July 3, 1923. 1,460,377

H. C. HAY

AUTOMOBILE ALARM SIGNAL

Filed Feb. 3, 1922

Fig. 8.

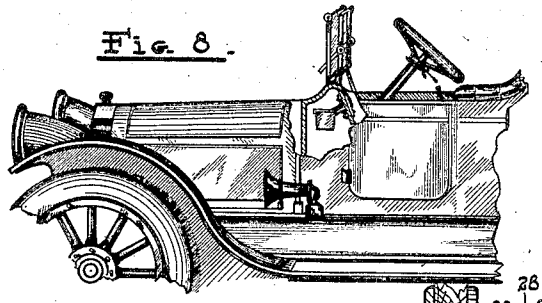


Fig. 7.

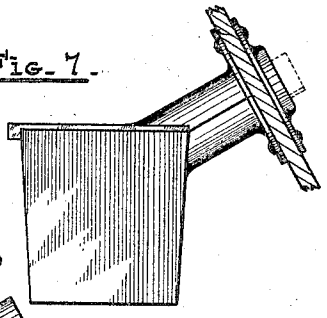


Fig. 1.

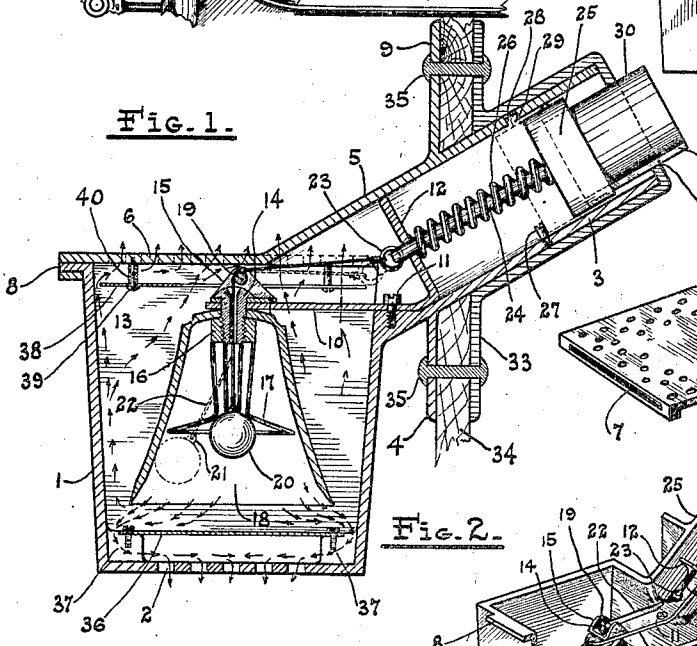


Fig. 4.

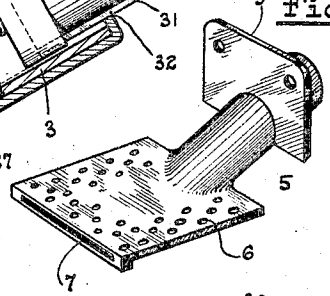


Fig. 2.

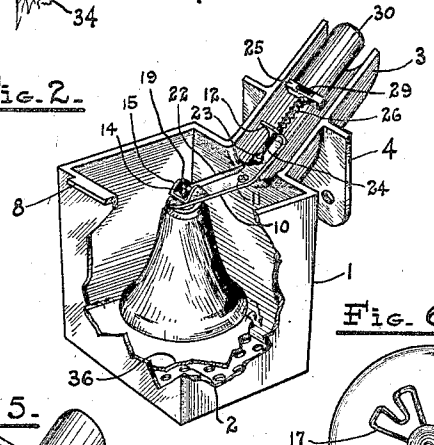


Fig. 3.

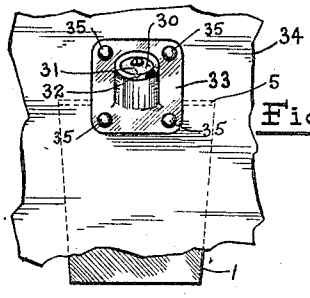


Fig. 5.

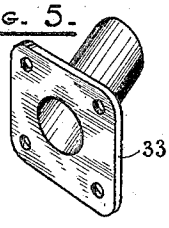
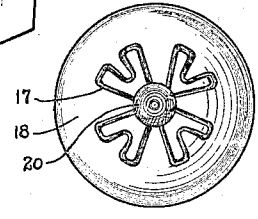


Fig. 6.



