

No. 848,108.

PATENTED MAR. 26, 1907.

P. A. M. LANIER.
FOLDING LADDER.

APPLICATION FILED DEC. 24, 1906.

Fig. 1.

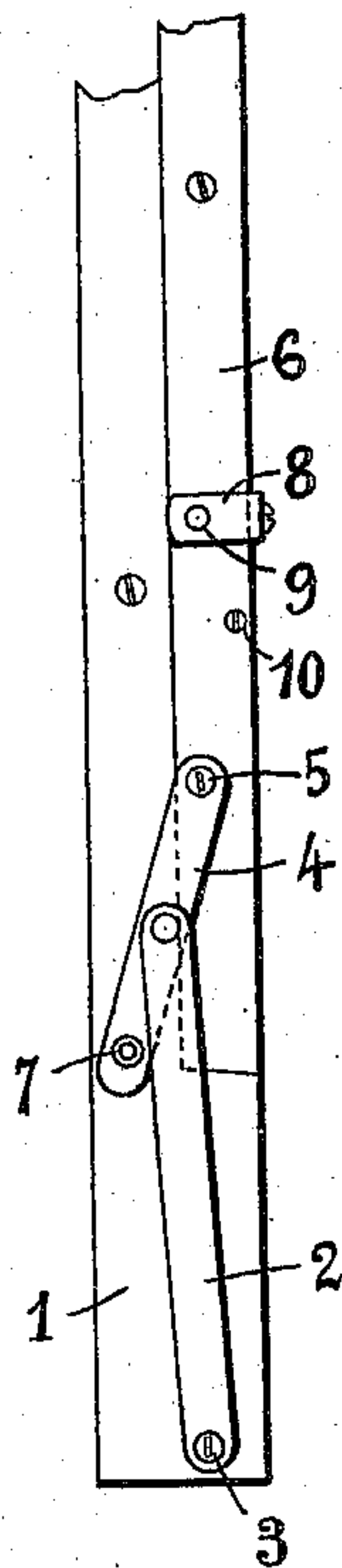


Fig. 2.

