G. W. TIFFANY.

DEVICE FOR PROTECTING SAFES OR OTHER ENCLOSURES.

APPLICATION FILED MAY 28, 1921.

1,422,903. Patented July 18, 1922.

Fig. 1.

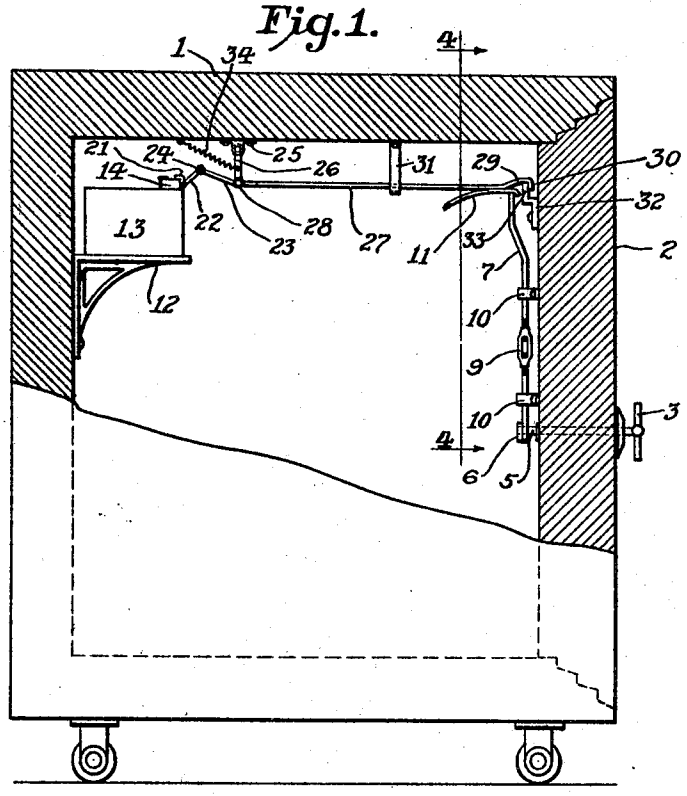


Fig. 4.

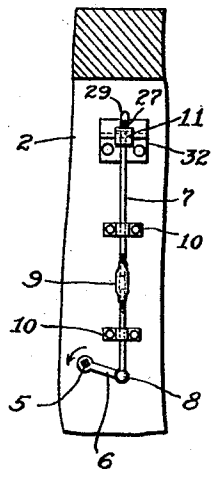


Fig. 3.

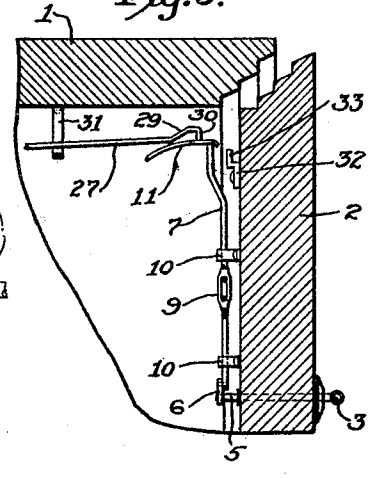
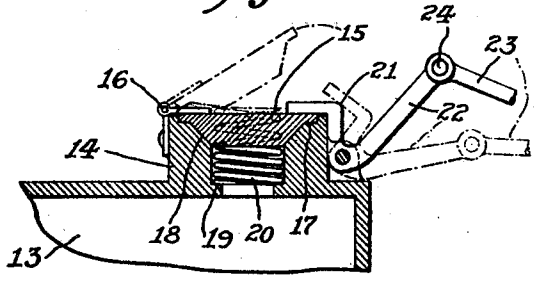


Fig. 2.



Inventor
G. W. TIFFANY

By his Attorneys
Sheffield & Betts

UNITED STATES PATENT OFFICE.

GERALD W. TIFFANY, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO NORMAN J. FITZSIMMONS, OF NEW YORK, N. Y.

DEVICE FOR PROTECTING SAFES OR OTHER ENCLOSURES.

1,422,903. Specification of Letters Patent. Patented July 18, 1922.

Application filed May 28, 1921. Serial No. 473,297.

To all whom it may concern:

Be it known that I, GERALD W. TIFFANY, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented a new and useful Device for Protecting Safes or Other Enclosures, of which the following is a specification.

My invention relates to apparatus for decreasing the risk of theft of valuables from places of safe-keeping.

The object of my invention is to provide a protective device which may be placed in a safe or other enclosure which will not operate when the door thereof is opened in the regular manner but which, when such door is forced open, will liberate a gas or other substance which is so injurious or disagreeable that the person opening the door will be driven away. Other objects and advantages of my invention will be apparent upon reading this specification thereof.

The preferred mechanism for attaining this object is shown in the accompanying drawing in which—

Fig. 1 is an elevation, partly in section, illustrating a device according to my invention, mounted in a safe;

Fig. 2 is a sectional elevation of a portion of the container shown in Fig. 1.

Fig. 3 shows a part of the mechanism of Fig. 1 when the door of the safe has been partly opened in the regular manner; and

Fig. 4 is a detail view as seen from the line 4—4 in Fig. 1, looking in the direction of the arrows.

Similar reference characters refer to similar parts throughout the several views.

The top wall of the safe is shown at 1 and the door thereof at 2. 3 is the usual handle which, when turned, after the combination has been properly set, releases the bolts that hold the door closed when the safe has been locked. The shaft 5 of the handle 3 runs through the door to the inside of the safe; to the interior end of said shaft is fastened an arm 6 which is so attached to the shaft as to rotate therewith. A rod 7 is pivotally connected to the arm 6, as at 8, in such a manner that, when the handle 3 is rotated in the direction indicated by the arrow in Fig. 4, to open the safe, the rod 7 is raised. For purposes of adjustment, I prefer to break the rod 7 and insert a turnbuckle, as shown at 9. The motion of the rod 7 is directed and limited by U-shaped guide-straps, 10. To the upper extremity of the rod 7 is affixed a convex, plate-like member 11, the function of which will be explained hereinafter.

