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G. R. BROCK

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BRACKET FOR HOLDING FIRE EXTINGUISHERS

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Fig. 1.

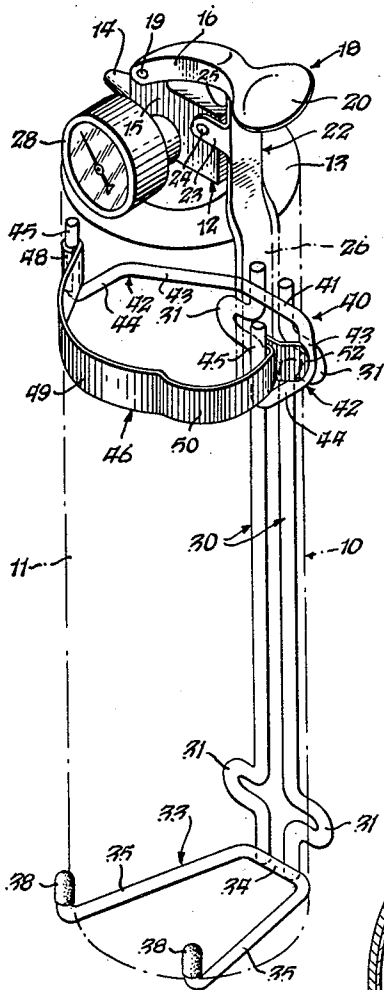


Fig. 2.

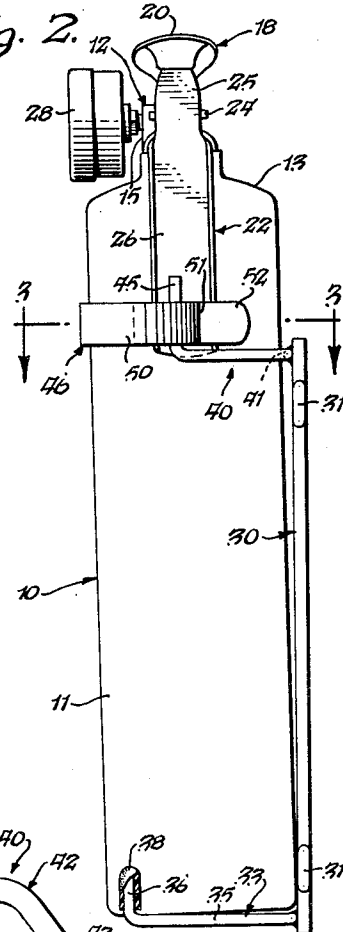
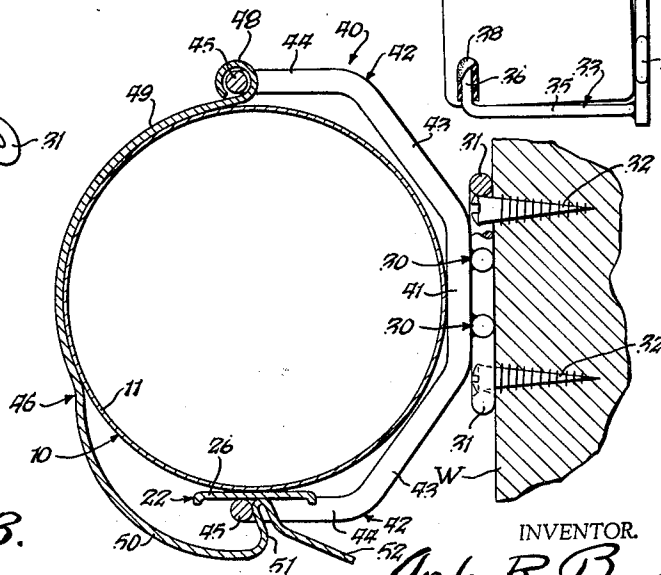


Fig. 3.



INVENTOR.

Gordon R. Brock
BY Popp and Sommer
ATTORNEYS.

