

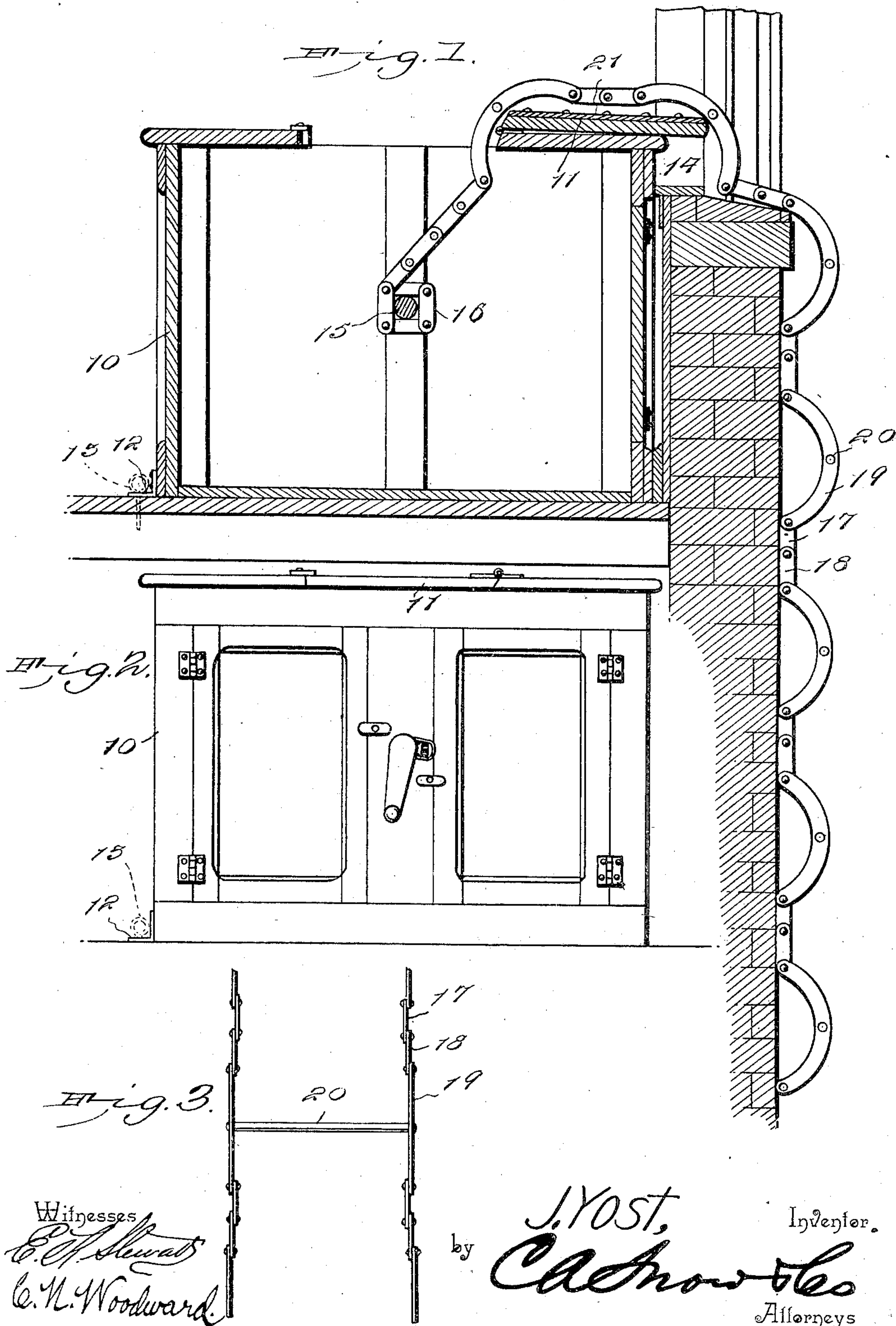
No. 726,389.

PATENTED APR. 28, 1903.

