No. 896,548. PATENTED AUG. 18, 1908.

L. JANSOONE.

FIRE ESCAPE.

APPLICATION FILED MAR. 23, 1908.

Fig. 1.

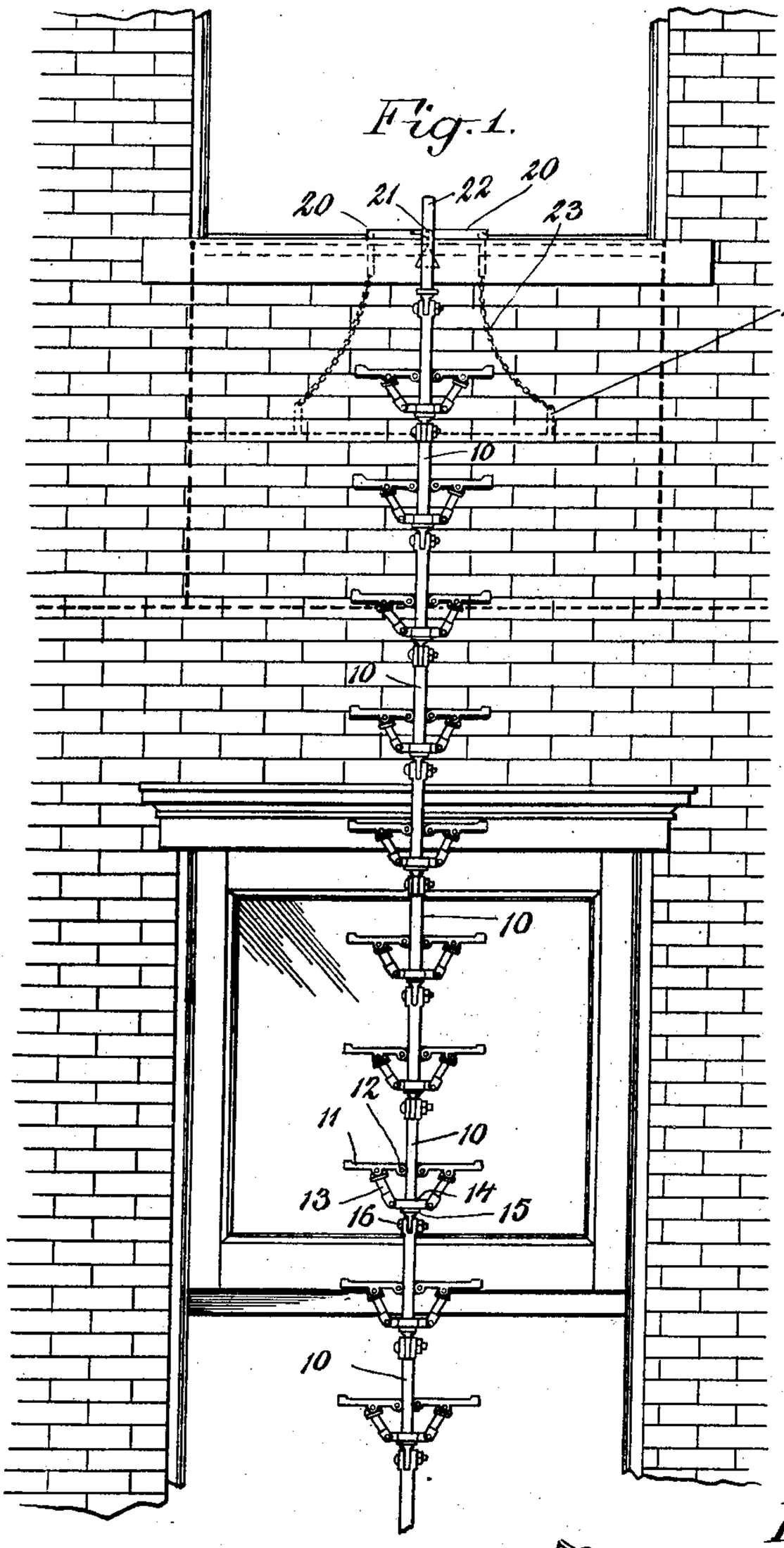


Fig. 2.

