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E. TYDEN.

PROCESS OF VENEERING COLUMNS.

APPLICATION FILED JUNE 6, 1902.

NO MODEL.

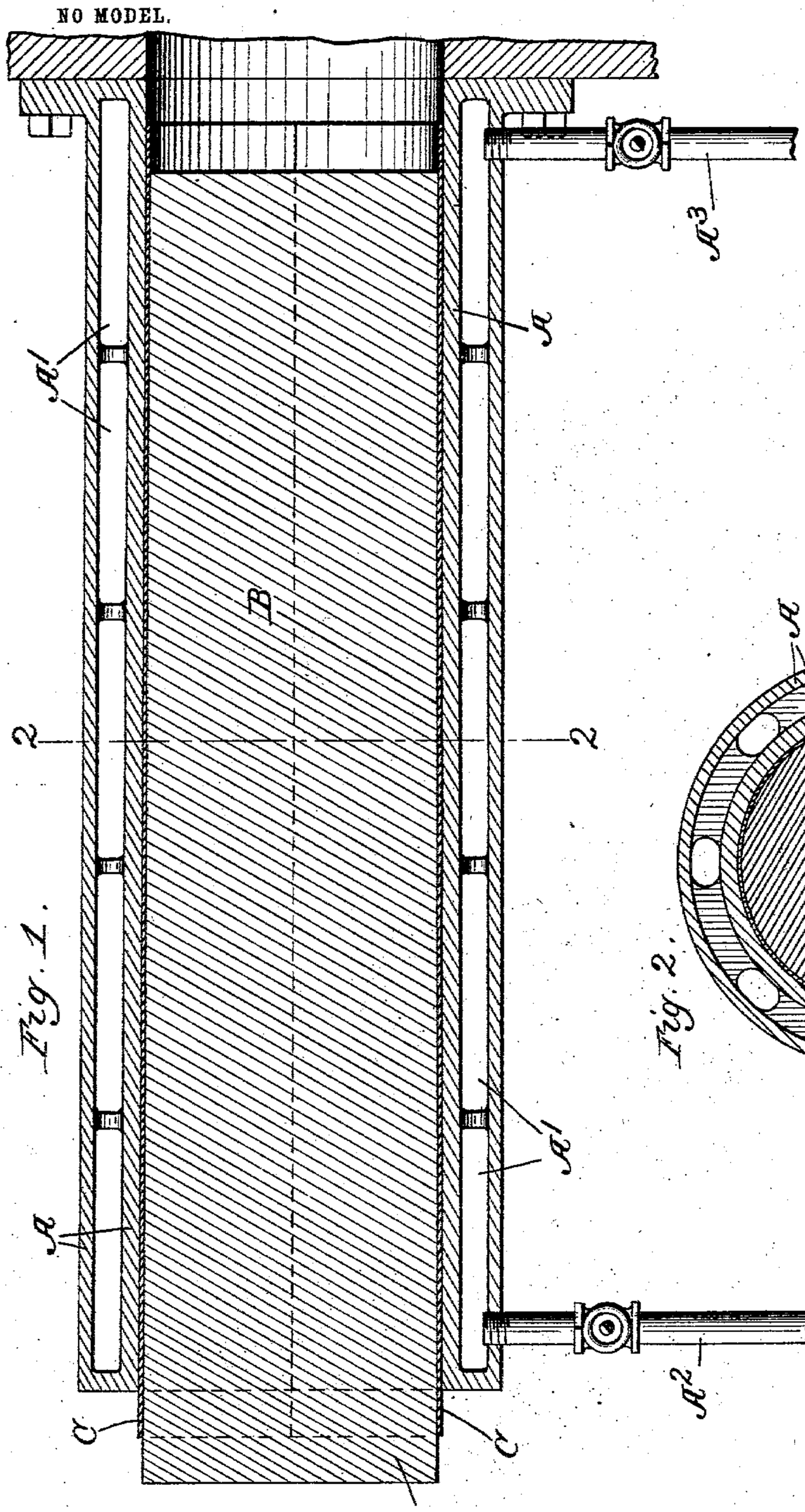

Fig. 1.

