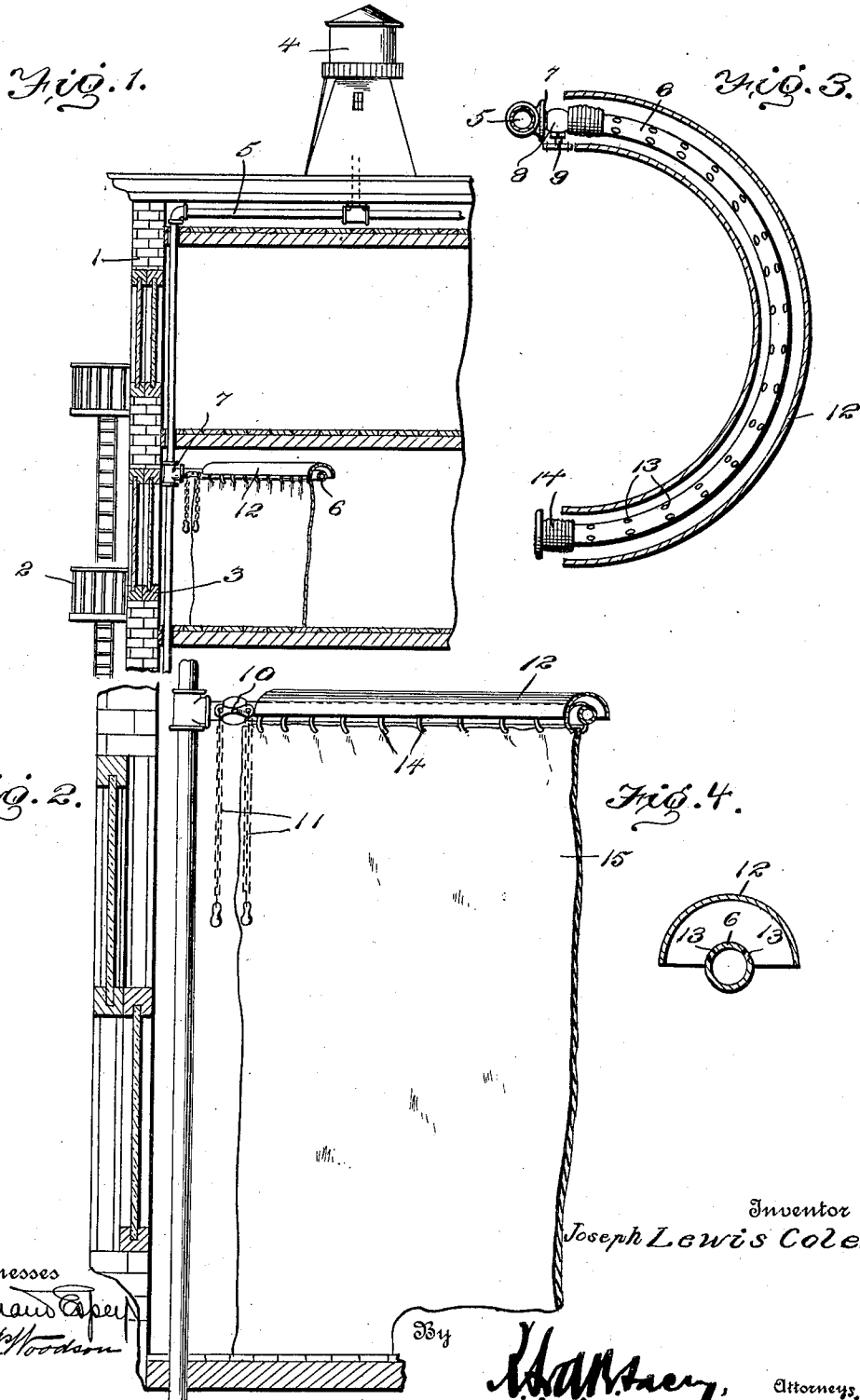


J. L. COLE.
 WATER CURTAIN.
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1,092,243.

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WATER-CURTAIN.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH LEWIS COLE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Water-Curtains, of which the following is a specification.

This invention relates to water curtains, and has as its object to provide a water curtain constructed and arranged to protect the exits leading to fire escapes and to elevator shafts, etc.

The primary aim of the invention is to provide a water curtain so constructed that the exit at which it is arranged will be protected against flames in the event of fire as will also persons standing at the exit so that protection will be afforded persons attempting to escape from the building while they are waiting for the elevator or while waiting for an opportunity to take their places on the fire escape leading from the building.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a sectional view illustrating the arrangement of the water curtain embodying the present invention, within a building. Fig. 2 is a similar view on an enlarged scale of the device shown in section. Fig. 3 is a horizontal sectional view taken in a plane extending through the deflector of the curtain. Fig. 4 is a vertical transverse sectional view through the deflector and the spray-pipe of the device.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawing by the same reference characters.

