Sept. 13, 1932. H. M. STIEGLITZ 1,877,612

CATCH LOCK

Filed Feb. 17, 1930

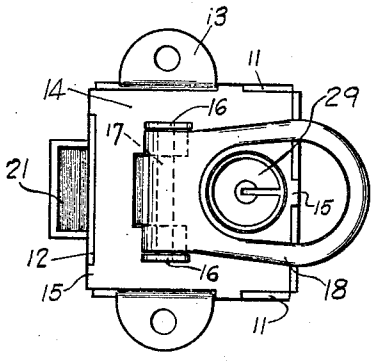


FIG. 1

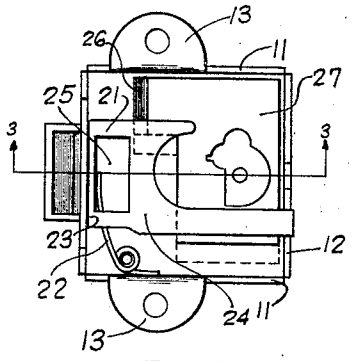


FIG. 2

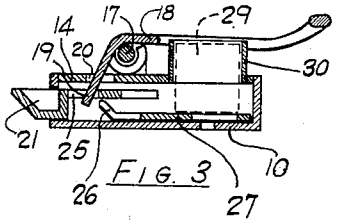


FIG. 3

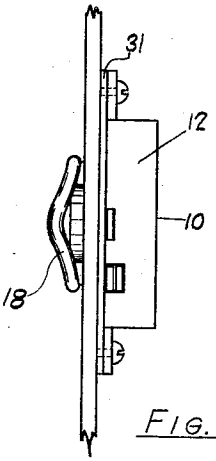


FIG. 4

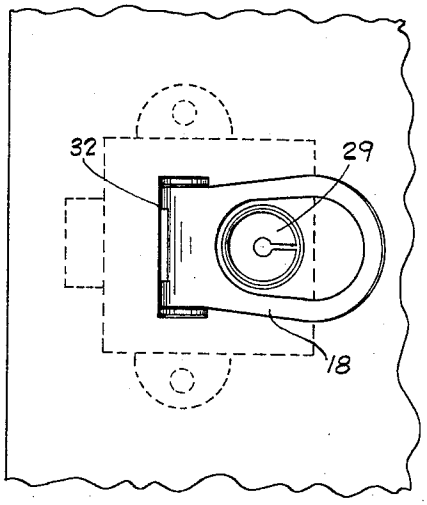


FIG. 5

INVENTOR
HENRY M. STIEGLITZ
BY
Eilers & Schaumberg
ATTORNEYS

Patented Sept. 13, 1932 1,877,612

UNITED STATES PATENT OFFICE

HENRY M. STIEGLITZ, OF ST. LOUIS, MISSOURI, ASSIGNOR TO FRANK ADAM ELECTRIC CO., OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI

CATCH LOCK

Application filed February 17, 1930. Serial No. 429,021.

This invention relates to improvements in spring or catch locks and means for mounting same on doors of cabinets and the like.

The device herein described and illustrated has been found particularly applicable for use in connection with metal cabinets, such as are employed in electrical installations, for housing panelboards and switchboards.

An object of my invention is to provide an improved lock, wherein the bolt is normally disposed in locking position, and which is adapted to yield to permit the closing and latching of the door to which it is secured, and having a locking member which cooperates with a bolt actuating lever, but is independent of the bolt itself. This construction permits of the use of my device in installations where a simple spring door latch is sufficient.

Another object of the invention is that of providing a bolt releasing member which is substantially flat and adapted to lie close to, or within a recess in, the door front. Knobs and other forms of actuating members which project from the face of the door are easily broken and rendered inoperative, a fault which the device of my invention tends to eliminate.

Another and further object of the present invention lies in the provision of improved means for mounting my device on a door, the means enabling ready removal and replacement of the lock in event of damage thereto, and further enables the application, during manufacture, of any one of several types of lock to a standard mounting plate permanently secured to the door.

