

929,288.

J. C. COVERT.  
FIRE ESCAPE.  
APPLICATION FILED NOV. 15, 1907.

Patented July 27, 1909.

Fig. 1.

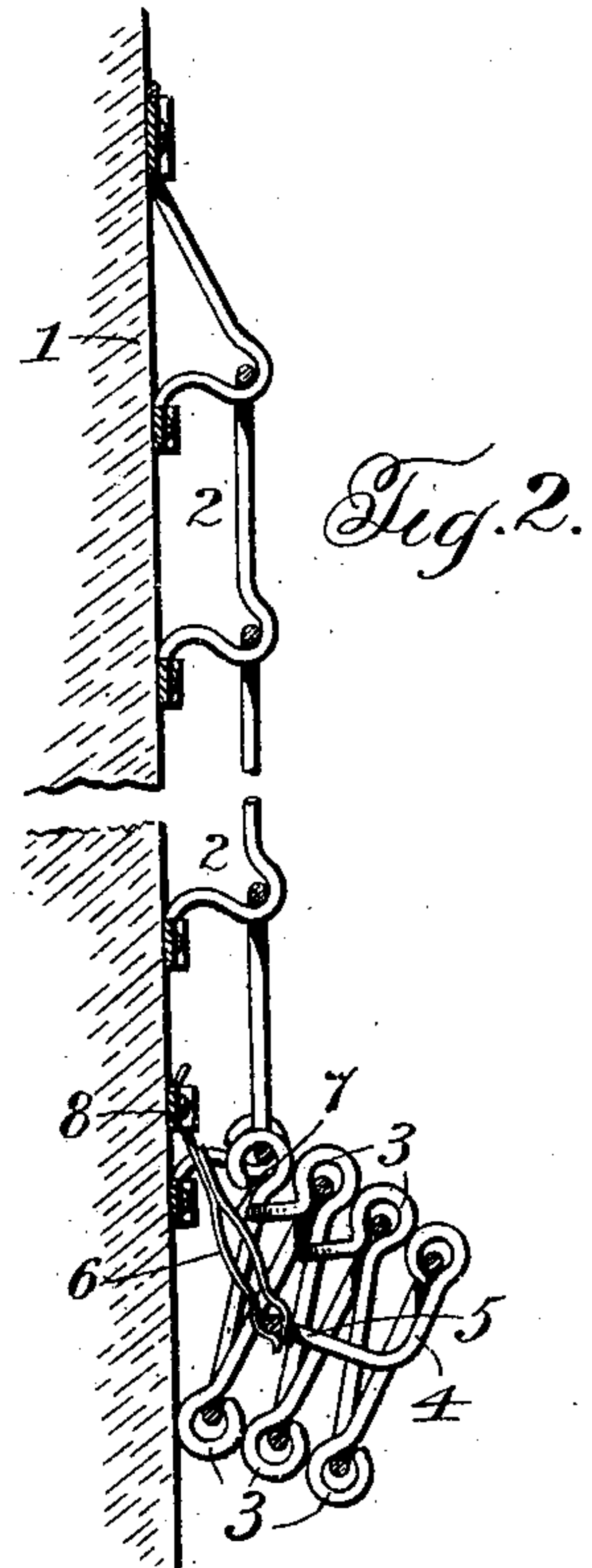
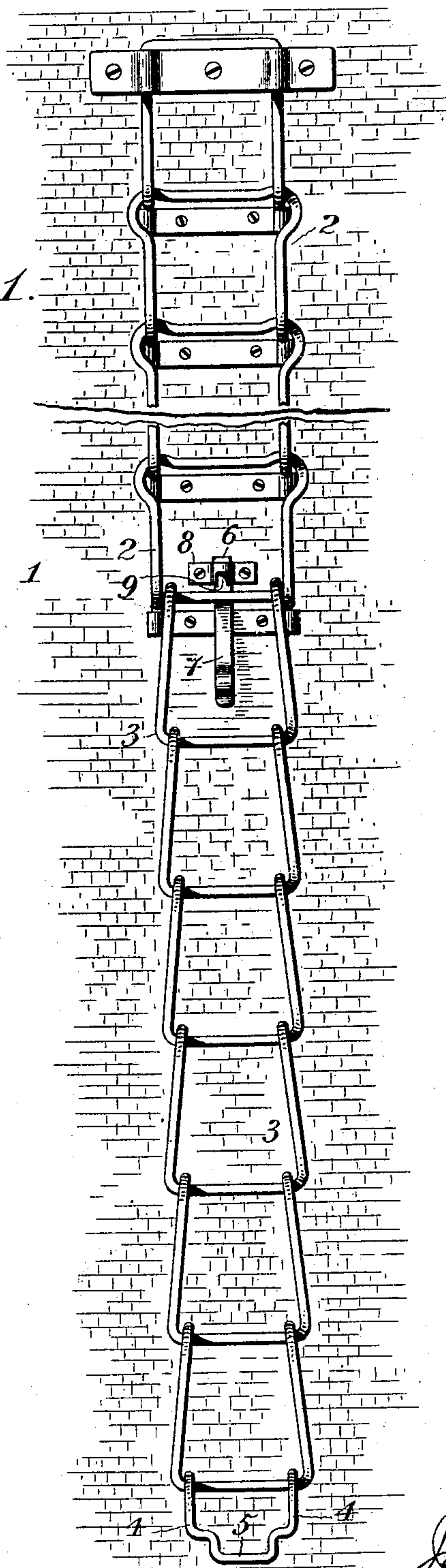


