

F. D. RANDALL.

LADDER.

No. 180,637.

Patented Aug. 1, 1876.

Fig. 1.

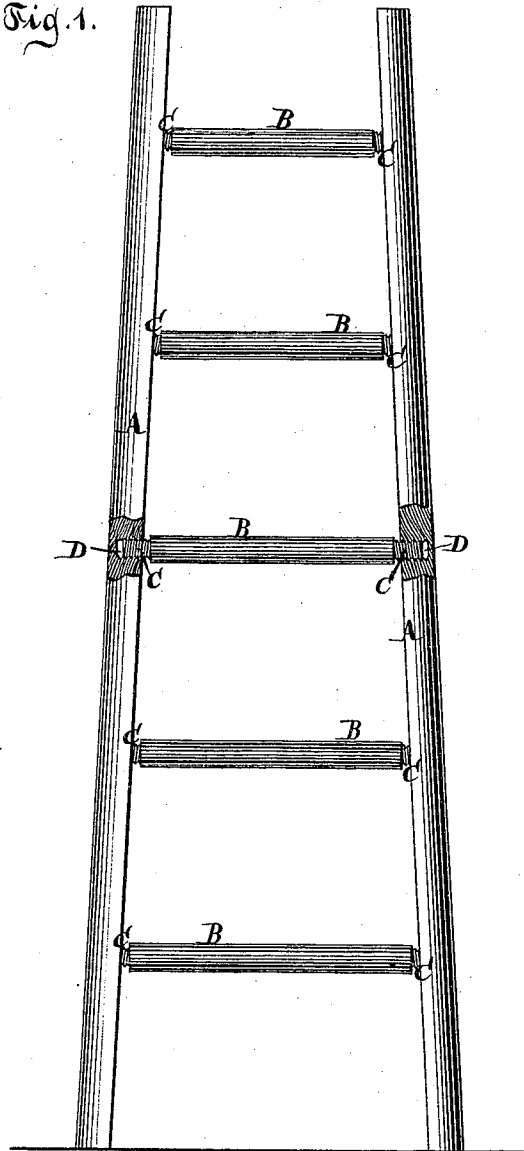
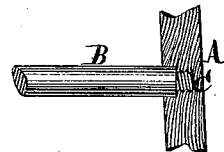


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

FRANCIS D. RANDALL, OF WAUPACA, WISCONSIN.

IMPROVEMENT IN LADDERS.

Specification forming part of Letters Patent No. **180,637**, dated August 1, 1876; application filed May 2, 1876.

To all whom it may concern:

Be it known that I, FRANCIS D. RANDALL, of Waupaca, in the county of Waupaca and State of Wisconsin, have invented a new and useful Improvement in Ladders, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a sectional front view of a ladder made according to my invention. Fig. 2 shows a modification of the same.

Similar letters indicate corresponding parts.

My invention relates to certain improvements in the construction of ladders; and consists, substantially, in connecting the rounds to the side rails by means of right and left screw-threads, so that the rounds are very firmly held in place, while I obtain a ladder of great strength and durability.

In the drawing, the letter A designates the side rails of a ladder, and B are its rounds. The rounds are provided at their opposite ends, respectively, with a right and left handed screw-thread, C, while the side rails A have correspondingly screw-threaded sockets D formed in them, so that the threaded ends C of the rounds can readily be screwed into these sockets, whereby the rounds and the side rails are firmly held together. The threaded ends

C of the rounds are made of a slightly less diameter than the remaining part thereof, and in the example shown in Fig. 1 only the said ends C are received in the threaded sockets D. In some cases, however, I form the ends of the rounds and the sockets D as shown in Fig. 2, so that part of the full thickness of the rounds is received in and rest in the sockets, and the screw is protected from the weather.

It is obvious that by connecting the rounds B to the side rails A, by means of a screw-thread, such parts are very firmly held together, while the solidity of the side rails A is, to the greatest possible extent, preserved, and great strength is given to the ladder.

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

The combination of the rounds B, having right and left screw-threads C formed at each end, and the side rails A, provided with similar screw-threaded sockets D, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 25th day of April, 1876.

FRANCIS D. RANDALL. [L. S.]

Witnesses:

P. T. HANSON,
GEO. H. CALKINS.