No. 649,657. Patented May 15, 1900.

D. W. DIGGS.

FIRE EXTINGUISHER.

(Application filed Mar. 8, 1899.)

(No Model.)

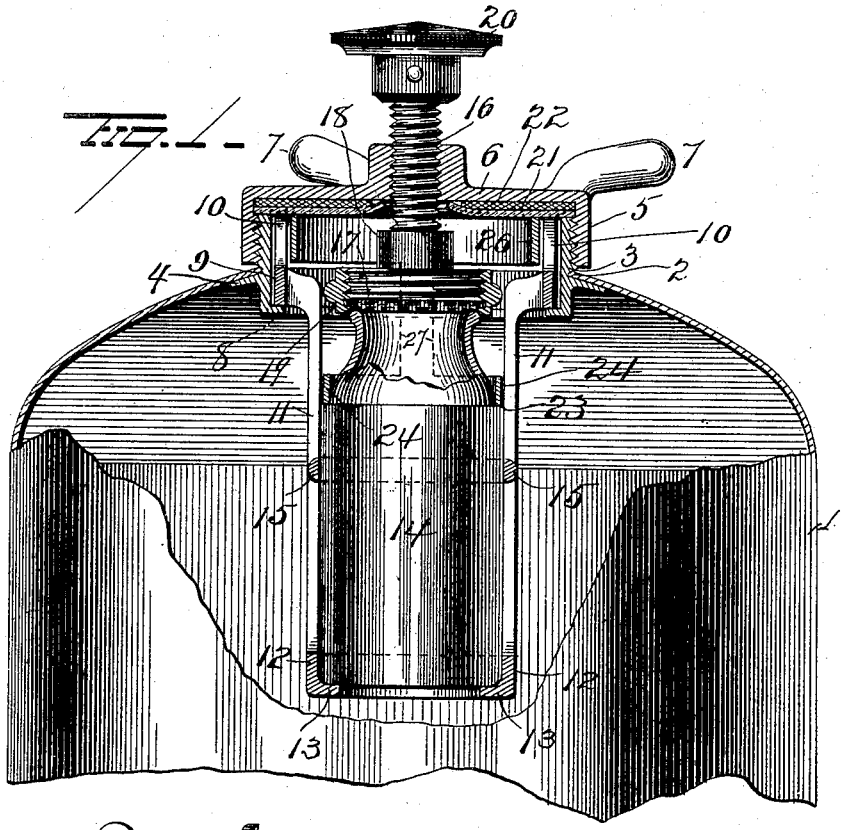

FIG. 1.

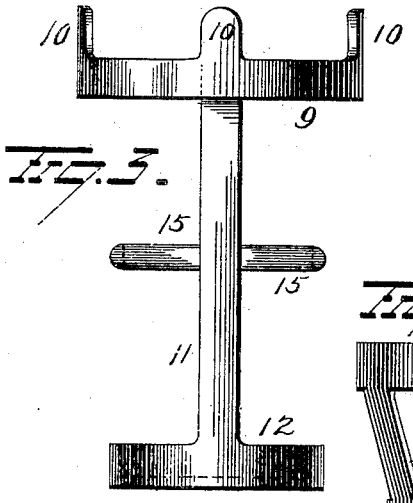

FIG. 3.

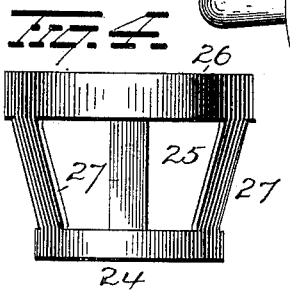

FIG. 4.

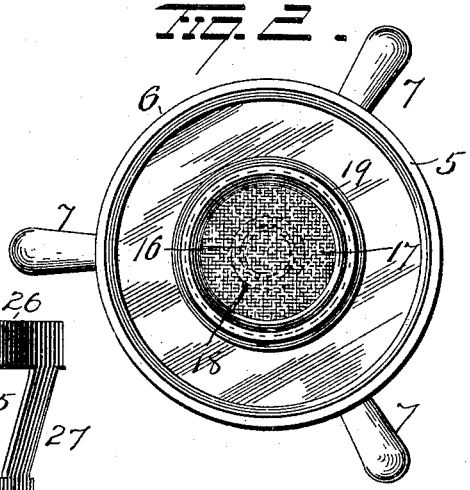

FIG. 2.

WITNESSES

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FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 649,657, dated May 15, 1900.

Application filed March 8, 1899. Serial No. 708,239. (No model.)

To all whom it may concern:

Be it known that I, DABNEY W. DIGGS, a resident of New York, borough of Manhattan, and State of New York, have invented certain new and useful Improvements in Fire-Extinguishers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in fire-extinguishers, and more particularly to chemical-mixing fire-extinguishers, one object of the invention being to provide a fire-extinguisher which will be simple in construction, comparatively cheap to manufacture, easy to operate, and most effectual when in use.

