E. COOPER.

MEANS FOR LOCKING ELECTRIC SWITCHES ON AUTOMOBILES.

APPLICATION FILED FEB. 6, 1920.

1,348,090.

Patented July 27, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

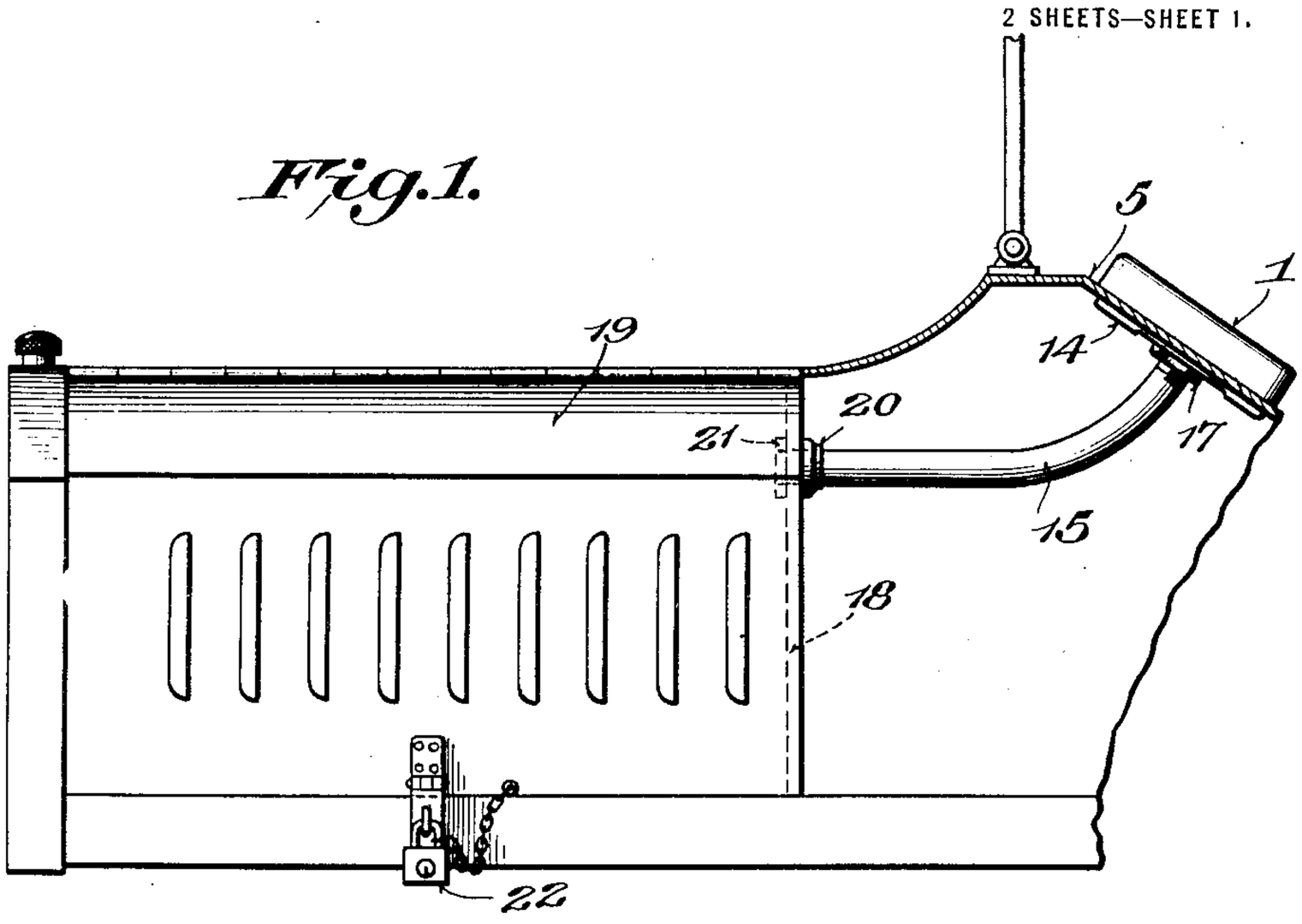


Fig. 2.