In the drawing, the building within which the water curtain is arranged, is indicated in general by the numeral 1 and a fire escape leading from the building is indicated by the numeral 2.

The window through which persons must pass in order to reach the fire escape 2, is indicated at 3, and it is at this window and at other similar windows within the building that the water curtain embodying the present invention is to be arranged. Of course, if the building is provided with an elevator, the water curtains will be arranged at the doors leading to the shaft, so that protection will be afforded the persons waiting for the elevator.

The numeral 4 indicates a reservoir which is of any ordinary type and is arranged upon the roof of the building, and leading from this tank or reservoir is a supply-pipe 5 which is to supply water to the several water curtains arranged within the building.

Each of the water curtains mentioned above consists essentially of an arcuate spray-pipe 6 which preferably has the extent of a half circle and this pipe is coupled at one end with the supply-pipe 5 by means of a T 7. A cut-off valve 8 is interposed in the pipe 6 at the end thereof which connects with the supply-pipe 5 and the stem of this valve, indicated by the numeral 9 has fixed upon it an arm 10, to the opposite ends of which are connected chains 11. By pulling upon one of these chains the valve may be rotated to open position, and by pulling upon the other chain it will be closed. The opposite end of the spray-pipe 6 is closed in any suitable manner. It will be observed by referring to Figs. 1 and 2 of the drawing that the spray-pipe of the curtain is arranged opposite to and slightly above the top of the window frame and that the pipe 5 extends at one side of the frame and that the pipe 6 has its ends located at opposite sides of the top of the frame.

In connection with the spray-pipe 6 there is employed a deflector 12 which is of arcuate form and in cross section is semicircular. This deflector is supported in any suitable manner above the spray-pipe 6 with its concave side presented downwardly and with the said pipe 6 partly received within its concavity. The spray-pipe is formed in its upper side with openings 13 which are so positioned as to direct streams of water upwardly in opposite directions against the concave under side of the deflector 12 and the purpose of so arranging the openings will be presently pointed out. A number of metallic rings 14 are slidably supported upon the spray-pipe 6 and suspended from these rings are curtains 15 of which there are preferably two. These curtains 15 may be of heavy canvas, rubber, or any other suitable flexible material, and each is of a width to extend from one end of the spray-pipe 6 to a point about midway between the ends thereof. Normally, the curtains are draped back at the ends of the spray-pipe as indicated by the positions assumed by the rings 14 in Fig. 3 of the drawing and they

are held in this position by means of weak cord or any other means which will permit of ready disengagement of the curtains so that they may be draped, as shown in Figs. 1 and 2. When the curtains are draped in position for use, they will form a substantially semicircular inclosure in front of the window 3 and it is within this inclosure that the persons to be protected, stand. After the curtains have been arranged in position for use, the proper one of the chains 11 is pulled thereby allowing water to rush into the pipe 6 from which it will issue in streams which are projected against the concave under side of the deflector 12 and are so deflected from the same as to form a water curtain upon each side of the curtains 15. The water curtain which is formed outside of the inclosure formed by the curtains 15 will prevent the curtain being burned by flames and this water curtain and the curtain which is formed within the inclosure will serve to cool the atmosphere and to protect the users of the device against excessive heat and flames.

Having thus described the invention what is claimed as new is:—

1. In a device of the class described, a spray-pipe, a deflector arranged in juxtaposition to the pipe and having a concave side presented toward and spaced above the pipe, the pipe having discharge outlets presented at different angles toward the concave side of the deflector, and a curtain suspended from the pipe.

2. In a device of the class described, a supply-pipe, a spray pipe leading from the supply pipe, a valve arranged in the spray-pipe, a deflector arranged above the spray-pipe, and a curtain suspended from the spray-pipe.

3. In a device of the class described, an arcuate spray-pipe, an arcuate deflector arranged above the pipe and having a concave under side presented downwardly toward the upper surface of the pipe, the pipe being provided in its upper side with outlets, and a curtain suspended beneath the pipe.

4. In a device of the class described, a spray pipe provided with a series of outlets presented upwardly at an angle, a deflector arranged above the said pipe and having a concave under side concentric with the pipe and entirely spaced therefrom, and a curtain suspended from the pipe.

5. In a device of the class described, a spray pipe provided with a series of outlets presented upwardly at an angle, a deflector arranged bodily above and entirely spaced from the said pipe and having a concave under side presented toward the pipe, curtain rings slidably mounted upon the pipe, and a curtain suspended from the rings.

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

JOSEPH LEWIS COLE. [L. S.]

Witnesses:

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