

J. M. DAVIS.  
Extension-Ladder.

No. 161,010.

Patented March 23, 1875.

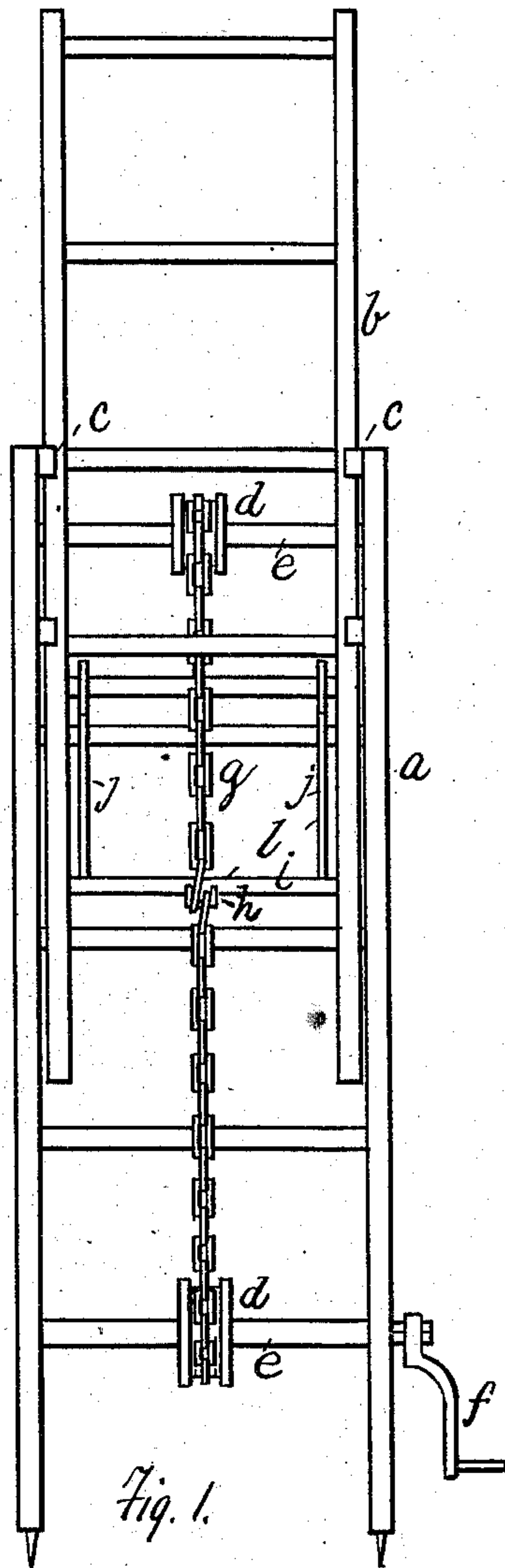


Fig. 1.

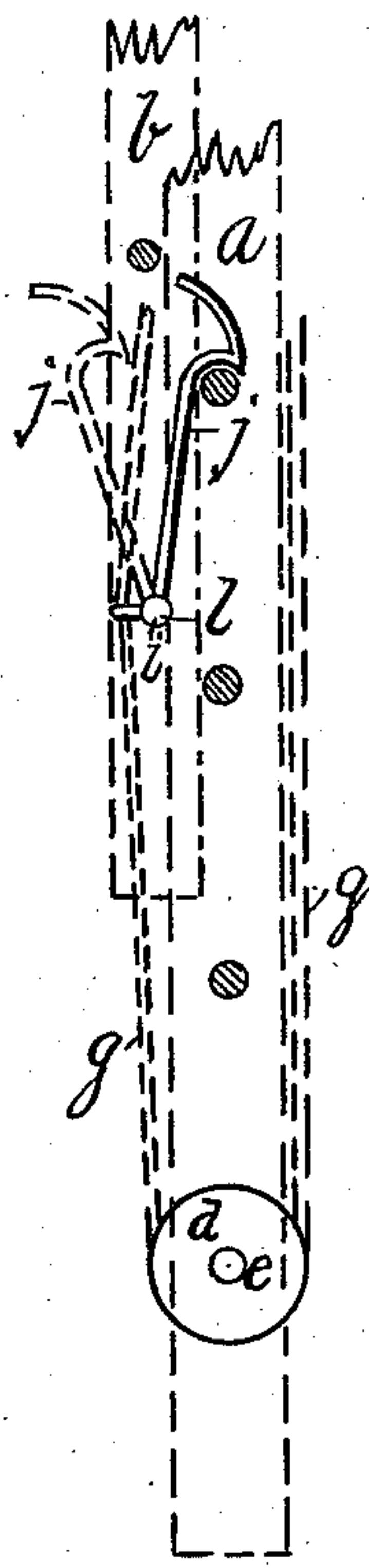


Fig. 2.

Witness  
D. T. Russ  
W. S. Pearson

Inventor  
James M. Davis  
By Franklin Seaver Atty

# UNITED STATES PATENT OFFICE.

JAMES M. DAVIS, OF BANGOR, MAINE, ASSIGNOR TO JOSEPH S. SMITH, OF  
SAME PLACE.

## IMPROVEMENT IN EXTENSION-LADDERS.

Specification forming part of Letters Patent No. **161,010**, dated March 23, 1875; application filed  
July 22, 1874.

*To all whom it may concern:*

Be it known that I, JAMES M. DAVIS, of Bangor, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Extension-Ladders; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 shows a front elevation; Fig. 2, a partial section.

Same letters show like parts.

My invention consists of an extension-ladder designed for the use of firemen, painters, and others.

I employ two or more ladders, the arrangement and operation of which will be readily understood by reference to the accompanying drawing.

At *a* is shown a stationary ladder, upon which is placed a sliding ladder, *b*, moving in proper retaining-clamps *c*. At each end of the ladder *a* are drums *d*, upon shafts *e*, the shaft at the lower end being provided with a crank, *f*, by which it and its drum is revolved, giving motion to a chain, *g*, passing around said drum and over the upper drum. The ends of this chain are both attached to a projection, *h*, up-

on a shaft, *i*, at the lower end of the sliding ladder, upon the ends of which shaft are hooks *jj* of sufficient length to hook over the rungs of the stationary ladder *a*, so as to support the ladder *b* at any desired point of extension. These hooks *jj* and the projection *h* upon the shaft *i* form a lever, *l*, of which said shaft is the fulcrum, which lever is operated by the chain *g*, so that when the ladder *c* is being extended the hooks are hugged down toward the ladder *a*, clasp ing over its rungs, but when the ladder *c* is slid downward the lower portion of the chain lifts the hooks away from said rungs, allowing the ladder to descend without impediment. The upper faces of the hooks are curved outwardly, so as to pass easily over the rungs as the ladder ascends.

What I claim as my invention, and desire to secure by Letters Patent, is—

In an extension-ladder, the combination of two or more ladders with drums *e*, chain *g*, and lever *l*, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of July, 1874.

JAMES M. DAVIS.

Witnesses:

WM. FRANKLIN SEAVEY,  
J. B. BASS.