

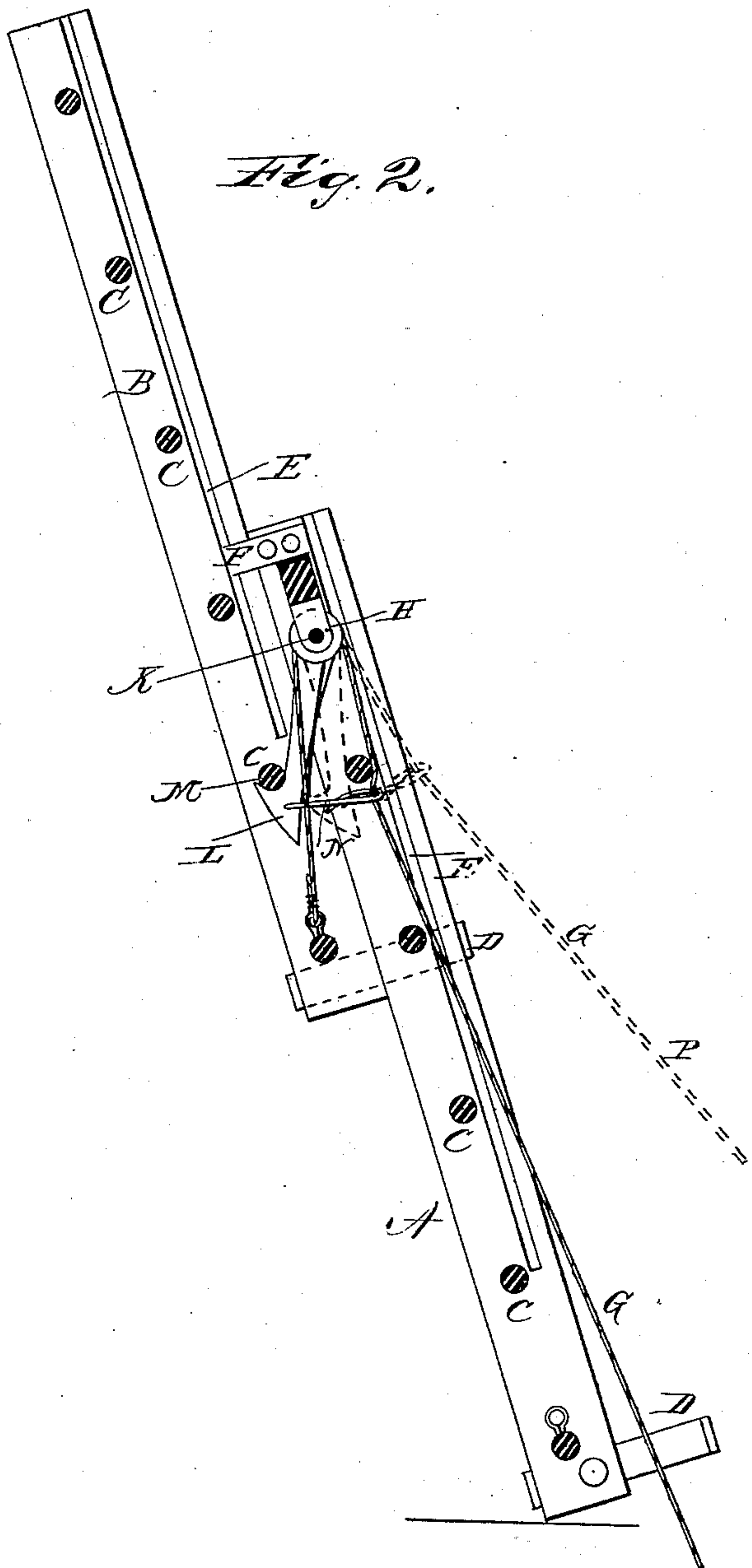
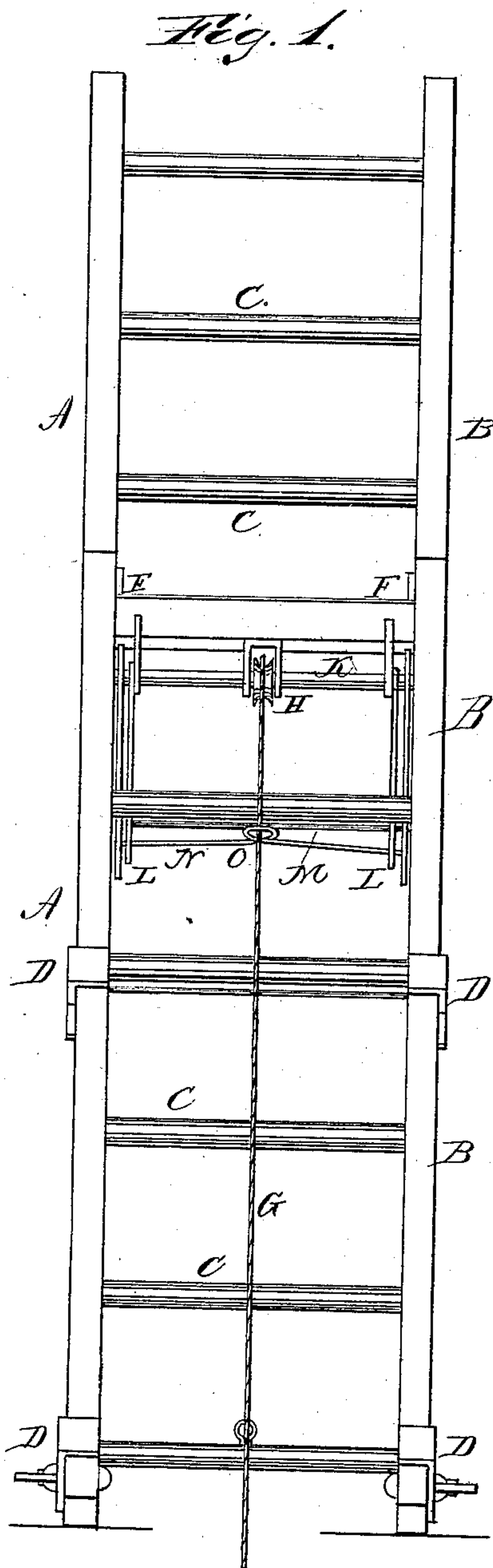
(No Model.)

