

No. 835,050.

PATENTED NOV. 6, 1906

F. YOST.  
FIRE EXTINGUISHER.  
APPLICATION FILED NOV. 20, 1905.

FIG. 1

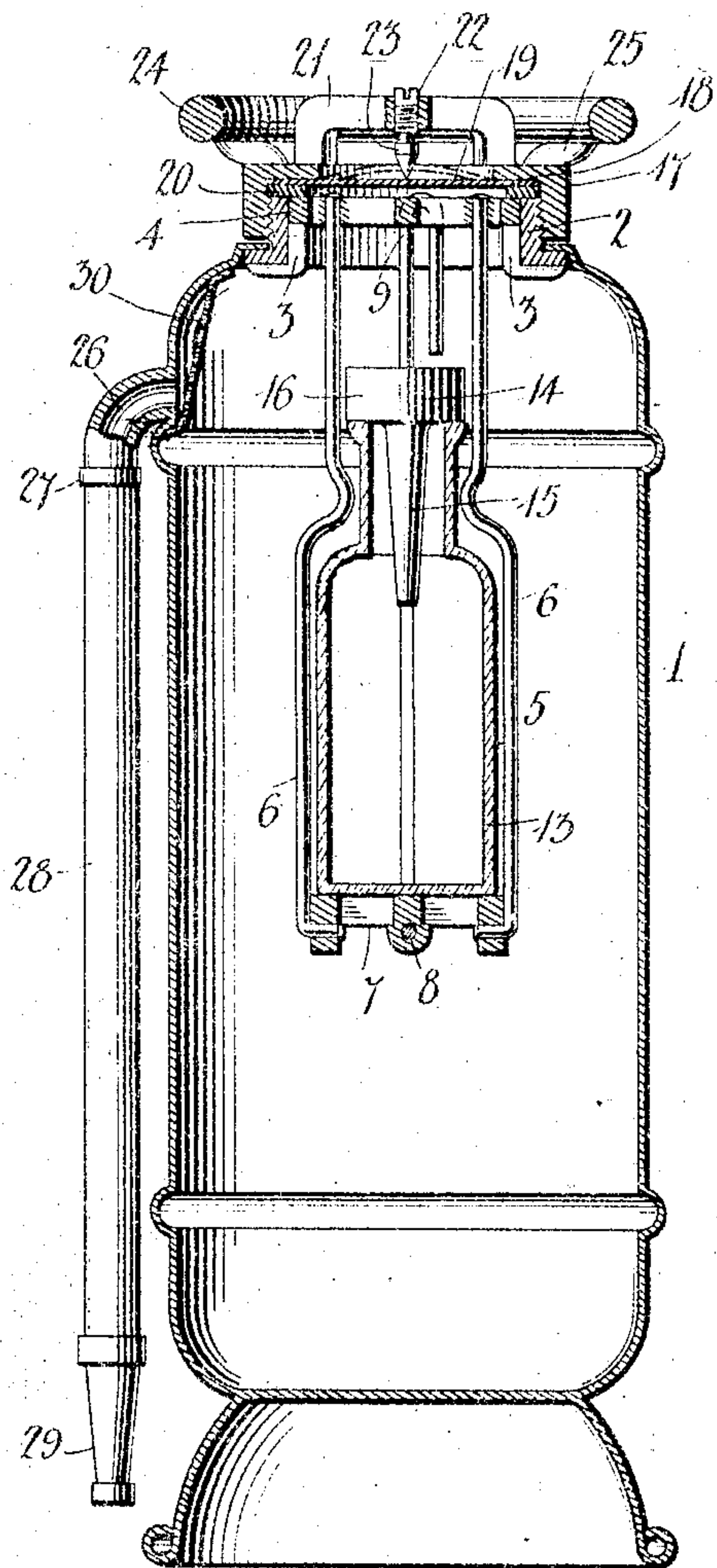


FIG. 2

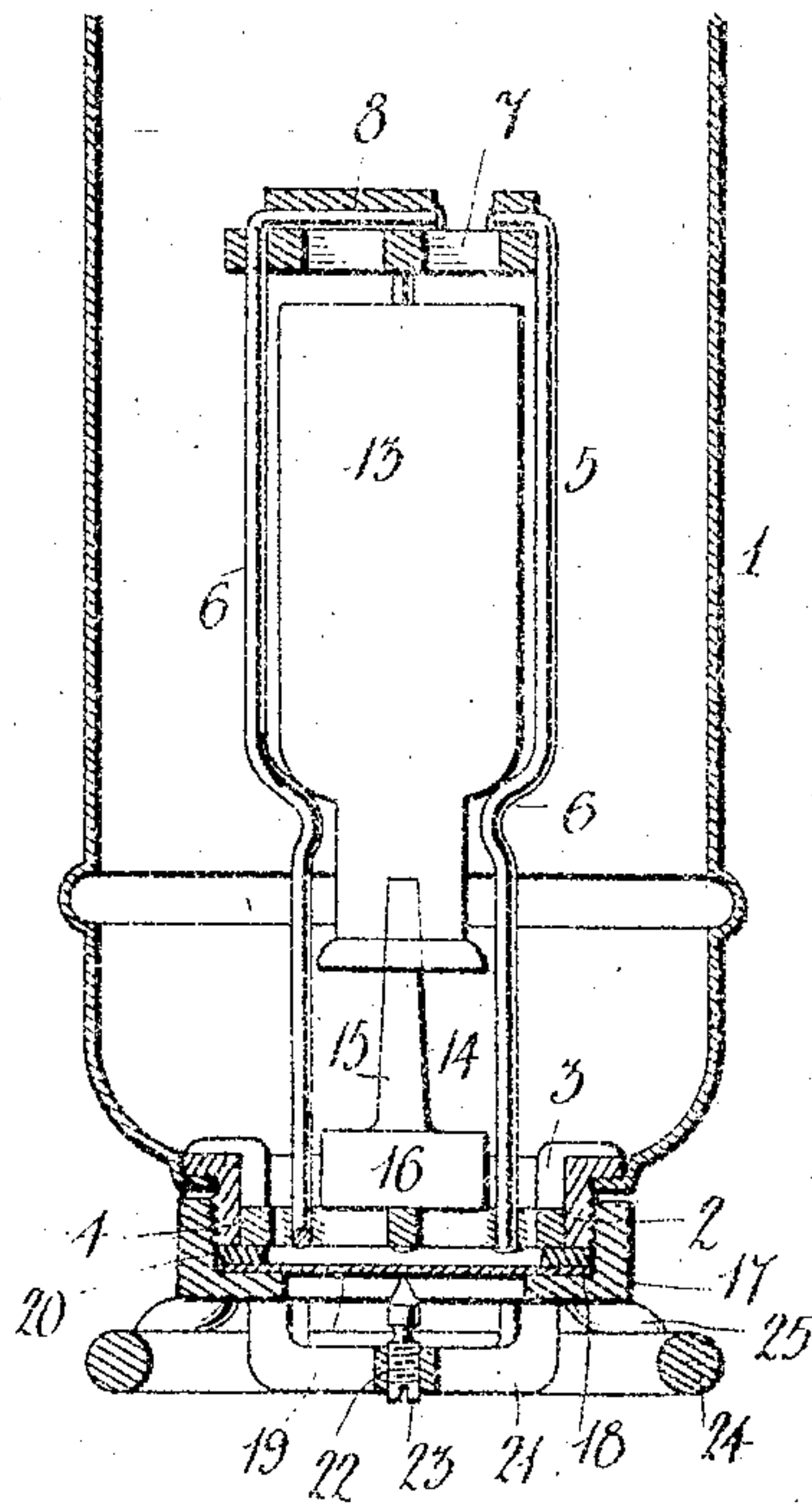
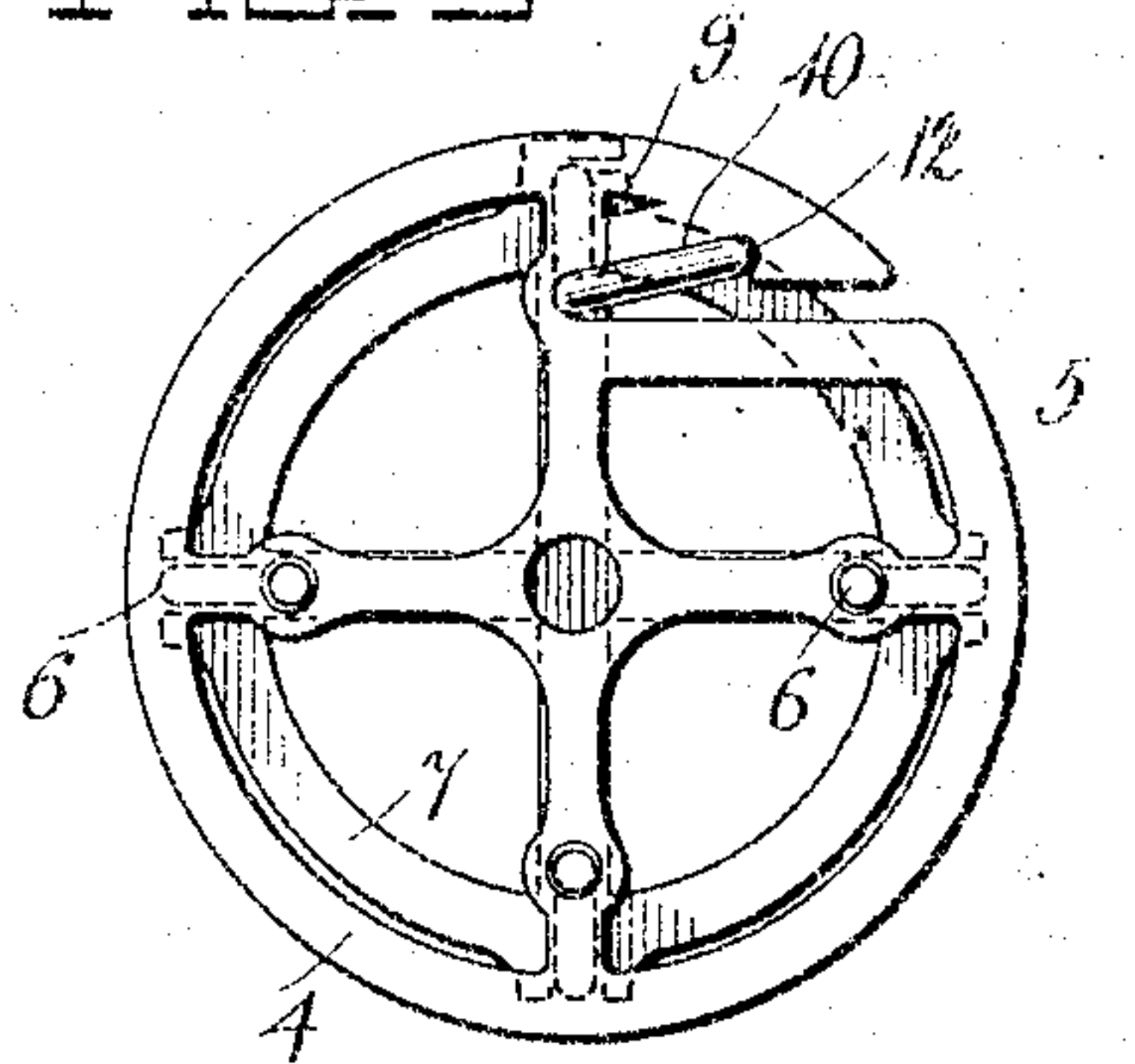