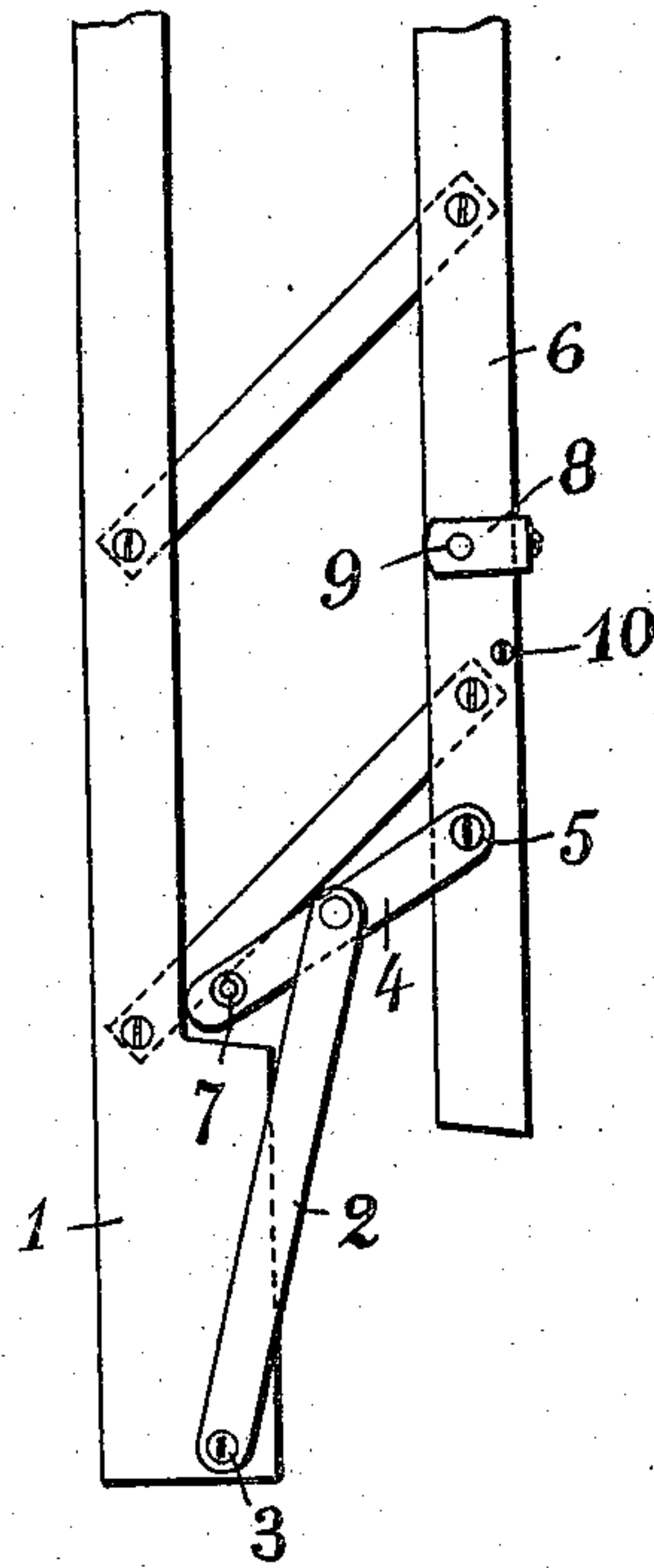
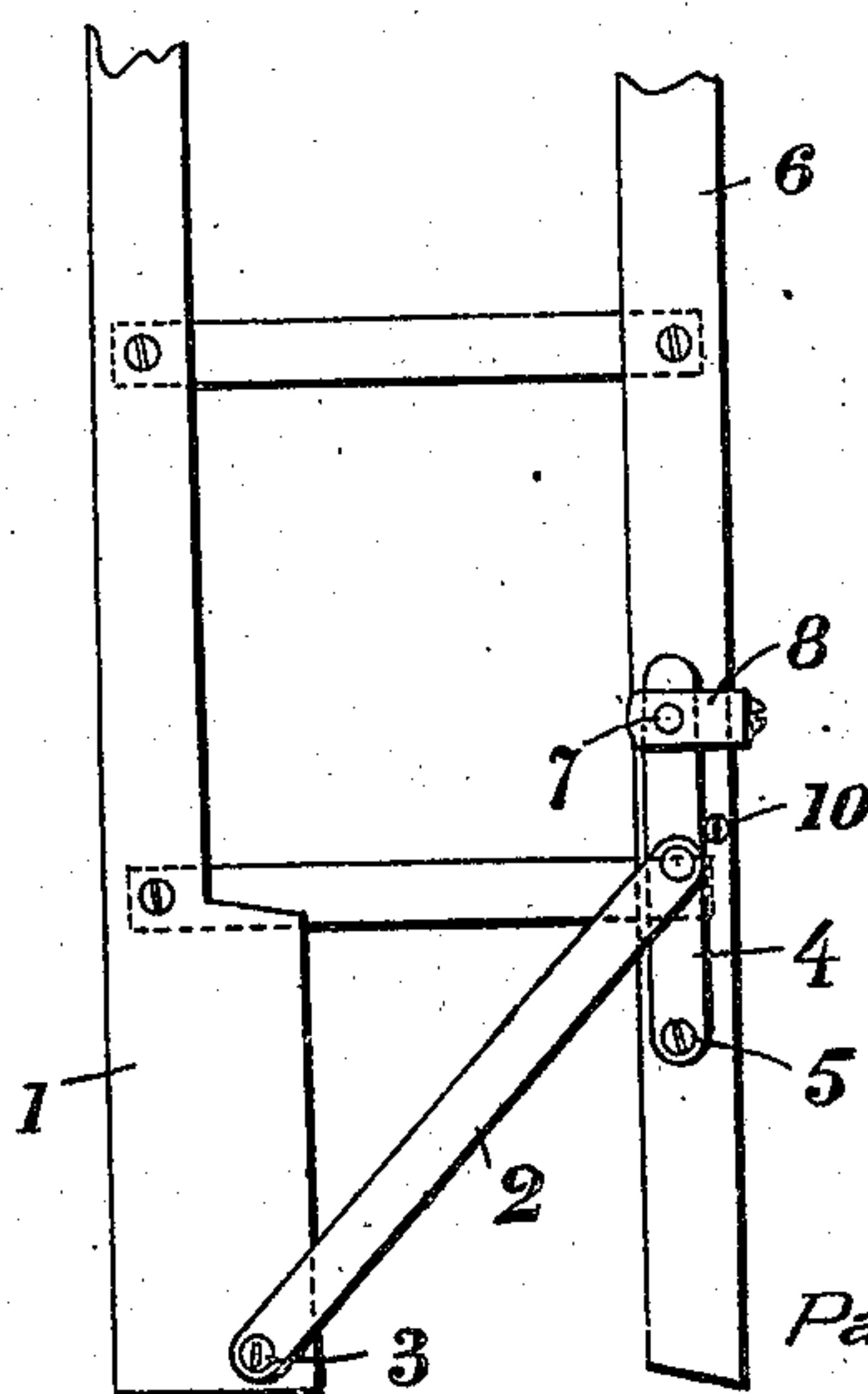