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UNITED STATES PATENT OFFICE.

HARRY C. HAY, OF NEWPORT, KENTUCKY, ASSIGNOR OF ONE-HALF TO WILLIAM C. BUTEN, OF NEWPORT, KENTUCKY.

AUTOMOBILE ALARM SYSTEM.

Application filed February 3, 1922. Serial No. 533,973.

To all whom it may concern:

Be it known that I, HARRY C. HAY, a citizen of the United States, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Automobile Alarm Signals, of which the following is a specification.

My invention relates to improved theft alarm signals for motor vehicles.

The objects of my invention are the prevention of theft and unauthorized use of automobiles by a simple, audible signal that automatically operates when the slightest vibration is imparted to the machine in any manner; to afford an alarm in a manner that will be certain to attract attention in very noisy places as on the streets of large cities; to provide this alarm so that it can be readily set by the rightful user without unnecessary inconvenience, and without danger of being tampered with.

My invention consists in an audible signal which is adapted to be locked into operative position to cause an alarm when the car on which it is mounted is moved.

My invention also consists in the combination and arrangements of parts and in the details of construction as herein set forth and claimed.

In the drawings:

Fig. 1 is a central vertical section of my invention;

Fig. 2 is a perspective view thereof with the cover plate removed and a portion of the lower part broken away;

Fig. 3 is a front view showing the device applied to the instrument board;

Fig. 4 is a perspective view of the cover plate;

Fig. 5 is a perspective view of the flanged lock securing cap;

Fig. 6 is a bottom view of the bell showing the clapper held in inoperative position;

Fig. 7 is a side elevation of a modified construction; and

Fig. 8 is a side elevation of a portion of a car partly broken away showing the modified construction in position upon the car.

In the embodiment of my invention as illustrated and which shows preferred constructions, I provide a steel bell housing 1 having sound perforations 2 in its bottom and having integrally formed thereon the lower half of the lock casing 3 which is provided with attaching flange 4. Said bell housing is provided with steel cover plate 5, (Fig. 4) having sound perforations 6 therein. Said cover plate is provided with slot 7 adapted to receive interlocking holding projection 8 integrally formed on the upper side of bell housing 1 and is provided with attaching flange 9. A bell bracket 10 (Figs. 1 and 2) is secured in fixed position by set screws 11 extending into bell housing 1. This bracket extends centrally near the top of the bell housing and has an upwardly extending spring seat and guide 12 disposed transversely of the lock casing. The bell is mounted upon the inner free end of bracket 10 which is provided with hole 13 to receive hollow machine screw 14 which passes through clapper cord bracket 15, thence through said hole 13 and into nut 16 by which the parts are firmly held together. A spring clapper holder 17 is secured to said nut and projects downwardly therefrom within the tube 18 of the bell. The clapper cord bracket 15 (Figs. 1 and 2) is of U shaped construction and has a pivotally mounted cord roller 19 in its upper part. The bell clapper 20 is provided with a projecting eye 21 to which cord 22 is attached and passes upwardly through hollow machine screw 14 over roller 19 and is attached to ring 23 in the end of spring support 24 attached to the rear of slidable lock 25. A coil spring 26 is mounted on said support between said lock and said spring seat and guide 12. The slidable lock 25 is mounted in the upper end of lock casing 3 and its inward movement is limited by set screw 27. The cover plate is provided with recess 28 to receive lock bolt 29 when the device is secured in bell ringing or warning position. The shank 30 of the lock tumbler casing is cylindrical and has a longitudinal rib 31 on one side which fits into slot 32 of flange cap 33 to prevent it from turning. Flange cap 33 fits over the lock casing and against the instrument board 34 of an automobile to which the device is permanently secured by rivets 35, as clearly shown in Fig. 1, thus preventing removal of the device and preventing tampering therewith.

