

(No Model.)

R. RONSON.
LADDER.

No. 596,545.

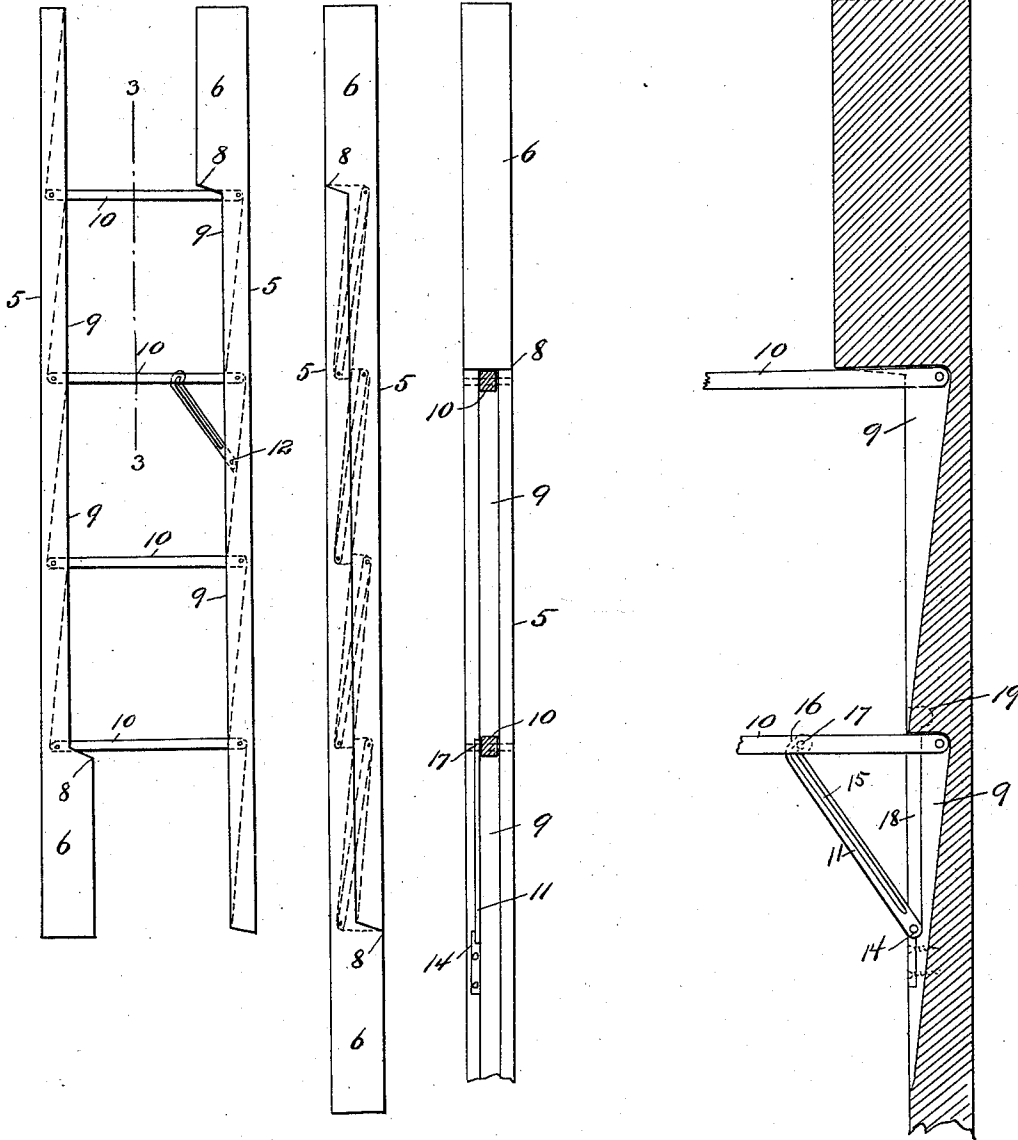
Patented Jan. 4, 1898.

Fig. 1

Fig. 2

Fig. 3

Fig. 4



WITNESSES.

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LADDER.

SPECIFICATION forming part of Letters Patent No. 596,545, dated January 4, 1898.

Application filed January 13, 1897. Serial No. 619,027. (No model.)