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BRACKET FOR HOLDING FIRE EXTINGUISHERS
Gordon R. Brock, Elmira, N.Y., assignor to Sterling Precision Corporation, Elmira, N.Y., a corporation of Delaware

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5 Claims. (Cl. 248—313)

This invention relates to bracket for holding a fire extinguisher and more particularly for holding such extinguisher which has a cylindrical body having a neck and discharge nozzle at one end and to which neck is pivoted a squeeze lever for operating the extinguisher and, to which neck is also pivoted a combined handle and latch lever which blocks the movement of the squeeze lever, and the outboard end of which latch lever, when in latching position, extends axially alongside the cylindrical body of the extinguisher and is confined within the bracket so that it is necessary to remove the extinguisher from the bracket to operate it. Features of the invention can be used in mounting fire extinguishers of other types, however.

An important object is to provide such a fire extinguisher bracket which can be used to mount the extinguisher in any plane, that is, on a support surface which can be vertical, horizontal or at any angle, and can be used for every type of application required in the transportation and marine field.

Another important object of the invention is to provide such a bracket which can be securely fastened to a support surface and securely support a hand fire extinguisher, and in which the manner of removal of the fire extinguisher is sufficiently obvious that the fire extinguishers can be quickly removed by persons having merely the usual practical experience of adults.

A specific object of the present invention is to provide such a bracket employing only a single tempered metal spring clip, this clip serving both to hold the extinguisher in the bracket under spring pressure and also to hold the handle and latch lever of the extinguisher in the position in which it blocks the operation of the squeeze lever thereof.

Another specific object is to provide such a bracket which is composed of fewer parts than present brackets for this purpose and which parts can be easily and inexpensively assembled and united, thereby to reduce the cost of the bracket without diminishing its utility.

Another specific aim is to eliminate the possibility of scuffing the finish or paint from the fire extinguisher shell in removing and replacing the fire extinguisher during inspection, recharging and use.

Another specific object is to provide such a bracket which is simple and pleasing in appearance and which provides a maximum display of the fire extinguisher which it holds.

Other objects and advantages of the invention will be apparent from the following description and drawings in which:

FIG. 1 is a perspective view of a bracket embodying the present invention showing a hand fire extinguisher supported thereby in an upright position, the body or shell of the extinguisher being shown in phantom, it being understood, however, that the bracket can be used to support the extinguisher in any plane.

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FIG. 2 is a side elevational view of the bracket, as shown in FIG. 1, supporting a fire extinguisher, and with a part of the bracket in section.

FIG. 3 is an enlarged section taken generally on line 3—3, FIG. 2, and also showing the support and fastening screws.

While features of the invention can be embodied in brackets for supporting hand fire extinguishers of various types, the bracket is shown as supporting a dry chemical hand fire extinguisher indicated generally at 10 from which the extinguishing agent is discharged by stored air pressure. The extinguisher has a cylindrical body 11 closed at its one end and having a neck 12 projecting upwardly from its other end head 13 and which neck carries the laterally directed discharge nozzle 14 for the extinguishing agent. This neck 12 has opposite flat sides 15 which are generally parallel with the major axis of the body 11 and are embraced by the side walls 16 of a squeeze lever 18 which is of channel shape in cross section and has one end pivoted to the neck 12 by a pivot pin 19 extending perpendicularly through the flat sides 15 of the latter. The free end of the squeeze lever 18 has a finger piece 20 which is manually operated to actuate the valve mechanism (not shown) for discharging the extinguishing agent so that pressing the squeeze lever 18 toward the body 11 causes the extinguishing agent to be ejected from the nozzle 14 by the compressed air.

This action of the squeeze lever 18, when the extinguisher is contained in the bracket of the present invention, is blocked by a vertical latch and handle lever 22 having ears 23 embracing the flat sides 15 of the neck 12 and secured thereto by a pivot pin 24 parallel with the pivot pin 19. The latch and handle lever 22 has one end 25 projecting into the channel-shaped squeeze lever to prevent the latter from being moved toward the body 11 and has its opposite end 26 offset and extending axially along one side of the body or shell 11 of the extinguisher in face-to-face engagement therewith, as best shown in FIG. 3. The fire extinguisher can also have a pressure gage 28 secured to one face 15 of its neck 12 and showing the air pressure within the shell 11.

