

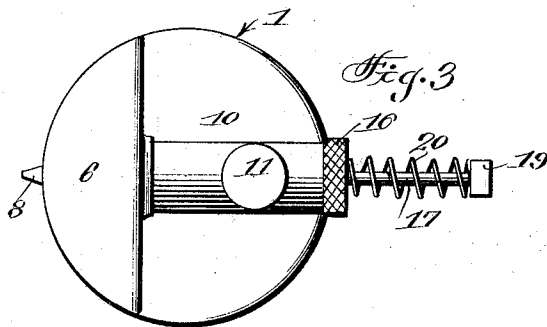
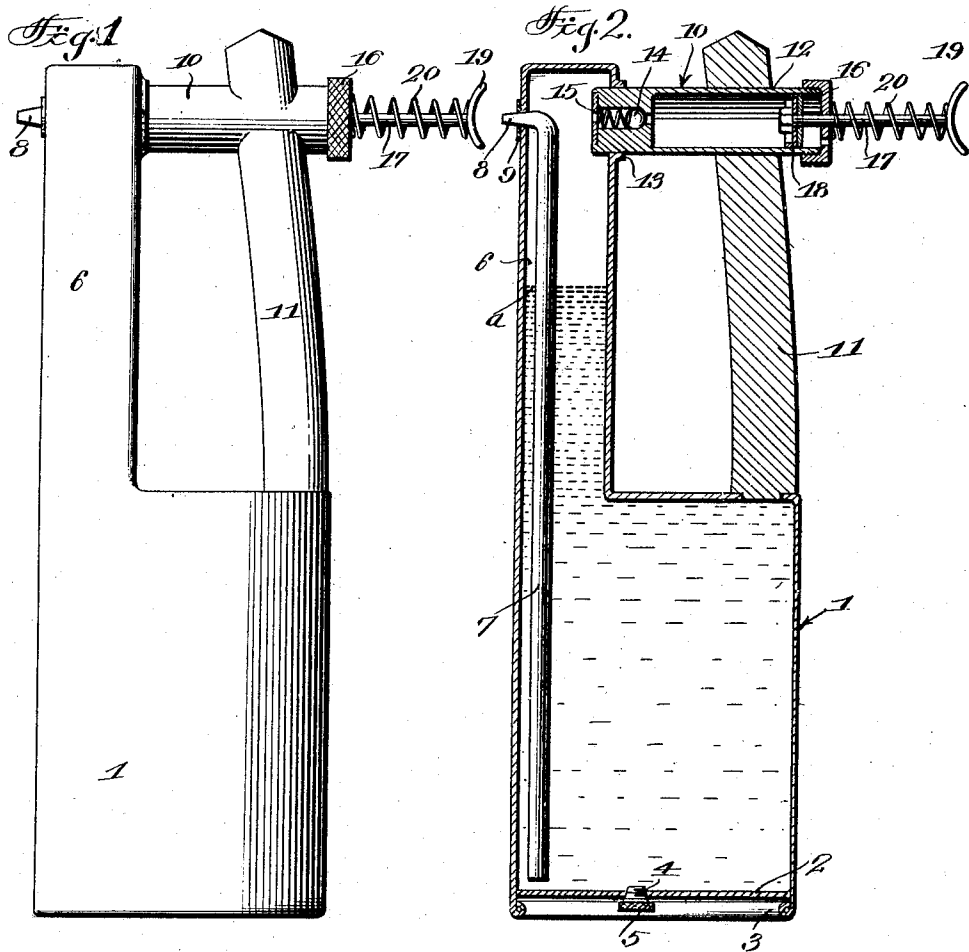
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FIRE EXTINGUISHER

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FIRE EXTINGUISHER

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This invention relates to portable fire extinguishers and a primary object thereof is to so construct a device of this character that it may be operated with one hand only while continuously discharging a stream of fluid.

Another object of the invention is to so construct a device of this character that a minimum amount of compressed air is required to create the necessary pressure so that one stroke will start the liquid flowing.

Another object is to construct a device of this character so that it is extremely simple and cheap to manufacture and yet has all of the advantages of the more expensive type.

In carrying out these objects, the invention is susceptible of a wide range of modification without departing from the spirit or sacrificing any of the advantages of the claimed invention; there being shown in the drawings for illustrative purposes a preferred and practical form, in which:

Figure 1 is a side elevation of a fire extinguisher constructed in accordance with this invention;

Fig. 2 is a vertical sectional view thereof; and

Fig. 3 is a top plan view.

