

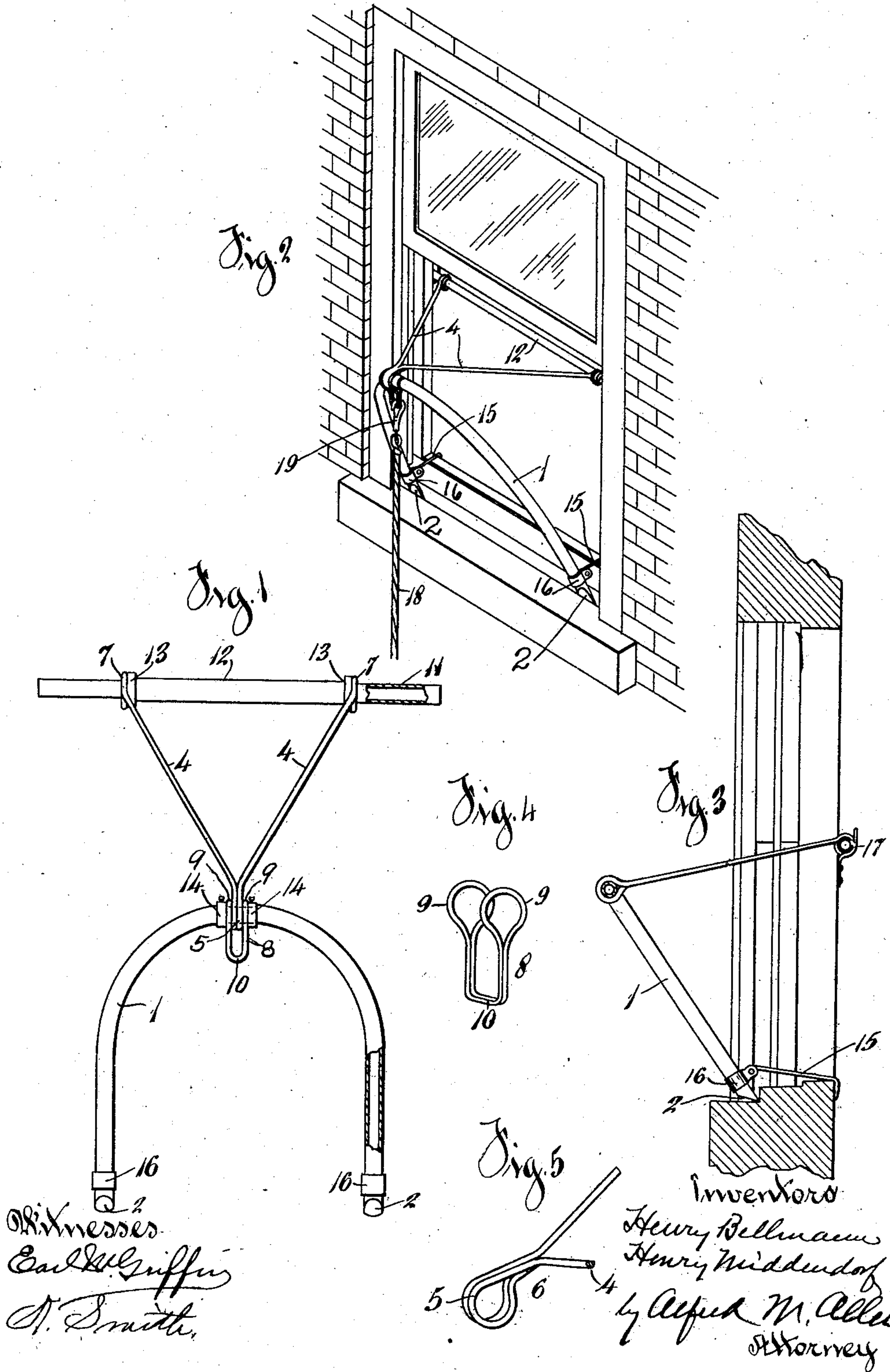
H. BELLMANN & H. MIDDENDORF.

FIRE ESCAPE.

APPLICATION FILED MAR. 23, 1910.

994,239.

Patented June 6, 1911.





# UNITED STATES PATENT OFFICE.

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## FIRE-ESCAPE.

994,239.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed March 23, 1910. Serial No. 551,174.

*To all whom it may concern:*

Be it known that we, HENRY BELLMANN, a citizen of the United States, and a resident of the city of Cincinnati, in the county of Hamilton and State of Ohio, and HENRY MIDDENDORF, a citizen of the United States, and a resident of the village of Elmwood Place, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

Our invention consists of a portable folding fire escape apparatus adapted to be applied to the window of a house for the purpose of forming a convenient support for a rope or other lowering apparatus by which the user can readily descend to the ground.

