

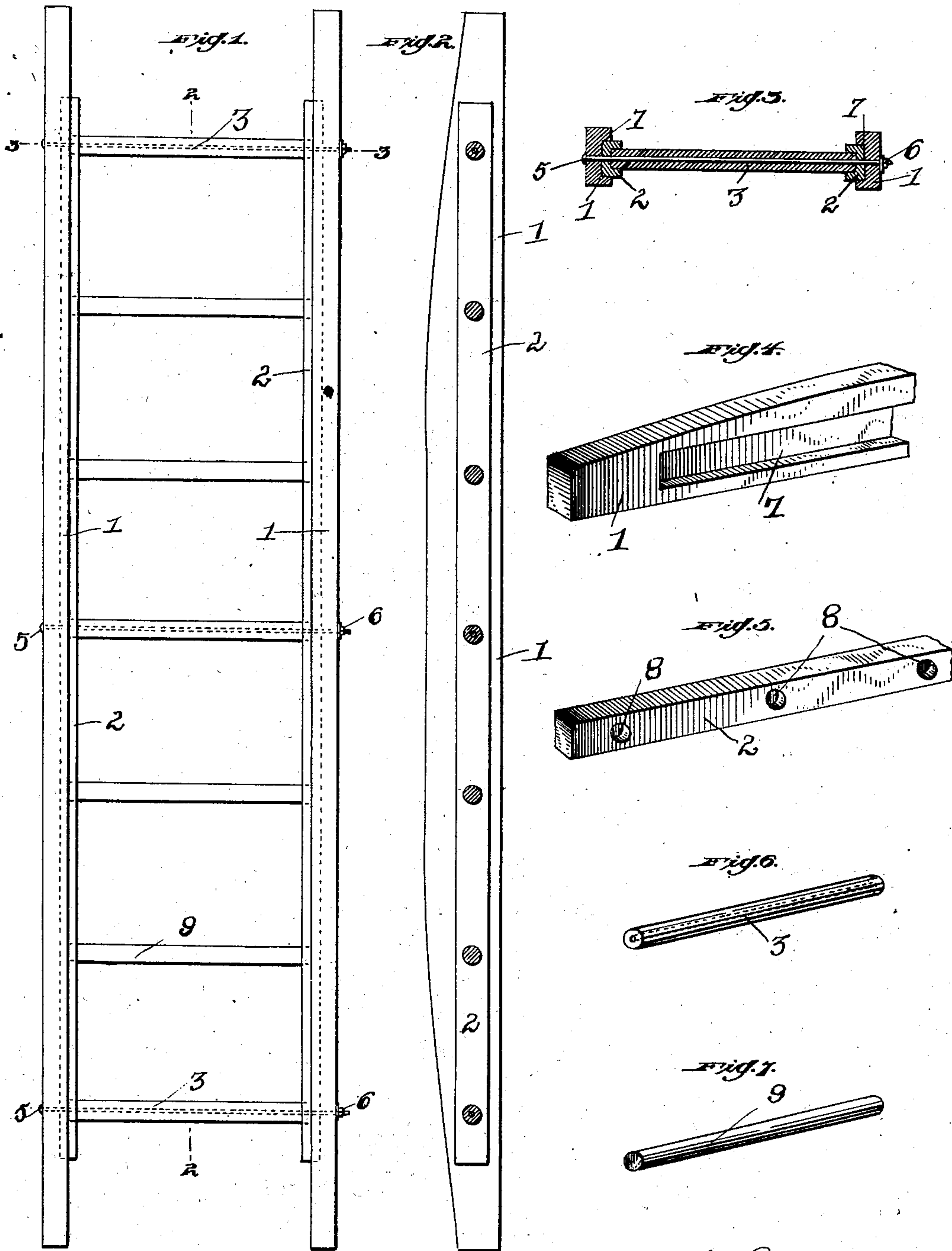
No. 721,298.

PATENTED FEB. 24, 1903.

E. L. HARMON.  
SWINGING LADDER.

APPLICATION FILED DEC. 30, 1901.

NO MODEL.



Witnesses:

J. B. Appleman.  
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E. L. Harmon Inventor  
By C. D. Lewis

Atty.

# UNITED STATES PATENT OFFICE.

ELMER LEE HARMON, OF ALLEGHENY, PENNSYLVANIA.

## SWINGING LADDER.

SPECIFICATION forming part of Letters Patent No. 721,298, dated February 24, 1903.

Application filed December 30, 1901. Serial No. 87,731. (No model.)

*To all whom it may concern:*

Be it known that I, ELMER LEE HARMON, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Swinging Ladders, of which improvement the following is a specification.

This invention relates to an improved swinging ladder for painters' use; and it consists in the certain details of construction and combination of parts, as will be fully described hereinafter.

The object of the invention is to provide a strong durable ladder of the class above mentioned at a small cost and also to construct the same in a manner that will admit of the ladder being taken apart for shipment.

In the accompanying drawings, Figure 1 is a face view of my improved swinging ladder, the same being constructed and arranged in accordance with my invention. Fig. 2 is a side sectional elevation of the same, the said section being taken on the line 2 2 of Fig. 1. Fig. 3 is a cross-section taken on the line 3 3 of same figure. Fig. 4 is a perspective view of a portion of the lower or upper end of one of the standards or uprights, showing the grooves for the reception of the strengthening-piece. Fig. 5 is a perspective view of a portion of the said strengthening-piece. Fig. 6 is a perspective view of one of the hollow rungs of the ladder. Fig. 7 is a perspective view of one of the ordinary rungs used in the construction of the ladder.

To construct a swinging ladder in accordance with my invention, I first provide two standards 1, of a suitable length and formed with grooves 7, running in the direction of the length of the same. These grooves 7 extend almost the entire length of the standards 1 and are formed upon the inner side of each. Placed within the grooves 7 are strips of wood 2 of a greater thickness than the depths of the said grooves. These strengthening-strips are secured in position by means of glue. Formed at regular intervals along the length of the strips 2 are a series of an-

nular openings 8, the one registering opposite the other, and are used for the reception of the ends of the several rungs 3 and 9. These rungs consist of cylindrical pieces of wood of equal length, the ends of which are arranged in the openings 8, above mentioned. The top, bottom, and middle rungs 3 are provided with a central bore, through which are passed bolts 5, having suitable nuts 6, by means of which the two standards 1 are held securely together. By means of this construction of a ladder the same is greatly strengthened, and when used for the purpose described lightness is one of the essential features.

The ladder may be taken down for the purpose of shipment by removing the nuts 6 and withdrawing the bolts 5.

Slight modifications may be made in the general construction without departing from the spirit of the invention.

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

A device of the type set forth, comprising a pair of standards each being grooved on its inner face through the length thereof with the groove terminating in proximity to the ends of the standard, strips of wood received within said grooves and protruding for a distance beyond the inner faces of said standards, the ends of said strips engaging the end walls formed by said grooves in the standards, the inner faces of said strips having openings formed therein extending but partially into said strips, rungs having their ends seated within said apertures in the strips, two or more of said rungs having central bores, and bolts passing through said bores, strips and standards and nuts on the ends of the bolts for securing the previously-mentioned parts in their assembled position.

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

ELMER LEE HARMON.

In presence of—

LOUIS MOESER,  
M. HUNTER.