W. F. WALKER.

SAFETY LOCK.

APPLICATION FILED SEPT. 2, 1913.

1,102,830.

Patented July 7, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

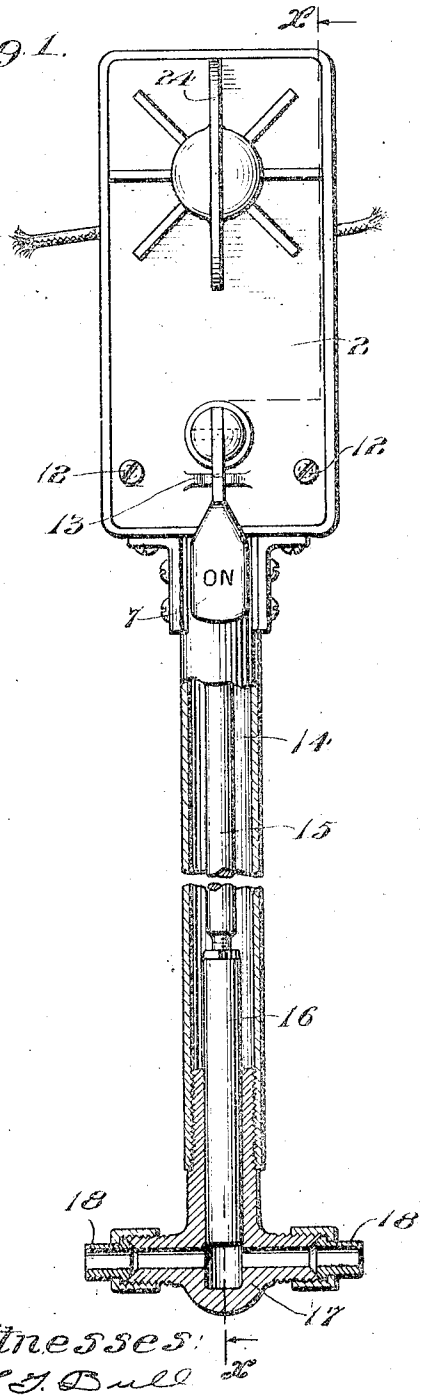
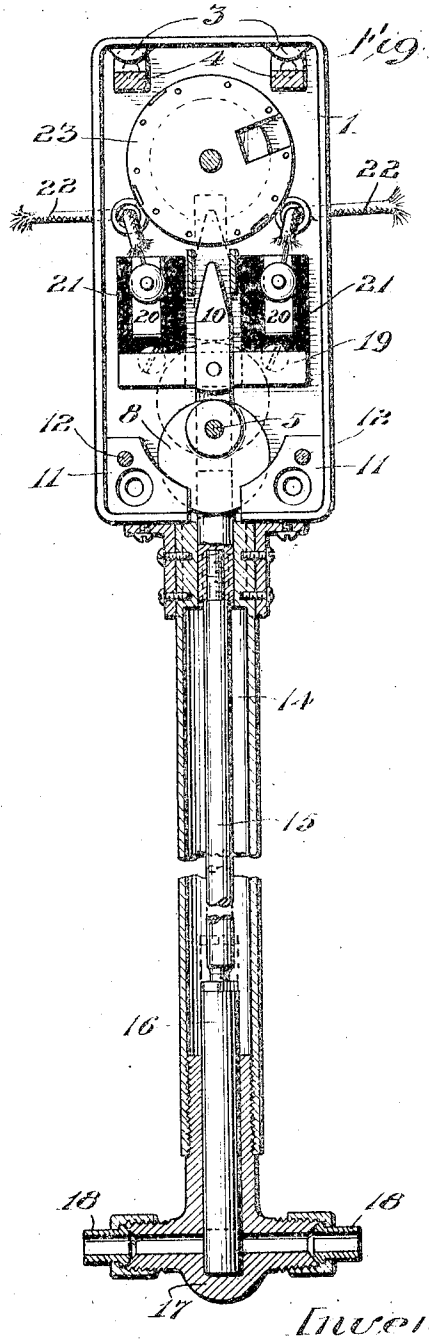


Fig. 2.



Witnesses:

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2 SHEETS—SHEET 2.

Fig. 3.