To all whom it may concern:

Be it known that I, ROBERT RONSON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Ladders, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to ladders; and the object thereof is to provide an improved device of this class which is so constructed that the side bars of the ladder may be folded together when not in use and extended when necessary.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side view of my improved ladder, the separate parts thereof being in position for use; Fig. 2, a similar view of the separate parts of the ladder folded together; Fig. 3, a partial section on the line 3 3 of Fig. 1; and Fig. 4, a central vertical section of one of the side bars of the ladder, showing the method of connecting the rounds therewith and other features of the construction.

In the drawings forming part of this specification the separate parts of my improvement are designated by the same numerals of reference in each of the views, and in the construction of my improved ladder I provide two similar side bars 5, each of which has an enlargement at one end, as shown at 6, so as to form inwardly-directed shoulders or projections 8, the enlargement of one bar being placed at the bottom of the ladder and the other at the top thereof. The inner surface of each of the side bars 5, or that portion thereof between the shoulder or projections 8 and the opposite end, is provided with a plurality of slots or grooves 9, which are deepest at their upper ends at one side and at their lower ends on the opposite side, this construction being shown in dotted lines in Fig. 1 and in full lines in Fig. 4, said slots or grooves being triangular in form in longitudinal section and gradually diminishing in depth from the upper end downwardly on one side and from the lower end upwardly on the other side, and when the side bars 5 are extended for use, as

shown in Fig. 1, the deepest portion of said slots or grooves are at exactly opposite points.

The rounds 10 of the ladder are pivoted at each end in the deepest portions of the slots or grooves 9, and in the lower portion of one of said slots or grooves I pivot a slotted arm 11, said arm being pivoted to one of the side bars 5, as shown at 12 in Fig. 4 and in dotted lines in Fig. 1, and the arm 11 is provided with a longitudinal slot 15, and the upper end thereof is curved slightly, as shown at 16, and the round 10 adjacent thereto is provided with a pin 17, which passes through the slot 15, said slot being continued through the curved extension 16 of the arm 11.

Formed in one of the side walls of the slot or groove 9 in which the arm 11 is pivoted is a supplemental longitudinal slot or groove 18, which is adapted to receive the arm 11 when the side bars 5 are folded together, as shown in Fig. 2, and the curved portion 16 of said arm also enters a slot formed in the side bar 5 with which said arm is connected, as shown at 19 in Fig. 4.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

The arm 11 is intended to render the ladder rigid when the separate parts thereof are in the position shown in Fig. 1, and this is accomplished by means of the curved extension 16 of said arm and the slot 15, which is formed therein, together with the pin 17, which operates in said slot, and whenever it is desired to fold the side bars 5 of the ladder together it is only necessary to slightly lift or raise the upper end of the arm 11, when the side bars 5 may be folded into the position shown in Fig. 2.

My improved ladder is simple in construction and operation, and the separate parts thereof, as shown and described, may be folded into a compact form which will resemble a single bar, and in this position of the parts the ladder will occupy but slight space and may be quickly carried or shipped from one point to another.

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

As an improved article of manufacture, a folding ladder comprising two side bars or stiles, each of which is provided at one end with an enlarged portion corresponding in
5 length to the distance between the rounds, the enlarged ends of the said side bars or stiles being placed at the opposite ends of said ladder, the inner end of each being inclined or beveled and the opposite end of the
10 said side bars or stiles being correspondingly beveled, the inner edge of each side bar except said enlarged portion being provided with a plurality of notches or recesses which are triangular in form in longitudinal section,
15 the inner walls being directed outwardly and downwardly in one of said bars and outwardly and upwardly in the other, rounds pivotally mounted in the deepest portion of the said triangular notches and adapted to
20 bear against the horizontal walls thereof, and

a locking-lever pivotally mounted in a longitudinal groove formed in the inner wall of one of said bars adjacent to one of said triangular notches or recesses and also positively connected with one of the rungs, said
25 lever being provided with an angular extension and with a longitudinal slot extending into said extension, a pin mounted adjacent to the center of one of said rounds, and adapted to engage in the slot of said slotted lever,
30 substantially as and for the purpose described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 7th day
35 of January, 1897.

ROBERT RONSON.

Witnesses:

CHARLES S. ROGERS,
C. GERST.