Feb. 18, 1936. W. W. BRAREN 2,031,523

AUTOMOBILE LOCK

Filed May 2, 1935 2 Sheets-Sheet 1

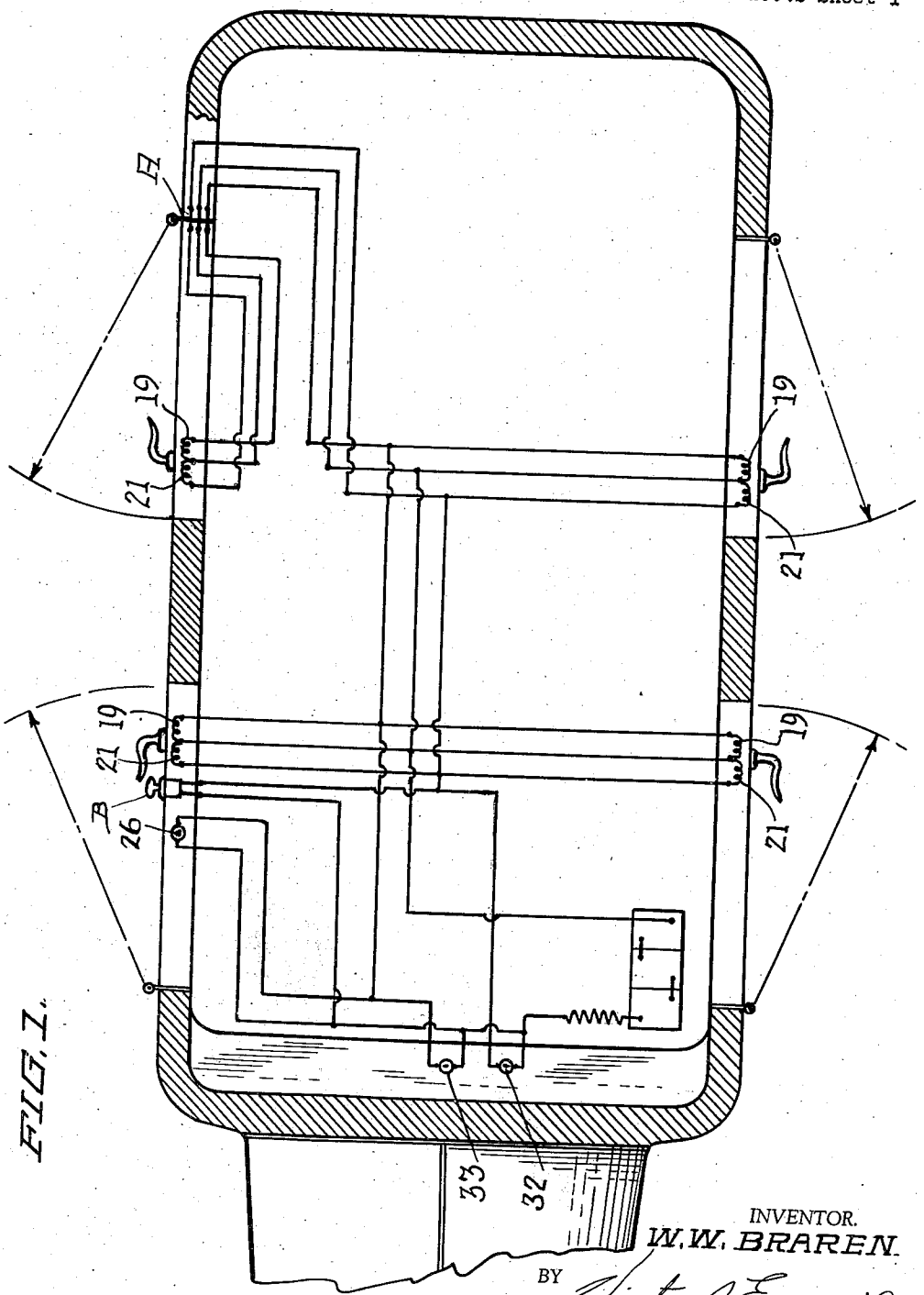



FIG. 1.

