(No Model.)

M. TILLOTSON.

SELF CLOSING DOOR.

No. 386,042. Patented July 10, 1888.

Fig. 1.

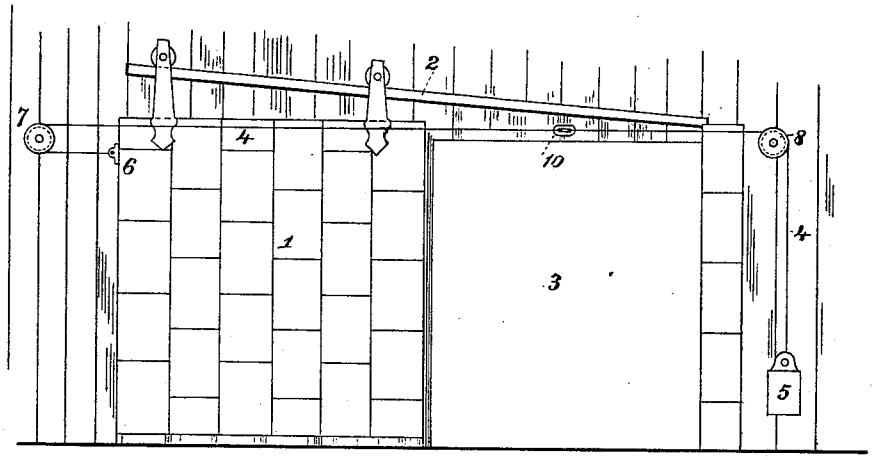
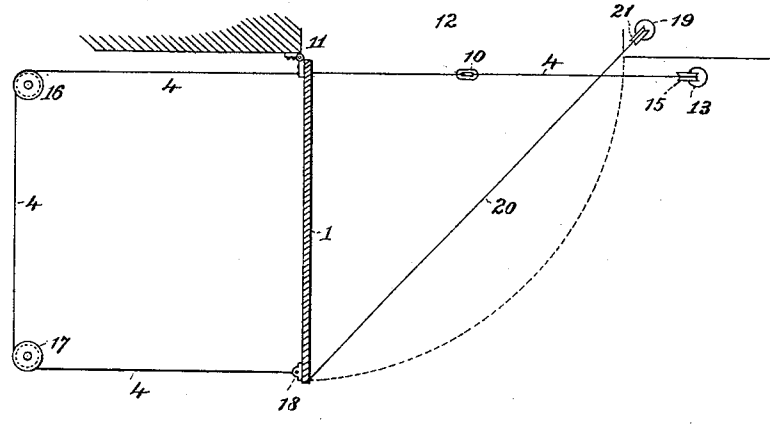


Fig 2.



Attest:
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UNITED STATES PATENT OFFICE.

MARSHALL TILLOTSON, OF LAWRENCE, MASSACHUSETTS, ASSIGNOR TO THE PROVIDENCE STEAM AND GAS PIPE COMPANY, OF PROVIDENCE, RHODE ISLAND.

SELF-CLOSING DOOR.

SPECIFICATION forming part of Letters Patent No. 386,042, dated July 10, 1888.

Application filed March 17, 1888. Serial No. 267,586. (No model.)

To all whom it may concern:

Be it known that I, MARSHALL TILLOTSON, of Lawrence, Essex county, Massachusetts, have invented certain new and useful Improvements in Automatic Fire-Doors, of which the following is a specification.

The object of my invention is to provide means for automatically closing a door upon the occurrence of a fire without interfering with the ordinary opening and closing of the same.

The invention consists of a door or hatch arranged to close of itself when released, a counterbalancing-weight connected to the door by a cord, so as to counteract the self-closing tendency, and one or more fusible links or other heat-severed devices joining the cord and adapted to disconnect the same upon an increase of temperature, and thereby allow the door to close.

In the accompanying drawings, Figure 1 represents a front elevation, showing the application of my invention to a sliding door. Fig. 2 is a diagrammatic view showing the invention applied to a swinging door.

In Fig. 1 the door 1 is supported on an inclined track, 2, so as to have a tendency to close the doorway at 3 by sliding down the incline. The door in effect tends to close by its own weight, and to keep it open or hold it in any desired position I counteract this tendency by cord 4 and weight 5. The cord is attached to the door at 6, and passed first over a fixed pulley, 7, and then across the doorway, and over another fixed pulley, 8, to the weight 5. The weight may be of such a size as to just counteract the tendency of the door to close, so that the door may be open or closed, or left in any desired position. The cord 4 is joined at one or more desirable places by devices that will be severed by an increase of temperature above the normal. I have shown for this purpose a link, 10, made of fusible solder; but any device capable of disconnecting the cord at abnormally-high temperature would serve the purpose. It is preferable to have the heat-severed device 10 located opposite the doorway, so that the presence of heat on either side of the door will rupture the connection and allow the door to close.

In Fig. 2 I have shown a swinging door, 1, hinged at 11 and adapted to close the doorway at 12. In this case the door is held open by weight 13 pulling on a cord, 4, the cord being joined at 10, with a fusible link passed around pulleys 15 16 17 and secured to the door at 18. A weight, 19, hung from cord 20, which passes around pulley 21 and is secured to the door at 18, serves to hold the door closed when closed, and also to automatically close it when the cord 4 is disconnected.

It will be seen that from the arrangement of the pulleys the weight 13 will have the advantage over the weight 19 when the door is open, while when the door is closed the weight 19 will have the advantage. The door may therefore be left open or closed at will, and when open will close automatically when the link 10 is softened by heat.

I claim—

The combination of a self-closing door with a counterbalancing-weight tending to hold the door open, a cord connecting the said weight and door and passing over a pulley and across the doorway, the said cord being joined opposite the doorway with a device capable of being severed by heat.

MARSHALL TILLOTSON.

Witnesses:
HORACE C. JEALOUS,
W. K. ANDEN.