May 1, 1945. W. D. ROSSITER 2,374,898

CABINET LOCKING MEANS

Filed May 3, 1944

FIG-1-

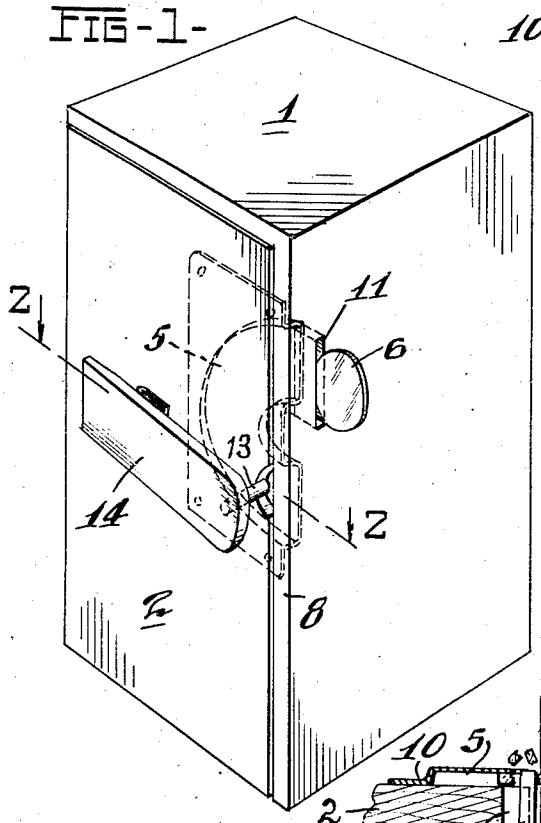


FIG-5-

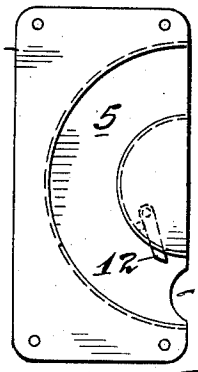
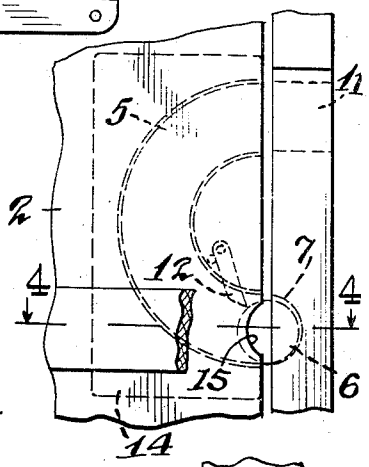


FIG-3-



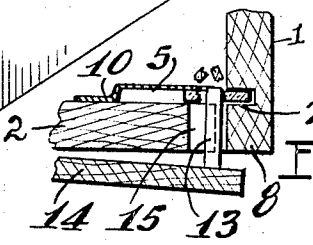


FIG-4-

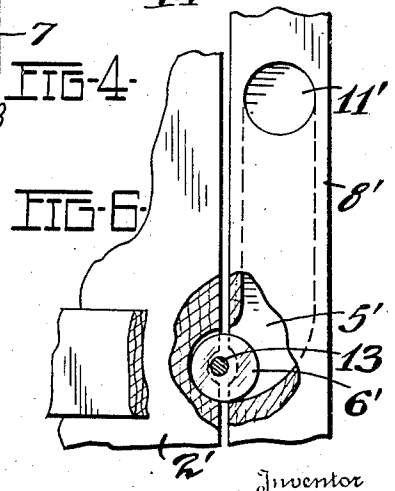
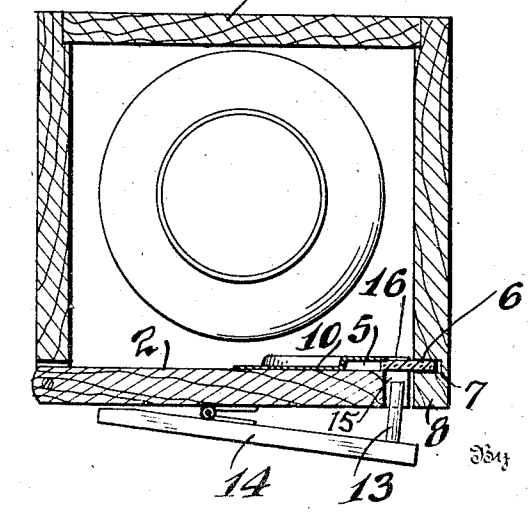


FIG-6-

FIG-2-



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CABINET LOCKING MEANS

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11 Claims. (Cl. 292—327)

This invention relates to door locking means, and particularly to such a means that will prevent an opening of a door by unauthorized persons without detection.

