

(No Model.)

G. ALBEE.
EXTENSION LADDER.

No. 460,419.

Patented Sept. 29, 1891.

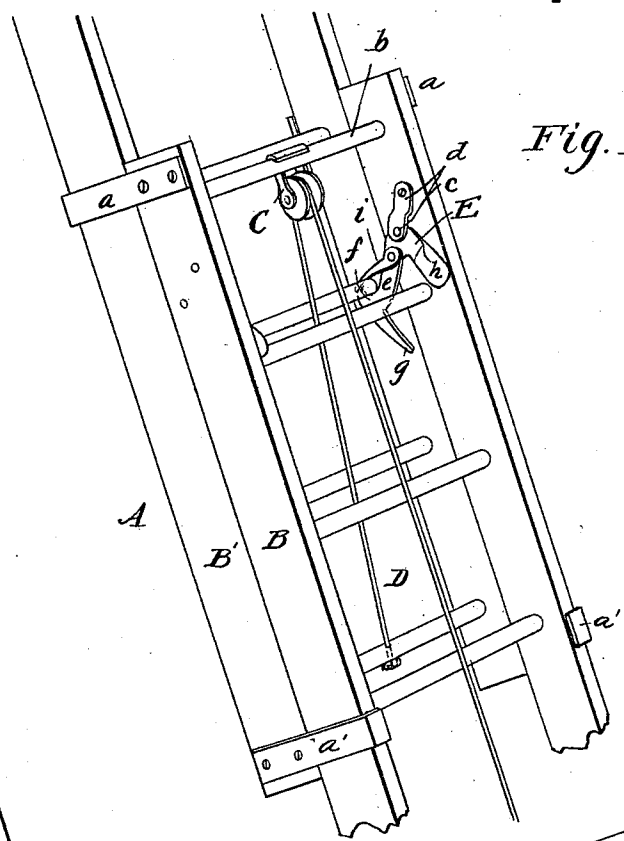


Fig. 1.

Fig. 3.

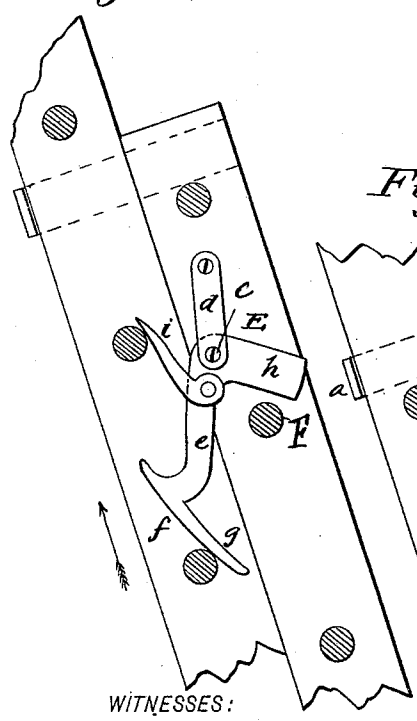


Fig. 2.

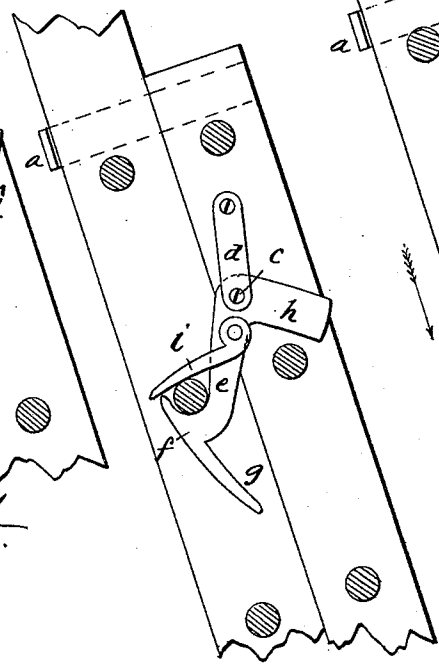
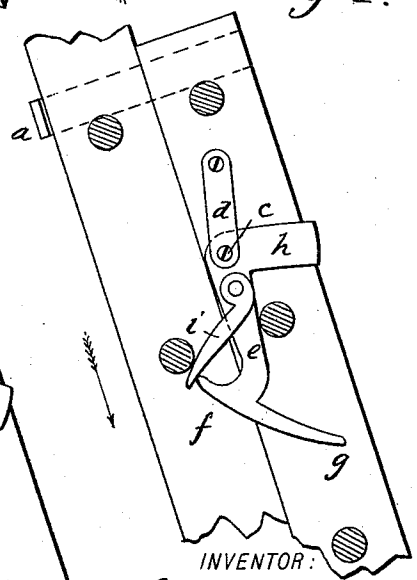


Fig. 4.



