M. HOFHEIMER.

PROCESS OF MAKING TENON JOINTS.

APPLICATION FILED DEC. 15, 1908.

917,433. Patented Apr. 6, 1909.

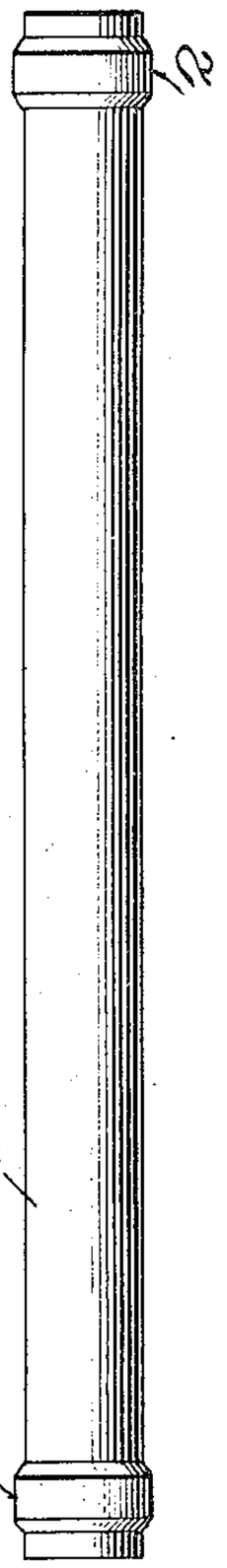

Fig. 1.

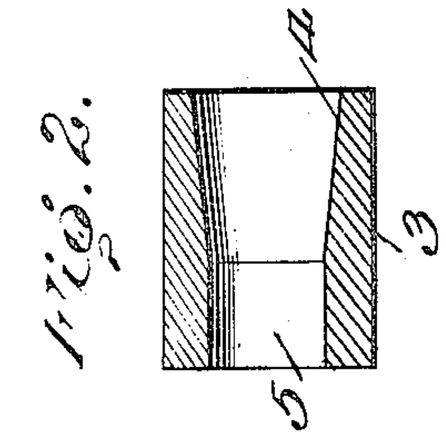

Fig. 2.

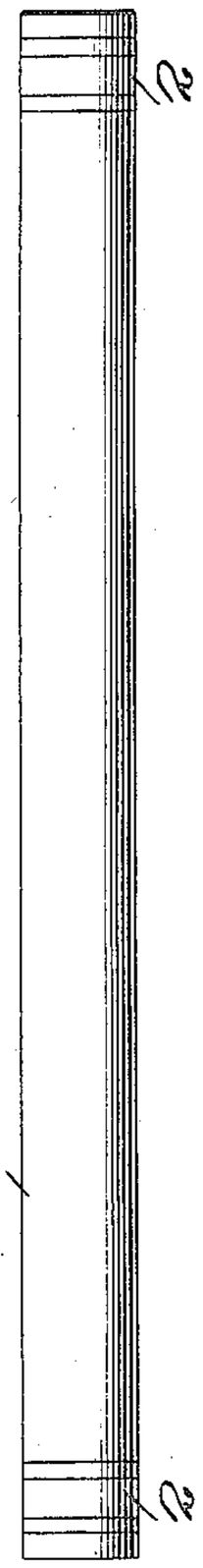

Fig. 3.

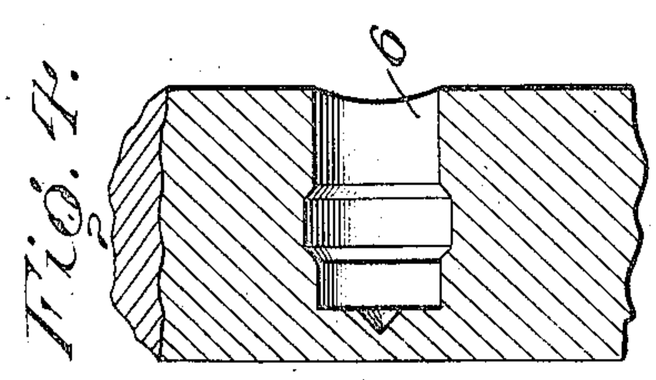

Fig. 4.

