No. 780,683. PATENTED JAN. 24, 1905.

A. F. PRAHM.

PERFORATOR FOR SEALS OF FIRE EXTINGUISHERS.

APPLICATION FILED MAR. 28, 1904.

Fig. 1.

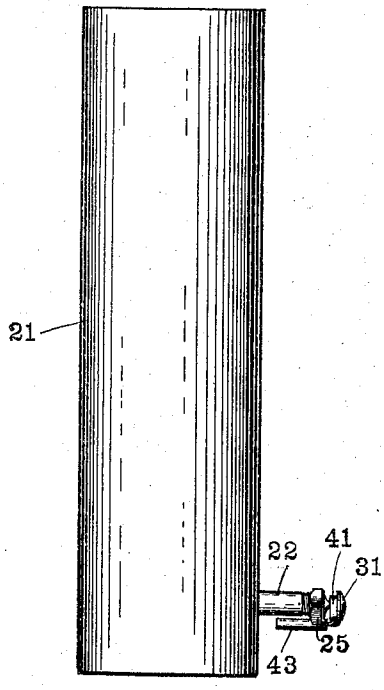


Fig. 2.

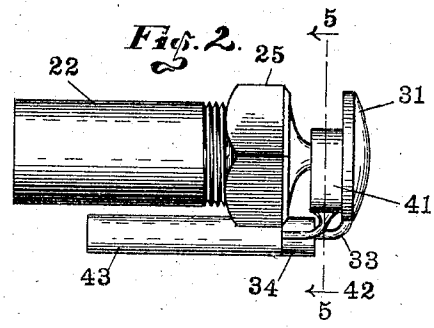


Fig. 3.

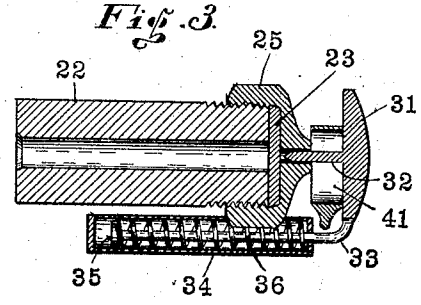


Fig. 4.

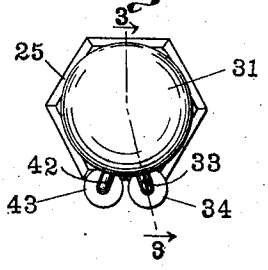


Fig. 6.

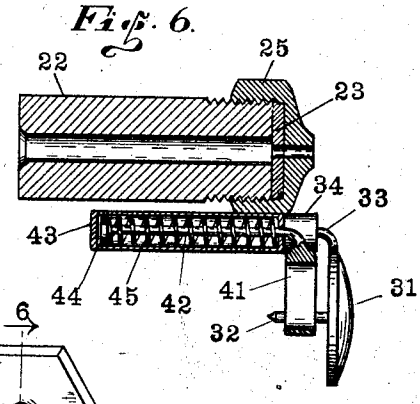


Fig. 5.

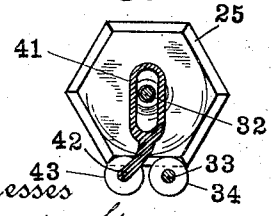
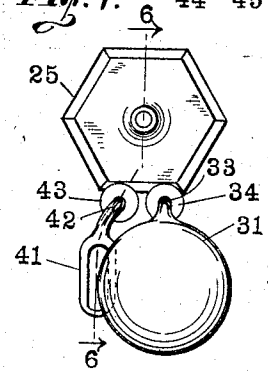


Fig. 7.



Witnesses
Adelaide Kearns.
J. A. Walsh.

Inventor
Adolph F. Prahm
By Bradford & Hood,
Attorneys.

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No. 780,683. Patented January 24, 1905.

UNITED STATES PATENT OFFICE.

ADOLPH F. PRAHM, OF INDIANAPOLIS, INDIANA.

PERFORATOR FOR SEALS OF FIRE-EXTINGUISHERS.

SPECIFICATION forming part of Letters Patent No. 780,683, dated January 24, 1905.

Application filed March 28, 1904. Serial No. 200,436.

To all whom it may concern:

Be it known that I, ADOLPH F. PRAHM, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Perforators for Seals of Fire-Extinguishers, of which the following is a specification.

As is well known, in order to render operable that class of fire-extinguishers which are used in cars, factories, shops, and such like places it is necessary to perforate what is termed a "seal" by means of which they are kept air-tight, and thus inoperative, until desired for use.

It is the object of my present invention to provide a perforator for these seals which shall be capable of being quickly and easily used when required, but which shall embody means for keeping the perforator out of contact with the seal until purposely adjusted to operative position and which means shall be kept securely attached to the nozzle of the fire-extinguisher, so that it may not be easily lost or misplaced.

