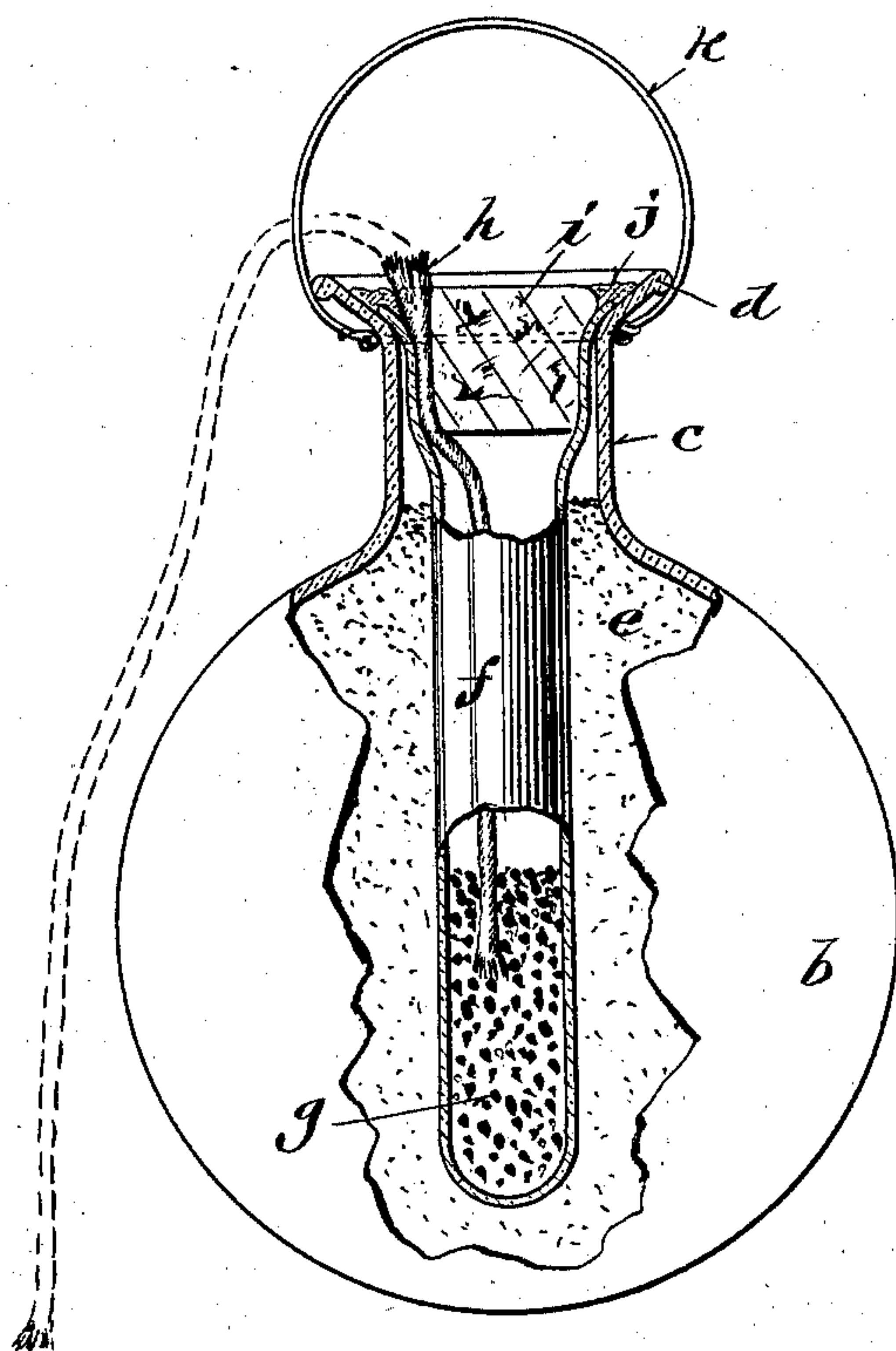


No. 750,416.

PATENTED JAN. 26, 1904.

J. H. WALRATH.
FIRE EXTINGUISHING DEVICE.
APPLICATION FILED APR. 21, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN H. WALRATH, OF MILWAUKEE, WISCONSIN.

FIRE-EXTINGUISHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 750,416, dated January 26, 1904.