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

PAUL AUGUSTE MARIE LANIER, OF PARIS, FRANCE.

FOLDING LADDER.

No. 848,108.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed December 24, 1906. Serial No. 349,321.

To all whom it may concern:

Be it known that I, PAUL AUGUSTE MARIE LANIER, a citizen of the Republic of France, residing at 17 Rue Jouvenet, Paris, in the Republic of France, manufacturer, have invented certain new and useful Improvements in Folding Ladders, of which the following is a specification.

There are ladders in existence which when not in use allow of the two uprights being brought one against the other, the rungs lodging in grooves formed in each of the walls of the two opposite uprights.

When the ladder is opened out—that is to say, when the two uprights are separated one from the other—the interval is maintained constant by the intermediary of a stud fixed in one of the uprights and entering an orifice formed at one of the extremities of a cross-piece, the other extremity of which is jointed to the other upright. This arrangement, however, presents the defect of being impractical. As a matter of fact, the person who wishes to use the ladder is obliged after having opened it out to hold it with one hand and seize the cross-piece with the other in order to bring its orifice opposite the fixed stud and then to bear upon the cross-piece in order to introduce the stud into its recess. These manipulations cause loss of time, as one may have to make several attempts before succeeding in fixing the cross-piece.

The present invention has for its object a means for overcoming these defects. In accordance with the invention it is only necessary to open the ladder in order that automatic engagement may take place at the moment at which the movable upright has finished its movement. This arrangement is illustrated, by way of example, in the accompanying drawing, in which—

Figure 1 shows the ladder folded. Fig. 2 represents it during opening. Fig. 3 shows it completely opened.

The upright 1 of a ladder in accordance

with the present invention carries a lever 2, rocking around the pin 3 and jointed to the middle of a second lever 4, rocking around the pin 5, which is mounted on the other upright 6. At its free extremity the lever 4 is provided with a stud 7, which on lifting a leaf-spring 8, fixed to the upright 6, is able to engage in an orifice 9 formed in this spring. In order to open the ladder, it is therefore only necessary to rest the upright 1 on the ground and separate the upright 6 from it. The levers 2 and 4 turn around their respective pins 3 and 5, and the extremity of the lever 4 passes between the upright 6 and the spring 8. The stud 7 engages in the orifice 9 without the necessity for any special operation on the part of the person who is manipulating the ladder.

In order that the stud 7 may not have to bear alone the strains which may arise in the lateral direction, a stop 10 maintains the lever 4 on the outer side.

In order to fold up the ladder, the stud 7 is first of all disengaged from the opening 9, whereupon the uprights 1 and 6 may be brought together.

What I claim, and desire to secure by Letters Patent of the United States, is—

Means for the automatic engagement of folding ladders, comprising two levers each of which oscillates upon an axis fixed to an upright, one of said levers being pivoted to the center of the other, which latter at its free extremity carries a stud, which is adapted to enter an orifice formed in a spring fixed to that upright to which the lever carrying the stud is attached, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

PAUL AUGUSTE MARIE LANIER.

Witnesses:

PAUL COULOMB.

JOHN BAKER.