(No Model.)

J. C. F. McGRIFF.

FIRE ALARM.

No. 482,379. Patented Sept. 13, 1892.

Fig. 1.

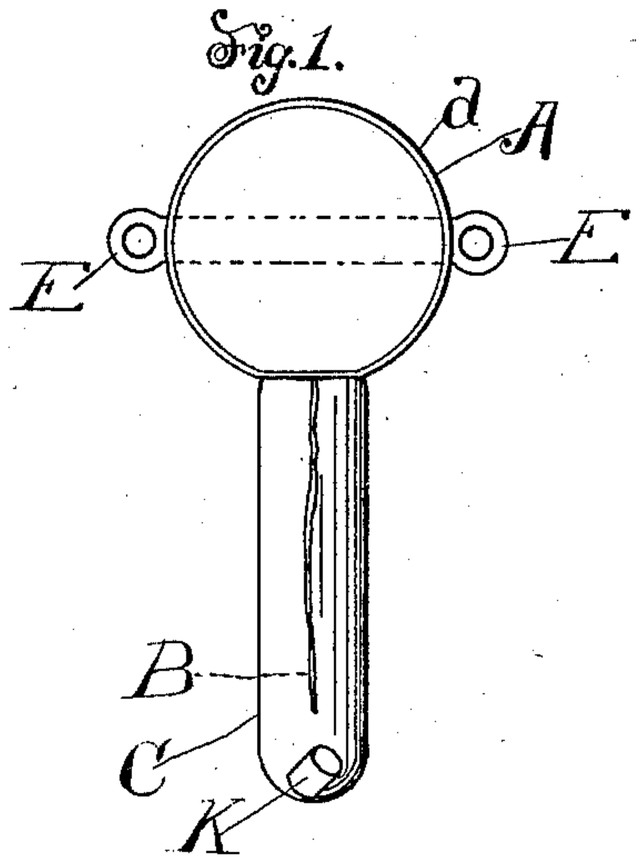


Fig. 2.

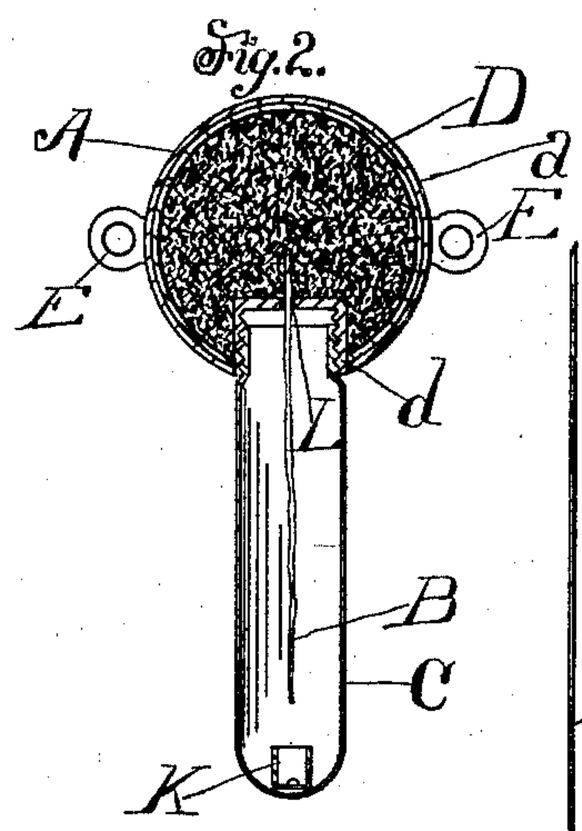


Fig. 7.

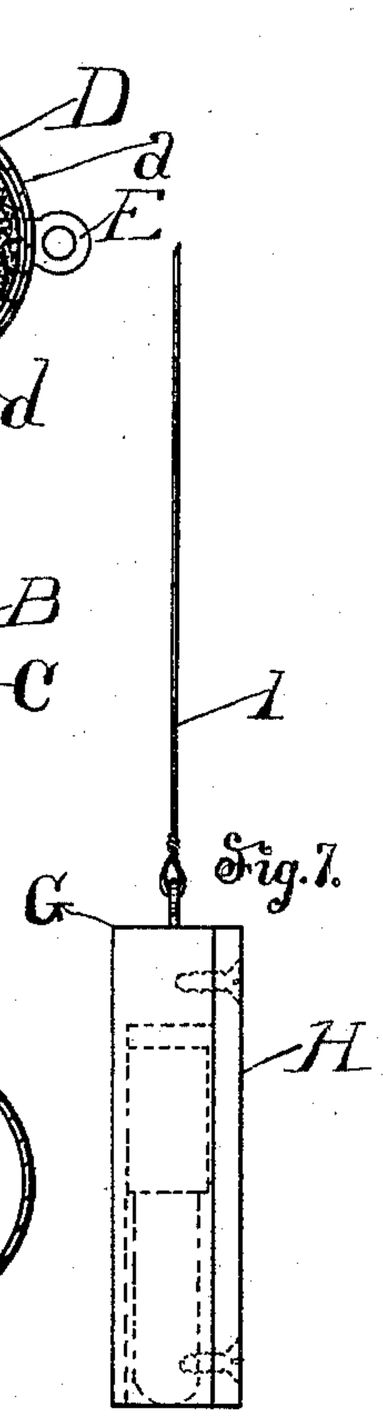


Fig. 3.