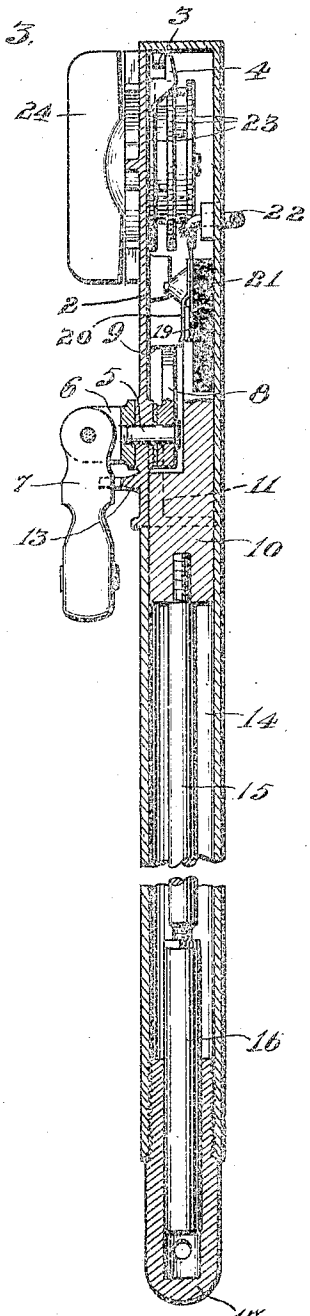


Fig. 4.

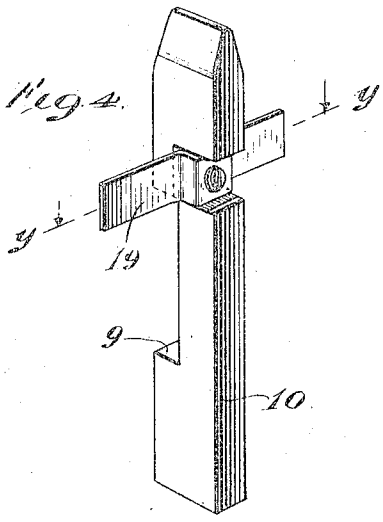
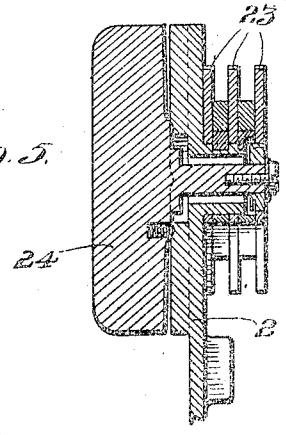


Fig. 5.

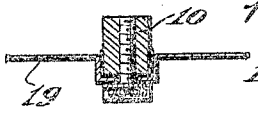


Witnesses:

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Fig. 6.



Inventor:

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UNITED STATES PATENT OFFICE.

WILLIAM F. WALKER, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-EIGHTH TO MATTHEW SORWICK, OF CICERO, ILLINOIS, AND ONE-FOURTH TO CHARLES F. DUSMAN AND ONE-EIGHTH TO ARCHIBALD B. CAMERON, BOTH OF CHICAGO, ILLINOIS.

SAFETY-LOCK.

1,102,830. Specification of Letters Patent. Patented July 7, 1914.

Application filed September 2, 1913. Serial No. 787,661.

To all whom it may concern:

Be it known that I, WILLIAM F. WALKER, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Safety-Locks, of which the following is a specification.

My invention relates to improvements in safety locks especially adapted for use in conjunction with automobiles and the like and has for its object the provision of a simple device of this character which will effectually prevent unauthorized removal of an automobile.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a face view of a device embodying my invention shown partially in section, Fig. 2, a section taken at right angles to Fig. 1, but showing the operating parts in different positions, Fig. 3, a section taken on line *x—x* of Fig. 1, Fig. 4, a perspective view of a slidable bolt employed in the construction, Fig. 5, an enlarged section taken through a combination lock employed in the construction, and Fig. 6, a section taken on line *y—y* of Fig. 4.

