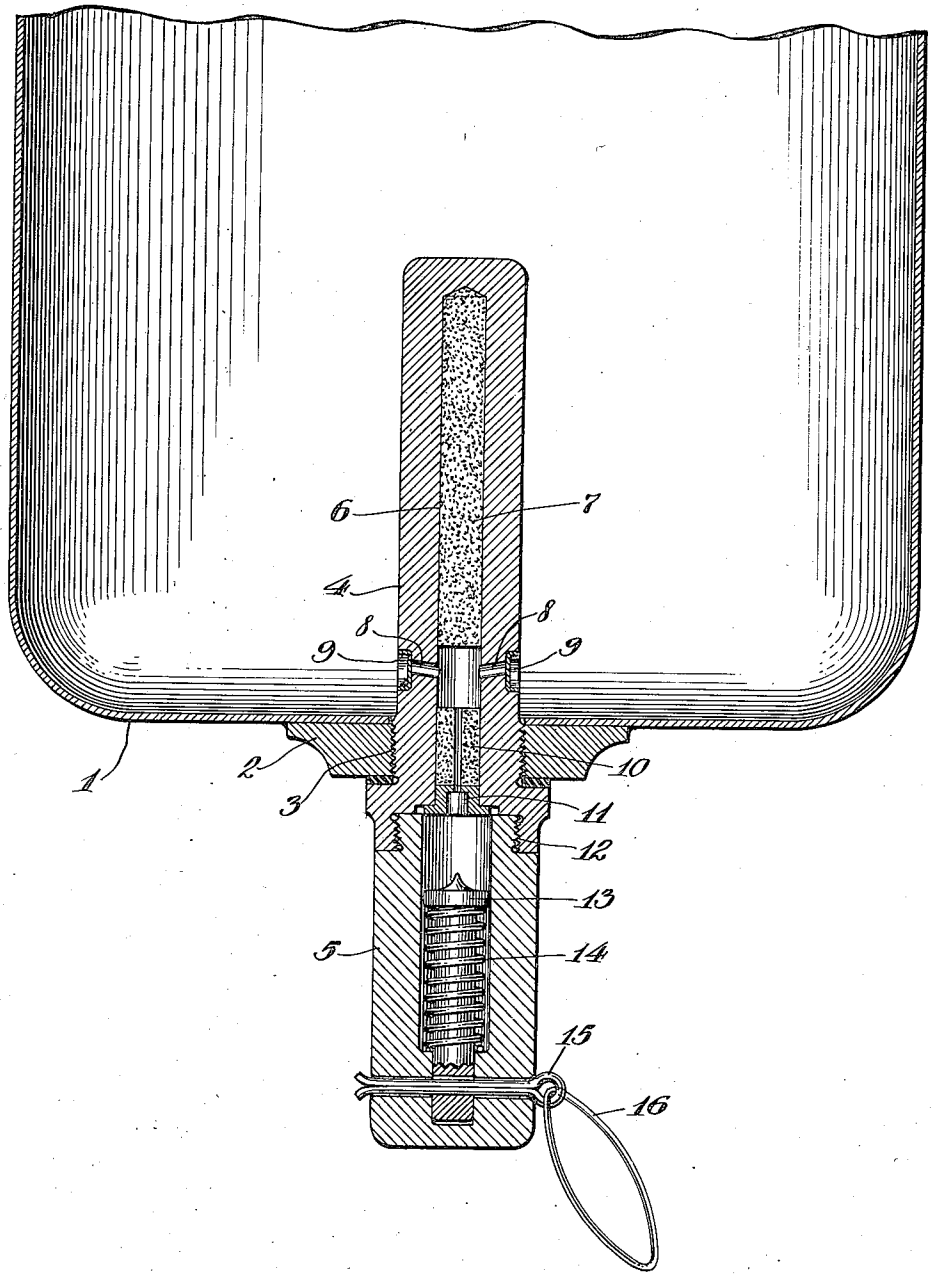
Oct. 7, 1924. 1,510,843

W. J. HAWKINS

FIRE EXTINGUISHER

Filed March 31, 1921



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FIRE EXTINGUISHER.

Application filed March 31, 1921. Serial No. 457,242.

To all whom it may concern:

Be it known that I, WILFORD J. HAWKINS, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented a new and useful Improvement in Fire Extinguishers, of which the following is a specification.

This invention relates to an improvement in fire extinguishers.

In certain fire extinguishers heretofore known, the brine in the container is expelled by gas developed by the burning of a series of slow matches ignited by an igniting device when the extinguisher is turned upside down. In these extingushers, the gas developing device is inbuilt with a long and otherwise cumbersome case attached to the outside of the brine container. The structure is complicated and expensive to manufacture and to reload, and premature operation will occur whenever the extinguisher is turned upside down, accidentally or carelessly, in or out of transportation.

The main object of the present invention is the production of an inexpensive device free from the defects inherent in such devices heretofore known. In the best constructions, there is provided a simple and compact expeller projecting into the brine container and having a safety igniting device housed in its exposed or outer part, the latter being just large enough to serve as an efficient handle for the extinguisher; the enclosed part of the expeller has a powder chamber and one or more blow ports extending through its wall adjacent the container wall; and the igniting device includes a sear-controlled spring-pressed firing pin adapted to ignite a primer and pellet in the mouth of the chamber and thereby ignite the main charge of powder in the chamber and blow the ports open. With these and other objects not specifically mentioned in view, the invention consists in certain constructions and combinations which will hereinafter be fully described and then specifically set forth in the claims hereunto appended.

