(No Model.) 2 Sheets—Sheet 1.

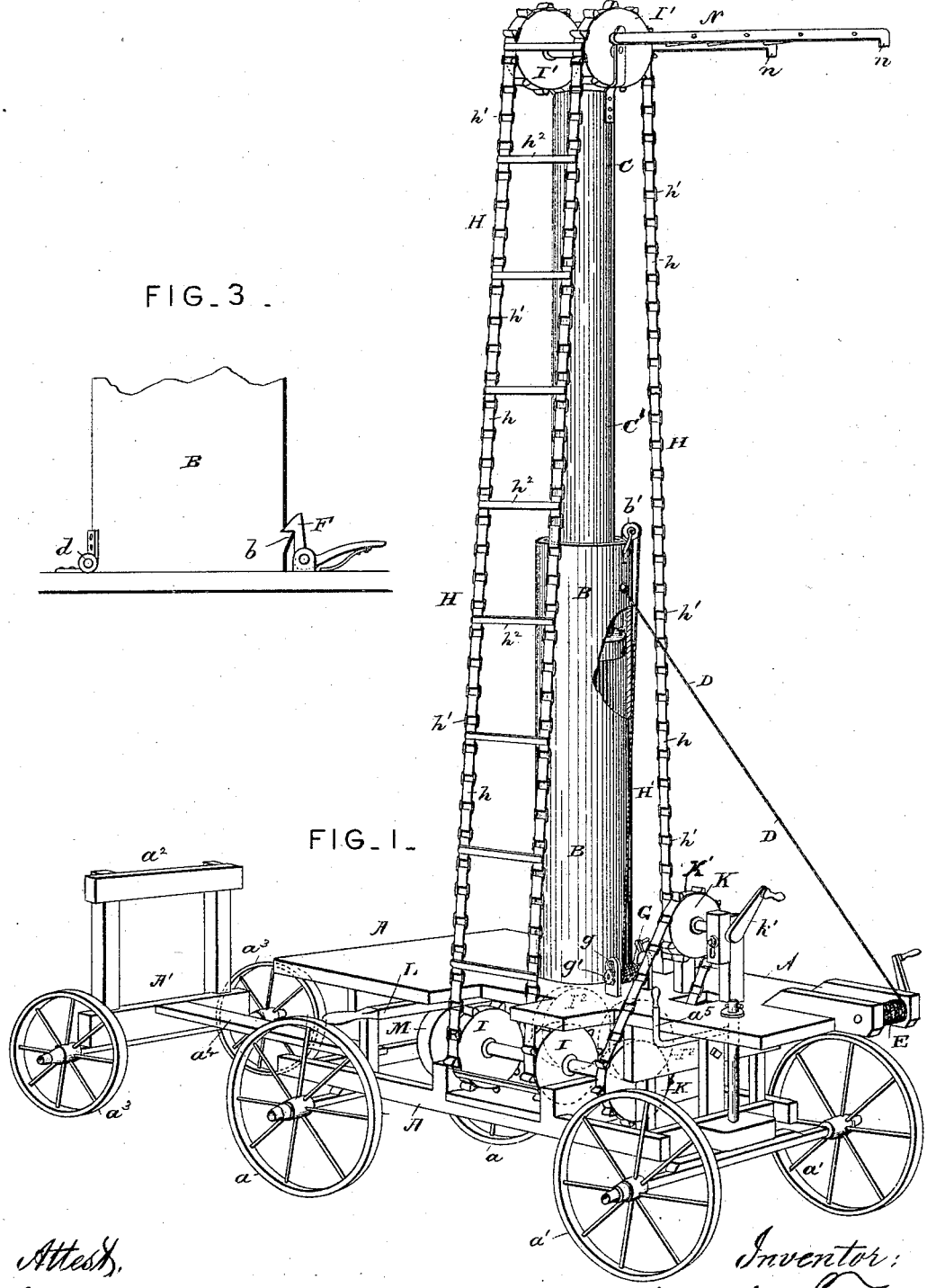
J. T. DAVIS.

FIRE ESCAPE.

No. 307,023. Patented Oct. 21, 1884.

FIG. 3.

FIG. 1.