Fig. 4.

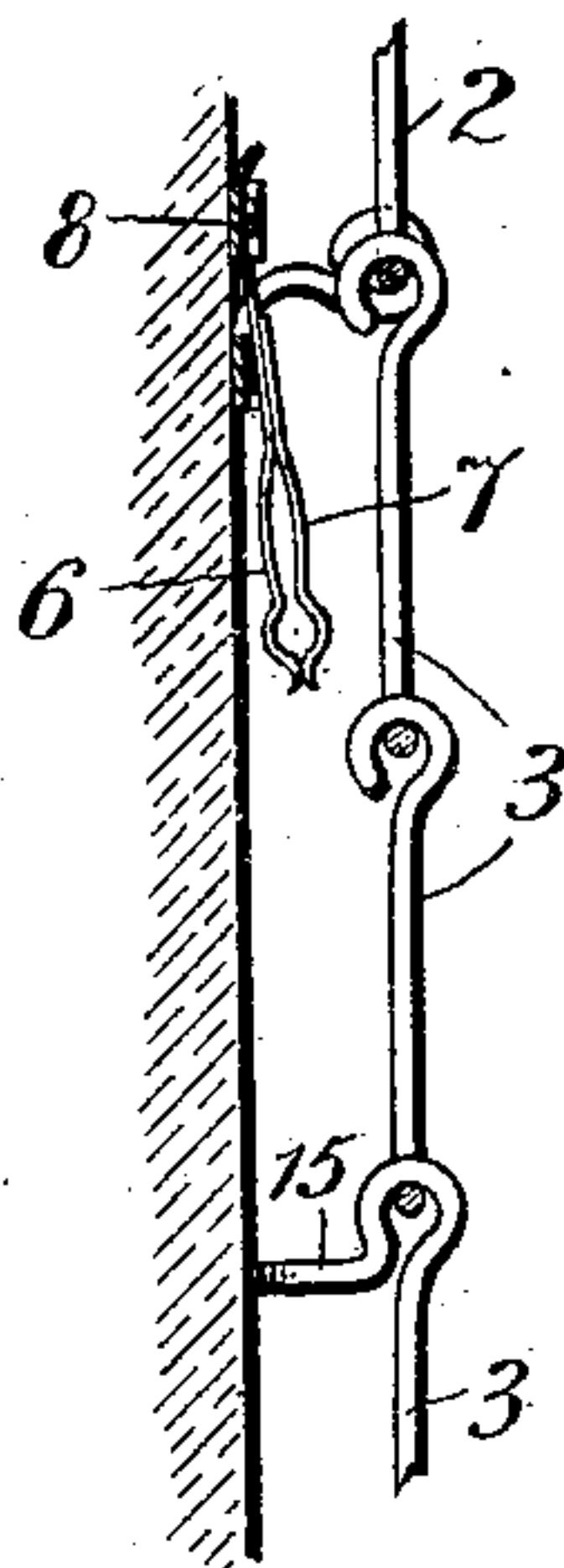
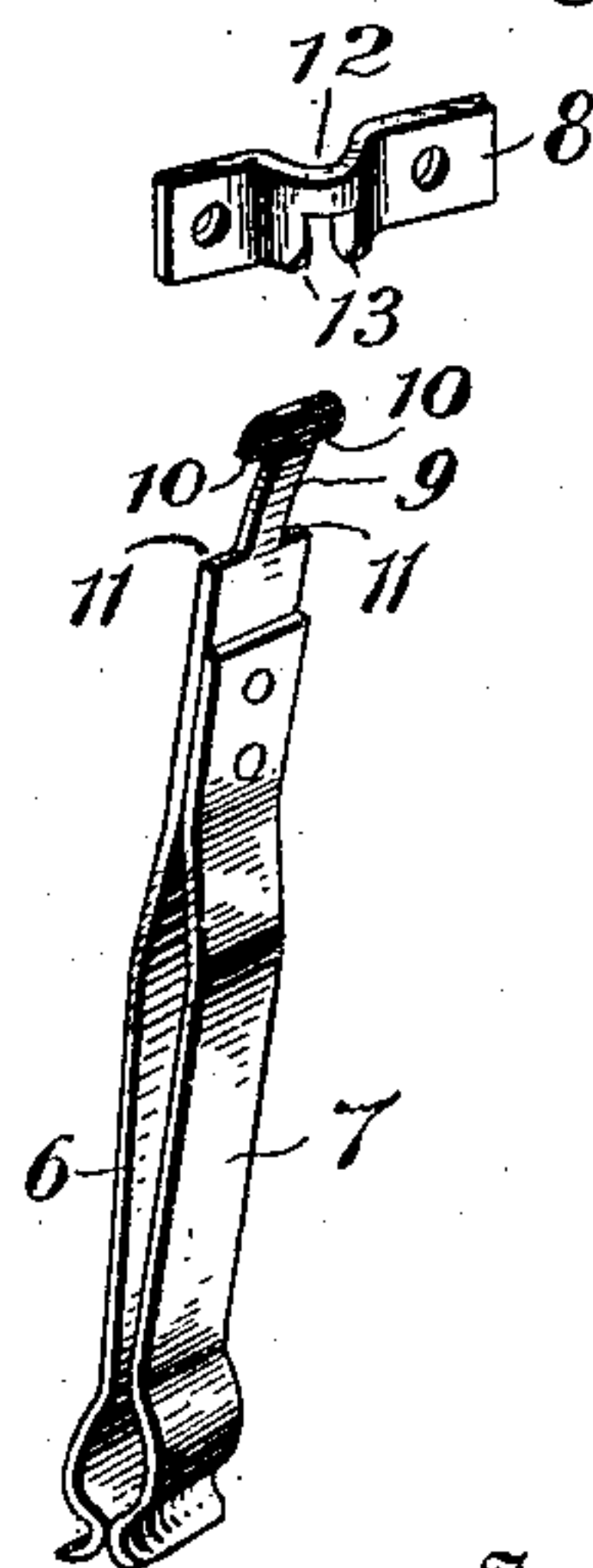


Fig. 3.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## FIRE-ESCAPE.

No. 929,288.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed November 15, 1907. Serial No. 402,305.

*To all whom it may concern:*

Be it known that I, JAMES C. COVERT, a citizen of the United States, residing at Watervliet, in the county of Albany 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 therein to the accompanying drawing.

10 The invention relates to an improvement in fire escapes and more particularly to that type designed as a permanent fixture for a building. In this class of fire escapes, for reasons well understood it is desirable that provision be made for normally maintaining in an elevated position the lower portion of the device, generally that portion thereof adapted to extend from the second story of a building to the ground.

20 The present invention in its broadest sense comprehends a collapsible ladder member permanently connected at one end to a support at a point some distance above the ground to extend from said support to the ground, said member being adapted to be arranged and supported in a collapsed or folded position adjacent said support.

30 More specifically stated the invention comprehends the use of such a collapsible ladder member to constitute a direct continuation of another ladder member secured to a building.

35 One of the chief aims of the invention is to provide a simple arrangement, whereby the collapsible member when held supported in a folded state, may be conveniently released and positively opened or distended by applying pressure directly to said member.

40 Other novel features of the invention reside in the particular construction and arrangement of parts before referred to and in the special construction and location of the means to hold the collapsible ladder member in its folded state.

