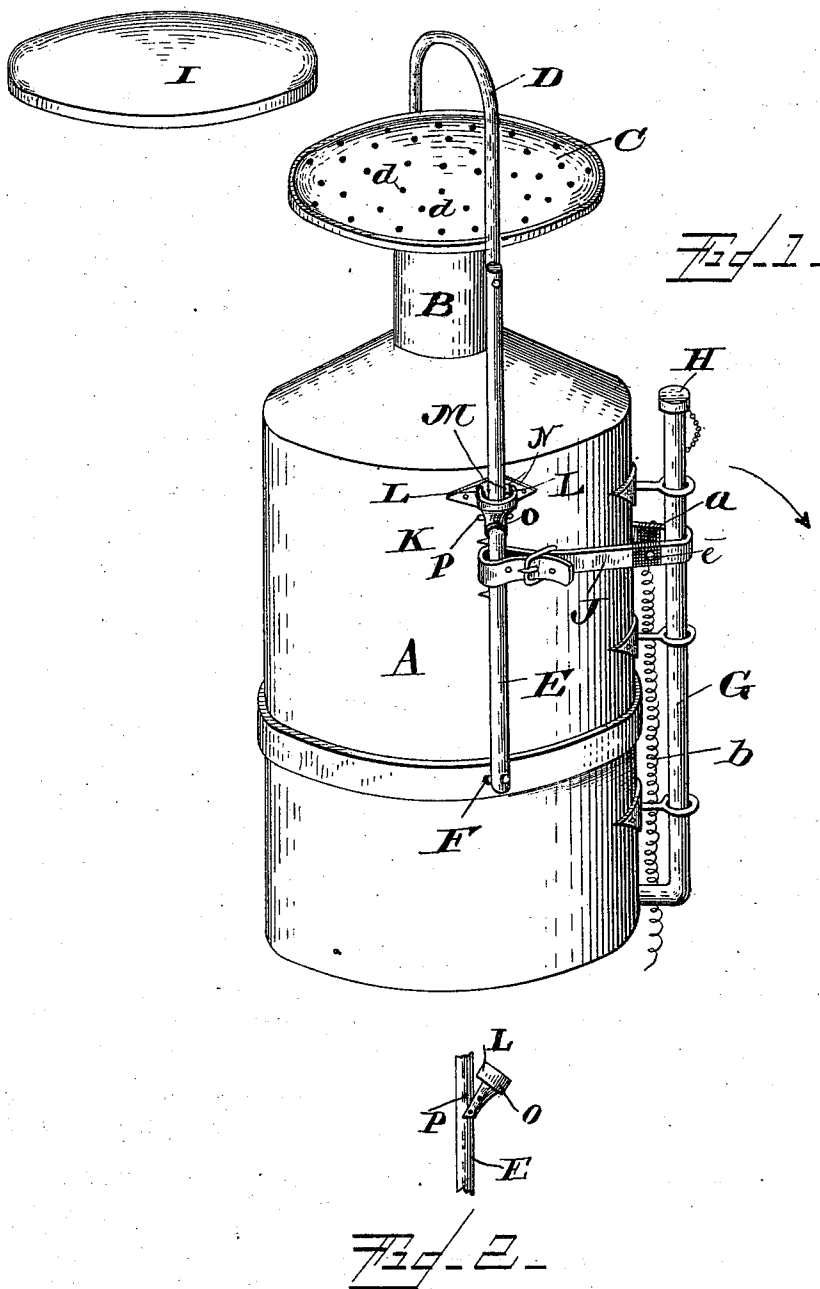


(No Model.)

W. S. PURIFOY.
AUTOMATIC FIRE EXTINGUISHER.

No. 488,832.

Patented Dec. 27, 1892.



WITNESSES
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AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 488,832, dated December 27, 1892.

Application filed March 26, 1892. Serial No. 426,610. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SCOTT PURIFOY, a citizen of the United States, and a resident of Furman, in the county of Wilcox and State of Alabama, have invented new and useful Improvements in Automatic Fire-Extinguishers; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in automatic fire-extinguishers, and is particularly designed for use in such buildings where, from the nature of the work done and the material and devices employed in certain manufactures, the conditions are present which would increase the liability of the place to take fire and at the same time offer the means at the starting of the blaze for further destructive results.

The object of the invention, therefore, is to provide an extinguishing device which will be operated automatically by the fire, the same consisting of a suitable vessel filled with water or other fire-extinguishing liquid and suspended in such place as prudence may determine, the vessel being normally held in its upright position by means of a fusible strap to which fire is communicated by a fuse, and which when parted by the fire permits the vessel, which is slightly held out of equilibrium on its pivotal support, to invert itself and discharge the contents on the fire underneath and around it.

