

N. FINICAL.
 AUTOMATIC FIRE EXTINGUISHER.
 APPLICATION FILED APR. 28, 1909.

973,185.

Patented Oct. 18, 1910.

2 SHEETS-SHEET 1.

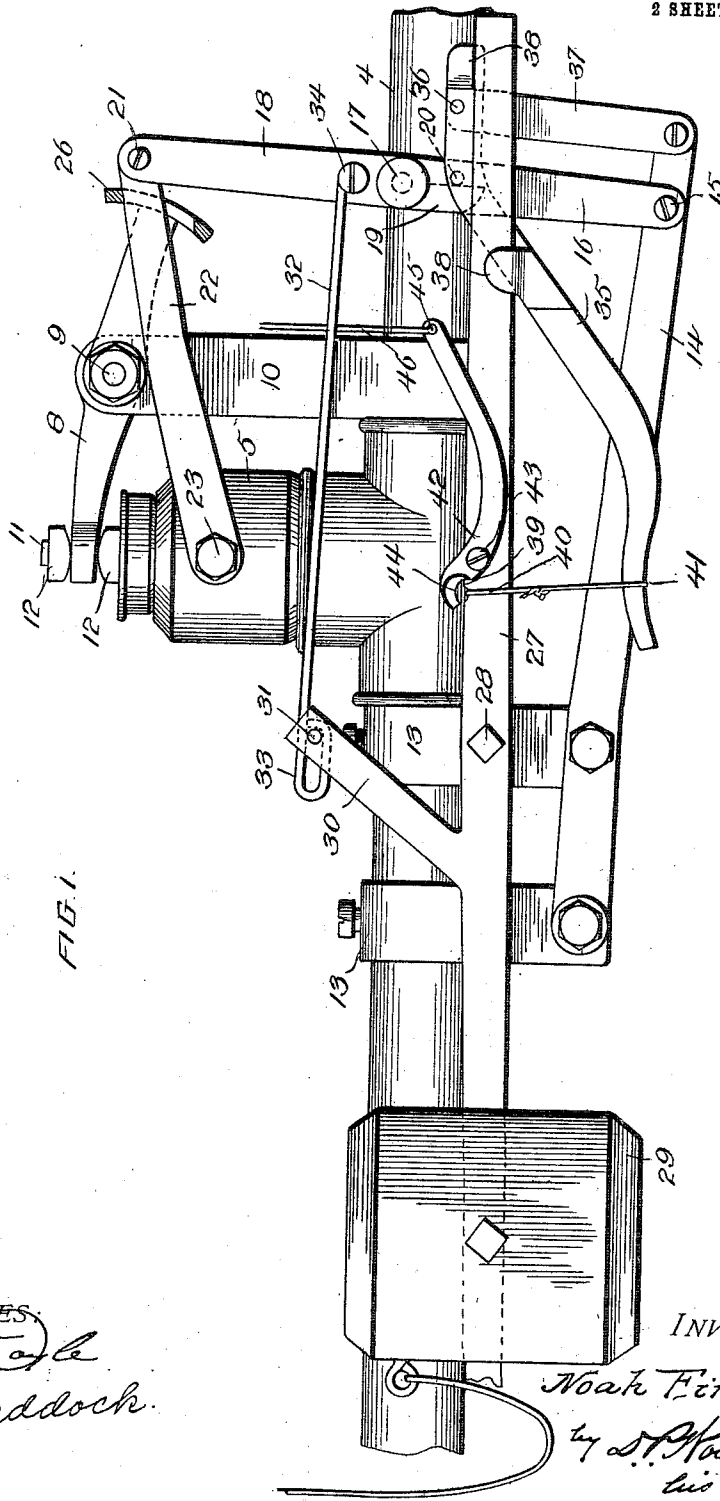


FIG. 1.

WITNESSES:
R. C. Braddock
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INVENTOR