The preferred form of construction as illustrated in the drawings comprises a rectangular metallic casing 1 which is provided with a removable lid or closure 2 as shown. At its upper end the casing 1 is provided with inwardly projecting locking lugs 3 and closure 2 is provided with locking lugs 4 adapted to engage lugs 3 and prevent the direct outward removal of the corresponding end of said closure as will be readily understood, said lugs being so arranged as to permit the proper positioning of closure 2 by tilting the lower end thereof. Adjacent its lower end closure 2 carries an operating shaft 5 which is provided at its outer end with a bifurcated operating head 6 as shown. An operating crank handle 7 is pivotally mounted in head 6 so as to depend therefrom but facilitate the rotation of shaft 5 as will be readily understood, said handle 7 being marked on one side with the word "On" and on the other side "Off." At its inner end shaft 5 carries an eccentric cam 8 which fits within a notch 9 provided in the bolt 10 slidably mounted in casing 1. By this arrangement it will be observed that by rotating shaft 5 by means of handle 7 the bolt 10 may be readily reciprocated in casing 1.

Locking shoulders or flanges 11 are provided in the lower corners of casing 1 in position to permit the insertion of cam 8 into said casing when said cam is in one position but to engage over said cam when in the position shown in Fig. 2. Shoulders 11 also serve as convenient anchors for screws 12 which serve to secure closure 2 removably in place. Closure 2 is provided with a notched lug 13 adapted to receive handle 7 when in idle position and prevent rattling of the same or accidental operation thereof. By this arrangement it will be observed that cam 8 may be readily positioned in either the position indicated in Fig. 3 or the position indicated in Fig. 2 and temporarily locked in that position by simply dropping handle 7 into the notch in lug 13. When the cam is in the position indicated in Fig. 3 the closure 2 may be readily placed in position or removed therefrom, and when cam 8 is in the position indicated in Fig. 2, it engages under shoulders 11 thus effectually preventing the removal of closure 2.

A depending guard tube 14 is secured to the bottom of casing 1 and an operating rod 15 is secured to the lower end of bolt 10 and operates in tube 14. At its lower end rod 15 is provided with a plug 16 which operates in a valve casing 17 to open or close fuel supply pipe 18 for the passage or prevention of passage of fuel therethrough. Fuel supply pipe 18 is the ordinary fuel supply pipe for a gasolene engine, so that when valve 16 is in one position the fuel may pass to the carbureter of the engine but when in its closed position the passage of fuel to the carbureter of the engine is cut off. By this arrangement it will be observed that when cam 8 is in the position indicated in Fig. 2, the passage of fuel to the engine is prevented and thus starting of the engine rendered impossible.

Bolt 10 carries a metallic connecting strip

19 which is insulated therefrom and adapted to coöperate with electric contacts 20 mounted on insulating blocks 21 in casing 1. Contacts 20 are connected with electric wires 22 which in turn may be connected in series in the primary of a spark coil of an engine, so that when bolt 10 is in its depressed position as shown in Fig. 2 the primary circuit of the spark coil is broken and when bolt 10 is in its elevated position as indicated in Fig. 3 the primary circuit through the spark coil is or may be closed. By this arrangement it will be observed that when cam 8 is manipulated to close pipe 18 against passage of fuel, the primary circuit of the engine is also broken, thus effectually preventing starting of the engine due to the absence of a spark.

A combination lock is arranged in casing 1 in operative relation with bolt 10, said combination lock comprising the usual notched disks 23 which are operatively connected with an operating handle 24 so as to facilitate manipulation of said disks to set the combination to permit elevation of bolt 10 as will be readily understood by those familiar with combination locks. The specific form of combination lock is old and well known constituting no part of my invention and needs no further description here.

In use the casing 1 is secured to the ordinary dash board of an automobile and contacts 20 connected in series in the primary circuit of the engine. Valve casing 17 is inserted in the fuel supply pipe of the engine as will be readily understood. When it is desired to lock an automobile against unauthorized removal, handle 7 is manipulated to depress bolt 10, thereby breaking the primary circuit so as to prevent the formation of a spark and also closing the fuel supply pipe so as to cut off the supply of fuel from the engine. The combination is then thrown so as to prevent return of bolt 10. This will effectually prevent unauthorized starting of the engine and consequent removal of the automobile. When it is desired to start the car the combination is manipulated to permit elevation of bolt 10, said combination being only known to the knowledge of one authorized to operate the car, it can only be properly set by such a person. Then handle 7 is manipulated to cause cam 8 to elevate bolt 10 thus closing the sparking circuit and opening the fuel supply pipe when the car is ready for operation in the usual manner. In case it is desired to inspect the interior of casing 1 for repairs or otherwise, cam 8 is moved to the position indicated in Fig. 3 whereupon closure 2 may be removed by the removal of screws 12. It will be observed however that the closure 2 cannot be removed when the locking device has been set at safe position, owing to the engagement of cam 8 with locking shoulders 11, thus preventing tampering with the car by removing the closure 2.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirt of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. A device of the class described comprising a casing; a removable closure for said casing; means in said casing for stopping an engine and locking said closure against removal; and manipulating means on said casing for operating said first mentioned means, substantially as described.