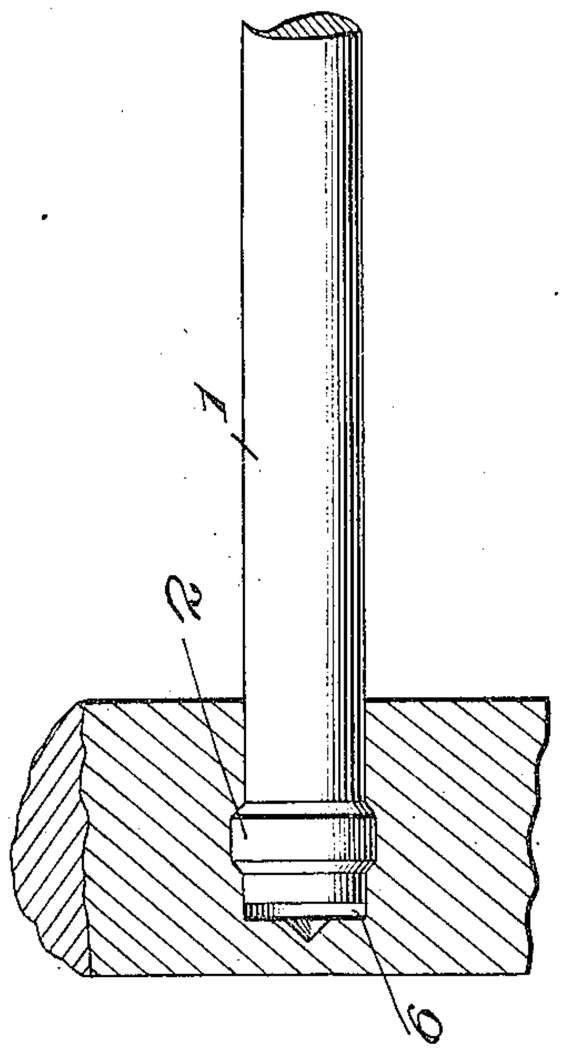

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

MAURICE HOFHEIMER, OF BALTIMORE, MARYLAND.

PROCESS OF MAKING TENON-JOINTS.

No. 917,433. Specification of Letters Patent. Patented April 6, 1909.

Application filed December 15, 1908. Serial No. 467,636.

To all whom it may concern:

Be it known that I, MAURICE HOFHEIMER, of Baltimore, in the county of Baltimore City and State of Maryland, have invented certain new and useful Improvements in Processes of Making Tenon-Joints; 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.

The primary object of this invention is to provide an improved process for forming joint members of chairs or other wooden articles, and a secondary object is to enable the parts to be prepared in quantities ready for use as desired.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 shows a rung or stretcher with a tenon at each end. Fig. 2 is a sectional view of a tenon-deforming device. Fig. 3 shows the tenon after being deformed. Fig. 4 shows in section a chair leg socket corresponding to the form of tenon shown in Fig. 1. Fig. 5 is a sectional view showing the tenon within the socket.

In a pending application for Letters Patent filed May 5, 1908, Serial No. 431,029 I described a process for treating the joint-members of chairs and other wooden articles which, briefly stated, consists in softening the tenon and then compressing the enlarged portion thereof while being inserted into an undercut socket formed to accommodate the tenon in its expanded shape.

When it is desirable to prepare a great many chair rungs at one time, the chairs being made up a few at a time, or as required, the tenon of the rung or stretcher 1 is preferably formed as shown, that is, a circumferential boss or enlargement 2 surrounds the cylindrical body.

The tenon is first softened by subjecting it to the action of water, the best results being obtained with hot water, and is then driven into a compressor or deformer, which is shown in the form of a tube 3, having a tapered entrance bore 4 which terminates in a cylindrical bore 5 of about the same diameter as the body of the tenon. When the latter is driven into the deformer the boss 2 is compressed to the size of the cylindrical part of the tube so that the entire tenon assumes a uniform cylindrical shape, as shown in Fig. 3. The tenon is allowed to remain in the deformer until the wood becomes dry, when it may be withdrawn and handled without detriment to the deformed tenon which retains its cylindrical shape as long as the wood remains dry. When it is desired to join the parts the tenon is dipped in water and inserted in the socket 6, which latter is undercut and has a conformation corresponding to that of the tenon. In a few moments the water, penetrating the wood, causes the deformed or compressed boss 2 to expand to its original or natural form so that the tenon will be locked in the socket, as shown in Fig. 5. If glue is used in the joints the water therein, as it is absorbed by the wood, will be sufficient to cause the return of the deformed or compressed boss to its natural shape.

While my present invention, like that disclosed in the before-noted application for patent, possesses the advantage of saving the trouble arising from chair rungs coming out of place and forms a practically inseparable joint, it has the further advantage of enabling rungs or stretchers to be prepared in quantities ready for use as required.

I claim as my invention:—

1. The herein-described process of making wood-joints, which consists in forming an undercut socket in one member, and a tenon on another member, such tenon having an enlarged portion, softening the tenon, and then compressing the enlarged portion thereof to the normal diameter of the body of the tenon and allowing it to remain under such compression until hardened to permit it to be inserted into said socket.

2. The herein-described process of making wood-joints, which consists in forming an undercut socket in one member, and a tenon on another member, such tenon having an enlarged portion, softening the tenon, and then compressing the enlarged portion there-

of to the normal diameter of the body of the tenon and allowing it to remain under such compression until hardened to permit it to be inserted into said socket, and then again softening the tenon to permit the expansion of the enlarged portion of the tenon within the socket.

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

MAURICE HOFHEIMER.

Witnesses:
JAS. L. MURRILL,
WM. G. THUMM.