(No Model.)

G. O. DAW.

MECHANISM FOR RAISING LINES TO THE UPPER PARTS OF BUILDINGS.

No. 283,580. Patented Aug. 21, 1883.

Fig: 1.

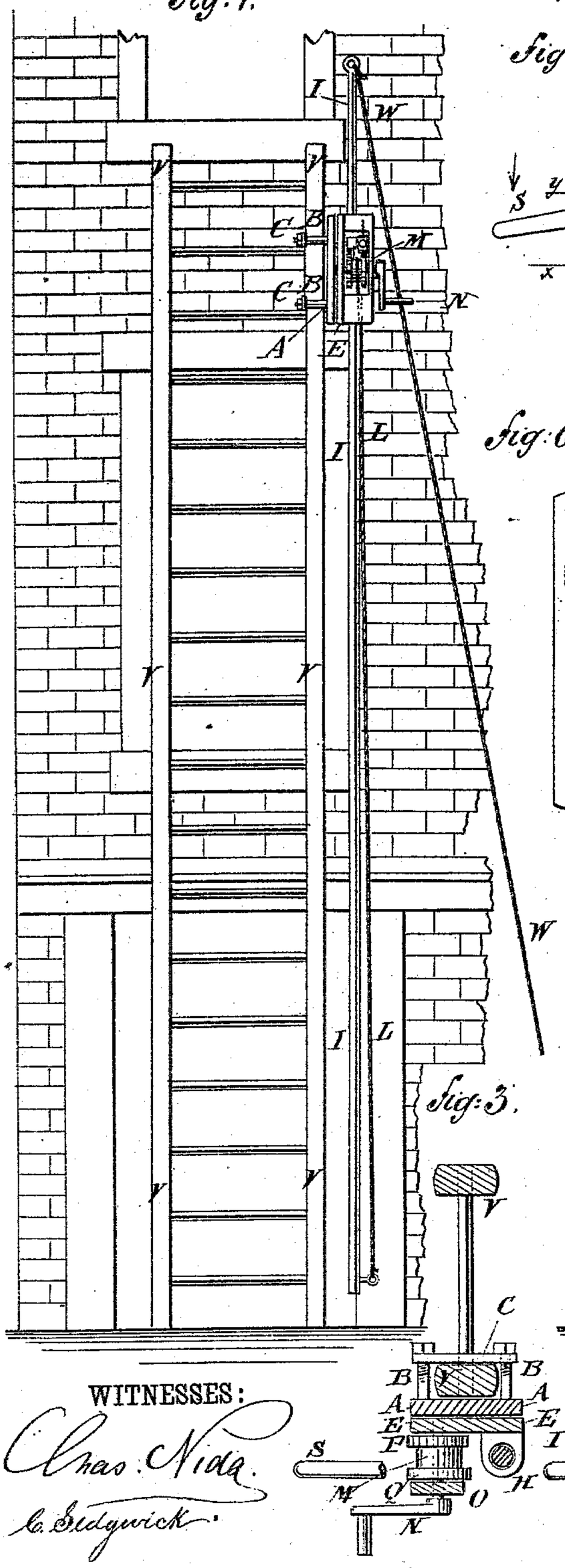

Fig: 5.

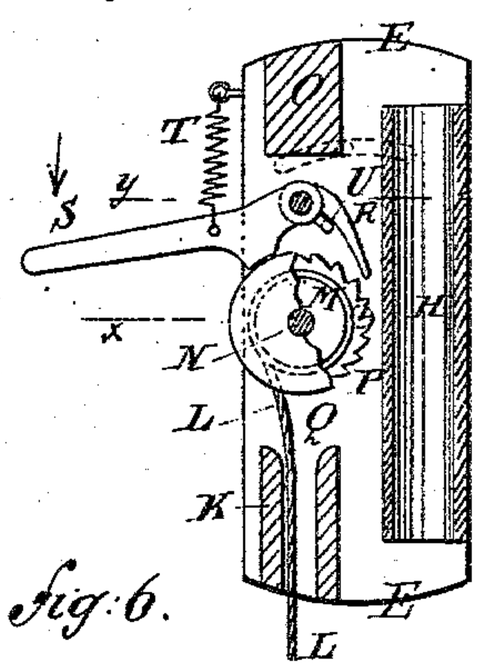

Fig: 6.

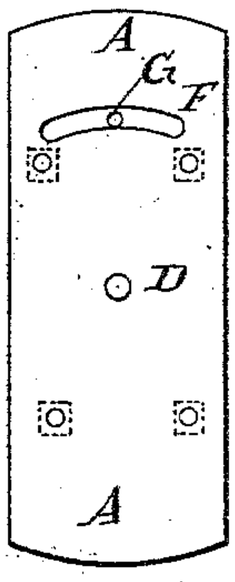

Fig: 2

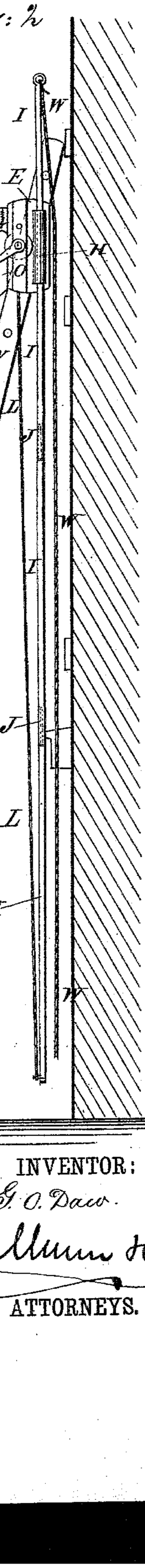

Fig: 3.

