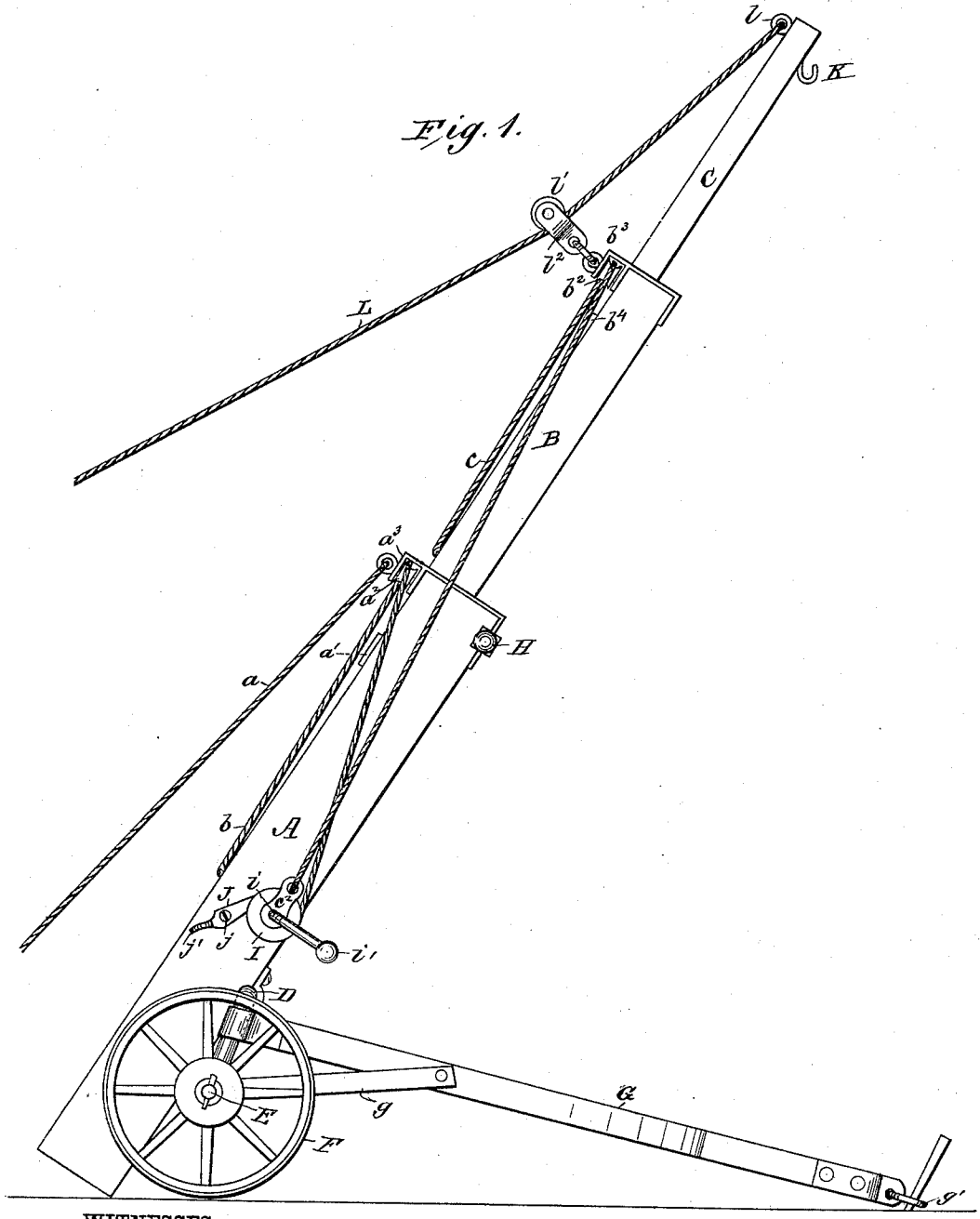
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R. M. HENDERSON & J. A. GLAESLINE.

FIRE ESCAPE LADDER.

No. 328,943. Patented Oct. 27, 1885.

Fig. 1.



WITNESSES:

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Solon C. Kemon

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ATTORNEYS.

