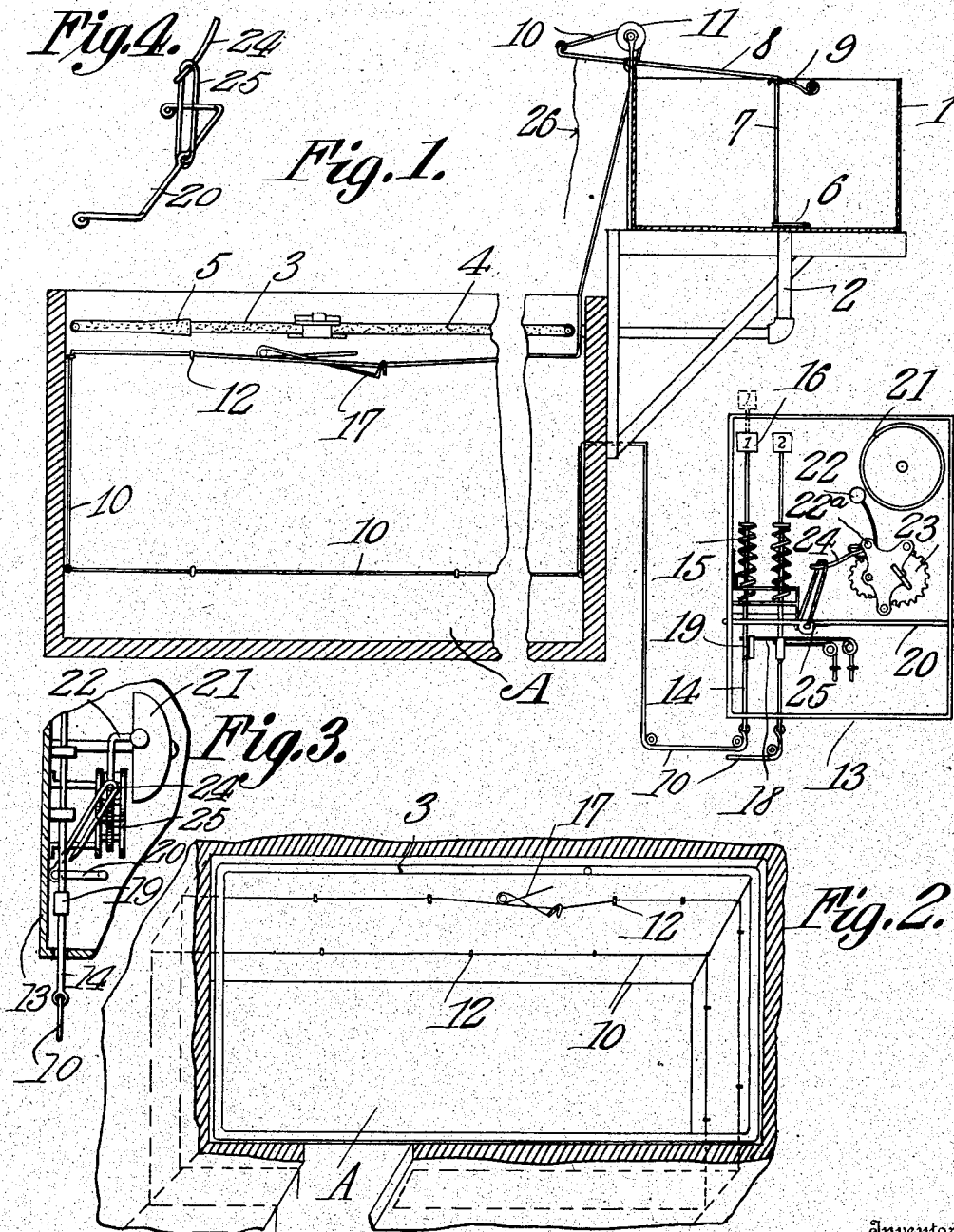


J. W. LAWHON.
 COMBINED FIRE EXTINGUISHING AND INDICATING APPARATUS.
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Patented May 21, 1912.



Witnesses

E. W. Hunt
Arthur D. Lawson

Inventor
John W. Lawhon.

By *C. A. Snow & Co.*
 Attorneys

UNITED STATES PATENT OFFICE.

JOHN W. LAWHON, OF TRUNDLES CROSS ROADS, TENNESSEE.

COMBINED FIRE EXTINGUISHING AND INDICATING APPARATUS.

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Specification of Letters Patent.

Patented May 21, 1912.

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To all whom it may concern:

Be it known that I, JOHN W. LAWHON, a citizen of the United States, residing at Trundles Cross Roads, in the county of Sevier and State of Tennessee, have invented a new and useful Combined Fire Extinguishing and Indicating Apparatus, of which the following is a specification.

This invention relates to apparatus for automatically extinguishing fires in buildings, and at the same time, indicating the room or rooms in which the fire is located.

One of the objects of the invention is to provide means of this character, including a tank having valves therein, one valve being provided for each room in which the apparatus is located, there also being a separate pipe for conducting water from the tank to each of the rooms.

Another object is to provide mechanical means designed to be released when subjected to the action of fire, for the purpose of permitting the escape of water from the tank and into the pipe entering the room wherein the fire is located.

A further object is to provide an indicator which is held normally in a predetermined position by a strand of material located within a room and each strand, when severed, releases the indicator and enables it to operate automatically to indicate the location of the fire.

With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings: Figure 1 is a vertical section through a portion of the structure having the present improvements applied thereto, the connections between the indicator and the balance of the apparatus being indicated diagrammatically. Fig. 2 is a perspective view of a portion of a structure and showing the arrangement of the discharge pipe and the controlling strand within a room. Fig. 3 is a vertical section through the indicator. Fig. 4 is a detail view of a portion of the structure.

