Oct. 16, 1923. 1,471,130

F. C. HUGHES

APPARATUS FOR THROWING LIQUIDS

Filed Dec. 15, 1921

Fig. 1.

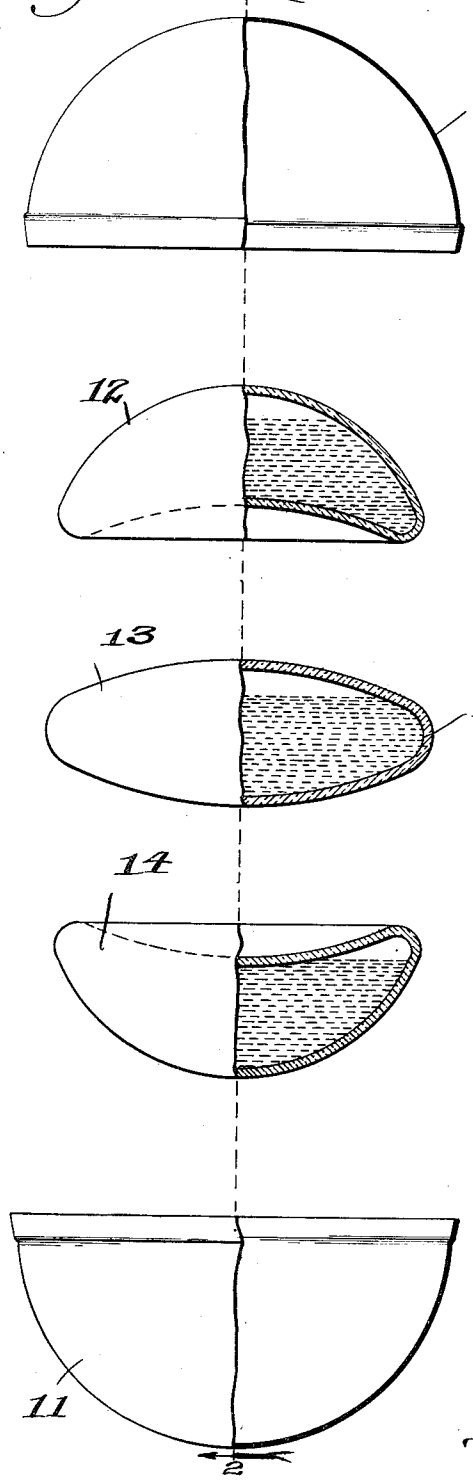


Fig. 2.

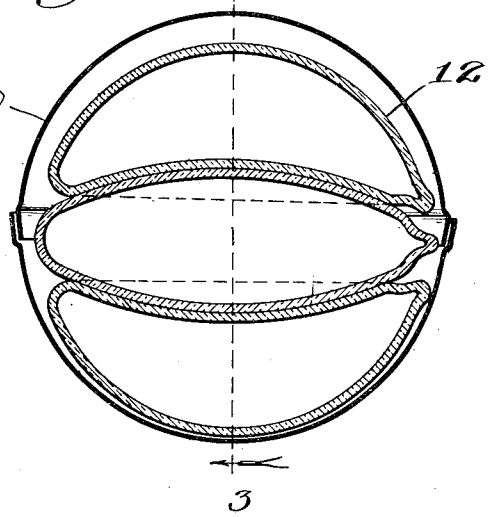
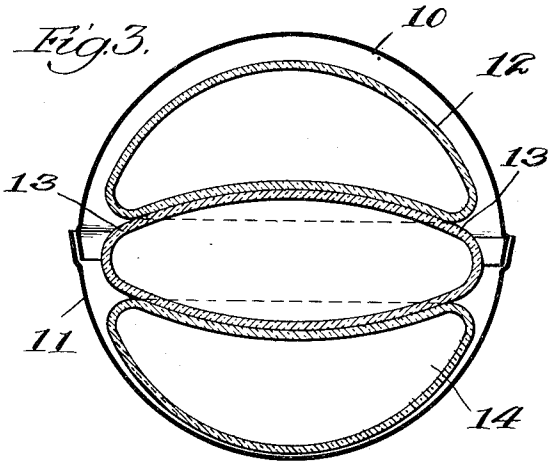


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRANK C. HUGHES, OF OAK PARK, ILLINOIS.

APPARATUS FOR THROWING LIQUIDS.

Application filed December 15, 1921. Serial No. 522,684.

To all whom it may concern:

Be it known that I, FRANK C. HUGHES, a citizen of the United States, residing at 312 Washington Boulevard, Oak Park, in the county of Cook and State of Illinois, have invented new and useful Improvements in Apparatus for Throwing Liquids, of which the following is a specification.

This invention relates to improvements in bombs and will be fully understood by reference to the following specification and accompanying drawings, in which Figure 1 is a view partly in section and partly in elevation of the parts of a bomb showing the same separated, Fig. 2 is a view taken as indicated by the line 2 of Fig. 1 showing the parts assembled to form the bomb, and Fig. 3 is a view taken as indicated by the line 3 of Fig. 2.

My bomb is especially useful, for example, for throwing liquids which give off noxious or poisonous gases or fumes, as used in warfare, police work and the like. It is ordinarily desirable to keep such liquids confined until they are in a vicinity where they are to become effective. My bomb is also useful for throwing two or more liquids, which are to be mixed at some distant point from the thrower, in order to give off irritating or poisonous fumes or gases.

In order to illustrate one embodiment of my invention, I have shown in the drawings a bomb, which can be used for the purposes set forth above. As shown in said drawings, this bomb comprises a spherical metal shell formed of the two halves 10 and 11, having coacting edges adapted to be fitted together, as shown in Fig. 2. Within the shell are placed three containers made of frangible material such as thin glass, indicated respectively by 12, 13 and 14. The metal shell is sufficiently stiff to serve as a protector for the frangible containers within, during the ordinary handling of the bomb. The glass containers are made in suitable shapes, as shown, adapting them to nest together within the metal shell. These containers contain the liquid or liquids to be thrown. For example, container 12 may contain a quantity of chloro-picrin, container 13 an approximately equal quantity of stannic chlorid, and container 14 an approximately equal quantity of ammonium hydroxid saturated with ammonium chloride. When these three liquids mix, heat is generated which vaporizes the chloro-picrin and causes it to give off irritating vapors and fumes. The bomb may be thrown into the vicinity where these vapors and fumes are to be dispersed. Upon striking any hard substance, the three glass containers 12, 13 and 14 will break, permitting the three liquids to mix. The two halves 10 and 11 of the metal shell will become separated by the shock when the bomb strikes, or, if not, the expansion of gases within, resulting from the mixture of the liquids, will cause their separation.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claims, in which it is my intention to claim all novelty inherent in my invention as broadly as possible in view of the prior art.

What I claim as new and desire to secure by Letters Patent, is:

1. A bomb, comprising a substantially spherical shell, said shell containing three frangible containers, including a central substantially disk-shaped container and two substantially mushroom-shaped containers, said three containers adapted to nest within the shell and substantially fill the same.

2. A bomb comprising a substantially spherical shell made of separable parts, said shell containing three frangible containers, including a central substantially disk-shaped container and two substantially mushroom-shaped containers, said three containers adapted to nest within the shell and substantially fill the same.

Witness my hand and seal this 12 day of December, 1921.

FRANK C. HUGHES. [L. S.]