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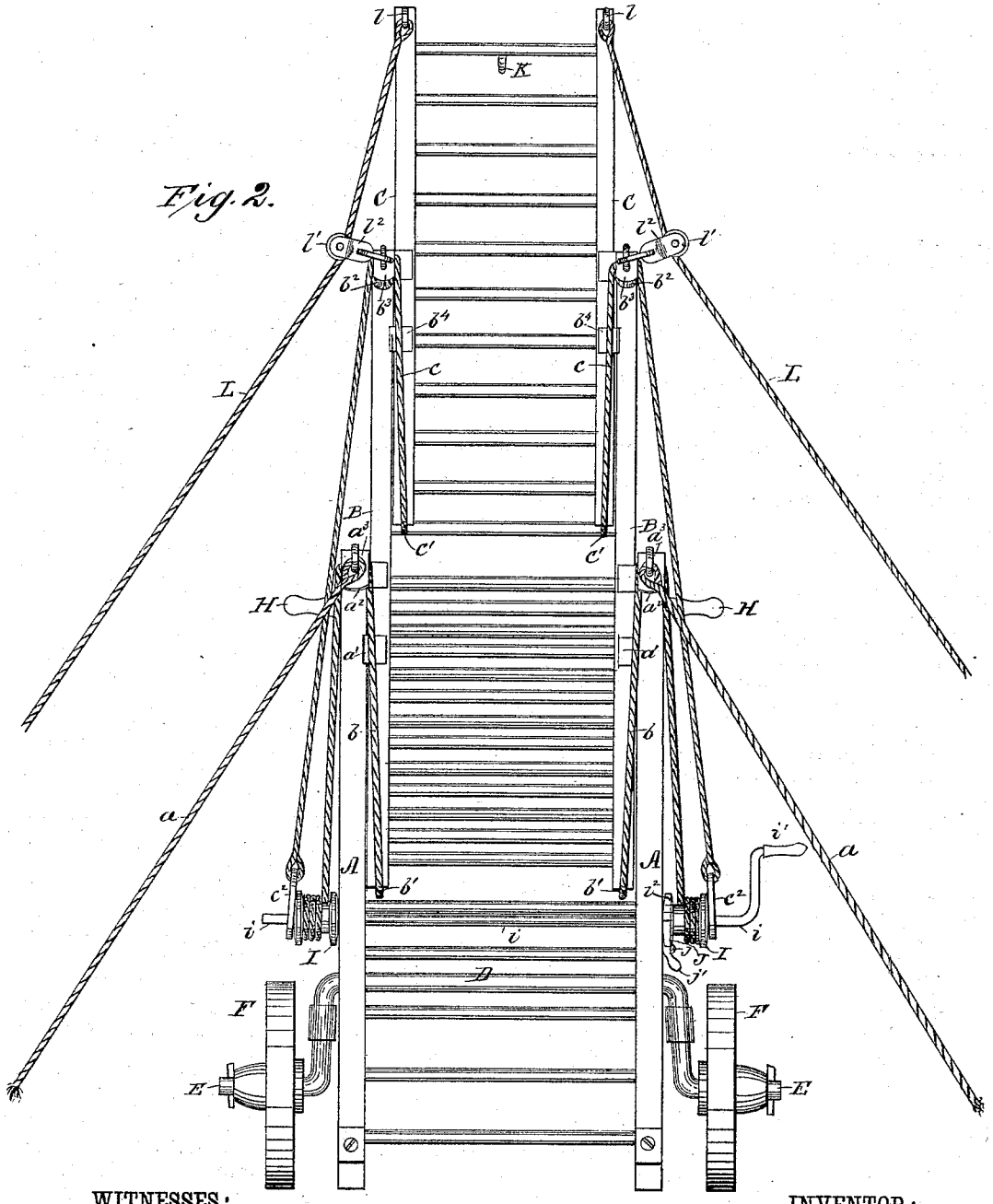
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Fig. 2.



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UNITED STATES PATENT OFFICE.

ROBERT M. HENDERSON AND JOHN A. GLAESLINE, OF JACKSON COUNTY, INDIANA.

FIRE-ESCAPE LADDER.

SPECIFICATION forming part of Letters Patent No. 328,943, dated October 27, 1885.

Application filed March 20, 1885. Serial No. 159,614. (No model.)

To all whom it may concern:

Be it known that we, ROBERT M. HENDERSON and JOHN A. GLAESLINE, of Jackson county, Indiana, (P. O., Leesville, Lawrence county, Indiana,) have invented certain new and useful Improvements in Fire-Escape Ladders, of which the following is a description.

Figure 1 is a side view of our improved ladder elevated and with the sliding portions partially drawn out. Fig. 2 is a rear view of the same.

Our invention relates to fire-escape ladders which are made in sections, and are adapted to be drawn out so as to reach to any desired height.

Our invention consists in the detailed construction and combination of the parts hereinafter described, whereby a fire-escape ladder when made in sections can be operated in an improved manner by one person, and can be adjusted and set to any required inclination before the sliding portions are raised.