2. A device of the class described comprising a casing; a removable closure for said casing; means in said casing for breaking an electric circuit and locking said closure against removal; and manipulating means on said casing for operating said first mentioned means, substantially as described.

3. A device of the class described comprising a casing; a removable closure for said casing; means in said casing for breaking an electric circuit, closing a fuel valve and locking said closure against removal; and manipulating means on said casing for operating said first mentioned means, substantially as described.

4. A device of the class described comprising a casing; a removable closure for said casing; means in said casing for closing a fuel valve and locking said closure against removal; and manipulating means on said casing for operating said first mentioned means, substantially as described.

5. A device of the class described comprising a casing; a removable closure for said casing; a reciprocatory bolt in said casing; a lock arranged to prevent reciprocation of said bolt; a circut breaker operatively connected with said bolt; an operating shaft carried by said closure; an eccentric on said shaft and having an operative connection with said bolt; and an engaging shoulder in said casing arranged to engage said eccentric when said bolt is thrown to position to break said circuit and lock said closure against removal, substantially as described.

6. A device of the class described comprising a casing; a removable closure for said casing; a reciprocating bolt in said casing; a lock arranged to prevent reciprocation of said bolt; a fuel supply valve operatively connected with said bolt; an operating shaft carried by said closure; an eccentric on said

shaft and having an operative connection with said bolt; and an engaging shoulder in said casing arranged to engage said eccentric when said bolt is thrown to position to close said fuel supply valve and lock said closure against removal, substantially as described.

7. A device of the class described comprising a casing; a removable closure for said casing; a reciprocating bolt in said casing; a lock arranged to prevent reciprocation of said bolt; a circuit breaker operatively connected with said bolt; a fuel supply valve operatively connected with said bolt; an operating shaft carried by said closure; an eccentric on said shaft and having an operative connection with said bolt; and an engaging shoulder in said casing arranged to engage said eccentric when said bolt is thrown to position to break said circuit and close said valve and lock said closure against removal, substantially as described.

8. A device of the class described comprising a casing; a locking lug arranged at one end of said casing; a removable closure for said casing; a locking lug on said closure arranged to engage said lug on said casing; an operating shaft arranged at the other end of said closure; a cam on said shaft; a locking shoulder in said casing arranged to engage said cam; and engine stopping means operatively connected with said cam, substantially as described.

9. A device of the class described comprising a casing; a locking lug arranged at one end of said casing; a removable closure for said casing; a locking lug on said closure arranged to engage said lug on said casing; an operating shaft arranged at the other end of said closure; a cam on said shaft; a locking shoulder in said casing arranged to engage said cam; a reciprocating bolt in said casing and operatively connected with said cam; a circuit breaker; a fuel supply valve; operative connections between said circuit breaker and said bolt whereby said cam engages its coöperating shoulder when said breaker and valve are in operative positions; and means for locking said bolt against reciprocation, substantially as described.

10. A device of the class described comprising a casing; a locking lug arranged at one end of said casing; a removable closure for said casing; a locking lug on said closure arranged to engage said lug on said casing; an operating shaft arranged at the other end of said closure; an operating crank arm pivotally connected with the outer end of said shaft; a cam on said shaft; a locking shoulder in said casing arranged to engage said cam; and engine stopping means operatively connected with said cam, substantially as described.

11. A device of the class described comprising a casing; a locking lug arranged at one end of said casing; a removable closure for said casing; a locking lug on said closure arranged to engage said lug on said casing; an operating shaft arranged at the other end of said closure; an operating crank arm pivotally connected with the outer end of said shaft; a cam on said shaft; a locking shoulder in said casing arranged to engage said cam; a reciprocating bolt in said casing and operatively connected with said cam; a circuit breaker; a fuel supply valve; operative connections between said circuit breaker and said bolt whereby said cam engages it coöperating shoulder when said breaker and valve are in operative positions; and means for locking said bolt against reciprocation, substantially as described.

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

WILLIAM F. WALKER.

Witnesses:

HELEN F. LILLIS,

MARIE CALLAGHAN.