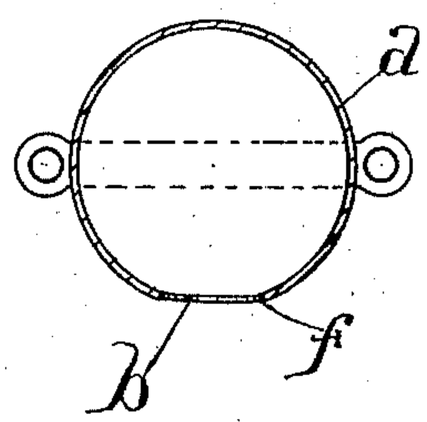


Fig. 4.

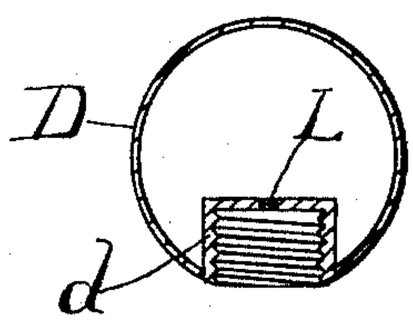


Fig. 5.

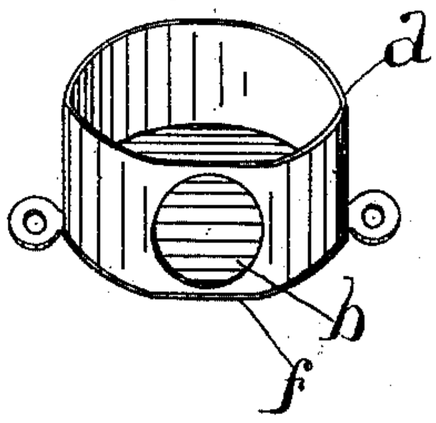


Fig. 6.

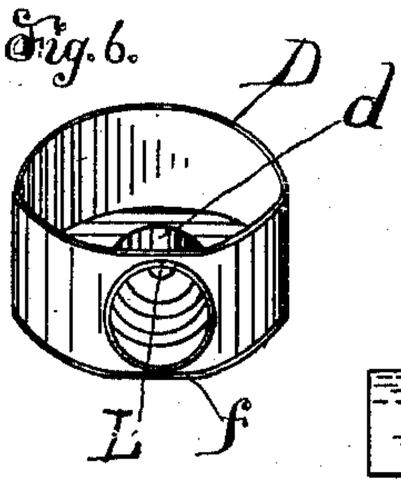


Fig. 9.

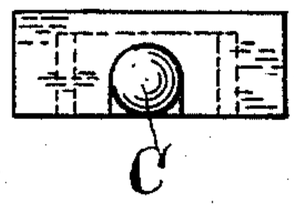
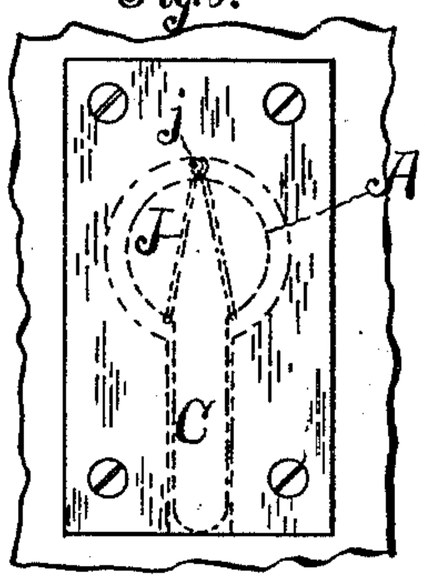


Fig. 8.



Witnesses.
M. M. Lee.
F. M. Townsend.

Inventor.
J. C. F. McGriff
by Hazard Townsend
his Attys.

UNITED STATES PATENT OFFICE.

JOHN C. F. MCGRIFF, OF LOS ANGELES, CALIFORNIA.

FIRE-ALARM.

SPECIFICATION forming part of Letters Patent No. 482,379, dated September 13, 1892.

Application filed September 1, 1891. Serial No. 404,420. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. F. MCGRIFF, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Fire-Reporter, of which the following is a specification.

The object of my invention is to provide cheap, simple, and permanent means which can be conveniently applied to dwellings, warehouses, ships, ships' cargoes, &c., to report fires immediately they originate.

My invention relates particularly to that class of fire-reporters in which a charge of explosive is designed to be exploded by means of a fuse arranged to be ignited by the fire.

