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H. E. HEIGIS

1,879,228

FIRE EXTINGUISHER SUPPORT

Filed Sept. 5, 1931

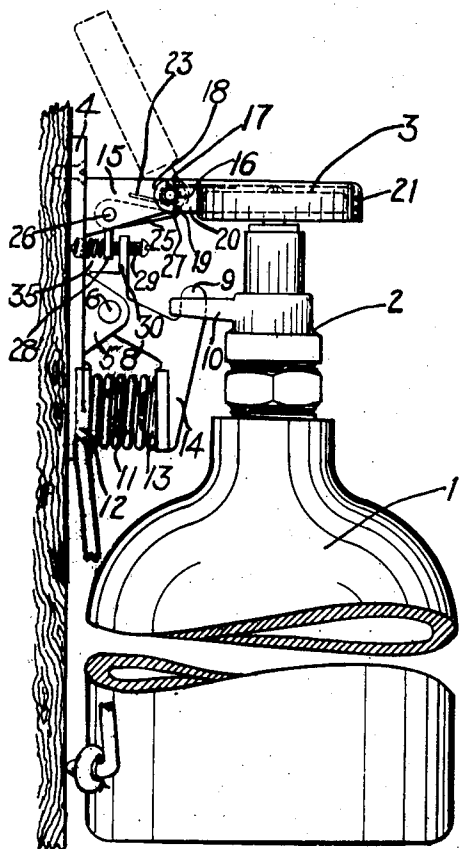


Fig. 1

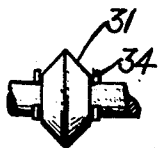


Fig. 4

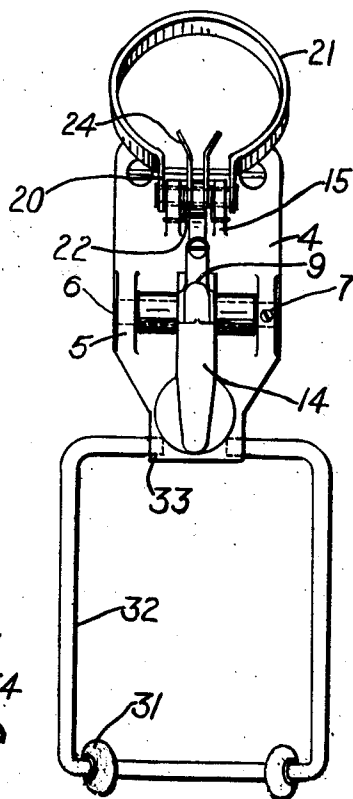


Fig. 2

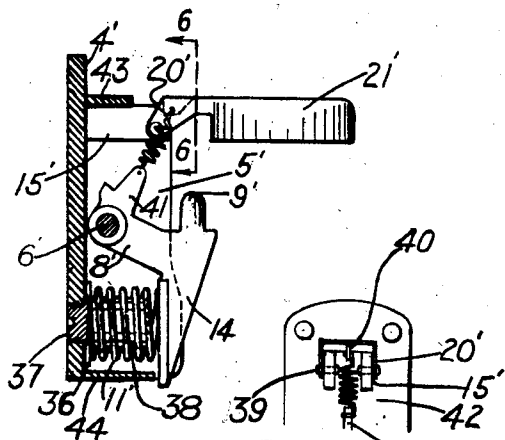


Fig. 5

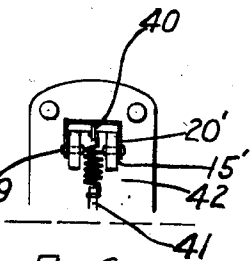


Fig. 6

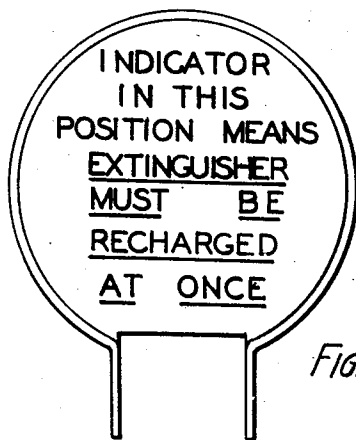


Fig. 3

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FIRE EXTINGUISHER SUPPORT

Application filed September 5, 1931. Serial No. 561,400.

