

S. L. WOTTRING.  
FIRE EXTINGUISHER BOTTLE CLOSURE.  
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924,211.

Patented June 8, 1909.

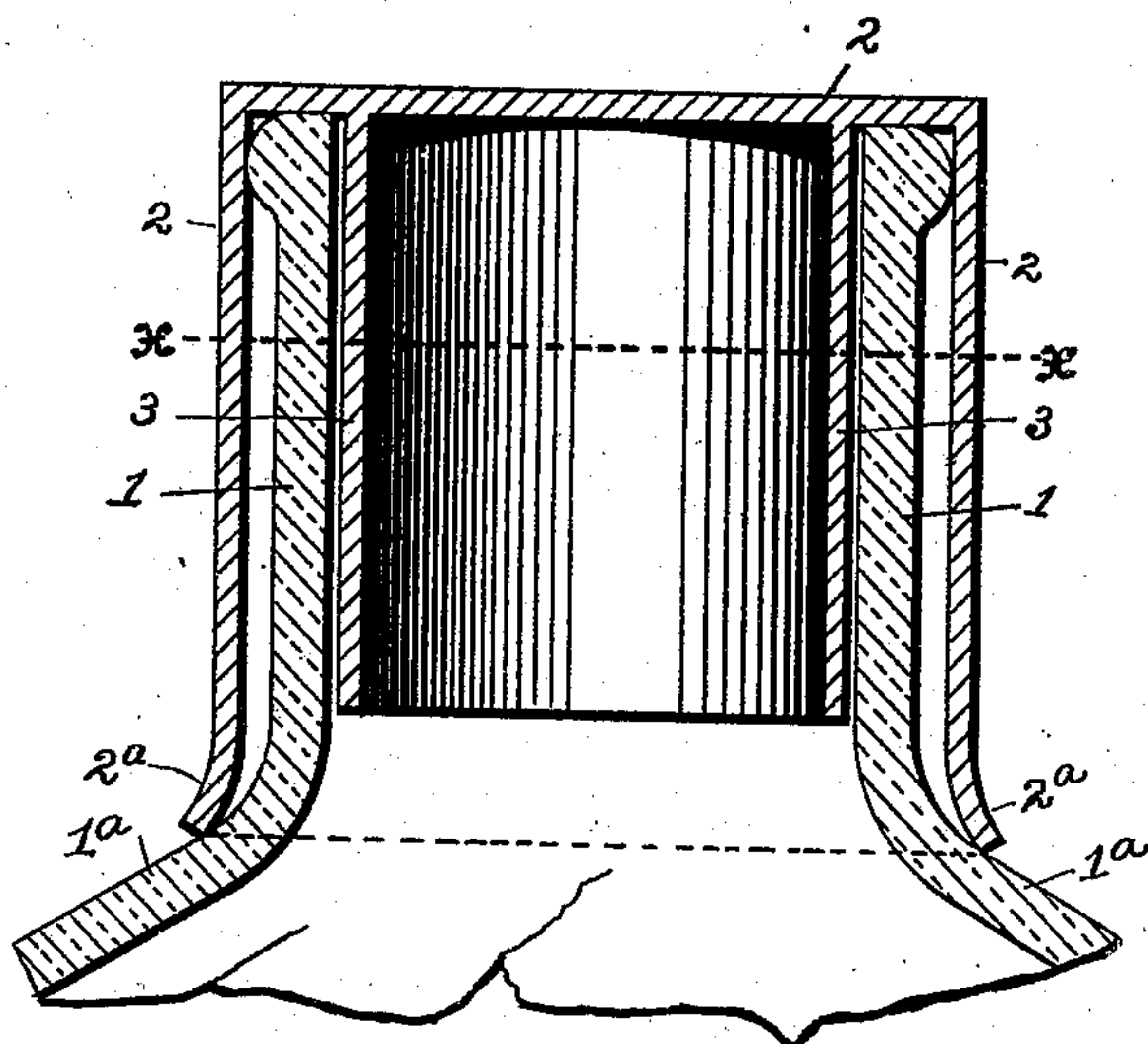


Fig. 1.