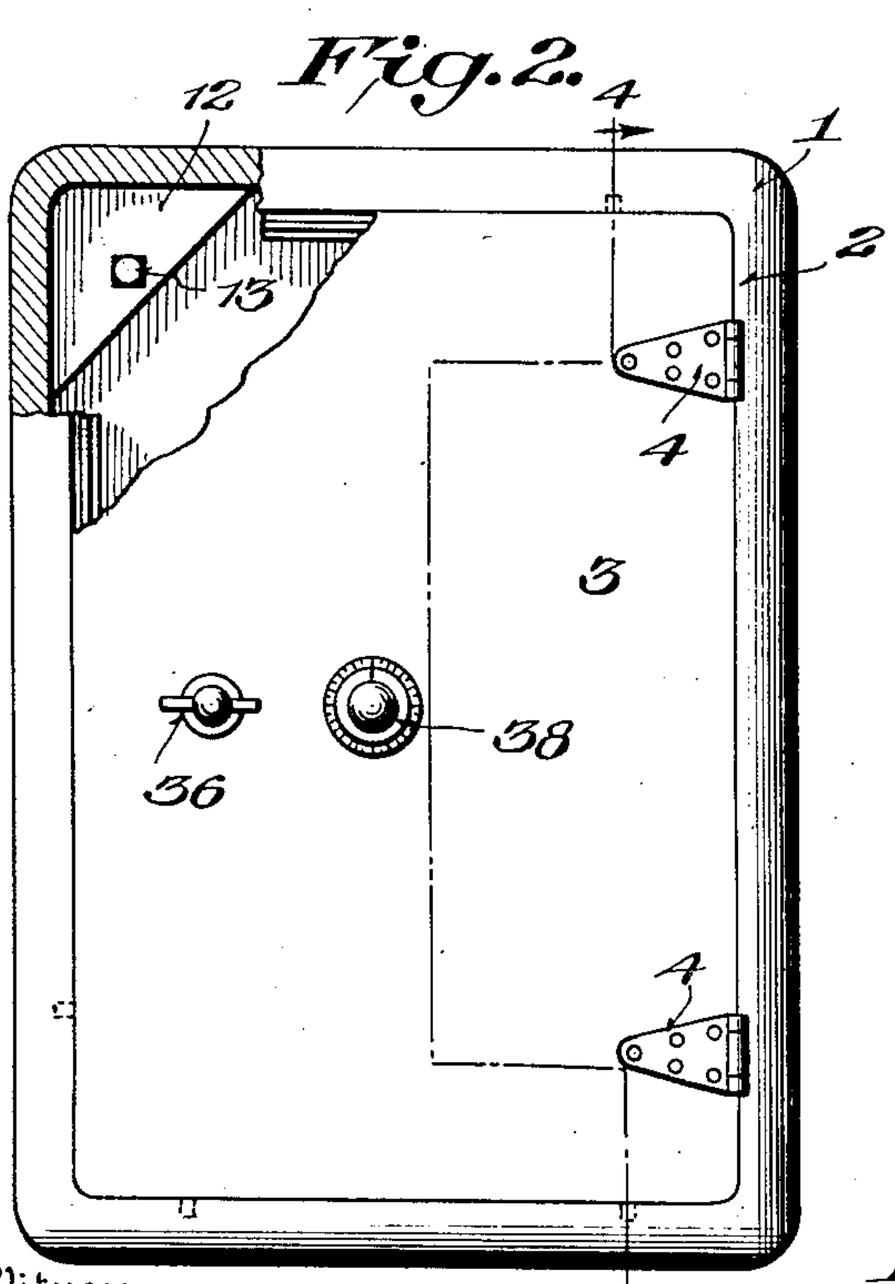
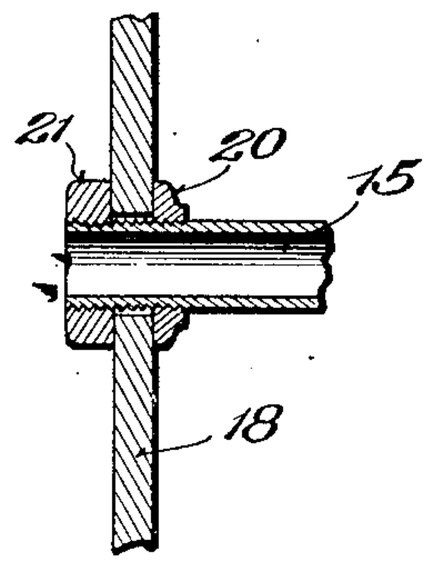