The present invention relates to supporting means for portable fire extinguishing apparatus of the type which is normally suspended from wall brackets or the like and which is readily accessible in time of need.

The invention relates more specifically to portable fire extinguishing apparatus in which is employed a fire extinguishing fluid retained under pressure in a container therefor, an example of such fluid being liquefied carbonic acid gas.

In extinguishers of the type referred to, which are rapidly being introduced commercially in many countries as standard equipment for combatting oil and electrical fires, wherein an electrically non-conductive gas producing extinguishing fluid is the most effective extinguishing medium obtainable, it is desirable to have a simple and effective means for indicating loss of weight of the extinguishing fluid, such as might occur by leakage of the fluid under pressure or by tampering with the release valve of the apparatus, as well as by actual intentional use thereof.

The invention, therefore, contemplates the provision of a supporting means for such apparatus having an indicating means associated therewith and of such design that the indicator cannot be reset while there is a deficiency in the supply of the extinguishing fluid.

The invention also contemplates the provision of an indicator which will serve at the same time as a guard for the operating handle of the valve or other release means of the extinguisher, and which will deter unauthorized tampering with the valve.

The invention further contemplates a combined indicator and guard in which a predetermined loss in weight will cause a quick movement of the indicator-guard to the indicating position, so that the indication will be clearly understood and so that the guard will

be fully operative until the total predetermined loss of weight has occurred.

It is accordingly one of the objects of the present invention to provide a loss of weight indicator for portable fire extinguishers containing a fire extinguishing fluid under pressure.

Another object of the present invention is to provide an operating handle guard for portable fire extinguishers which will deter tampering with the extinguishers when they are not in use.

Another object of the invention is to provide an indicator which will indicate a partial loss of weight of the contents of a container and which will render warning that depletion of the contents has taken place to a point below a predetermined safe minimum.

Another object is to provide a loss of weight indicator which will pass quickly from the non-indicating position to the indicating position when the "danger" point is reached or passed.

Still another object is to provide means for adjusting or altering the magnitude of loss of weight to be indicated.

A further object of the invention is to provide a combined loss of weight indicator and operating handle guard.

A still further object of the invention is to provide a novel means for supporting a fluid medium container so as to assist in attaining other objects of the invention.

Further objects, not specifically enumerated above, will be apparent as the invention is described in greater detail in connection with the accompanying drawing, wherein:

Figure 1 is a view in side elevation of a device embodying my invention with a portable extinguisher unit shown in operative relation therewith.

Figure 2 is a view in front elevation, showing the device of Figure 1 in an indicating position and with the portable extinguisher unit removed.

Figure 3 is a view showing the interior of the upturned indicator of Figure 2 and illustrating a sample warning notice.

Figure 4 is a view in front elevation, showing the details of the rollers of the guide frame shown in Figures 1 and 2.

Figure 5 is a view in side elevation and partly in section of a somewhat different embodiment of my invention.

Figure 6 is a partial view and partly in section, taken on line 6—6 of Figure 5, and looking in the direction of the arrows.

Referring to the above drawing, Figure 1 shows a container 1 of a portable fire extinguisher unit of the type already referred to, the container being provided with a closure member 2 having a closure member operating means in the form of a handwheel 3. All of the elements necessary to form a complete portable extinguisher unit are not shown, as they have no bearing on the present invention.

At 4 is shown a base or supporting member which is secured in any convenient manner to any structure and which is formed with lugs 5 carrying a shaft 6 which is secured against rotation by means of a set-screw 7, shown in Figure 2. This shaft 6 carries rotatably a member 8 formed with a hook 9 for engaging an opening in the lug 10 on the closure member 2. The rotating effect upon the member 8 of the fire extinguisher or other unit suspended therefrom, is yieldingly opposed by the spring 11 which is supported at one end within a depression 12 in the base 4 and at the other end over a boss 13 formed on an arm 14 of the member 8.

