

May 24, 1955

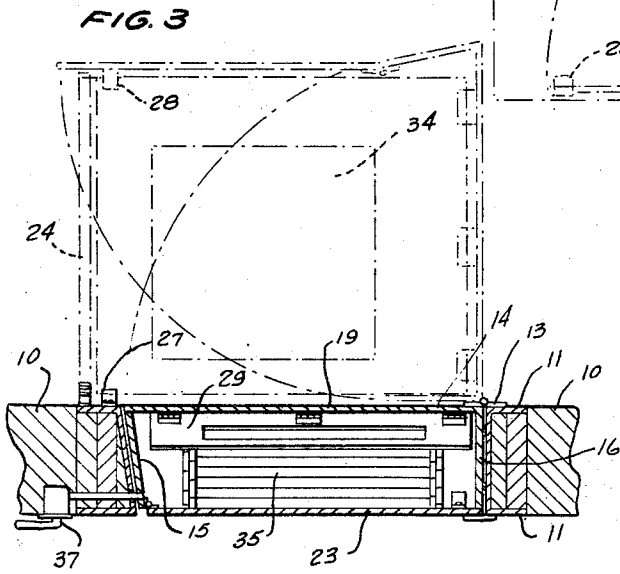
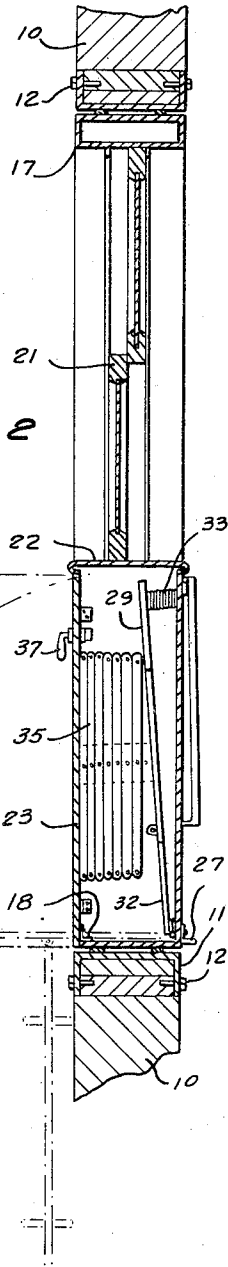
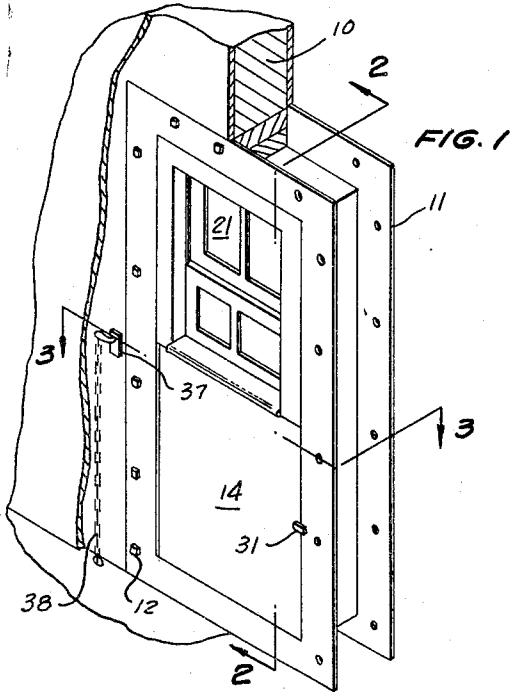
W. J. VROMAN ET AL