Placed on a shelf 12 or other convenient support, preferably within the enclosure, is a container 13 having a projection 14, the outside of which may be cylindrical in form. This part 14 is hollow so that the container may be filled or emptied therethrough. Within the upper portion of the part 14, a closure in the form of a cap 15, which is hinged to the part 14 (as shown at 16), fits snugly. In order to insure a tight fit and prevent the escape of gas or other substance held in the container, I provide the cap 15 with an annular flange 17 and, below that, a beveled surface 18, the part 14 having complementary surfaces. In some cases it may be advisable to place a thin annular piece of suitable packing between the surface 17 of the cap and the complementary surface of the part 14. At the bottom of the opening in the said part 14, an annular shoulder 19 is provided; upon this rests a helical spring 20 which is under compression when the cap is closed and which bears against the lower surface of the said cap.

Pivotally connected to the side of the cylindrical part 14 which is adjacent to the free end of the cap, is an L-shaped catch 21 having an integral projecting arm 22. A short rod or lever 23 is pivotally connected to the arm 22, as at 24. A bracket 25 is attached to the top of the safe and a member 26 pivoted therein in such a manner that it may swing in the vertical plane through the rod 23; a spring 34, under tension, is connected to that side of the member 26 nearest the catch 21 for the purpose of preventing release of the catch unless considerable tension is exerted upon the member 26 against the pull of the spring 34. A long rod or lever 27 and the short lever 23 are both pivotally connected to the lower end of the member 26, as at 28. The opposite end of the lever 27 is bent upwards somewhat gradually, as shown at 29, and terminates in a downward-pointing hook, as shown at 30. The lever 27 is held against lateral motion by the guide-member 31 which also prevents the lever from dropping more than a predetermined distance when the hook 30 is not supported. To complete

my device, a bracket 32 is attached to the door of the safe; this bracket is formed with a flange-like projection 33 adapted to engage the hook 30 of the lever 27.

The operation of my device is as follows: After my device has been set up within the safe as above described, the container 13 is filled with an injurious or highly disagreeable gas or easily volatile substance, the so-called "tear-gas" being well adapted to this purpose. The cap 15 is then closed, the spring 20 being thereby compressed; the cap is then held in place by moving the lever 27 toward the container, this operation pushing the catch 21 over the cap and forcing it tightly closed. The tension of the spring 34 will then hold the catch in this position and the cap closed unless a considerable strain is exerted against the tension of the spring.

The door of the safe being open and the handle being in the position in which it remains after opening the door, rod 7 is in a raised position. As the door is pushed inward, the upper surface of the member 11 first comes into contact with the hook 30 and the latter is raised, by virtue of the inclination of the member 11, as the door is pushed further in—the lever 27 lifting with the joint at 28 as the fulcrum. The relative position of the parts, when the door is nearly closed, is shown in Fig. 3. When the door has been completely closed, the point of the hook 30 is in such position that, when the handle is turned so as to throw the bolts and lock the door, thereby lowering the rod 7, the said hook drops into place between the flange 33 of the bracket 32 and the door of the safe.

When the safe is opened in the regular manner, the turning of the handle raises the rod 7 and, consequently, the member 11 and the lever 27, disengaging the hook 30 from the flange 33. As the door is opened, the lever 27 and the hook slide over the surface of the member 11 and drop until checked by the guide 31. As any pull against the tension of the spring 34 is negligible, the catch 21 will remain in position and the cap of the container remain closed. It is, of course, necessary so to shape the member 11 and the curve 29 and hook 30 of the lever 27 that there will be no danger of the edge of said member 11 engaging the hook as the door is opened.

If, however, the door be forced open, as by a charge of explosive, the operation of my device will be as follows: Since the handle will not then have been turned, the member 11 is in the position shown in Fig. 1; therefore, when the door opens or is blown outward, the flange 33 of the bracket 32 engages the hook 30 on the lever 27 and exerts sufficient pull thereon and against the spring 34 to release the catch 21. The catch having been released, the spring 20 forces the cap 15 open and the gas escapes, filling the safe and the surrounding atmosphere with noxious fumes.

While I have described only one form of my invention, I appreciate that it is susceptible of many modifications and variations and I desire protection for all such modifications and variations as come within the scope of the appended claims.

Having described my invention, I claim:

1. A device of the kind described comprising in combination an enclosure to be protected, a door giving access thereto, a container within said enclosure holding a noxious substance, an opening in said container, a cap for said opening, means tending to force said cap out of said opening, a catch for retaining said cap in said opening, and means connected to said catch and adapted to release the same when said door is forced open.

2. A device of the kind described comprising in combination an enclosure to be protected, a door giving access thereto, a handle for opening said door, a container within said enclosure, a noxious substance within said container, a closure for said container, means for automatically opening said closure, a catch normally holding said closure closed, and means associated with said catch, said door, and said handle whereby, if said door is opened without turning said handle, said catch is released from said closure.

3. A device of the kind described comprising in combination an enclosure to be protected, a door giving access thereto, a handle for opening said door, a container within said enclosure, a noxious substance within said container, a closure for said container, a bracket upon said door, a lever associated with said closure and adapted to engage said bracket, and means connected to said handle whereby said lever is disengaged from said bracket when said handle is turned, all for the purpose specified.

GERALD W. TIFFANY.