A still further object is to provide means for replaceably mounting a lock on a metal door by means entirely on the rear or concealed side of the closure. It is, of course, obvious that if screws, rivets or the like project through the door, unauthorized persons may gain access to a cabinet by cutting or drifting the holding members from the front of the door. The present construction eliminates this possibility.

Further objects and advantages will appear from the following detailed description and drawing.

The device herein shown and described by way of illustration, is constructed to permit the use of a locking mechanism of the tumbler or barrel type. Since this mechanism forms no part of the present invention, its internal operation will not be explained and the description of same will be confined to the manner in which it functions to actuate certain other members of the device.

In the drawing, Fig. 1 is a plan view; Fig. 2 is a plan view, the cover plate and accompanying actuating handle having been removed to better show the operating parts of the lock; Fig. 3 is a sectional elevation, taken along the line 3—3 of Fig. 2. In this view, the position of the tumbler mechanism is indicated by dotted lines. Fig. 4 is a side elevation of my device as it would appear when secured to a mounting plate carried by a metal door front; and Fig. 5 is a plan view which shows portions of the lock ordinarily visible upon the front of a cabinet door when the lock is mounted in accordance with the preferred arrangement.

Referring now to the drawing and particularly to Figs. 1, 2 and 3, 9 indicates, generally, a metal case, having its bottom 10, sides 11 and ends 12 formed preferably of a single piece of sheet material, as is customary in locks of the type herein described. Projecting outwardly from the upper margins of the side walls, and lying in a plane parallel to the box bottom, I provide fastening lugs 13 which are apertured to accommodate screws for the purpose of fastening the lock to a door. A cover plate 14 is adapted for securement to the case by means of marginal projections 15 which engage recesses formed in the wall portions of the case. The cover plate is provided with a pair of upstanding bearings or trunnions 16 through which a pin 17 is disposed to form a pivot for a lever 18. The pin 17 is preferably upset or riveted at each end, so that the handle is inseparably or fixedly attached to the lock body or case, as well as in operative relation to the mechanism. According to the present construction, as hereinafter appears, the lock including the handle, may be attached to, or removed from the door, as an assembled unit.

The trunnions 16 serve to space the pivot 17 and hence the handle, to a certain extent from the case or body of the lock, which spacing permits the handle and case to be disposed on opposite sides of the door, and normally to lie parallel to each other and to the plane of the door, whereby to minimize space requirements of the assembly.

The member 18, in the present example, forms an actuating handle and is used in lieu of the knob or handle customarily employed. An arm 19 (Fig. 3), which forms part of the member 18, extends into the case through an opening 20 in the cover plate for engagement with the bolt 21. This bolt, of usual form, is normally disposed in an outermost position, being urged to this position by a spring 22. Shoulders 23 (see Fig. 2) formed on the internal portion 24 of the bolt, abut the case wall and limit the outward movement of the bolt. As will be best seen by reference to Fig. 3, when the bolt is locked against actuation, the arm 19 extends through and slightly beyond an opening 25 in the bolt portion 24, so that it is adapted to come into contact with an upturned lip portion 26 of a locking member 27. In unlocked position, it may be mentioned that the lip 26 is moved out of the path of movement of the lever arm 19, so that the bolt may be drawn into the case by action of the lever 18.

The member 27 is adapted for actuation by means of the tumbler locking mechanism. When the proper key is applied and turned to effect the locking of the device, the member 27 is caused to be moved into the position indicated by dotted lines in Fig. 2, which brings the lip 26 into the path of the arm 19 and prevents any actuation of the lever 18 to operate the bolt, as will be well understood by those skilled in the art.