Referring to the figures by characters of reference, A designates a room within a structure, there being a storage tank 1 supported in any preferred manner upon the compartment. A discharge pipe 2 extends

from the bottom of the tank and opens into a spraying pipe 3. This last-mentioned pipe is supported upon the walls of the compartment and preferably adjacent the ceiling, said pipe being formed with a plurality of minute discharge openings 4, through which jets of water are designed to be projected into the compartment A. The spraying pipe may be made up of sections of any preferred length and diameter and can be connected together either by means of threads or by telescoping the ends thereof, as indicated at 5 in Fig. 1. The openings 4 are so located as to discharge jets of water in all directions from the pipe.

The outlet of the tank 1 is designed to be closed by a valve 6, having a rod 7 connected to it and extending upwardly to one end of the lever 8. This lever is fulcrumed at an intermediate point and a spring 9 bears upwardly against one end thereof, so as to hold the valve 6 normally unseated. That end of the lever farthest removed from the valve rod 7 has a cord 10 attached to it, said cord being guided over a sheave 11 mounted above the lever. This cord is extended downward into the compartment A and thence along the walls of the compartment through guide eyes 12 provided therefor. The cord can be arranged in any manner preferred and, as indicated in Fig. 2, is preferably extended along the upper portions of the walls and thence downward toward the floor, after which it is extended longitudinally of the walls and thence downward to an indicator located at some point removed from the compartment. It is to be understood that this cord fits loosely within its supporting eyes 12 and is therefore capable of being shifted longitudinally.

The indicator used in connection with the apparatus may consist of a casing 13 having a slide 14 mounted to reciprocate therein, there being a spring 15 mounted thereon and tending to hold one end of the slide normally projected beyond the casing. This end of the slide has a head 16 arranged thereon and provided with a numeral or other data sufficient to designate the room or compartment to which the slide 14 is connected. The cord 10 is attached to one end of the slide 14 and is designed to hold the spring 15 under stress and the head 16 retracted within the casing 13. A spring 17, located in compartment A, bears constantly on the cord 10 and operates to hold the same

constantly taut, it being understood that this spring is more powerful than the spring 15. If desired, and as illustrated in Fig. 1, the spring 15 may be augmented by another
 5 spring 18 bearing against a projection 19 carried by the slide.

A bail is hung within the casing 13 as indicated at 20, this bail normally lying within the path of the projection 19. A bell 21
 10 is mounted within or upon the casing and the clapper 22 thereof is provided with spring-controlled mechanism 23 which, when wound, will automatically operate the clapper for a predetermined period. An arm 24
 15 extends from the clapper shaft 22^a and moves with the clapper and is loosely engaged by a loop 25 attached to the bail 20. The bail, loop and arm are so proportioned that when said bail is in its normal position, loop 25
 20 will hold the arm 24 against movement in one direction and the clapper 22 and its actuating mechanism will thus also be held in fixed relation.

Should a fire occur within the compartment A the cord 10 will soon become severed
 25 at one or more points and immediately thereafter spring 9 will shift the lever 8 so as to open valve 6 and cause the contents of the tank to flow into the spraying pipe 3,
 30 thus resulting in the discharge of numerous jets in all directions within the compartment. While this operation is taking place the slide 14, having been released, will be shifted longitudinally by the spring or
 35 springs connected thereto and the head 16 will therefore be projected beyond the casing and will indicate the compartment in which the fire is located. During the movement of the slide the projection 19 will
 40 strike bail 20 and shift it out of normal position, thus moving the loop 25 to such an extent as to permit the arm 24 and the clapper 22 to oscillate under the action of the spring-controlled mechanism 23. The bell
 45 21 will therefore be sounded and an alarm thus given.

In the drawings only one compartment, and the mechanism associated therewith, has been shown, but it is to be understood that
 50 each compartment in the building may be provided with a separate mechanism such as described. Only one tank need be utilized however, although it will be provided with separate outlets, one for each compartment.

55 Should it be desired to shut off the flow of water, a chain 26, or the like, attached to the lever 8 could be pulled so as to force the

lever against the stress of spring 9 and thus reseal the valve 6. Said chain 26 could then be fastened until the controlling cord 10 has
 60 been replaced and the apparatus thus reset for further use.

It is to be understood that various changes may be made in the arrangement and construction of the parts without departing
 65 from the spirit or sacrificing the advantages of the invention.

What is claimed is:

1. In apparatus of the class described a casing, a slide mounted to reciprocate therein, a normally taut element adapted to be
 70 parted when subjected to the action of heat for holding the slide normally in a predetermined position, a spring for shifting the slide to project one end portion thereof beyond the casing when said element is parted,
 75 a bail hung within the casing, a sounding element, a clapper, means for actuating the clapper, an arm movable with the clapper, a loop connected to the bail and engaging the arm, said bail normally holding the loop in
 80 position to restrain the arm and clapper, and a projection on the slide and movable against the bail to shift the bail and loop and release the arm and clapper.

2. In apparatus of the class described a casing, slides normally housed within the casing, normally taut elements adapted to be
 85 parted when subjected to the action of heat, said elements constituting means for holding the slides in normal position, springs mounted on and bearing against the slides to automatically project them beyond the casing when
 90 the elements connected thereto are parted, a bail hung within the casing, a bell, a clapper, spring actuated means for operating the clapper, an arm movable with the clapper, a loop pivotally connected to and movable
 95 with the bail, said loop loosely and detachably engaging the arm to hold the clapper out of contact with the bell and to hold the clapper actuating mechanism against movement, and a projection on each slide, any one
 100 of the projections being movable against the bail when its normally taut element is parted, to shift said bail and release the clapper arm.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN W. LAWHON.

Witnesses:

H. C. BLAIR,
 McD. BROWN.