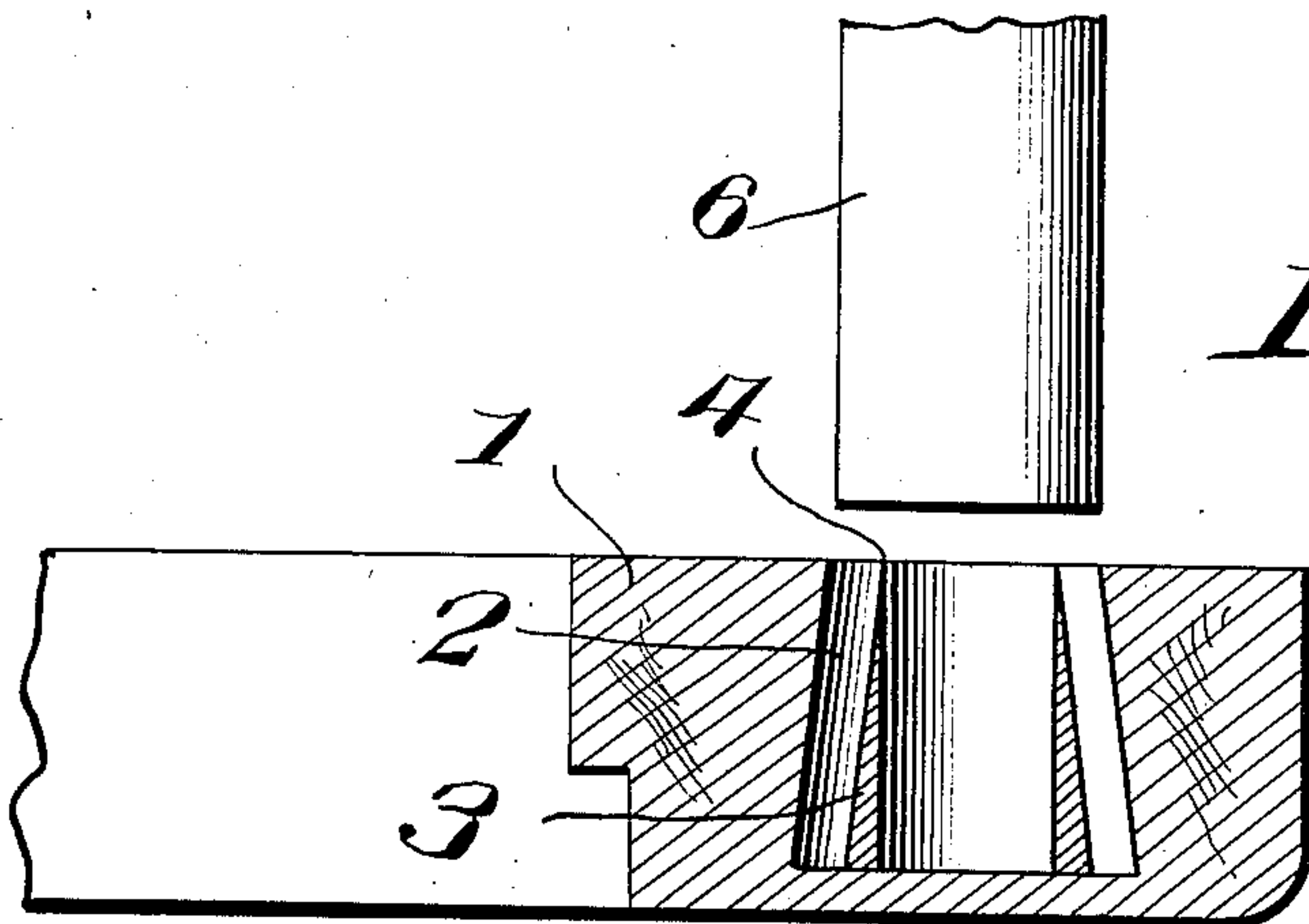


No. 879,382.

PATENTED FEB. 18, 1908.

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MORTISE AND TENON.

