

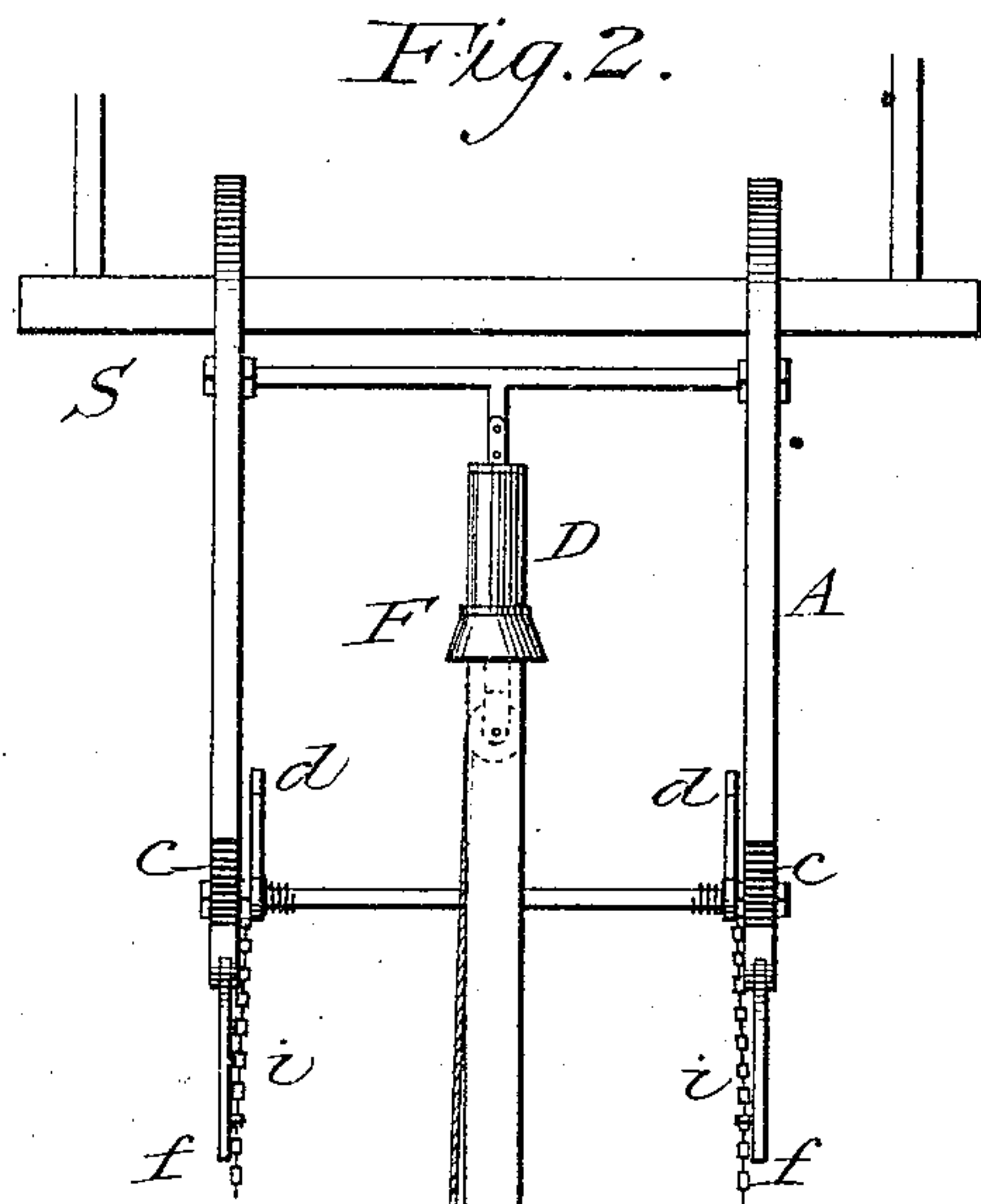
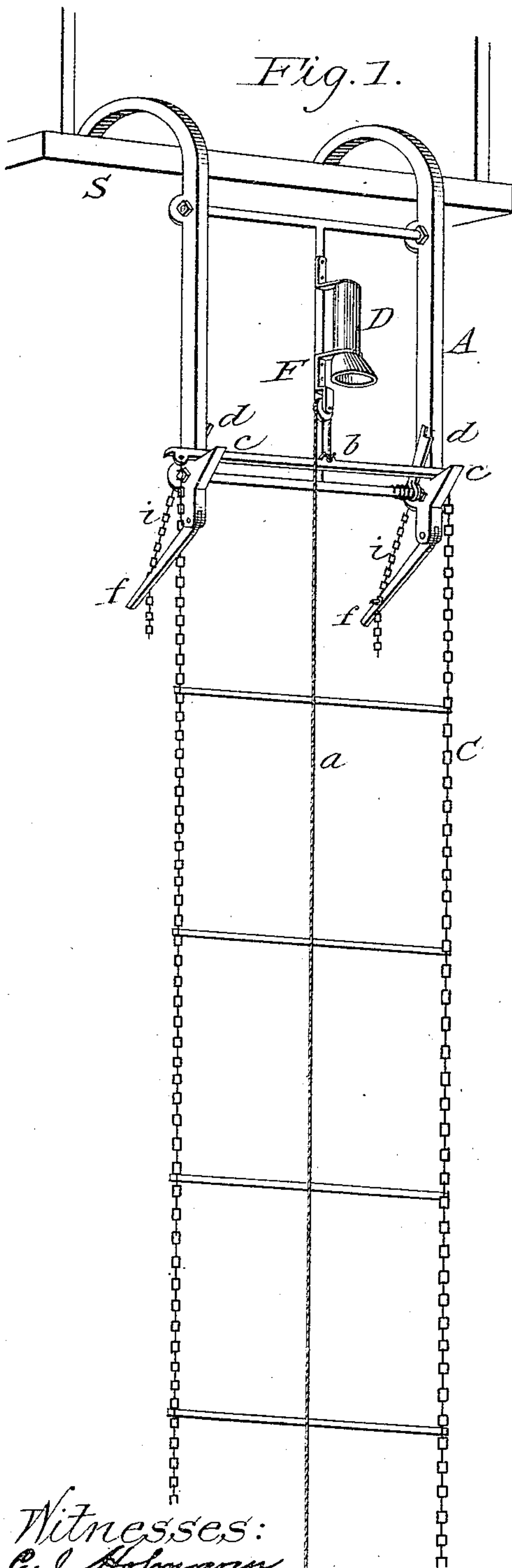
(No Model.)

