

No. 825,453.

PATENTED JULY 10, 1906.

R. W. GERTZ.
AUTOMATIC SPRINKLER.
APPLICATION FILED APR. 29, 1905.

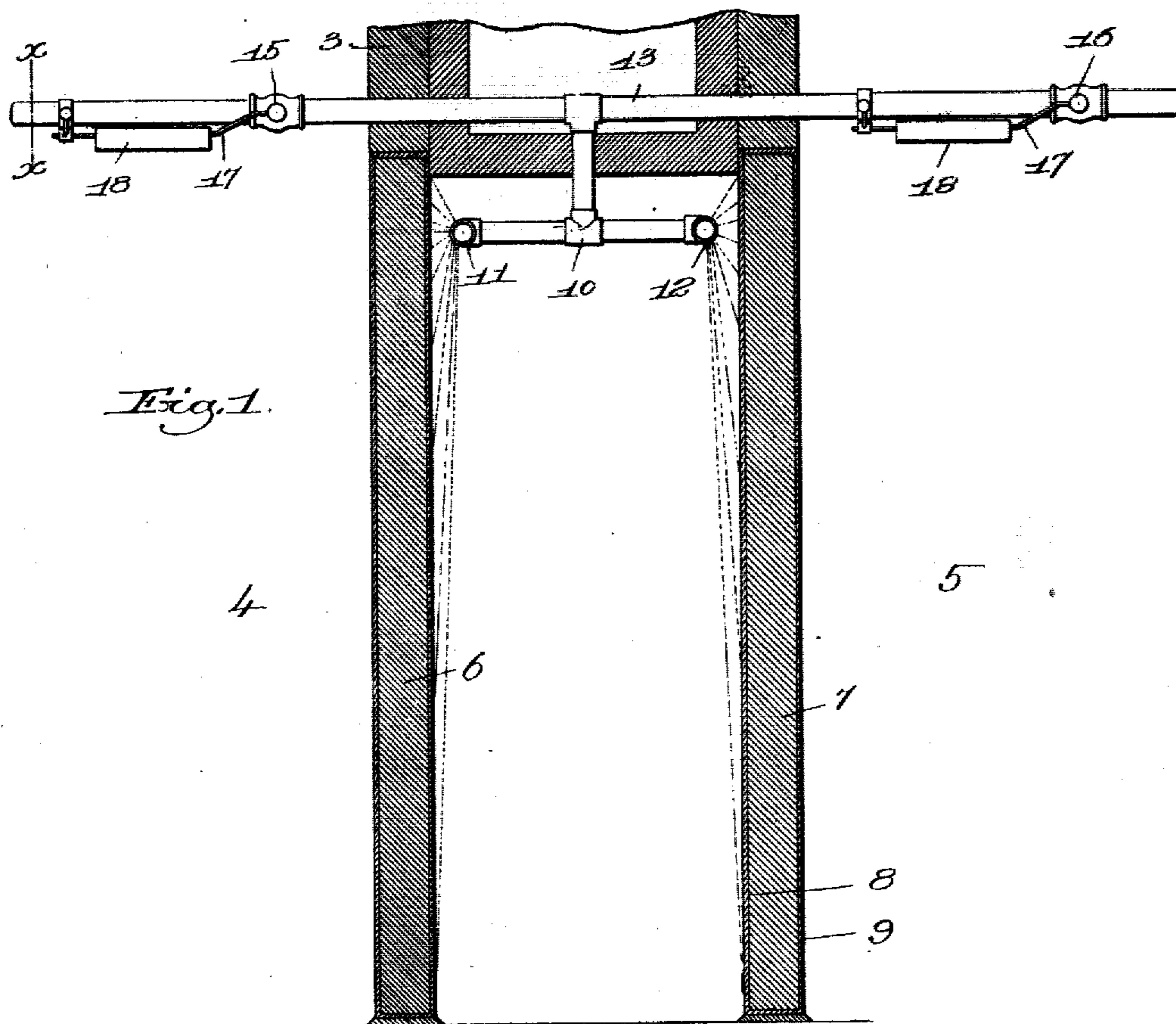
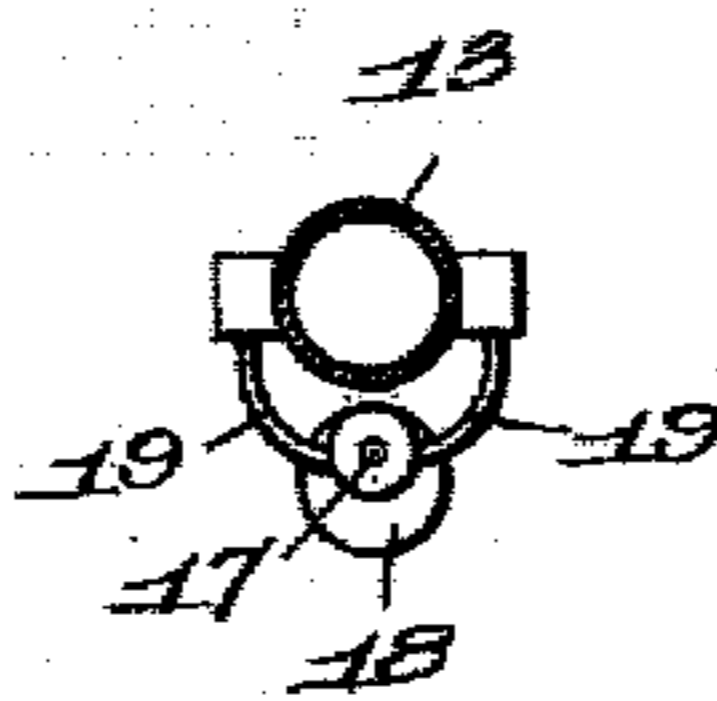


Fig. 1.