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

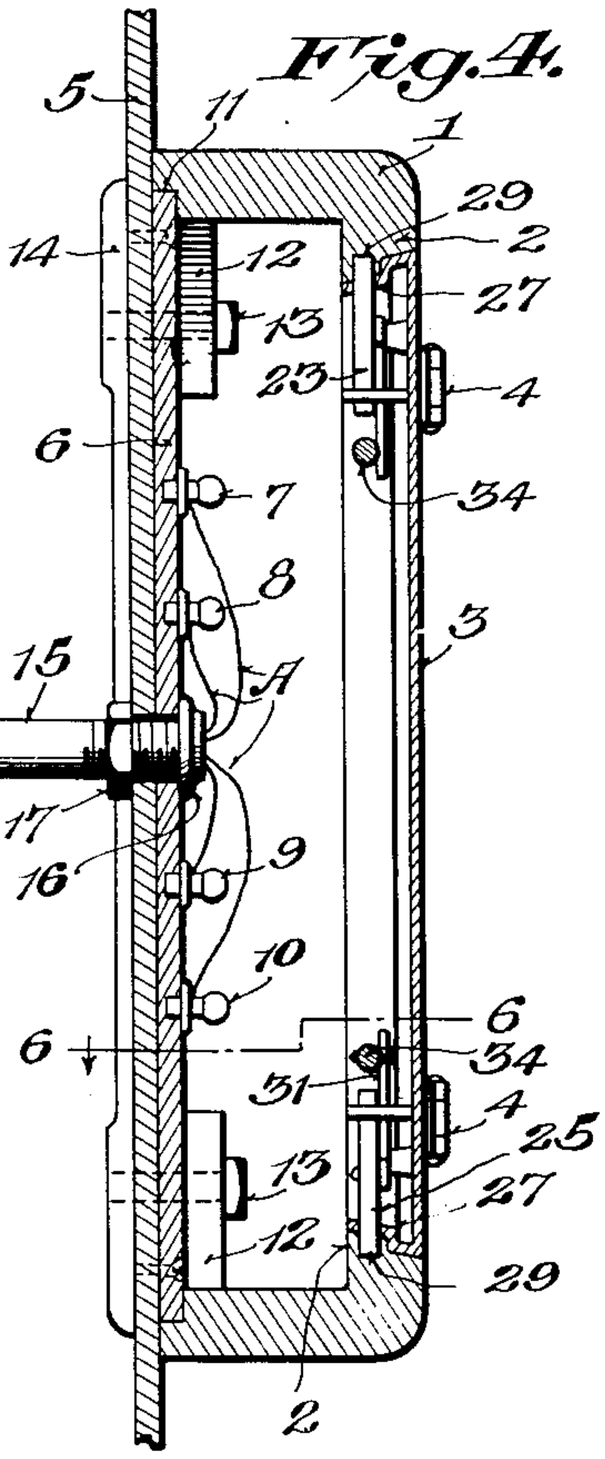


Fig. 5.