WITNESSES:

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GEORGE ALBEE, OF SUSQUEHANNA, PENNSYLVANIA.

EXTENSION-LADDER.

SPECIFICATION forming part of Letters Patent No. 460,419, dated September 29, 1891.

Application filed January 19, 1891. Serial No. 378,370. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ALBEE, of Susquehanna, in the county of Susquehanna and State of Pennsylvania, have invented a new and Improved Extension-Ladder, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a perspective view of a part of my improved extension-ladder, showing the ladder extended. Fig. 2 is a vertical transverse section showing the movable ladder supported by the catch. Fig. 3 is a vertical transverse section illustrating the operation of the catch while the movable ladder is being raised, and Fig. 4 is a vertical transverse section showing the operation of the catch while the movable ladder is descending.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to construct an extension-ladder in which the movable part may be raised or lowered by manipulating the lifting-rope.

My invention consists in the combination with the fixed and movable parts of a ladder provided with clips and arranged to slide one on the other, of one or more weighted catches adapted to engage the rungs of the ladder, and a latch pivoted to the catch and adapted to close the hook of the catch, so as to allow the movable part of the ladder to descend without engagement of the catch, all as will be hereinafter described and claimed.

The ladder A is composed of a fixed part B and a movable part B'. The fixed part B is provided with a pair of clips *a*, which extend around the side bars of the part B', and the movable part B' is furnished with clips *a'*, which extend around the side bars of the fixed part of the ladder.

To the upper rung *b* of the fixed ladder B is attached a sheave C, over which passes a rope D, attached to the lower rung of the movable ladder B', the said rope being designed for raising and lowering the movable part of the ladder.

Upon pins *c*, projecting from the inner face of the side bars of the fixed part of the ladder, are pivoted the angled catch-levers E, and the said pins *c* are stayed by the offset

plates *d*, attached to the side bars. The longer arms *e* of the catch-levers are provided with hooks *f* for engaging the rungs of the ladder, and the said hooks are furnished with fingers *g*, extending backwardly, to guide them over the rungs as the movable part of the ladder is raised. The shorter arm *h* of the lever E is weighted to cause the hook *f* to swing outwardly in position to engage the rungs of the movable part of the ladder. Each clutch-lever E is furnished with a latch *i*, adapted to close over the end of the hook *f*, as shown in Fig. 4, so as to prevent the rungs of the ladder from engaging the hook when the movable portion is allowed to descend; but the end of the latch *i* projects beyond the hook, so that as the movable part of the ladder is raised the rungs will engage and lift the latch, so that the hook *f* can engage the rung when the movable part of the ladder is released, so as to allow the rung to drop into the hook, as shown in Figs. 1 and 2. When it is desired to lower the movable part of the ladder, it is raised to a sufficient height to allow the latch *i* to drop over the hook, as shown in Fig. 4, when the rung will slide over the latch and pass the hook. The catch-levers E are pivoted above one of the rungs F of the stationary part of the ladder and adjacent to said rung, and so disposed that the longer arm or shank *e* of each catch-lever ranges normally longitudinally of the ladder, to extend above and below the rung F, near which it is pivoted. The short arm or angle-arm *h* will thus range transversely across the ladder. By this arrangement either of the arms *e* *h* will strike the rung F, according as the catch-lever E is moved by the removable section of the ladder, and the movement of the said catch-lever E is thus controlled by the rung adjacent to which it is pivoted. Thus the rung forms a stop which arrests both arms of the catch-lever.

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

1. The combination, with a ladder formed of a fixed and movable portion, of an angled weighted catch-lever pivoted to the side bar of the ladder and furnished with a latch for closing the catch of the lever, and a fixed stop

arranged at the angle of the lever, against which stop both arms of the catch-lever are adapted to contact, substantially as specified.

2. The combination, with a ladder formed
5 of a fixed and a movable portion, of an angled
weighted latch-lever pivoted to the side of the
ladder adjacent to one of the rungs thereof
and provided with a latch for closing the
catch of the lever, one arm of said lever nor-
10 mally ranging longitudinally of the ladder

and the angle-arm ranging transversely thereof, the said arms being each movable against the said rung as the catch-lever is moved by the movable part of the ladder, substantially as described.

GEORGE ALBEE.

Witnesses:

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