(No Model.)

F. O. REISENER.

FIRE ESCAPE LADDER.

No. 303,884. Patented Aug. 19, 1884.

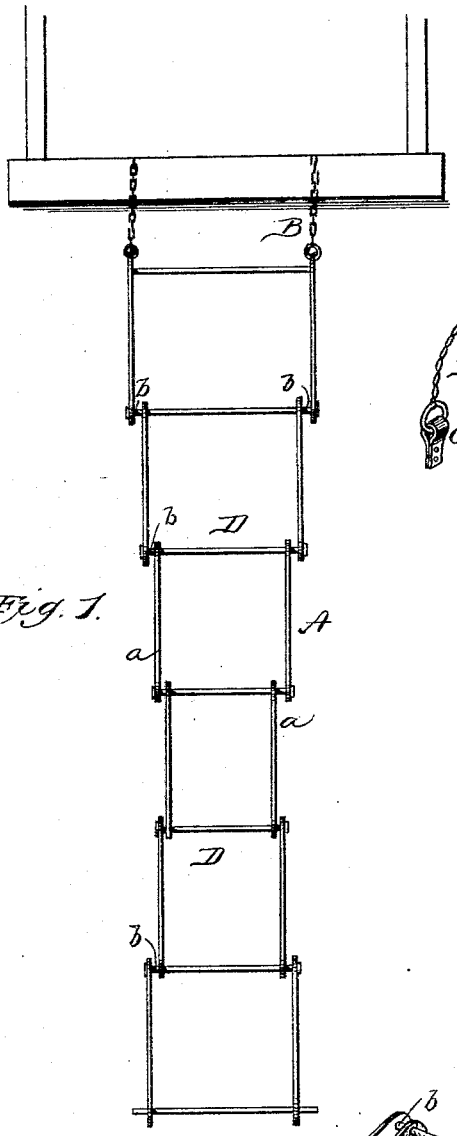

Fig. 1.

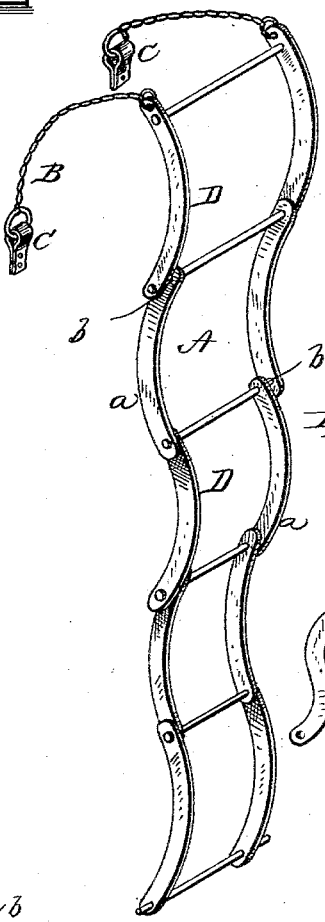

Fig. 3

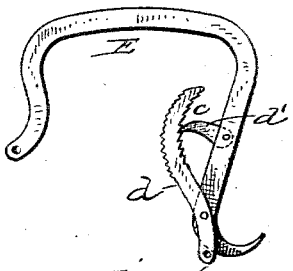

Fig. 4.

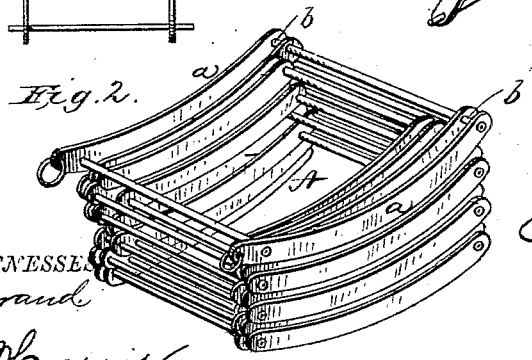

Fig. 2.