J. YOST.  
FIRE ESCAPE.

APPLICATION FILED JUNE 19, 1902.

NO MODEL.





# UNITED STATES PATENT OFFICE.

JOHN YOST, OF RAUBSVILLE, PENNSYLVANIA.

## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 726,389, dated April 28, 1903.

Application filed June 19, 1902. Serial No. 112,384. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN YOST, a citizen of the United States, residing at Raubsville, in the county of Northampton and State of Pennsylvania, have invented a new and useful Fire-Escape, of which the following is a specification.

This invention relates to devices employed in escaping from burning buildings, and has for its object the production of a device whereby any number of persons may escape without danger of accident and without danger of the means of escape being affected by the fire; and the invention consists in a metal foldable ladder adapted to be contained in a cabinet or casing in the room, which cabinet is provided with means for supporting the ladder and from which it may be quickly and readily run out through a window, while the cabinet remains as the means of support for the upper end of the ladder and also as a support to retain the ladder in position with relation to the building to prevent the persons using it being thrown against the building while descending.

Other novel features will appear in the description following and be specified in the claims.

In the drawings illustrative of the invention, Figure 1 is a sectional side elevation of the cabinet supporting the ladder, a section of the ladder, and a sectional view of a window-sill and window-frame with the ladder applied. Fig. 2 is a side elevation of the cabinet closed. Fig. 3 is a view of a section of the ladder from the front.

The invention comprises a cabinet or casing for the ladder, as represented at 10. The cabinet will preferably be made to represent some article of furniture, such as a washstand, bureau, chiffonier, or the like, so that when closed it will appear as a part of the furniture of the room. The cabinet will be provided with a door or lid 11 in the upper part, which is adapted to open outward and lie flat upon the top of the cabinet and extend out over the window-sill, as indicated in Fig. 1, when the ladder is to be used. The cabinet will be preferably provided with extended catches, (indicated at 12,) through which screw-eyes 13 may be inserted and screwed into the floor to firmly secure the cabinet in

place when it is to be used. Under ordinary conditions or when the device is not in use the cabinet may be located at any desired part of the room, and when it is to be used it will be pushed over in front of the window and so placed that when the cover 11 is opened out it will extend over the window-sill 14, as shown in Fig. 1. Under ordinary conditions the cabinet will be heavy enough to support the ladder and the persons descending by it and will require no fastening; but as a measure of precaution the ears 12 and screw-eyes 13 may be employed to render its position perfectly secure and avoid any danger of the cabinet being tilted up or displaced by the weight of the persons descending the ladder. A shaft 15 is supported transversely within the cabinet, preferably at its center, and to this shaft are secured sections of chains 16, only one of these chains being shown; but it will be understood that a section of the chain will be attached at each end of the shaft 15. These chains 16 are adapted to be attached to the shaft by their inner ends and to the ladder by their outer ends, as shown.

The ladder consists of spaced side members and transverse rounds, so constructed that they will readily adapt themselves to the shaft 15 and chains 16, so that when the shaft is rotated the ladder and chains will be wound around the shaft as a drum. The side members of the ladder consist of sections of short coupled links 17 18 and interposed outwardly-bent longer links 19, coupled by their ends to the shorter links, and each opposite pair of the longer links connected by transverse rounds 20.

The dimensions of the parts will be so arranged that the distances between the rounds 20 will be about equal to the distance between the rounds of an ordinary ladder, so that when extended the persons descending may easily reach from round to round in the same manner as when descending an ordinary ladder, and the width of the outwardly-opening cabinet-lid 11 is made to correspond with the space between the center of one of the outwardly-bowed links to the center of the adjacent bowed link, so that two of said links when extended will span the width of the lid 11 and hook over and engage the opposite edges thereof and reliably support the ladder.



When first placing the ladder in position for use, the free end is lifted from the cabinet 10, carried up over the opened lid 11, and passed out of the window and then permitted  
5 to run down out of the window until the free end reaches the ground or as near the ground as may be necessary, it being understood, of course, that the ladder will be long enough to reach the ground from the room in which it  
10 is located.