The object of the invention is to provide a construction, strong and durable, which may be readily and easily adjusted to any window opening desired at a moment's notice, and which will support the lowering rope at a convenient distance from the walls of the building, so that the party descending will be kept away from the wall, and the rope itself held from contact with the window ledge.

The especial object of the invention is to furnish a construction which shall be made of parts of sufficient strength to stand the strain to which it may be subjected, without being unwieldy, and which parts may be readily assembled into the complete apparatus without difficulty.

The invention consists of that certain novel construction and arrangement to be hereinafter particularly pointed out and claimed.

In the drawings,—Figure 1 is a plan view of our apparatus, partly in section. Fig. 2 is a perspective view of the apparatus in use at a window. Fig. 3 is a side elevation of the same, partly in section. Fig. 4 is a perspective view of the link for the supporting rope. Fig. 5 is a detail view, in perspective, of the middle portion of the metal brace.

1 is the main brace of the device constructed of metal pipe or tubing, so as not to be unwieldy and still to be of sufficient strength. This pipe is curved into a U-shape for the brace with the ends of the pipe beveled at

2, 2. The middle brace is formed of a single piece of metal rod with spreading arms 4, 4, and a metal loop 5 formed by bringing the arms together, bending the loop and welding its ends to the body at 6. This loop 5 is of a diameter to readily slide on the brace 1. The ends of the arms 4, 4, are also formed into loops 7, 7.

8 is a link made of a single piece of metal rod, bent to form a stirrup at the base and the two ends bent around to form the loops 9, 9, of such diameter as to fit slidably on the brace 1. This link is designed to be used to connect the lowering device to the brace 1.

11 is a cross bar also formed of tubing, to which the arms of the middle brace are secured.

12 is a sleeve of a diameter slightly larger than the bar 11, to form a close fit therewith, and to serve as a spreader for the arms 4, 4.

13, 13 are washers to prevent the loops 7, 7, from pulling over the sleeve.

To assemble the parts, the link 8 and the middle portion of the brace 3 are placed together with the loops 9, 9, of the link on either side of the loop 5 of the middle brace, and these loops are then passed over the main brace and brought to the middle portion, and there secured by collars 14, 14, with set screws. The sleeve 12 with the washers 13, 13, are placed between the loops 7, 7, of the arms, and the cross bar 11 is then driven to place, with its ends extending beyond the ends of the arms an equal distance on each side. On the lower ends of the main brace, hooks 15, 15, are secured by clips 16, 16, and the apparatus is ready for use.

In the event of a fire, the user places the cross bar 11 horizontally across the window jambs on the inside, resting them in supports 17, 17, mounted on either side of the window jamb on the inside, or the cross bar can be supported by resting on a nail at either end, as there is no particular strain downwardly on the bar. The main brace is placed outside the window with the lower beveled ends engaging the window ledge at the window sill, and the hooks 15 are caught inside the window sill, and the apparatus is ready for use. The lowering rope 18 is either tied or secured by a snaffle hook 19 to the link 8, and ordinarily a suitable rope or lowering device will be previously secured to the support, ready for use.

When not in use, the apparatus can be



folded so as to occupy only the space of the main brace, and the lowering rope coiled up and laid between the arms of the main brace, and the apparatus stored in a closet  
5 or other convenient place and readily accessible.

The fact that the main brace and the cross brace, which have to withstand the most strain, are made of tubing, enables us to  
10 obtain the necessary strength, without too great weight, so that the apparatus is portable and easily handled. The U-shaped construction of the main brace gives the maximum strength and the spreading arms of the  
15 middle brace throw the strain on the ends of the cross bar, so that there is no liability of bending.

By reason of the tubular construction and the formation of the various loops, we are  
20 able to assemble the parts and secure them together with great facility at the same time maintaining a connection of the various braces which is not dependent on screws or bolts. The joints of each of the braces with  
25 each other are integral with the parts connected so that the apparatus is absolutely reliable no matter for how long a time it may be out of use and stored away. This is very

apt not to be the case when bolts or screws, or screw threaded parts are relied upon for  
30 the various connections.

What we claim as new and of our invention and desire to secure by Letters Patent, is:

A fire escape consisting of a folding portable frame comprising a tubular cross bar  
35 adapted to be placed across the inner side of a window, a brace formed from an integral piece of tubing bent into U-shape with its ends beveled to engage the ledge of the  
40 window sill on the outside and adapted to take an inclined upright position, and a middle brace formed with a loop to slide over the U-shaped brace and pivotally secured thereto at its middle, said middle brace pro-  
45 vided with spreading arms formed with loops at the outer end to slide over, and pivotally secured to the cross bar near its ends, with a sleeve on the cross bar interposed between the looped ends of the middle  
50 brace to hold the spreading arms apart.

HENRY BELLMANN.

HENRY MIDDENDORF.

Attest:

ROBERT C. HARGITT,  
EARL W. GRIFFIN.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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