June 23, 1925. 1,543,314

F. E. BEST

SECURING MEANS FOR LOCK HOUSINGS

Filed June 7, 1923 2 Sheets-Sheet 1

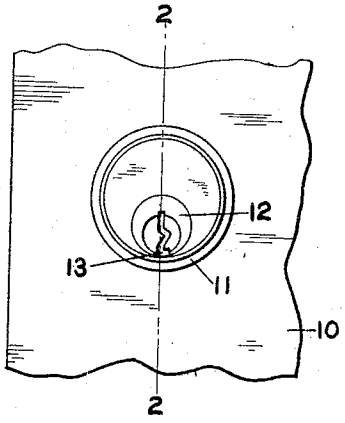


FIG. 1

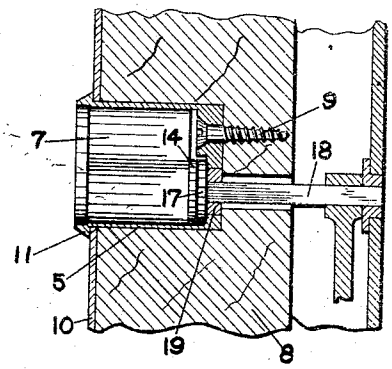


FIG. 2

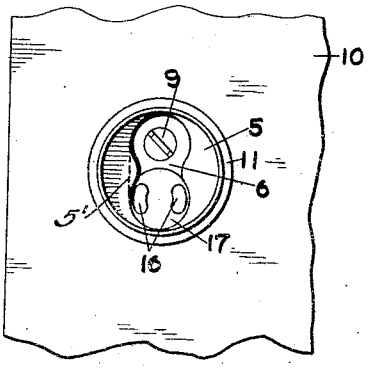


FIG. 3

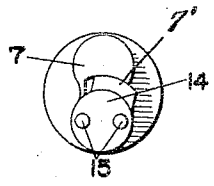


FIG. 4

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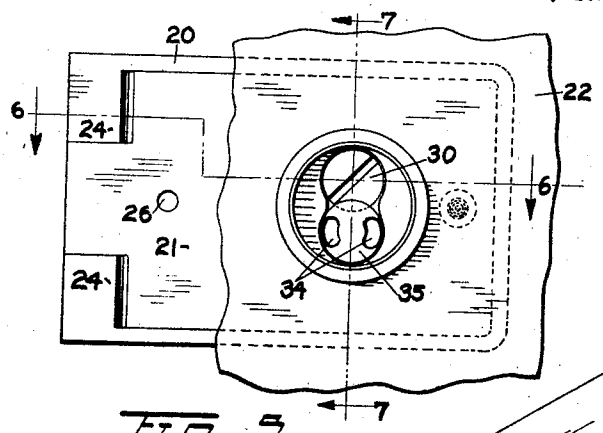


FIG. 5

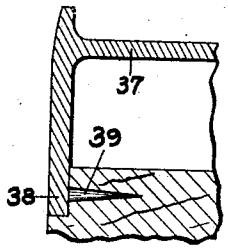


FIG. 10

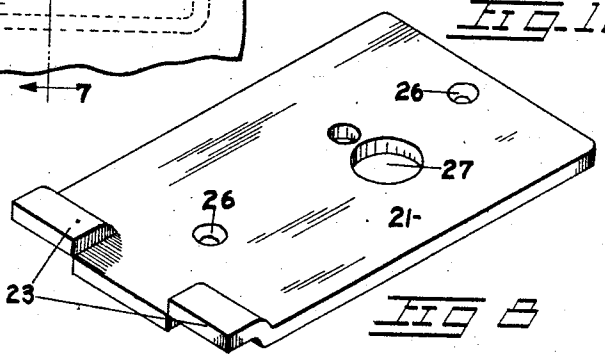


FIG 8

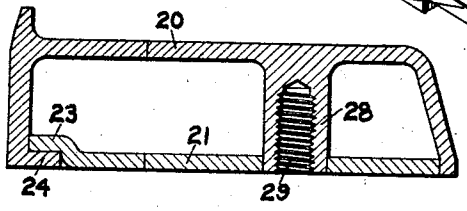


FIG 6

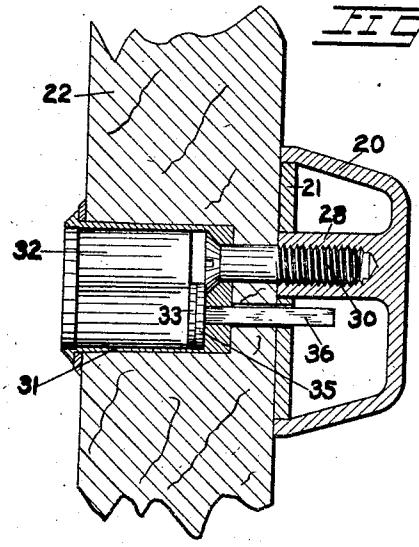


FIG 7

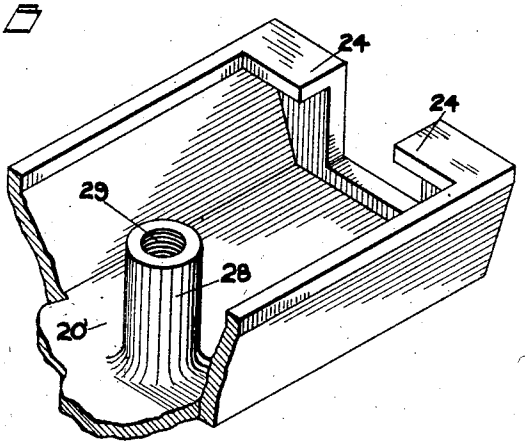


FIG 9

Frank Ellison Best
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Patented June 23, 1925. 1,543,314