The bracket embodying the present invention comprises a pair of laterally spaced, generally parallel rods 30 each provided at each end with a laterally projecting U-shaped bend or offset 31, the offsets of the two rods projecting away from, and preferably being in line with each other and in a plane parallel with the support surface which is shown as being a wall W so that these offsets can contain screws 32 or like fasteners for securing the bracket to the support surface or wall W.

To one pair of the ends of these rods 30, beyond the adjacent pair of U-shaped offsets 31, is secured, as by welding, a first cross rod or support 33 which is of U-shaped form, the rod having a central cross part 34 bridging and welded to this pair of extremities of the rods 30 in parallel relation to the offsets 31, arms 35 forming laterally extending diverging, continuations of the ends of the cross part 34, and an extension 36 of the free end of each arm 35 extending toward the adjacent end of the extinguisher. Each of these end extensions 36 can be capped with a cap 38 of soft resilient yielding material, these extensions 36 being spaced so that the adjacent end of the shell 11 of the fire extinguisher snugly fits the bracket at four points, namely at the corresponding ex-

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tremities of the rods 30 and at these resilient caps 38, these caps yieldingly pressing the extinguisher against the adjacent extremities of the rods 30.

To the other pair of the ends of these rods 30, beyond the other pair of U-shaped offsets 31, is secured, as by welding, a second cross rod or support 40 which is of U-shaped form, the rod having a central horizontal cross part 41 bridging and welded to this other pair of extremities of the rods 30, in parallel relation to the offsets 31, arms 42 having inner portions 43 forming laterally extending, diverging continuations of the ends of the cross part 41 and also having outer generally parallel portions 44 forming continuations of the inner portions 43, and extensions 45 of the outer ends of the outer portions 44 of the arms 42. These extensions 45 extend generally parallel with the major axis of the extinguisher and are spaced so that when the extinguisher 10 is in the bracket, one of these extensions engages the outer side face of the outboard end 26 of the latch and handle lever 22, as best shown in FIG. 3, while the other extension 45 is in closely spaced relation to the opposite side of the shell 11 of the extinguisher.

The bracket is completed by a spring metal clip indicated generally at 46. This clip is in the form of a flat strip of spring metal formed at one end with a tubular eye or knuckle 48 which embraces and turns on the extension 45 on the left side of the bracket as viewed in FIG. 1. This strip is also formed with a curved segment 49 forming a continuation of the knuckle 48 and curved to conform to and embrace the cylindrical wall of shell 11 of the extinguisher as best shown in FIG. 3. This strip is also formed to provide a curve offset 50 forming a continuation of the segment 49, this offset 50 being offset away from the axis of the segment 49 and terminating in a U-shaped catch 51 which projects generally toward this axis and in position to yieldingly engage jointly both the rear side of the adjacent extension 45, and also the end 26 of the latch and handle lever 22 of the fire extinguisher. The U-shaped catch 51 is continued to form a large finger piece 52 which extends obliquely outwardly toward the support surface or wall W so that it can readily be manually pulled away from the support surface to withdraw the U-shaped catch 51 from behind its upstanding extension 45 so that the clip 46 can be swung out around the axis of its knuckle 48 to provide ready access to the fire extinguisher.

In use, the rods 30 are secured to its support surface or wall W by bolts or screws 32 through the pairs of U-shaped offsets 31 and anchored in the support surface as shown in FIG. 3. The fire extinguisher is inserted by fitting its closed end snugly against the arms 35 and snugly among the adjacent extremities of the rods 30 and the yielding upstanding caps 38 at the outboard ends of these arms 35.

The extinguisher is then brought generally parallel with the rods 30 and the spring clip 46 swung inwardly until its U-shaped catch 51 latches behind the corresponding extension 45 as shown in FIG. 3. In this position the segment 49 of the clip yieldingly embraces the side of the extinguisher shell 11 and holds it yieldingly and snugly against the cross support or rod 40 at two places, namely, the center of its cross piece 41 and the inner portion of one of its arms 42. In this position the free end 26 of the latching and handle lever 22 is yieldingly held against the side of the shell 11 by the U-shaped catch 51 which engages it.

