment comprising lockable means for temporarily interrupting said conduit and connecting the aforementioned terminal of the ignition switch to said alarm signal so as to close the alarm circuit as soon as said ignition switch is switched on while the ignition circuit is interrupted, burglar-proof enclosure means encompassing said coil, and a longitudinal tubular burglar-proof member through which said conductive rod is movably extended and whose ends are secured to said coil enclosure means and to said lockable means respectively.

2. In an automotive vehicle which is provided with an ignition switch, an ignition coil, a distributor, a storage battery, an electrically actuated alarm signal, and, a conduit connecting one terminal of the ignition switch to said coil, a theft preventing attachment comprising a tamper-proof housing encompassing said coil and having a first opening for extending therethrough

a conductor leading to the distributor and a second opening adjacent a coil terminal which is to be connected to the ignition switch, a tubular member having one of its ends secured to that portion of said housing which surrounds said second opening, a first contact member being connected to said coil terminal which is adjacent said second opening, a longitudinal conductive rod slidably extended through said tubular member being in spaced relation to the inner side of said tubular member, a second contact member being electrically connected to one terminal of said alarm signal, lockable means for moving said conductive rod into a first position in which one of its ends touches said first contact member while its other end is in spaced relation to said second contact member, and into a second position in which one end of said conductive rod touches said second contact member

while its other end is in spaced relation to said first contact member, and a flexible conduit connecting said conductive rod to a terminal of the ignition switch.

ARTHUR EBERHARDT.

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