The length of the ladder will be proportioned to the distance the room in which it is located is from the ground, the ladders located in the rooms in the upper stories of  
15 buildings being of course longer than those in the lower stories.

The cover 11 will be very securely fastened and will be provided with a metal wear-plate (indicated at 21) to receive the impact of the  
20 ladder as it runs over it to prevent undue wear and abrasion. This makes a very flexible ladder, which will readily adapt itself to the shaft 15 and readily wind thereon and upon itself within the cabinet when not in  
25 use and will readily unwind therefrom when required.

The short links 17 18 coact with the longer outwardly-extended links 19 to cause the ladder to readily wind upon the shaft and occupy  
30 the least possible space when in the cabinet and at the same time be readily unwound and run down through the window when required, the outwardly-projecting bent links 19 serving to hold the rounds 20 outward away from  
35 the wall to afford adequate foothold to the persons using the ladder. These links 19 are preferably bowed outwardly in semicircular form, but they may be bent in any other suitable shape. This is a very important feature  
40 of the invention, as it holds the rounds outward away from the building in substantially the same position to the building as permanent fire-escape ladders, and is therefore a very safe and convenient ladder to use, especially for women and children and timid persons under the excitement of escaping from  
45 burning buildings.

The interposed short lengths 17 18 are important features of the invention, as they add  
50 materially to the flexibility of the ladder and enable it to be wound more readily in the cabinet and also permit it to hang in a better position for use and enabling the ladder to adapt itself to any irregularity of surface  
55 which it may engage.

The links may be made of any suitable size and the rounds of any desired length and strength, and the cabinet may be made of any suitable size and with its outside ornamentation conforming to the furniture in the  
60 room, so that it will not attract undue attention.

It will be noted that in Fig. 1 two of the extended links 19 engage the cover 11 of the cabinet when the latter is opened in the form  
65 of hooks, so that the ladder is supported by the cabinet at its cover in addition to the support afforded by the shaft 15, one link hooking over the inner edge of the lid and the other over the outer edge thereof. This  
70 is also an important feature of the invention, as the line of draft is thereby partially transferred to the upper part of the cabinet and draws downward against the window-sill, so that the tendency to tilt the cabinet when  
75 the pressure comes upon it is greatly lessened and almost entirely obviated. At whatever point the chain is stopped in its descent a pair of the links 19 will engage the cover 11, as shown in Fig. 1, so that at all stoppage-  
80 points in the descent of the chain the ladder will be hooked over the cover 11 and supported thereby.

A suitable brake mechanism will preferably be attached to the shaft 15 to control  
85 the descent of the ladder, and this brake may be arranged to be controlled or operated by a spring or other form of governor.

Having thus described my invention, what I claim is—  
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1. In a fire-escape, the combination of a cabinet having a seat adapted to extend over a window-sill, a ladder movably supported in said cabinet and composed of outwardly-bent links flexibly connected, the width of said  
95 seat corresponding to the space between the centers of the adjacent pairs of said links, said pairs of links when extended hooking over the opposite edges of said seat for reliably supporting the ladder and transferring  
100 the line of draft to the top of the cabinet.

2. In a fire-escape, the combination of a cabinet having an outwardly-opening lid adapted to extend over a window-sill when opened, a rotatable shaft mounted in said  
105 cabinet, a ladder secured at one end to said shaft, and consisting of spaced side members composed of outwardly-bowed links flexibly connected by shorter straight links, and rounds connecting the bowed links of the side  
110 members, the width of said lid corresponding to the space between the centers of the adjacent pairs of said bowed links, said pairs of links when extended hooking over the opposite edges of said lid for reliably supporting  
115 said ladder and transferring the line of draft to the upper part of the cabinet.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN YOST.

Witnesses:

E. N. WILHELM,  
THEOPHILUS HECKEL.