

1,012,595.

Fig. 1.

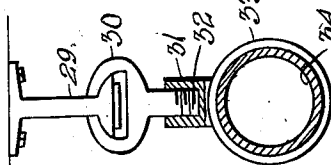


Fig. 4.

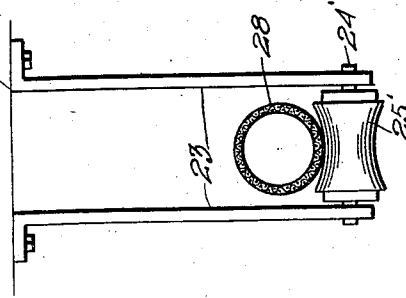


Fig. 3.

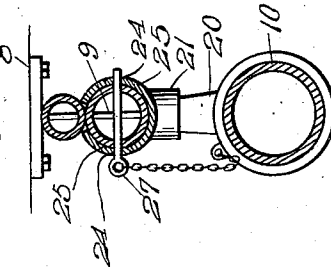
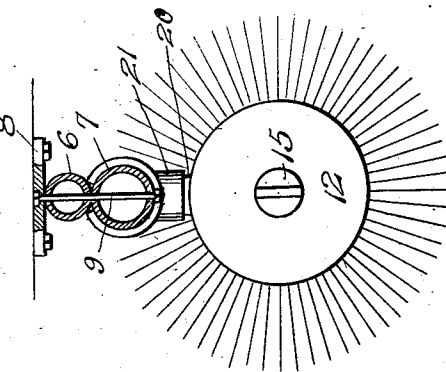


Fig. 2.



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FIRE-EXTINGUISHER.

1,012,595.

Specification of Letters Patent.

Patented Dec. 26, 1911.

Application filed December 3, 1910. Serial No. 595,466.

To all whom it may concern:

Be it known that I, JOHN W. CAMPBELL, a citizen of the United States of America, and resident of Colorado Springs, in the county of El Paso and State of Colorado, have invented certain new and useful Improvements in Fire-Extinguishers, of which the following is a specification.

This invention relates to fire extinguishers and particularly to an apparatus designed to be used in cellars, ware houses and the like where the apparatus may be installed, the said apparatus comprising novel means for shifting a liquid discharging member to proper position to effectively discharge the liquid in order that it will reach the burning structure or merchandise or other material being destroyed, the primary object of the invention being to so mount the liquid discharging member that it can be caused to spray only that portion of the building or material which is burning whereas the goods or combustible material adjacent thereto will be saved from damage by the liquid.

A further object is to enable the firemen or operators to move the nozzles or liquid discharging members to positions where they will prove of greatest efficiency without injuring the firemen by causing them to enter the burning structure.

A further object of this invention is to provide a novel track and in connection therewith a nozzle or liquid dispenser supporting means adapted to travel on the track and suspend the said nozzle, means being also provided for moving the suspending means longitudinally of the track in order that the discharging end of the nozzle or dispenser may be brought to a position to insure the greatest efficiency. While I have herein referred to the element for discharging the water as a nozzle or dispenser, I will hereafter use the term "nozzle" by which term I desire to be understood as meaning any device for discharging liquid whether it be associated with a flexible hose or a metal pipe and regardless of the particular method of the discharge from said member, that is to say whether the discharge be in the form of a spray or a stream.

With the foregoing and other objects in view, the invention consists in the details of

construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings, forming part of this specification wherein like characters denote corresponding parts in the several views, and in which—

Figure 1 illustrates a view in elevation of a track showing a hose supporting bracket and a nozzle supporting member together with the means for moving the nozzle, in their assembled relations; Fig. 2 illustrates a sectional view on the line 2—2 of Fig. 1 the nozzle being in elevation; Fig. 3 illustrates a vertical sectional view through the track and nozzle on the line 3—3 of Fig. 1, parts being broken away; Fig. 4 illustrates a view in elevation of a supporting bracket with the hose in section; and Fig. 5 illustrates a modified form of track and hanger for the nozzle.

In these drawings I have shown a track comprising a relatively small pipe 6 and a larger pipe 7 secured to a base plate 8 through the medium of a bolt 9. By having the pipe of smaller diameter at the top and the one of greater diameter thereunder, the latter acts as a track or support along which the nozzle hangers may be moved. The nozzle 10 is here shown as comprising a metal pipe and a head 11 provided with a discharge end guarded by a disk 12, the said disk being held against the discharge end of the head 11 by a spring 13 encircling the bolt 14, which bolt has a head 15 to which a flexible connection 17 such as a rope or cable is attached, the said flexible member 17 operating over a sheave 18 which is mounted in a bracket 19, the said flexible connection being extended to the exterior of or to a window in the cellar or structure in which the apparatus is installed, so that by pulling on the said flexible connection the nozzle may be moved to different positions along the track.

