

T. P. McCALL.  
FIRE EXTINGUISHER.  
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964,299.

Patented July 12, 1910.

Fig. 1.

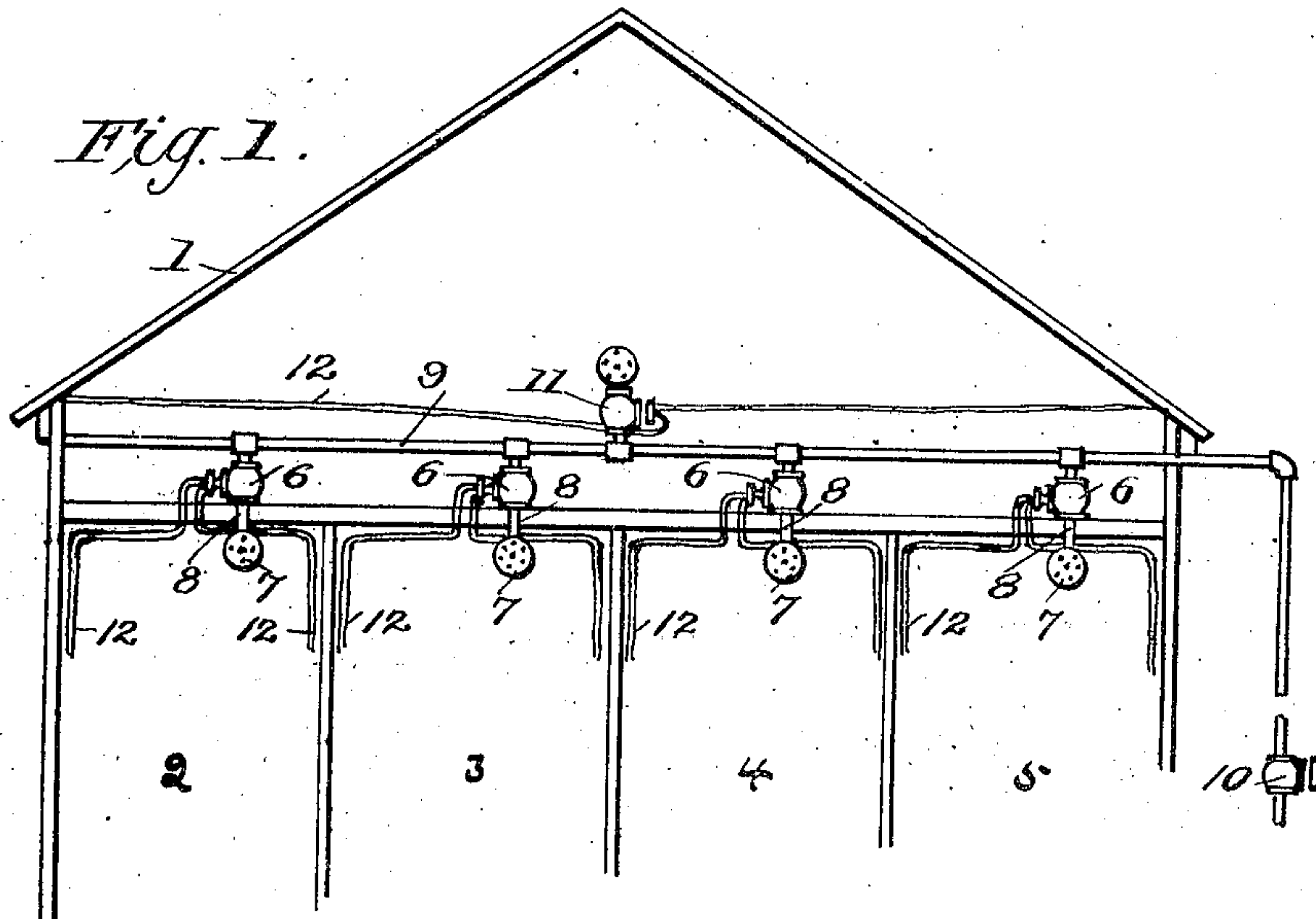
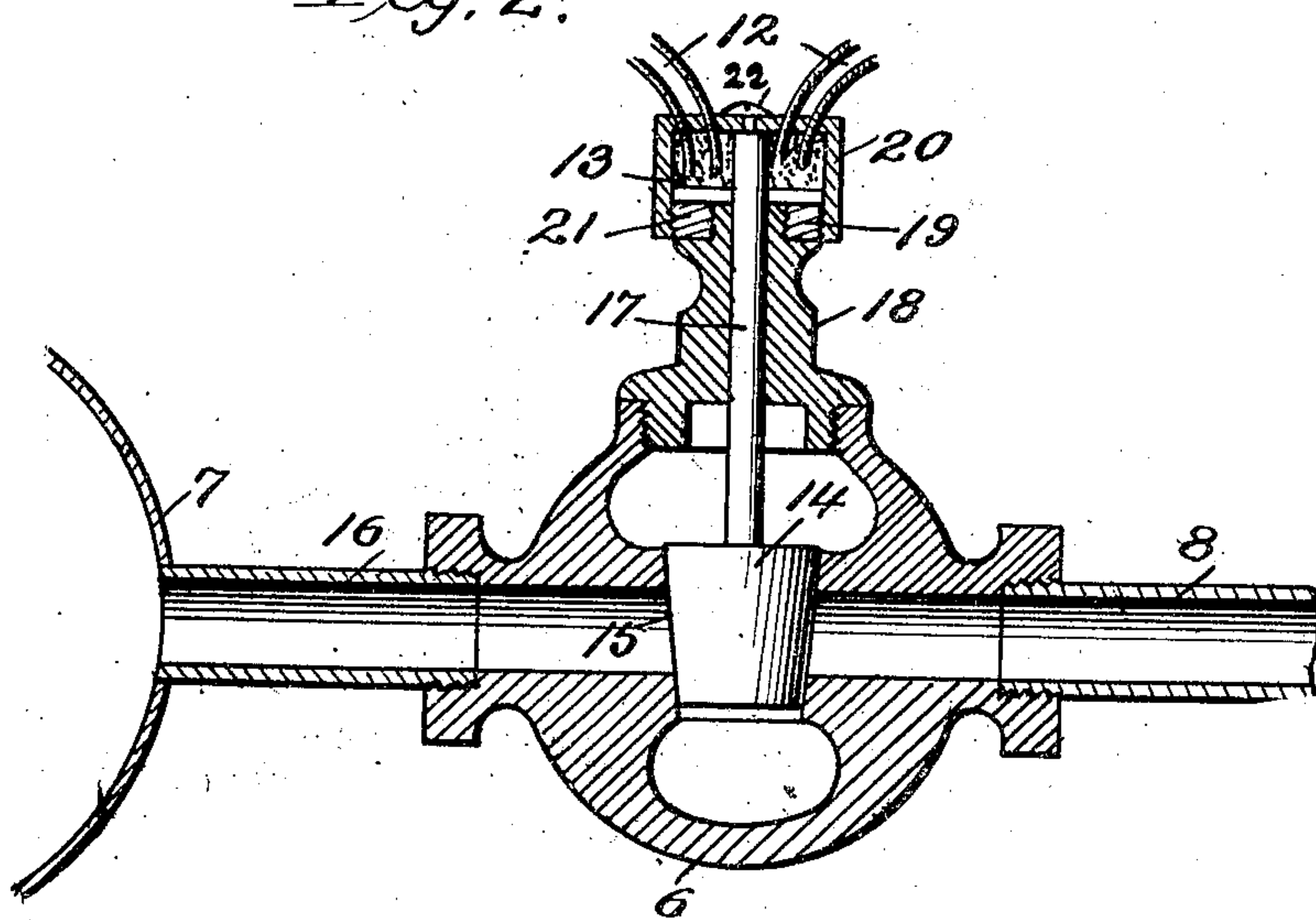


