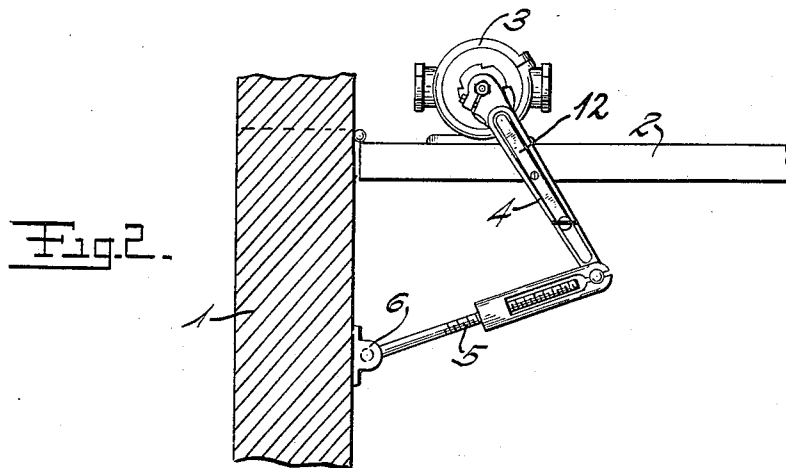
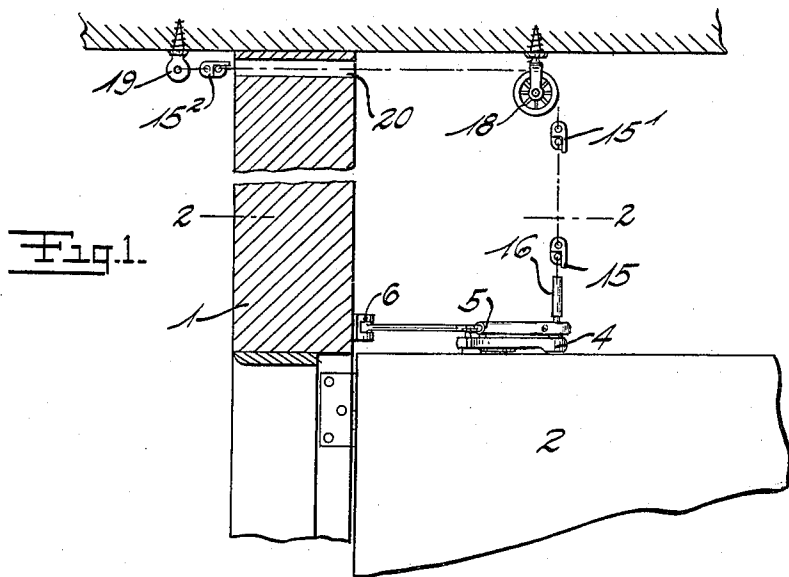


W. K. HENRY.
SAFETY DOOR HOLDER.
APPLICATION FILED OCT. 19, 1917.

1,278,465.

Patented Sept. 10, 1918.

2 SHEETS—SHEET 1.



Inventor
W. K. Henry
By his Attorneys
Bartholomew & Mowbray.

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2 SHEETS—SHEET 2.

Fig. 3.

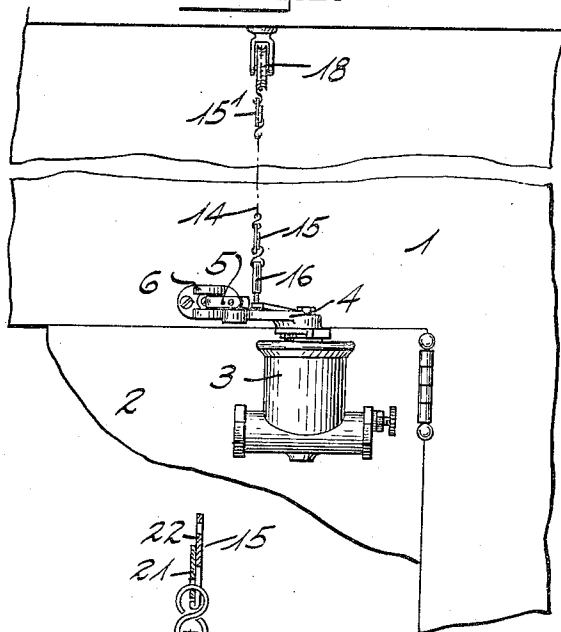


Fig. 6.