FIG. 3



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## FIRE-EXTINGUISHER.

No. 835,050.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed November 20, 1905. Serial No. 288,262.

*To all whom it may concern:*

Be it known that I, FERNANDO YOST, a citizen of the United States, residing at Weehawken Heights, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Fire-Extinguishers; and I do 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.

This invention relates to improvements in carbonic fire-extinguishers.

The object of the invention is to provide a fire-extinguisher of this character the inverting of which causes the chemicals contained therein to mix, thus generating an acid gas which when discharged into a fire by suitable apparatus connected with the device the fire will be extinguished.

Another object of the invention is to provide a device of this character having operating discharge mechanism, which is operated by the overpressure of gas within the cylinder to automatically release said gas, thereby preventing an explosion and bursting of the device.

A further object is to provide an improved means for holding the acid-container in suitable position within the cylinder, whereby said holding device and the acid-container may be readily removed from the cylinder.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical sectional view of the device, showing the parts in the position they assume when the device is not in use and in an upright position and showing in dotted lines the position of and the manner in which the safety closing disk or plate is ruptured to prevent the exploding of the extinguisher by overpressure of the gas within the cylinder. Fig. 2 is a similar view showing the extinguisher inverted and the parts therein in position for use, and Fig. 3 is a top plan view of the cage for holding the acid-container removed from the cylinder.