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FIRE-ESCAPE LADDER.

SPECIFICATION forming part of Letters Patent No. 303,884, dated August 19, 1884.

Application filed March 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, FRIEDERICH O. REISENER, a citizen of the United States, residing at West Point, in the county of Lee and State of Iowa, have invented a new and useful Fire-Escape Ladder, 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 readily folded to occupy a minimum amount of space.

A further object of the invention is to provide a ladder which shall be cheap and simple in its construction and effective in its use.

The invention consists in forming the sides of each section composing the ladder alternately convex and concave.

The invention further consists in the improved construction and combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is a front elevation of my improved ladder applied. Fig. 2 is a perspective view of the same folded. Fig. 3 is a perspective view of a portion of the ladder, showing the attaching means and the curved sides; and Fig. 4 is a detail view of a modified form of fastening for securing the upper or top end of the ladder within the room where it is designed to be used.

In the accompanying drawings, in which like letters refer the corresponding parts in the several figures, A represents the ladder, which is provided at its upper end with a sufficient length of chain, B, in order that the top round of the ladder, when in use, will fall in its proper place on the outside of the window. The chain B, which is secured to the upper ends of the sides of the ladder A, is secured to the floor or other part of the room by means of looped plates C, having openings for the passage of screws for their attachment; though it will be seen that there are various ways in which the ladder may be secured. The ladder A consists of a series of sections, D, as before mentioned, the sides and rounds of which decrease in length and width, respectively, as they near the bottom of the ladder. The sides *a* of this ladder are made curved, the sides of one section being convex and the sides of the adjacent section concave, so that the ladder, when suspended, may be said to approach a serpentine form, as is clearly shown. The rounds are secured in openings of the sides, and between the outer side of one section and the inner side of the adjacent is provided a tube or bushing, *b*, in order to keep the sections properly separated and allow of their ready working.

The ladder, as above described, is adapted to be folded one section within the other, and, as will be readily seen, occupies but a small amount of space.

It will be seen that by forming the sides of the ladder alternately concave and convex, the liability of the rounds to lie close to the walls so that nothing more than the tip of the foot can be easily set upon them is prevented.

In Fig. 4 I have shown a modified form of fastening for securing the ladder to a building. This form is preferably employed when it is desired to have the escape-ladder portable, the same being constructed as follows: E represents a bracket approximating a U shape, and provided at one of its extremities with an opening for its attachment to the upper end of the ladder. At the opposite end or extremity is pivoted a hook, *d*, which is provided upon its inner side with a series of teeth, *c*. The other end of this pivoted hook extends a slight distance beyond the side of the end of the bracket to which it is pivoted, and is adapted to be engaged by a pivoted pawl, *d'*, by which means it is held rigid upon the said bracket against upward movement. In use, two of these brackets are employed, and they are suspended by means of the pivoted hooks to the window-sill or other suitable place, the pivoted pawl engaging the teeth-pivoted hook, thus preventing its disengagement from the object to which it is attached.

It will be seen that the improved ladder and the means for attaching the same are simple, readily applied, and that it affords ready means for the purpose for which it is designed. It will also be seen that by forming the sections of the ladder as described, the same is made to occupy but a small amout of space.

Having fully described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A ladder constructed of pivoted sections the sides of which are alternately concave and convex, substantially as set forth.

2. A ladder constructed of pivoted sections the sides of which are alternately concave and convex in length as they near the end, the rounds being correspondingly narrower from top to bottom of each section, said ladder being provided with suitable means for its attachment, substantially as set forth.

3. The combination, with a sectional ladder, of a bracket secured thereto, said bracket being provided at its opposite end with a pivoted hook provided on its inner side with teeth, and having its lower end extending beyond the side of the end to which it is pivoted, and a pivoted pawl to engage the end of said hook, 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.

FRIEDERICH OTTO REISENER.

Witnesses:
CHARLES MARTIN,
GEORGE SEIM.