H. H. CHRISMAN & F. W. ADSIT.

HOOD LOCKING DEVICE FOR AUTOMOBILES.

APPLICATION FILED APR. 7, 1917.

1,283,669. Patented Nov. 5, 1918.

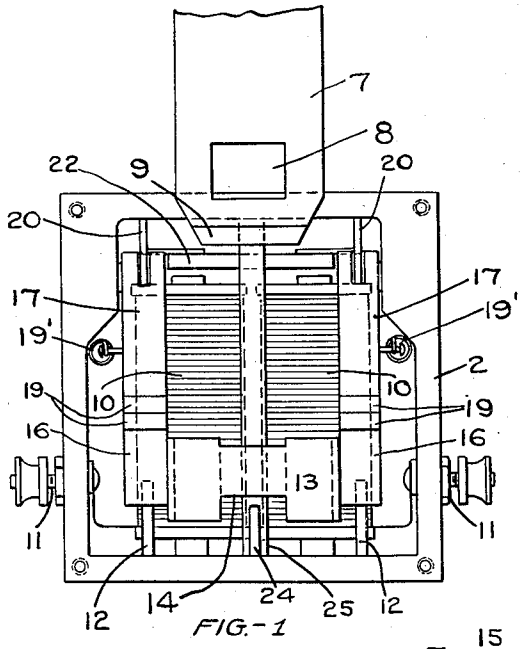


FIG.-1

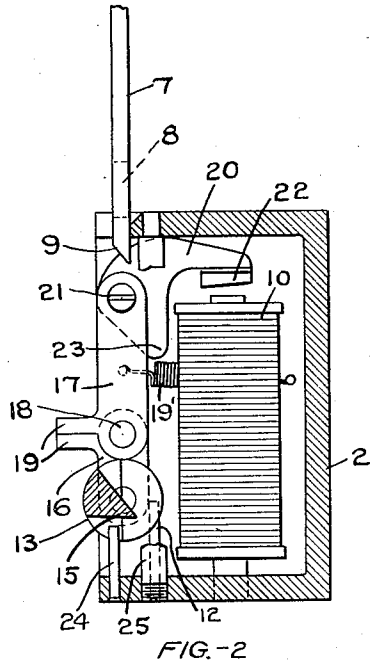


FIG.-2

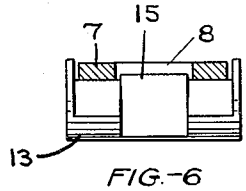


FIG.-6

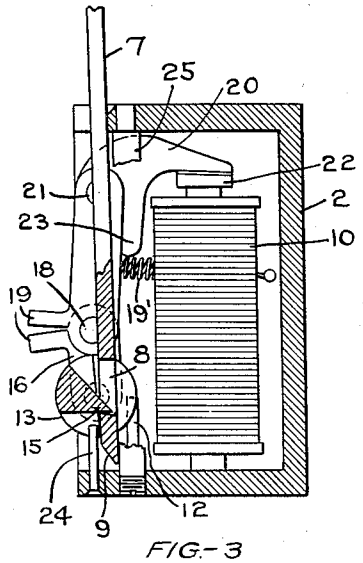


FIG.-3

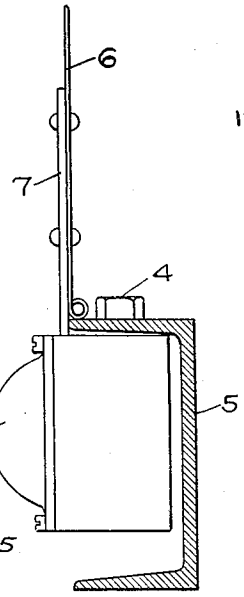


FIG-5

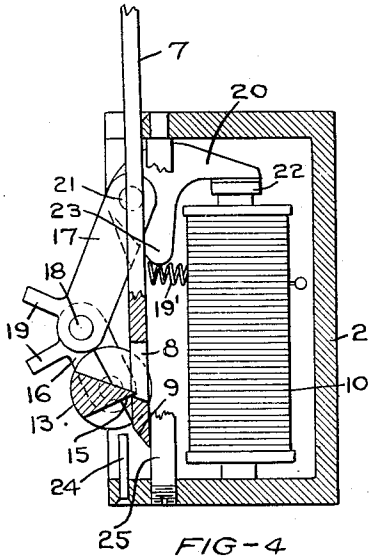


FIG-4

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UNITED STATES PATENT OFFICE.

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HOOD-LOCKING DEVICE FOR AUTOMOBILES.

1,283,669. Specification of Letters Patent. Patented Nov. 5, 1918.

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To all whom it may concern:

Be it known that we, HERBERT H. CHRISMAN and FRANK W. ADSIT, citizens of the United States, residents of Minneapolis, county of Hennepin, State of Minnesota, have invented certain new and useful Improvements in Hood-Locking Devices for Automobiles, of which the following is a specification.