45 With these and other objects in view, which will appear from the annexed detailed description, one embodiment of the invention comprises the construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the appended claims.

55 In the drawings: Figure 1 is an elevation of the attachment showing parts of the fixed portion of the ladder and parts of the building, Fig. 2 is a side elevation showing parts in section and the extension in a folded condi-

tion, Fig. 3 is a detailed perspective view of the clip and its bracket attachment, and Fig. 4 is a side elevation of a portion of the collapsible ladder member showing the position of the parts when extended.

Referring to the drawings in detail, wherein like reference characters designate corresponding parts throughout the several views, 1 designates a portion of the face of a building or other structure and 2 designates a ladder member structure shown in the present instance as rigidly secured thereto and terminating some distance above the ground floor thereof. A collapsible ladder member 3 is permanently connected with the ladder 2 to form a direct continuation of said ladder to the ground. This member 3 is made up of a plurality of rigid sections in the nature of links of substantially U-shape form, the sections having a hinge connection with each other and the upper terminal section having a hinge connection with the lower rung of the ladder member 2, so that said sections are adapted to extend in the vertical plane of the rungs of the ladder section 2. The member 3 is adapted to be so arranged and supported in a collapsed or folded state at the lower end of the ladder member 2, that a person mounted on said ladder may, through the medium of his foot, conveniently apply pressure to the member 3 to release and positively open or distend said member. With this idea in view, the sections of the member 3 are adapted to be folded up one upon another in a pack at the lower end of the ladder 2, the upper surface of the pack of sections extending substantially parallel with the lower rung of the ladder 2 and to the front of the vertical plane of the rungs of said ladder, the position of the upper terminal section of the member 3 being unchanged except that it is swung inwardly toward the wall 1 and the lower terminal section lying at the front of the pack.

100 The means for supporting the member 3 in its folded state comprises a catch connected to the wall 1 and a bail pivoted to the lower terminal section of the member 3. The bail has side portions 4 and a forward narrowed nose portion 5 arranged at an angle to project within the pack of sections when the bail is folded down against the lower terminal section, the portions 4 of the bail lying against said section and serving to limit the extent of inward projection of the nose portion 5 within the pack of sections. The



catch, which is made up of two flat strips of metal 6, 7, placed face to face and secured together at one end and shaped to form spring jaws, is supported by a bracket 8 secured to the wall 1 in the rear of the rungs of the ladder 2 and near the lower end of the ladder. The catch is adapted to hang close to the wall 1 in the rear of the rungs of the ladder 2 and the member 3 entirely out of the way thereof, the weight of the catch tending to hold the same in this position. The catch, however, is adapted to be swung forward from the wall so that the jaws thereof extend within the pack of sections sufficiently to receive and hold the nose portion 5 of the bail, and when the parts have been thus engaged, the member 3 will be securely held in its folded state as indicated in Fig. 2 of the drawings. The connection of the catch with its supporting bracket is as follows: The strip 6 of the catch is extended above the upper end of the strip 7 and near its upper end is cut away at opposite edges to provide a reduced portion 9 with shoulders 10 and 11 at the upper and lower ends thereof respectively. The reduced portion 9 loosely fits within the socket 12 of the bracket, the shoulders 10 resting upon the upper edge of the metal forming the socket. The upper end of the strip 6 from the lower end of the reduced portion is curved and the lower front wall of the socket is slotted at 13, the lower edges of the side walls of the socket being beveled to cooperate with the shoulders 11.

As will be understood, when the collapsible member 3 is arranged and supported as illustrated in Fig. 2 of the drawings, the same may be easily and quickly released and positively opened or distended by applying pressure thereto, the pack of sections pivoting outwardly on the transverse portion of the upper terminal section. As soon as the sections have been forced outwardly sufficiently to disengage the bail from the catch, the catch will drop back to its normal position close to the wall 1.

It may in some cases be desirable to provide the flexible section with projections to rest against the wall so as to hold the extensions out from the wall when it is dropped down. This is accomplished by forming the extensions 15 on the eye part of the sections as shown in Fig. 4. Any number of these extensions 15 may be employed but preferably every alternate frame should be so provided. A convenient manner of forming the extensions is shown in my former patent No. 793,770 of July 4, 1905.