As a means for connecting the nozzle to the track, I provide the said nozzle and head with shanks 20 threaded in collars 21 formed on the U-shaped jaws 22 which jaws embrace the pipe 7 as shown in Figs. 2 and 3, the said jaws being loose on the pipe 7 in

order that they may slide thereover for the purpose of changing the position of the nozzle to bring the discharge end thereof to the proper position with relation to the burning structure or material. I also provide one of the jaws 22 with apertures 24 and I provide the pipe 7 with apertures 25, the said apertures coinciding for the purpose of receiving a locking pin 27 for holding the nozzle in fixed relation while the same is not in use. When it is desired to move the nozzle, the pin can be removed and by pulling the flexible connection 17, the nozzle may be carried along the track as stated. The nozzle may be caused to travel rearwardly by a pull on the hose 28 which is connected to the nozzle in any appropriate manner.

In order to support the hose during the movement of the nozzle, a hanger may be employed and I have here shown the said hanger as comprising two arms 23 supporting a spindle 24 on which an anti-friction roller 25 is mounted, the said roller being here shown as having a concaved face forming a seat for the hose so as to prevent its lateral displacement or engagement with the arms.

The construction of the nozzle or the head 11 and its adjuncts is such as to control the discharge of liquid therefrom yet permitting its escape when the pressure is sufficient to overcome the tension of the spring 13. The spraying apparatus is therefore automatic in that the resistance of the spring increases as the pressure in the nozzle is increased. It is also desirable in this connection to provide means for determining the position of the nozzle with relation to the track in order that the operator may know whether the said nozzle is properly positioned to discharge the liquid within the zone of the fire. To that end I have devised a fire alarm and indicator which will show the exact location of the fire with respect to the track. The hose may be provided with indicating means such as graduations A, that the operator may determine the length of hose that has been drawn into the building in order that the location of the carrier on the track and the point of discharge of the liquid from the nozzle may be known; or the flexible connection may be provided with indicating means B, by observing which, the operator may know the distance that the carrier for the nozzle has traveled over the track. These means will enable the operator to determine the exact location of the carrier and the nozzle, and he may know that liquid is being discharged into the zone of the fire as determined by the alarm and indicator. It becomes apparent, therefore, that the use of the alarm and indicator coupled with the apparatus disclosed herein obviates the

necessity for an operator to enter the burning structure as the zone of the fire can be determined by the alarm and indicator, and the extinguishing apparatus can be controlled.

While I have used the term "liquid" throughout this specification, it is to be understood that any fire extinguishing compound or water may be employed and I therefore use the comprehensive term "liquid" as meaning any such element.

In the form shown in Fig. 5, which is a modification of the form heretofore described, the track comprises an eye beam 29 and the hanger consisting of a jaw 30 having a threaded shank 31 engaging a nipple on the collar 33, which collar embraces the nozzle 34.

I claim—

1. In a fire extinguisher, a track, a nozzle horizontally suspended from the track, jaws embracing the track and connected to the nozzle, a liquid supplying medium connected to the nozzle, and means for moving the jaws longitudinally of the track.

2. In a fire extinguisher, a track, a nozzle, jaws embracing the track and connected to the nozzle, a liquid supplying medium connected to the nozzle, removable means for fastening one of the jaws to the track, and means for moving the jaws longitudinally of the track.

3. In a fire extinguisher, a track, a nozzle, jaws embracing the track and connected to the nozzle, a liquid supplying medium connected to the nozzle, removable means for fastening one of the jaws to the track, means for moving the jaws longitudinally of the track, and means for determining the location of the nozzle with relation to the track.

4. In a fire extinguisher, a track, a nozzle, jaws embracing the track and connected to the nozzle, a liquid supplying medium connected to the nozzle, removable means for fastening one of the jaws to the track, means for moving the jaws longitudinally of the track, means for determining the location of the nozzle with relation to the track, and a hanger for the liquid supplying medium.

5. In a fire extinguisher, a track, a nozzle having a spring controlled head, jaws embracing the track and connected to the nozzle, a liquid supplying medium connected to the nozzle, removable means for fastening one of the jaws to the track, means for moving the jaws longitudinally of the track, means for determining the location of the nozzle with relation to the track, and a hanger for the liquid supplying medium.

6. In a fire extinguisher, a track, a nozzle having a spring controlled head, jaws em-

bracing the track and connected to the
nozzle, a liquid supplying medium connected
to the nozzle, removable means for fastening
one of the jaws to the track, means for mov-
5 ing the jaws longitudinally of the track, and
means for determining the location of the
nozzle with relation to the track.

In testimony whereof, I affix my signa-
ture in the presence of two witnesses.

JOHN W. CAMPBELL.

Witnesses:

ALLEN H. LEEFER,
VIRGIL COOPER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."