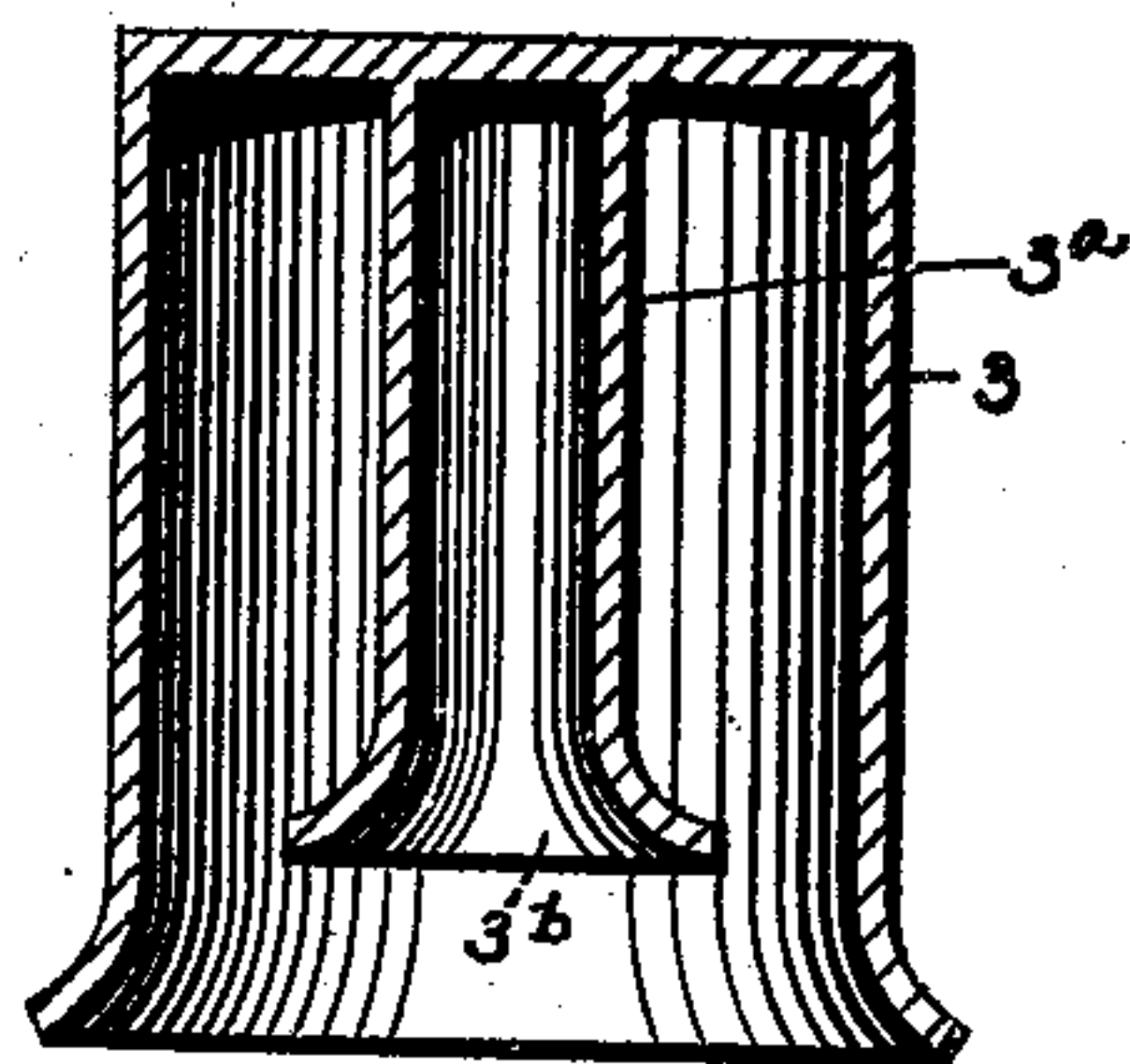


Fig. 3.

