

No. 834,681.

PATENTED OCT. 30, 1906.

J. & W. PETERS.

FIRE DOOR.

APPLICATION FILED JUNE 4, 1906.

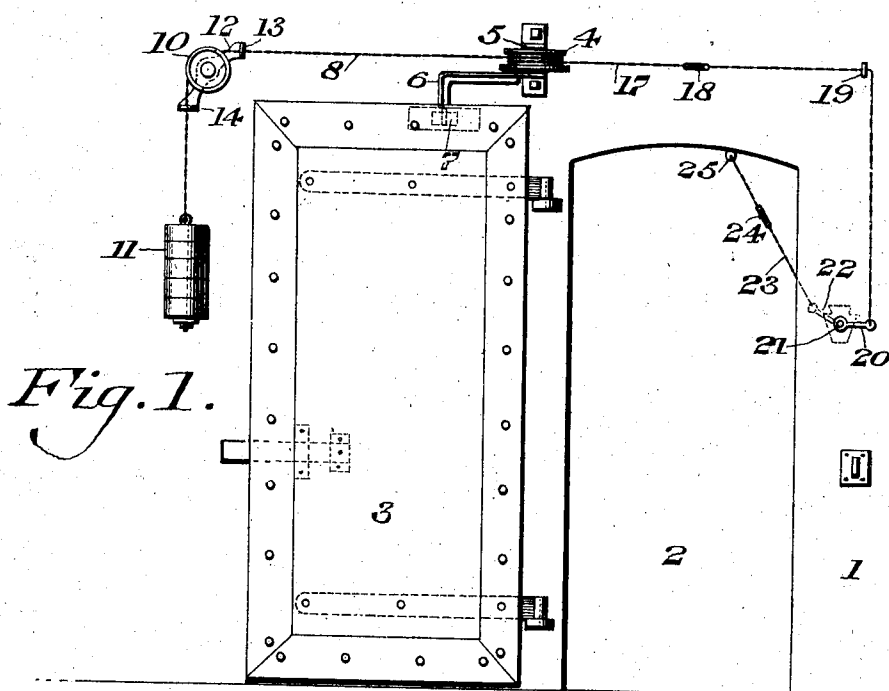


Fig. 1.

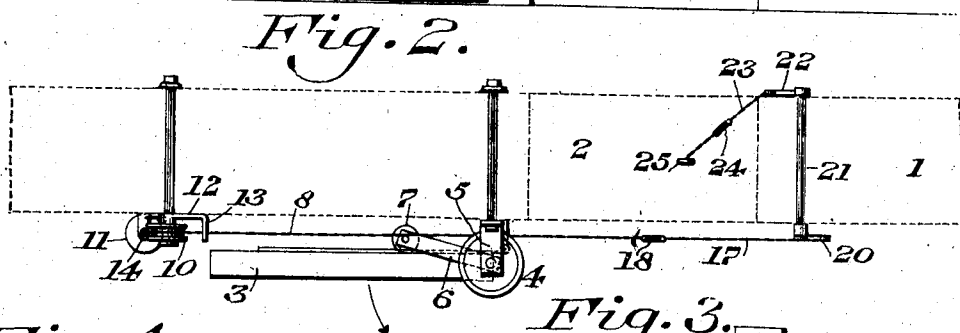


Fig. 2.

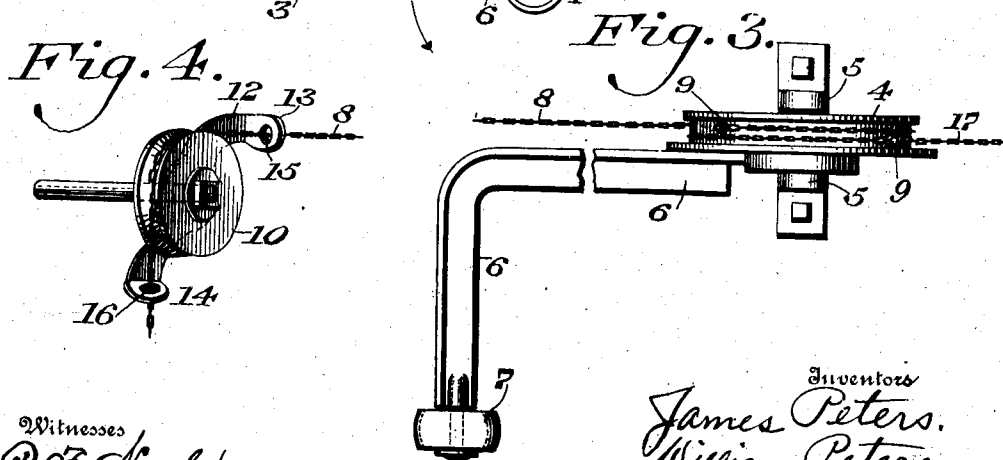


Fig. 4.

Witnesses  
Q. E. Nagle.  
L. Drville.

Inventors  
James Peters.  
William Peters.  
By Wiedersheim & Fairbanks.  
Attorneys

# UNITED STATES PATENT OFFICE.

JAMES PETERS AND WILLIAM PETERS, OF PHILADELPHIA, PENN-  
SYLVANIA.

## FIRE-DOOR.

No. 834,681.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed June 4, 1906. Serial No. 320,020.

