Oct. 22, 1940. W. L. ROESSNER 2,218,856

RETAINING AND SUSPENDING DEVICE

Filed May 29, 1939

Fig. 1.

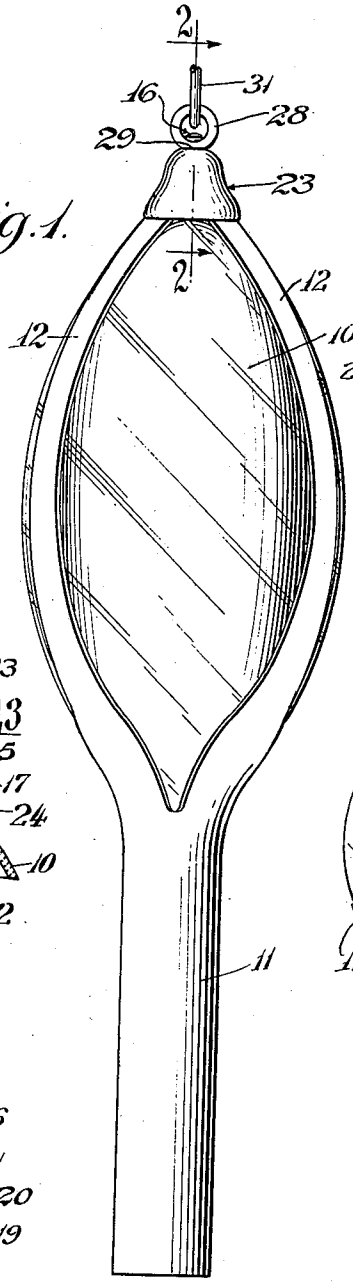


Fig. 2.

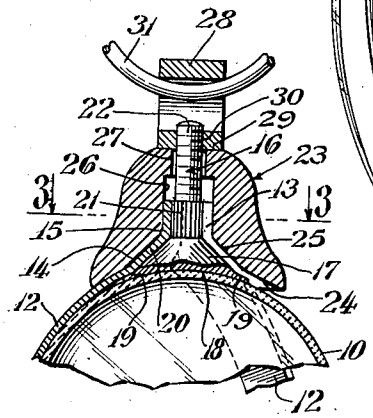
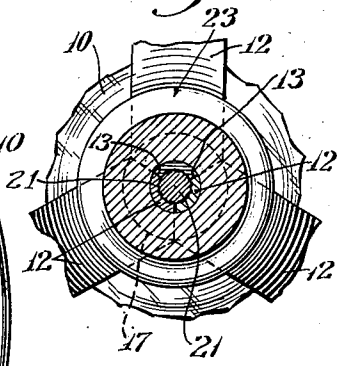


Fig. 3.



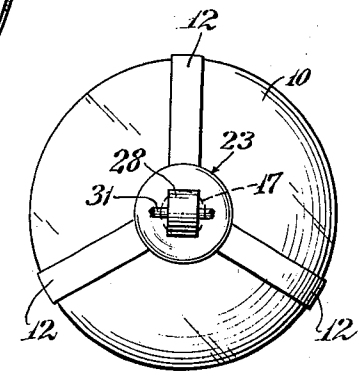
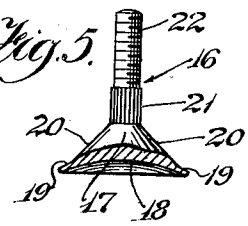


Fig. 4.

Fig. 5.



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RETAINING AND SUSPENDING DEVICE

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Application May 29, 1939, Serial No. 276,279

3 Claims. (Cl. 169—36)

This invention relates to retaining and suspending devices and particularly to a device for retaining in assembled relation a plurality of separate parts.

In the embodiment of my invention herein shown and described, the retaining device serves to retain in assembled relation the unconnected free ends of the metal frame members of a fire extinguisher of the grenade type, in which embodiment it also serves as means for suspending the extinguisher. However, the retaining means may be employed in devices which need not be suspended.

The retaining device of my invention is best adapted for use in assembling the unconnected free ends of two or more members which are intended to extend radially, with or without curving or inclination, relatively to said retaining device.

The suspending means is designed to serve also in the assembling of the retaining device and the parts to be retained by it.

The retaining device may be used to advantage in structures where the unconnected parts to be retained cannot be welded or otherwise connected to each other, and where space for a retaining member is limited.

