

Oct. 27, 1953

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2,656,958

PORTABLE PUMP APPARATUS OF THE SHOULDER PACK TYPE

Filed Feb. 18, 1950

Fig. 1

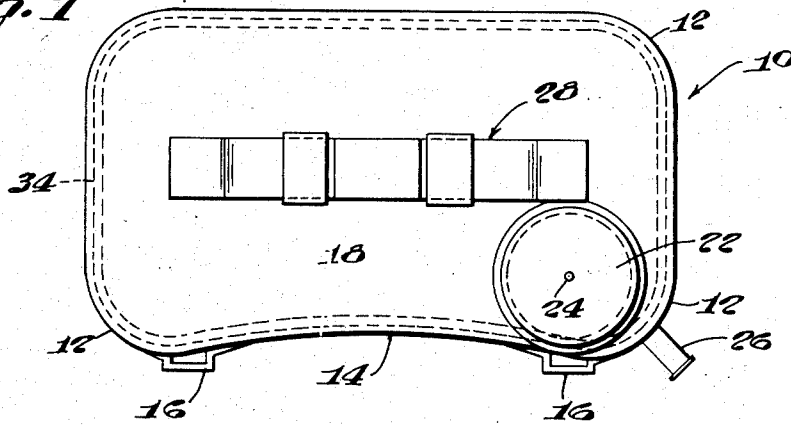
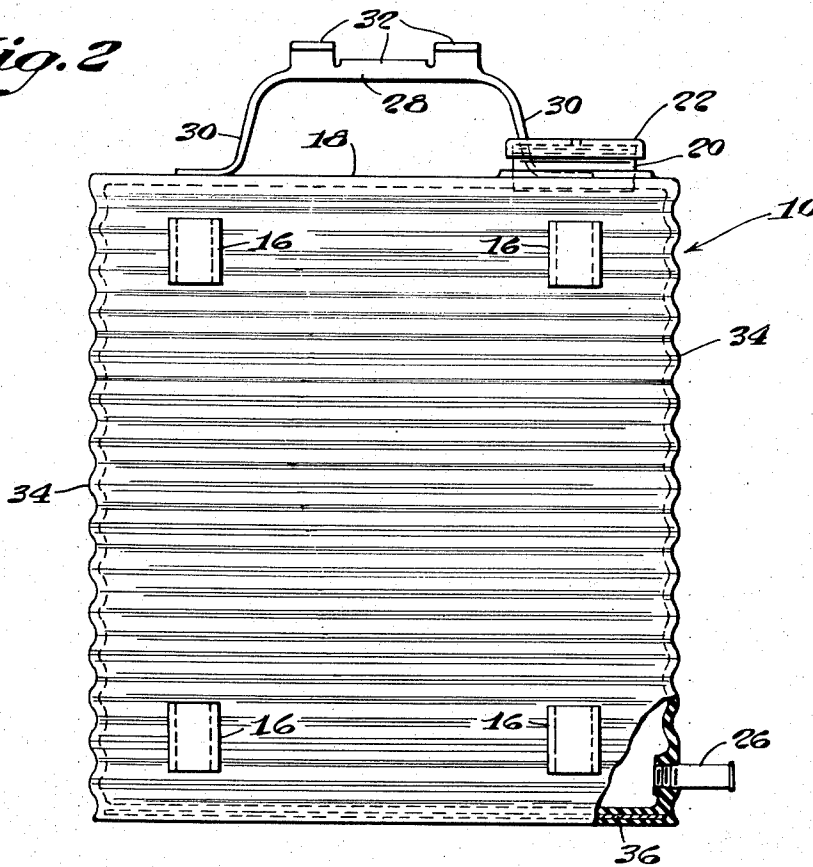


Fig. 2



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2,656,958

PORTABLE PUMP APPARATUS OF THE SHOULDER PACK TYPE

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Application February 18, 1950, Serial No. 145,014

1 Claim. (Cl. 224-5)

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This invention relates to portable pump apparatus of the shoulder pack type, and more particularly to a novel container for the liquid to be pumped by such apparatus.

The invention has for an object to provide a novel and improved container for embodiment in portable pump apparatus of the shoulder pack type which is light in weight, conformable to the back of the wearer, and of a non-corrodible nature.

A further object of the invention is to provide a novel container of the character specified which may be collapsed into small volume when not in use for shipping and storage purposes.

With these general objects in view and such others as may hereinafter appear, the invention consists in the container for portable pump apparatus of the shoulder pack type hereinafter described and particularly defined in the claim at the end of this specification.

In the drawing illustrating the preferred embodiment of the invention, Fig. 1 is a plan and Fig. 2 a front elevation with a portion broken away and shown in section of a container for portable fire extinguishing apparatus of the shoulder pack pump type.