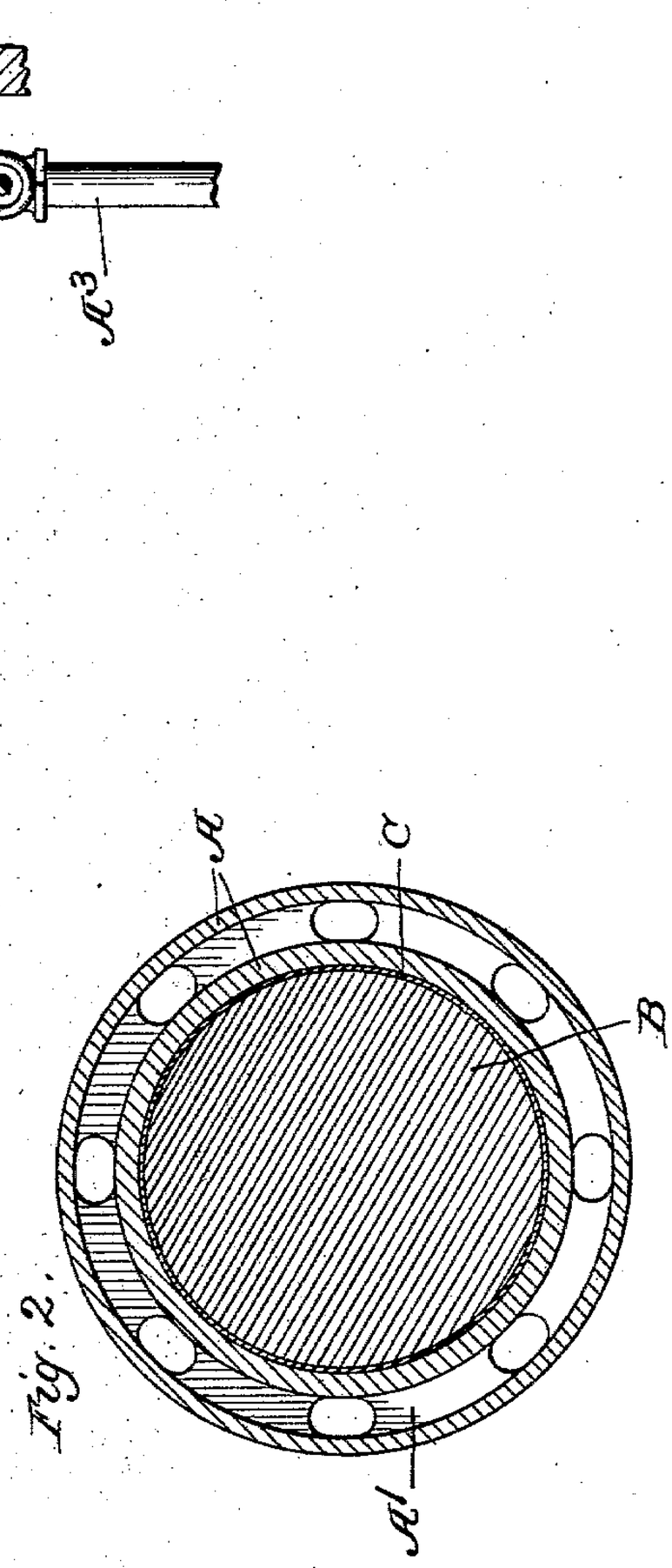

Fig. 2.

Witnesses,
Edward F. Wray.
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Emil Tyden
by Burton Burton.
his Atty's.

UNITED STATES PATENT OFFICE.

EMIL TYDEN, OF HASTINGS, MICHIGAN.

PROCESS OF VENEERING COLUMNS.

SPECIFICATION forming part of Letters Patent No. 720,760, dated February 17, 1903.

Application filed June 6, 1902. Serial No. 110,562. (No model.)

To all whom it may concern:

Be it known that I, EMIL TYDEN, a citizen of the United States, residing at Hastings, in the county of Barry and State of Michigan, have invented certain new and useful Improvements in the Process of Veneering Round or Rounded Columns, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The veneering of round columns for furniture is regarded by furniture-makers as among the least satisfactory of the many shop processes, because of the great difficulty experienced in two respects—first, making perfect contact for gluing over the entire surface of the foundation-wood and veneer; second, making a perfect butt-joint of the veneer edges at the line at which they meet after wrapping about the column. The difficulty in the first respect arises from the inequality of pressure which different parts of the circumference of the column will receive in any mold or jacket hitherto exployed for the purpose unless it is made of many sectional parts closed up radially. A two-part mold, for example, is calculated to give its full pressure only at the middle line of each part and to press the parts only tangentially—that is, with a wedging pressure at the sides—and if made slightly too narrow, in order to compensate by wedging what is lost in direct pressure at the side, the pressure intermediate the sides and middle is liable to be deficient. The difficulty in the second respect arises from the impossibility of so accurately measuring the veneer that it will exactly encompass the column, especially because it must be moistened in order to make it sufficiently flexible to be applied, and the swelling and shrinkage cannot be gaged with certainty and will not be uniform. The result is the necessity for patching at the junction-line of the veneer and for repairing "blisters"—spots where the adhesion is imperfect—which is done by puncturing the veneer and introducing fresh glue and again applying pressure, and these uncertainties and additional work make the expense so great and variable as to destroy all certainty of product, while the resulting profit is in a majority of cases unsatisfactory to a skilled workman.

