No. 847,205. PATENTED MAR. 12, 1907.

E. ROWE.

STEP LADDER BRACE.

APPLICATION FILED JULY 25, 1906.

Fig. 1.

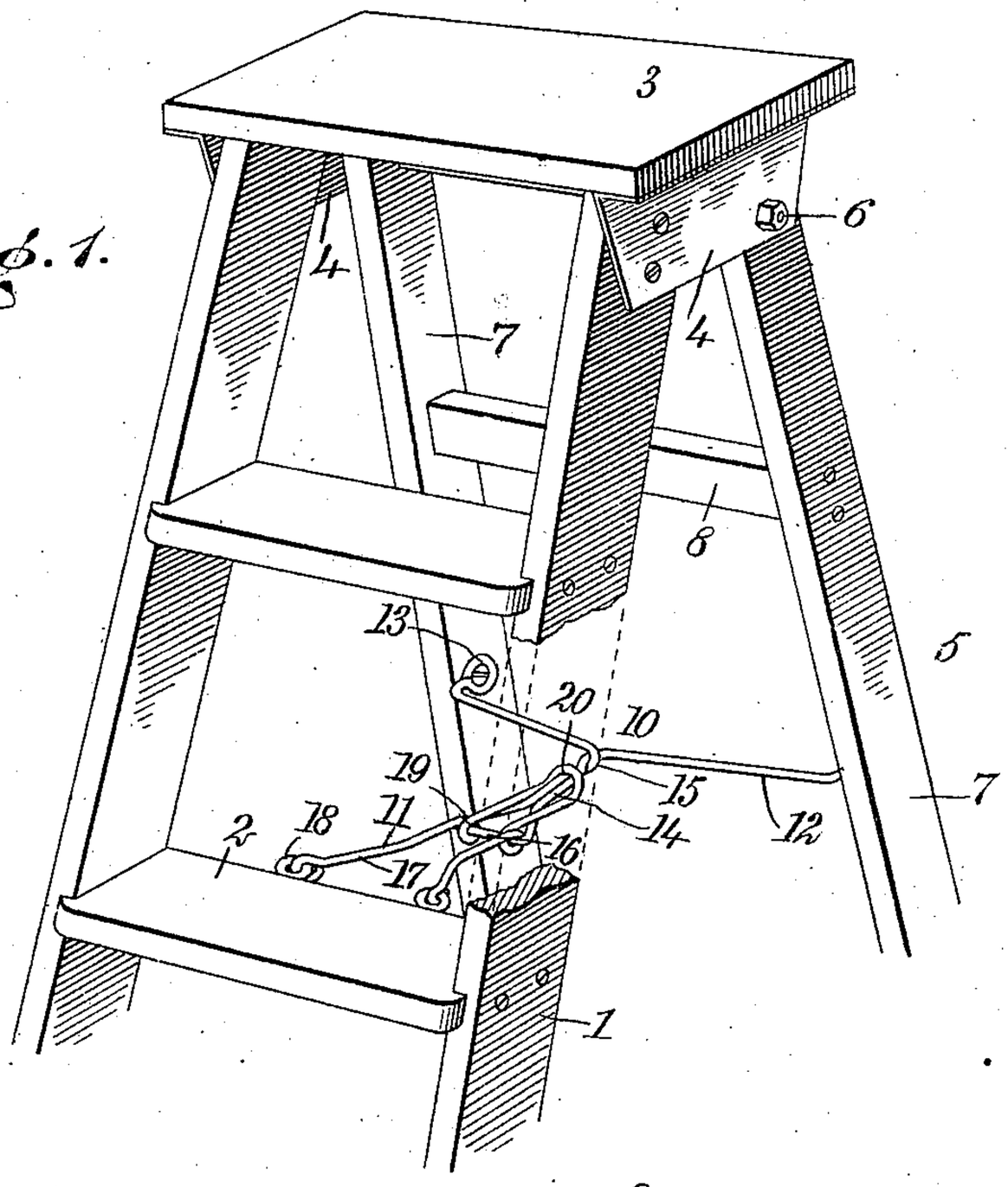
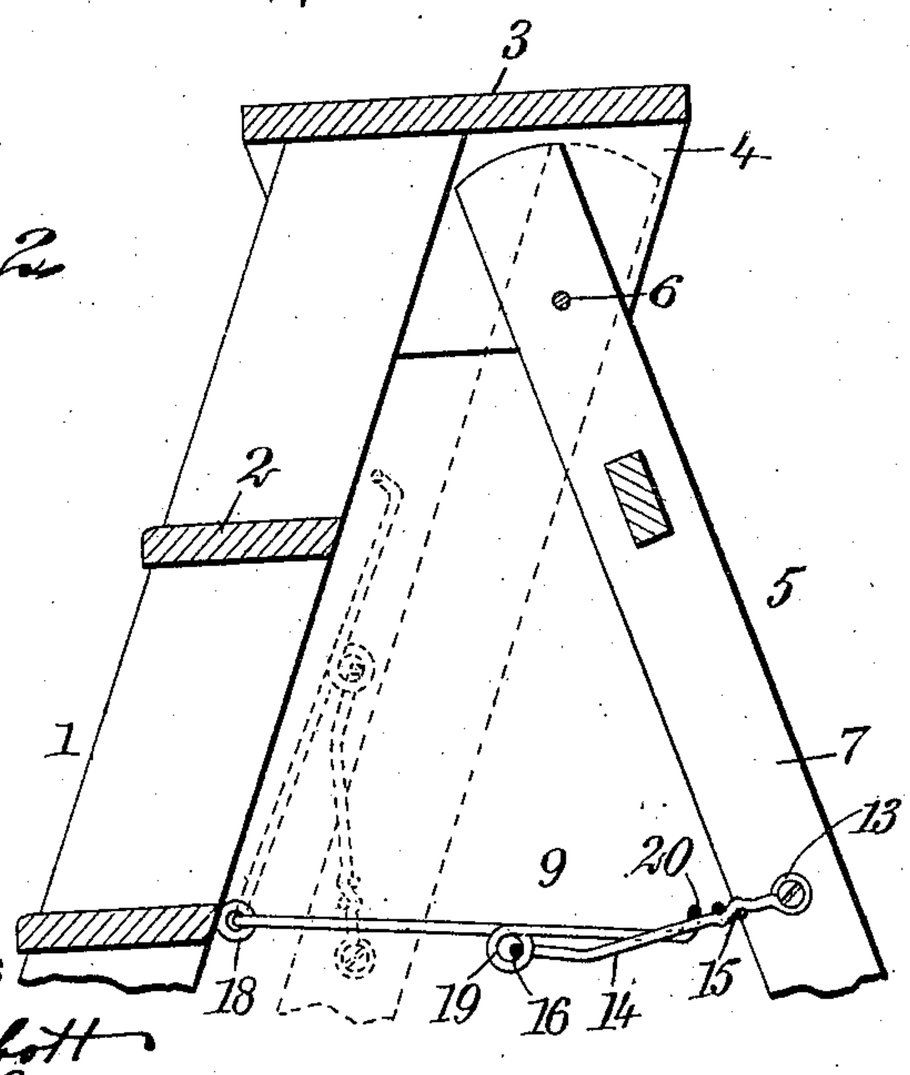