Fig. 2.



Witnesses:
Fred S. Grunhof
M. C. Lunsford.

Inventor.
Richard W. Gertz,
by Wesley Ferguson,
attys.

UNITED STATES PATENT OFFICE.

RICHARD W. GERTZ, OF BOSTON, MASSACHUSETTS.

AUTOMATIC SPRINKLER.

No. 825,453.

Specification of Letters Patent.

Patented July 10, 1906.

Application filed April 29, 1905. Serial No. 258,011.

To all whom it may concern:

Be it known that I, RICHARD W. GERTZ, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improve-
5 ment in Automatic Sprinklers, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing
10 like parts.

The building laws in many places require that a so-called "fire-door" shall be placed between different rooms in a factory, and these doors are usually made of wood sheathed
15 in sheet-iron or some similar sheet metal, and where the wall between two rooms is of any thickness two such doors are used, one at each side of the wall. While these doors to some extent prevent the spread of fire from
20 one room to another, yet if a fire generating any considerable heat starts in one room the wood of the door very soon becomes charred in spite of the metal sheathing, and when this occurs the fire is very likely to break through
25 the door.

I have devised an automatic sprinkler system to be used between two separated fire-doors interposed between two rooms and which is for the purpose of automatically
30 spraying water on the inside of each door if a fire breaks out in either room, thereby keeping the doors cool and preventing them from becoming charred.

Figure 1 is a vertical section through a portion of a building having my improvements applied thereto. Fig. 2 is a section on the line
35 $x-x$, Fig. 1.

3 designates a partition-wall dividing two rooms 4 and 5 in a factory, and 6 and 7 designate two fire-doors interposed between these
40 rooms, said doors being separated widely from each other, as is sometimes the case. These doors are each formed of a filling 8 of wood, which is sheathed in sheet metal 9, and
45 they may be either sliding or swinging doors. 10 designates a sprinkler-head located between the doors, said head having two sprinklers 11 and 12, one for the inner side of each door. Said sprinklers are arranged to sprin-
50 kle the entire surface of each door and are connected to a suitable pipe 13, connected to a water-supply and perhaps forming part of the sprinkler system. The water is normally led from the sprinkler-head 10 by
55 suitable valves 15 and 16, said valves being

adapted to be opened automatically if a fire occurs in either room.

As herein shown, the valve-stems 17 of each valve are weighted by means of a suitable weight 18, and each valve is held closed
60 by fusible members 19, said members being made of suitable material which will fuse at a comparatively low temperature. If a fire occurs in either room and the temperature adjacent either fire-door reaches a certain
65 point, the fusible members 19 will be melted, thereby allowing the weight 18 to open the valve in the room where the temperature is thus raised. As soon as this occurs water is admitted to the sprinkler-head and the inside
70 of each door is sprinkled, this spraying operation continuing until the valve is again closed. The sprinkling of the fire-doors prevents them from being burned through, and with this simple expedient it is possible oftentimes to
75 confine the fire in one room of a factory or building.

Although the doors herein shown are formed of wood sheathed in metal, it will be obvious that my invention might be em-
80 ployed in connection with iron fire-doors or doors of any character.

Upon looking at the drawings it will be noted that the space between the two fire-doors shown constitutes a small room or
85 compartment, and my invention in its broadest aspect includes a door separating two compartments or rooms, a sprinkler-head on one side of the door being arranged to sprinkle substantially the entire surface of
90 the door, and a thermostatic valve in the room on the other side of the door controlling said sprinkler-head.

In some building construction only one fire-door is used between adjacent rooms or
95 compartments, and where this is the case only one sprinkler-head will be necessary, as will be obvious, and my invention will take the form above referred to. Such an adaptation of my invention would be especially
100 useful in connection with rooms where explosives and highly-combustible material are kept and also in connection with doors leading to or from staircases.

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

1. In a building, two fire-doors separate from each other and interposed between two rooms, a sprinkler-head between said doors
110

adapted to sprinkle both of them, a pipe connected to said sprinkler-head and extending into each room, and a thermostatic valve in each room controlling said pipe whereby
5 when the temperature rises beyond a predetermined point in either room the inside of the doors is sprinkled.

2. In a building, a door separating two compartments or rooms from each other, a
10 sprinkler-head in one compartment adapted to sprinkle the side of the door which faces

said compartment, a pipe connected to said sprinkler-head and extending into the other compartment, and a thermostatic valve in said latter compartment controlling said pipe. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RICHD. W. GERTZ.

Witnesses:

LOUIS C. SMITH,
MARGARET A. DUNN.