J. Withers.

Fire Escape.

No. 22,324. Patented Dec. 14, 1858.

Fig. 1.

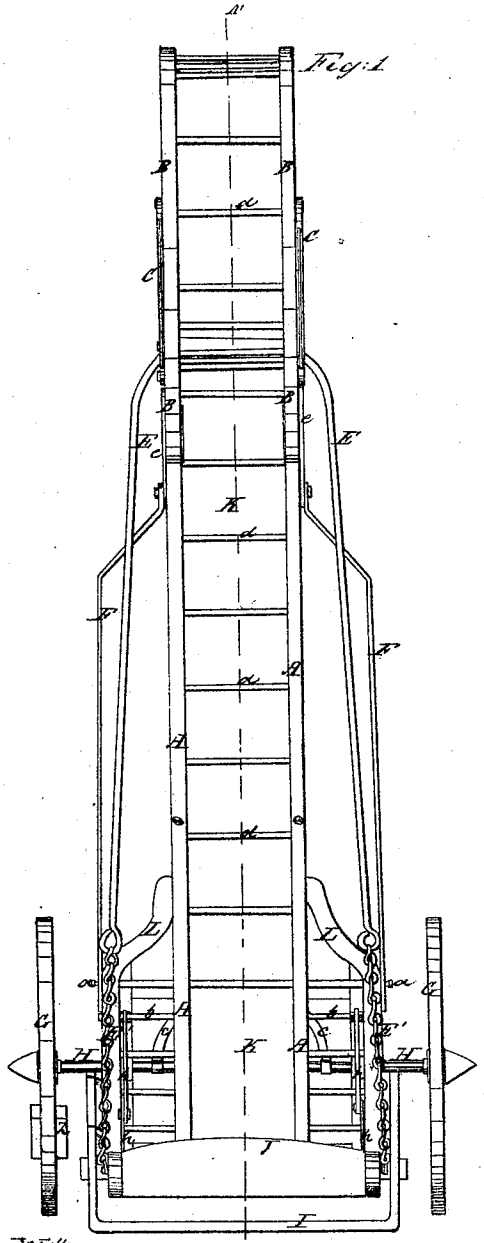
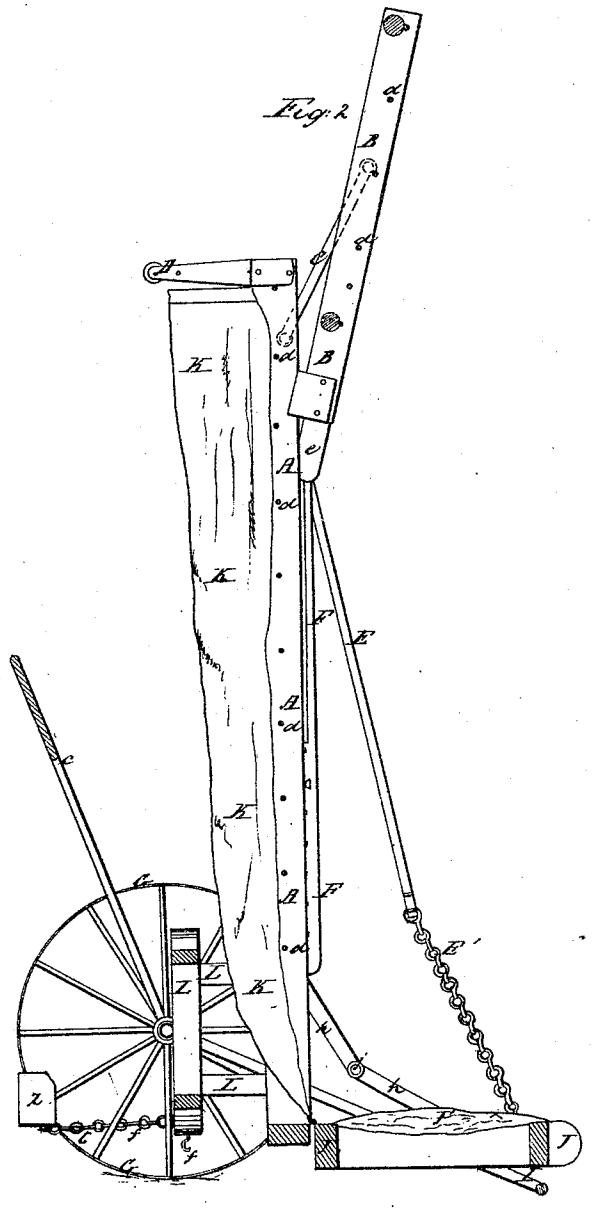


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN WITHERS, OF COLLINSVILLE, ILLINOIS.

