June 21, 1927.

1,633,254

C. O. JOHNSTON

FIRE EXTINGUISHER

Filed July 9, 1926

Fig. 1.

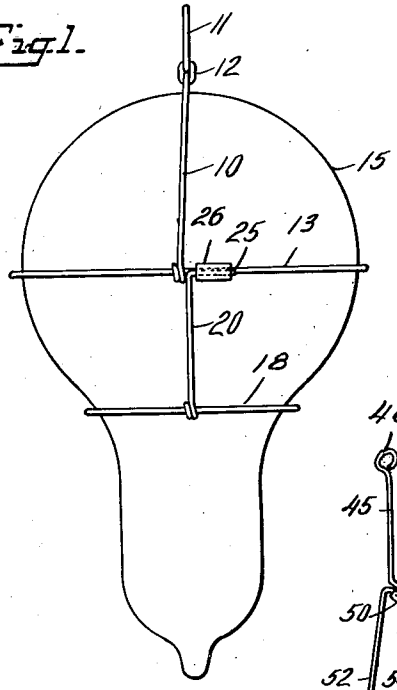


Fig. 2.

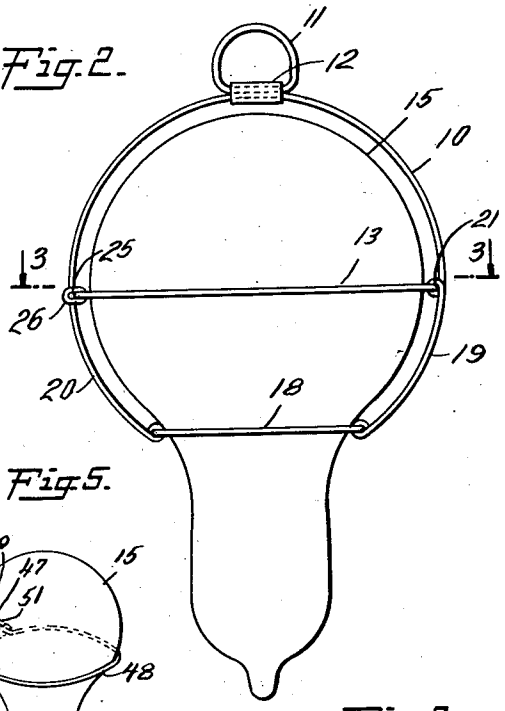


Fig. 5.

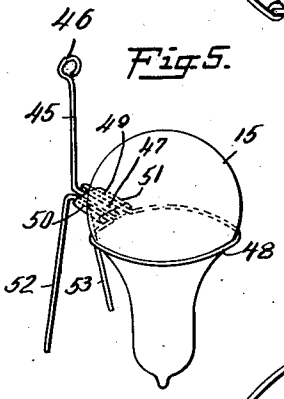


Fig. 3.

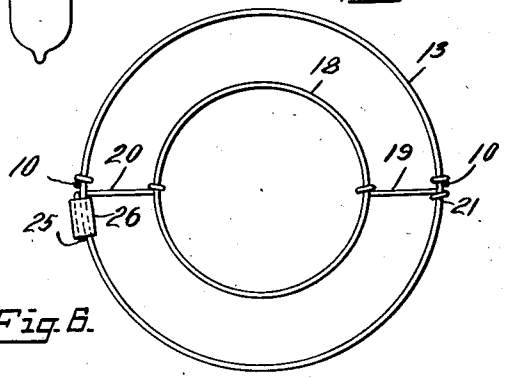


Fig. 4.

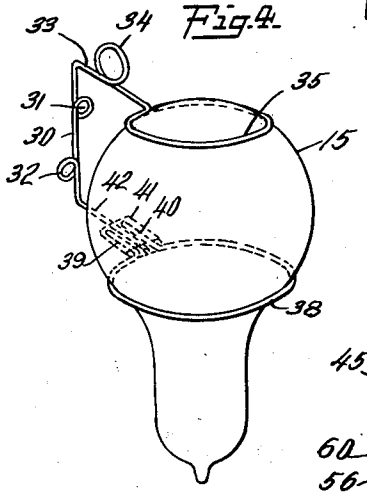
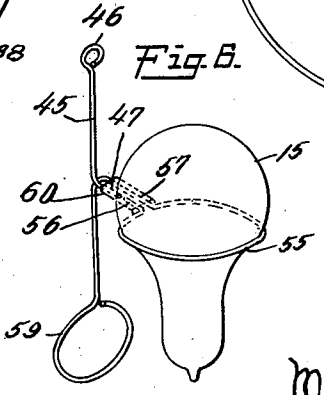


Fig. 6.