In the embodiment illustrated a container 1 is shown in the form of a cylinder preferably of metal of such character as to be unaffected by the extinguishing fluid to be contained therein. This vessel or can 1 which may be of desired size, preferably small enough to be easily supported by one hand of a person after it has been filled with the extinguishing fluid. As shown, the bottom of this can numbered 2 is spaced above its lower rolled edge 3 so that the latter forms a support for the can 1 when it is placed on a shelf or other surface without the bottom 2 contacting with said surface. This is for the purpose of mounting within said bottom 2 a filling opening 4 closed by a removable screw plug 5 to provide for the filling of the can with the extinguishing fluid which may be of any desired character such as that ordinarily used in extinguishers of this kind. This can 1 has a hollow extension 6 at one side of its upper end the interior of which communicates with the interior of the body

of the can and is designed to receive the extinguishing fluid to a level about that indicated at *a* in Fig. 2. The space above this liquid level line *a* being intended as the pressure air space which is supplied by means of a pump 10 in a manner presently to be described. This can 1 and its extension 6 is closed air tight and a liquid discharge or outlet pipe 7 is located at one side of the container which registers with the extension 6. This pipe 7 the lower end of which is open extends to a point near the bottom of the container as shown clearly in Fig. 2 and at the upper end thereof is provided with a laterally extending nozzle 8 which projects through one side wall of the hollow extension 6 and is surrounded by a gasket or washer 9 to form an air tight connection at this point.

This nozzle 8 is designed for spraying or discharging the fluid from the container, which is accomplished by means of air pressure in the air chamber of hollow extension 6. This pressure bearing down on the fluid forces it up through the pipe 7 and causes its discharge through the nozzle 8 in a continuous stream.

Projecting upwardly from the top of the container 1 at a point opposite the hollow extension is a handle 11 here shown made of solid material although obviously it need not be so made. This handle 11 projects preferably slightly above the top of the extension 6 and has an opening 12 extending transversely therethrough which registers with a similar opening 13 formed in the inner wall of the extension 6. These openings are designed to receive an air pump the discharge end of which opens into the air chamber in hollow extension 6 and is provided with a check valve 14 held normally seated by a coiled spring 15.

The outer end of the pump barrel 10 is equipped with a removable cap 16 through which slidably operates a plunger rod 17 the inner end of which carries a piston 18 mounted to reciprocate in the pump barrel and when moved forward will compress the air in said cylinder and force it out into the air chamber in hollow extension 6 the air pressure operating of course to unseat the

check valve 14 when this operation is being performed. The outer end of the plunger or piston rod 17 is provided with a thumb receiving member 19 against which pressure is designed to be brought to bear to force the plunger 18 forward to compress the air for operating the extinguisher.

A coiled spring 20 encircles the piston rod 17 and bears at one end against the cap 16 and at its other end against the thumb engaging member 19 and is designed to exert its tension to move the plunger outward on its return stroke when pressure is removed from said member 19.

In the use of this fire extinguisher the handle 11 is gripped by the fingers of the user and the thumb of said hand is engaged in the saddle-like seat 19 on the outer end of the plunger rod to force the plunger inward and as soon as the pressure is released the spring 20 will return the plunger, so that by continually pressing and releasing this device the pressure fluid within the air chamber of hollow extension 6 is so maintained that it will bear down on the liquid and force it out through the pipe 7 and discharge it through the nozzle 8 thus throwing a continuous stream of liquid until the container is emptied. The air chamber of hollow extension 6 is purposely made small so that very little air is required to create a sufficient pressure therein, one stroke of the pump being all that is necessary to start the liquid flowing.

It is of course understood that the container may be refilled by removal of the plug 5 and the inversion of the container to permit such filling.

From the above description it will be obvious that this fire extinguisher will be very light and easily handled, being capable of being easily held in one hand and operated by the thumb in the manner above described thus leaving the other hand of the operator free for any purpose desired.

Without further description it is thought that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will, of course, be understood that changes in the form, proportion and minor details of construction may be resorted to, without departing from the spirit of the invention or its scope as claimed.

We claim:

1. A fire extinguisher comprising an extinguishing fluid reservoir, an extension chamber leading therefrom and communicating therewith, a discharge pipe located in said reservoir and opening through one wall of said extension chamber, said pipe being in communication with the reservoir, an air pump mounted on said reservoir and discharging into said extension above the liquid level thereof, said pump having a plunger rod located in position to be operated by the hand which supports the reservoir.

2. A fire extinguisher comprising an extinguishing fluid container having an extension at its upper end at one side thereof and an upwardly extending hand grip at the other side, an air pump supported by said hand grip and discharging into said extension, said pump having a check valve in its discharge end, a plunger in said pump having a stem provided with a finger grip located adjacent said handle for operation by one of the fingers of the hand which grasps the handle, and a discharge pipe leading from a point near the bottom of the reservoir and opening through one wall of said extension.

3. A fire extinguisher comprising an extinguishing fluid container having an extension at its upper end at one side thereof and an upwardly extending hand grip at the other side, an air pump supported by said hand grip and discharging into said extension, said pump having a check valve in its discharge end, a plunger in said pump having a stem provided with a finger grip located adjacent said handle for operation by one of the fingers of the hand which grasps the handle, a discharge pipe leading from a point near the bottom of the reservoir and opening through one wall of said extension, and provided with a discharge nozzle, and means for automatically returning the pump plunger to initial position after it has been operated.

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