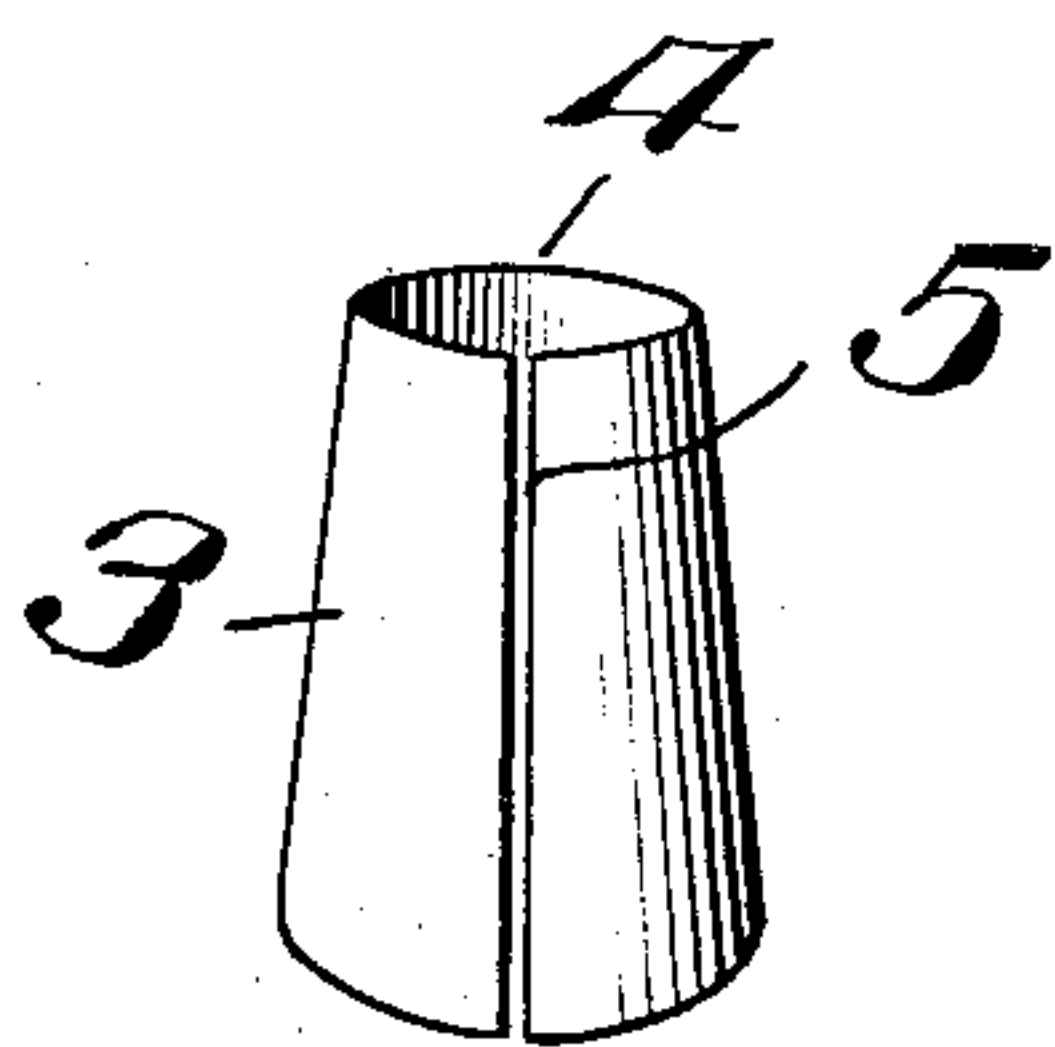
APPLICATION FILED SEPT. 1, 1906. RENEWED JULY 26, 1907.



