W. R. D. McQUARRIE.

AUTOMOBILE ALARM SIGNAL.

APPLICATION FILED JUNE 2, 1919.

1,330,206. Patented Feb. 10, 1920.

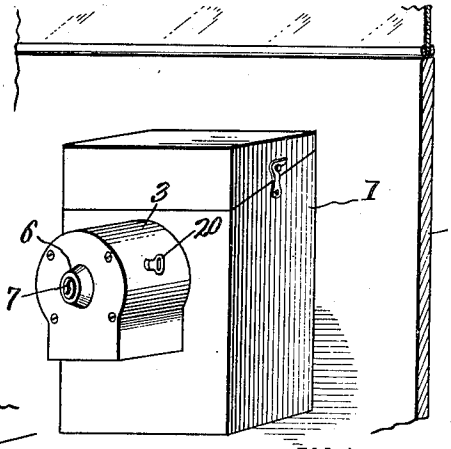


Fig. 1.

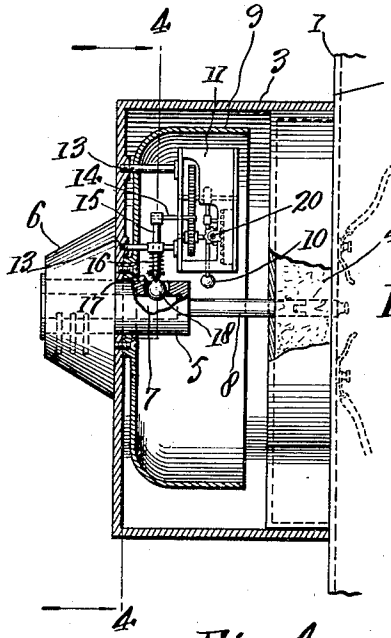


Fig. 2.

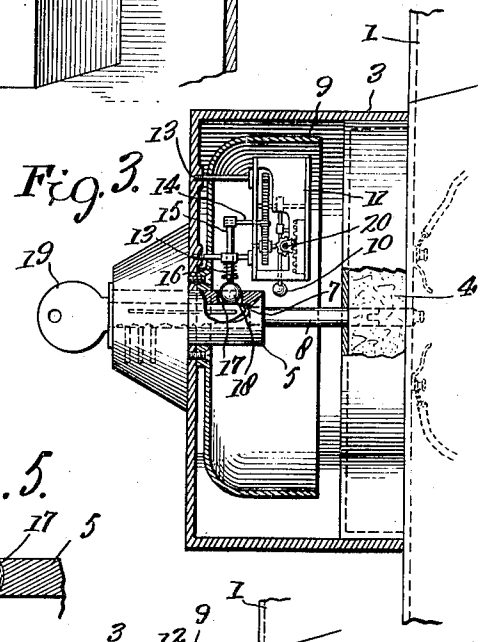


Fig. 3.

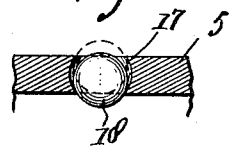


Fig. 5.

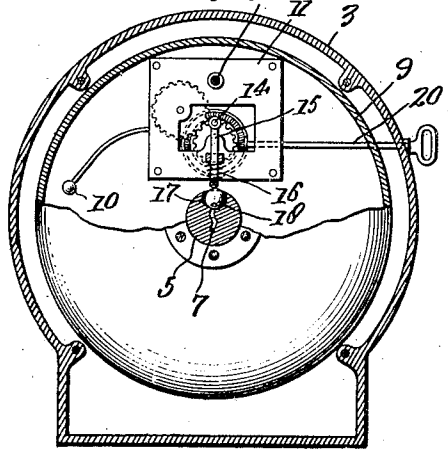


Fig. 4.

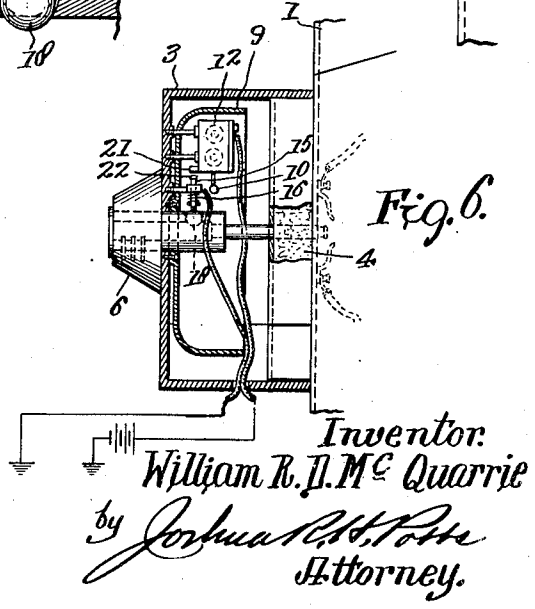


Fig. 6.

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UNITED STATES PATENT OFFICE.

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AUTOMOBILE ALARM-SIGNAL.

1,330,206. Specification of Letters Patent. Patented Feb. 10, 1920.

Application filed June 2, 1919. Serial No. 301,369.

To all whom it may concern:

Be it known that I, WILLIAM R. D. McQUARRIE, a citizen of the United States, residing at Buffalo, county of Erie, and State of New York, have invented certain new and useful Improvements in Automobile Alarm-Signals, of which the following is a specification.