Removing the extinguisher is a simple matter of pulling on the large finger piece 52 to withdraw the U-shaped catch 51 of the clip 46 from behind its extension 45; swinging the clip 46 out around the other extension 45 as a pivot; and withdrawing the extinguisher.

It will be seen that the bracket consists of but five metal parts, namely, the pair of rods 30, cross rod 33, cross rod 40 and clip 46, plus the two caps 38 of soft resilient yielding material. It will also be seen that only

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one tempered steel spring clip 46 is required. Also this clip latches the extinguisher handle and latch lever 22 to the side of the shell 11 to prevent use of the squeeze lever 13 without dismounting the extinguisher. Likewise the finish of the extinguisher is not scuffed in removing it from and replacing it in the bracket.

I claim:

1. A bracket for supporting a fire extinguisher, comprising a pair of laterally spaced generally parallel metal members adapted to be fastened to a support surface, a first metal cross support forming the sole connection between one pair of extremities of said members and being formed to support one end of the extinguisher, a second metal cross support forming the sole connection between the other pair of extremities of said members and having arms extending part way around the corresponding end of the extinguisher, and means releasably holding said corresponding end of said fire extinguisher between said arms, comprising an integral extension at the outboard end of each of said arms extending generally parallel with the major axis of the extinguisher, a spring metal clip having one end formed into a knuckle pivotally embracing one of said extensions and having its opposite end formed into a U-shaped catch engaging the side, facing the support surface, of the other of said extensions, said clip yieldingly embracing the extinguisher to hold it against at least one of said arms of said second metal support.

2. A bracket as set forth in claim 1 wherein the free end of said U-shaped catch is continued in the form of a finger-piece directed obliquely toward the support surface.

3. A bracket for supporting a fire extinguisher against a support surface, comprising a pair of laterally spaced generally parallel rods, a single first cross rod having a central crosspart welded to and bridging the space between one pair of extremities of said pair of rods, arms forming laterally extending continuations of the ends of said crosspart and extending away from said pair of rods, and extensions at the outboard ends of said arms extending laterally toward the adjacent end of said extinguisher, said adjacent end of the extinguisher being contained among said pair of rods and said extensions at the outboard ends of said arms, a single second cross rod having a central crosspart welded to and bridging the space between the other pair of extremities of said pair of rods, arms forming laterally extending continuations of the ends of said crosspart of said second cross rod and extending away from said pair of rods, and extensions at the outboard ends of said arms of said second cross rod extending generally parallel with the major axis of the extinguisher, and a spring metal clip having one end formed into a knuckle pivotally embracing one of said last mentioned extensions and having its opposite end formed into a U-shaped catch engaging the side, facing the support surface, of the other of said last mentioned extensions, said clip yieldingly embracing the extinguisher to hold it against at least one of said arms of said second cross rod.

4. A bracket as set forth in claim 3 wherein the free end of said U-shaped catch is continued in the form of a finger-piece directed obliquely toward the support surface.

5. A bracket for supporting a tubular fire extinguisher, comprising a pair of single metal rods arranged to extend longitudinally of and along one side of the outer peripheral face of said fire extinguisher and arranged in laterally spaced, generally parallel side-by-side relation to each other and adapted to engage a support surface, a first single metal cross rod fastened to bridge and form the sole connection between one pair of extremities of said longitudinally extending rods and having extensions extending away from said support surface and terminating in ends extending generally parallel with said longitudinally extending rods along the opposite side of the outer peripheral face of said fire extinguisher, the ad-

jacent end of said first extinguisher adapted to be contained between said ends of said first cross rod and said longitudinally extending rods, a second single metal cross rod fastened to bridge and form the sole connection between the other pair of extremities of said longitudinally extending rods and having extensions extending away from said support surface to embrace said one side of the outer peripheral face of said fire extinguisher and terminating in ends extending generally parallel with said longitudinally extending rods, means pivotally embracing one of said ends of said second cross rod and having its opposite end formed into a catch engaging the other of said ends of said second cross rod for yieldingly engaging the other side of the outer peripheral face of said

fire extinguisher to hold it against displacement from the bracket.

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CLAUDE A. LE ROY, *Primary Examiner*.

FRANK L. ABBOTT, *Examiner*.