By referring to Fig. 3, it will be observed that the opening 25 is sufficiently extended to permit endwise movement of the bolt even though the lever be held in locked position by the member 27. Thus it will be seen that my device serves as a catch lock, and a door equipped therewith, may be moved from open to closed position and thereafter remain locked until the member 27 is key-actuated. The tumbler mechanism hereinbefore mentioned is by preference provided with a customary barrel-type key socket, indicated at 29, and I provide an outwardly projecting cylinder 30 secured to the cover plate 14, for the housing thereof. The socket 29 in the present example is located directly under the actuating lever 18, which is apertured as shown in Figs. 1 and 5, to permit access to the key socket.

In the application of my lock to a metal cabinet door, I provide a mounting plate 31, which is secured to the door by any suitable means, preferably by welding it thereto. This plate is provided with threaded apertures in register with the apertures in the fastening lugs 13, as well as with apertures to accommodate the cylinder 30, handle, and hinge assembly for the handle, these members being adapted to extend through the openings in the plate 31 and through opening similarly shaped and correspondingly located in the door. This arrangement obviates the prevailing necessity of removing a handle or other lock part, before the device can be applied to or removed from a door. As will best appear from Fig. 5, in which the opening for trunnions 16 and the handle is shown at 32, this opening is of sufficient area to permit passing the handle therethrough as the assembled lock is applied to the plate 31 on the rear of the door. There is, of course, provided an opening in plate 31, the latter opening corresponding in size and location to the opening 32. These openings are of such size and so disposed that they are closed at the rear by the lock body or case.

It is understood that the above description relates to a single executional embodiment of my invention, and that certain changes may be made in the device herein shown and described without departing from the full scope and intended spirit of the invention, as defined by the appended claims.

I claim:

1. A door lock assembly including a lock body, a handle inseparably associated therewith, the lock body and handle being related for disposition in normally parallel arrangement upon opposite faces of a door, and means detachably secured between the lock body and handle, for mounting the lock assembly entirely from one face of a door.

2. A door lock and mounting therefor, including a lock body and a handle inseparably associated as a unit with the lock body, the handle and body being related for normal disposition in substantially parallel relation, on opposite sides of a door, and a plane mounting member apertured to pass the handle, and adapted for securement to a door between the lock body and handle.

3. A door lock including a housing, a spring-pressed bolt projecting from the housing, a handle having a bolt actuating portion arranged to coact with the bolt in lost motion relation, a pivot for the handle, a pair of pivot-receiving projections carried by, and disposed externally of the housing, whereby the housing and handle are spacially related for disposition on opposite sides of a door, and a locking member within the housing, arranged for movement into and out of the path of the bolt actuating portion of said handle, while beyond the path of said bolt.

4. A door lock including a lock body, a bolt extending from the body; a handle inseparably connected to the body and a key receiving element, the handle and element extending from one side of the lock body, the

handle and lock body being spacially related for disposition on opposite sides of a door, with the handle normally overlying the key element and having an aperture for access thereto.

5. The combination with a door, of a door lock including a lock body, a plate secured to the door and adapted as a mounting for the lock body, a bolt extending from the body, a handle extending through the door and mounting plate, and inseparably connected to the body, the door and plate being apertured to pass the handle, and the handle and lock body being spacially related for disposition on opposite sides of the door.

6. The combination with a metal door, of a lock including a lock body, a bolt extending from the body, a handle inseparably pivoted to the body and extending therein for actuating said bolt, a mounting plate for the lock carried entirely on, and metallically united to one surface of the door and means for securing the lock and handle, as an assembled unit to the mounting plate, with said handle and mounting plate disposed on opposite sides of the door.

7. The combination with a door, of a lock including a case, a bolt extending slidably from said case, a bolt handle inseparably pivotally connected to said case, a mounting plate metallically united to one face of said door, means for securing the case to said mounting plate, said door and plate having registering apertures adapted to permit the passage of said handle therethrough, the lock case constituting a cover for said apertures, said case and handle being spacially related for disposition on opposite sides of the door and adapted for securement to the door, as a unit, by means of said mounting plate.

HENRY M. STIEGLITZ.