Noah Finical
 by *J. J. Walcott*
 his Attorney

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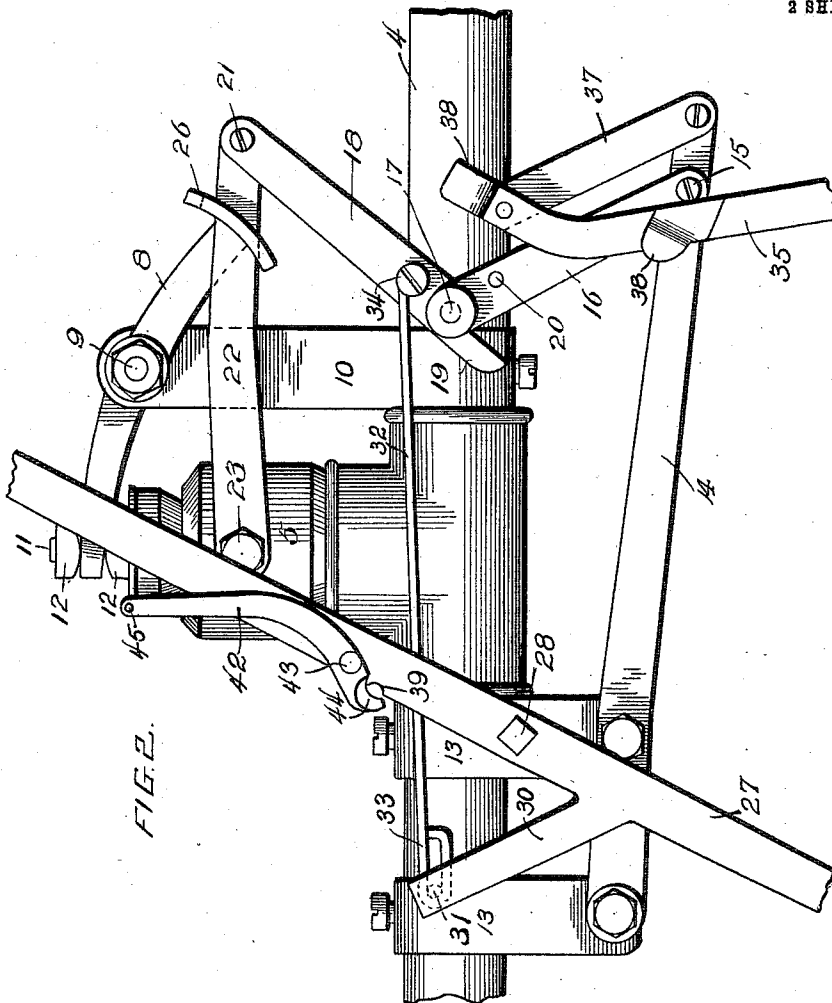


FIG. 2.

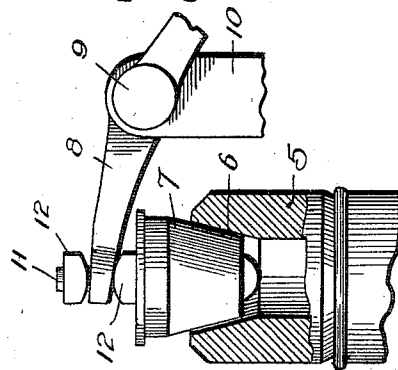


FIG. 3.

WITNESSES:

W. F. Doyle
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UNITED STATES PATENT OFFICE.

NOAH FINICAL, OF GALION, OHIO.

AUTOMATIC FIRE-EXTINGUISHER.

973,185.

Specification of Letters Patent.

Patented Oct. 18, 1910.

Application filed April 28, 1909. Serial No. 492,638.

To all whom it may concern:

Be it known that I, NOAH FINICAL, a citizen of the United States, residing at Galion, in the county of Crawford and State of Ohio, have invented certain new and useful Improvements in Automatic Fire-Extinguishers, of which the following is a specification.

The present invention relates to means for discharging water in case a fire breaks out within the region of said means, and the primary object is to provide simple, novel and effective mechanism, which is both automatically and manually controlled, so that should anything within the range of action of the apparatus become ignited, it will, if sufficient heat is generated, be automatically thrown into operation, or it can be actuated by hand from a distance in case the automatic mechanism is not affected as soon as may be desired.

A further and important object is to provide mechanism, which will effectively hold the supply of water in check, as long as it is not wanted, said mechanism being such that it is not apt to become inoperative from lack of use.

The preferred embodiment of the invention is illustrated in the accompanying drawings and is described in the following specification, but it will be evident from an inspection of the appended claims that the invention is not limited solely to the structure disclosed.

In the drawings Figure 1 is a side elevation of the device when inoperative. Fig. 2 is a similar view, showing the parts in position to permit the discharge of water. Fig. 3 is a detail sectional view of the discharge nozzle and controlling valve therefor.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment disclosed, a supply pipe 4 is employed, which may be suitably located and extended to different points, as desired. This supply pipe is provided with one or more upstanding discharge nozzles 5, each of which, as shown in Fig. 3, has an internal tapered valve seat 6. A valve 7 is movable into and out of coöperation with the seat and when opened constitutes a spreader or sprayer for the liquid, as will be evident. The valve 7 is mounted on one end of a lever 8 that is fulcrumed between its ends, as shown at 9 on an upstanding

standard 10, suitably secured to the pipe. The preferred manner of securing the valve to the lever is by means of a stem 11, which passes through said lever, and has bearing nuts 12 located on opposite sides of said lever.