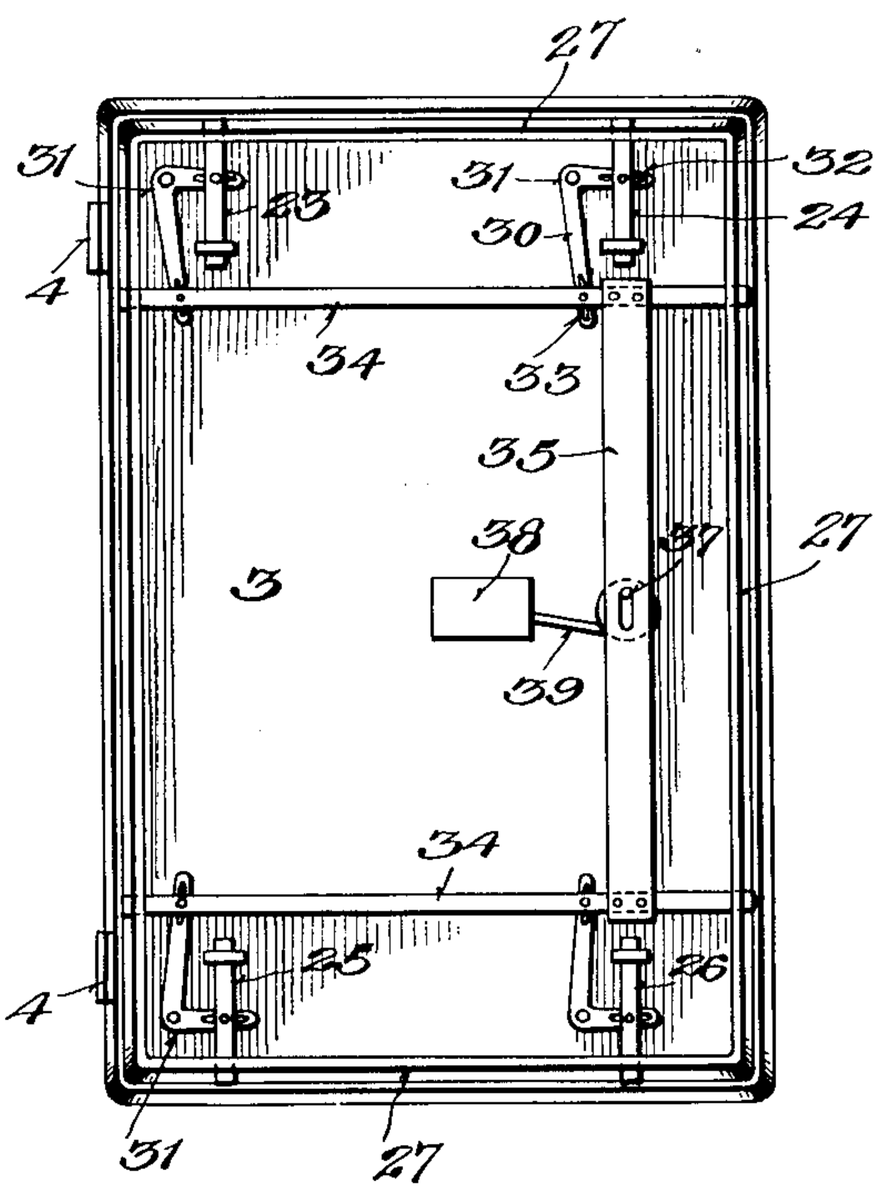
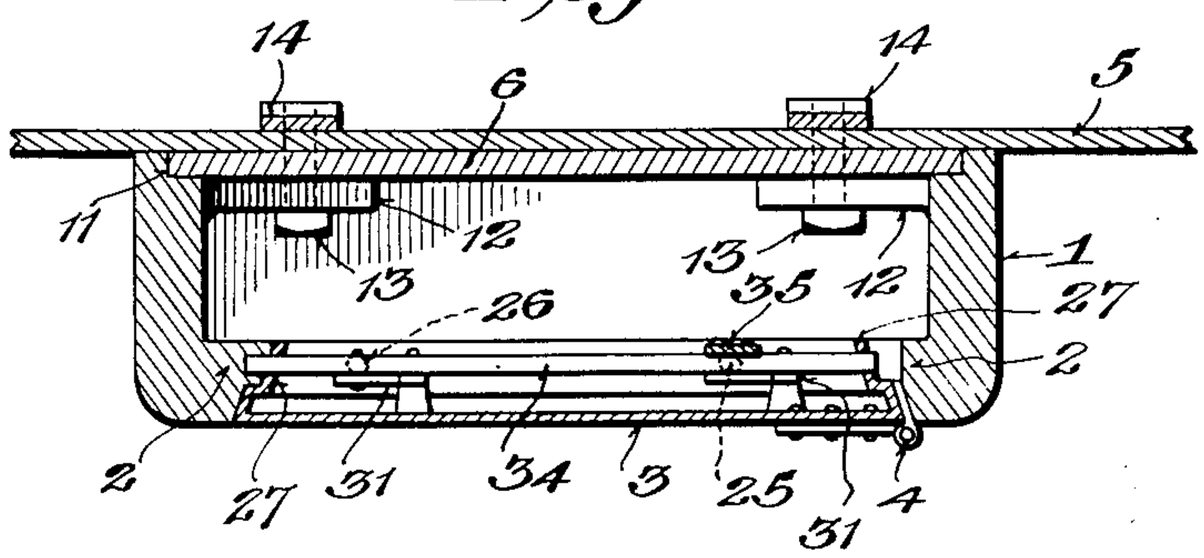