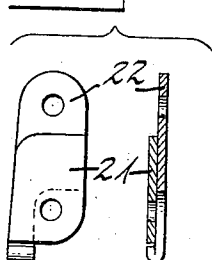


Fig. 4.

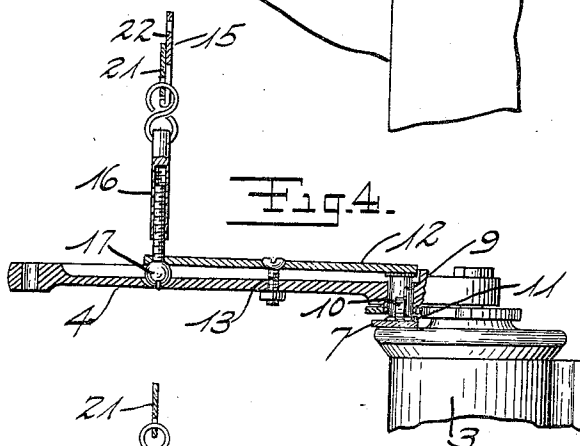


Fig. 7.

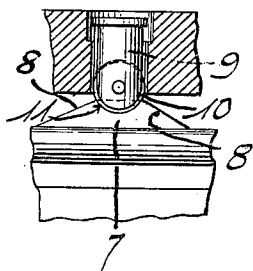
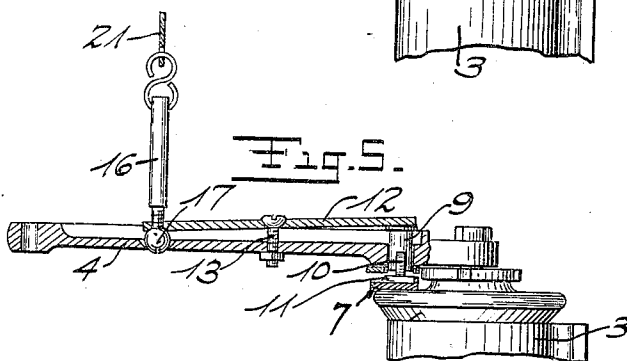


Fig. 5.



Inventor

W. K. Henry

By his Attorneys.

Bertlett & Mowley.

UNITED STATES PATENT OFFICE.

WILLIAM K. HENRY, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO AMERICAN
HARDWARE CORPORATION, OF NEW BRITAIN, CONNECTICUT, A CORPORATION
OF CONNECTICUT.

SAFETY DOOR-HOLDER.

1,278,465.

Specification of Letters Patent. Patented Sept. 10, 1918.

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To all whom it may concern:

Be it known that I, WILLIAM K. HENRY, a citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented a certain new and useful Improvement in Safety Door-Holders, of which the following is a full, clear, and exact description.

My invention relates to improvements in safety door holders and has for its object to provide a safety door holder in which the abutment is carried by the spring casing of a door check and which acts to hold the door open and shall be automatically released when the temperature of the air in the room at a point near the ceiling of the room shall have reached a predetermined point.

A further object is to provide such a holding device with means whereby it will be released when the temperature at a point remote from the door or in an adjoining room reaches a predetermined point.

Another object of my invention is to provide a safety door holder having a fusible link which shall be exposed to the surrounding atmosphere at a point considerably removed from the cooling surface of the wall containing the door.