The primary object of the invention is the provision of a simple, efficient and novel door locking means, which includes a special locking element of a frangible nature which necessitates breaking to permit opening of a door locked thereby, is easily and quickly broken for the purpose and may be replaced by a like element when again locking the door. Such a lock is particularly valuable for use in connection with cabinets for containing fire extinguishers, as ready access to the interior of the cabinet is not prevented but an opening without detection is prevented. This prevents saboteurs or others from tampering with a fire extinguisher or other article placed in the cabinet without such tampering being detected.

The invention is fully described in the following specification, and a prefered embodiment thereof illustrated in the accompanying drawing, in which

Figure 1 is a perspective view of a cabinet including the locking feature embodying the invention Fig. 2 is a cross-section thereof taken on the line 2—2 in Fig. 1; Fig. 3 is an enlarged front view of a portion of the cabinet including the locking means, with parts broken away and with a locking element in door locking position; Fig. 4 is a section on the line 4—4 in Fig. 3, with the striker in element breaking position and the element broken; Fig. 5 is an inner side elevation of the plate forming the guideway for the locking element, and Fig. 6 is a fragmentary view of the cabinet showing a modification of the invention.

Referring to the drawing, 1 designates a cabinet, in the present instance, suitable for holding a fire extinguisher, and having a hinged door 2 adapted to close an opening in the cabinet through which access may be had to its interior. The door, in the present instance, is hinged at one vertical edge for horizontal swinging movement.

The door near its outer swinging edge is provided with a passageway 5 disposed so that a locking element 6, when disposed in its upper end portion, will move by gravity to its lower end. This passage, in the present instance, is of arcuate form and slot-shaped in cross-section with its broad dimension flat to the plane of the door and with both ends open in such plane at the free or swinging edge of the door. The lower end of the passageway, when the door is in closed position, registers with a recess 7 in the adjacent jamb or wall portion 8 of the cabinet opening, and this recess forms a continuation and dead end for the lower end of the passageway 5. While this passageway is shown in the present embodiment as mainly located in the door, it may be otherwise located so long as its lower end portion crosses the line or space between the door edge and jamb and thus forms registering recesses in both said parts. In the embodiment shown, the passageway 5 is formed by a plate 10 in cooperation with the rear side of the door to which it is attached, and this plate is shaped to form the rear side and edge walls of the way.

While entrance to the upper end portion of the passageway 5 to deposit an element 6 therein may be had in any suitable manner, it is shown, in the present instance, as being through an entrance slot 11 in the jamb 8 with the slot registering with the upper end of the passageway when the door is closed.

The locking element 6 is of brittle frangible material, such for instance as glass, and is preferably of disk form so that it may readily roll or pass down the passageway and be disposed in flat relation to the door when in the dead end portion of the passageway. When the element reaches the lower end portion of the passageway of which the jamb recess 7 is a continuation, it is stopped with a portion, preferably substantially half, projecting into the jamb recess and the remaining portion projecting into the door portion of the way, as shown in Fig. 3, thus locking the door against opening until the element is broken. The elements 6 are provided with an identifying mark or stamp, so that other elements of a similar shape could not be used without detection. A supply of these elements should be kept by the person having charge of the cabinet in some place where only authorized persons can obtain them, so that when one has been broken it can be replaced by such a person with another element having the authorized marking. A pivoted dog 12 is carried by the plate 10 and projects down into the lower end portion of its passageway through the top edge wall thereof in position to engage and prevent rearward movement of the element 6 from locking position. This dog swings to permit the element to pass forward thereunder, but is prevented from swinging rearward beyond stop or locking position, as is apparent.

