March 29, 1932. W. B. BRONANDER 1,851,151

FIRE EXTINGUISHER

Filed March 6, 1929

Fig. 1.

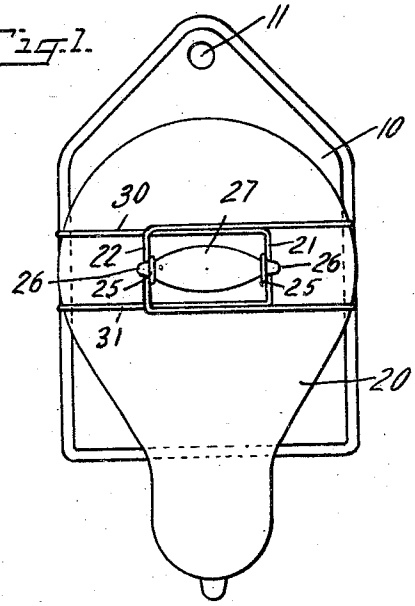


Fig. 5.

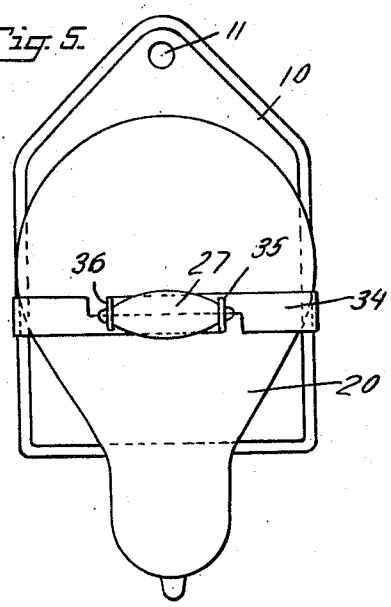


Fig. 2.

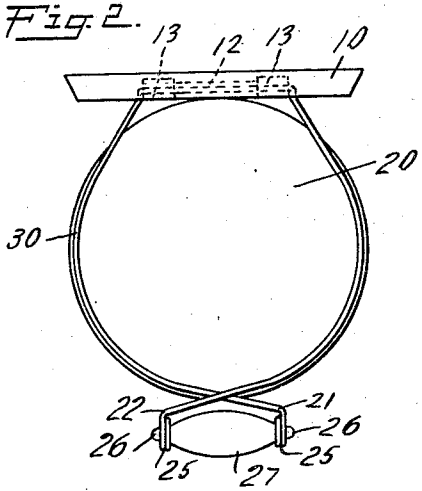


Fig. 6.

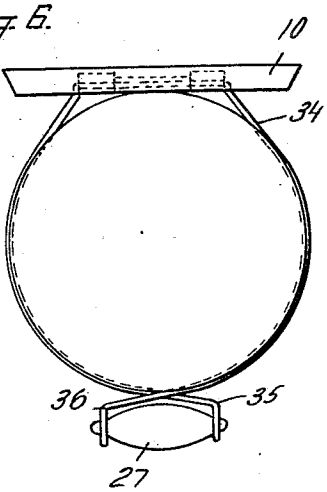


Fig. 3.

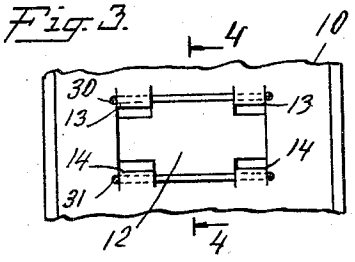
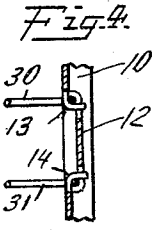


Fig. 4.



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UNITED STATES PATENT OFFICE

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FIRE EXTINGUISHER

Application filed March 6, 1929. Serial No. 344,822.

This invention relates to fire extinguishers.

More particularly stated, the invention relates to supports for the grenade type of fire extinguisher.

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 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 elevation of a fire extinguisher container and support constructed in accordance with the invention;

Fig. 2 is a top plan view of the construction shown in Fig. 1;

Fig. 3 is an elevational view partly broken away, showing the method of securing the grenade supporting members to the bracket;

Fig. 4 is a sectional elevation taken substantially on line 4—4 of Fig. 3;

Fig. 5 is a view similar to Fig. 1 showing another form of the invention; and

Fig. 6 is a top plan view of the device shown in Fig. 5.

The invention briefly described consists of a fire extinguisher of the grenade type and a support therefor so constructed and arranged that in case of fire the frangible container or grenade will be automatically released and will drop and break, thus freeing the fire extinguishing liquid therein. In the particular forms of the invention illustrated, the frangible container is supported by an elastic or resilient ring, the ends of the ring being overlapped and held in position by means of a frangible bulb having therein a fluid adapted to expand upon a rising temperature and to explode the bulb.

Further details of the invention will appear from the following description.

In the form of the invention illustrated in the drawings, there is shown a back plate or bracket 10 which is preferably formed of a metal stamping. The bracket has a hole 11 adapted to receive securing means for securing the plate to a support.

The plate 10 is indented, as shown in Fig. 4, at 12 and tabs 13 and 14 are punched out at the corners of the indented portion. The frangible container or grenade 20 is supported in a resilient wire frame formed of wire and having overlapping U-shaped end portions 21 and 22. Each U-shaped portion has loops 25 adapted to receive the reduced ends 26 of a frangible bulb 27. The bulb 27 forms a container for a suitable fluid or gas, such as carbon dioxide, which is adapted to expand rapidly upon a rise in temperature and to explode the bulb.