In order to still further prevent access to

the interior of the device, I provide a guard plate 36 mounted upon bosses 37 in the corners of bell housing 1, said plate being spaced apart from the walls of said bell housing to permit the sound from the bell to pass outwardly through sound perforations 2 as indicated by the arrows. A similar guard plate 38 is mounted upon the lower side of the cover plate upon screws 39 and spaced apart from said plate by sleeves 40 on said screws. Said plate is also spaced apart from the walls of the bell housing 1 to permit the sound from the bell to pass outwardly through sound perforations 6, as indicated by the arrows. This plate 38 likewise prevents tampering with the interior construction.

The bell clapper holder 17 is of spring construction in order that the bell clapper may be drawn securely into non-noise making position when the machine is in ordinary use and it is not desired to sound the alarm.

When the lock is pushed in to release the bell clapper there are no projecting parts which can readily be tampered with to permit access to the interior.

My attachment is adapted to be applied to all types of cars but in some instances slight modifications in the construction of the attaching flanges are necessary in order to adapt them to the varying shapes or positions of the instrument board. This is illustrated by the modified construction shown in Figs. 7 and 8, in which the instrument board is disposed at an angle to the vertical position shown in Fig. 1.

It will be observed that this attachment is entirely independent of the steering post or other operative mechanism of the car and that when the device is locked in sound operating position an alarm will be sounded on the slightest movement of the car whether it is attempted to convey it by its own power or whether it is towed away or mounted upon a truck or other conveyance, any slight vibration either of the car itself or of the conveyance upon which it is mounted, being sufficient to operate the clapper and thus sound the alarm.

It will also be noted that the bell is enclosed in a steel casing preventing access to the interior by all ordinary means and thus insuring the safety of the car from theft or other unauthorized use.

The operation of the device is very simple. When the car is in ordinary use the lock will be in the position shown in Fig. 1 in which the bell clapper is held in inoperative position. When it is desired to secure the alarm in operative position, the operator will simply push the lock inwardly against set screw 27 when the lock bolt 29 will automatically engage recess 28 in the position shown by dotted lines and thus securely lock the device in alarm sounding position. When it is desired to again secure the device in non-alarm sounding position, insert the key into the lock and release bolt 29 whereupon the lock will again automatically slide into the position shown in Fig. 1.

Thus it is seen that the device is very convenient as it can be instantly locked by merely pushing the lock inwardly as indicated by the dotted lines, and can be quickly unlocked by merely inserting and turning the key, spring 26 automatically returning the lock 25 to non-alarm sounding position.

What I claim as new and desire to secure by Letters Patent is:

1. In an automobile alarm signal, an enclosed bell housing, a bell bracket therein, a bell fixed on said bracket, an adjustably mounted swinging bell clapper therein, a lock casing, a lock slidably mounted therein and a connection between said lock and said clapper whereby the latter is held in operative position when the device is unlocked, and in inoperative position when the device is locked.

2. In an automobile alarm signal, a bell housing having perforations therein, a guard plate secured therein in spaced apart relation from the walls of said bell housing, a cover plate having sound perforations therein and a guard plate secured to said cover plate in spaced apart relation therefrom and from the walls of said housing, a bell within said housing, a lock casing having a recess therein, a slidable lock mounted therein and means connected to said lock and to said bell respectively, whereby said bell is held in non-alarm sounding position when the lock bolt is disengaged and in sound alarm position when the bolt is in locked engagement with said recess.

3. In an automobile alarm signal, a two part bell housing having an integrally formed lock casing, a bell suitably mounted in said housing, a slidable lock in said casing, a connection between said bell and said lock whereby the bell is adapted to be held either in operative or inoperative position, an interlocking flange cap fitting over said casing, and means for permanently securing said device to an automobile.

4. In an automobile alarm signal, a bell housing having an integrally formed lock casing thereon, a bell bracket mounted in said housing and having a hole in one end thereof, a cord roller bracket having a hole therein and mounted on said bell bracket, a hollow machine screw extending through said brackets, a bell tube mounted on said screw, a nut on said screw within said bell tube, a clapper holder attached to said nut, a slidable lock in said casing, a spring support attached to said lock, a spring on said support, a seat for said spring and a guide for said support, and a flexible connection between said support and said bell clapper.

5. In an automobile alarm signal, a two part bell housing having a lock casing provided with integrally formed attaching flanges, a bell in said casing, a slidable lock mounted in said casing adapted to hold said bell in either operative or inoperative position, a flanged cap mounted on said lock casing, and means for permanently fastening said casing and cap upon an automobile instrument board.