Referring more particularly to the drawings, 1 denotes the cylinder, which may be of any suitable form and construction. In one end of the cylinder is secured an exteriorly-threaded collar 2, on the inner side of which

is formed a series of inwardly-projecting lugs 3. On the lugs 3 is supported an apertured plate or disk 4, forming part of an acid-container cage 5, the sides of which are constructed of suitably-bent wire rods 6, secured at their lower ends to a plate 7. One of the rods 6 is pivotally connected at its lower end to the plate 7, as shown at 8, and is bent downwardly at its opposite end to form a loop 9, which is adapted to be sprung into engagement with a recess 10, formed in the plate or disk 4, and into engagement with a notch 12, formed in one side of said recess 10, as clearly shown in Fig. 3 of the drawings. By thus providing one of the wire rods 6 with a pivotal connection the same may be forced out of engagement with the notch 12 and recess 10 and swung laterally a sufficient distance to permit the insertion and removal of the acid-container, which is here shown in the form of a bottle 13 of suitable size and capacity. The bottle 13 is normally closed by means of a lead stopper 14, constructed with an elongated loosely-fitted neck-engaging portion 15, on the outer end of which is formed an enlarged head 16, which when the bottle is in an upright position is seated upon the top of the same, as shown in Fig. 1, and which when the device is inverted will cause the stopper to drop out of engagement with the bottle and to rest upon the plate or disk 4, thus permitting the discharge of the acid from the bottle.

On the threaded upper end of the collar 2 is adapted to be screwed an apertured cap 17, on the inner side of which is formed an annular seat 18, in which is adapted to be placed a flexible closing plate or disk 19, which is preferably formed of thin metal. On the disk 19 between the same and the end of the collar 2 is arranged an elastic gasket 20, by means of which the upper open end of the cylinder is hermetically sealed when the cap 17 is screwed down in place. On the outer side of the cap 17 is formed an outwardly-curved protecting frame or spider 21, in the center of which is formed a screw-threaded aperture 22, through which is adapted to be screwed a threaded piercing-point 23, the inner end of which is adapted to be engaged by the flexible disk 19 when the latter is distended by the pressure of gas within the cylinder, thus piercing or rupturing said disk and forming a discharge-outlet through which the liquid may pass, thus relieving the pressure of the same within the cylinder and



preventing the explosion or bursting of the latter. By forming the piercing-point 23 in the form of a screw the same may be adjusted in the spider 21 to bring the point more or less closely to the disk 19, so that the latter will be ruptured by a greater or less pressure of the gas within the cylinder, thus providing for the regulating of said pressure. Around the cap 17 is arranged a supporting-ring 24, which is connected to and spaced from the cap by means of short integrally-formed legs or arms 25. The ring 24 is adapted to form a support upon which the cylinder may rest when turned in an inverted position.

In one side of the cylinder, near the open end thereof, is formed a discharge-aperture 26, with which is connected a threaded nipple 27, with which is adapted to be connected the inner end of a flexible discharge-pipe 28, provided on its opposite end with a discharge-nozzle 29. The aperture 26 is preferably covered within the cylinder by means of a perforated plate 30.

By providing a fire-extinguisher of this character with an automatically-operating safety device explosions, which so frequently occur from the sudden mixing of the chemicals within the cylinder or from the accidental stopping of the flow of liquid through the discharge-pipe, are obviated, thus providing for the safe handling of the extinguisher. By providing a receptacle for the acid-container, such as herein shown and described, the latter may be quickly and readily removed for renewal or other purposes.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In a fire-extinguisher of the class de-

scribed, the combination with a suitable cylinder, of an acid-container arranged therein, a flexible closing-disk arranged in one end of said cylinder, means whereby said disk is removably held in place, and an adjustable piercing-point to perforate said disk when the latter is distended by pressure of gas within the cylinder, said piercing-point consisting of a threaded screw, substantially as described.

2. In a fire-extinguisher of the class described, the combination with a suitable cylinder, of an acid-container arranged therein, a removable supporting-cage to hold said container in place, means whereby said container may be readily removed from said cage, a flexible closing-disk arranged in one end of said cylinder, a protecting-cap to hold said disk in place over the open end of said cylinder, and a threaded adjustable piercing-point to perforate said disk when the latter is distended by the overpressure of gas in said cylinder, substantially as described.

3. In a fire-extinguisher of the class described, the combination with a suitable cylinder, of an acid-container arranged therein, a removable supporting-cage to hold said container in place, means whereby said container may be readily removed from said cage, a flexible closing-disk arranged in one end of said cylinder, an apertured, threaded cap adapted to be screwed onto said end of the cylinder, a seat formed in said cap to receive said disk, a gasket arranged between the disk and the end of the cylinder, a spider formed on the outer side of said cap over the aperture therein to protect said disk, and a screw-threaded piercing-point adjustably arranged in said spider to perforate said disk when the latter is distended by overpressure of gas in the cylinder, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FERNANDO YOST.

Witnesses:

J. W. SCHULHORN,  
ARTHUR W. COLE.