(No Model.)

J. GRAFF.

FIRE ESCAPE.

No. 261,847. Patented Aug. 1, 1882.

Fig: 1

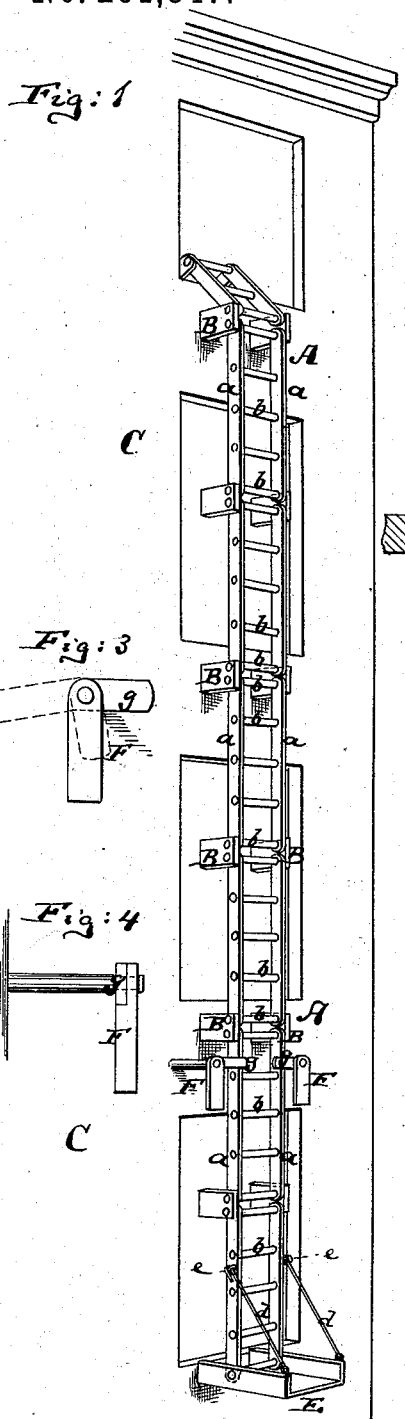


Fig: 2

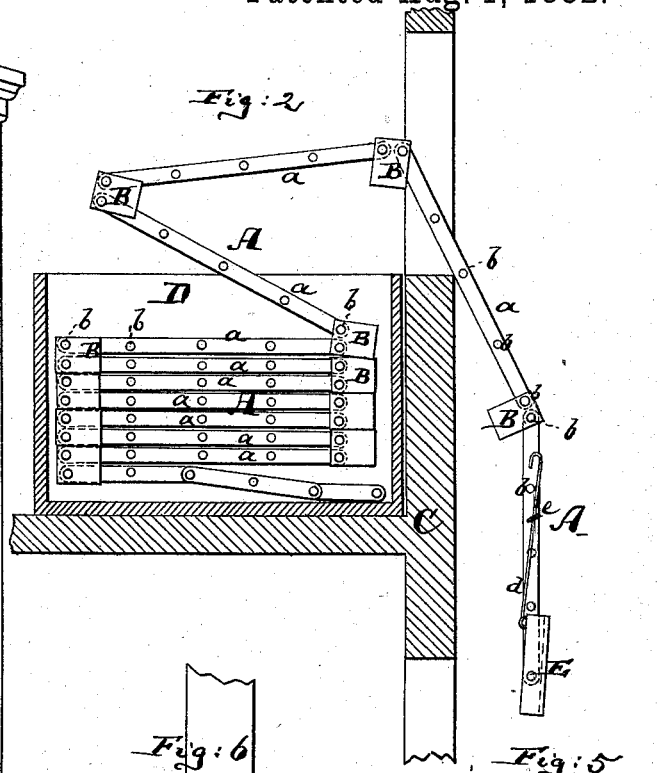


Fig: 3

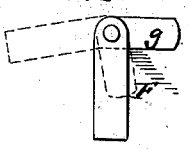


Fig: 4

Fig: 6

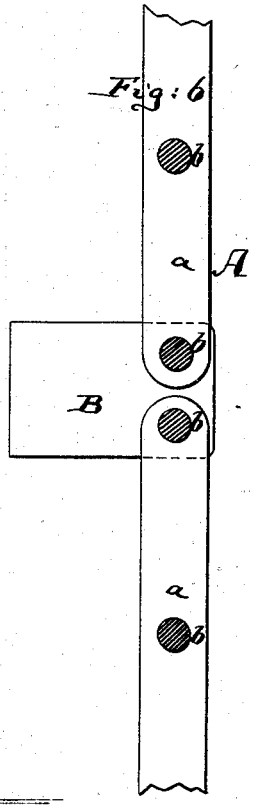
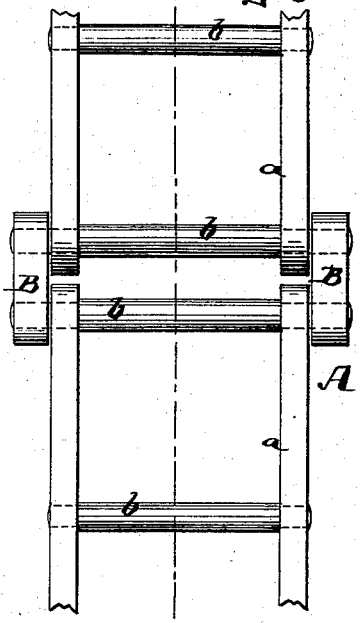


Fig: 5



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UNITED STATES PATENT OFFICE.

JOHN GRAFF, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO ANDREW MILLS, OF SAME PLACE.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 261,847, dated August 1, 1882.

Application filed April 5, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN GRAFF, of New York, in the county and State of New York, have invented a new and Improved Fire-Escape, of which the following is a specification.

Figure 1 is a perspective view of my improved fire-escape. Fig. 2 is a side view, partly in section, of the same. Figs. 3, 4, 5, and 6 are detail views of parts of the same.

The object of this invention is to produce a drop-ladder for a fire-escape, which drop-ladder shall, when thrown out of a window or from the roof of a house, though flexible, be kept off the wall of the building, so as to allow its free and ready use by persons who wish to escape from or enter into the burning building; and to this end the invention consists in uniting the adjoining sections of the ladder, by their respective lower and upper rungs, with toes or plates that will keep the ladder off the front of the building.

The invention also consists in further details of improvement that will be hereinafter more fully described.

In the drawings, the letter A represents my improved ladder, which is composed of sundry sections *a a*, each section being composed of wooden or metallic side bars and of series of rungs *b b*. The several sections are united together where they meet by their end rungs passing through plates B, which plates are wider than the sections of the ladder and project inward toward the wall of the building, as shown in the drawings. The sections of the ladder are between the plates B, as shown. By this means I obtain several important advantages—namely, in the first place, when the ladder is thrown out of a window the several plates or toes B, projecting inward toward the wall C of the building, will keep the ladder properly distanced from said wall and hold it in position for convenient use, whereas other flexible ladders labor under the disadvantage that they are frequently so close to the walls of a smooth building, particularly such buildings in which such ladders are mostly needed—namely, smooth brick buildings or frame structures—that they will not be of assistance to unskilled persons who may