Fig. 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## FIRE-EXTINGUISHER.

964,299.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed November 8, 1909. Serial No. 526,876.

*To all whom it may concern:*

Be it known that I, THOMAS P. McCALL, a citizen of the United States, residing at Raymond, in the county of Hinds and State of Mississippi, have invented certain new and useful Improvements in Fire-Extinguishers, of which the following is a specification.

This invention relates to improvements in fire extinguishers, and particularly to automatic fire extinguishers arranged to flood the building or room in case of fire.

The object in view is the provision of a valve arranged with an explosive for opening the same for controlling a system of water distributing pipes, and the like.

Another object of the invention is the provision of a valve adapted to be opened upon the explosion of an explosive substance connected therewith, which has one or more fuses leading therefrom and distributed at any desired place for igniting the explosive charge in case of fire in any part of the room or building to which the valve is secured.

With these and other objects in view the invention comprises certain novel constructions, combinations and arrangement of parts as will be hereinafter more fully described and claimed.

In the accompanying drawings: Figure 1 is a fragmentary view of a building with a system of water distribution and spraying means connected with the controlling valve, the water distributing system and valve embodying the invention. Fig. 2 is an enlarged view of a valve shown in an open position, but with the explosive connected therein still in position.

Referring to the accompanying drawings by numerals, 1 indicates a housing of any desired kind which may be provided with a plurality of rooms 2, 3, 4 and 5 as desired, in which valves 6 are positioned. Valves 6 are arranged to carry a sprinkling bulb or other water distributing means 7, and in turn are connected to a pipe 8, which pipe is in free communication with a general supply pipe 9. General supply pipe 9 may have a valve 10 interposed therein for controlling manually a flow of water therein. Connected to each of the valves 6, and also to valve 11, which is also of the same structure as valves 6, are one or more fuses 12. The

fuses 12 extend from the top of the stem of the valve which carries an explosive mixture 13 to any desired point. Preferably there are a number of these fuses extending from each valve to various parts of the building or room, so that in case fire is started at any point the fuse near that point will be almost immediately ignited and the fire communicated to the explosive 13, which upon being ignited will explode and raise valve member 14 from its seat 15 and permit water or other fire extinguishing medium to pass from pipe 8 to pipe 16, and from thence into sprinkler 7.

If desired pipe 16 may carry a plurality of sprinklers or a plurality of perforated pipes as desired for thoroughly distributing the fire extinguishing fluids in the vicinity of valve 6. The valve will remain open after the same has been forced open by the explosive 13 until the same has been manually closed. The ordinary friction of the stem 17 will prevent the valve from dropping down, especially as the same is assisted by the upward pressure of the fire extinguishing fluid as the same passes through the valve.

The valve is further retained by means described below.

The valve 6, as more clearly seen in Fig. 2, is formed with a stem 18 comparatively long in order to guide the movable stem 17 connected rigidly with valve member 14. The member 18 is removably secured in position, and has positioned at its upper end a washer 19, preferably of lead and threaded to stem 18, and above which is arranged a housing 20. Housing 20 carries the explosive 13, and is prevented from moving off the stem 17, when explosive 13 has been ignited, by head 22. When the valve is closed valve member 14 of course will be upon its seat 15, and the housing 20 will be resting against washer 19. Immediately upon the explosive 13 becoming ignited the force of the explosion will partly melt washer 19, and at the same time quickly raise stem 17 of valve 14. Some of the lead from washer 19 will run around the stem 17, and will assist in preventing the return of the stem until manually moved to its lowered or closed position.

In arranging the fire-extinguishing system a valve provided with an explosive is



preferably located in each room, and connected to a general supply of fire extinguishing medium, so that in case there is a fire in one room the fire extinguishing medium will  
5 be turned on in that room only, unless the fire should spread to the other rooms. This is of considerable advantage in that the damage will be localized, and no general inconvenience caused.

10 What I claim is:

1. In a fire extinguisher, a valve casing, a valve operating therein, an explosive material for moving the valve, and a material adapted to be fused by the explosive material and tending to prevent the valve from  
15 closing after it has been forced open by the ignition of the explosive.

2. In a fire extinguisher, a valve casing, a valve operating therein, a stem for said  
20 valve, an explosive material for moving said valve, a valve stem, a washer in contact with the valve stem, such washer being of material adapted to be fused by the explosive material and tending to prevent the valve  
25 from closing after it has been forced open by the ignition of the explosive.

3. In a fire extinguisher, a supply pipe, a valve casing connected therewith, a valve arranged to reciprocate in the casing, a valve  
30 stem connected with the valve, a cap affixed to one end of the valve stem, an explosive material within the cap, a washer of fusible material surrounding the valve stem, said stem being adapted to be retained in posi-

tion to hold the valve open, by the partial 35 fusing of the washer.

4. In a fire extinguisher, a supply pipe, a valve casing connected therewith, a valve operating in the casing, a valve stem connected with the valve, a guiding member for  
40 said stem, a cap connected with one end of the stem, a washer of fusible material surrounding the stem and disposed within the lower portion of the cap, and an explosive material within the cap and located between  
45 the upper side thereof and the fusible washer.

5. In a fire extinguisher, means for supplying a fire extinguishing medium, a pipe extending therefrom, a valve connected with  
50 said pipe formed with a reciprocating valve member, and a valve rod, an explosive, a housing rigidly secured to said valve rod, and inclosing said explosive, whereby when said explosive has been ignited the same will  
55 move said valve rod and valve member for opening said valve, a plurality of fuses extending from said explosive, and a fire extinguishing medium distributor connected with said valve and designed to distribute  
60 the fire extinguishing medium in the vicinity of said valve.

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

THOMAS P. McCALL.

Witnesses:

J. C. PEYTON,

J. W. CONLEY.