2,709,030

FIRE ESCAPE

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2 Sheets-Sheet 1



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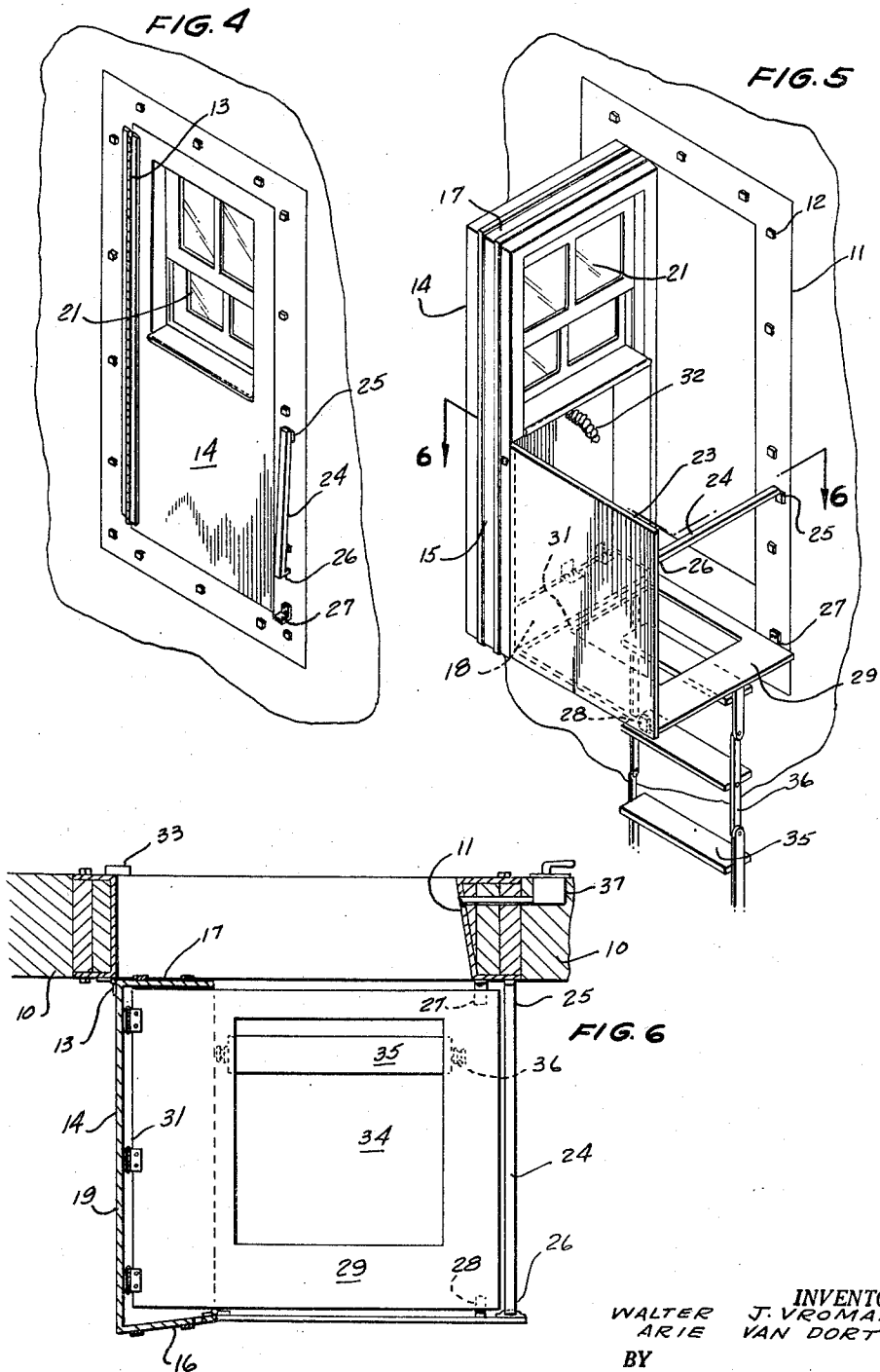
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FIRE ESCAPE

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2,709,030

**FIRE ESCAPE**

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Application May 14, 1954, Serial No. 429,882

2 Claims. (Cl. 228—42)

The present invention relates generally to fire escapes, and specifically to a fire escape which may be incorporated into an exterior wall of a building and which in non-use condition can be inconspicuous and to all appearances, a part of the exterior wall itself with no resemblance to a fire escape.

The present invention may have a window as a portion of its construction or may be paneled to resemble adjacent wall panels, and is particularly useful in the design of apartments, lodge halls, hospitals and other institutions of relatively few stories, that is, five stories high as the upper limit.

A principal object of the present invention is to provide a device which forms a fire escape when extended and when in non-extended condition, resembles a section of wall both on the interior and on the exterior.

Another object of the present invention is to provide a device which automatically extends itself after a single latch is opened.

A further object of the present invention is to provide a simple and inexpensively constructed door of pressed steel members which provide a relatively large compartment for the storage of a folding ladder.

A still further object of the present invention is to provide a fire escape door which is self contained, and except for a small inconspicuous bracket on the exterior frame and a latch on the inside frame member, no parts of it give any resemblance to a fire escape.

These, and other objects and advantages of the present invention will be fully apparent upon consideration of the following description when taken in connection with the accompanying drawings, in which:

Figure 1 is a view in perspective of the present invention as installed in a wall,

Figure 2 is a side view in cross section taken on line 2—2 of Figure 1,

Figure 3 is an end view in cross section taken on line 3—3 of Figure 1,

Figure 4 is a view in perspective of the fire escape as seen in closed position on the exterior of the building,

Figure 5 is a view in perspective of the fire escape in operating position, and

Figure 6 is a top view in cross section taken on line 6—6 of Figure 5.