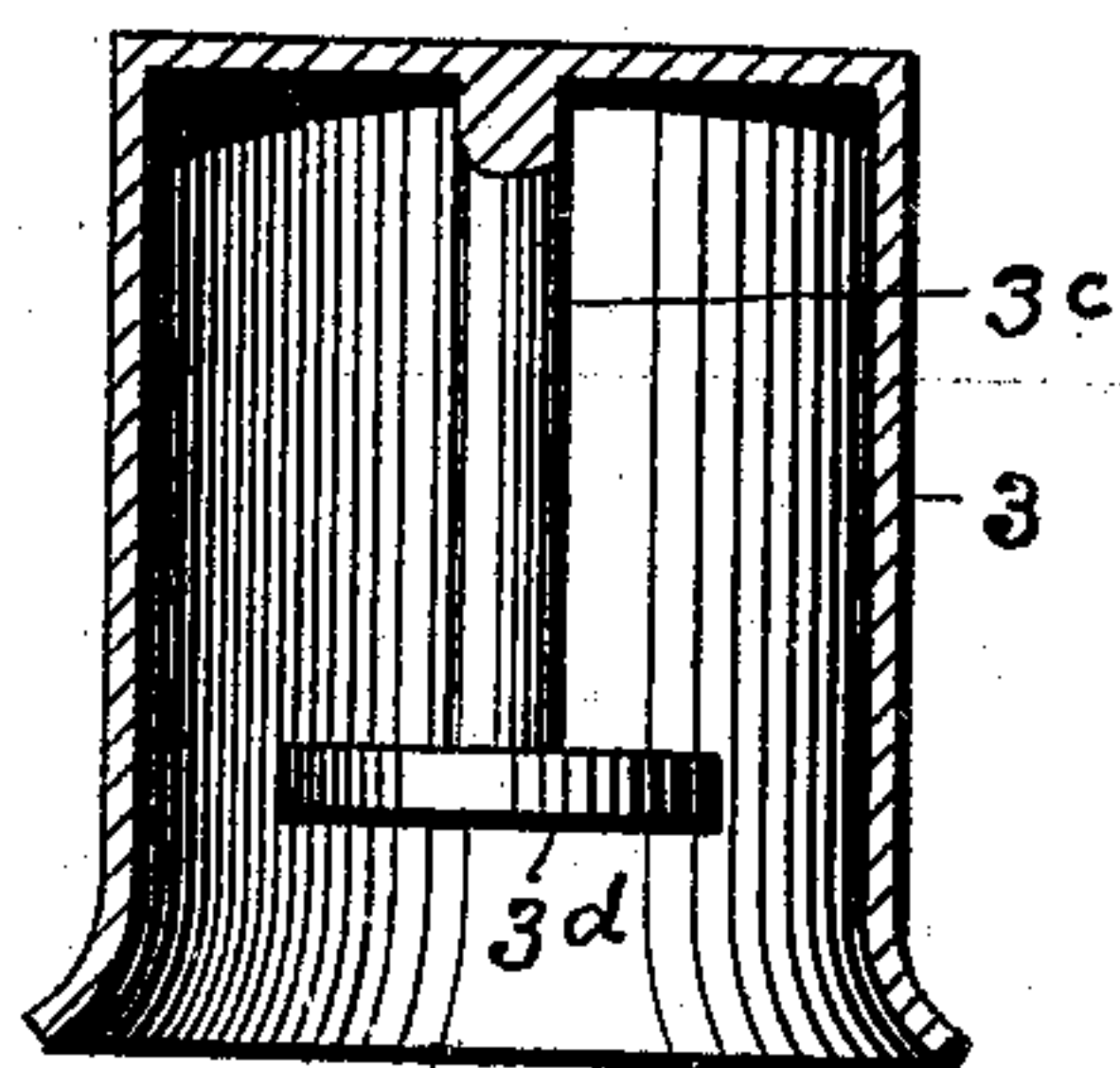


Fig. 4.