Referring to the accompanying drawings, which are made a part hereof and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of a fire-extinguisher the nozzle of which is provided with a seal-perforator embodying my said invention; Fig. 2, an elevation of the nozzle separately on an enlarged scale; Fig. 3, a central sectional view thereof as seen when looking in the direction indicated by the arrows from the dotted line 3 3 in Fig. 4; Fig. 4, an end elevation; Fig. 5, a transverse sectional view as seen when looking in the direction indicated by the arrows from the dotted line 5 5 in Fig. 2; Fig. 6, a view similar to Fig. 3, but as seen from the dotted line 6 6 in Fig. 7, after the perforator has been used and before the parts have been restored to their former positions; and Fig. 7, an end elevation like Fig. 4, but with the parts in position shown in Fig. 6.

The fire-extinguisher 21 is of any ordinary or desired form or character and is provided with a nozzle 22, as is usual. Within this nozzle there is a seal 23, usually in the form of a lead disk and which is generally held clamped tightly between the end of the inner nozzle-pipe and its nut or point 25, being secured in the ordinary and well-known method of securing gaskets. In other words, this seal when in position is practically what is known as a "blind" gasket.

Secured to the nut or point of the nozzle is my improved perforator. This is composed of a disk 31, carrying a perforating-point 32, and is mounted upon a reciprocable rod 33, mounted in a barrel 34, extending back parallel with the nozzle. This rod has a head 35, and within said barrel and interposed between said head and the opposite end of said barrel is a spiral spring 36, which tends to hold the perforating-point inwardly and into the orifice of the nozzle when the parts are in the position shown in the principal figures of drawings. The perforating-point is of sufficient length so that when the disk is close to the point of the nozzle it will extend through and perforate the seal or gasket therein. This, however, is to be prevented at all times except when the fire-extinguisher is to be used, and I have therefore provided as an efficient means of such prevention a distance-block 41, which I prefer to mount on a rod 42 parallel to the rod 33, carrying the disk, and which is mounted in a barrel 43 and which has a head 44 and is provided with a spring 45 in the same manner. It will be understood, however, that this distance-block may be carried by any means desired, so long as it is securely attached to the structure of which the nozzle-point forms a part, without departing from my invention, although I prefer the means shown and just described.

The apparatus is operated as follows: The fire-extinguisher is filled, as is usual, and the devices embodying my present invention are assembled by placing the distance-block against the point of the nozzle with the point of the perforator passing through the opening therein and into the nozzle-orifice. When the parts are in this position, the distance-block keeps the perforating-point just out of contact with the seal. When, however, it is desired to use the fire-extinguisher, the disk carrying the perforating-point is withdrawn until it escapes from the point of the nozzle,

the distance-block is swung to one side, the perforating-point reinserted within the orifice of the nozzle, and the disk given a smart blow with the hand. This drives the perforating-point through the lead or other soft and easily-perforated seal or gasket, rendering the fire-extinguisher capable of use in extinguishing fires. The perforating-point is then withdrawn and moved to one side and the apparatus is ready for use.

In recharging the fire-extinguisher a new seal or gasket is put in place, the distance-block and perforating-point are restored to original position, and the apparatus is again ready for manipulation in the manner stated.

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

1. The combination, in a fire-extinguisher, of the nozzle, a perforatable seal therein, a perforating-point suitably carried by said nozzle and adapted to be swung into position to register with the orifice therein, a distance-block adapted to be swung to a position in front of the nozzle and when in this position to hold the perforating-point away from the seal, and when removed from this position to permit said perforating-point to reach and perforate said seal.

2. The combination, with the nozzle of a fire-extinguisher and the perforatable seal therein, of a perforating-point, a disk upon which said point is mounted, a rod carrying said disk, and a barrel parallel with the orifice of the nozzle in which said rod is mounted.

3. The combination, with a fire-extinguisher nozzle and a perforatable seal mounted therein behind its discharging-orifice, of a perforating-point mounted in a bearing parallel with the axis of the nozzle and adapted to enter said nozzle and perforate said seal.

4. The combination, with a fire-extinguisher nozzle and a perforatable seal carried therein, of a perforating-point carried by a rod parallel with the nozzle, and a distance-block also carried by a rod parallel with the nozzle, each of said rods being spring-mounted and thus held toward or against said nozzle.

5. The combination, in a fire-extinguisher, of the nozzle, a perforatable seal therein, a perforating-point suitably carried by said nozzle and adapted to be moved into position to register with the orifice therein, a distance-block also having an orifice and adapted to be swung to register with the perforations in the nozzle and prevent the perforating-point from reaching the seal.

6. The combination, in a fire-extinguisher, of the nozzle, a perforatable seal therein, a perforating-point suitably carried by said nozzle and adapted to be swung into position to register with the orifice therein, and a distance-block attached to the nozzle and adapted to be removably interposed between the nozzle and perforator to hold the perforating-point away from the seal.

7. The combination, in a fire-extinguisher, of the nozzle, a perforatable seal therein, a reciprocating point carried by said nozzle, and a perforated distance-block attached to the nozzle and through which the perforating-point may be passed, whereby when in this position the distance-block will hold the perforating-point away from the seal, and, when removed, the perforating-point will be permitted to reach and perforate the seal.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 24th day of March, A. D. 1904.

ADOLPH F. PRAHM. [L. S.]

Witnesses:
JAMES A. WALSH,
RUTH WORTHINGTON.