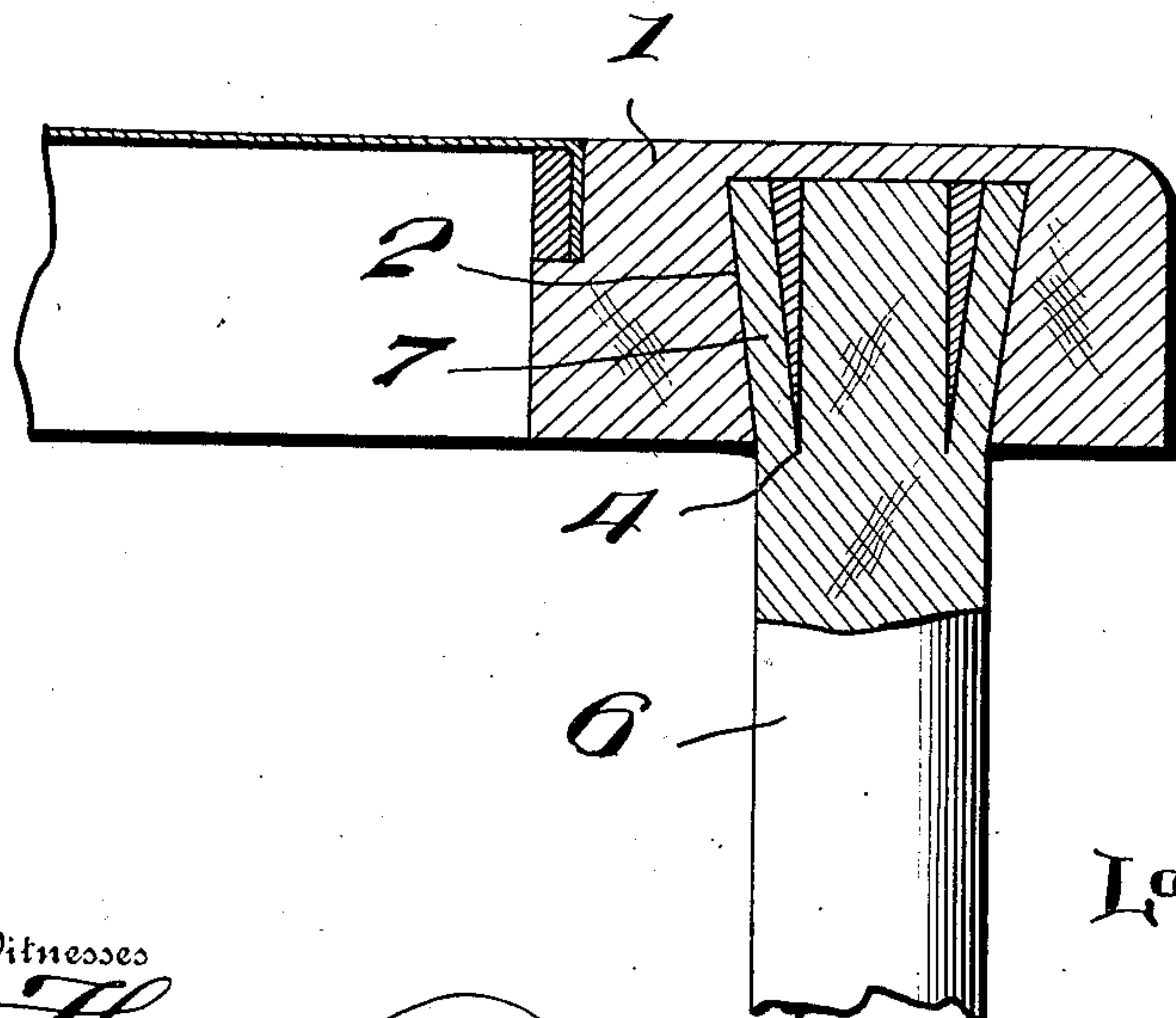
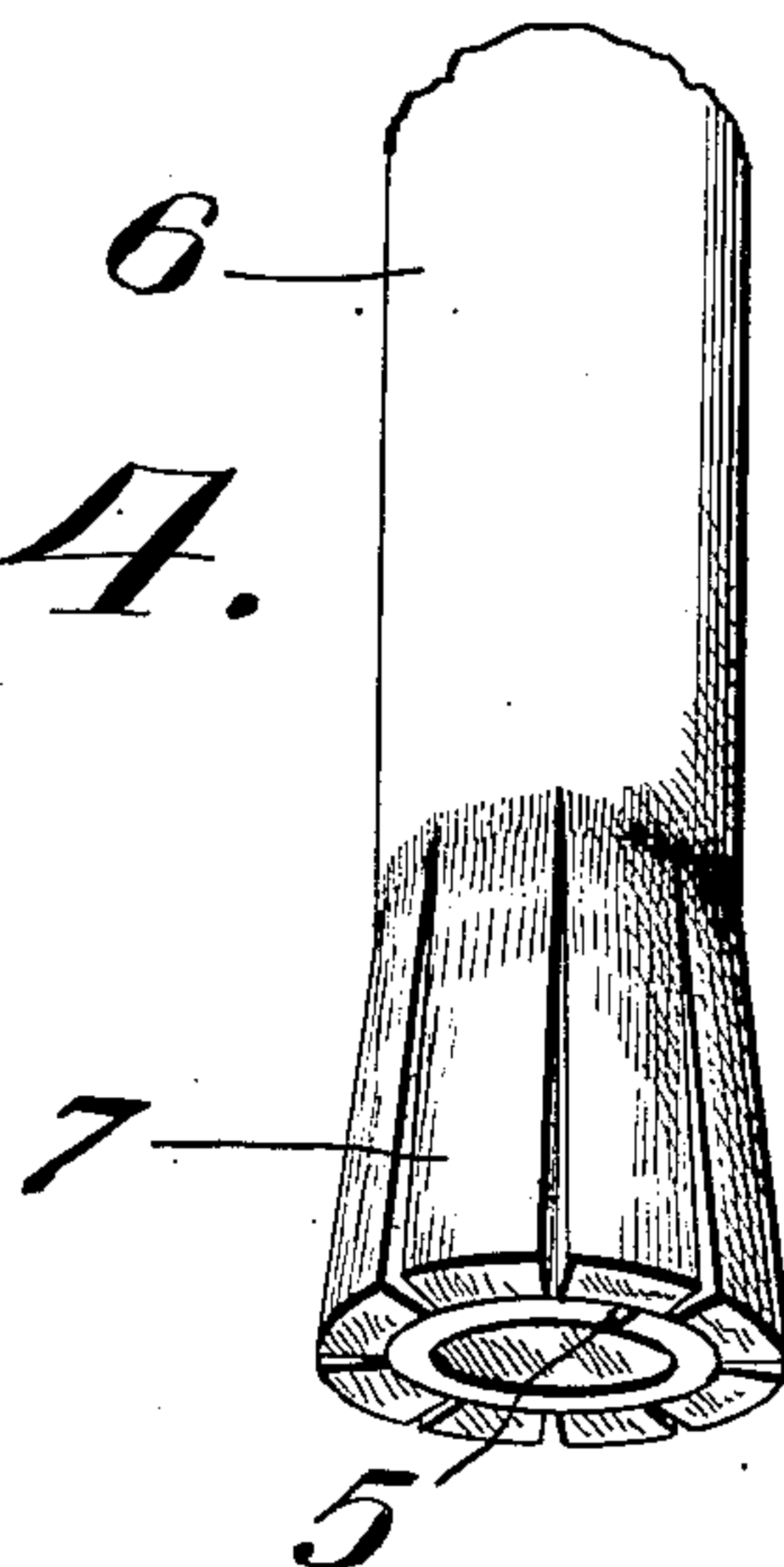
*Fig. 1.*