Secured to the pipe 4, by means of clamps 13, is a bracket arm 14 arranged beneath the pipe, and pivoted to said arm at 15, is a link 16, to which is pivoted at 17, another link 18. These links are movable into and out of alined locked position, as shown in Figs. 1 and 2, the upper link 18 having a depending finger 19, which is arranged to engage a stop lug 20, carried by the lower link 16. The upper link 18 is pivoted, as shown at 21 to a lever 22 fulcrumed at 23 on one side of the discharge nozzle 5. This lever 22 passes through a yoke 26 formed upon the lever 8. When the links 16 and 18 are in alinement, the lever 22 will be in its raised position, and the end of the lever 8, carrying the valve will be depressed, so that the valve will be seated and held in its closed position. When, however, the links are swung out of alinement, as shown in Fig. 2, then the yoke 26 of the lever 8 will be depressed, and the valve raised to the position, shown in Fig. 3.

For the purpose of effecting the swinging movements of the links 16 and 18, the following mechanism is preferably employed. An actuating lever 27 is fulcrumed between its ends, as shown at 28 on one of the clamps 13, and is provided at one end with an adjustable weight 29. The same arm of the lever that carries the weight 29, is also provided with an arm 30 having an offset pin 31. A rod 32, has one end looped, as shown at 33, to the pin 31, while the other end of said rod is connected by a fastener 34 to the upper link 18. A latch 35, pivoted, as shown at 36 to an upstanding link 37, which in turn is pivoted to the bracket arm 14, is provided with oppositely extending hook lugs 38 that engage over the opposite edges of the arm of the lever 27 opposite to that carrying the weight 29. The said arm of the lever 27 has a notch 39 that receives the looped end of a fusible cord or wire strand 41 that can be extended to any desired point, and this strand, as shown in Fig. 1, passes beneath the free end of the latch, thus holding the same with the lever 27 in a substantially horizontal position. A strand severing device, in the form of a clipper arm 42, is

pivoted between its ends on the lever 27, as shown at 43, and one end portion of the clipper has a cutting edge 44 that is movable to a position to sever the strand 40. The other end of the lever 42 has an eye 45 to receive cords or wires 46, which can be extended to any suitable point for manual operation.

The operation of the structure is substantially as follows. Under normal conditions, or when the device is inoperative, the parts are in the position shown in Fig. 1, and will be so held until a fire breaks out, or it is desired for some other reason to manually operate the mechanism. Assume that a conflagration occurs, if the flames reach the cord 41 or sufficient heat is generated to burn or otherwise sever the same, it will be evident that the free end of the latch 35 will be released. The weight 29 will consequently act to swing said latch downwardly, and when the pin 31 carried by the arm 30 of the lever 27 reaches the end of the loop 33, sufficient momentum will have been secured to pull the rod 32 and swing the links 16 and 18 out of alinement. As a result, the valve will be elevated, and the discharge nozzle opened to permit the outflow of water. On the other hand, if a person should discover the fire and wish to throw the apparatus into operation, without waiting for the strand 41 to be automatically severed, he has only to pull upon the cord 46, whereupon the cutting edge 44 will sever the loop 40, and release the mechanism, in which case, the same operation as above described will take place.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a fire extinguishing apparatus, the combination with a supply pipe having a discharge, of a valve controlling said discharge, a lever connected with said valve, an actuating lever operatively connected with said first mentioned lever, a pivotally supported holding latch having a holding and supporting engagement with said actu-

ating lever, a holding strand engaging said latch, and a severing device for said strand.

2. In a fire extinguishing apparatus, the combination with a supply pipe having a discharge; of a valve controlling the discharge, a pivotally mounted lever connected with said valve, a second lever operatively connected with said first mentioned lever, pivotally connected links, one of which is pivoted to the second lever and means for swinging the links into and out of substantial alinement.

3. In fire extinguishing apparatus, the combination with a supply pipe having a discharge, of a valve controlling the discharge, a lever fulcrumed between its ends and engaged at one end with the valve, a yoke carried by the other end of the lever, a second lever fulcrumed at one end and passing through the yoke, pivotally connected links, one of which is pivoted to the second lever, and means for swinging the links into and out of substantial alinement.

4. In fire extinguishing apparatus, the combination with a supply pipe having a discharge, of a valve controlling the discharge, a lever fulcrumed between its ends and engaged at one end with the valve, a yoke carried by the other end of the lever, a second lever fulcrumed at one end and passing through the yoke, pivotally connected links, one of which is pivoted to the second lever, a weighted actuating lever having an arm, and a rod connected to the arm and to the links.

5. In fire extinguishing apparatus, the combination with a supply pipe having a discharge, of a valve controlling the discharge, a lever fulcrumed between its ends and engaged at one end with the valve, a yoke carried by the other end of the lever, a second lever fulcrumed at one end and passing through the yoke, pivotally connected links, one of which is pivoted to the second lever, a weighted actuating lever having an arm, a rod connected to the arm and to the links, a pivotally mounted latch having hook lugs that engage over opposite sides of the weighted lever, a fusible strand connected to the free end of the latch and engaged with the weighted lever, and a strand severing device mounted on said actuating lever.

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

NOAH FINICAL.

Witnesses:

W. J. GEER,

H. C. SPONHAUEN.