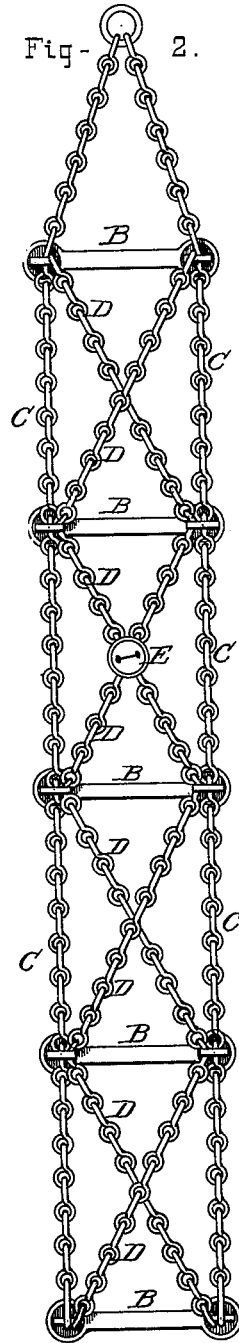
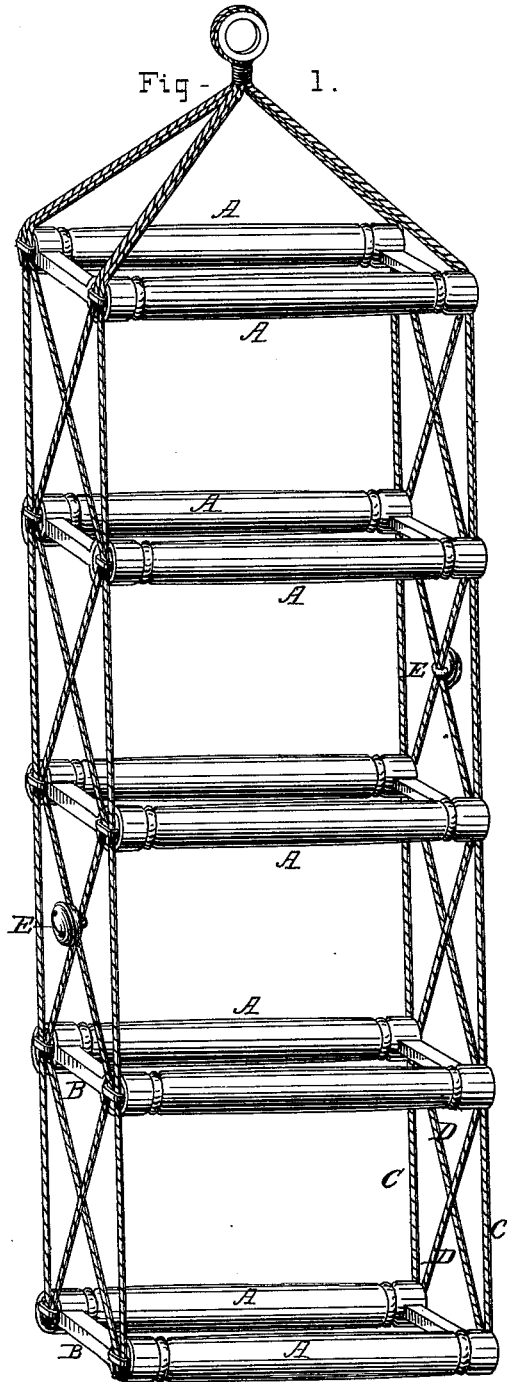


F. DETTMER.
Fire-Escape.

No. 202,708.

Patented April 23, 1878.



ATTEST.

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UNITED STATES PATENT OFFICE.

FRIEDERICK DETTMER, OF MADISON, INDIANA.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **202,708**, dated April 23, 1878; application filed December 28, 1877.

To all whom it may concern:

Be it known that I, FRIEDERICK DETTMER, of Madison, in the county of Jefferson and State of Indiana, have invented certain Improvements in Ladders for Fire and other Purposes, of which the following is a specification:

This invention relates to a ladder of peculiar construction, adapted and intended for saving life in the event of fire, but which may be used for any purposes to which its construction adapts it.

It is well known that the ordinary wooden ladder of rigid construction cannot be conveniently kept in a house, nor brought in during a fire, and when long and heavy they are very difficult to raise against a building. Flexible ladders of rope or similar material may be stowed in a moderately-small compass, and can be readily lowered from the window of a burning house; but they lie, of necessity, close to the wall and can be climbed with difficulty, there being little chance to maintain a hand or foot hold.

This invention seeks to obviate these defects by providing a flexible ladder with double rungs, rigidly secured together to form steps or treads, the same being connected together at proper intervals by means of chains or their flexible equivalents, all as will be hereinafter set forth.

In the drawings, Figure 1 is a perspective view of my improved ladder, and Fig. 2 is an edge or side view of same.

A A are rungs, preferably turned from hard wood. B B are yokes, of metal, preferably malleable or wrought iron. Each of these has eyes, which fit tightly on tenons formed on the ends of the rungs. Two rungs, firmly yoked together at the ends, form a step or tread of the ladder. These steps are connected at proper distances apart by pairs of chains or other equivalent flexible suspensories, C C, secured rigidly to the treads. Cross chains or cords D D stretch from rung to rung, front and back alternately, in such a manner as to cross midway between the steps, as shown. These chains also are rigidly secured to the rungs.

I prefer to use chains for connecting and bracing the steps, as this material is flexible and fire-proof; but flexible material of any kind may be used if adapted to the purpose. The chains D D, extending diagonally across from front to rear, and vice versa, prevent the step from tilting when the weight is thrown upon it, because the weight will always be divided up between two or three adjoining steps, and the pressure on the front of one prevents the next from tilting.

E E are bells, which may be attached to the ladder or not, as desired. They serve to warn the inmates of the presence of the ladder or its approach.

This ladder, when collapsed, occupies very little space, and may be stowed in a room or hall, close to the window; or it may form a part of a fire apparatus, and be carried up into a building by the firemen to aid the escape of the inmates. When placed flatwise against the wall, the treads offer ample opportunity for foot and hand hold; and when placed edgewise, as in Fig. 2, two persons may descend at once with ease, one on each side.

I claim—

1. In a ladder, the treads formed each of rungs A A, connected at their ends by yokes B B, substantially as shown and specified.

2. In a ladder, the combination of the chains C C and D D, or their equivalents, arranged as shown, with treads or steps arranged to form a flexible ladder, as and for the purposes specified.

3. The combination, in a flexible ladder, of the treads formed of the rungs A A and yokes B B, the suspending chains or ropes C C, and the diagonal chains or ropes D D, substantially as and for the purposes herein set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

FRIEDERICK DETTMER.

Witnesses:

CHARLES BOICOURT,
E. HAFFORD.