*Fig. 3.*

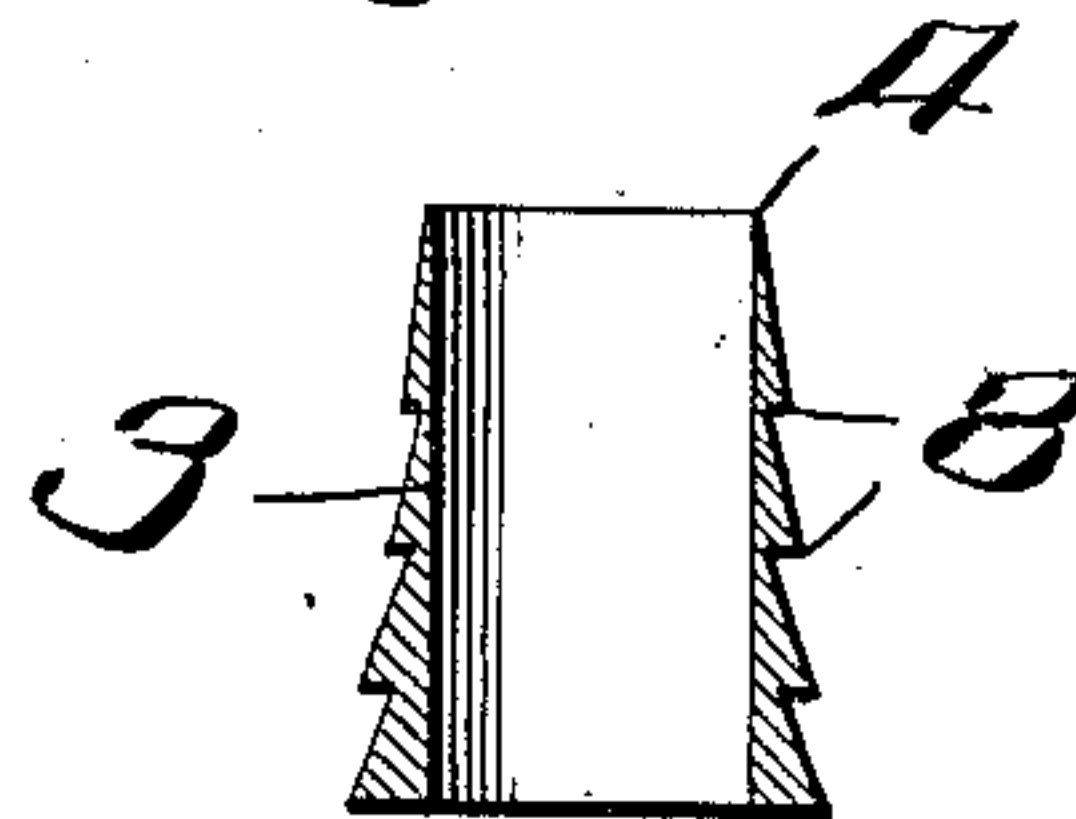
*Fig. 4.*



*Fig. 2.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

LAWRENCE P. HARRIS, OF TERRELL, TEXAS.