Referring in greater detail to the drawings, in which like numerals indicate like parts throughout the several views, a wall is indicated generally at 10, and the present invention consists of a door frame 11 constructed of channel steel or other rigid material and being secured to the wall 10 by the bolts 12.

As seen in Figures 3, 4 and 6, a hinge 13 connects the door 14 to the door frame 11 permitting it to swing outwardly to the position best shown in Figure 5. The door 14 is as thick as the wall and is composed of side frame members 15 and 16, top frame member 17, bottom frame member 18, and an exterior panel 19. Due to the thickness of the door 14, side frame member 15 is somewhat

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angularly disposed relative to the exterior panel, seen best in exaggerated form in Figures 3 and 6.

In the embodiment here shown, a window, indicated generally by the reference numeral 21, is disposed in the upper half end of the door, although it may be omitted as not a part of the invention.

A window sill 22 is then provided and serves to form one side of an enclosure bounded by the side frame members 15 and 16 and the bottom frame member 18 of the door, with the exterior panel 19 closing it on the outer face of the door. An upstanding panel 23 is hingedly connected along one of its sides to the door frame and swings from a position normally closing the enclosure to a position at substantially a right angle to the door. A railing 24 is hingedly secured by one of its ends 25 to the door frame and may be engaged at its other end 26 in the panel 23 when it is in open position. A pair of angle brackets 27 and 28 on the frame and panel respectively, engage the upper end of an upstanding floor plate 29 when it swings outwardly to a horizontal position from its normal closed position in confronting face to face relation with respect to the inner face of the door, the inner end 31 of the floor plate 29 being hingedly connected to the door on its bottom frame member 18 and resting thereon when in horizontal position. A spring 32 carried on the inner face of the door urges the floor plate outwardly whenever the door is opened, a short keeper 33 on the door frame serving to restrain outward swinging movement of the panel 23 until the door clears the frame.

The floor plate 29 is provided with an escape opening 34 large enough for a person to lower himself through to reach the folding ladder 35, which in non-use position, is engaged by its one end to the non-confronting face of the floor plate and by its other to the panel 23, dropping to use position when the floor plate 29 assumes its horizontal position. While here illustrated as being made with linkage 36, the ladder can be constructed of chain, cable, or telescoping rods, subject to the limitations imposed by the available space within the door, the height of the building, and other requirements.

A latch 37 locks the door in the door frame and is provided with a chain for either locking the latch against inadvertent use or for automatic actuation by some remote motor means connected to an alarm system.

While a single embodiment has been here illustrated and described, many other embodiments are contemplated and many changes and modifications may be made in the construction of the present invention without departing from the spirit and scope thereof as set forth in the appended claims.

What is claimed is:

1. The combination with a wall having a door frame therein, of a door normally closing said frame and hingedly connected along one of its sides for swinging movement from its closing position to an open position, an upstanding floor plate positioned in confronting face to face relation with respect to the inner face of said door and connected along its lower edge to said door for swinging movement from the face to face position to a horizontal position, a flexible ladder arranged in folded condition positioned on the non-confronting face of said floor plate and having one end attached to the latter face, an upstanding panel facing said floor plate and engaging the other end of said folded ladder and being connected along a side edge thereof to said door for swinging movement from the facing position to a position wholly uncovering said floor plate, and latch means carried by said door frame and engageable with said panel when said door is in its closing position for holding said panel in its facing position with respect to said floor plate.

2. The combination with a wall having a door frame therein, of a door normally closing said frame and hingedly

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ly connected along one of its sides for swinging movement from its closing position to an open position, an upstanding floor plate positioned in confronting face to face relation with respect to the inner face of said door and connected along its lower edge to said door for swinging movement from the face to face position to a horizontal position, a flexible ladder arranged in folded condition positioned on the non-confronting face of said floor plate and having one end attached to the latter face, an upstanding panel facing said floor plate and engaging the other end of said folded ladder and being connected along

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a side edge thereof to said door for swinging movement from the facing position to a position wholly uncovering said floor plate, latch means carried by said door frame and engageable with said panel when said door is in its closing position for holding said panel in its facing position with respect to said floor plate, and spring means carried by said door on the inner face thereof and engaging said floor plate for urging said floor plate to its horizontal position.

No references cited.