The wire cage can be formed by forming a U-shaped portion 21 intermediate the ends of a wire, carrying the ends as shown at 30 and 31 around to form a curved or semi-circular portion, passing the ends through the lugs or tabs 13 and 14, and forming another curved portion or a semi-circular portion. The ends are then bent around to form the other U-shaped portion 22 and the loop 25.

As shown in Fig. 1, the bulb 27 is inserted in position and the grenade or container 20 can be placed in position to be supported by the wire cage, this being possible because of the resiliency of the wire. If some one is present when the fire starts, the bulb 20 can be grasped and pulled from its cage and thrown at the fire. However, if no one is present, the rising temperature, due to the fire, will cause the gas or fluid within the bulb 27 to expand rapidly and explode the bulb. When the bulb explodes, the two curved supporting portions of the wire cage will separate to a sufficient extent to release the container.

In the form of the invention illustrated in Figs. 5 and 6, a flat supporting band 34 is used instead of the wire cage shown in Figs. 1 to 4. The flat band 34 is secured to the plate 10 in a manner similar to the method shown

for securing the wire cage. The outer ends of the flat band 34 are offset and are bent laterally to form lugs 35 and 36 having openings therein to receive the ends of the bulb 27. In this case the container 20 is supported on the upper edge of the band 34.

In case of fire the container can be grasped and thrown at the fire, provided some one is present, but in case no one is present the bulb will explode and release the container.

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 in the 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 fire extinguisher comprising a supporting member, a fire extinguisher container, separable means carried by said member for releasably supporting said container when said means are held against separation, and a frangible member engaging said means for preventing the separation thereof, said member being held under compression by said separable supporting means and having therein a fluid expansible by heat to break the member.

2. A fire extinguisher comprising a supporting member, a fire extinguisher container, separable resilient means carried by said member for releasably supporting said container when said means are held against separation, and a frangible member engaging said means for preventing the separation thereof, said member being held under compression by said separable supporting means and having therein a fluid expansible by heat to break the member.

3. A fire extinguisher comprising a supporting member, a frangible fire extinguisher container, separable means carried by said member for releasably supporting said container when said means are held against separation, and a frangible member engaging said means for preventing the separation thereof, said member being held under compression by said separable supporting means and having therein a fluid expansible by heat to break the member.

4. A fire extinguisher comprising a supporting member, a fire extinguisher container, separable means carried by said member for releasably supporting said container when said means are held against separation, said separable means forming a cage having spaced portions for embracing said container at points in a plurality of planes, and a frangible member engaging said means and adapted to prevent the separation thereof, said member having therein a fluid expansible by heat to break the member.

5. A grenade support comprising a bracket, a pair of separable resilient grenade engaging and supporting elements carried by said bracket for releasably supporting the grenade when said elements are held against separation, and means including a burstable member, adapted to burst under the action of heat, engaging said supporting elements and holding the elements against separation, said member being held under compression by said grenade supporting elements.

6. A grenade support comprising a bracket, a cage carried thereby and having spaced portions adapted to embrace and releasably support a container at points in a plurality of planes when said portions are held against separation, said cage having resilient portions adapted to separate and release the container, and burstable means engaging said resilient portions and normally preventing the separation thereof.

7. A grenade support comprising a bracket, a cage carried thereby adapted to embrace and releasably support a container, said cage having resilient portions adapted to support the container when said portions are held against separation and adapted to separate and release the container, and burstable means engaging said resilient portions and normally preventing the separation thereof, said resilient portions having overlapping ends engaged by said burstable means.

8. A grenade support comprising a bracket, a wire cage carried thereby and having spaced portions adapted to embrace and releasably support a container at points in a plurality of planes, said cage having resilient portions adapted to support the container when said portions are held against separation and adapted to separate and release the container, and burstable means engaging said resilient portions and normally preventing the separation thereof.

9. A grenade support comprising a bracket, a pair of resilient, integrally connected grenade engaging and supporting elements carried by said bracket and biased to separate but adapted to releasably support a container when held against separation, and means including a burstable member, adapted to burst under the action of heat, engaging said supporting elements and holding the elements against separation.

10. A grenade support comprising a supporting member, a container having fire extinguishing fluid therein, a pair of separable arms carried by said member and engaging and releasably supporting said container when the arms are held against separation, said arms having overlapping ends and heat controlled means engaging and held under compression by said overlapping ends for preventing the separation of said arms.

11. A grenade support comprising a supporting member, a container having fire extinguishing fluid therein, a pair of separable

arms carried by said member and engaging and supporting said container, said arms having overlapping ends and heat controlled burstable means engaging said overlapping ends and preventing the separation of said arms.

12. A grenade support comprising a supporting member, a container having fire extinguishing fluid therein, a pair of separable, resilient arms carried by said member and engaging and supporting said container when said arms are held against separation, said arms having overlapping ends and heat controlled means engaging said overlapping ends and held under compression thereby for preventing the separation of said arms.

13. In a grenade support, a pair of resilient arms adapted to embrace and support a grenade, said arms having overlapping ends, and burstable heat controlled means engaging said ends and holding said arms under tension and in grenade supporting position.

14. A grenade support comprising a bracket, a pair of resilient, integrally connected grenade engaging and supporting elements carried by said bracket and biased to spread apart, said elements being arranged to support a grenade when held against separation, and heat controlled means engaging said supporting elements and holding the elements against separation.

WILHELM B. BRONANDER.