

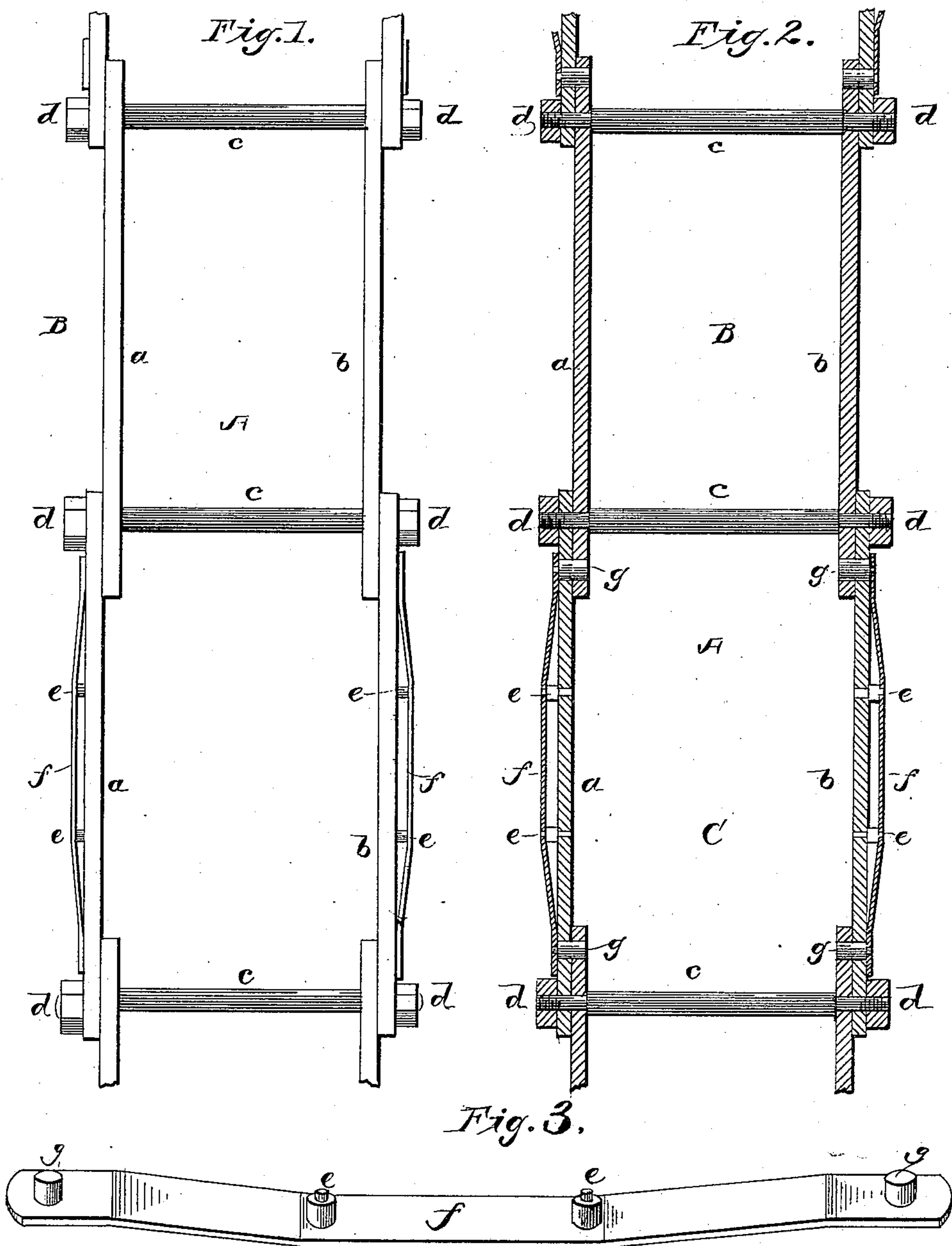
(No Model.)

H. T. LINNENBRINK.

FIRE ESCAPE.

No. 308,179.

Patented Nov. 18, 1884.



WITNESSES
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HENRY T. LINNENBRINK, OF ROCHESTER, PENNSYLVANIA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 308,179, dated November 18, 1884

Application filed September 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY T. LINNENBRINK, a citizen of the United States, residing at Rochester, in the county of Beaver and State of Pennsylvania, have invented a new and useful Improvement in Fire-Escapes, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to fire-escape ladders; and it has for its object to provide a device of this character which may be folded to occupy the minimum amount of space, and one in which the sections will, when extended, become rigid.

A further object of the invention is to provide a fire-escape ladder which shall be simple in its construction, and one that will be strong and durable.

With these ends in view the invention consists in the improved construction and combinations of parts hereinafter fully described, and pointed out in the claim.

In the drawings, Figure 1 is a front elevation of a fire-escape ladder constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section, and Fig. 3 is a detail view of the spring-plate carrying the steps or lugs; and Fig. 4 is a modification.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures, A represents the ladder, which consists of a series of sections, B C. Each of the sections B C consists of the sides *a b*, which are provided at their upper and lower ends with a hole or opening. The ends of the sections B fit between those of the sections C, and said sections are pivoted together by means of rods *c*, the ends of which are screw-threaded and extend beyond the sides of the sections composing the ladder, said rods being held in place by nuts *d*. It will be seen that the rods *c* serve two purposes—namely, pivoting the sections together, and serving as rounds upon which to step when making a descent. Upon the outer sides of the side strips *a* of the sections C are provided lugs or posts *e*. Upon each side of the sections C, fitted on the posts *e*, are flat springs *f*, carrying at their ends, upon the inner sides thereof, lugs *g*. These flat springs extend nearly the entire length of the sections C, and the lugs *g* are adapted to engage holes or openings in the ends of the sections B C, which register when the ladder is ex-

tended, as shown in Fig. 1. It will thus be seen that said sections are held rigid. Brackets may be secured to the wall of the building at suitable points to prevent the ladder from touching the same.

In lieu of the flat springs shown, I might employ upon the sections C, at each end thereof, a box or casing, R, having an opening, *r*, in its upper end, and provide said casing with a sliding bolt, *s*, having a coil-spring surrounding the same within the casing, said spring to bear against a pin or projection on the sliding bolt with its lower end, while the upper end of said spring would bear against the inner side of the casing.

The ladder above described is preferably attached to the base-board or floor of a room by means of chains, and when not in use is folded. When it is desired to use the ladder, the same is raised and dropped from the window. In dropping, the sections straighten out, and as soon as the sections have assumed this position the openings at the ends of the said sections will register and will be immediately engaged by the spring-pressed lugs or bolts. In case the flat spring is used it will be seen that to disengage the lugs, in order that the sections may be folded, it is necessary only to depress said springs at their center, which will raise their ends from the openings and allow the sections to be folded, the springs being allowed sufficient vertical play upon the posts to admit of their ends being raised when they are depressed between said posts.

The above-described ladder is simple in its construction, may be folded to occupy a small space, is positive in its operation, and is extremely strong and durable.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A fire-escape ladder consisting of a series of pivoted sections, flat springs secured to the sides of one of said sections, and lugs formed upon the ends of said springs, said lugs being adapted to engage holes or openings formed in the ends of each of said sections, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

HENRY T. LINNENBRINK.

Witnesses:

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R. A. SMITH.