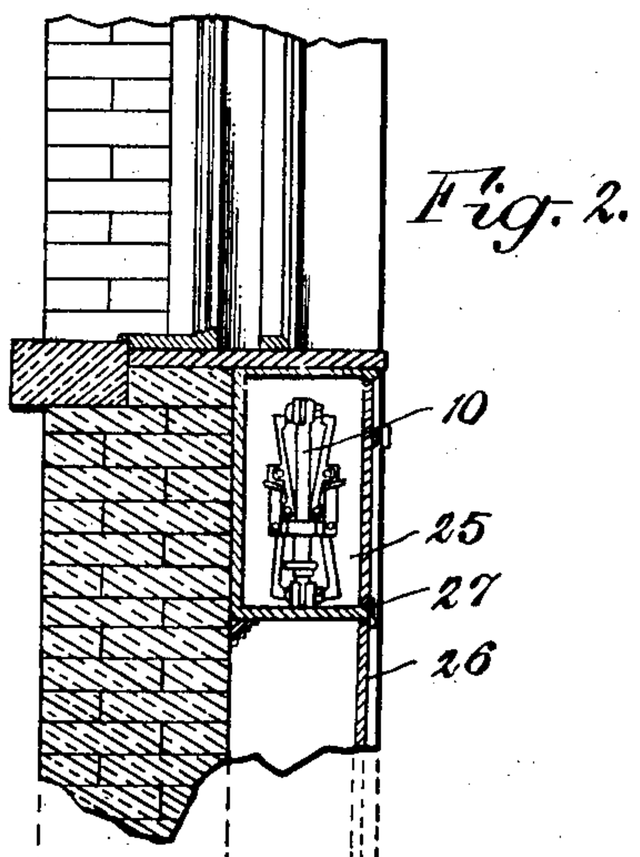


Fig. 3.

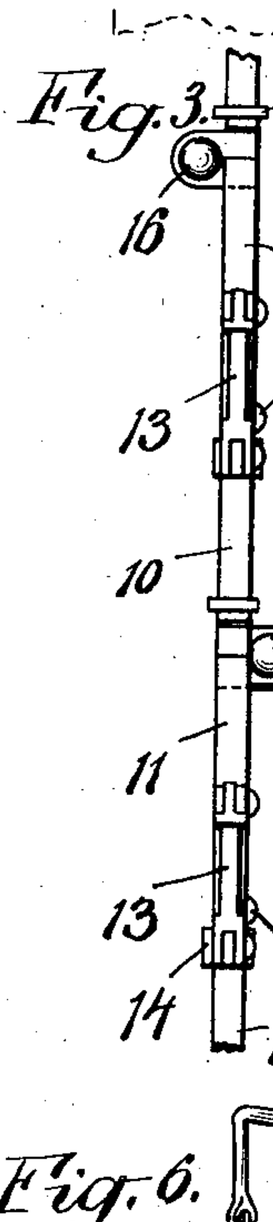


Fig. 4.

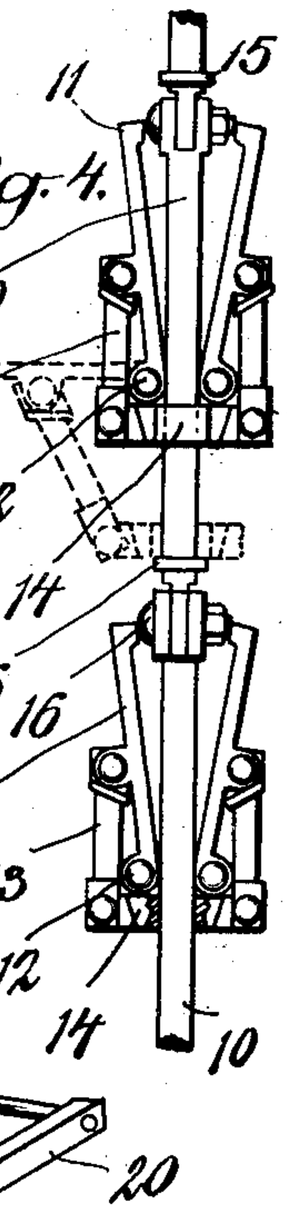


Fig. 5.