6. In an automobile alarm signal, a bell housing having sound perforations therethrough, a holding projection upon its upper edge, a cover plate having a slot therein to receive said holding projection and interlock therewith, a lock casing formed integrally with said bell housing and cover plate, a slidable lock in said casing, a bell in said housing and means connecting said bell and said lock, a flanged cap adapted to fit over said lock casing, and means whereby the flanges on said casing and said cap are permanently secured in fixed relation to each other upon an automobile instrument board.

7. In an automobile alarm signal, a bell housing provided with a perforated cover plate having a slotted inturned flange and an integrally formed portion of a lock casing extending at an angle therefrom, and an attaching flange integrally formed upon said casing, substantially as set forth and for the purposes specified.

8. In an automobile alarm signal, a bell housing having a holding projection thereon and having the lower part of a cylindrical lock casing integrally formed thereon, and projecting at an angle therefrom, an attaching flange integrally formed on said lock casing, a cover plate engaging said holding projection and having an attaching flange, a lock in said lock casing and an alarm operatively connected to said lock casing, substantially as set forth and for the purposes specified.

9. In an automobile alarm signal, a two part housing having an integrally formed lock casing, a bell in said housing a lock slidably mounted in said casing, a connection between said bell and said lock, and a cap adapted to fit over said casing and having an outwardly extending attaching flange thereon, and an inwardly extending lock holding flange.

10. In an automobile alarm signal, a two part housing having an integrally formed lock casing, a bell in said housing, a lock in said casing, cooperative means between said lock and bell, a longitudinal rib on said lock, a cap adapted to fit over said lock casing, and having a flange provided with a slot adapted to receive said rib to hold said lock from turning.

11. In an automobile alarm signal, a lock casing, a lock in said casing, a supporting spring for said lock, a bell housing, a cover secured in fixed relation thereto, a bell bracket secured to said housing and having one end extending inwardly from its support in the upper part of said housing, a bell and means for attaching said bell to said bracket, a spring seat integrally formed with said bell bracket and extending transversely of said lock casing to form a bearing for said supporting spring, a lock in said casing, a connection between said lock and said bell, substantially as set forth and for the purposes specified.

12. In an automobile alarm signal, having a housing and lock casing, a bell bracket secured in the housing, a cord roller and bracket therefor, a bell tube, a hollow machine screw extending through said brackets and bell tube, a nut on said machine screw whereby said parts are secured together, a spring bell clapper holder mounted on said nut, a bell clapper, a flexible connection attached to said bell clapper and extending through said hollow machine screw and over said roller, a lock, a support attached to said lock, a seat, a coil spring on said support exerting pressure against said lock at one end and the seat at the other end, and means for connecting said support to said flexible connection whereby said clapper is adapted to be held in operative or inoperative position, as desired, substantially as set forth and for the purposes specified.

13. In a device of the character described, a bell having an opening therethrough, a hollow screw suitably mounted and extending though said opening, a nut in said bell mounted on said screw and having downwardly extending spring holders with outwardly and downwardly projecting ends, a clapper adapted to be held by said holders, and means for releasing said clapper, substantially as set forth and for the purposes specified.

14. In an automobile alarm signal, a steel bell housing having an integrally formed steel lock casing provided with an attaching flange integrally formed thereon, a lock in said casing, a bell in said housing and cooperative means between said bell and said lock, a flanged cap mounted on said casing, and rivets extending through said flanges and the instrument board of an automobile whereby said device is permanently attached thereto.

15. In an automobile alarm signal, a steel bell housing having an integrally formed steel lock casing, a steel cover therefor, means for interlocking one end of said cover plate to said housing, attaching flanges on said casing and cover, a flanged cap adapted to fit over said casing and means for permanently securing all of said flanges in fixed relation to each other upon an automobile instrument board, a bell in said housing, a lock in said casing and cooperative

means between said bell and housing, substantially as set forth and for the purposes specified.

16. In an automobile alarm signal, a bell housing, a bell therein, having a clapper, a lock casing, a slidable lock therein, a flexible connection between said lock and the clapper of said bell and a spring in engagement with said lock adapted to automatically return said lock to unlocked position whereby the bell clapper is securely held in non-alarm sounding position.

HARRY C. HAY.