At the upper part of the base member 4 are provided lugs 15 which carry rotatably a hollow pin 16. Secured centrally of the hollow pin 16 by means of a set-screw 17, is a collar 18 formed with a notch or catch 19 on its normally circular circumference. The extensions 20 on the inverted cup-like member 21 are secured to the hollow pin 16 by expanding the ends of the hollow pin within openings in the extensions 20. Coiled springs 22 having the ends 23 secured to the lugs 15 and the ends 24 bearing on the interior surface of the cup-like member 21, tend to urge the cup-like member into the position shown in dotted lines, but this movement is normally prevented by a lever 25 journaled, as at 26, in the lugs 15 and formed with a hook 27 which normally engages the notch or catch 19 on the collar 18, the relation of the parts being such that when the hook 27 engages the notch or catch 19, the cup-like member 21 is in the horizontal position shown in full lines.

The lever 25 is also formed with a depending arm 28, which is adapted to be engaged by an adjusting screw 29 carried by an arm 30 on the member 8.

From the foregoing description it will be apparent that a decrease in weight of the fire extinguisher or other unit will cause a coun-

ter-clockwise rotation of the member 8 under the influence of the spring 11, first causing adjusting screw 29 to contact with the arm 28 of the lever 25 and further causing clockwise rotation of the lever 25. This action results in disengagement of the hook 27 from the catch 19, and the cup-like member 21, under the influence of the coil springs 22, is snapped into the position shown in dotted lines.

Up until now the member 21 has been referred to as a cup-like member, but from the foregoing description it will be evident that this member is the combined loss of weight indicator and handwheel guard in accordance with the present invention. It is, therefore, to be noted that when the member 21 is in the position shown in full lines, it serves as a guard for deterring tampering with the handwheel of the fire extinguisher while hanging from its support, whereas the member 21 in the position shown in dotted lines serves as an indication that the weight of the extinguisher has fallen below the predetermined safe minimum. In this connection it should be noted that adjustment of the screw 29 will permit alteration of the magnitude of the decrease in weight which is to be indicated.

It is also to be noted that, by reason of the construction employed, the member 21 remains in its guarding position until the entire predetermined decrease in weight has taken place, whereupon it immediately snaps over to its indicating position, without any intermediate position being possible. In this manner the guarding action is maintained all during the time that it is necessary, and the indicating action is definite enough to be clearly understood.

It will be understood that the interior of the indicator-guard member 21 can be provided with a suitable warning notice to attract the attention of the proper attendant, and Figure 3 accordingly shows a possible form of warning notice.

With the type of fire extinguisher shown in Figure 1, which would normally rest with its lower end against the surface of the structure from which it is suspended, enough friction might be encountered to cause interference with the vertical movement of the extinguisher, and hence, with the operation of the loss of weight indicator. In order to overcome this difficulty there are shown in Figures 1, 2 and 4, rollers 31, which may be supported, as shown, on a frame 32 made from rod and supported, as at 33, in the lower end of the base member 4. The frame 32 is, of course, shaped to keep the rollers out of contact with the surface of the supporting structure, and the rollers are preferably designed for substantially line contact with the surface of the extinguisher. The rollers may be maintained in their proper positions on the frame by means of cotter pins 34, passed through the frame, as shown in Figure 4.

It will, of course, be evident that the rollers

31 reduce considerably, resistance to the vertical movement of the extinguisher.

Figure 1 also shows at 35 a spring which bears against the base member 4 at its one end and against the arm 28 at its other end and which accordingly normally urges the hook 27 of the lever 25 into engagement with the catch 19, but which yields upon operation of the device in the manner hereinbefore described.

Referring now to Figure 5, which shows a somewhat different embodiment of the invention, there is shown a base member 4' having lugs 5' carrying a shaft 6' to which is secured a member 8' formed with a hook 9' for suspending a fire extinguisher or other unit therefrom. A spring 11', bearing at one end against the arm 14' of the member 8', and at the other end against the washer-like head 36 of an adjusting screw 37, serves to yieldingly oppose the rotation of the member 8' under the influence of the weight of the extinguisher. The adjusting screw 37 is threadedly engaged with the base member 4', whereby adjustment of the screw with its washer-like head 36 will alter the position of the spring 11', so that the magnitude of the decrease in weight which is to be indicated, can be selected at will. The adjusting screw 37 is shown provided with a boss 38 which extends from the washer-like head 36 within the spring 11' and which serves as a support for the spring.

