

(No Model.)

D. FRIEDHEIM.
FIRE LADDER.

No. 261,843.

Patented Aug. 1, 1882.

Fig. 1.

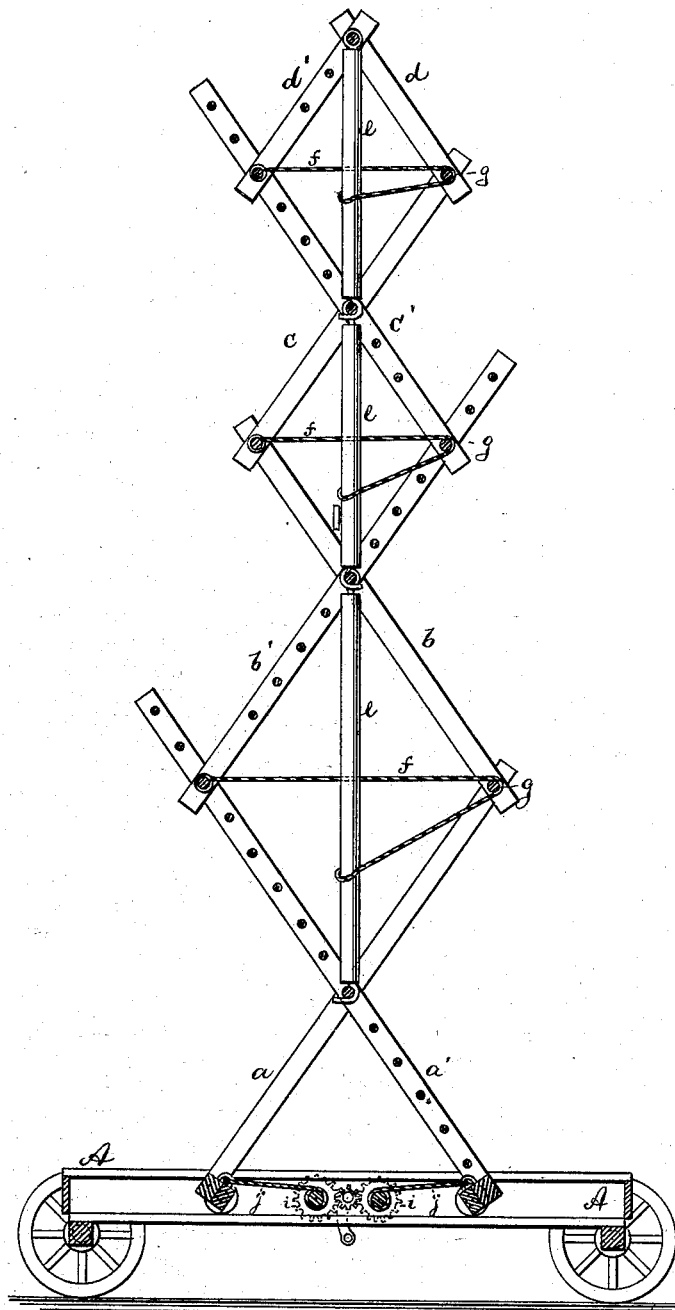
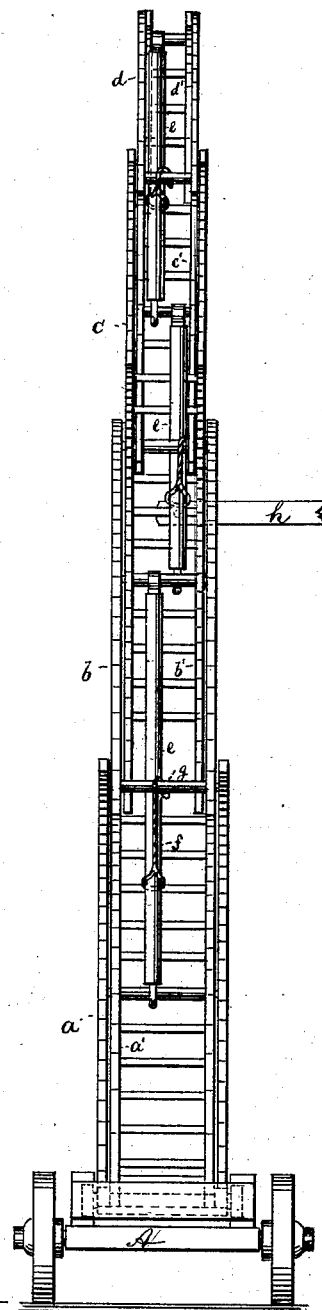