Fig. 2.



WITNESSES

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STEP-LADDER BRACE.

No. 847,205. Specification of Letters Patent. Patented March 12, 1907.

Application filed July 25, 1906. Serial No. 327,609.

To all whom it may concern:

Be it known that I, EDWARD ROWE, a citizen of the United States, and a resident of Indiana, in the county of Indiana and State of Pennsylvania, have invented a new and Improved Step-Ladder Brace, of which the following is a full, clear, and exact description.

This invention relates to step-ladders; and the object of the invention is to produce a brace of simple construction which is adapted to brace the legs of the step-ladder so as to hold the same in upright position.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective of the upper portion of a ladder provided with a brace constructed in accordance with my invention. Fig. 2 is a vertical section through the upper portion of the ladder, and further illustrating the brace and the manner in which the ladder may be folded up.

Referring more particularly to the parts, 1 represents the body of the ladder, provided with the usual steps 2 and attached rigidly to a top board 3 through the medium of bracket-plates 4. To these bracket-plates 4 a leg-frame 5 is pivotally attached at 6, the said leg-frame comprising a pair of legs 7, connected by a rigid horizontal brace 8. The step-ladder is adapted to be opened into the position shown in Fig. 1 when set upright.

In order to brace the leg-frame 5 and hold the same in a fixed position, I provide a brace 9. This brace is adapted to be formed entirely of wire and comprises a link 10 and a link 11. The link 10 is formed with divergent arms 12, the extremities whereof are formed into eyes 13, which are pivotally attached to the inner sides of the legs 7, as shown. The middle portion of the link 10 is formed into a forwardly-projecting tongue 14, which is twisted at the root 15 thereof, as shown, the outer portion of the tongue being formed of two substantially-parallel bars, which diverge at their extremities so as to present a transversely-disposed wrist-pin 16. This link 10 is preferably formed of a single piece of wire, as shown. The forward link 11 presents two substantially parallel arms 17, which diverge forwardly and are attached to eyebolts 18, which eyebolts are preferably screwed into the rear edge of one of the steps 2, as indicated. At a suitable point the arms 17 are twisted to form eyes 19 around the wrist-pin 16, and beyond this point the arms continue substantially parallel with each other and are bent upwardly at their extremities so as to form a connecting bight or shoe 20. When the brace is in its extended position, as shown in Fig. 1, this bight or shoe 20 engages the shank of the tongue 14.

Referring to Fig. 2, it will be seen that the wrist-pin 16 is depressed below the line connecting the eyebolts 18 with the shoe 20, so that a force tending to spread the legs of the ladder will not operate to "break" the joint of the brace. In other words, when the brace is extended it locks itself in the extended position. When the ladder is to be closed up, the joint of the brace is "broken," so that the leg-frame may fall forwardly against the inner side of the ladder-body, while the brace will move into the position in which it is ndicated in the dotted lines in Fig. 2. Evidently the brace may be very readily constructed of wire, formed as described. Furthermore, the resiliency of the brace, together with its manner of construction, brings about a desirable "give" or play, which has a tendency to prevent the ladder from "walking" or moving laterally when the weight upon it shifts.

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

1. A step-ladder-leg brace consisting of a pair of links formed of wire, one of said links presenting a forwardly-projecting tongue formed of bars spread apart and connected by an integral transversely-disposed wrist-pin, the other of said links presenting a pair of arms twisted about said wrist-pin to form eyes, the extremities of said arms beyond said wrist-pin being bent upwardly and integrally united by a transverse shoe engaging said tongue.

2. A step-ladder-leg brace, consisting of a pair of links formed of wire, one of said links having oppositely-extending arms twisted together to form a forwardly-projecting tongue, said tongue presenting a transversely-disposed wrist-pin, the other of said links con-

sisting of a pair of arms twisted about said wrist-pin to form eyes, said arms beyond said wrist-pin extending substantially parallel with each other, and having their extremities turned upwardly, forming a curved shoe engaging said tongue.

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

EDWARD ROWE.

Witnesses:
G. W. ROOP,
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