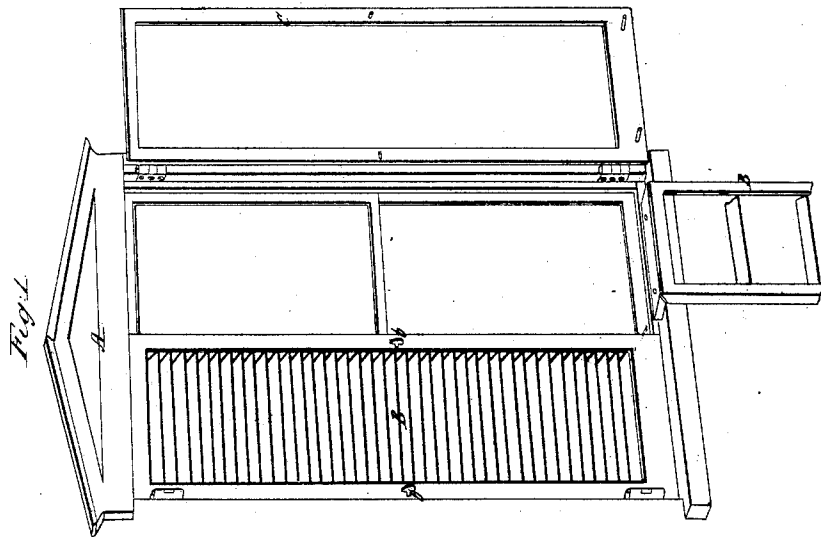
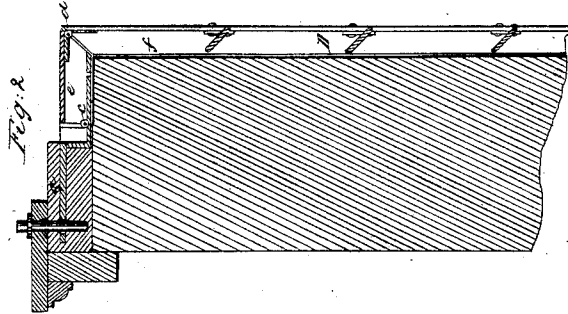


F. Seymour.

Fire Escape.

No 28,095.

Patented May 1, 1860.



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK SEYMOUR, OF CINCINNATI, OHIO.

FIRE-ESCAPE.

Specification of Letters Patent No. 28,095, dated May 1, 1860.

To all whom it may concern:

Be it known that I, FREDERICK SEYMOUR, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Fire-Escapes; and I do hereby declare that the following is a full and complete description thereof, reference being had to the accompanying drawings and letters of reference, making part of this application.

My improvement consists in the combination of a ladder and shutter so constructed as to be used for the ordinary purposes of a shutter or blind, except in cases of emergency, when it may readily be adjusted to unfold and depending from a strong fastening upon the window sill, fall in hinged sections from the base of the window to the ground.

To enable others of competent skill to make and use my invention I proceed to describe its construction and mode of operation.

Figure 1 is a perspective view of a window to which my improvement is applied. As shown, the frame C of the shutter or blind is thrown open and the ladder B is presented as depending from the sill of the window. Fig. 2 is a vertical section by a plane cutting the window sill transversely. It shows the fastening by which the hinged shutters is held closed, when in ordinary use, and by which the ladder is suspended when the part of the shutter which forms the ladder has been detached from the frame and permitted to fall in jointed sections toward the ground. Fig. 3 is a vertical section through the shutter when the part of it which forms the ladder has been folded and secured in place so that the rungs of the ladder form the slats of the shutter as will be described.

Like letters indicate corresponding parts in the different drawings.

A is a window frame of ordinary construction.

B is a closed shutter constructed upon the plan of my improvement.

C is the hinged frame of a shutter standing open from which the part of it which forms the ladder has been detached.

D represents the ladder suspended from the sill of the window. At letter (a) Fig. 2 is seen a section of the plate fastener, by which the ladder is suspended from the window sill when required as a ladder, or by

which the blind is held closed when in ordinary use.

