No. 752,188. PATENTED FEB. 16, 1904.

H. C. SMITH.

SUPPORT FOR FIRE DOORS.

APPLICATION FILED OCT. 15, 1903.

NO MODEL.

Fig. 1.

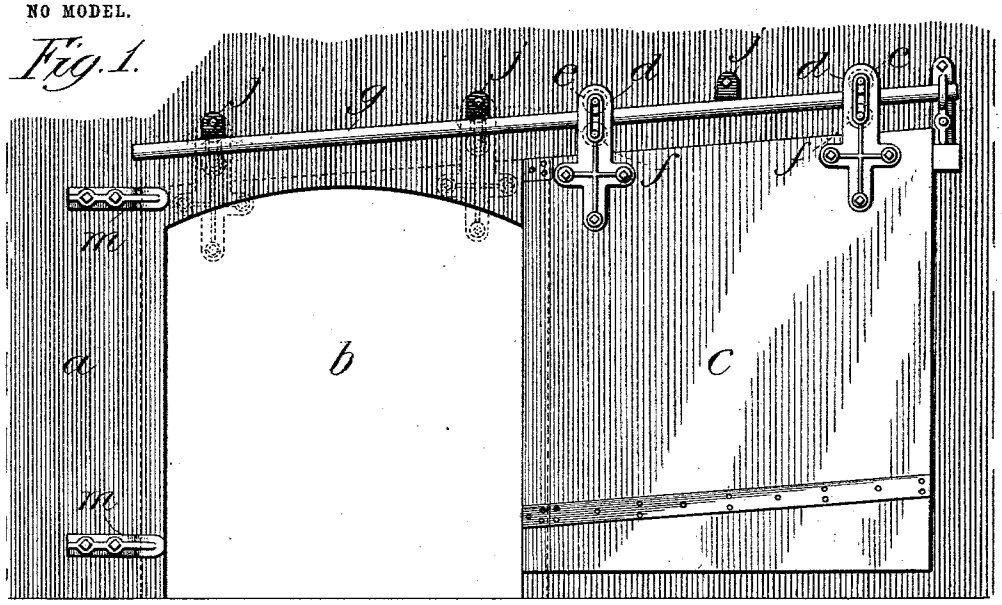


Fig. 2.

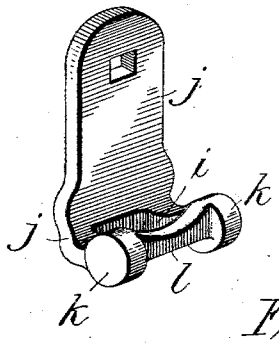


Fig. 3.

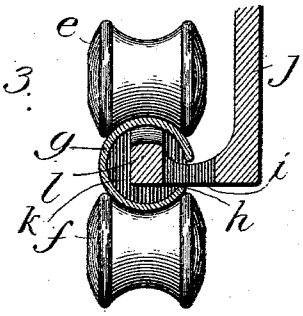


Fig. 4.

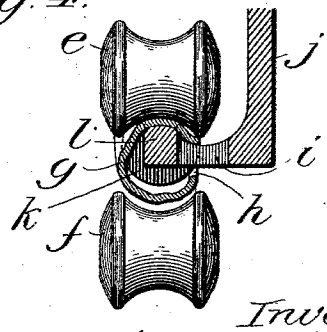
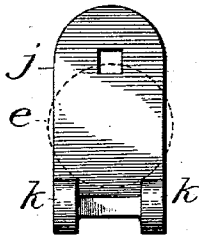


Fig. 5.



Witnesses:
Chas. E. Gaylord.
John Enders.

Inventor:
Henry C. Smith
By David H. Fletcher,
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 752,188. Patented February 16, 1904.

UNITED STATES PATENT OFFICE.

HENRY C. SMITH, OF CHICAGO, ILLINOIS.

SUPPORT FOR FIRE-DOORS.

SPECIFICATION forming part of Letters Patent No. 752,188, dated February 16, 1904.

Application filed October 15, 1903. Serial No. 177,135. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. SMITH, of Chicago, in the county of Cook and State of Illinois, have invented a new, useful, and Improved Support for Fire-Doors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which like letters of reference in the different figures indicate corresponding parts.