A. S. COLES.

LADDER.

No. 264,245.

Patented Sept. 12, 1882.



WITNESSES:

J. L. Curand
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UNITED STATES PATENT OFFICE.

ANDREW S. COLES, OF MAMARONECK, NEW YORK.

LADDER.

SPECIFICATION forming part of Letters Patent No. 264,245, dated September 12, 1882.

Application filed December 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, ANDREW S. COLES, residing at Mamaroneck, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Extension-Ladders, of which the following is a specification.

This invention pertains to the class of ladders which are arranged to slide upon each other in the direction of their length, and having guides to control their position with each other, and with a rope or cord to raise and lower them; and the invention consists chiefly in the arrangement of the holding devices for supporting two or more ladders in an extended position, and the manner of releasing said hooks by the operating-rope, as will hereinafter appear.

The drawings show at Figure 1 a front elevation of two ladders in a partially-extended position, and Fig. 2 represents a sectional elevation of the parts in the same position.

A and B are the two sections of the ladder, made with ordinary rounds at C. The side bars of the ladders are made of the same width from end to end, so that they can slide upon each other. At their lower ends are fastened metal straps D, that serve as clamps to hold the two sections upon each other in the ordinary manner. Upon the inner faces of the side bars are formed grooves at E to receive tongues of metal at F, that also serve as guides to keep the side bars in position when they are being moved. Two ladders so combined may then be extended by drawing on a rope at G, which is fastened to the lower round of the

sections to be lifted, and said rope runs over a sheave at H on an axis at K near the top of the ladder, which rests on the ground. Consequently by drawing on the rope the ladder may be lifted to the desired height. To keep it at said point metal hooks at L are pivoted to inner faces of the lower ladder, and when the ladders are inclined, as shown at Fig. 2, said hooks swing in toward the raised ladder and engage with a round, as at M, and thereby not only hold it from descending, but have the effect to draw the edges of the two ladders together. For the purpose of disengaging the said hooks when the ladder is to be lowered, a rod at N extends from the hooks at L, and has a loop at O in its center, through which the lifting-rope passes, so that by drawing the said rope outward, as shown in dotted lines P, the rod N will draw back the hooks and permit the ladder to descend. The lower ladder at B may serve also as a second ladder to a set of three, and so any number may be used by duplicating the parts, as already described.

I therefore claim—

In an extension-ladder, the combination of the hooks, looped rod, and rope, whereby the hooks may be drawn back, as hereinbefore set forth.

In witness whereof I have hereunto subscribed my name and affixed my seal in the presence of two subscribing witnesses.

ANDREW S. COLES. [L. S.]

Witnesses:

EUGENE N. ELIOT,
JOHN W. WENTWORTH.