UNITED STATES PATENT OFFICE.

FRANK ELLISON BEST, OF SEATTLE, WASHINGTON, ASSIGNOR TO FRANK E. BEST, INC., OF SEATTLE, WASHINGTON, A CORPORATION OF WASHINGTON.

SECURING MEANS FOR LOCK HOUSINGS.

Application filed June 7, 1923. Serial No. 643,961.

To all whom it may concern:

Be it known that I, FRANK ELLISON BEST, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a new and useful Securing Means for Lock Housings, of which the following is a specification.

My invention relates to improvements in means for securing locks and lock housings to doors or to other members on which they are installed and the object of my invention is to simplify, cheapen and increase the efficiency of devices of this nature.

Another object is to provide a lock securing means that is absolutely inaccessible to any persons except those having proper keys to the lock.

Other objects are to provide lock securing means that is especially well adapted for use in connection with locks on the doors of automobiles of the enclosed car type or for use in connection with locks of the form commonly known as night latches.

A more specific object is to provide lock securing means of this nature in which a lock housing is embedded in a member to which it is to be anchored and is secured thereto by a screw that is inserted from the inside of the lock housing, projects through the end of said housing and screws into any member to which the lock housing is to be secured, the lock housing being arranged to have a lock core removably locked therein, said removable lock core making it possible to use lock housing securing means of this nature.

Other and more specific objects will be apparent from the following description taken in connection with the accompanying drawings.

In the drawings Figure 1 is a view in end elevation of a lock constructed in accordance with this invention a fragment only of the door or member in which said lock is installed being shown:

Fig. 2 is a sectional view substantially on broken line 2—2 of Fig. 1.

Fig. 3 is a view in elevation showing the lock housing with the lock core removed.

Fig. 4, is a view in elevation of the inner end of the lock core.

Fig. 5 is a fragmentary view in elevation showing an adaptation of this lock securing means to a night latch type of lock, the inner side of the night latch being shown together with a fragment of the door and the core case of the lock with the core removed.

Fig. 6 is a sectional view taken on broken line 6—6 of Fig. 5 showing the night latch portion only of the device.

Fig. 7 is a sectional view on line 7—7 of Fig. 5.

Fig. 8 is a detached perspective of the base plate of the night latch.

Fig. 9 is a fragmentary detached perspective of the housing of the night latch.

Fig. 10 is a fragmentary sectional view illustrating a modified form of night latch housing.

Like reference numerals designate like parts throughout the several views.

Referring to Figs. 1 to 4 inclusive, the numeral 5 designates a lock housing provided with an internal recess 6 of figure 8 cross sectional shape adapted for the reception of a lock core 7 of the pin tumbler type which is arranged to be locked within the housing by a movable gate 7′, Fig. 4 which engages behind a shoulder 5′ indicated by dotted lines Fig. 3, the pin tumbler lock being of the double shear line type described in my prior Patent No. 1,384,022 issued July 5, 1921, in which one shear line of the lock performs the usual locking function while the other shear line controls the movement of the gate 7′ for unlocking and removing the core from the housing thus making it possible for a person having a proper key to remove the core and gain access to the recess 6 within the housing. The housing 5 is disposed within a suitable recess in a lock receiving member 8, which may be a door or door casing, and is secured to said member 8 by a screw 9 which projects through the bottom of the lock housing 5 and is screwed into the member 8 as shown in Fig. 2.

The provision of a removable core 7 in the lock housing makes possible the use of the screw 9 in the bottom of the lock housing which forms an exceptionally simple and efficient means for securing the lock housing to the member 8. Access to the screw 9 may be had only when the lock core 7 is removed and said lock core may be removed only by authorized persons having the proper key.

In automobile bodies of the type to which this lock is particularly adapted the member

8 is ordinarily the frame of a door and said member 8 is provided with an external covering 10 of sheet metal with which a flange 11 on the outer end of the lock housing engages.

The lock core 7 is provided with a key plug 12, arranged to be rotated by the insertion of a proper key in a key slot 13, said key plug 12 having a disc 14 secured to the inner end thereof that is provided with two outwardly protruding pins 15 arranged to project into slots 16, Fig. 3, in a disc 17 on the end of a latch operating bar 18. The latch operating bar 18, which is of standard construction, is connected with suitable latch mechanism also of standard construction, not shown.