Application filed April 21, 1902. Serial No. 103,890. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. WALRATH, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Fire-Extinguishing Devices; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to devices for the automatic extinguishment of fires; and it consists in certain peculiarities of construction and combination of parts, as will be fully set forth hereinafter in connection with the accompanying drawing and subsequently claimed.

The said drawing is a representation in side elevation of the preferred form of a device embodying my present invention, shown partially broken away to better illustrate certain details of construction.

Referring by letter to said drawing, *b* designates an outer vessel, herein shown as generally spherical in form, with a neck *c*, whose outer end *d* is shown flared outwardly, this being for the support of the inner tube, hereinafter described. The vessel *b* is composed of some frangible material, glass being suitable, although heavy paper or pasteboard may answer in many cases, and is filled with a dry fire-extinguishing chemical powder *e*. Suspended within the vessel *b* is a tube *f*, preferably of glass, the upper end of this tube being represented as also flaring, so as to find a seat on the described flared upper end *d* of the vessel-neck *c*, the said tube being surrounded by the powder within the vessel *b*. The tube *f* is partially filled with a suitable explosive, such as gunpowder, as shown at *g*, from which point a fuse *h* of any length desired extends up and out through the tube, being held in place by a suitable cork *i* or other stopper, as shown, and the said tube and its stopper being sealed to the vessel-neck by any suitable cement or other adhesive material, as shown at *j*, so as to keep the described parts firmly united and to exclude air from the contents of the vessel, and for convenience in suspension I have shown a wire loop or ring *k*.

The operation of my device will be readily

understood from the foregoing description of its construction.

This device is not designed to be thrown after the manner of the well-known fire-extinguishing "hand-grenades," but to be suspended by its loop *k*, and should fire break out near the same the fuse *h* (which may extend down, as indicated by the dotted lines in the drawing, to any point below or alongside of the vessel) will quickly be ignited and carry fire to the explosive *g* within the tube *f*, when an instantaneous explosion will occur, shattering the vessel *b* and scattering its contents about, thereby quickly extinguishing the fire by chemical action.

As stated, the vessel *b* may be of any frangible material; but as heavy paper or pasteboard is a desirable substance it is necessary that the chemical compound contained therein should be in dry powdered form, as a liquid could not be properly kept within a paper or pasteboard vessel. It is also desirable that the stopper *i* should be imperforate and of such material, such as cork, that is expansible, so that the fuse *h* should be crowded against the inner surface of the tube *f* between it and the outer surface of said cork, as thereby air is better excluded than would be the case if the said stopper was perforated, and as the tube *f* has a flaring upper end this fits down closely upon the correspondingly-flared upper end *d* of the vessel-neck *c*, and then when the cement *j* is applied a perfect seal is completed, which is very desirable, and by reason of the employment of the non-combustible wire loop *k* the vessel *b* and its contents are always suspended in proper position with the sealed end upward, as it always should be, and kept at the desired point instead of being permitted to drop down prior to explosion.

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

1. A device for extinguishing fires, comprising an outer vessel, having a contracted neck, flared outwardly at its upper end, and containing a dry fire-extinguishing powder, in combination with a close-bottomed tube, having its upper end correspondingly flared

outwardly to fit snugly on the flared upper end of the vessel-neck, and partly filled with an explosive; a fuse leading from said explosive up through and out of said tube; an imperforate stopper of expansible material, closing
5 said tube and wholly outside of said fuse, the latter being held between the stopper, and the inner wall of the said tube; sealing material uniting the vessel and tube firmly together, and
10 excluding air therefrom; and a non-combustible loop or rings surrounding said vessel-neck, for suspension of the said vessel in an upright position.

2. A device for extinguishing fires, comprising an outer vessel of heavy paper or pasteboard, having a contracted neck, outwardly
15 flared at its upper end, and containing a dry fire-extinguishing powder, in combination with a close-bottomed glass tube having a cor-

respondingly-flared upper end, and partly
20 filled with an explosive; a fuse leading from said explosive up through and out of said tube; an imperforate cork stopper closing said tube and pressing expansively against said fuse and the wall of the tube; a cement seal above the
25 top of said tube, and securely uniting it to the vessel-neck; and a wire loop surrounding said vessel-neck, and projecting upward above the top thereof.

In testimony that I claim the foregoing I
30 have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

JOHN H. WALRATH.

Witnesses:

N. E. OLIPHANT,
B. C. ROLOFF.