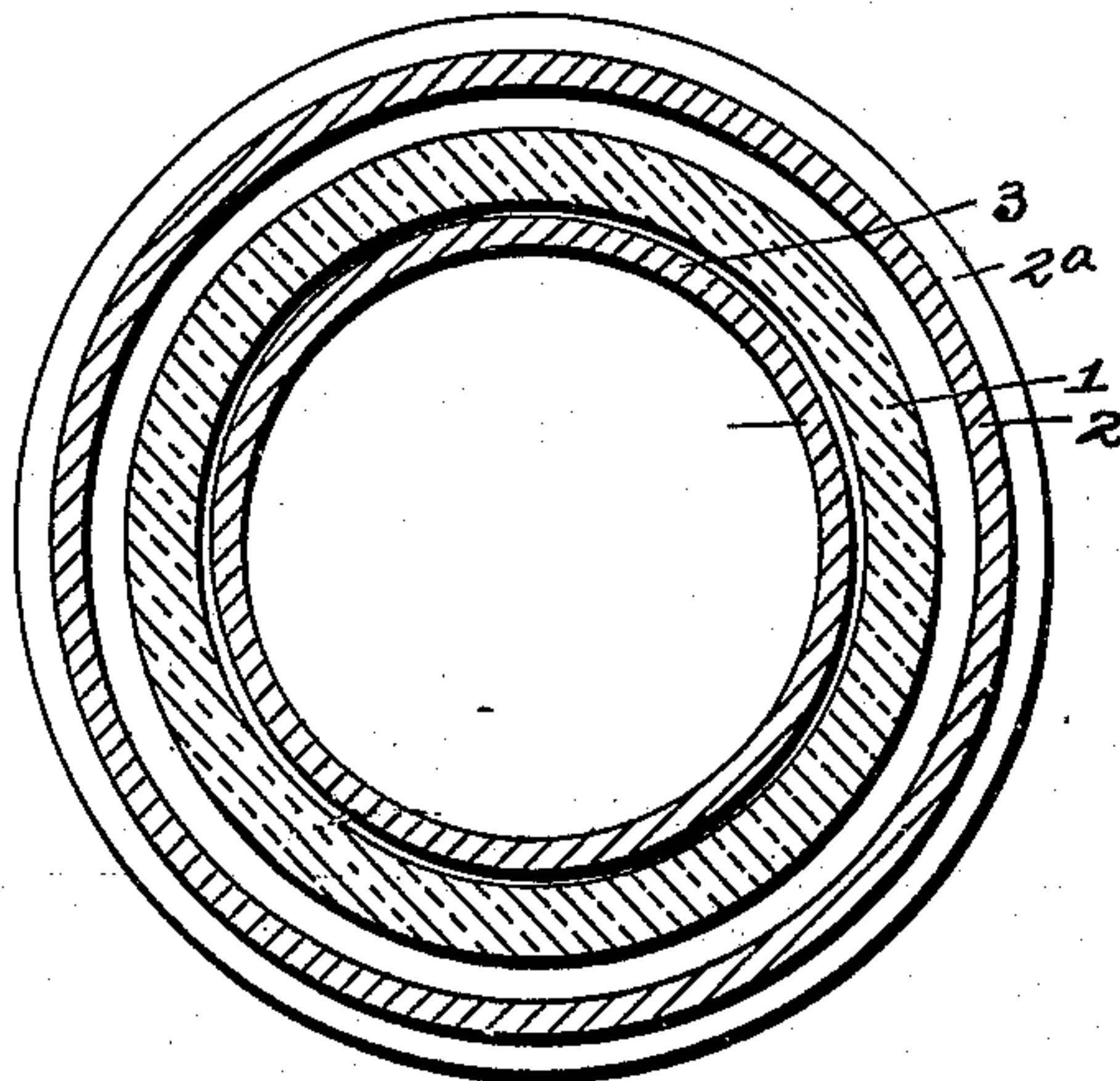


Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## FIRE-EXTINGUISHER-BOTTLE CLOSURE.