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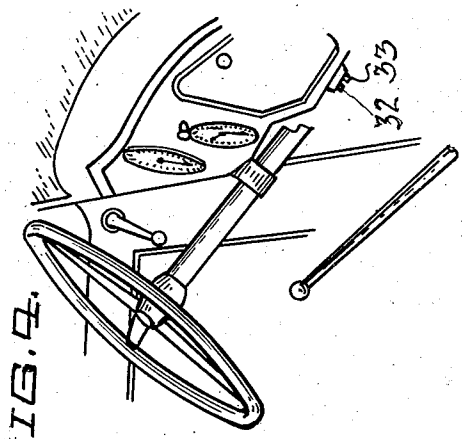



FIG. 4.

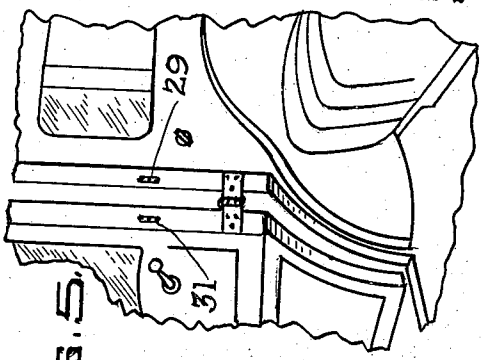



FIG. 5.

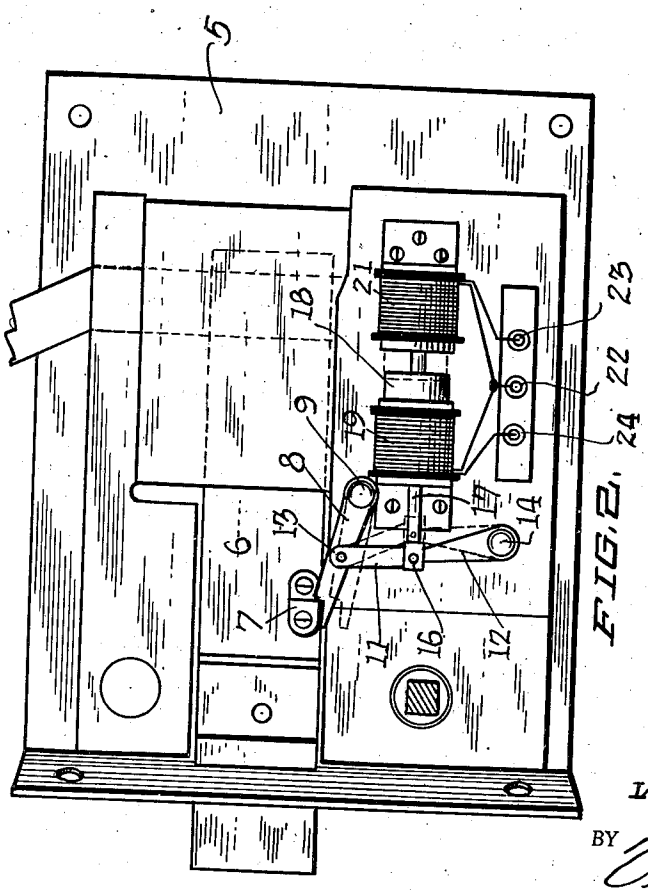



FIG. 2.

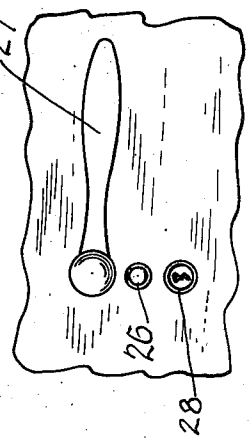



FIG. 3.

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Patented Feb. 18, 1936

2,031,523

# UNITED STATES PATENT OFFICE

2,031,523

## AUTOMOBILE LOCK

Waldo W. Braren, Pasadena, Calif.

Application May 2, 1935, Serial No. 19,488

2 Claims. (Cl. 70—50)

This invention relates to improvements in locks and has particular reference to a lock for use with a motor vehicle.

