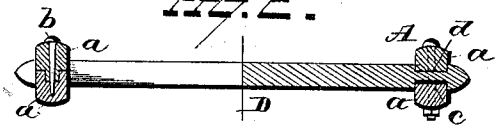
(No Model.)

O. V. FLORA.

LADDER.

No. 285,605. Patented Sept. 25, 1883.

Fig. 2.



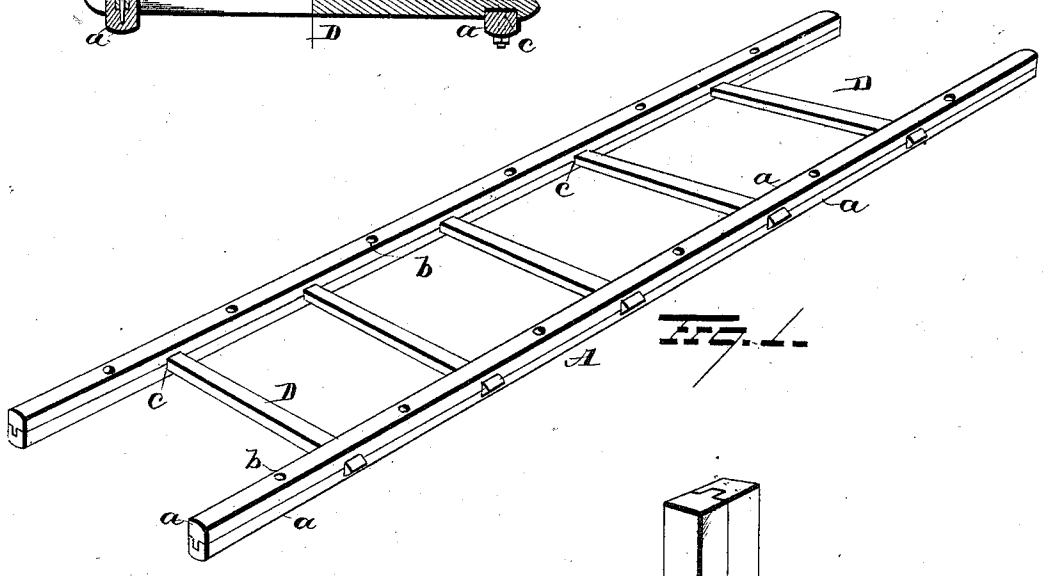


Fig. 1.

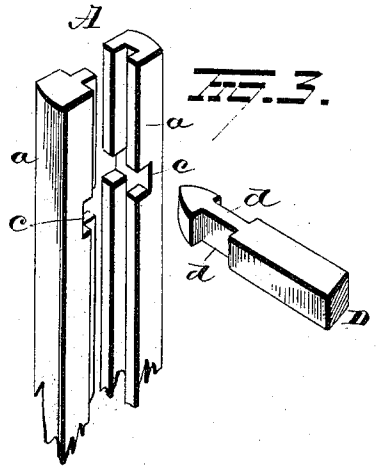


Fig. 3.

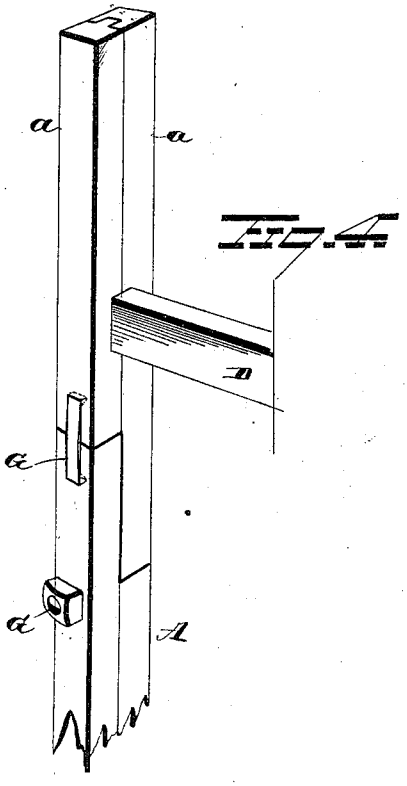


Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

ORLANDO V. FLORA, OF MADISON, INDIANA.

LADDER.

SPECIFICATION forming part of Letters Patent No. 285,605, dated September 25, 1883.

Application filed August 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, ORLANDO V. FLORA, of Madison, in the county of Jefferson and State of Indiana, have invented certain new and useful Improvements in Ladders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in ladders, the object of the same being to construct a ladder of any desired length out of ordinary-size lumber; and it consists in certain details in construction and combinations of parts as will be more fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved ladder. Fig. 2 is a transverse vertical section of the same. Fig. 3 is a view showing the parts detached, and Fig. 4 shows one of the rails made of more than two pieces of material.

A represents the side rails, each of which consists of two or more sections, *a*, made of wood joined together by tongue and groove. One of the sections, *a*, is provided longitudinally on its inner face with a groove, and the other with a tongue adapted to fit into a groove, and the two, when secured together by the bolts *b*, resemble the side rails of an ordinary ladder. The inner faces of both sections *a* of each side rail are provided at regular intervals apart with registering-slots *c*, into which the ends of the rounds or steps D are secured. These rounds D are provided, near their opposite ends, with the annular groove *d*, which latter register with the slots in the side rails of the ladder.

The manner of constructing the ladder is as follows: One section of each side rail is first placed in position with their inner faces upward, and the rounds then placed in the slots therein. The other sections of the side rails are then laid in position on the lower sections, with their tongues or grooves and slots registering, respectively, with the groove or tongues and slots of the lower sections. The two sections of both side rails are then firmly secured together by suitable bolts or nails driven through the section of the side rails at suitable intervals apart, which firmly unite the side rails and rounds, thus forming a strong and durable ladder that can be manufactured at a comparatively small cost. When it is desired to construct a long ladder out of material of ordinary length, this can be accomplished by making each section out of two or more pieces and breaking the joints in the sections—that is to say, so placing the parts composing the section of each rail that the joints in the upper section will not rest over or in very close proximity to the joints or connections in the lower section of the rail, as shown in Fig. 4, and firmly securing the two adjacent ends of the pieces composing one of the sections to the lower sections by the T-bolts G. The extremities of the arms of these bolts G are each provided with a downwardly-projecting end, which take into the adjacent ends of the parts composing one section and prevent a separation of the parts.

This ladder is exceedingly simple in construction, and one of the great advantages of it is that all the parts can be turned out by machinery.

It is evident that slight changes in the construction and relative arrangement of the several parts might be resorted to without departing from the spirit of my invention, and hence I would have it understood that I do not confine myself to the exact construction shown and described, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. The combination, with the side rails, each of which is composed of two sections secured together, of rounds connecting the side rails, substantially as set forth.

2. The combination, with the side rails, each of which is made up of sections, the sections of each rail being connected together by tongue and groove and bolts, of rounds connecting the side rails, substantially as set forth.

3. The combination, with the side rails, made up of sections, the sections of each rail being connected together by tongue and groove and bolts, and each section being provided with

slots for the rounds, of the rounds provided with grooves adapted to register with the slots, substantially as set forth.

4. The combination, with the side rails, each of which is composed of sections, the latter being made up of two or more pieces, the said sections being united by tongue and groove and the bolts, of the rounds connecting the side rails and forming a ladder, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ORLANDO V. FLORA.

Witnesses:
PERRY E. BEAR,
G. B. CHAMBERS.