Attest,
Geo. T. Smallwood.
William A. Garner

Inventor:
Joseph T. Davis
by L. Deane.
his atty.

(No Model.) 2 Sheets—Sheet 2.

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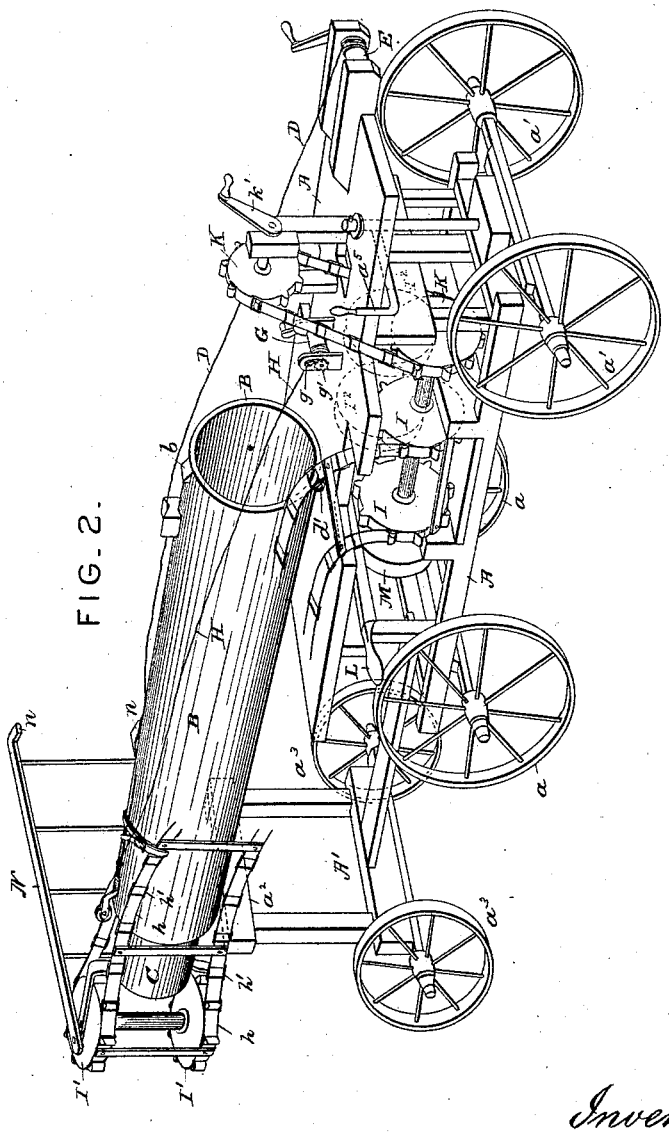

FIG. 2.

Attest.
Geo. T. Smallwood.
William A. Garner.

Inventor
Joseph T. Davis
By L. Deane.
his atty.

UNITED STATES PATENT OFFICE.

JOSEPH T. DAVIS, OF NEWARK, OHIO.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 307,023, dated October 21, 1884.

Application filed June 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH T. DAVIS, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Fire Escapes, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a perspective view with the parts in position as in use. Fig. 2 is a perspective view showing parts in position for moving; Fig. 3, a detail showing hinge and catch on post.

The object of this invention is to provide an easily-made, strong, and cheap fire-escape; and the points of novelty will be fully set out and explained in the following description and claims.

In the drawings, A denotes any suitable carriage or frame, having wheels *a a'*. Upon this carriage are so placed the hollow metallic pillars or posts B that they shall be strongly and securely held vertically when in use, or turned down for transportation. These pillars are of proper height to form the first section of the ladder-support. Into these hollow posts or pillars the upper section, C, of the ladder-support telescopes. These may be of any desired length. The lower section is hinged at *d* to the carriage-platform, or in any other suitable way or manner to the carriage or frame. When the section C is telescoped down into the lower hollow section, B, the whole can be lowered down upon the rear truck or frame, A', which frame consists of a horizontal support, a^2, attached to the axle of the wheel a^3. This truck A' is connected to the carriage A by the tongue a^4, which is pivoted to its rear axle, so that the truck can have all necessary horizontal movement in turning corners, &c.