Fig. 6.



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UNITED STATES PATENT OFFICE.

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MEANS FOR LOCKING ELECTRIC SWITCHES ON AUTOMOBILES.

1,348,090. Specification of Letters Patent. Patented July 27, 1920.

Application filed February 6, 1920. Serial No. 356,600.

To all whom it may concern:

Be it known that I, EDWARD COOPER, a citizen of the United States, residing at Cheyenne, in the county of Laramie and State of Wyoming, have invented new and useful Improvements in Means for Locking Electric Switches on Automobiles, of which the following is a specification.

This invention relates to means for preventing unauthorized access to electric switches on automobiles, such as the self-starter switch, the ignition switch and the lighting switch, and it is an important object of the invention to provide for conveniently applying the device to the dash or instrument board of an automobile in such a manner as to house, conceal and prevent access to the switches, and likewise to house and protect the electric conductors leading from the switches to the various electric devices.

The present invention is embodied in the form of a housing or casing which is open at its back so as to receive and embrace the switches, and is provided with means whereby the housing or casing may be conveniently and strongly secured to the instrument board, the fastening devices being inaccessible when the door at the front of the housing or casing is locked in its closed position.

With these and other objects in view, the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and particularly pointed out in the appended claims, it of course being understood that changes in the form, proportion, size and minor details may be made, within the scope of the claims, without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings,

Figure 1 is a side elevation of the engine hood portion of an automobile, the dash being in section and the present invention being shown in elevation.

Fig. 2 is a front elevation of the casing or housing of the present invention, parts being broken away to illustrate the manner of fastening the housing to the dash.

Fig. 3 is an enlarged detail sectional view illustrating the manner of securing one end of the pipe or conduit which incloses the electric conductors.

Fig. 4 is a sectional view on the line 4—4 of Fig. 2.

Fig. 5 is a plan view of the inner side of the door of the housing or casing.

Fig. 6 is a sectional view on the line 6—6 of Fig. 4.

The present invention includes a casing or housing 1 in the form of a substantially rectangular casting open at its front and back, and provided at its front with an interior peripheral flange 2 within which fits a swinging door 3 mounted upon suitable hinges 4. One leaf of each hinge is riveted to the door, and the other leaf is suitably secured to the inner periphery of the flange 2, as best indicated in Fig. 6. By this means the removable fastenings of the hinge are inaccessible when the door is closed.