My invention relates to signaling devices, and particularly to an alarm signal for automobiles.

Automobiles are provided with a switch for throwing the battery or magneto into or out of circuit with the motor when it is desired to start or stop the same; and this switch is usually controlled by a removable key. It frequently happens that the operator of the car will insert the key in the key-hole but forget to turn the same to operate the switch, in which event he would continue to crank the machine without being able to start the same until he discovers his failure to turn the switch. Also it frequently happens that the operator will turn the switch in stopping the car and forget to remove the key, thereby leaving the car in a condition to be readily stolen.

The object of my invention is to provide a device which will give a signal to the operator of the car, when about to start the same, in the event that he should have failed to turn the key to operate the switch to close the circuit to the engine. A further object of my invention is to provide a device as mentioned which will actuate a signal to advise the operator of the car that he has failed to remove the key after having stopped the engine. Further objects of my invention will appear hereinafter.

With these objects in view, my invention consists generally in a signal arranged adjacent the switch and which is thrown into operation by the key when the latter is within the key-hole and the switch in inoperative position. My invention further consists in various details of constructions and arrangements of parts all as will be fully described hereinafter and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which—

Figure 1 is a perspective view illustrating my invention applied to the switch box of an automobile.

Fig. 2 is a vertical, longitudinal section upon an enlarged scale illustrating the parts with the switch in inoperative position and the key removed.

Fig. 3 is a similar view with the key inserted.

Fig. 4 is a vertical, transverse section on the line 4—4 of Fig. 2.

Fig. 5 is a detail view upon an enlarged scale of one of the elements of the device, and

Fig. 6 is a view similar to Fig. 2 illustrating a modified form of the invention.

Referring now to the drawings, 1 indicates the coil box arranged upon the dash 2 of an automobile. Arranged upon the coil box is a switch box 3 in which is arranged the usual fiber switch block 4 which controls the circuit to the magneto or battery, not shown. Mounted in axial alinement with the switch block 4 is the barrel 5 of a Yale lock, 6 indicating the outer casing thereof, and 7 the key-hole. This much of the device is old, the switch block 4 being actuated upon turning of the barrel 5 with the key inserted. The barrel 5 is connected to the switch block by a rod or stem 8.

In carrying out my invention, I provide a suitable signal adjacent the lock which shall notify the operator of the car of failure to turn the switch block when about to start the car and of failure to remove the key after having stopped the engine. This signal may be of practically any form, but I prefer to use an audible signal as being more effective. To this end, I arrange a bell 9 within the casing 3 and provide suitable mechanism for sounding the same. This comprises a clapper 10 which may be actuated by means of clockwork mechanism 11, as illustrated in Figs. 2 to 4 inclusive or electrically as indicated at 12 in Fig. 6.

Referring to Figs. 2 to 4 inclusive, the clockwork mechanism is supported in the casing 3 upon suitable posts 13, and a brake arm 14 normally engages a portion of the clockwork mechanism to prevent actuation of the same. The brake arm is connected to or actuated by a reciprocating pin 15 normally held in retracted position by a spring 16. Loosely mounted in a recess 17 in the wall of the barrel 5 is a ball 18 which, when the switch is in inoperative position, lies directly beneath or in alinement with the pin 15. Upon insertion of the key 19, said key forces the ball 18 outwardly which

in turn moves the pin 15 against the tension of the spring 16 and thereby actuates the brake arm 14 to release the alarm actuating mechanism 11. It is obvious, therefore, that as soon as the car is stopped and the switch thrown into position to stop the engine, the alarm will sound and will continue to sound until the operator removes the key. Also should the operator insert the key for the purpose of starting, and fail to turn the same to close the switch, the signal will begin to sound and continue to do so until he closes the switch. It should be noted that the recess 17 is such as to permit free movement of the ball 18 but will retain the same within the shell 5. 20 indicates means for winding the clockwork mechanism.

In the form shown in Fig. 6, the device is similar to that shown in the preceding figures, except that the bell clapper 10 is actuated electrically, and the brake arm 14 is replaced by a contact 21 which coöperates with a contact 22 on the pin 15, thereby closing the circuit to the device 12, when the key is within the barrel and the switch in inoperative position. It is obvious that my invention may be variously modified without departing from the scope thereof.

I claim:—

1. In a device of the class described, the switch controlling the circuit to an automobile engine and the locking key for actuating the same, in combination with a signal, and means for throwing said signal into operation when said key is within the lock and the switch in inoperative position, substantially as described.

2. A device of the class described comprising a switch, a lock and key for controlling and actuating said switch, an alarm bell, mechanism for sounding said bell, means actuated by the insertion of the key when the switch is in inoperative position for starting the alarm actuating mechanism, substantially as described.

3. A device of the class described comprising a switch, a lock barrel in axial alinement therewith, an alarm bell, mechanism for sounding said bell, means normally holding said mechanism out of operation, a member loosely mounted in said barrel and forced outwardly by the insertion of a key, and means actuated by said member when the switch and barrel are turned to inoperative position for releasing the bell sounding mechanism, substantially as described.

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

WM. R. D. McQUARRIE.

Witnesses:
HARRY WALLENS,
MOISE LEVEINE.