When the device is to be used at a fire, the carriage is placed in convenient position near to the burning building, its front wheels, *a'*, are locked or fixed in position in any convenient way or manner, or the carriage frame and wheels may be so made that they can be swung around under the body by means of handle a^5, and thus the carriage is fixed firm in position.

By means of the windlass E and the cord or chain D, attached at one end to the upper part of the posts or pillars B or lower section of the ladder-supports, and passing at the other over the said windlass, which has suitable standards fixed to the carriage A, the ladder-support sections can be raised into vertical position on the carriage, where they can be held not only by said cord or chain, but also by the spring-latch F, attached to the carriage and engaging upon any suitable projection, *b*, on the lower end of one of the posts or pillars B. The section C of the ladder-support, which for purposes of transportation has been telescoped into the pillars or posts B, can now be raised vertically by means of the windlass G (which is supported on the carriage A at any convenient place) and the rope or chain H', which passes over the drum of the windlass and the pulley *b'*, (secured to the upper part of sections or pillars B,) and at the other end is attached to the lower part of the section C.

It will be observed that the diameter of the section B is sufficiently greater than that of section C to allow the latter, with its carrying chain or rope, free movement in and out of B.

The endless chain H is composed of links *h* and eyes *h'*, and is of the kind used on sprocket-wheels, and passes over such wheels I in the body of the carriage A and wheels I' in the upper part of the sections C. Motion is given to these lower wheels by similar sprocket-wheels, K, and endless chain K' and crank *k'*, which are properly adjusted in and upon the frame A; but I may use instead of sprocket-wheel K a train of gear-wheels to answer same purpose. To the chain are secured, at suitable distances apart, the rungs h^2. By operating the crank *k'* the sprocket-wheels I are moved, and these carry the chain H, and this then passes over the upper sprocket-wheel, I', and the rear sprocket-wheel, I^2. Thus there is not the slightest possibility of this chain slipping. Its up-and-down movement as it is revolved, as aforesaid, will be even and safe. The pawl *g* on the windlass, engaging on the ratchet *g'* of the windlass G, will hold the section at any point desired. This pawl can be disengaged by means of any suitable trip. (Not shown in present instance.) The brake L, which can be moved against the wheel M on the outer end of the shaft of the sprocket-wheel I, can be used to regulate the movement of the wheel and the chain it carries.

When the device is not in use, the parts being arranged as in Fig. 2, the slack of the chain can be very easily gathered up and secured in any desired way. There is not the slightest trouble in disengaging all of this or in placing the chain on the sprocket-wheels when occasion for use arises.

To the upper end of section C is hinged or otherwise adjusted the ladder N, of any desired length. It may have curved ends *n*, for engaging upon the window-ledge, or otherwise being attached to the building, and will afford easy means to connect the fire-escape therewith.

It will be observed that as many additional ladder-support sections as may be desired can be added to those shown by merely mechanical adjustment.

The operation of this apparatus will be readily understood from the above description.

Having now described my invention, what I consider new, and desire to secure by Letters Patent, is—

1. In combination with the hollow metallic posts or pillars B, constituting the lower section of the ladder-supports, the section C, windlass G, chains H′ and H, and the sprocket-wheels I I′ I², as and for the purposes described.

2. In a fire-escape, the combination of the sprocket-wheels I I′ I², operated as described, with the chains H, having links *h*, eyes *h′*, rungs *h²*, and sections B and C, substantially as described.

3. The combination, in a fire-escape apparatus, of the carriage A, truck A′, the sections B, and telescoping sections C, the windlass G, provided with pawl and rack, the chain H′, and the sprocket-wheels I I′ I², the wheels K, chain K′, and the crank *k′*, all substantially as described.

4. In a fire-escape apparatus having telescoping sections adapted to be raised and lowered in the manner and by the means described, the combination of the sprocket-wheel I, having the wheel M on its shaft, with the brake L, substantially as described.

5. In a fire-escape apparatus, the combination of the carriage A and the rear truck, A′, with the hinged section B, telescoping section C, the windlass E, the chains D, latch F, wheel K, chain K′, crank *k′*, the sprocket-wheels I I′ I², the chain H, having rungs *h*, windlass G, having pawl, rack, and stop, and ladder N, all as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH T. DAVIS.

Witnesses:

JAMES W. OWENS,

NATHAN BOSTWICK.