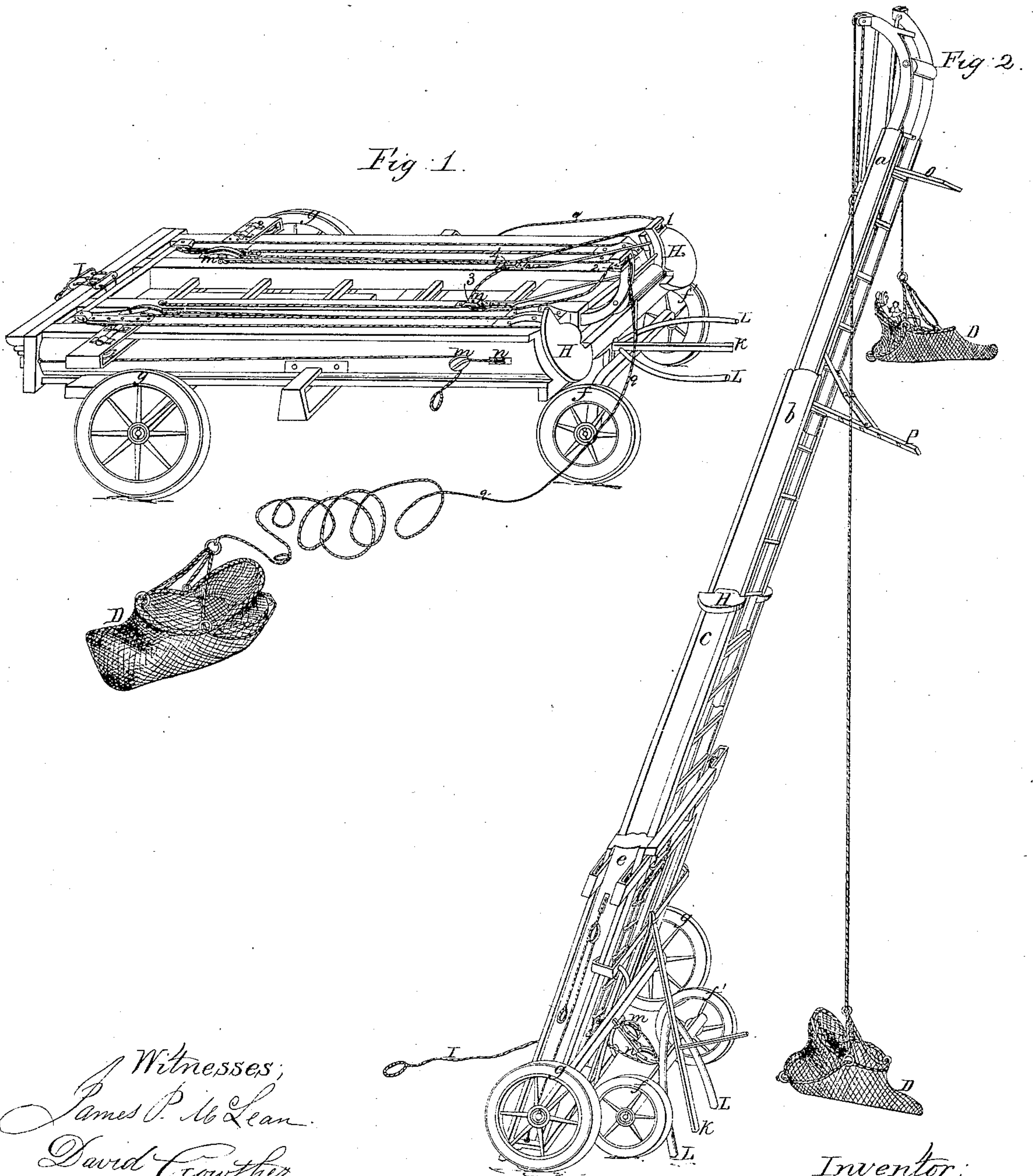


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Fire Escape.

Nº 18,262.

Patented Sep. 22, 1857.