In the construction of my combination blind ladder I use for the outer hinged frame either iron or wood. A light variety of angle iron is well adapted to this purpose. The frame is hinged in the ordinary way, though with somewhat stronger hinges, to the frame of the window or wall. The frame is furnished with iron buttons *b, b*, for a purpose to be explained.

The ladder D is constructed entirely of metal, being made in sections of a length corresponding with the length of the window. These sections are joined together with hinges placed at their ends and so placed and constructed as to allow the ladder to be unfolded longitudinal as soon as released from the frame. The slats or rungs of these sections are made of iron of suitable width and thickness proportional to the size of the window to which the ladder is to apply, and are joined securely to the side sections at distances appropriate and convenient for the rungs of a ladder, provided that the arrangement of the series of slats upon each section shall be made with reference to all the other sections, so that when the parts or sections are folded together as provided, each series of slats will fall into such relations as to distance to all the others that they will together form a complete series of equidistant and appropriate blind slats. But, as in folding up, the side rails of the sections have thickness different in distance from the outer or inner faces of the blind, so the arrangement of the slats upon the rails should be made with reference to these differences, so that when closed and in use as a blind they may appear all in one rank like the slats upon the ordinary window blind. The sections may be united together by any ordinary hinges of suitable strength providing that they permit the parts to fold together closely so as to occupy only the amount of space allowable for a blind.

Referring now to Fig. 3, let it be proposed to return the ladder to its place in the window and to unite it with the hinged blind frame so as to form a complete blind. The horizontal part (*o*) revolving upon the hinge (*e*) is elevated to a vertical position. The part *f* which appears suspended in a vertical position but which finds a horizontal position by the change in the position of part (*e*) is now carried up into a line with the part *e*,

so that the outer face when it was suspended now becomes its inner face. But attached to this is another section not shown in the drawings and this being carried up finds
 5 itself suspended by its hinge to the top of part (*f*); next, another part is rotated half around like the part *f* upon its hinged axis and is found along side the two parts first elevated to place, but in going up it carried
 0 another or a fourth part or section, which depending by its hinges from the now upper end of the third part or section, falls into a vertical rank with all the others. If the ladder is made to consist of another section
 .5 or pair of sections they may be returned to place in the same manner. The sections now being all in place and resting with their lower extremities upon the window sill, the outer or hinged frame *c* which has been
 10 spoken of is closed so that its side and end rails cover the ends and sides of the sections; in this position it will be found that the slots or button holes in the side pieces of the frame correspond with similar openings in
 25 all the rails of the sections, so that the metal buttons (*b*) passing through the holes of all the parts as provided, and then turned so that the shoulders of the buttons act upon the parts appropriately, the whole is held
 30 firmly together and constitute a blind of ordinary appearance.

The lower end rail of the blind frame is provided with stout pins (*h*) which find appropriate holes in the end plates of the
 35 sections support the weight of the slatted parts. The pin *i* may now be withdrawn releasing the blind and it is formed to swing out on its hinges presenting all the appearance of an ordinary blind. Let it now be
 40 supposed that the ladder is required for in-

stant use. The blind is drawn to, and secured by the pin *i* the buttons (*b b*) are turned allowing them to release their hold and fall out, the outer frame swings away
 45 clear of the ladder and it unfolds and falls down of its own weight toward the ground, remaining suspended securely to the window frame, and affording ready means of escape from the apartment.

It will be found easy to make the shutter
 50 close instead of slatted by an appropriate arrangement of the slats.

It will not be necessary in most cases to construct the ladder in more than four sections, as this, with windows of ordinary
 55 length, giving a length of ladder from twenty four to thirty six feet, and depending from the lower sill of even five and six story windows will reach sufficiently near the ground for safety.

Having now fully described my improved fire escape shutter and its mode of operation, what I claim as my invention and desire to secure by Letters Patent is—

1. My mode of forming ladder and shutter, having the blind, shutter or ladder folding inside of frame.

2. I claim the mode of fastening the ladder and shutter to the window sill as described.

3. I claim the combination of ladder and shutter substantially as herein described and for the purposes set forth.

In testimony of which I have hereunto set my hand.

FREDERICK SEYMOUR.

Witnesses:

WM. CLOUGH,
 S. K. GRAVES.