Prior to the present invention portable fire extinguishing apparatus of the shoulder pack pump type has been extensively used for fighting forest fires and for fighting other fires in more or less remote places where a supply of water under pressure is not available. This type of apparatus as heretofore constructed has included a metal container or tank to which a hand pump is operatively connected. The tank is of a size sufficient to hold a substantial quantity of a fire extinguishing liquid such as water, and in practice these tanks have usually been of a five-gallon capacity. The metal container when filled with five gallons or other quantity of water or other extinguishing liquid represents a relatively heavy load for the operator and the metal of the container when strapped to the back by suitable straps extending over the shoulder becomes uncomfortable for the wearer after the apparatus has been worn for any substantial length of time.

The present invention contemplates a construction of container particularly useful in fire extinguishing apparatus of the shoulder pack pump type which may be worn by the operator with maximum comfort, is economical to manufacture, corrosion resisting, relatively light in weight, and which may be collapsed into relatively small volume for shipping and storage purposes.

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Referring now to the drawing, 10 represents the present container for the fire extinguishing liquid of portable extinguishing apparatus of the shoulder pack pump type. The container 10 in accordance with the present invention is made of a flexible resilient waterproof material of a size comparable to the size of the metal containers heretofore embodied in fire extinguishing apparatus of this type. For most purposes the container 10 will be of a size sufficient to hold five gallons of the extinguishing liquid such as water. While various materials may be utilized in the production of the container, I prefer to mold the container of rubber or rubber composition in the general shape illustrated in the drawing in which the top and bottom of the container are flat and the side walls corrugated or plaited for a purpose to be described. As herein shown, the corners 12 of the container are preferably rounded and the side wall 14 concave to conform generally to the back of the wearer. The side wall 14 may and preferably will be provided with metal belt clips 16 molded in or vulcanized to the side wall 14 for the reception of the usual shoulder straps by which the container and its load of extinguishing liquid may be supported on the back of the wearer with the straps extended over the shoulders in accordance with the usual practice when shoulder pack pump types of extinguishers are worn.

The upper wall 18 of the container may and preferably will be provided with a filling opening for the introduction of the extinguishing liquid into the container, and as herein shown a metal nipple 20 is molded or vulcanized into the upper wall 18 and the nipple is provided with a removable cap or closure 22 screwed onto the threaded nipple. The cap is provided with a vent opening 24 for permitting the introduction of air when the extinguisher is being used. The lower portion of the container is provided with a metal outlet nipple 26 herein shown as vulcanized or molded in the lower portion of one corner of the container, as shown. The upper wall 18 may also be provided with a handle 28 to enable the container to be conveniently transported prior to its application to the back of the wearer, and preferably the legs 30 of the handle may be molded or vulcanized in the rubber of the upper wall to be securely attached thereto.

The usual hand pump, not shown, has the inlet thereof connected by a flexible hose to the discharge nipple 26 of the container, and the usual outlet hose from the pump enables the operator to direct the stream of extinguishing liquid at

the fire. In order to enable the pump to be conveniently carried, the handle 28 of the container is provided with suitable metal clips 32 for the reception of the pump so that when the complete apparatus is assembled, the pump may be conveniently carried on top of the handle.

The side walls of the body portion of the container are preferably corrugated or plaited horizontally, as indicated at 34, so that an empty container may be readily collapsed into a relatively small volume to enable it to be conveniently packed, shipped or stored, and in practice the upper and lower walls of the container may be provided with reinforcing metal plates, one of which is shown at 36 molded into the rubber constituting such walls.

While I prefer to produce the present container of rubber, it will be understood that other suitable flexible waterproof materials may be used, such as fabrics impregnated with rubber or with suitable synthetic resinous materials now on the market.

In use the present conformable container may be worn with much more comfort than the prior metal containers, and in addition the collapsible construction of the container enables the same to be stored, shipped and packed in a relatively small volume.

While the present construction of shoulder pack pump unit is particularly useful as a fire extinguisher of this type, nevertheless it will be observed that the non-corrodible nature of the container lends itself particularly to the use of the pump unit for spraying and other purposes where liquid insecticides or the like often present serious problems because of their corrosive nature.

Having thus described the invention, what is claimed is:

A container for a portable pump apparatus of the shoulder pack type comprising a resiliently flexible and hollow body portion having substantially rectangular top, bottom and four side walls, the top and bottom walls being provided with metal reinforcing plates therein to preserve the substantially rectangular shape of the container when it is filled with liquid, the four intervening side walls being readily flexible and provided with a series of transversely extended corrugations formed thereacross generally parallel to said top and bottom walls and with their crest portions extending outwardly at least as far as the boundaries of said top and bottom walls whereby said crests engage the wearer's back and support said container therefrom, the flexible side wall adapted to contact the wearer's back being concave for flexible conformity to the wearer's back, the concave portion thereof being of a width equal to the width of an average man's shoulders and said back contacting flexible side wall provided with shoulder-strap clips spaced thereon such that shoulder straps fastened thereto will rest comfortably on and over the shoulders of the wearer when the liquid-filled container is worn.

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