No. 836,432. PATENTED NOV. 20, 1906.

F. J. BRYANT.

FIRE ESCAPE.

APPLICATION FILED DEC. 20, 1905.

Fig. 1.

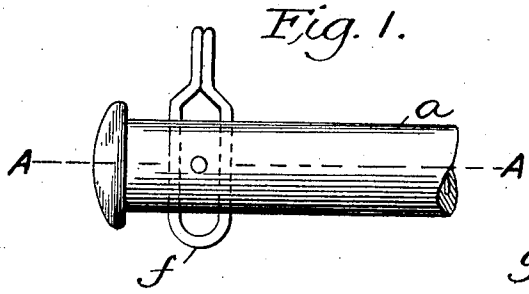


Fig. 2.

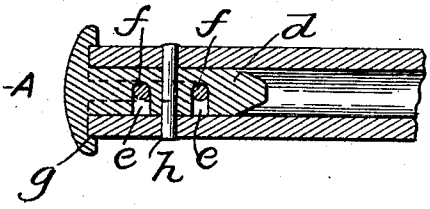


Fig. 3.

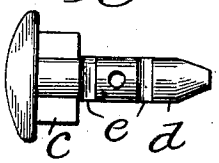


Fig. 4.

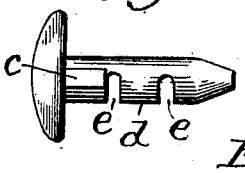


Fig. 9.

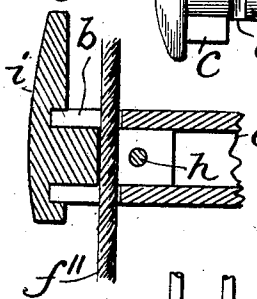


Fig. 5.

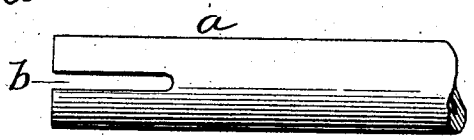


Fig. 10.

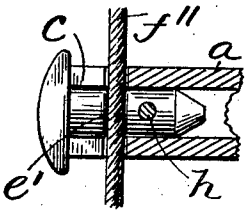


Fig. 6.

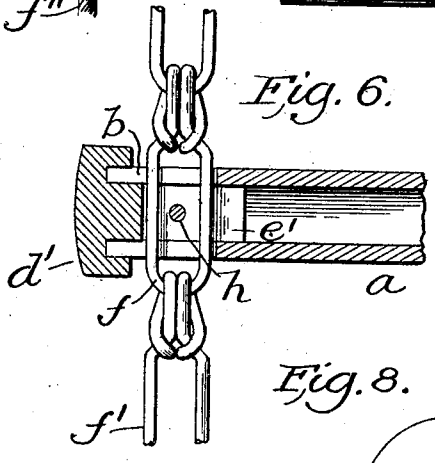


Fig. 7.

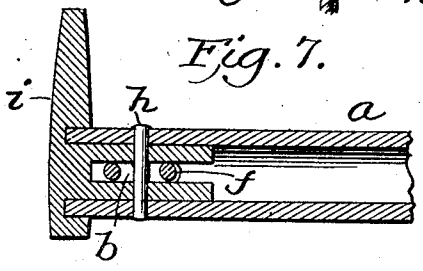
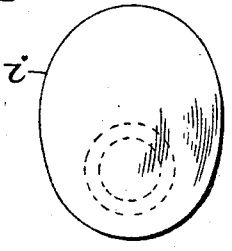


Fig. 8.



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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

No. 836,432. Specification of Letters Patent. Patented Nov. 20, 1906.

Application filed December 20, 1905. Serial No. 292,527.

To all whom it may concern:

Be it known that I, FREDERIC J. BRYANT, a citizen of the United States, residing in the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in fire-escapes or fire-ladders; and one object of my invention is to provide means for securing the rungs to the suspensory members.

Another object of my invention is to provide means for holding the rung away from the wall of a building.

In the drawings illustrating the principle of my invention and the best mode now known to me of applying that principle, Figure 1 is an elevation of a rung secured to the suspensory member by my novel means, hereinafter described. Fig. 2 is a sectional view on line A A, Fig. 1. Figs. 3 and 4 are detail views of the securing-bolt. Fig. 5 shows an end of the rung; and Figs. 6, 7, 8, 9, and 10 illustrate modifications hereinafter referred to and described.

The ends (only one end is shown in Fig. 5; but it will be understood that the other is precisely similar) of the rung *a* are formed with a slot *b*, adapted to receive the ears *c*, projecting from the sides of the securing-bolt *d*. The latter is formed with grooves *e e*, adapted to receive the link *f*. The head of the securing-bolt is formed with a circular channel or groove *g*, within which the end of the rung fits, as shown in Fig. 2. The bolt *d* is secured in place by means of the pin *h*. The bolt *d'* (shown in the modification of Figs. 6, 7, and 8) is formed with a central longitudinal groove *e'*, within which the link *f* fits.

The bolts *d d'* may be provided with an enlargement *i* upon the head, by means of which the rung is held away from the wall of the building, Fig. 8.

The link *f* is a link of a weldless chain, and the rung *a* rests upon the upper end of the succeeding lower link *f''* when forced downwardly by the weight of the user. The chain interlocks not only with the rung *a* but also with the bolt *d*, by which it is held from sidewise displacement. The bolt *d* is secured against displacement by the pin *h* and the ears *c*, the latter serving also to guide the bolt when the parts are assembled. The whole forms a simple and efficient means for locking the suspensory member to the rung.

In Figs. 9 and 10 there are shown two forms or embodiments of my invention in which a cable is used as the suspensory member, the cable *f''* being held by the slotted (or longitudinally-grooved) bolt *d'* against the bottom of the slot *b* in the rung *a* in Fig. 9, while in Fig. 10 the cable *f''* is held in the transverse groove *e'* of the securing-bolt *d''*.

What I claim is—

1. In a fire-escape, the combination of a rung formed with a hollow, slotted end; a securing-bolt fitted in said end and formed with grooves; and a suspensory member fitted in said grooves and extending through the slot formed in the end of said rung.

2. In a fire-escape, the combination of a rung slotted at its end; a securing-bolt formed with ears adapted to engage said slot and grooved to receive the suspensory member; and said suspensory member.

3. In a fire-escape, the combination of a rung; a securing-bolt adapted to fit into said rung and grooved to receive a suspensory member; and said suspensory member; said bolt being formed with an enlarged head adapted to hold the rung from the wall of the building.

4. In a fire-escape, the combination of a rung formed with a hollow slotted end; a suspensory member which passes through the slot in the end of said rung; and a securing-bolt fitted in the hollow end of said rung and provided with a head which overlaps the slotted end of said rung to strengthen the same; said bolt holding said suspensory member in said slot.

5. The combination in a fire-escape of a rung; a suspensory member; and a device for securing said suspensory member to said rung; said device interlocking by lug-and-slot connection with said rung and said suspensory member.

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Witnesses:
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