The indicator-guard 21' is formed with extensions 20' rotatably secured to lugs 15' by means of rivets 39, as shown in Figure 6. The indicator-guard is formed with a projection 40, and the member 8' is formed with an arm 41, while a tension spring 42 is secured between the projection 40 and the arm 41.

The arrangement of the parts is such that the line of force of the tension spring 42 is to one side of the pivoting center of the indicator-guard when the extinguisher is fully charged or contains more than the predetermined safe minimum weight of the extinguishing medium, whereby the indicator-guard remains in its guarding position, while a decrease in the weight of the extinguisher below the predetermined safe minimum, with resultant counter-clockwise rotation of the member 8', will cause shifting of the line of force of the tension spring 42 to the other side of the pivoting center of the indicator-guard, whereby it will quickly snap over to its upturned indicating position.

In connection with Figure 5, it should be noted that the lugs 5' have been conveniently formed, together with the base member 4' and the projections 43 and 44, to provide a guard for the operating elements.

It will accordingly be noted that Figures 1 and 5, although showing constructions differing somewhat in detail, both illustrate

embodiments of the same principles of invention.

It should be noted that when the fire extinguisher or other unit, supported as herein shown and described, is required for use, it is merely necessary to lift the extinguisher or other unit from the supporting hook, whereupon the indicator-guard will move to its indicating position. If an attempt should be made to replace an empty extinguisher or under-charged extinguisher, the indicator will remain in its indicating position. If, however, a fully charged extinguisher is suspended from the supporting hook, the indicator-guard can be returned to its guarding position.

It will accordingly be seen that I have provided a novel type of support for portable fire extinguishing apparatus, incorporating a simple and effective loss of weight indicator which, at the same time, may serve as an operating handle or handwheel guard, the guarding feature being had all during the time that it is necessary, and the indicating feature coming into action immediately upon the occurrence of the predetermined loss of weight to be indicated, without any intermediate position of the indicator being possible. I have also provided novel means of selecting at will the magnitude of the decrease in weight to be indicated, as well as means for reducing the frictional contact between extinguishers of the type herein described and the surface of the structures from which they are suspended.

While the present invention has been described with specific reference to the accompanying drawing, it is not to be limited, save as defined in the appended claims.

I claim as my invention:

1. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a rotatably supported holding member for holding the fire extinguisher, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher; a pivotally supported means for indicating a predetermined decrease in the weight of the fire extinguisher and normally in a non-indicating position, and means to cause the last named means to assume an indicating position upon a predetermined counter-rotation of the holding member.

2. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid and having a hand actuated fluid release means, comprising a rotatably supported holding member for holding the fire extinguisher, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member

upon a decrease in weight of the fire extinguisher, a pivotally supported means overlying the hand actuated release means, said pivotally supported means serving to indicate a predetermined decrease in the weight of the fire extinguisher and being normally in a non-indicating position, and means to cause the pivotally supported means to assume an indicating position upon a predetermined counter-rotation of the holding member.

3. A combined loss of weight indicator and fluid release means guard for a fire extinguisher containing an extinguishing fluid and having a hand actuated fluid release means, comprising a rotatably supported holding member for holding the fire extinguisher, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, a pivotally supported guard means overlying the hand actuated release means, said pivotally supported guard means serving also to indicate a predetermined decrease in the weight of the fire extinguisher and being normally in a non-indicating position, and means to cause the pivotally supported guard means to assume an indicating position upon a predetermined counter-rotation of the holding member.

4. A combined loss of weight indicator and handwheel guard for a fire extinguisher containing an extinguishing fluid and having a handwheel for operation thereof, comprising a rotatably supported holding member for holding the fire extinguisher, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, a pivotally supported guard member overlying the handwheel of the fire extinguisher, and means to cause the guard member to alter its position upon a predetermined decrease in the weight of the fire extinguisher for the purpose of indicating said decrease in weight.

