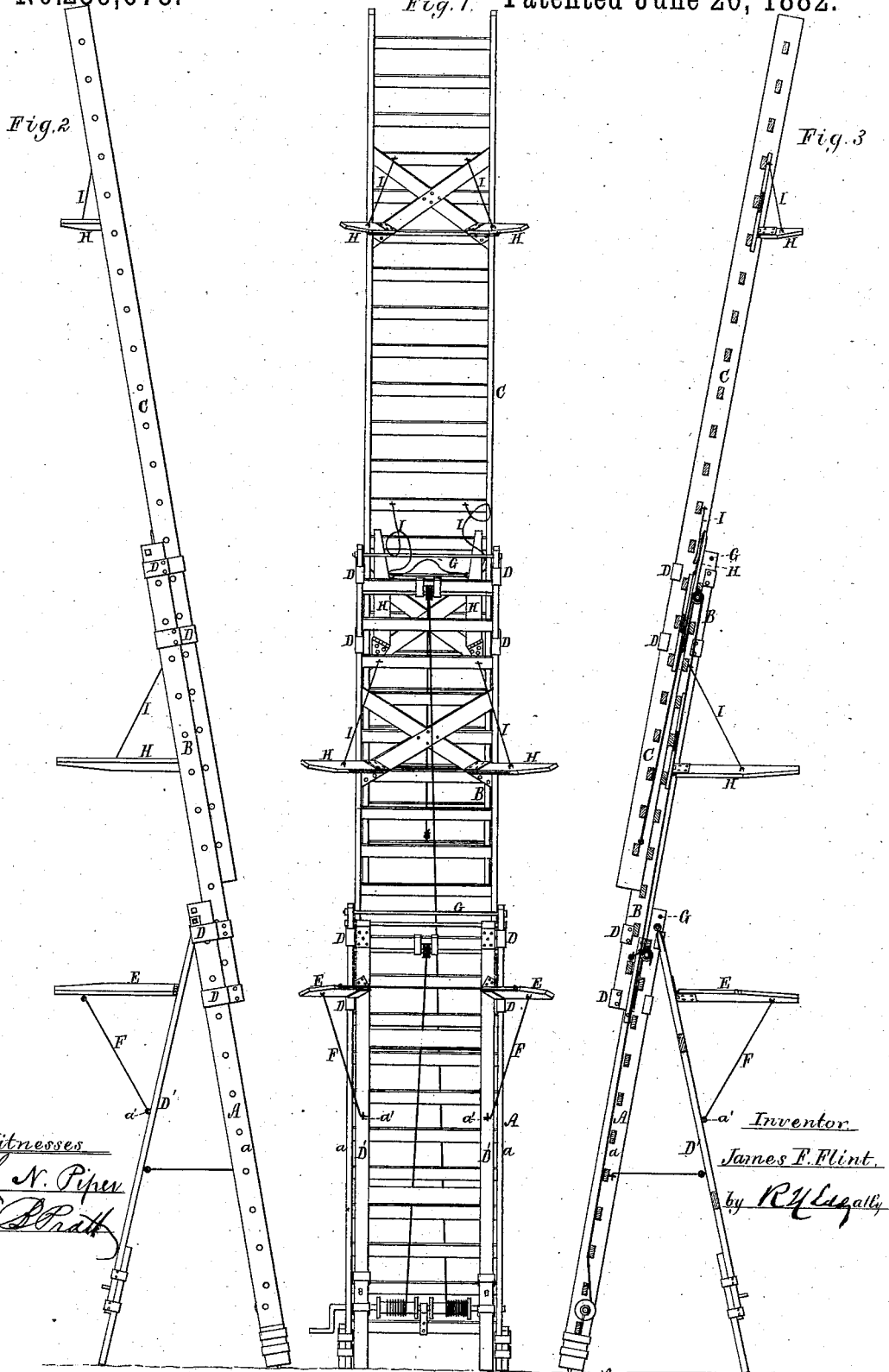


(No Model.)

J. F. FLINT.
EXTENSION LADDER.

No. 259,678.

Patented June 20, 1882.



UNITED STATES PATENT OFFICE.

JAMES F. FLINT, OF WEST DANVERS, MASSACHUSETTS.

EXTENSION-LADDER.

SPECIFICATION forming part of Letters Patent No. 259,678, dated June 20, 1882.

Application filed March 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. FLINT, of West Danvers, in the county of Essex, of the State of Massachusetts, have invented a new and useful Improvement in Extension-Ladders; and I do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a rear elevation, Fig. 2 a side view, and Fig. 3 a vertical and longitudinal section, of an extension-ladder containing my invention, the nature of which is defined in the claim hereinafter presented.

This ladder is shown as formed of three separate ladders or sections, A B C, the second, B, of which is adapted to slide lengthwise within the first, A, or between its side rails, *a a*, the third, C, being similarly applied to the second. Each section A or B is connected by clasps D with the section within it and slides within such clasps, all being as usual in extension-ladders of this kind. The sections B and C are to be provided with suitable tackle or means of raising them to and sustaining them in their proper elevations above the lower section, A.

There is hinged to the lowermost section, A, near its upper end, a leg-frame, D', and such leg-frame is provided with two struts, E E, arranged as shown, and at their upper ends hinged to the leg-frame, near its upper part. Each strut has jointed to it a long brace-rod, F, hooked at its lower end to enter a staple or eye, *a'*, in the leg-frame, such brace-rod being to support the strut in a horizontal position. The leg-frame, when drawn out from and to an acute angle with the section A, is to rest on the ground and thereby support the ladder in an inclined position. Furthermore, there is extended from the upper part of one side rail to that of the other of each of the sections A and B a rod, G, it being arranged as shown, and there are hinged to the section B, at its middle and rear, two struts, H H, each being provided with a sustaining-ropes, I, extending from it to the section, as represented. Another pair, H H, of such struts is in a like manner applied to the upper section, C, they being likewise furnished with sustaining-ropes

I. While the section B is being lowered within the section A the struts H of the said section B will be drawn against the rod G of the section A, and by such will be caused to turn and fold upward against the section B, and will pass down between it and the said rod G. While the section B is in the act of being drawn upward within the section A, the struts H of the former will rise over the rod G and fall into, or nearly into, horizontal positions, in which they will be sustained by their ropes I. So, while the section C is being lowered within the section B, the struts H of the said section C will be drawn against the rod G of the section B, and by such will be caused to turn and fold upward against the section C and to pass down between it and the said rod G. While the section C may be in the act of being drawn upward within the section B, the struts H of the former will rise over the rod G of the latter section and fall into horizontal positions, in which they will be sustained by their ropes I.

The several struts hereinbefore mentioned are, when in horizontal position, or thereabout, to rest with their feet against the front or wall of a building, when the latter may be in use before such as a fire-escape or for any other purpose, the struts in such case serving to steady the ladder to excellent advantage.

When the ladder is in a folded state the leg-frame connected with its lowest section will be flat against it, and the struts will also be flat against their sections.

I do not claim an extension-ladder composed of a series of sections or ladders adapted to slide one within or upon the other, and provided with means of so operating them and of supporting them when elevated.

What I claim is as follows, viz:

The extension-ladder provided with the leg-frame and its struts, and with the auxiliary struts, their supporting-lines, and tripping-rods G, all arranged and combined substantially in manner and to operate as shown and described.

JAMES F. FLINT.

Witnesses:

R. H. EDDY,
S. N. PIPER.