The invention also consists in certain other novel features in the construction and arrangement of parts, all, as hereinafter fully explained.

In the accompanying drawings in which the invention is fully illustrated, I have shown in Figure 1 a perspective view of the fire-extinguisher in its complete form and ready for use, the cover of the nozzle or sprinkler being shown removed. In Fig. 2, a detailed view is shown of the catch for temporarily holding the vessel in its upright position, said catch being shown out of engagement.

The vessel A, may be of any convenient form or size and is provided at its top, or discharge end with a contracted or neck portion

B, which together with the sprinkler C, for giving the water as wide a distribution as possible, forms a nozzle for giving force to the discharge of water. The vessel A, is permanently supported by the bail D, which connects with and forms a continuation of the rods E, which rods are pivotally secured to the vessel A, at the point F, below the center of gravity and to the right thereof, so that when the vessel is freed of its fusible support it will invert itself and discharge its contents.

The vessel A, is provided on its exterior with a tube G which extends up from the bottom where it communicates with the interior, of the vessel, to the top or water level of said vessel, and by means of which the vessel is filled, the height of the water therein determined at any time and an air inlet furnished to the vessel when inverted to allow the free discharge of the water. This tube G, is fitted with a cover H, which is secured to the device by a chain or other suitable connecting medium and falls off by its own weight, as does the cover I, fitting the sprinkler C, when the vessel A, is inverted.

The strap J, which forms the fusible support to keep the vessel in its upright position connects with the rods E, at about their central point and extends around one half of the vessel. The vessel is held normally, by the strap, in an upright position, but the vessel having its greatest weight on the side up which the tube G, extends, will tip in the direction of said tube.

On the rod E, is provided a suitable fixture for temporarily holding the vessel in an upright position while the fusible strap is being adjusted. The device consists of a clasp O, pivotally secured to the rod E, so that it can be brought up close around the rod or swung out therefrom at its top. This clasp O, is provided with a projection L, which when said clasp is brought against the rod E at its top will engage the lug or projection M, on the plate N secured to the vessel, and by such engagement hold the vessel in its upright position. A pin P, is provided to lock the clasp when raised which extends through both clasp and rod. When the fusible band is adjusted and the device properly suspended the clasp O, is turned down and out of use.

The strap J, is held out from the side of the

vessel by the tube G, which allows the fire communicated to the strap to attack it from all sides. The strap may be composed of any suitable material and at the points *a, a*, is
 5 made very inflammable either by saturation with nitric acid or other liquid or by the incorporation of inflammable substances therein. To the belt or strap at the points *a, a*, is preferably secured a coiled wire *b* through which
 10 a fuse extends and is held connected to the strap.

The operation of the device briefly described is as follows: The extinguisher being suspended by the bail D, in any desirable place, a fire
 15 originating in any near vicinity will ignite the fuse and be communicated thereby to the strap J, at the point *a*. When the strap J, is parted the vessel A, will turn on its trunnions at F, in seeking its center of gravity and invert itself, whereupon the cover I, will drop off the
 20 sprinkler C, and the water be discharged through the openings *d*. The sprinkler is of convex form and provided with a large surface, and the water is thereby given a wide
 25 distribution. In the inversion of the vessel the cover H, of tube G, also comes off and permits the air to enter the vessel A, the vacuum caused by the inversion drawing the water from the tube G.

30 Where it is desired to connect several of the extinguishers together by a fuse, the continuous fuse may extend through the opening *e* in the fusible portion of the strap and the

fuse protected by a trough or other suitable means.

Any number of extinguishers can be arranged either singly, or connected by a continuous fuse, and the building may also be provided with fusing arranged to operate the
 40 extinguishers at a distance from the source of the fire in order to wet walls, floors and property contained therein, and such are clearly within the spirit and scope of my invention.

Having thus described my invention what
 45 I claim and desire to secure by Letters Patent, is:

In an automatic fire extinguisher, the vessel A, supported by the bail D E pivotally connected thereto at a point below its center of
 50 gravity, a strap J, connected to the bail and extending partly around the vessel, to normally hold the same in an upright position, adapted to be parted by the communication of fire thereto, air inlet tube G, communicating
 55 with the interior of the vessel A, at its bottom and the sprinkler C, for the discharge of the water, substantially as described and for the purpose set forth.

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

WILLIAM SCOTT PURIFOY.

Witnesses:

J. H. WATSON,
 W. J. J. HURST.