## MORTISE AND TENON.

No. 879,382.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed September 1, 1906, Serial No. 333,016. Renewed July 26, 1907. Serial No. 385,708.

*To all whom it may concern:*

Be it known that I, LAWRENCE P. HARRIS, a citizen of the United States, residing at Terrell, in the county of Kaufman and State of Texas, have invented certain new and useful Improvements in Mortises and Tenons; 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 new and useful improvements in mortises and tenons, and more particularly to that class adapted to be used in securing certain parts of furniture together, such as securing chair legs to the bottom of a chair or table legs to the table top and the like, and my prime object is to provide a suitable mortise, the inner end of which is of greater diameter than the outer end thereof and the wall of the mortise tapered outwardly from its lower end to its upper end.

A further object is to provide means for entering the ends of the supports inserted into the mortise and causing the same to spread and be held tightly impinged against the surrounding walls of the mortise.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings which are made a part of this application: Figure 1 is a sectional view of a portion of a chair frame showing the supporting leg ready to be inserted into the socket or mortise in the frame. Fig. 2 is a similar view showing the leg secured within the mortise. Fig. 3 is a perspective view of one form of a wedge employed for separating the ends of the legs and causing the same to tightly wedge within the mortise. Fig. 4 is a perspective view of the chair leg showing the wedge seated therein, the chair leg being removed from the chair frame, and, Fig. 5 is a sectional view through a slightly modified form of wedge.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates the frame of a chair or the like, which is provided at suitable points with mortises 2, said mortises extending into the frame 1 from the lower side thereof and to a point near the upper surface of the frame, said mortises increasing in diameter from the lower to the upper end thereof, so that an

article disposed thereinto can be forced outwardly to increase the size thereof, and thereby securely fasten the same within the mortise.

Disposed within the mortise 2 is a tubular wedge 3, one end of which is preferably brought to an edge as at 4, while the material at the opposite end thereof is much thicker thereby, forming a tapered or substantially conical outer surface for the wedge, and the wedge is also severed from end to end as at 5, whereby the wedge will be permitted to yield when being driven into the article to be secured within the mortise. The usual form of tenon 7 is formed at the upper end of the supporting leg 6 which is disposed into the mortise 2, the wedge 3 entering the end of the tenon and forcing the outer portion thereof into engagement with the walls of the mortises, thereby forming a lock for the leg. By this construction it will be seen that when the tenon 7 is forced into the mortise 2, that the outer edge of the tenon will be split and forced into engagement with the tapered walls of the mortise 2, thereby firmly securing the tenons in the mortises.

In Fig. 5 of the drawing I have shown a slightly modified form of wedge, in which the outer surface thereof is stepped at intervals, so that when the same is driven into the tenon, particles of the fiber will be seated in the grooves 8 formed by stepping the outer surface of the wedge to more readily hold the wedge into engagement with the tenon. In assembling the supporting legs 6 and the other portions of the chair, the frame of the chair is inverted, disposing the mouth of the mortises upward, after which the wedges 3 are concentrically disposed within the mortises and the tenon portion of the leg driven into the mortises, the wedges forcing the outer portion of the tenon outwardly and into engagement with the tapered walls of the mortises, thereby permanently securing the leg to the chair frame, and while I have shown and described the device as being employed in connection with chairs, it will be readily understood that the same may be employed in connection with any article depending upon a mortise and tenon for securing the parts together.

What I claim is:

The combination with a frame having a mortise therein, the walls of which are tapered; of a tenon adapted to enter said mortise, a tubular wedge having an edge at one

end thereof and split from end to end where-  
by the same may yield, said wedge being  
concentrically disposed in the mortise and  
adapted to enter the tenon and force the  
5 outer portion thereof into engagement with  
the tapered walls of the mortise.

In testimony whereof I have signed my

name to this specification in the presence of  
two subscribing witnesses.

LAWRENCE P. HARRIS.

Witnesses:

CONRAD K. PATTON,  
J. W. COWLES.