This invention relates to safe doors, and the principal aim of the invention is to provide means for establishing a fireproof seal across the doorway when the safe is subjected to a fire hazard to prevent entrance of heat, flame, smoke, and steam, or the like, into the interior of the safe, and thus protect the contents of the safe from damage and injury by these elements.

In an application filed by Carl P. Bartels September 26, 1924, for fireproof safe door, Serial No. 73,600, Patent No. 1,547,717, issued July 29, 1925, there is disclosed a construction in which an auxiliary or valve door is mounted on the inner face of a main door by means of fusible studs, which, when fused, by reason of high heat, melt and release the valve door completely from the main door, so that springs which are compressed between the main door and valve door firmly seat the valve door against shoulders or abutments provided on the safe walls.

The object of the present invention more particularly is to improve upon the fusible connection between the main door and the valve door and to provide a connection whereby, when the safe is subjected to a fire hazard, the valve door will become tightly seated against cooperating jamb abutments to form an effective fireproof seal across the doorway, but the valve door will not be entirely released from the main door and cannot completely fall away therefrom.

In accordance with my invention, the fusible connection between the main door and the valve door is such that, when the fusible portions of the connection are melted under the influence of high temperatures, the valve door is permitted to move a limited distance away from the main door and sufficiently to seat tightly against suitably located abutments on the safe jamb, the connecting means, however, limiting the extent to which the valve door may move away from the main door and maintaining the valve door on the main door.

This invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the following claims.
action of the springs 16 when the fusible material 13 has melted, thus establishing a tight fireproof seal through the doorway and preventing entrance of heat into the interior of the protected structure. Cup 12 may be omitted and washer 13 plated with suitable material, such as nickel.

Preferably the valve door and abutments 17 are so located that under normal temperature conditions the valve door will not meet the shoulders when the door is closed, thus avoiding the bending of the springs 16 every time the door is opened or closed, which would tend to crystallize the springs and weaken them and shorten their life. However, if desired, the arrangement can be such that the valve door is moved slightly against the action of the springs 16 under normal temperature conditions and whenever the door is closed.

It will be noted that when the fusible material 13 has melted and flowed out of the cups 12, the valve door 4 will still be retained on the main door, by reason of the fact that the heads 11 of the screws are larger than the apertures through the valve door wall. Thus the valve door will be held to the main door under all conditions.

To restore the door to original condition, it is only necessary to insert new pieces of fusible material 13 within the cups 12 and beneath the heads of the screws.

It will be apparent that the solder will fuse before the fire hazard has reached a great height, and thus the sealing of the doorway will be effected very quickly when a fire hazard arises, and the sealing will not be delayed long enough to permit previous harm to the safe contents.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

What I claim is:

1. In a door of the character described, in combination, a main door, a valve door, a stud rigidly secured to the main door and abutting the valve door, a headed screw engaging the stud, fusible material intermediate the head of the screw and said valve door, and spring means for moving the valve door away from the main door and toward the head of said screw when said fusible material is melted.

2. In a door of the character described, in combination, a main door, a valve door, a stud rigidly secured to the main door and abutting the valve door, a headed screw engaging the stud, a cup intermediate the valve door and the head of the screw, fusible material in said cup, the shank of the screw extending through said fusible material and the bottom of the cup, and spring means for moving the valve door away from the main door and toward the head of the screw when said fusible material is melted.

This specification signed this 30 day of June, 1925.

CARL BARTELS