In the drawing:

Fig. 1 is an elevational view of a fire extinguisher grenade in which the unconnected upper ends of the metal frame members are retained by a retaining and suspending device embodying my invention.

Fig. 2 is a vertical sectional view, on an enlarged scale, taken in the plane of the line 2—2 of Fig. 1.

Fig. 3 is a horizontal sectional view, taken in the plane of the line 3—3 of Fig. 2.

Fig. 4 is a plan view of the device shown in Fig. 1.

Fig. 5 is an elevation, partly in section, of the screw member detached.

In that embodiment of the invention shown in the drawing, the retaining and suspending device is embodied in a fire extinguishing grenade, wherein it is employed to retain the free ends of the metal frame members of the grenade and to suspend the grenade from a support. However, the invention may be embodied in other devices for similar purposes.

The fire extinguishing grenade comprises a glass container 10 for fluid chemical and a metal handle 11 having three upwardly extending frame members 12 engaging the container 10. The free upper ends of the frame members 12 are cut away at each side, as indicated at 13 in Fig. 3, to accommodate the ends within a small area at the apex of the container 10. Preferably the cut away ends are bent as indicated at 14 and 15 in Fig. 2.

A specially shaped screw, indicated at a whole at 16, comprises a head 17 which has a concave surface 18 adapted to rest on the rounded upper end of the container 10. The head 17 is inclined, as indicated at 19 and 20, from its periphery to a shank which is knurled adjacent the head as indicated at 21, and screw threaded from the knurled portion to its free end, as indicated at 22. The head 17 of the inverted member 16 fits beneath the free ends of the frame members 12.

A bell shaped hood 23, recessed and bored centrally as indicated at 24, 25, 26 and 27, is adapted to fit over the screw 16 and ends of the frame members 12, the inclination of the surfaces 24 and 25 being correlated with the surfaces 19 and 20 to receive between them the frame ends. After the hood 23 has been positioned on the screw 16 and frame ends, it may be retained by means of a nut screwed on the end 22 of the shank, but I prefer to use for this purpose a device 28 which serves not only to retain the hood 23 in place but to suspend the extinguisher or other mechanism to which my invention may be applied.

The knurling 21 on the shank of the screw 16, frictionally engaging the free ends of the frame members 12, prevents the screw 16 from turning in the assembly when the device 28 is screwed into place to draw the hood 23 and the head of the screw toward each other and to clamp the free ends of the frame members in assembled position between said hood 23 and the head 17 of the screw.

The device 28 is a short tube provided with a slightly flattened surface 29 at one side and a screw threaded bore 30 through said flattened side. When the device 28 is screwed on the shank 22 of the screw 16, it bears on the flattened top of the hood 23, and the head 17 of the screw is drawn toward the inner surfaces 24, 25 and 26 of the hood, thereby firmly gripping the ends of the frame members 12 between them. The axis of the tubular member 28 is horizontally disposed and adapted to receive a ring or loop 31 for hanging the extinguisher on a hook or other fixed support (not shown).

Changes may be made in details of construction without departing from the scope of my invention.

I claim:

1. In combination with a fire extinguisher of the grenade type having a plurality of relatively movable, radially extending frame members, means for assembling the free ends of said frame members, said means comprising an inverted headed screw having inwardly and upwardly inclined surfaces between the periphery of the head and the shank of the screw on which said frame members bear, a bored and recessed hood fitted over the shank of said screw and on said frame members, and means on the shank drawing the headed screw and frame members into the recessed hood.

2. In combination with a fire extinguisher of the grenade type having a plurality of relatively movable, radially extending frame members, means for assembling the free ends of said frame members, said means comprising an inverted headed screw having inwardly and upwardly inclined surfaces between the periphery of the head and the shank of the screw on which said frame members bear, a bored and recessed hood fitted over the shank of said screw and on said frame members, and means on the shank drawing the headed screw and frame members into the recessed hood, said last mentioned means including a suspension device and screw threads for engaging the screw threaded end of the shank.

3. In combination with a fire extinguisher of the grenade type having a plurality of relatively movable, radially extending frame members, means for assembling the free ends of said frame members, said means comprising an inverted headed shank on which said frame members bear, a recessed hood fitted over the shank and on said frame members, and means on the shank bearing on the hood and retaining said frame members between the headed shank and hood.

WILLIAM LOUIS ROESSNER.