*To all whom it may concern:*

Be it known that we, JAMES PETERS and WILLIAM PETERS, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Fire-Door, of which the following is a specification.

Our invention relates to new and useful fire-doors; and it consists in means for automatically closing the door should a fire occur.

It further consists of novel details of construction, all as will be hereinafter set forth.

Figure 1 represents an elevation of our device, showing the same in position as applied to a door. Fig. 2 represents a plan view thereof, showing the wall in dotted lines. Fig. 3 represents a side elevation of a portion of the device on an enlarged scale. Fig. 4 represents a perspective view of a portion of the device on an enlarged scale.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, it is essential in fire-doors that some means be provided for automatically closing said doors should a fire occur, and while we have shown one form of a device for carrying out this invention, and which form we have found exceedingly practical, it will of course be evident that other instrumentalities may be employed or some changes may be made which would accomplish the results.

In the drawings, 1 designates a wall or partition in a building in which is the doorway 2, adjacent which is hinged in any convenient or suitable manner the door 3, it being understood that said door is of any suitable fire-proof construction. We have shown in the drawings means for normally retaining the door in open position and means for automatically closing the same when a fire occurs, and to this end we have mounted a pulley 4 adjacent the door, said pulley being carried in the ears 5, which are connected with the wall or other suitable support. Connected with or carried by said pulley is an arm 6, on the end of which is preferably mounted a roller 7, said arm being of such form and size as to permit said roller 7 to contact with the door 3, as best understood from Figs. 1 and 2, wherein the roller is shown as lying behind the door, although it will be apparent that said arm can be connected with said door in any suitable manner or in any

way in order to operate the same, as herein-  
after described.

8 designates a rope or chain which passes around the pulley 4, the end of which is connected therewith by means of a pin 9, said chain 8 also passing over a pulley 10 and having the weight or weights 11 connected with its free end.

12 designates a guard or guide which is situated adjacent the pulley 10 and is provided with the arms or ears 13 and 14, in which are the openings 15 and 16, through which passes the chain 8 in order that it is properly guided and held at all times in proper connection with said pulley 10.

17 designates a rope or chain which is connected with a pulley 4 by a suitable pin and which in a suitable portion of its length is provided with a connection 18 of fusible material, said rope or chain 17 passing over the guide 19, and the end of said rope being connected with an arm 20, which is secured to or forms part of a bar or rod 21, which is adapted to be journaled in the wall 1. The opposite end of the bar or rod is provided with an arm or lever 22, with which is connected a rope or chain 23, which is also provided with a connection of fusible material 24, and the other end of which chain 23 is connected with a support 25, which is mounted or carried by a fixed support and in the drawings is shown as mounted in the doorway.

The operation is as follows: The door 3 is set in position as seen in Fig. 1, so that the doorway 2 is open. Should a fire occur on the side of the wall at which the door is situated, the fusible material 18 or even the rope 17 would burn or fuse, thus releasing the pulley 4, as the chain or rope 17 is of sufficient strength to hold the weight or weights 11. As soon as the pulley 4 is released from its position by the burning of the rope 17 or the fusible material 18 the weight or weights 11 rotate the pulley 4, which carries with it the arm 6, the latter closing the door—that is, moving it in the direction indicated by the arrow in Fig. 2. The same action would occur should the fire take place upon the opposite side of the wall 1, in which event the rope 23 or fusible material 24 would burn or fuse and the pulley would likewise be released and the weight or weights 11 would act upon the door, as before described. The door can be opened or closed by hand, if desired.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character described, a fire-door, a pulley suitably supported, means carried by the pulley and contacting with said door, means for normally holding said pulley in stationary position, and means operative when said holding means is released for rotating said pulley for closing said door when a fire occurs.

2. In a device of the character described, a fire-door, a pulley, means contacting with said door and adapted to be actuated by the pulley, means for holding said pulley in stationary position, a fusible portion forming part of said holding means, and a weight for actuating said pulley when said holding means is released for closing said door.

3. In a device of the character described, a fire-door, a pulley supported adjacent the same, a chain having a portion thereof of fusible material connected with said pulley, a weight connected with said pulley and an arm carried by said pulley and in suitable connection with said door for closing the same when said pulley is actuated.

4. In a device of the character described, a fire-door, a pulley, means carried thereby for contacting with the door, means for holding said pulley in stationary position, said means

extending on both sides of the wall to which the door is attached, a fusible portion carried by said holding means and means for actuating said pulley when said holding means releases the same.

5. In a device of the character described, a fire-door, a pulley supported adjacent the same, a chain connected with said pulley, a weight connected with said chain, means carried by the pulley and in suitable connection with said door for actuating the same, a lever suitably connected with said pulley and a second chain connected with said lever at one end and to a stationary support at the other.

6. In a device of the character described, a fire-door, a pulley supported adjacent the same, a chain connected with said pulley, a weight connected with said chain, means carried by the pulley and in suitable connection with said door for actuating the same, a lever movably supported, a chain connecting said lever with said pulley and a second chain connected with said lever at one end and to a stationary support at the other.

JAMES PETERS.  
WILLIAM PETERS.

Witnesses:

ALBERT H. WAGNER,  
WM. PAUL OELSCHLAGER.