The principal object of the invention is to produce a lock whereby all of the doors of the vehicle may be locked or unlocked simultaneously from a point within or without the vehicle.

A further object is to provide means whereby the device may be attached to any standard motor vehicle without materially altering its construction, either as to locks or interior arrangement.

A still further object is to produce a device which is economical to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Fig. 1 is a schematic wiring diagram of my device as the same would be applied to a motor vehicle, an outline of the body of the vehicle being shown in cross section,

Fig. 2 is a side elevation of a door lock common to motor vehicles and having my invention applied thereto,

Fig. 3 is a fragmentary detail view showing the door actuating mechanism from the outside of the vehicle,

Fig. 4 is a fragmentary perspective view showing the positioning of locking and unlocking buttons within the driving compartment of the vehicle, and

Fig. 5 is a fragmentary perspective view showing the door contacts.

Referring now to Fig. 2, it will be noted that the numeral 5 designates the lock plate having a sliding bolt 6, which is actuated in the usual manner. To this bolt I attach a stop 7 which is adapted to be engaged by a notched dog 8 pivoted as at 9 and actuated by toggle links 11, one of the links being pivoted at 13 to the dog 8 the other link being pivoted as at 14 to the plate 5. These links are in turn pivoted as at 16 to a pull rod 17, which carries an armature 18 positioned between electro-magnets 19 and 21. These electromagnets have one end connected to a common binding post 22 and have their opposite ends to binding posts 23 and 24. Such a structure is positioned in each of the locks on the vehicle door. A push button 26 is mounted upon the outside of one of the front doors adjacent the handle 27. The customary key hole is shown at 28. In order to carry the wires to the binding posts 22, 23 and 24 I mount in the sides of the doors, contact plates 29 and 31. The construction of these contact plates is obvious and merely consists of abutting terminals which engage when the door is closed. In Fig. 4 I have shown buttons 32 and 33, the button 32 serving to unlock all of the doors and the button 33 serving to lock all of the doors.

Referring now to Fig. 1, it will be noted that I have only shown one set of door contacts, which are located at the point A. It is obvious that similar contacts are located at each of the doors. The coils of the electromagnets 19 and 21 in this figure have been given the same numbers in order to avoid confusion. The electric connection to these coils is clearly shown and it is believed that it will be unnecessary to trace the circuits. The button 26, as well as the button 33, completes the circuits to the coils 19, while the key B inserted in the key hole 28, as well as the button 33 serves to complete circuits to the coils 21 for the purpose of unlocking the doors.

The actuation of the lock is best shown in Fig. 2 wherein the full line positions show that the coil 19 has been energized and the armature 18 moved thereagainst. This causes the toggles 11 and 12 to pass beyond dead center, thus elevating the dog into alignment with the stop 7. When the coil 21 is energized the armature 18 moves thereagainst pulling the toggle links 11 and 12 to the dotted line position, thus dropping the dog 8 away from the stop 7. It will thus be apparent that if a person is sitting in the car and feels that he is to be bothered by an outsider, by pushing the button 33 all the doors will be immediately locked and cannot be unlocked unless by actuation of the button 32 or B. When the person leaves the car it is only necessary that the person press the button 26 and all the doors will be locked.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that various changes relative to the material, size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention or scope of the subjoined claims.

Having thus described my invention, I claim:—

1. An automobile door lock having a sliding bolt, a stop secured thereto, a pivoted detent positioned adjacent said bolt and capable of being moved into alignment with said stop, a toggle link connected to said detent, a pair of spaced electro-magnets mounted adjacent said detent, an armature capable of being alternately attracted by said electro-magnets, and means connecting

said armature with said link, whereby said detent will be moved simultaneously with the movement of said armature.

2. In an automobile door lock a sliding bolt secured thereto a stop formed on said bolt, a detent capable of being moved into alignment with said stop, a toggle link connected to said detent and to the casing of said lock, a pair of spaced magnets mounted in said lock, an armature positioned therebetween, and a pull rod secured to said armature and to said toggle link whereby when said armature is moved in one direction said detent will be in alignment with said stop and when said armature is moved in the opposite direction said detent will be moved out of alignment with said stop.

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