A. O. NORDENBORG.

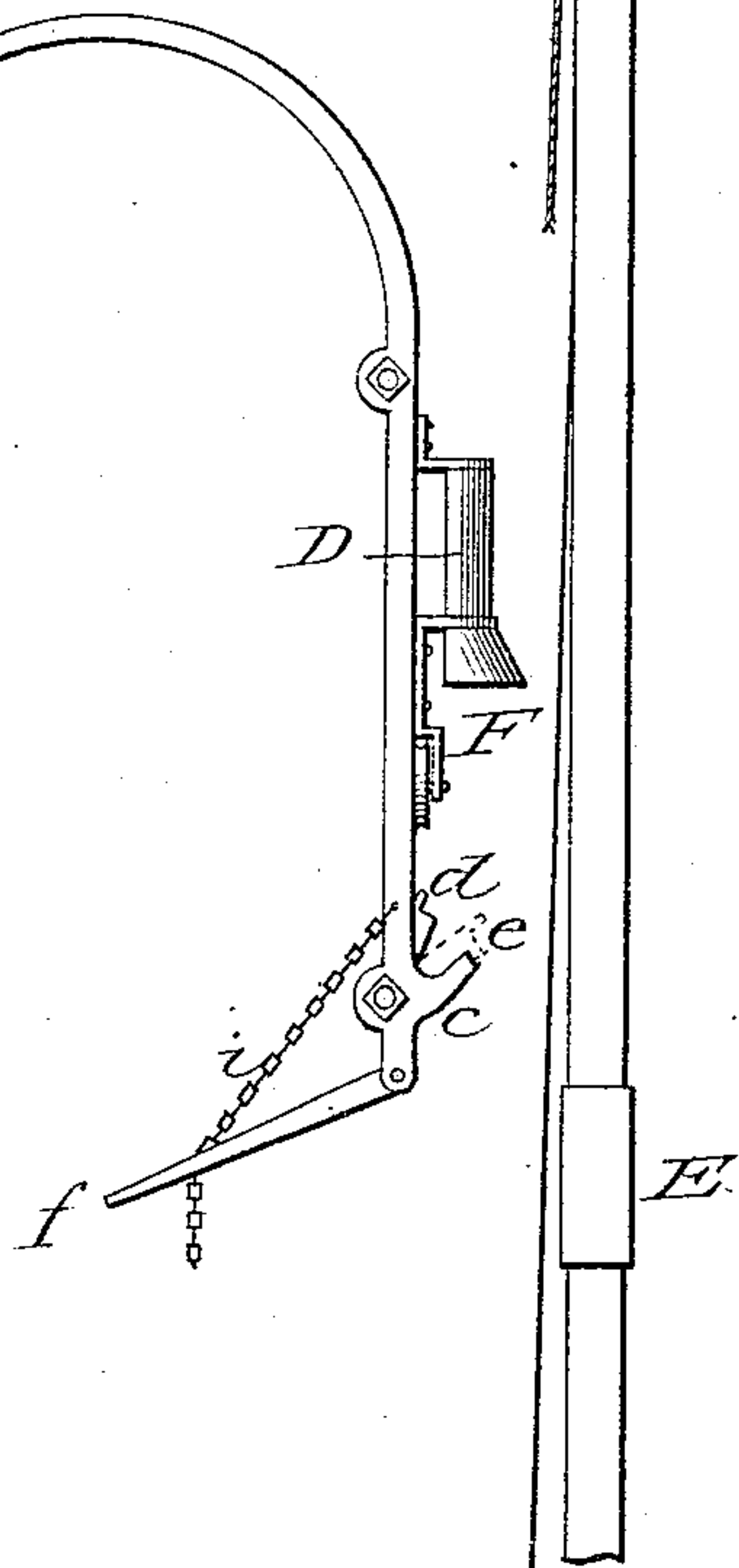
FIRE ESCAPE LADDER.