The latch operating bar 18 may be of square or rectangular cross sectional shape, in which instance it is preferably provided with a circular collar 19 that is rotatable in a suitable opening in the end of the lock housing 5. The inner end of the lock housing 5 is internally recessed to afford working clearance for the disc 17 on the end of the operating bar 18.

The end of the lock housing 5 is preferably flat and fits squarely against the end of the recess in the member 8 in which said lock housing is inserted.

In installing this device it is only necessary to place the lock housing 5 in the recess in the member 8, insert the wood screw 9 and then insert the core 7 and lock the same in place. The latch operating bar 18 is preferably readily removable with the housing 5.

The location of the screw 9 is such as to render it inaccessible except by first removing the lock core thereby making the lock very difficult to tamper with.

In Figs. 5 to 10, I have shown this invention as applied to a night latch comprising a night latch housing 20 arranged to fit over a base plate 21 that is secured to a door 22. The forward end of the base plate 21 is provided near opposite corners with raised hook-like lugs 23 that are arranged to be engaged by inwardly extending flange portions 24 on the forward end of the lock housing 20 to secure the forward end of the lock housing to the base plate. A flat tongue portion 25 is provided on the base plate 21 between the lugs 23 to support a latch bolt, not shown. Any suitable night latch mechanism, not shown, may be used in the night latch. The base plate 21 is secured to the door 22 by screws that are inserted through holes 26 and such base plate is provided with a perforation 27 into which the end of a lug 28 that is integral with the housing 20 may protrude.

The lug 28 is provided with an internally threaded recess 29 for the reception of a screw 30 that extends through the bottom of a lock housing 31 having a removable lock core 32 provided with a rotatable disc 33 having pins, not shown, corresponding to the pins 15 shown in Fig. 4 that engage within perforations 34 in a disc 35 on the end of a rotatable latch operating bar 36, all of said parts being substantially identical with and functioning in the same manner as those shown and described in connection with Figs. 1 to 4.

In installing this device, the door 22 is recessed on one side for the reception of the core housing 31 and the base plate 21 is secured to the opposite side of said door. The night latch housing 20 is applied by inserting the flanges 24 under the lugs 23 and pressing the night latch housing rearwardly and inwardly until the edges of said housing drop over the edges of the base plate and the lug 28 enters the perforation 27. The core housing 31 and the night latch housing 20 are then both securely fastened to the door 22 by inserting the screw 30. Access to the screw 30 is prevented by insertion of the core 32 in the core housing 31. The screw 30 is relatively large and strong and forms a substantial lock securing means that is inaccessible except to persons having a proper key. When the night latch housing 20 is removed from the door it will, at the same time be removed from the plate 21 thus affording instant access to the mechanism within said night latch.

Figure 10 shows a modified form of night latch housing 37 in which the front end of the housing is extended as at 38 so as to lap over the front edge of a door and is provided with spike or barb members 39 arranged to be driven into the edge of the door to secure the front end of such night latch housing to the door. The night latch housing shown in Fig. 10 makes it possible, if desired, to dispense with the base plate, as base plate 21, which is ordinarily provided in connection with this form of night latches, the screw 30 serving to hold the rear portion of the housing 37 in the manner hereinbefore explained in connection with Figs. 5 to 9 inclusive.

The foregoing description and accompanying drawings clearly disclose what I now consider to be a preferred embodiment of my invention but it will be understood that changes in the same may be resorted to within the scope of the following claims.

I claim:

1. In a lock, a lock housing having an internal recess for the reception of locking mechanism and a screw arranged to be inserted through the bottom of said housing to secure said housing to a support the head of said screw being accessible only through said recess.

2. In a lock of the class described, a lock housing having an internal recess, a

lock core removably disposed in said recess and a screw arranged to project through the bottom of said lock housing for securing said lock housing to a support, said screw being accessible only when said lock core is removed.

3. In a lock of the class described, the combination with a lock receiving member having a cavity provided therein, of a lock housing arranged to fit within said cavity, said lock housing having a recess, a lock core arranged to be removably locked within said recess, and a screw arranged to project through the bottom of said lock housing and screw into said lock receiving member, the head of said screw being inaccessible when said lock core is inserted in said housing and being accessible when said lock core is removed from said housing.

4. In a lock of the class described the combination with a lock receiving member having a cavity provided on one side, of a latch disposed on the opposite side of said lock receiving member, a lock core housing arranged to fit within said cavity, a removable lock core in said lock core housing, and a screw arranged to project through the bottom of said lock core housing and screw into said latch to secure said lock core housing and said latch to said lock receiving member, access to said screw being prevented when said lock core is inserted in said lock core housing.

5. In a lock of the class described the combination with a door, of a lock housing on one side of said door and having a recess provided therein for the reception of locking mechanism, night latch mechanism on the other side of said door, and a screw arranged to extend through the bottom of said lock housing and to screw into said night latch mechanism to secure said lock housing and said night latch mechanism together and in assembled relation relative to the door, the head of said screw being accessible only through said recess in said lock housing.

FRANK ELLISON BEST.