When it is desired to open the door, the locking element 6 is broken in any suitable or con-

venient manner. This is shown, in the present instance, as being accomplished by forcing a striker pin 13 inward against an exposed portion of the element. This pin is carried by an arm 14 hinged to the door and adapted to project through an opening 15 therein in register with an element when in locking position. The plate 10, or rear wall of the passageway, also has an opening or recess 16 therein opposite the striking end of the pin to facilitate a breaking of a registering element when struck by the pin.

It is apparent from the foregoing that the cabinet door when in closed position may be locked in such position by inserting an element 6 into the receiving opening or end portion 11 of the guide slot or passageway 5, such element then passing by gravity down the guideway into its lower end portion with a part projecting into the recess 7 of the jamb and a part projecting into the door portion of the guideway. If it is desired to release the door for opening, this may be quickly effected by pressing inward on the striker arm 14 with sufficient force to cause its pin 13 to strike and break the registering locking element. If upon inspection the element 6 is found to be broken, or replaced by an unauthorized element, there is a possibility that the contents of the cabinet have been tampered with, which may be definitely determined by examination.

In the modification shown in Fig. 6, the passageway 5' for the element 6' is shown as being disposed in the jamb portion 8' of the door opening with its lower end portion terminating in the adjacent edge of the door 2'. The entrance to the passageway 5' is through a front opening 11' at its top.

I wish it understood that my invention is not limited to any specific construction, arrangement or form of the parts, as it is capable of numerous modifications and changes without departing from the spirit of the claims.

Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. The combination with a cabinet having an opening to its interior and a movable door for said opening, said door and a wall of said opening having registering recesses with a passage leading thereto, of a frangible element directed to said recesses and positioned therein in connecting relation to the opening wall and door to lock the door in closed position, the door being released for opening by a breaking of said element.

2. An arrangement as called for in claim 1 wherein the breakable element is of glass and of disk form.

3. In a cabinet having a swinging door for closing an opening therein, said door and a wall of said opening having registering recesses with a passageway leading thereto through one or the other of said door and wall, of a disk like element of frangible material introduced into said recesses through said passageway and, when in the recesses, extending across the line between the opening wall and door edge to lock the door against opening, and being breakable from without the cabinet to permit an opening of the door.

4. An arrangement as called for in claim 3 together with means operable to prevent backward movement of the element from locking position in the passageway.

5. In a cabinet having a swinging door for closing an opening therein, said door and the wall of said opening having registering recesses with a passageway leading thereto through one or the other of said door and wall, of a disk like element of frangible material introduced into said recesses through said passageway and, when in the recesses, extending across the line between the opening wall and door edge to lock the door against opening, and being breakable from without the cabinet to permit an opening of the door, at least one of said door and wall having a side opening in register with the element when in door locking position, and means operable through said opening to strike and break a registering locking element.

6. The provision in a cabinet having an opening therein and a hinged door for closing said opening, of a passageway through one of said door and the wall of the cabinet, and having an open upper end and extending downward therefrom and terminating in a dead end portion which is partially in both said wall and door, and a disk like element of frangible material introducible into said passageway through its upper end and movable by gravity to its dead end where it spans the line between the door and wall and, until broken, locks the door in closed position.

7. An arrangement as called for in claim 6 together with means manually movable to strike and break the locking element when in locking position to permit opening of the door.

8. An arrangement as called for in claim 6 together with means operable to prevent backward movement of the element from locking position in the passageway.

9. The provision in a cabinet having an opening therein and a hinged door for closing the opening of a downwardly extending passageway open at its upper end and terminating in a dead lower end in the opening wall when the door is closed, and a disk like member of brittle frangible material movable through said passage from its open end to its dead end and being of a size that when in the dead end it extends partly into the door portion of the passageway to lock the door in closed position and being breakable when in such position to permit an opening of the door, and means for preventing back movement of said element from its locking position in said passageway.

10. An arrangement as called for in claim 9 together with a striker element attached to one of said cabinet and door and operable to break the locking member to release the door.

11. In a cabinet having an opening forming a door jamb and a door movable to open and close said opening, the provision of a passageway leading to a point where it crosses from one of said jamb and adjacent door edge into the other and having an open upper end, and a frangible element introducible into the passageway through its upper end and movable by gravity therethrough to said crossing point where it projects partly into both the jamb and the door to lock the latter in closed position until the element is broken.

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