In the accompanying drawings similar letters of reference indicate corresponding parts in both the figures.

A is the bottom section of a fire-escape ladder, provided with a middle section, B, and top section, C, which can be drawn out so as to extend to any desired height. The bottom section, A, is provided with trunnions D, which are journaled upon the axle E.

F are wheels upon which the machine runs. G are the shafts by which it is drawn about. *g* are braces, which assist in attaching the shafts firmly to the axle. *g'* is a ring at the end of the shafts, through which a spike can be driven into the ground for holding the machine secure in one position.

H is a handle attached to one end of the bottom section, A, of the ladder, by which it can be raised. *a* are guy-ropes fastened to the top end of section A when raised. These may be attached to spikes driven into the ground or to any convenient object, so as to maintain the bottom section of the ladder at the required inclination before raising the sliding sections B and C. *a'* are guide-plates, which keep section B connected to section A.

I are rollers mounted upon the shaft *i*, which is provided with crank-handles *i'* for elevating the sliding sections. J is a pawl pivoted on the pin *j*, projecting from the side of the bottom section, A, of the ladder, and provided with the handle *j'*, by which it can be turned round so as to fall into gear with the teeth of the ratchet i^2, formed upon one of the flanges of one of the rollers I. Ropes *b* are attached to eyes *b'* at the bottom of section B of the ladder. These ropes pass over pulleys a^2, carried in brackets a^3 at the top of section A of the ladder, and are fastened to the rollers I, so that the said section B can be drawn out by turning the crank-handles *i'*. Ropes *c* are attached to eyes *c'* at the bottom of section C of the ladder, and, passing over pulleys b^2 held in brackets b^3 at the top of section B, are made fast by the links c^2 to the shaft *i*, so that the act of drawing out section B of the ladder, by turning the crank-handles *i'* and winding ropes *b* upon rollers I, also causes the top section, C, to be withdrawn from the middle section, B. Guide-plates b^4 are provided and attached to the upper part of section B of the ladder, which keep section C in connection with section B.

K is a hook attached to the top of section C of the ladder, to which a hose-pipe may be attached.

L are guy-ropes attached to eyes *l* at the top of section C. These ropes pass over pulleys *l'*, held in the blocks l^2, attached to the top of section B of the ladder. The lower ends of these ropes may be attached to spikes driven into the ground or to any convenient objects, and are for supporting the two upper sections of the ladder when extended.

We do not confine ourselves to the use of the ladder above described as a fire-escape, as the same can be advantageously used for general purposes by carpenters, painters, fruit-growers, and is adapted for all purposes for which a portable extension-ladder may be used.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the lower section, A, of the ladder, provided with guide-plates *a'*, pulleys a^2, brackets a^3, and trunnions D, axle E, wheels F, shafts G, having ring *g'*, guy-

ropes *a*, section B of the ladder, having eyes *b'*, ropes *b*, rollers I, mounted on shaft *i*, pawl *j*, and ratchet-teeth i^2, substantially as described and shown, and for the purpose set forth.

2. The combination of the lower section, A, of the ladder, having guide-plates *a'*, pulleys a^2, and brackets a^3, section B of the ladder, having eyes *b'*, pulleys b^2, and brackets b^3, ropes *b*, section C of the ladder, having eyes *c'*, ropes *c*, having links c^2, rollers I, mounted on shaft *i*, pawl *j*, and ratchet-teeth i^2, substantially as described and shown, and for the purpose set forth.

3. The combination of section C of the ladder, provided with eyes *l*, guy-ropes L, section B of the ladder, having guide-plates b^4, pulleys *l'*, and blocks l^2, attached to it, and section A of the ladder, mounted upon wheels, and provided with the mechanism for raising sections B and C, substantially as described and shown, and for the purpose set forth.

4. The combination of the lower section, A, of the ladder mounted upon wheels, and provided with guide-plates *a'*, pulleys a^2, and brackets a^3, guy-ropes *a*, section B of the ladder, having eyes *b'*, pulleys b^2, guide-plates b^4, brackets b^5, pulleys *l'*, and blocks l^2, ropes *b*, rollers I, mounted on shaft *i*, pawl *j*, ratchet-teeth i^2, section C of the ladder, having eyes *c'* and *l*, guy-ropes L, and ropes *c*, having links c^2, substantially as described and shown, and for the purpose set forth.

ROBERT M. HENDERSON.
JOHN A. GLAESLINE.

Witnesses:
MICAJAH ALLEN,
JOHN C. ALLEN.