Fig. 2.



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FIRE-LADDER.

SPECIFICATION forming part of Letters Patent No. 261,843, dated August 1, 1882.

Application filed April 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, DAVID FRIEDHEIM, of the city of New York, county and State of New York, have invented a new and Improved Fire-Ladder, of which the following specification is a full, clear, and exact description.

This invention relates to an improved fire-ladder which occupies but a small space when not in use, and which may be readily raised
10 when to be used.

The invention consists in the combination of mounted lazy-tongs, of which one series forms ladders, with one or more rods pivoted to central rungs and locking the lazy-tongs
15 when they are elevated; also, in the peculiar mode of hanging said rods, whereby they are made to lock automatically; and, finally, in extending each ladder above its connection to the succeeding ladder, all as hereinafter more
20 fully described.

In the accompanying drawings, Figure 1 is a longitudinal vertical central section of my improved fire-ladder, showing it extended. Fig. 2 is an end view of the same.

25 Similar letters of reference indicate corresponding parts in both figures.

In the drawings, the letter A represents a truck consisting of a square frame mounted upon wheels. Upon this truck are placed the
30 lowermost members, *a a'*, of a system of lazy-tongs. These members are mounted upon wheels, and may be raised by a drum or drums, *i*, and ropes *j*, or in equivalent manner, the wheels traveling in proper guides.

35 *b b' c c' d d'* are the members completing the set of lazy-tongs, such members diminishing in length toward the top. Of each set one member, *a' b' c' d'*, is a ladder, while the other member, *a b c d*, is a hollow frame embracing
40 said ladder. The several ladders form a continuous series, as shown. The three lowermost ladders, *a' b' c'*, are extended a short distance above their connection to the succeeding ladder, so that a party mounting the system
45 may pass beyond the connections and then

turn around to pass from one ladder to the other. Of course any suitable number of ladders may be used instead of the four pairs shown in the drawings.

In order to prevent the apparatus from collapsing, it is provided with one or more rods, *e*, pivoted to one of the central rungs, and provided with a hook at its lower end, which engages the central rung of the ladder directly
50 below. The central rungs should for this purpose be made of additional strength.

Each rod *e* may be made to lock automatically when the apparatus is raised. This is effected by means of rope *f*, connected to rod *e* and to the ladder, to which it is pivoted, and
60 passing over a pivot, *g*, connecting respectively the frames *a b*, &c. By this arrangement, when the apparatus is raised the rods *e* are gradually swung into a vertical position. Each of the rods *e* may be provided with a foot-
65 board, *h*, by which access may be had to windows of the building before which the apparatus is mounted.

When the apparatus is to be lowered the rods *e* are first unhooked before the lazy-tongs
70 are swung into a nearly horizontal position.

I claim as my invention—

1. The combination of the mounted lazy-tongs *a a' b b'* with rod *e*, pivoted to a central rung, and provided with a hook at its lower
75 end to engage the succeeding central rung, substantially as herein specified.

2. The combination of the mounted lazy-tongs *a a' b b'* with pivoted rod *e*, having hook at lower end, and having rope *f* passing over
80 pivot *g*, substantially as specified.

3. The combination of the frames *a b c* with the ladders *a' b' c'*, each of the ladders being extended above its connection to the succeeding ladder, substantially as and for the pur-
85 pose set forth.

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Witnesses:

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