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Patented June 21, 1927. 1,633,254

UNITED STATES PATENT OFFICE.

CHARLES O. JOHNSTON, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO INTERNATIONAL FIRE EQUIPMENT CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

FIRE EXTINGUISHER.

Application filed July 9, 1926. Serial No. 121,334.

This invention relates to fire extinguishers.

More particularly stated, the invention relates to the grenade type of fire extinguisher and to a holder or support for the grenade.

This invention has for its salient object to provide a support for a grenade so constructed that the grenade can be easily and readily removed therefrom, and furthermore, so constructed and arranged that in case of fire the grenade will automatically drop, break, and dispense the fire extinguishing fluid.

Another object of the invention is to provide a support or holder for a grenade so constructed and arranged that the grenade will be releasably held against accidental displacement or removal from the support.

Another object of the invention is to provide a bracket or holder for grenades comprising few parts and a structure that can be economically manufactured.

Further objects of the invention will appear from the following specification taken in connection with the drawings, which form a part of this application, and in which

Fig. 1 is an elevational view illustrating one form of support and a grenade mounted thereon;

Fig. 2 is an elevational view taken at right angles to Fig. 1;

Fig. 3 is a sectional elevation taken substantially on line 3—3 of Fig. 2;

Fig. 4 is a perspective view showing a slightly different embodiment of the invention including means for releasably holding the grenade against accidental removal;

Fig. 5 is a perspective view showing another form of the invention; and

Fig. 6 is a perspective view showing still another embodiment of the invention.

The invention briefly described consists of a holder or support for a grenade preferably comprising two parts, one of the parts being adapted to be secured to a supporting structure and the other part forming the support for the grenade. The two parts are connected together by fusible metal in such a manner that in case of fire the fusible metal will melt and the grenade support will drop, releasing the grenade. Various forms of the invention are shown and in one embodiment there is provided a resiliently pressed ring adapted to rest on the top of the grenade and prevent its accidental removal from the support.

In the form of the invention shown in Figs. 1 to 3 inclusive, the grenade holder comprises a bail 10 having an eye 11 connected thereto by a sleeve 12 formed of fusible metal and the bail also has secured to the lower end thereof a ring 13 which, as shown in Figs. 1 and 2, encircles the grenade 15 and forms a protection therefor. The ring 13 does not have any supporting function.

The grenade 15 is supported in a ring 18 carried by links 19 and 20. The link 19, as shown at 21, is bent around the ring 13 and pivoted thereon. The link 20, as shown at 25 in Fig. 3, is bent laterally into the plane of the ring 13 and the laterally bent end 25 is secured to the ring 13 by a sleeve 26 formed of fusible metal.

The form of the invention shown in Figs. 1 to 3 inclusive is particularly adapted for suspension from a ceiling and is suspended by the eye 11. In case of fire, when the temperature of the room in which the grenade is suspended rises to a predetermined extent, one or both of the sleeves 12 and 26 will melt, whereupon the grenade will be released and fall. The grenade 15 is formed of frangible material, such as glass, and contains a fire extinguishing fluid such as carbon tetrachloride. When the grenade falls it will break and release the tetrachloride which will form a blanket and smother the fire. If the sleeve 26 melts before the sleeve 12, the ring 18 will drop and the link 19 will swing about its pivot 21 thus releasing the grenade. It will be evident that it is not necessary for the sleeve 26 to entirely melt as the weight of the grenade will pull the extension 25 away from the sleeve as soon as it starts to melt.

In the form of the invention shown in Fig. 4 a supporting bracket for the holder comprises an upright portion 30 having a pair of eyes 31 and 32 extending laterally therefrom and adapted to receive securing screws by means of which the bracket is secured to a wall. The upright portion 30 which is

formed of wire is bent laterally at 33 at its upper end, has a loop 34 formed therein, and is then extended and bent around to form a ring 35 which, as shown, rests on the top of the grenade 15.

The grenade is supported by a ring 38 having its two ends 39 and 40 bent laterally and enclosed within a sleeve 41 of fusible metal. This sleeve also encloses a lateral extension 42 formed on the lower end of the bracket and the ring 38 is thus secured to the bracket.

The form of the invention shown in Fig. 4 is particularly adapted for use on ships since the resiliently pressed ring 35 will prevent the grenade from being accidentally tipped out of or removed from the supporting ring 38.