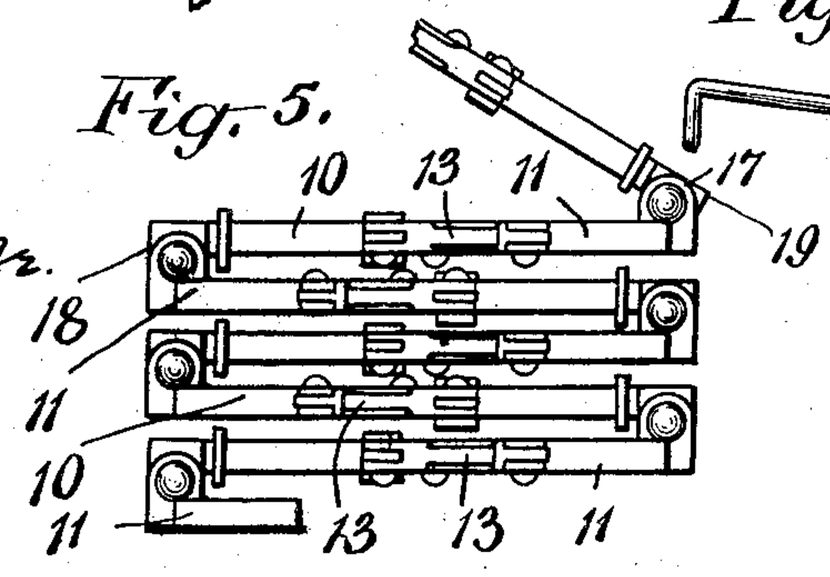
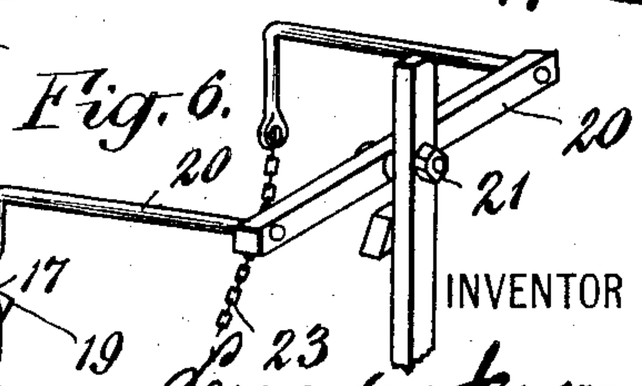


Fig. 6.



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FIRE-ESCAPE.

No. 896,548. Specification of Letters Patent. Patented Aug. 18, 1908.

Application filed March 23, 1908. Serial No. 422,843.

To all whom it may concern:

Be it known that I, LEONARDUS JANSOONE, a subject of the King of Belgium, and a resident of Brooklyn borough, in the city of New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in fire escapes and particularly to that class of fire escapes known as portable or folding fire escapes such as are adapted to be folded up and packed away out of sight when not in use, but which, when required for use may be suspended from the sill of a window at the exterior of the building in which the window is contained to afford an emergency means of exit from the building.

The main object of my invention is to provide a device, which when opened out and in use, constitutes a strong and rigid structure, yet is capable of being folded up into a small compass so that when not in use, it will take up but little room.

In order that my invention may be fully understood, I will now proceed to describe an embodiment thereof, having reference to the accompanying drawings illustrating the same, and will then point out the novel features in claims.

In the drawings: Figure 1 is a view of a portion of the exterior of the building showing the fire escape opened out and ready for use. Fig. 2 is a view in transverse section through a portion of the building showing the fire escape folded up and packed away in a receptacle designed to receive it. Figs. 3 and 4 are views, respectively, in side and front elevation of the chain ladder of which the fire escape is in great part comprised, with the tread portions of the ladder folded up. Fig. 5 is a view in side elevation of a portion of the chain ladder showing the same with the tread portions folded up and the links also folded upon themselves. Fig. 6 is a detail perspective view of the suspension member of the fire escape and which is employed for suspending the ladder element from the window sill.