I desire it to be understood that various changes, within the scope of the appended claims, may be made in the construction and arrangement of parts hereinbefore set forth without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim is:

1. In a fire escape, a collapsible ladder extension comprising a series of pivotally connected sections having rigid side bars, means for connecting the uppermost section to a suitable support and means for holding the sections in a folded position adjacent the support comprising a catch member secured to the support and a member cooperating with the catch secured to the lowermost section of the collapsible ladder, said last mentioned means being adapted to be released by applying pressure to said folded ladder extension substantially as described.

2. In a fire escape, a collapsible ladder extension comprising a series of pivotally connected sections, each section having rigid side bars and the sections adapted to be folded one upon the other, means for connecting the uppermost end of the ladder to the support, a spring catch loosely connected to the support and a substantially rigid member connected with the lower end of the lowermost section for engaging the said catch and retaining the members in a collapsed or folded position.

3. In a fire escape, the combination with a collapsible ladder extension, of a spring comprising a substantially U-shaped member, means for loosely securing said catch member to a support and a bail member secured to the lower end of the ladder section for engaging the said catch member when the sections are folded.

4. In a fire escape, the combination with a wall of a building, of a collapsible ladder member comprising a plurality of sections, each of said sections consisting of a rigid open frame, said ladder member being connected at one end with the wall to extend down the same and adapted to be arranged in a collapsed state near its point of support, and means to hold the ladder member in its collapsed state, said means including a member connected with the ladder member to extend within the sections when packed together, and a catch supported from the wall to engage and hold the member connected with the ladder member.

5. In a fire escape, the combination with a wall of a building, of a collapsible ladder member comprising a plurality of sections, each of said sections consisting of a rigid open frame, said ladder member being connected at one end with the wall to extend down the same and adapted to be arranged in a collapsed state near its point of support, and means to hold the ladder member in its collapsed state, said means including an angular bail pivotally connected with the ladder member to extend within the sections when packed together, and a catch supported from the wall and adapted to be moved to project within the sections when packed together to engage and hold the bail.

6. In a fire escape, the combination with a



5 wall of a building, of a collapsible ladder member comprising a plurality of sections, each of said sections consisting of a rigid open frame, said ladder member being connected at one end with the wall to extend down the same and adapted to be arranged in a collapsed state near its point of support, and means to hold the ladder member in its collapsed state, said means including an angular bail pivotally connected with the ladder member to extend within the sections when packed together, and a catch pivotally supported from the wall and adapted to be swung to project within the sections when packed together to engage and hold the bail.

10 7. In a flexible extension for fire escapes, the combination with a support, of a series of rigid frames pivotally connected one with the other, connection between the uppermost frame and the support and means for retaining the sections in a folded position, said means comprising a member secured to the support and a member secured to the lowermost section adapted to engage directly with the member on the support said means being adapted to be released by applying pressure directly to said folded ladder extension.

30 8. In a fire escape, the combination with a wall of a building, of a foldable ladder member comprising a plurality of sections hinged together, each of said sections consisting of a rigid open frame, said ladder member being connected at one end with the wall to extend down the same and adapted to be arranged in a folded state near its point of support, and means to hold the ladder member in its collapsed state, said means comprising

a bail connected with the ladder member to extend within the sections when packed together, and a catch pivotally supported from the wall to be moved to extend within the sections when packed together to engage and hold the bail. 40

9. In a fire escape, the combination with a wall, of a building, of a main ladder member secured to the wall to extend down the same, a collapsible ladder member connected at one end with the lower end of the main ladder member to form a continuation thereof, said collapsible ladder member comprising a plurality of rigid open frame sections and adapted to be arranged in a collapsed state at the lower end of the main ladder member, and means to hold said member in its collapsed state including a catch supported from the wall to normally hang close thereto and adapted to be moved to project within the pack of sections, and a member connected with the collapsible ladder member to engage with the catch. 50 55 60

10. In a fire escape, a collapsible ladder, means for connecting one end of the ladder to a suitable support and means for holding said ladder in a collapsed state adjacent the support, said last mentioned means being adapted to be released by applying pressure directly to said ladder. 65

In testimony whereof I affix my signature in presence of two witnesses.

JAMES C. COVERT.

Witnesses:

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EDWIN S. CLARKSON.