5. A combined loss of weight indicator and handwheel guard for a fire extinguisher containing an extinguishing fluid and having a handwheel for operation thereof, comprising a supporting member, a holding member for holding the fire extinguisher and rotatably carried by the supporting member, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, a guard member overlying the handwheel of the fire extinguisher and pivotally carried by the supporting member, and means to cause the guard member to alter its position upon a predetermined decrease in the weight of the

fire extinguisher for the purpose of indicating said decrease in weight.

6. A combined loss of weight indicator and handwheel guard for a fire extinguisher containing an extinguishing fluid and having a handwheel for operation thereof, comprising a supporting member, a holding member for holding the fire extinguisher and rotatably carried by the supporting member, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, a guard member overlying the handwheel and pivotally carried by the supporting member, means to indicate a predetermined decrease in the weight of the fire extinguisher, said means being associated with the face of the guard member which is immediately adjacent the handwheel when the guard member overlies the handwheel, and means to cause the guard member to alter its position upon said predetermined decrease in weight for the purpose of exposing the indicating means associated with the guard member.

7. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a movable holding member for holding the fire extinguisher, means to yieldingly oppose the moving effect of the weight of the fire extinguisher upon the holding member, means for indicating a predetermined decrease in the weight of the fire extinguisher and normally in a non-indicating position, and means to cause the last named means to assume an indicating position upon a predetermined decrease in weight of the fire extinguisher.

8. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a movable holding member for holding the fire extinguisher, means to yieldingly oppose the moving effect of the weight of the fire extinguisher upon the holding member, means for indicating a predetermined decrease in the weight of the fire extinguisher and normally in a non-indicating position, means to cause the last named means to assume an indicating position upon a predetermined decrease in weight of the fire extinguisher, and means to adjust for the magnitude of the decrease in weight necessary to effect the desired indication.

9. A combined loss of weight indicator and fluid release means guard for a fire extinguisher containing an extinguishing fluid and having a hand actuated fluid release means, comprising a movable holding member for holding the fire extinguisher, means to yieldingly oppose the moving effect of the weight of the fire extinguisher upon the holding member, guard means overlying the hand actuated release means, said guard means serving also to indicate a predeter-

mined decrease in the weight of the fire extinguisher and being normally in a non-indicating position, and means to cause the guard means to assume an indicating position upon a predetermined decrease in the weight of the fire extinguisher.

10. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid and which is to be suspended in a substantially vertical position on a substantially vertical surface, comprising a movable holding member for holding the fire extinguisher, means to yieldingly oppose the moving effect of the weight of the fire extinguisher upon the holding member, means for indicating a predetermined decrease in the weight of the fire extinguisher and normally in a non-indicating position, means to cause the last named means to assume an indicating position upon a predetermined decrease in weight of the fire extinguisher, and means to facilitate vertical movement of the fire extinguisher by reducing the friction between the extinguisher and the aforesaid surface.

11. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid and which is to be suspended in a substantially vertical position on a substantially vertical surface, comprising a movable holding member for holding the fire extinguisher, means to yieldingly oppose the moving effect of the weight of the fire extinguisher upon the holding member, means for indicating a predetermined decrease in the weight of the fire extinguisher and normally in a non-indicating position, means to cause the last named means to assume an indicating position upon a predetermined decrease in weight of the fire extinguisher, and means to facilitate vertical movement of the fire extinguisher by reducing the friction between the extinguisher and the aforesaid surface, said means comprising vertically disposed rollers supported out of contact with the aforesaid surface and in contact with the extinguisher.

12. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid and which is to be suspended in a substantially vertical position on a substantially vertical surface, comprising a rotatably supported holding member for holding the fire extinguisher, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, a pivotally supported means for indicating a predetermined decrease in the weight of the fire extinguisher and normally in a non-indicating position, means to cause the last named means to assume an indicating position upon a predetermined counter-rotation of the holding member, and means to facilitate vertical movement of the fire ex-

tinguisher by reducing the friction between the extinguisher and the aforesaid surface.

13. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid and which is to be suspended in a substantially vertical position on a substantially vertical surface, comprising a rotatably supported holding member for holding the fire extinguisher, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, a pivotally supported means for indicating a predetermined decrease in the weight of the fire extinguisher and normally in a non-indicating position, means to cause the last named means to assume an indicating position upon a predetermined counter-rotation of the holding member, and means to facilitate vertical movement of the fire extinguisher by reducing the friction between the extinguisher and the aforesaid surface, said means comprising vertically disposed rollers supported out of contact with the aforesaid surface and in contact with the extinguisher.

14. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a rotatably supported holding member for holding the fire extinguisher, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, a pivotally supported means for indicating a predetermined decrease in the weight of the fire extinguisher and normally in a non-indicating position, means to cause the last named means to assume an indicating position upon a predetermined counter-rotation of the holding member, and means to adjust for the magnitude of the decrease in weight necessary to effect the desired indication.

15. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a supporting member, indicating means pivotally carried by the supporting member and normally in a non-indicating position, a holding member rotatably carried by the supporting member and formed with a hook for holding the fire extinguisher and having an arm, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, spring means normally tending to urge the indicating means to an indicating position, a catch on the indicating means, and a two-armed lever pivotally carried by the supporting member, one arm of which is formed with a hook to normally engage the aforesaid catch and the

other arm of which extends into the path of movement of the arm on the holding member but normally spaced therefrom, so as to be engaged thereby to release the indicating means upon a predetermined counter-rotation of the holding member occurring upon a predetermined decrease in the weight of the fire extinguisher.

16. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a supporting member, indicating means pivotally carried by the supporting member and normally in a non-indicating position, a holding member rotatably carried by the supporting member and formed with a hook for holding the fire extinguisher and having an arm, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, spring means normally tending to urge the indicating means to an indicating position, a catch on the indicating means, a two-armed lever pivotally carried by the supporting member, one arm of which is formed with a hook to normally engage the aforesaid catch and the other arm of which extends into the path of movement of the arm on the holding member but normally spaced therefrom, so as to be engaged thereby to release the indicating means upon a predetermined counter-rotation of the holding member occurring upon a predetermined decrease in the weight of the fire extinguisher, means normally urging the hook on the two-armed lever into engagement with the catch on the indicating means, and means to alter the effective distance between the arm on the holding member and the arm on the aforesaid two-armed lever for the purpose of selecting at will the predetermined decrease in weight which is to be indicated.

17. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a supporting member, indicating means pivotally carried by the supporting member and normally in a non-indicating position, a holding member rotatably carried by the supporting member and formed with a hook for holding the fire extinguisher and having an arm, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, spring means normally tending to urge the indicating means to an indicating position, a catch on the indicating means, a two-armed lever pivotally carried by the supporting member, one arm of which is formed with a hook to normally engage the aforesaid catch and the other arm of which extends into the path of movement of the arm on the holding member but nor-

mally spaced therefrom, so as to be engaged thereby to release the indicating means upon a predetermined counter-rotation of the holding member occurring upon a predetermined decrease in the weight of the fire extinguisher, spring means normally urging the hook on the two-armed lever into engagement with the catch on the indicating means, and an adjusting screw carried by the arm on the holding member and extending in the direction of the arm on the aforesaid two-armed lever to alter the effective distance therebetween for the purpose of selecting at will the predetermined decrease in weight which is to be indicated.

18. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a rotatably supported holding member for holding the fire extinguisher and having an arm, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, a pivotally supported indicating means for indicating a predetermined decrease in the weight of the fire extinguisher and normally in a non-indicating position, means adapted to be engaged by the arm on the holding member to cause the indicating means to assume an indicating position upon a predetermined counter-rotation of the holding member, and means to alter the effective distance between the last named means and the arm on the holding member for the purpose of selecting at will the predetermined decrease in weight which is to be indicated.

19. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a rotatably supported holding member for holding the fire extinguisher, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, a pivotally supported indicating means for indicating a predetermined decrease in the weight of the fire extinguisher and normally in a non-indicating position, means to cause the indicating means to assume an indicating position upon a predetermined counter-rotation of the holding member, and means to alter the opposing effect of the aforesaid yielding means for the purpose of selecting at will the predetermined decrease in weight which is to be indicated.

20. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a supporting member, a holding member rotatably carried by the supporting member and formed with a hook for holding the fire extinguisher and having an arm, a compression spring seated between said arm

and the supporting member to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, indicating means pivotally carried by the supporting member and normally in a non-indicating position, means to cause the indicating means to alter its position upon a predetermined decrease in the weight of the fire extinguisher for the purpose of indicating said decrease in weight, and means to alter the compression of the aforesaid spring for the purpose of selecting at will the predetermined decrease in weight which is to be indicated.

21. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a supporting member, indicating means pivotally carried by the supporting member and normally in a non-indicating position, a holding member rotatably carried by the supporting member and formed with a hook for holding the fire extinguisher and having an arm extending in the general direction of the pivoting center of the indicating means, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, an arm on the indicating means extending from its pivoting center toward and in the general direction of the arm on the holding member, and a tension spring connecting the aforesaid arms of the holding member and indicating means, said spring normally exerting a force so as not to rotate the indicating member from its non-indicating position but having its line of action shifted to one side of the pivoting center of the indicating means upon a predetermined counter-rotation of the holding member occurring upon a predetermined decrease in the weight of the fire extinguisher, so that the indicating means is rotated from its non-indicating position and thus serves to indicate said decrease in weight.

22. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a supporting member, indicating means pivotally carried by the supporting member and normally in a non-indicating position, a holding member rotatably carried by the supporting member and formed with a hook for holding the fire extinguisher and having an arm extending in the general direction of the pivoting center of the indicating means, means to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, an arm on the indicating means extending from its pivoting center toward and

in the general direction of the arm on the holding member, and a tension spring connecting the aforesaid arms of the holding member and indicating means, said spring normally exerting a force to one side of the pivoting centers of the holding member and indicating means but having its line of action shifted to the other side of the pivoting center of the indicating means upon a predetermined counter-rotation of the holding member occurring upon a predetermined decrease in the weight of the fire extinguisher, so that the indicating means is rotated from its non-indicating position and thus serves to indicate said decrease in weight.

23. A loss of weight indicator for a fire extinguisher containing an extinguishing fluid, comprising a supporting member, indicating means pivotally carried by the supporting member and normally in a non-indicating position, a holding member rotatably carried by the supporting member and formed with a hook for holding the fire extinguisher and having a depending arm, a compression spring seated between said depending arm and the supporting member to yieldingly oppose the rotating effect of the weight of the fire extinguisher upon the holding member and to effect counter-rotation of the holding member upon a decrease in weight of the fire extinguisher, a second arm on said holding member extending upwardly in the general direction of the pivoting center of the indicating means, an arm on the indicating means extending from its pivoting center toward and in the general direction of the upwardly extending arm on the holding member, a tension spring connecting the arm on the indicating means with the upwardly extending arm on the holding member, said tension spring normally exerting a force so as not to rotate the indicating means from its non-indicating position but having its line of action shifted to one side of the pivoting center of the indicating means upon predetermined rotation of the holding member occurring upon a predetermined decrease in the weight of the fire extinguisher, so that the indicating means is rotated from its non-indicating position and thus serves to indicate said decrease in weight, and means to alter the compression of the aforesaid compression spring for the purpose of selecting at will the predetermined decrease in weight which is to be indicated.

24. A loss of weight indicator and guard device as described comprising the combination with a charged fluid container having a hand valve for releasing its contents when desired, of supporting means for the container, a combined loss of weight indicator and guard for the valve mounted so it protects the valve against operation when the fully charged container is supported on said supporting means, and means interconnecting said supporting means and combined indi-

cator and guard for moving it to indicating and unguarding position when the weight of the charged container falls below a predetermined amount.

- 6 25. A loss of weight indicator for a charged fluid container comprising a movably supported holding member for holding the container, means to yieldingly oppose movement of the holding member under the weight of
10 the charged container and to cause counter-movement of the holding member upon decrease in weight of the charged container, a movably supported indicator normally in non-indicating position, and means to positively operate the indicator to indicating position when released by counter-movement of
15 the holding member.

This specification signed this 20th day of May, A. D. 1931.

20 HENRY ERNEST HEIGIS.

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