My invention consists, essentially, in a fire-reporter of this class having its fuse inclosed and protected from the atmosphere and from injury of other kinds by a fuse-protecting case, which is secured to the explosive-containing shell of the reporter and is adapted to be broken by the action of the fire, thus to expose the fuse to the fire for ignition.

It also consists in the peculiar construction and combination of parts hereinafter set forth.

The accompanying drawings illustrate my invention.

Figure 1 is a plain front view of my invention ready for attachment to a building. Fig. 2 is a mid-section of the same. Fig. 3 is a mid-section of the outside shell with the fastening attachment secured thereto. Fig. 4 is a like sectional view of the inner shell. Fig. 5 is a perspective view of the outer shell, and Fig. 6 is a like view of the inner shell. Fig. 7 is a side view of my improvement incased in a wooden protecting-block supplied with means for suspending the block, so as to apply my invention to the protection of stores or cargoes by suspending the device between the bales and boxes of such cargoes or stores. Fig. 8 shows another form in which the device is fastened to a wall by means of a wooden block recessed to receive the reporter and secured to the wall by screws. Fig. 9 is a view of the bottom of Fig. 8.

My invention, as shown, consists, essentially, of a torpedo or explosive shell A, provided with a fuse B and with a glass fuse-protecting case or tube C, which contains the projecting fuse and is adapted to be broken by the action of fire.

It also comprises the special combination of parts whereby I secure cheapness of construction combined with lasting qualities.

The outer shell or case *a* is open at one end and closed at the other and is provided in its wall with the fuse-case hole *b*. The inner shell D is open at one end and closed at the other and is provided with the fuse-case socket *d* and with the fuse-opening L in such socket.

In putting the device together the outer shell *a* is placed upon the inner one D. The outer shell is preferably just deep enough to chamber the inner shell, and when the two are fitted together the hole *b* is made to coincide with the mouth of the fuse-case socket *d*. The walls of the two cases are flattened, as shown at *f*, so that no care will be required to adjust the parts to make the hole *b* and the mouth *d* coincide. When fitted together, the two cases are secured to each other by solder. Then the case is filled with powder through the fuse-opening L, which may be made as large as the opening in the end of the glass tube C, if desired. When the case is filled, the fuse is inserted and the fuse-tube, which is open at its inner end and closed at its outer end, is placed over the fuse and is screwed into its socket and hermetically sealed.

In practice the reporters are secured to the walls of a building in numerous places at points where fire might occur. They may be nailed or screwed to the walls or other portion of the house through the medium of the ears E, which project from the sides of the shell. These ears, as shown, are formed at the ends of a metal strip, which is soldered to one face of the shell. When the reporter is to be placed within the walls, there is no need of further protection than that afforded by the walls; but when it is placed in an exposed position it is well to give it additional protection. This I secure by means of the devices illustrated in Figs. 7, 8, and 9.

In Fig. 7, G is a wooden case chambered to receive the reporter, the glass tube of which extends to the bottom, so as to be exposed. Dotted lines indicate the position of the reporter. H is a lid secured to the case by screws.

I is a wire arranged to suspend the case in the desired position.

In Fig. 8 the reporter, which is shown in dotted lines, is shown provided with a wire fastener J, instead of the eyes E. This fastener consists simply of a wire wound about the case or shell and secured in a twist at *j*.

The operation of the reporter is as follows: When fire comes into contact with the glass tube, it breaks it and ignites the fuse, which ignites the explosive which gives the alarm. In order to increase the certainty of explosion, a gun-cap K may be placed in the glass tube, so that if the heat does not break the tube the fulminate of the cap may explode, and thus break the tube and admit the flame to the fuse.

The case is preferably made of pressed metal. The tube should be made quite thin in order to be easily broken by the heat.

The object of hermetically sealing the device is to prevent deterioration from the action of air as time elapses. The glass tube also affords protection against mice and rats and other destructive agencies, which might otherwise render the reporter of no value.

I am aware that automatic fire-alarms have been provided with a shell or casing, a charge of explosive, and a fuse, and I therefore make no broad claim to such a combination.

My alarm differs from all prior devices of which I am aware in that the fuse is inclosed within a casing adapted to be broken by the heat, whereby the fuse and the charge of explosive are protected against moisture and dampness, which would render the device useless.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a fire-alarm, the combination, with a shell or casing containing an explosive, of a fuse and a fuse-protecting case inclosing the fuse and secured to the shell or casing and projecting outward therefrom, said fuse-protecting case being adapted to be broken by an undue rise in temperature.

2. In combination with the outer shell *a*, provided with the hole *b*, the inner shell provided with a socket *d*, coinciding with the opening *b* and with a fuse-opening L, a fuse B, projecting through the opening, and a fuse-case C, inclosing the projecting end of the fuse and secured within the socket, said fuse-case being adapted to be broken by an undue rise in temperature.

J. C. F. McGRIFF.

Witnesses:
JAMES R. TOWNSEND,
F. M. TOWNSEND.