No. 342,924.

Patented June 1, 1886.



*Fig. 3.*



Witnesses:  
C. J. Holmgren  
Ernest L. Bennett

Inventor  
Alexander Olof Nordenborg

# UNITED STATES PATENT OFFICE.

ALEXANDER OLAF NORDENBORG, OF NEW YORK, N. Y.

## FIRE-ESCAPE LADDER.

SPECIFICATION forming part of Letters Patent No. 342,924, dated June 1, 1886.

Application filed January 27, 1886. Serial No. 189,914. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER OLAF NORDENBORG, a citizen of Sweden, residing at 309 East 19th street, New York, in the  
5 county and State of New York, have invented a new and useful Fire-Escape Ladder, of which the following is a specification.

My invention relates to improvements in fire-escape ladders which are to be fastened  
10 at the windows or terraces; and the objects of my improvements are, first, to make it possible to stand on the ground and fasten the ladder at a superior apartment; second, by means of the ladder to reach the topmost windows  
15 or terraces of the highest buildings, and, third, to make it possible for one man to manage it with facility. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

20 Figure 1 is a perspective view of the entire ladder as it is fastened at the window-sill; Fig. 2, a front view of the hook of the ladder fastened at the window-sill by means of a sectional rod; Fig. 3, a side view of the hook.

25 Similar letters refer to similar parts throughout the several views.

The entire ladder consists of three parts—viz., the hook A, the rod B, and the especial ladder C. The hook is provided with a socket,  
30 D, into which the rod is to be slid, as shown in Fig. 2. The rod is divided into a number of sections, from D to E in Fig. 2 being one section, every section being equal and provided with a socket at its lower end, into  
35 which the upper end of another section is to be slid, as shown in Fig. 2 at E, each section being about six feet in length; and when in operation the first section is to be slid into the socket of the hook, and then the hook pushed  
40 upward along the wall of the building till there is space enough for another section to be slid into the first section's socket. Then the

hook is pushed farther up and another section added, &c., till the hook has reached the desired height, where it is fastened to the  
45 window-sill. The hook is also provided with a pulley, F, over which passes the rope *a*, being with its one end *b* fixed at the middle of the first round of the ladder, and by means of which pulley and rope the ladder is hoisted  
50 up and hitched to the hook at the hitches *c c*. (See Fig. 1.)

When the ladder is to be taken down, it is first pulled up onto the unhitches *d d*, and then by its own gravity turns the unhitches  
55 in the position they take at *e* in Fig. 3, passes by the hitches *c c*, and descends to the ground. The unhitches *d d* are retained in a vertical position in the following manner: The bolts which support the chains *i i* also serve to pre-  
60 vent the unhitches from falling backward, while spiral springs which are fixed around the lower round of the hook, close by the unhitches prevent them from falling forward. (See Figs. 1 and 2.) The bars *f f* and the  
65 chains *i i* are means whereby the hook is made to hang perpendicular with the wall.

I am aware that prior to my invention fire-escape ladders have been made which are to be fastened to the windows or terraces. I  
70 therefore do not claim such an invention broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

In a fire-escape ladder, the combination of  
75 ladder C with the hitches *c c*, the unhitches *d d*, and the pulley F, over which passes the rope *a*, by which the ladder is hoisted, substantially as set forth.

ALEXANDER OLAF NORDENBORG.

Witnesses:

CHARLES JOHN HOLMGREN,  
ERNEST LE ROY BENNETT.