

G. W. REED.
LADDER.

APPLICATION FILED JUNE 26, 1912.

1,063,831.

Patented June 3, 1913.

Fig. 1.

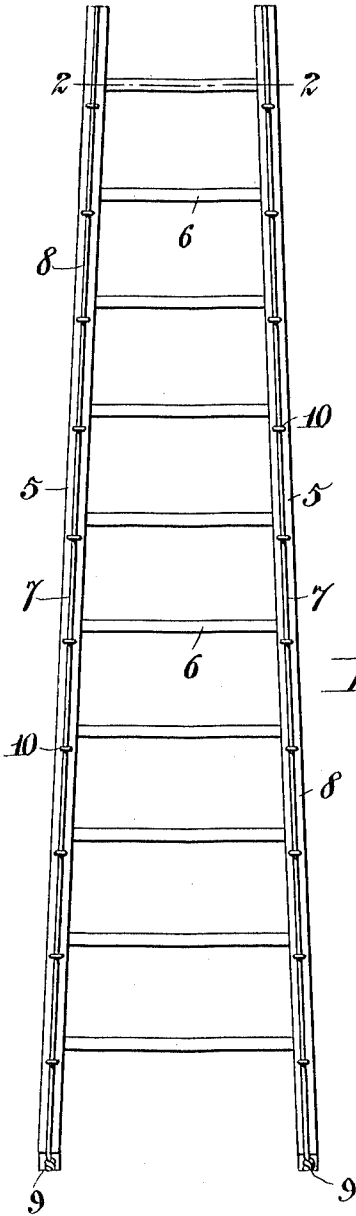


Fig. 2.

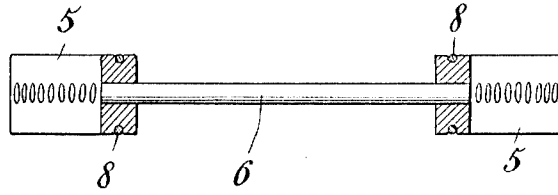


Fig. 3.

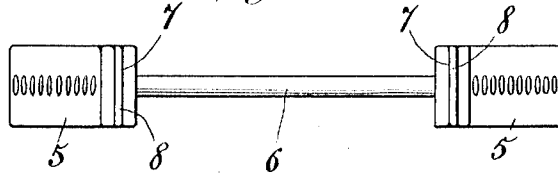


Fig. 4.

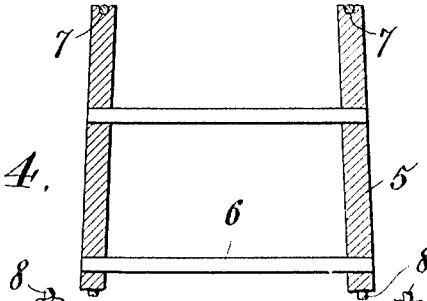
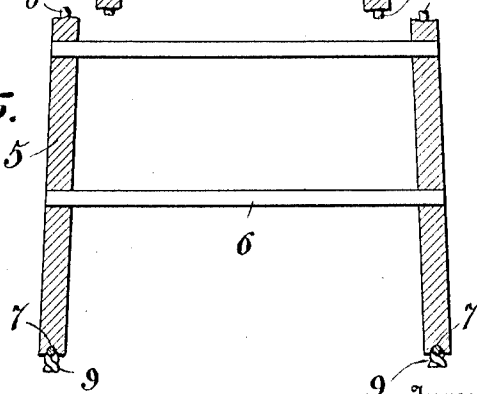


Fig. 5.



Witnesses: _____

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UNITED STATES PATENT OFFICE.

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LADDER.

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To all whom it may concern:

Be it known that I, GEORGE W. REED, a citizen of the United States, residing at Holcomb, in the county of Ontario and State of New York, have invented new and useful Improvements in Ladders, of which the following is a specification.

The invention relates to a ladder, and more particularly to the class of trussed or reinforced ladders.

The primary object of the invention is the provision of a ladder wherein the side sections or rails thereof are materially reinforced so as to increase the strength of the same to avoid the cracking or otherwise breaking of the ladder when subjected to excessive strains.

Another object of the invention is the provision of a ladder in which the brace wires are embedded in the marginal or outer edges of the side sections or rails, so as to lie flush with the said edges, and thereby not interfere with the handling of the ladder while ascending or descending the same.

A further object of the invention is the provision of a ladder which is simple in construction, possessing maximum strength, and one which may be manufactured at a minimum cost.

With these and other objects in view the invention consists in the construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawing, and pointed out in the claim hereunto appended.

In the drawing: Figure 1 is an elevation of a ladder constructed in accordance with the invention. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is an end elevation. Fig. 4 is a vertical longitudinal sectional view thereof. Fig. 5 is a fragmentary vertical longitudinal sectional view through the lower end of the ladder.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawings by numerals, the ladder comprises the usual side rails or sections 5, and cross rungs 6, the same being engaged at intervals in the side rails or sections to form a unitary structure. The side rails or sections 5 are each provided with a continuous longitudinal channel 7, formed

in the outer or marginal edges thereof to receive a reinforcing wire 8, which is seated within the said channel 7 and has its ends twisted as at 9 at one end of the side rail or section so as to form an endless loop embracing the said side rail or section of the ladder, so as to prevent the possibility of the splitting or otherwise breaking of the same, thereby materially increasing the strength of the ladder to assure its withstanding excessive strains which may be applied thereto. The twisted ends 9 of the wires are adapted to form anchoring projections which extend beyond the lower bearing end of the side rails whereby the said twisted ends will bite into a foundation or support to prevent the slipping of the ladder. The wires 8 are retained within the channels 7 in the side rails or sections 5 of the ladder by means of staples 10 which are driven into the same at intervals throughout the length of the said sections or rails, so as to span the wires 8 seated within the channels therein.

From the foregoing description, taken in connection with the accompanying drawing, it is thought that the construction and operation of the invention will be clearly understood, and therefore, a more extended explanation has been omitted.

What is claimed is:—

A ladder comprising side rails having grooves extended about opposite sides and ends thereof, cross rungs connecting the side rails and a wire trained throughout the extent of the groove in each side rail and having its ends twisted together and located at one end of the side rail to project outwardly therefrom, and staples secured in the side rails and engaging the wire to sustain the same seated in the grooves, the said twisted ends of the wire being adapted to form anchoring projections extended beyond the lower bearing ends of the side rails whereby the said twisted ends will bite into the foundation to prevent the slipping of the ladder.

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

GEORGE W. REED.

Witnesses:

A. H. DEWEY,
HENRY M. PARMELE.