Fig: 4.

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MECHANISM FOR RAISING LINES TO THE UPPER PARTS OF BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 283,580, dated August 21, 1883.

Application filed April 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE O. DAW, of the city, county, and State of New York, have invented a new and Improved Mechanism for Raising Lines to the Upper Parts of Buildings, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of my improvement shown as applied to a ladder. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional plan view of the same, taken through the line *x x*, Fig. 5. Fig. 4 is a sectional plan view of a part of the same, taken through the line *y y*, Fig. 5. Fig. 5 is a sectional side elevation of the improvement, and upon a larger scale. Fig. 6 is a face view of the clamp-plate.

The object of this invention is to facilitate the raising of lines to the upper parts of buildings, whereby knotted ropes, rope ladders, or other escape mechanism can be drawn up to the said parts of buildings to provide means of descent when the ordinary passages have been rendered impassable.

A represents a plate, of any convenient shape and size, and which is provided with bolts B and yokes C, or other suitable clamps, for connecting the plate A to a ladder, a telegraph-pole, or other suitable or available support. To the middle part of the plate A is attached a stud, D, to serve as a pivot for connecting a second plate, E, with the said plate A. In the upper part of the plate A is formed a slot, F, which is curved upon the arc of a circle having its center in the axis of the pivot D, and which is designed to receive a pin, G, attached to the plate E, to limit the movement of the said plate E upon the plate A.

To the rear part of the outer side of the plate E is attached a tube, H, to receive and serve as a guide for a pole, I, which is made in sections, connected by ferrules J or other suitable couplings, so that the said pole may be made of any required length by using more or fewer sections.

To the lower forward part of the plate E is attached a short tube, K, to serve as a guide to the hoisting-cord L, the lower end of which is attached to the lower end of the pole I. The upper end of the cord L is attached to and wound upon a spool, M, secured to a small crank-shaft, N, which is pivoted to the plate E and to a support, O, attached to the plate E. One flange, P, of the spool M is toothed, to adapt it to serve as a ratchet-wheel, and the other flange, Q, is made smooth, to adapt it to serve as a brake-wheel.

To the plate E and support O is pivoted a pawl, R, to engage with the ratchet-wheel P, and which is held down upon the said ratchet-wheel by its own weight. To the plate E and support O is also pivoted, by the same pin that carries pawl R, a brake-lever, S, to be applied to the brake-wheel Q, and which is held up from the brake-wheel Q by a spring, T, attached to the said lever and to the plate E.

To the forward end of the brake-lever S is attached an arm, U, which is bent to one side to pass beneath the pawl R, so that the operation of pressing down the brake-lever S to apply the brake will raise the pawl R from the ratchet-wheel P.

In using the improvement, the plate A is clamped to the upper part of a side bar of a ladder, V, raised against the building, to a telegraph-pole, or to some other available support, a rod, I, of the required length is inserted in the tube H, the free end of the cord L is attached to the lower end of the rod I, and the end of the cord W to be raised is attached to the upper end of the said rod I. Then, by turning the crank N the cord L will be wound upon the spool M and the rod I will be forced upward through the tube, carrying the end of the cord W to the desired height, where it is taken by the people in that part of the building and drawn upward, raising a larger rope or a rope ladder, or other suitable means for descending from the building, the end of the said rope or ladder being attached to the lower end of the cord W. The pivot D enables the plate E to be so adjusted that the upper end of the rod I can be guided past cornices and other obstructions, and then swung inward when the proper height has been reached.

The cord W is designed to be connected with the upper end of the pole I by a loose

socket, so that it can be readily detached, and the pole I lowered out of the way, the descent of the pole being controlled by the brake S Q.

The loose connecting-socket may be made with a hook upon its upper end, to be hooked upon the window-casing or other support to prevent the cord W from escaping from the hands of those drawing it upward to raise the rope or ladder in their haste and excitement.

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

1. A mechanism for raising lines to the upper parts of buildings, constructed substantially as herein shown and described, and consisting of the plate A, provided with clamps B C, the pivoted plate E, provided with the tubes H K and windlass M N, the pawl and ratchet-wheel R P, and the brake S Q, as set forth.

2. In a mechanism for raising lines to the upper parts of buildings, the combination, with the plate A, having clamps B C, and the pivoted plate E, having tubes H K, the windlass M N, the pawl and ratchet-wheel R P, and the brake S Q, of the hoisting-cord L and the rod I, substantially as herein shown and described, whereby the said rod can be raised to raise a line, and can be quickly lowered out of the way, as set forth.

3. In a mechanism for raising lines to the upper parts of buildings, the combination, with the pawl R and the brake-lever S, of the spring T and the bent arm U, substantially as herein shown and described, whereby the operation of applying the brake will raise the pawl from the ratchet-wheel and the release of the brake-lever will allow the pawl to again engage with the ratchet-wheel, as set forth.

4. In a mechanism for raising lines to the upper part of buildings, the combination, with the clamp-plate A, having curved slot F, of the ladder, the mechanism for raising the pole, and the pivoted plate E, having pin G, substantially as herein shown and described, whereby the movement of the said pivoted plate is limited, as set forth.

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Witnesses:

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