FIRE-ESCAPE LADDER.

Specification of Letters Patent No. 22,324, dated December 14, 1858.

To all whom it may concern:

Be it known that I, JOHN WITHERS, of the village of Collinsville, county of Madison, and State of Illinois, have invented a new and Improved Fire-Escape Ladder; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, making part of this specification, in which—

Figure 1 is a plan, and Fig. 2 a vertical section through A′ A′.

The nature of my invention consists in combining a fire-proof "chute" with a pair of folding ladders, and a yielding bed; or bottom, and in mounting the said combination upon a pair of wheels, whereby the said machine may be easily transported, and also in so arranging the said ladders that they may be unfolded and placed against the side of a burning building whereby the inhabitants thereof may find an easy means of escape.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Similar letters of reference, represent corresponding parts of the different figures in the accompanying drawing.

L L, is the frame of the machine, which is mounted upon the axle H, which is fixed in the two wheels G G.

A A is a ladder which is secured in the frame L. B B, is also a ladder, which is secured to the ladder A by means of the two links C C. These two links are fixed upon center in the ladders A and B, so as to form a kind of radial bar around which the ladder B vibrates, whereby it may be made to set at an angle, with the ladder A, or may be brought down, to lie upon the same plane with it. Its position is governed by the two rods F F, to which it is attached, by means of a piece of metal, shown at *e*.

J is a frame secured to the lower end of the ladder A by means of hinges, and in this frame a yielding bottom is fixed in the nature of a bed, as shown at J′. This bed frame is supported by means of the two rods, or braces E E, to which it is attached by means of the chain, E′, and this bed frame has an additional support shown at *h h*, which consists of a pair of links joined at *j*, so as to admit of being folded together. The object of having this joint *j* in the brace *h h*, is to allow the frame J to fold down flat, upon the ladder A, so as to cause it to occupy as little room as possible.

K K is a canvas bag, or "chute," attached to the ladder A, and so arranged as to have a large, open, mouth; at the upper end, and so as to terminate in a curve, at the bottom, leading to the bed J, this "chute" or bag, is covered with fire proof paint, so as to insure it from burning, when placed against the hot walls of the burning building. The object of this chute is to enable a person to escape from an upper window, by sliding down it upon the bed J. Thus, for instance, a person might stand upon the ladder and slide five or six children down the "chute," while he was carrying one down the ladder.

L, is a block, with which the wheels G G are chocked, by which the ladder is prevented from falling from the wall against which it may be placed. These blocks are secured to the frame L by means of chains *t*, that they may not be lost. *f* is a hook, upon which these blocks are suspended when they are not in use.

D is a small wheel fixed in an arm attached to the upper end of the ladder A, as shown, that the ladder may be the more easily shoved up the side of the wall.

C is the tongue to which the power is applied for transporting the apparatus.

I is a bent lever which reaches around the back end of the machine, and which is secured to the frame L. The object of the lever is to enable the attendants to raise the upper end of the ladder, which is done by depressing the lever; the axle H forming a center, or fulcrum, around which the entire apparatus vibrates.

a a are pins, or catches, upon which are hooked the rods F, which have notches cut in their under sides, to correspond with these pins which hold the ladder B into the required position.

d, *d*, *d*, are the spokes of the ladder.

b b are spokes, between the frame and the ladder, which, at once serve as steps to ascend the ladder, and as braces to secure it to the frame L and as a center, or fastening to secure the lower end of the link *h h*.

When it is required to bring this apparatus into use, it is first wheeled to the required position, then by depressing the end of the lever, I the upper end of the ladder is elevated, to its position against the wall,

after which the wheels are chocked as shown, the bed J is raised to the position shown on the drawing, and the ladder, B is adjusted by means of the rods F F, when the apparatus is ready for use.

Having thus described the construction and operation of my invention, what I claim as new therein, and desire to secure by Letters Patent is—

1. The combination of the canvas bag or chute K with the ladder A in the manner described, for the purpose specified.

2. The combination of the bed J and its frame as shown and described, arranged to open and close as set forth.

3. The arrangement of the two ladders A and B, with each other, in the manner set forth, and also the means of adjusting the ladder B substantially in the manner described, all of which I respectfully submit.

JOHN WITHERS.

Witnesses:
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