No. 924,211.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed September 10, 1908. Serial No. 452,390.

*To all whom it may concern:*

Be it known that I, SYLVANUS L. WOTTRING, a citizen of the United States, residing at Prospect, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Fire-Extinguisher-Bottle Closures, of which the following is a specification.

My invention relates to closures for chemical fire extinguisher bottles of that class in which a bottle containing acid is mounted in the upper portion of a tank containing chemicals in solution, the acid and solution when combined, producing a fire extinguishing gas and mixture.

The objects of my invention are to provide a cap for closing the mouth of the bottle neck, which will readily drop from the bottle when the latter is inverted or sufficiently tipped and which cap is provided with means for preventing the acid contained in the bottle from rising in the bottle neck, raising the cap off its seat, and permitting a portion of the acid to flow downward into the tank, as a result of the splashing of the acid in the bottle due to jar of the tank, and to produce other improvements the details of which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawing, in which:

Figure 1 is a central vertical section of the upper neck portion of a fire extinguisher bottle having my improved closure, Fig. 2 is a transverse section of the same on line  $x-x$  of Fig. 1, Fig. 3 is a vertical section on a reduced scale of a modified form of cap or closure, and, Fig. 4 is a similar view illustrating a second modification in the construction of said cap.

Similar numerals refer to similar parts throughout the several views.

1 represents the vertical neck of a fire extinguisher bottle and 2 the closure cap thereof. This cap, which is preferably of metal and which is adapted, as shown, to bear removably upon the end of the bottle neck and to incase the latter, has its cylindrical wall provided with a flaring termination indicated at  $2^a$  which contacts with the shoulder  $1^a$  formed by the junction of the bottle body and the reduced neck thereof. Formed with

the underside of the cap 2 is a vertical depending member 3 which is preferably of the form shown in Figs. 1 and 2 of the drawing, in which said depending member is of cylindrical form and of such circumference as to fit loosely within the bottle neck.

When a chemical fire extinguisher of the class mentioned, is being conveyed from one place to another, either by hand or on wheeled trucks, the splashing of the acid in the bottle has been found to result in a sufficient lifting of the cap or closure, to permit a portion of the acid to escape from the bottle neck and mingle with the solution contained in the tank. By employing the depending member 3 in connection with the cap 2, it is obvious that such slight space as may exist between said member and the inner surface of the bottle neck due to the fact that the depending member fits loosely within said neck, will not be sufficient to permit the rise of the acid through splashing in the bottle in sufficient quantities to raise the cap off its seat. It will also be observed that by the employment of the member 3, additional weight is imparted to the cap, thereby offering an increased resistance to the splashing liquid.

In Fig. 3 of the drawing, I have shown a modified form of cap, in which the depending member which is indicated at  $3^a$  in said figure, is of considerably less diameter than the bottle neck, except at its lower end where it is formed flaring as indicated at  $3^b$ , said flaring portion being adapted to contact with the inner surface of the bottle neck and prevent the rise of the acid.

In Fig. 4 of the drawing, I have shown a second modification which differs from the other constructions shown only in the fact that the depending member, which in said figure is indicated at  $3^c$ , is in the nature of a comparatively slender solid body having a disk-like termination  $3^d$  between the periphery of which and the inner surface of the side wall of the cap, the neck of the bottle passes.

It is obvious that either of the three forms shown would serve the purpose for which my invention is intended.

What I claim, is:

The combination with a fire extinguisher bottle, of a loose cap maintained in position

upon said bottle by gravity only, said cap comprising an outer portion which extends down around the neck of the bottle for a considerable distance and a central portion  
5 which extends down inside the neck a considerable distance, said central portion having an enlarged flaring lower end.

In testimony whereof I affix my signature in presence of two witnesses.

SYLVANUS L. WOTTRING.

Witnesses:

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