Witnesses;
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Inventor;
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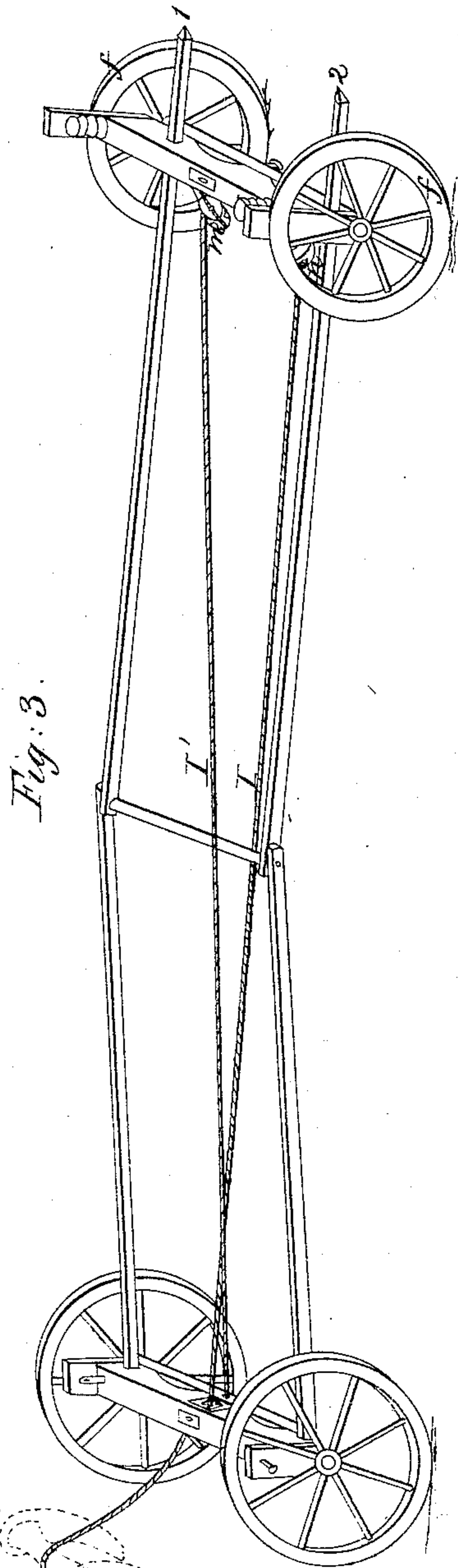


Fig. 3.

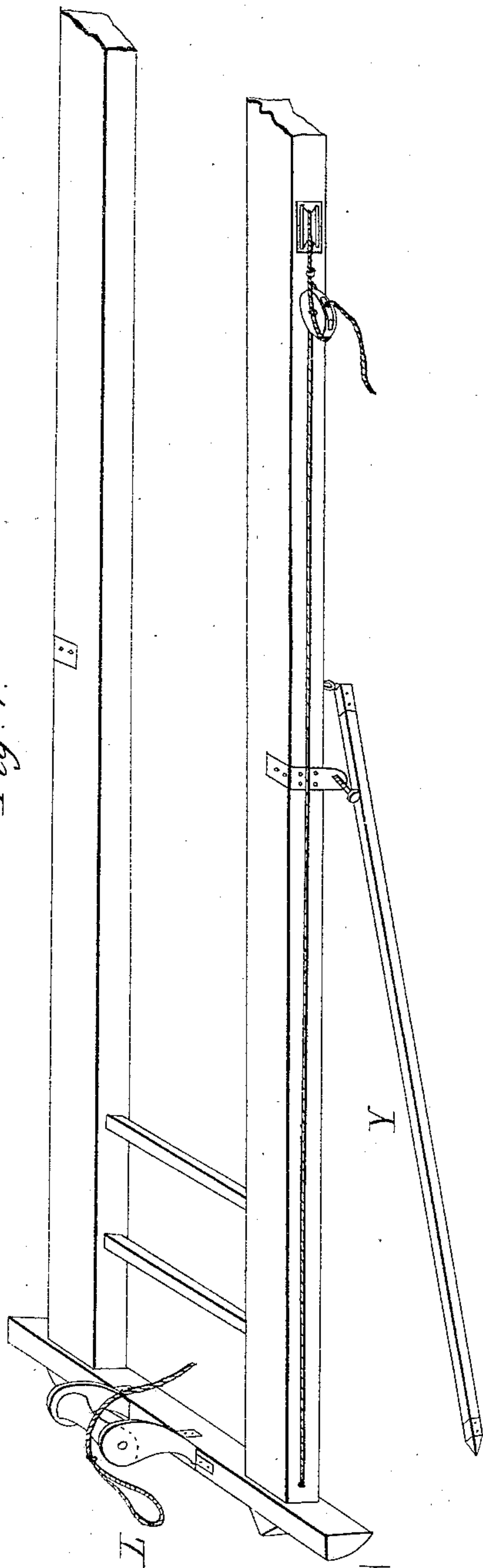


Fig. 4.

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Henry Loewenberg

UNITED STATES PATENT OFFICE.

HENRY LOEWENBERG, OF NEW YORK, N. Y.

FIRE-ESCAPE LADDER.

Specification of Letters Patent No. 18,262, dated September 22, 1857.