A further object is to so construct a fire-extinguisher that it can be readily charged, discharged, and recharged without injury to any part of the apparatus.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in section illustrating my improvements, and Figs. 2, 3, and 4 are views of details.

1 represents a cylindrical receptacle adapted to contain alkaline or other liquid and contracted at its upper end and provided with a screw-threaded opening 2 in its upper contracted end for the reception of an externally-screw-threaded ring 3. The ring 3 is of sufficient height to project above and into the receptacle 1 and is provided near its lower end with a peripheral flange 4 to form a seal against the receptacle and prevent the escape of the liquid therefrom. The upwardly-projecting screw-threaded ring 3 is adapted to engage internal screw-threads on a downwardly-projecting peripheral flange 5 of a cap 6. The cap 6 is provided at points around its periphery with suitable projections or handholds 7 to facilitate turning same to more securely lock the parts together.

The ring 3 is provided at its lower end with an internal annular shoulder 8 to support a ring 9, having upwardly-projecting lugs 10 thereon, for a purpose more fully hereinafter explained. Downwardly-projecting arms 11 are secured to the inner face of the ring 9 at diametrically-opposite points and are provided at their lower ends with a ring 12, having an inwardly-projecting flange 13 to form a seat for a bottle 14, preferably of metal, having tin or other non-corrodible lining so treated as to resist the action of the chemical contained therein. The arms 14 are provided between their ends with a ring 15 to insure the retention of the bottle 14 in proper position. The rings 9, 12, and 15 and arms 11 constitute a cage for the reception of the bottle 14.

The cap 6 is provided centrally with a screw-threaded hole or opening for the passage of a screw 16, provided on its lower end with a stopper 17, having an upwardly-projecting sleeve or collar 18 for the reception of the end of the screw 16. A collar 19 is screwed on the stopper 17 and hold on its lower face thereof a packing or filling of asbestos mixed with rubber or treated with paraffin, lead, or other non-corrodible material. The screw 16 is provided on its upper end with a suitable milled head or knob 20 for turning same to raise and lower the stopper 17.

In order to prevent the corrosion of the metal of the cap when the acid or chemical escapes from the bottle, I provide a lead disk 21 in said cap and a cork or rubber disk 22 above said lead disk, and it will be seen that when the screw is turned to release the acid or chemical contained in the bottle the collar or sleeve 18 on the stopper will be crowded against the packing-disk 21, and thus prevent the escape of liquid through the threaded opening in the cap.

The bottle 14 is provided near its upper end with a peripheral shoulder 23, against which a ring 24 of a frame 25 rests. The frame 25 comprises the lower ring 24, an upper ring 26, and connecting-arms 27. The ring 26 is disposed against the disk 21, and the arms 27 are of sufficient length to hold the bottle 14 in its normal position when the receptacle 1 is turned upside down to release the acid or chemical contained in the bottle. The lugs 10, heretofore referred to, are of sufficient height to rest against the disk 21,

and hence the cage will always be maintained in its proper position.

The operation of my improved apparatus is as follows: When it is desired to use the extinguisher, it is simply necessary to unscrew the screw 16, which will uncover the bottle 14, and the apparatus is turned upside down and the bottle 14 will be held in its proper position by the frame 25 to permit the mixing of the two chemicals to form a fire-extinguishing composition, which is directed on the flames by a suitable hose 28, communicating with an opening in the receptacle 1.

It will be seen that my improved apparatus can be readily recharged by simply removing the cap 6, and that no damage is done to any part of the apparatus by use, as is so common with the extinguishers now employed.

Various slight changes might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I would have it understood that I do not wish to limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a fire-extinguisher, the combination with a receptacle, of a ring projecting through the end thereof and provided at its inner end with an internal annular flange, a cap screwed on said ring, a cage depending within the receptacle and provided at its upper end with a ring clamped between the internal annular flange of the first-mentioned ring and said cap, a bottle supported in said cage, a frame between the bottle and cap and pressed by the latter against the bottle to retain it in place, a cover for the bottle, and a screw for said cover passing through the cap.

2. In a fire-extinguisher, the combination with a receptacle and a ring projecting through the end of the receptacle and provided at its lower or inner end with an internal flange, of a cap screwed on said ring, a cage held rigidly by said cap and the internal flange in the first-mentioned ring, a metal bottle supported in said cage, means for preventing endwise movement of the metal bottle, non-corrodible material on the inner face of the cap, a screw passing through the cap, a cover for the metal bottle at the lower or inner end of the screw and a collar on the screw to pack the opening through which the screw passes when the cover is moved from the bottle to prevent the escape of the chemical through the cap.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

DABNEY W. DIGGS.

Witnesses:
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