The present invention is a method of veneering such articles as round columns by which these difficulties are avoided.

It consists—

First. In employing a rigid tubular jacket which, even for columns designed to be substantially cylindrical, is given a slight and practically invisible taper, one-sixteenth of an inch to the foot being ample even in columns of large diameter for furniture and less being adequate in smaller diameters.

Second. Making the foundation-wood with like taper.

Third. Cutting the veneer in the sheet with a corresponding taper. This can be done accurately, because the jacket being a permanent one for each form or size of column the coefficient of taper for the veneer-sheet can be absolutely calculated, and an invariable pattern—of sheet metal, if desired—can be made for the veneer to fit each jacket.

Fourth. Rolling the veneer into tubular form and inserting it endwise into the jacket and forcing it endwise therein until the edges are perfectly abutting throughout the length. The veneer being moistened to render it flexible can be forced outwardly against the jacket by the hand of the operator at all points where it may at first tend to buckle inward, and being thus convex outward the tendency of the endwise pressure as soon as the edges touch is to bulge it out into perfect contact with the jacket at all points of length and circumference.

Fifth. Applying proper adhesive (glue) to the surface of the foundation-wood or to the inner surface of the veneer, or both.

Sixth. Introducing the foundation endwise into the veneer-lined jacket and forcing it endwise therein with sufficient pressure to make perfect contact between the foundation and the veneer. In this action the endwise pressure on the foundation-wood also tends to drive the veneer endwise in the jacket when any further capacity for such endwise movement exists or may have been developed by slight shrinking which the veneer may have suffered after being itself independently forced into the jacket, as above described. In any event the result is perfect union of the whole surface of the veneer and foundation-wood in contact and a perfect butt-joint of the two veneer edges.

Seventh. Drying the column while it is tight in the jacket.

Eighth. Withdrawing the column endwise from the jacket. A little allowance should be made in the length of both the foundation and veneer to compensate for the slightly-varying thickness of different veneers, the varying compressibility of the foundation-wood, and the varying consistency of the glue, each of which variations may tend to make one column extend a little farther in than another of the same pattern before it will become tight in the veneer. The excess of either the foundation or the veneer at either end will then be trimmed off. In practice columns or rods will be made up of what may be termed "full lengths"—that is, the maximum lengths which can be conveniently handled or in which the jackets can be conveniently made—and these full lengths will be cut into short lengths for use, so that the maximum waste due to the allowance above mentioned will be at the ends of each full-length stick.

This process dispenses with any special expertness on the part of the workman, the veneer being cut to an unvarying pattern and the foundation being turned to a templet and the many manipulations being of the simplest sort.

For columns which are designed to appear tapered the molds will be made of the desired taper, and the process is not limited to strictly round columns—that is, cylindrical or conical—but may be employed with any form sufficiently rounded to permit the veneer to be applied to it by flexure in a continuous piece.

In the drawings, Figure 1 is a side elevation of a metal jacket of the character above described, which is preferably shown chambered for the circulation of steam within it to hasten the drying, the veneer and foundation-wood of a column being shown protruding from the jacket. Fig. 2 is a section at the line 2 2 on Fig. 1.

A is the rigid jacket, having a very slight interior taper from end to end. A′ represents steam-passages in the wall for heating it.

A^2 and A^3 represent, respectively, steam inlet and outlet connections.

B is the foundation-wood of a column, and C the veneer being applied thereto.

The drying need not be effected by the special means, though it is preferable to dry somewhat rapidly, and no disadvantages result in any case from doing so. Any suitable means may be employed for drying the jacket when it is desired to hasten the drying.

I claim—

The process of veneering round or rounded columns, which consists in employing a rigid tapering jacket; cutting the veneer and forming the foundation-wood with tapers corresponding to that of the jacket; introducing endwise into the jacket the veneer folded tubularly, and forcing it endwise therein until the edges abut; applying adhesive to the foundation or veneer; introducing the foundation-wood endwise into the veneer-lined jacket, and forcing it endwise therein until it is tight in the veneer; drying the column while thus tight in the jacket; and lastly, withdrawing the veneered column endwise from the jacket.

In testimony whereof I have hereunto set my hand, in the presence of two witnesses, at Hastings, Michigan, this 29th day of January, 1902.

EMIL TYDEN.

In presence of—
A. C. BROWN,
NORA COOPER.