It will be evident without a detailed description that when the sleeve 41 melts, the ring 38 and the grenade supported thereby will drop.

In the form of the invention shown in Fig. 5, the supporting bracket comprises an upright portion 45 having an eye 46 formed at its upper end and a lateral extension 47 formed at its lower end. The grenade 15 is supported in a ring 48 having lateral extensions 49 and 50 secured by a fusible sleeve 51 to the portion 47 of the bracket. The lateral extensions 49 and 50 are bent downwardly and away from each other as shown at 52 and 53, these portions forming legs for stabilizing the holder and preventing it from swinging about the axis of the portion 45 of the bracket.

In the embodiment of the invention shown in Fig. 6, the bracket comprises an upright portion 45 and an eye 46 similar to that shown in Fig. 5. The grenade 15 is supported in a ring 55 having lateral extensions 56 and 57. The extension 57 is bent downwardly as shown at 58 and has formed at its free end an enlarged loop 59 which acts as a stabilizer in the manner of the legs 52 and 53. In Fig. 6, the extension 47 of the bracket and the extensions 56 and 57 are enclosed by a fusible metal sleeve 60.

From the foregoing description it will be evident that in each embodiment of the invention the grenade is supported in a ring which is connected to a bracket portion of a holder by a fusible connection. When this fusible connection melts, due to the rising temperature caused by the fire, this supporting ring will be released thus permitting the grenade to drop and extinguish the fire.

Although certain specific embodiments of the invention have been particularly shown and described, it will be understood that the invention is capable of modification and that changes in the construction and arrangement of the various cooperating parts may be made without departing from the spirit or scope of the invention as expressed in the following claims.

What I claim is:

1. A support for grenade fire extinguishers comprising a supporting member having a loop for suspending the supporting member and a ring carried by said member and adapted to encircle and form the sole support for the grenade and a fusible connection between said ring and said member.

2. In combination, a frangible container having a fire extinguishing fluid therein, a bracket, a container support encircling the container and supporting the container from below, and a fusible connection between said support and said bracket, said container having a reduced portion adapted to extend through the support and an enlarged portion adapted to rest on said support.

3. A support for grenade fire extinguishers comprising a member having an eye, a ring adapted to encircle and support the grenade, a fusible connection between said member and said ring and stabilizing means for the support disposed substantially in the plane of said eye.

4. A support for grenade fire extinguishers comprising a member having an eye, a ring adapted to encircle and support the grenade, a fusible connection between said member and said ring and diverging stabilizing means for the support disposed substantially in the plane of said eye.

5. A support for grenade fire extinguishers comprising a member having an eye, a ring adapted to encircle and support the grenade, a fusible connection between said member and said ring and stabilizing means for the support connected to said ring and disposed substantially in the plane of said eye.

6. A support for grenade fire extinguishers comprising a member having an eye, a ring adapted to encircle and support the grenade, a fusible connection between said member and said ring and stabilizing means for the support disposed substantially in the plane of said eye, said ring being disposed in a plane positioned substantially at right angles to the plane of said eye and stabilizing means.

7. A support for grenade fire extinguishers comprising a member having an eye, a ring adapted to encircle and support the grenade, a fusible connection between said member and said ring and stabilizing means for the support disposed substantially in the plane of said eye, said ring being disposed in a plane positioned substantially at right angles to the plane of said eye and stabilizing means, said stabilizing means comprising a pair of diverging legs connected to said ring and said member.

8. A support for grenade fire extinguishers comprising a member having an eye, a ring adapted to encircle and support the grenade, a fusible connection between said

member and said ring and stabilizing means for the support.

9. A support for grenade fire extinguishers comprising a member having an eye, a ring adapted to encircle and support the grenade, a fusible connection between said member and said ring and stabilizing means for the support disposed below the plane of the ring.

10. A support for grenade fire extinguishers comprising an upright member, a supporting member disposed in a plane substantially at right angles to said upright member and having a portion adapted to encircle and support a grenade and a fusible connection between the upright member and supporting member.

11. A support for grenade fire extinguishers comprising an upright member, a supporting member disposed in a plane substantially at right angles to said upright member and adapted to support a grenade, a fusible connection between the upright member and supporting member, and stabilizing means disposed below the plane of the supporting member at an angle thereto.

In witness whereof, I have hereunto set my hand this 6th day of July, 1926.

CHARLES O. JOHNSTON.