The object of our invention is to provide a means for locking the engine hood of an automobile or other power propelled vehicle for the purpose of preventing any unauthorized person from obtaining access to the engine.

A further object is to provide a locking device that is controlled by a combination lock near the driver's seat, but as this forms the subject matter of a companion application we have not thought it necessary to illustrate or describe the combination or its connection with the hood lock.

The invention consists generally in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification,

Figure 1 is a view of the hood locking device with the cover plate removed,

Fig. 2 is a vertical sectional view of the same,

Fig. 3 is a sectional view, showing the parts in their unlocked position,

Fig. 4 illustrates the mechanism with the tongue that is secured to the hood in its further released position,

Fig. 5 illustrates the preferred manner of mounting the device on the frame of a car,

Fig. 6 is a detail sectional view, showing the catch for the locking latch.

In the drawing, 2 represents a suitable case or box, in which the locking mechanism is mounted. This is provided with a cover plate 3 and is secured by suitable means, such as a bolt 4, to the channel bar side rail 5 of the car. 6 represents a portion of the engine hood, which when closed is seated on the upper flange of the channel bar. To this hood we secure a tongue plate 7 having a recess or opening 8 in its lower end and the extremity of this tongue has preferably a beveled surface 9. Within the casing we provide a pair of magnets 10 having terminals 11 for conductors leading to a source of electrical energy by means of which the magnets become energized when the circuit is closed through them.

In the lower part of the casing we provide upright pins 12 forming guides for brackets 16 which are vertically slidable on said pins. The middle portion of the hub 13 is cut away at 14 to form a catch 15 and said hub is provided at each end with upwardly projecting brackets 16 whereon arms 17 are pivoted at 18 and form therewith a knee-joint, being prevented from swinging inwardly by lugs 19 mounted respectively on said bracket and said arms and engaging each other to hold the arms and brackets against inward movement on their pivots. These brackets and arms are held against outward movement by extension springs 19' provided on each side thereof.

At the upper end of the arm 17 we provide a carrier 20 pivoted at 21 on said arms and supporting the armature 22 for the magnets 10. The carrier 20 has depending portions 23 below the pivots 21 for engaging the arms 17 and swinging them outwardly to break the joint between the brackets and arms when the armature is attracted by the energizing of the magnets, as shown in Fig. 3. A guide pin 24 is provided in the bottom of the casing for the lower end of the tongue when it is in its locking position and a rod 25 is mounted on the opposite side of the tongue for directing its movement to a position where it will be engaged by the locking latch.

In operating the device, the tongue 7 is thrust down into the casing when the hood is closed, its beveled end guiding it past the locking latch until the recess 8 is in position to receive said latch, and thereupon the tongue will be locked securely and the hood cannot be raised. When the circuit is closed through the magnets, the armature 22 will be attracted and the joint formed between the brackets 16 and the arms 17 will be broken and the parts swung to the position indicated in Fig. 3, the pivot pins 18 being then sufficiently opposite the plane of the tongue to allow the upward pull on the tongue to rock the latch-supporting hub and permit the tongue to be discharged therefrom, as shown in Fig. 4. Thereupon the hood may be raised and the engine exposed.

We claim as our invention:

1. An engine hood locking device comprising a casing having means for mounting it on the side rail of a car, electro-magnets within said casing, an armature therefor, brackets pivoted in said casing and having a catch thereon, arms pivotally connected with said brackets and said armature and forming therewith a toggle, a hood for said engine having a tongue formed thereon adapted to enter said casing when the hood is closed, said tongue having means for engagement with said catch for locking it within said casing when said toggle is straightened, closing of the circuit through said magnets and the attraction of said armature breaking said toggle to release said tongue.

2. The combination, with a power propelled vehicle frame, of a locking device mounted thereon and including electro-magnets having an electric circuit and armature, a toggle catch mechanism connected with said armature, an engine hood having a tongue for entering said locking device and engaging said catch mechanism, the straightening of the toggle locking said tongue and the movement of said armature breaking the toggle and tripping said catch mechanism to allow said tongue to be withdrawn when the circuit is closed through said magnets.

3. An engine hood locking device comprising a casing having means for mounting it on the side rail of a car, electro-magnets within said casing, an armature therefor, members mounted to rock within said casing and having a catch formed between them, guides for said members, arms pivotally connected with said members, a carrier pivoted on said arms and whereon said armature is mounted, said carrier having means for engaging said arms to break the joint between them and said members when said armature is energized, a spring for normally holding said arms and members in their locking position, and means mounted on said hood to engage said catch.

In witness whereof, we have hereunto set our hands this 28th day of March, 1917.

HERBERT H. CHRISMAN.
FRANK W. ADSIT.