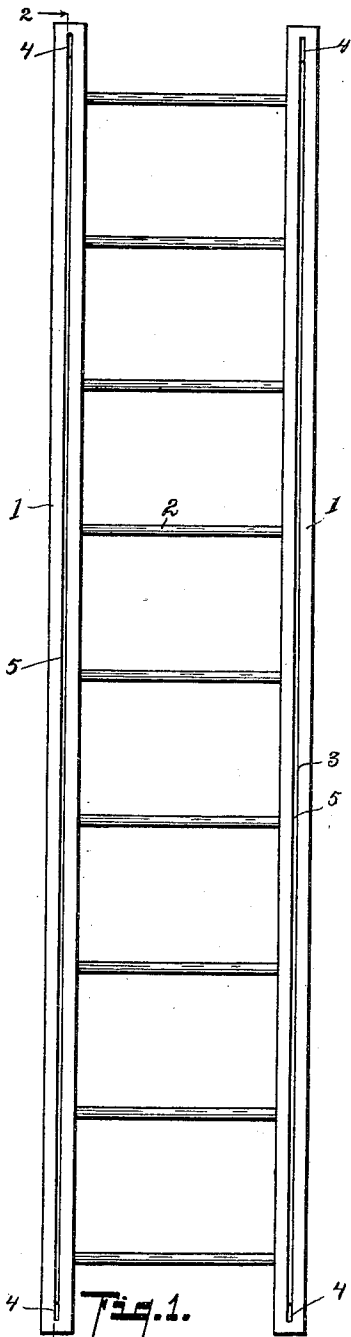


A. P. BOYER.
TRUSSED LADDER.
APPLICATION FILED SEPT. 1, 1908.

922,847.

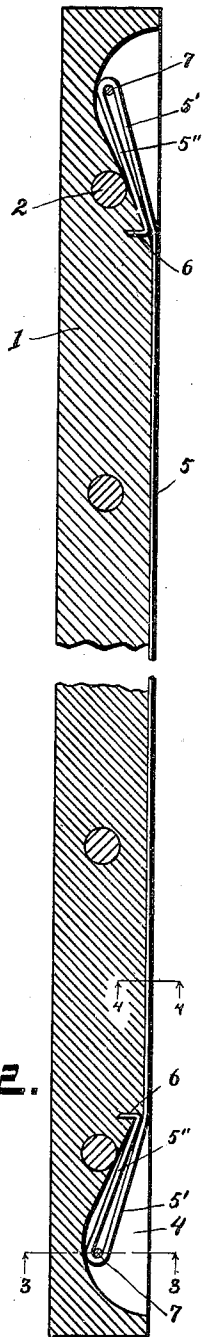
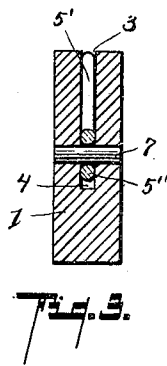
Patented May 25, 1909.



Witnesses
Clara E. Braden
Gertrude Tallman



Fig. 2.



Inventor

By

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UNITED STATES PATENT OFFICE.

ALLEN P. BOYER, OF GOSHEN, INDIANA.

TRUSSED LADDER.

No. 922,847.

Specification of Letters Patent.

Patented May 25, 1909.

Application filed September 1, 1908. Serial No. 451,153.

To all whom it may concern:

Be it known that I, ALLEN P. BOYER, a citizen of the United States, residing at Goshen, Elkhart county, Indiana, have invented certain new and useful Improvements in Trussed Ladders, of which the following is a specification.

This invention relates to improvements in trussed ladders.

The objects of the invention are to provide a convenient and expeditious means of bracing or trussing the risers of a ladder by means of a wire or cable, whereby the rigidity and strength of the same are greatly increased.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which—

Figure 1 is an elevation rear view of a ladder embodying the features of my invention. Fig. 2 is an enlarged detail vertical broken sectional view, taken on a line corresponding to line 2—2 of Fig. 1. Fig. 3 is an enlarged detail transverse sectional view, taken on a line corresponding to line 3—3 of Fig. 2. Fig. 4 is a similar enlarged detail sectional view, taken on a line corresponding to line 4—4 of Fig. 2.

In the drawing, the sectional views are taken looking in the direction of the little arrows at the ends of the section lines, and similar numerals of reference refer to similar parts throughout the several views.

Considering the numbered parts of the drawing, the risers 1—1 of the ladder are connected by the usual rungs 2, or it may be by suitable steps. The back side of each riser is grooved longitudinally at 3 to receive the truss rod wire or cable 5. Near each end of the riser a deep kerf is formed, the same being a continuation of the comparatively shallow groove 3, the groove being of only sufficient depth to receive and protect the rod or wire 5. The rod or wire 5 is arranged in this groove 4, and the ends are bent inwardly into the deep kerf 4 at 5' and recurved upon themselves at 5'', terminating

in a brad or prong 6 for driving into the material of the riser, as clearly appears in the sectional view in Fig. 2. The wire cable or loop may be formed with an eye at the end, and the brad be entirely dispensed with. Any effective means for securing the end of the wire in the kerf in the position indicated might be employed. The risers of the ladder are sprung into curved position toward their front when the pins 7 are inserted into the loops at each end, when it will be seen that the ladder is suitably braced and supported, the tension or tie rod being most effectively located and braced to secure the desired effect.

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

1. The combination in a ladder of a riser suitably grooved at its back, with a deeper kerf continuation of the groove at each end; a tie rod or cable arranged in the said groove and recurved upon itself with a projecting spur at the end arranged in said groove and kerf; and suitable pins through said riser and the loops at each end of said tie for securing the same under tension, as specified.

2. The combination in a ladder of a riser suitably grooved at its back with a deeper kerf continuation of the groove at each end; a tie rod arranged in said groove and recurved upon itself with an integral brad projecting at the end securing the same to said riser, the recurved portion being arranged in the said groove and kerf; and suitable pins through said riser and the loops at each end of said tie for securing the same under tension, as specified.

3. The combination in a ladder of a riser with a longitudinal kerf at each end; a tie rod or cable at the back of said riser and recurved upon itself with a projecting spur at the end arranged in said kerf; and suitable pins through said riser and the loops at each end of said tie for securing the same under tension, as specified.

4. The combination in a ladder of a riser with a longitudinal kerf at each end; a tie rod or cable at the back of said riser looped at each end; and a suitable pin through said riser and said loops for the purpose of securing the same under tension, as specified.

5. The combination in a ladder of a riser with a longitudinal kerf at the end; a tie rod or cable arranged longitudinally of said riser looped at its ends and extending into the

said kerf; and a suitable pin through said riser and loop for securing the said tie rod within the said kerf.

6. The combination in a ladder of a riser
5 with a longitudinal kerf at each end; a tie rod arranged at the back of said riser and looped at its ends with an integral spur projecting at the end securing the same to said riser, the looped portions being arranged in

the said kerfs at each end of said tie for se- 10
curing the same under tension, as specified.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

ALLEN P. BOYER. [L. S.]

Witnesses:

MAYNARD H. HOOVER,
MELVIN E. HARTER.