wish to use them; and, in the second place, these toes or plates B enable me to fold the ladder together into the most compact form—namely, to place one section *a* directly upon the adjoining section, as shown in Fig. 2. The toes B in this folded position point all in the same direction, as shown. This convenient folding could not be obtained without the connecting-links B on the sections of the ladder, and these connecting-links B, when made of the proper length, have the further advantage of sustaining the ladder at a distance from the wall of the building, as described. The one end of this ladder is to be secured in the lower portion of a box or chest, D, that may be placed near one of the windows in the upper floor of a building; or the ladder may be secured beneath the cornice of the building, or in a box that stands on the roof, or wherever it may be most conveniently held out of the way when not in use, and yet within reach when to be used.

A further feature of this invention is the application to the lower end of the ladder of a platform, E, which is pivoted thereto, and which is a little wider than the ladder itself, and is united to the lower section of the ladder by brace-hooks *d*, that pass through eyes *e* in said lower section. When the ladder is down this platform is readily put into horizontal position, as shown in Fig. 1, and is held in that position by the braces *d*, so as to constitute a convenient step to enable women and children to easily get off the ladder or be taken off, if desired.

To the wall C of the house are pivoted at proper intervals elbow-levers F, whose lighter arms *g* hang in the way of the ladder; but when the ladder is let down the broader platform E will crowd these lighter arms *g* aside, passing them, and thereupon the elbow-levers, swinging back into their normal position, will lap over the ladder and assist in holding it properly in place, preventing it from being swung outward farther than necessary.

It will be observed that the sections *a a* of the ladder are all of equal width and all aligned by having their end rungs pass through the straddling toe-plates.

I claim—

1. The ladder A, composed of jointed aligned sections *a a*, which are united to and by outer

links, B B, through their end rungs, said links B being wider than the ladder and constituting toe-plates to hold the same off a wall, substantially as described.

2. The combination of the flexible ladder A with the platform E, braces *d*, and eyes *e*, substantially as specified.

3. The combination of the ladder A and its widened lower portion, E, with the swinging catches F F, substantially as and for the purpose stated.

JOHN GRAFF.

Witnesses:
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