The fire escape generally comprises a folding ladder and a supporting member by which the ladder may be suspended. The ladder comprises a plurality of links each consisting of a stem 10, a pair of treads 11 pivoted thereto at 12 and struts 13 also pivoted to the said treads intermediate of their ends and to a sliding collar 14 which is loosely mounted upon the stem 10. The stem 10 is provided with an abutment 15 which forms a limiting support for the collar 14 when the treads 11 are in their horizontal position. The treads are permitted to be moved upward in a position substantially parallel with the central stem, by the fact that the collar 14 is permitted to move freely in an upward direction upon the said stem, whereby the parts are permitted to assume a closed position as is shown in Figs. 3 and 4.

The various links of the chain are connected together successively by means of pivot bolts 16. The form of hinged joint between each pair of links is such that alternate links are hinged with respect to the links adjacent thereto in opposite directions. Each link is provided with oppositely projecting lugs 17 and 18 which are fitted to complementary lugs in the adjacent links. This arrangement permits the links to be folded backwards and forwards with respect to each other as is shown in Fig. 5 of the drawings. At their rear edges, the said lugs are preferably squared as is shown at 19 whereby the said hinge will permit the movement of the lugs in the selected direction only. This will not only enforce the chain being folded properly but in addition thereto has the effect of lending a greater rigidity to the structure when it is in use. It will also be noticed, particularly by reference to Fig. 4, that the bearing surfaces between the links are quite long whereby the chain when extended has considerable sidewise rigidity. This is important as otherwise the chain would have more tendency to tip as the weight of a person descending is thrown from one side to the other. A chain constructed as herein described and shown, has considerable rigidity and hence is very much safer for a nervous or excited person to use than a chain of greater flexibility.

The supporting member of the chain may conveniently comprise two hook-like elements 20—20 hinged together by means of a bolt 21 and conveniently pivoted by the same bolt to the topmost link of the chain. The hook-like members 20 are made of such a size and shape as to conveniently fit over the window sill, and the said device, may, if desired, be secured by chains 23 to eyes 24 permanently fastened to the building on the inside thereof whereby there may be no dan-

ger of the fire escape, as a whole, being dropped bodily out of the window.

In order to take care of the fire escape when it is not in use, I have provided a cupboard or receptacle 25 for receiving it, such cupboard being arranged within the line of the framing 26 which is ordinarily arranged beneath the window at the inside of a room. The front portion of the top of the framing may be conveniently hinged at 27 whereby access may be readily had to the interior thereof for the purpose of putting the chain away or for fetching it out for use. The construction of the chain is such as to permit a considerable length thereof to be packed away within the cupboard or receptacle thus formed. I have found the space usually existing at this point to be ample to contain a chain long enough to reach from three to four stories. The hook-like members 20—20 of the supporting elements being hinged together as well as hinged to the chain itself, will likewise fold up in such a way as to take up but a minimum of space.

When it is required to use the device, it is only necessary to open the cupboard or receptacle, then to fling the chain out of the window, and then to adjust the hooks into position. The chain is so constructed as to have a tendency at such times to automatically open out to the position ready for use, and in which it is shown in Fig. 1.

What I claim is:

1. A fire escape comprising a supporting member and a folding chain ladder, the said folding chain ladder comprising links having individual folding tread portions, the said links pivotally connected together whereby they may be folded backwards and forwards with respect to each other.

2. A fire escape comprising a supporting member and a folding chain ladder, the said chain ladder comprising a plurality of links pivoted together to fold up against each other alternately in opposite directions, the said links including tread portions which are adapted to fold up with respect to the portion of the links supporting them.

3. A fire escape comprising a supporting member and a folding chain ladder, the said ladder comprising a plurality of links pivotally connected together, each link comprising a stem or shank, treads pivotally connected thereto, a collar arranged to slide upon the stem or shank, and struts pivoted to the treads and collar.

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Witnesses:

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