The following is a description of my invention, reference being had to the accompanying drawings, in which:

Figure 1 shows in elevation my safety door holder applied to a door-check, the door being open;

Fig. 2 shows a plan view of the same on the line 2—2, Fig. 1;

Fig. 3 shows a front view of the same with the door closed;

Fig. 4 is an enlarged sectional detail with the parts in holding position;

Fig. 5 is an enlarged sectional detail with the holding device approaching or retiring from holding position;

Fig. 6 is a plan and sectional view of one form of fusible link which may be used in connection with my invention, and

Fig. 7 is a detail of the abutment and the engaging detent.

Referring more particularly to the drawings, 1 is a wall separating two rooms; 2 is a door for closing the passage from one room to another, on which is mounted a door-closer, comprising the spring and liquid casing 3, a spring actuated arm 4 and link connection 5, connected at 6 to the door casing, all of the ordinary type. Mounted

upon the door-closer casing is an abutment 7, having cam surfaces 8. 9 is a detent having an anti-friction roller 10, which is adapted to ride up one or the other of the cam surfaces 8 and to be yieldingly retained in the recess 11 of said abutment. 12 is an elastic lever fulcrumed on the arm 4 by engaging the head of the screw 13, which is carried by the arm 4. One end of this lever bears upon the top of the detent 9, which is also carried by said arm 4, and the other end of said lever is connected to a cable 14, comprising fusible links 15—15'—15² and an end member 16 with which an adjusting screw 17, which passes through the free end of the lever 12, engages and is accessible through the arm 4. The cable passes upward toward the ceiling and then passes over a pulley 18 whence it extends in a horizontal direction to an anchorage 19, located at some point remote from the door-closer. This point may be in an adjoining room, in which case the wall is provided with a passage 20 for the cable. The link 15 is located near the top of the door so as to be in the path of any heated gases coming toward it through the door. The link 15' is located near the ceiling where the temperature is higher than at lesser heights. The link 15² is located in the adjoining room, near the ceiling, so as to be affected by heat in that room.

Any suitable fusible link may be used, one such form being shown in Fig. 6, consisting of two plates 21, 22 provided with perforations for connecting purposes, and secured together by easily fusible solder.

The parts, when assembled, are adjusted by means of the screw 17, so that when the door is fully opened with the detent in engagement with the recess 11, the door will be held open against the action of the door-closer. The door, however, on account of the yielding character of the lever 12, can be moved so as to disengage the detent from the abutment, permitting the door-closer to close the door in the ordinary manner. If the temperature of the air surrounding any one of the fusible links 15—15'—15² is sufficiently high to melt the link, the detent 9 is thereby released so as to permit the door to close automatically.

With the construction described above not only are the links located at points where they will act to release the door-closer under desired conditions, but the links above

the door-closer are located at points well removed from cooling surfaces, such as the wall of the room, and thus are at points where they will more quickly respond to dangerous conditions.

As will be evident to those skilled in the art, my invention permits of various modifications without departing from the spirit thereof or the scope of the appended claims.

What I claim is:

1. The combination with a door closer having a casing, a spring actuated arm movable horizontally about the vertical axis of said casing, a link pivoted thereto for connecting said arm to the door and an abutment mounted upon said casing, of a vertically movable detent carried by the arm of the door closer and adapted to engage said abutment, a lever of the first class fulcrumed on said arm so as to move in a vertical plane relatively thereto and having one end co-acting with said detent, a cable extending

upwardly from the other end of said arm to an anchorage fixed relatively to said door-closer, and a fusible link interposed in said cable.

2. The combination with a door closer having a casing, a spring actuated arm movable horizontally about the vertical axis of said casing, a link pivoted thereto for connecting said arm to the door and an abutment mounted upon said casing, of a detent carried by the arm of the door closer and adapted to engage said abutment, a lever of the first class fulcrumed on said arm and having one end co-acting with said detent, a cable extending upwardly from the other end of said arm, and a fusible link interposed in said cable, the connection between said cable and lever comprising an adjusting screw passing through said other end of said lever and into the end of said cable.

WILLIAM K. HENRY.

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