The open back of the housing or casing is applied against the dash 5 of the automobile so as to embrace the base 6 which carries the several switches 7, 8, 9 and 10. Preferably the back of the housing is rabbeted as at 11 so as to receive the peripheral edge of the board or plate 6. Within each corner of the casing or housing there is a plate or fillet 12 provided with an opening to receive a bolt 13 which also passes through alined openings in the board or plate 6 and the dash 5. There are four such bolts, one for each corner of the casing or housing, and for each pair of upper and lower bolts there is an upright bar 14 applied against the forward side of the dash and provided with top and bottom screw threaded openings to receive the screw threaded terminals of the bolts 13. When the door 3 is open, the bolts 13 may be applied and removed, but when the door is closed, the bolts are inaccessible and cannot be removed, and as the bolts can be removed only by unscrewing them, the housing or casing cannot be removed while the door 3 is closed.

The electric conductors A, which lead from the switches 7, 8, 9 and 10 extend forwardly through a metal pipe or conduit 15, the front end of which extends through openings in the dash 5 and the plate or board 6. The front end of this pipe is threaded and receives a collar 16 constituting a head lying against the dash or the plate 6 as the case may be, and a nut 17 is fitted upon the pipe and set up tightly against the dash, whereby the latter will be gripped between the collar 16 and the nut 17 so as to rigidly hold the

pipe in place. While the nut 17 may be backed away from the dash the other nut or collar 16 is not accessible and therefore the pipe cannot be pulled away from the dash. The front end of the pipe 15 is secured to the rear end wall 18 of the engine hood 19 in the manner shown in Fig. 3 and by means of clamping nuts 20 and 21 similar to the nuts 16 and 17 already described. It will thus be understood that the pipe 15 is effectually anchored in place at opposite ends and therefore houses and protects the electric conductors against unauthorized access.

It is preferred to lock the engine hood by means of a suitable lock 22.

The manner of locking the door is best shown in Figs. 4, 5 and 6, and the locking means include upper bolts 23 and 24 and also bolts 25 and 26 which work through openings in the peripheral flange 27 of the door and enter suitable seats or recesses 29 in the casing. For the simultaneous actuation of these bolts, each bolt is associated with a bell crank 30 fulcrumed at 31 to the inner face of the door and having one arm provided with a pin and slot connection 32 with the adjacent bolt. The other arm of the bell crank is provided with a pin and slot connection 33 with an endwise movable substantially horizontal cross bar 34 rigidly carried upon the adjacent end of an upright horizontal slidable bar 35. Accessible upon the front exterior of the door is a rotatable handle 36 having a slot and crank connection 37 with the slide 35 whereby the latter may be moved in opposite directions so as to move the bolts back and forth to release and lock the door. A suitable permutation lock 38 is provided upon the door and has a bolt 39 associated with the slide 35 so as to lock the same when the bolts are in locked position and thus lock the door against unauthorized opening.

What I claim is:

1. The combination of a back wall of an engine hood, a dash, a switch mounted upon the dash, a conductor leading from the switch into the engine hood, a housing mounted upon the dash and inclosing the switch and provided with a door having a lock, and a pipe or conduit receiving the conductor and connected at opposite ends to the dash and the back wall of the engine hood.

2. The combination of a back wall of an engine hood, a dash, a switch mounted upon the dash, a conductor leading from the switch into the engine hood, a housing mounted upon the dash and inclosing the switch and provided with a door having a lock, and a pipe or conduit receiving the conductor and connected at opposite ends to the dash and the back wall of the engine hood, each end of the pipe being threaded and provided with clamping nuts embracing the dash and the back wall of the engine hood respectively.

3. The combination of a dash and an electric switch thereon, of a housing having a door at its front and open at its back and receiving the switch, said housing having internal plates engaging the dash, bars at the front of the dash, and bolts extending through the plates and the dash and having screw threaded terminals engaging screw threaded openings in the bars, and a lock for the door.

4. A device of the class described comprising a housing open at its front and back, a door hinged to the housing and fitting within the open front thereof when closed, locking bolts upon the interior of the door, bolt operating means including a handle upon the outer side of the door, a permutation lock associated with the bolt operating means, said housing having interior plates, bars for the plates, and bolts extending through the plates and provided with screw threaded terminals engaging screw threaded openings in the bars.

EDWARD COOPER.