All of the above mentioned parts may be varied widely in construction within the scope of the claims, and the particular structure selected to illustrate the invention is but one of many possible concrete embodiments of the same. The invention, therefore, is not to be restricted to the precise details of the structure shown and described.

In the accompanying drawing, the figure is a central sectional view, partly broken away, of an extinguisher constructed in accordance with the invention.

Referring to the drawing, 1 indicates a brine container of the usual type, but provided with a reinforcing plate 2 brazed or otherwise secured to its rear head. The plate 2 is provided with a central threaded aperture 3.

A two-part expeller 4—5 is screwed into the threaded aperture 3, and projects into the brine container 1. The enclosed part 4 of the expeller is provided with a powder chamber 6 loaded with a tight charge of compressed meal powder 7, or other gas developer. Below this powder charge, a series of blow ports 8 extend through the expeller wall adjacent the container head. These ports are normally closed by means of a series of friction plugs 9 operating to keep the brine out of the expeller chamber. Just below the ports 8 and in the mouth of the chamber 6, is a black powder pellet 10; and just below the pellet is a primer 11.

The enclosed part 4 and the outer or exposed part 5 of the expeller are screwed together at 12. Housed within the part 5 is a firing pin 13 of a well known type. This pin is spring-pressed in the direction of the primer 11, the spring being marked 14. Normally, however, the spring is held under compression and the firing pin under restraint by means of a spring-cotter sear 15 which passes transversely through suitable holes drilled in the firing pin and in the expeller part 5. Attached to one end of the sear is a loop 16 of twine by means of which the sear may be withdrawn when it is desired to operate the extinguisher.

Withdrawal of the sear releases the firing pin and permits its spring to drive it against the primer which then ignites the pellet 10. The pellet, in turn, ignites the main charge 7 in the chamber 6 and simultaneously blows the friction plugs 9 out of the ports 8, thus permitting the gas developed by the main charge to blow through the ports into the container behind the brine and by its pressure expel the latter.

It is to be noted that the exposed part 5 of the expeller is just large enough to serve as an efficient handle for the extinguisher, and that until the sear is intentionally withdrawn from engagement with the firing pin, premature operation of the ex-

tinguisher cannot occur. After the extinguisher has been operated, it may be easily reloaded by refilling the container, and then inserting a new charge, pellet and primer in the expeller chamber, and resetting the firing pin; or by inserting a loaded spare expeller.

What is claimed is:

1. In a fire extinguisher, the combination with a container, of an expeller projecting into said container and having in its enclosed end a powder chamber and a normally closed blow port extending through its wall adjacent the container wall, and a safety igniting device including a firing pin and a spring-cotter sear housed in the exposed end of said expeller.

2. In a fire extinguisher, the combination with a container, of an expeller removably projecting into said container and having in its enclosed end a powder chamber and a blow port extending through its wall adjacent the container wall, a friction plug normally closing said port, and a safety igniting device housed in the exposed end of said expeller.

3. In a fire extinguisher, the combination with a container, of a thread-connected two-part expeller projecting into said container, the enclosed part being screwed into the wall of said container and having a powder chamber and a series of blow ports extending through its wall adjacent the container wall, a series of friction plugs normally closing said ports, and a safety sear-controlled igniting device housed in the exposed part of said expeller.

4. In a fire extinguisher, the combination with a container, of a two-part expeller projecting into said container, the enclosed part being screwed into the wall of said container and having a powder chamber and a series of blow ports extending through its wall adjacent the container wall, a series of friction plugs normally closing said ports, a spring-pressed firing pin housed in the exposed part of said expeller and adapted to ignite a primer and pellet in the mouth of said chamber, and a spring-cotter sear passing transversely through said firing pin and the exposed part of said expeller, the latter being screwed into the enclosed part of said expeller and forming a compact handle for the extinguisher.

5. In a fire extinguisher, the combination with a container, of an expeller projecting into said container and having in its enclosed end a powder chamber and a normally closed blow port extending through its wall adjacent the container wall, a tight charge of compressed meal powder in said chamber above said port, a safety igniting device housed in the exposed end of said expeller, and a primer and black powder pellet in the mouth of said chamber below said port.

6. In a fire extinguisher, the combination with a container, of a two-part expeller projecting into said container and having a powder chamber and a series of blow ports extending through its wall adjacent the container wall, a tight charge of compressed meal powder in said chamber above said ports, a series of friction plugs normally closing said ports, a spring-pressed firing pin housed in the exposed part of said expeller, a primer and black powder pellet in said chamber below said ports, and a spring-cotter sear passing transversely through said firing pin and the exposed part of said expeller, the latter being screwed into the enclosed part of said expeller and forming a compact handle for the extinguisher.

7. In a fire extinguisher, the combination with a container, of an expeller carried by said container and having a powder chamber and a normally closed blow port adapted to establish communication between said chamber and the interior of said container, and a safety igniting device including a firing pin and a spring-cotter sear in operative connection with said chamber.

In testimony whereof, I have signed my name to this specification.

WILFORD J. HAWKINS.