To all whom it may concern:

Be it known that I, HENRY LOEWENBERG, of New York city, in the county of New York and State of New York, have invented a new and useful Improvement in Apparatus to be Used in Time of Fire or other Danger for the Purpose of Saving Life or Property; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings and those drawings being lettered to correspond with the specification and making a part of the same.

In order that the public may fully understand the nature of my invention and those skilled in the art be enabled to construct the same I will describe it as follows, viz:

Figure 1 is a bird's-eye view of the apparatus showing the top front and oblique end of my extension ladders (*a, b, c, e,*) when packed for transportation, excepting the baskets (*D, D,*) which are taken off to show more clearly the manner of packing the ladders in a small space compared with the ordinary hook and ladders now in common use. One of the baskets is thrown off the carriage having its ropes attached as shown at (*D;*) Fig. 2, represents the ladders (*a, b, c, e,*) extended and in the position to be used in time of danger by fire or otherwise.

Mode of operation: In the first place the ladders are placed in front (of the building to be entered) upon the trucks (*f, g,*) having the front end (*H,*) turned toward the wall. The rope (*I, I'*) passes through the pulley blocks (*m, m,*) which are fastened to the forward axletree and is carried back to the hind axletree to which one end of the rope (*I, I'*) is strongly fastened, the other end thereof passes through the pulley block (*m'*) over the hind axletree and is continued up over the roller at the hind end of the carriage and there formed into a loop (*L,*) to receive the hand or other power, which power draws upon the rope (*I,*) with sufficient force to draw back the forward truck or wheels (*f, f'*) thereby causing the guide bars (or pole "*k,*" as shown at Fig. 2,) to rise at the center at which point the pole "*k,*" or guide bars are hinged as shown at Fig. 2, or held in their proper place by means of a rod as shown more clearly at Fig. 3, consequently drawing back as aforesaid the smaller or forward truck (*f, f'*.) I cause the guide bars to rise at the joint (or rod) in proportion to the distance I draw back

the forward truck. Hence the ladders (*a, b, c, e,*) or any other body must be carried or raised at the same time if placed upon the guide bars, and by drawing the forward trucks (*f, f'*.) back until they pass between the hind wheels or nearly so (the forward axletree being shorter than the hind one) thereby allowing the smaller or forward trucks to pass between the hind or larger ones as shown at Fig. 2 when in this position the end of the forward section of the guide bars (*1, 2,*) Fig. 3, or poles (*L, K, L,*) Fig. 2 rests firmly on the ground and acts as a brace; (the trucks (*f, f'*.) being strongly fastened with the rope (*I,*) to the back end of the ladder) to support the ladder after they have been elevated to the desired angle and ready for extension as shown at Fig. 2. Our ladder may be detached from the trucks and operated by means of the brace (*y,*) Fig. 4. And endless ropes and pulley (*m', m'',*) Fig. 1, without the application of cranks as applied and operated in both the cases cited against us in your office letter of March 20th.

We have a metallic frame attached to the top of the ladder (*a*) having a roller (*W,*) on the side next the wall; this metallic frame curves outward at the top sufficiently far to allow the rope (*Q,*) that is attached to the baskets (*D, D,*) to pass freely through the pulleys (*1, 2, 3, 4,*) Fig. 1, which are so arranged that the weight of a person in either basket would only cause the basket containing the weight to pass slowly down to the ground while the empty one rises to the top; the frame at the top of ladder (*a,*) curves out from the wall sufficiently far to allow the basket to pass up or down without coming in contact with the wall or landings from the ladder to the different stories of the building (*O, P,*). These landings are attached to the different sections of the ladder by hinges in order to be packed, as well as secure and support the ladder when operated.

I am aware that ladders with long sacks to convey the occupants of a building to the ladder have been long in common use; but the application of baskets or their equivalent operated as above set forth and the manner of elevating and packing the ladders as shown in the drawings I believe to be new and useful.

I do not claim the extension ladders; neither do I claim the use of ropes passing

around or over windlasses for the purpose of drawing or extending the ladders after they have been elevated to the desired angle ready for extending, but

5 I claim—

The manner of regulating or adjusting the trucks (f, f'), Figs. 2 and 3, by means of the hinged guide poles (K), Fig. 2, or guide bars Fig. 3, arranged and operating in the
10 manner and for the purpose of supporting

the ladders when secured by the rope (I, I') at any desired angle, substantially as described and shown in the drawings.

In testimony whereof I hereunto subscribe my name in the presence of two witnesses. 15

HENRY LOEWENBERG.

Witnesses:

DAVID CROWTHER,

JAMES B. McLEAN.