In the use of tubular tracks for the support of sliding fire-doors the tracks, which are usually made of steel plate of a light gage, readily collapse under the weight of the heavy fire-door and permit the latter to fall, thereby defeating the very purpose for which the door is employed.

The object of my invention is to overcome this difficulty and to provide means whereby the heavy door may be retained in place, notwithstanding the collapse of the track upon which it is normally supported. I accomplish said object in the manner hereinafter more particularly described, and definitely pointed out in the claims.

In the drawings, Figure 1 represents a portion of a wall or doorway together with a fire-door having my improved device applied to the track thereof. Fig. 2 is a perspective view of my improved form of bracket. Fig. 3 is a transverse vertical sectional view cut through the track and bracket, showing the hanger-wheels mounted upon the tracks as they would appear when the track is in its normal condition. Fig. 4 is a like view showing the track as it would appear when collapsed by heat with the track and hanger-wheels still supported by means of my improved safety device, and Fig. 5 is a front view of a modified form of bracket.

Referring to the drawings, *a* represents the wall of a building, having an opening *b* therein adapted to be closed by means of a fire-door *c*. The latter is supported by means of hangers *d*, of a well-known construction, each having grooved wheels *e f*, respectively, one adapted to be located above and the other below the track. The track *g*, upon which said wheels are mounted, is formed from sheet metal, usually steel, cylindrical in form, and provided with a longitudinal opening or slot *h*, Figs. 3 and 4, usually extending through its length. This slot or opening is intended for the reception of the arm *i*, Figs. 2, 3, and 4, of a bracket *j*, having one or more (but preferably two) heads *k* therein adapted to fit the interior of the tubular track *g*. For the purpose for which my device is intended I prefer, as stated, to use two heads and to connect them by means of a slightly notched or depressed portion *l*, for the purpose hereinafter stated. When the door *c* is closed, it occupies the position indicated in dotted lines in Fig. 1, with its forward edge resting against stops *m m*. The brackets *j j* above the opening *b* are so placed, respectively, that when the door is closed the brackets will be directly opposite the hangers *d d*. When thus positioned, the plane of the axes of the rollers will be midway between the heads *k k*, so that an upper roller *e* will rest upon the cylindrical track directly over the middle of the part *l*. Experience has shown that the comparatively thin steel tubing of the track will collapse under the heavy weight of the door with a comparatively moderate degree of heat, while the brackets being made from malleable iron will withstand a very much higher degree of heat without giving away. This being true, as soon as the track supported by my improved bracket becomes sufficiently heated it collapses and sags into the depression of the part *l* in the manner indicated in Fig. 4, thereby securing the wheels *e e* within the respective depressions, the door being firmly supported and held in place by means of the brackets the same as if the track were entirely removed.

It is obvious that the construction shown may be varied without departing from the principle involved—for example, that part of the bracket which enters the tube may be formed into one long cylinder without the depression, in which case the door would still be supported, but would be more liable to accidental displacement, or the two heads *k* might still be used without the part *l*, as indicated in Fig. 5, in which case I would recommend that the distance between them be made less than

the diameter of the wheel *e*, so that the latter would rest upon them in case the track should collapse, in the manner indicated in dotted lines in said last-named figure.

While I have shown a hanger with two wheels, one located above and the other below the track, I merely recommend it as a preferable construction, but do not wish to be confined thereto, inasmuch as it is obvious that the lower wheel might be omitted, the suspension of the door being from the upper wheel.

Having thus described my invention, I claim—

1. A device of the class described, in which is combined a fire-door supported by means of wheeled hangers, a slotted tubular track, and brackets having heads inserted within said tubular track opposite said respective hangers, said head being so shaped as to form supports for the hanger-wheels upon the collapse of the track.

2. The combination with a sliding fire-door and slotted tubular track, of wheeled hangers for suspending said door from the track and supporting-brackets having arms projected into the rear of the track, each of said arms being provided with an enlargement upon the end adapted to fit the interior contour of the track and a depression for receiving and supporting a hanger-wheel in the event of the bending or collapse of said track.

In testimony whereof I have signed this specification, in the presence of two subscribing witnesses, this 12th day of October, 1903.

HENRY C. SMITH.

Witnesses:

D. H. FLETCHER,

CARRIE E. JORDAN.