No. 671,981. Patented Apr. 16, 1901.

E. S. STONE.

SECTIONAL WOOD COLUMN.

(Application filed Mar. 17, 1900.)

(No Model.)

Fig. 1

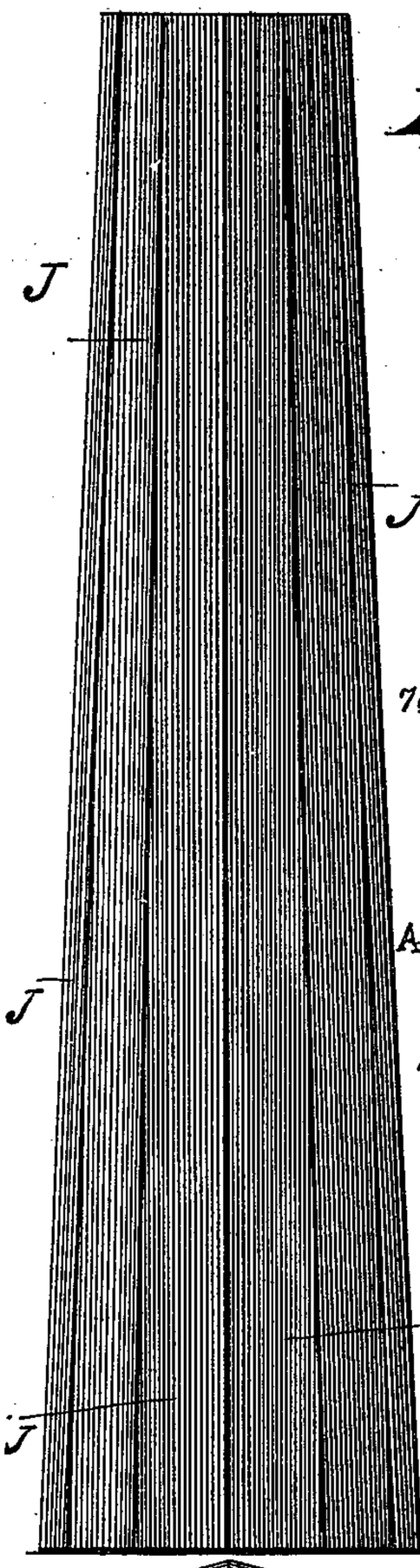


Fig. 4

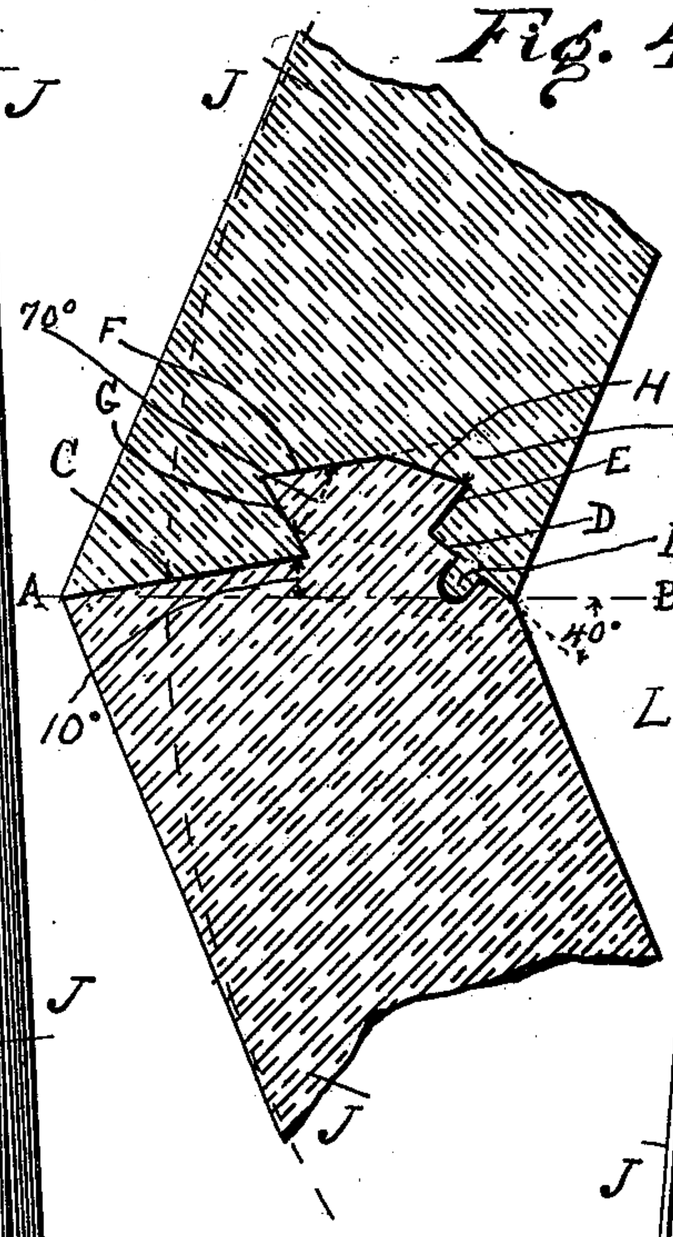


Fig. 3

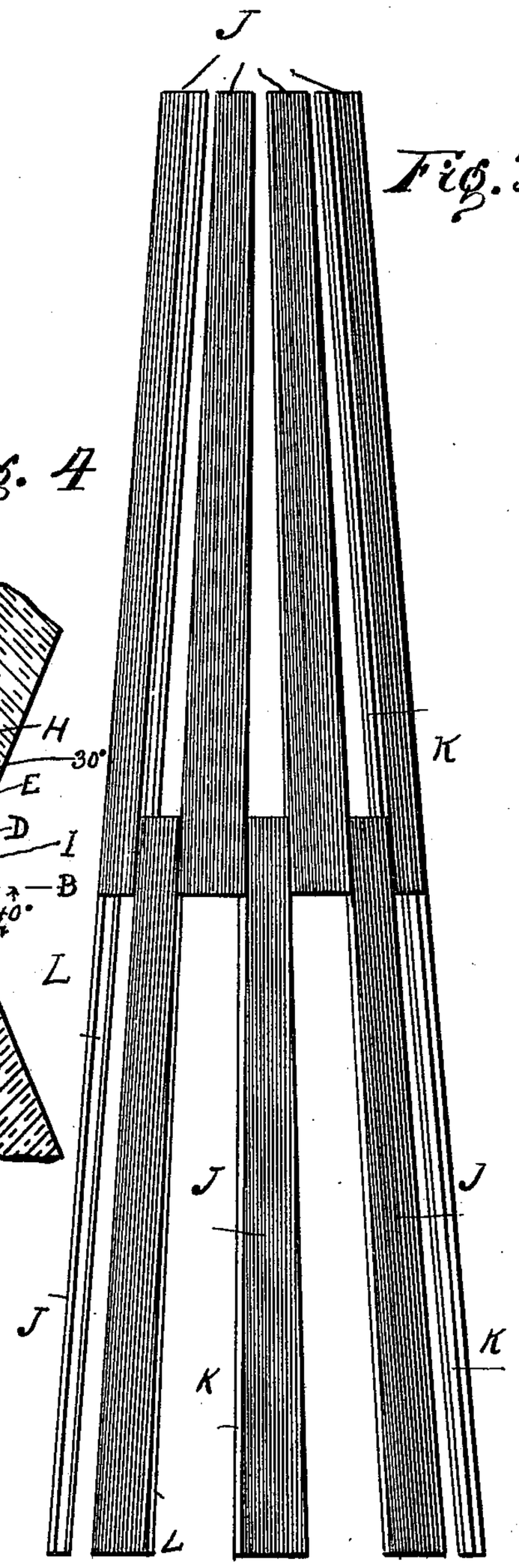
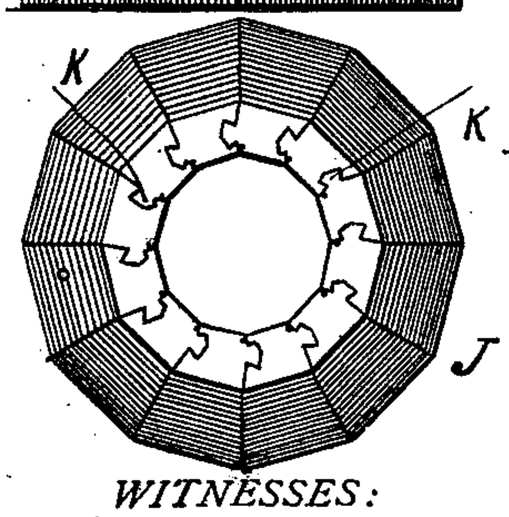


Fig. 2



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SECTIONAL WOOD COLUMN.

SPECIFICATION forming part of Letters Patent No. 671,981, dated April 16, 1901.

Application filed March 17, 1900. Serial No. 9,076. (No model.)

To all whom it may concern:

Be it known that I, ELIAS S. STONE, a citizen of the United States, residing at No. 167 Isabella street, Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Sectional Wood Columns; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in sectional wood columns.

The invention relates to that class of columns which are built up of a series of staves assembled in a circle and secured together.

The object of my invention is to provide a means of effectually locking the staves together without the use of nails or glue, and thus form a neat and tight joint which will not be liable to open by the shrinkage which takes place from exposure. I accomplish this in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a vertical side view of a column formed of staves joined together by my improved locking-joint. Fig. 2 is a plan view of the same. Fig 3 is a vertical side elevation showing the manner in which the columns are put together. Fig. 4 is an enlarged view of a portion of two of the staves, showing the locking-joint.

In the several views similar detail parts are designated by similar characters.

In the drawings I have shown a column of tapered form, which is constructed of a plurality of circumferentially-arranged staves J. A tongue K is formed upon one of the connecting edges of each stave, and upon the other edge is formed a groove to engage the tongue of the next stave.

In order to fully describe the locking-joint, reference is had to the enlarged view at Fig. 4, wherein A B represent a dotted radial line from the center of the column to the outer juncture of two staves. The line of connecting-surface C at the outer side of the tongue is formed at an angle of about ten degrees from the radial line, while the juncture-line D at the other side of the tongue is at an angle of about forty degrees from the radial line. The line E, forming one side of the tongue and groove, is formed at about an angle of forty-five degrees with the aforesaid line D. The line F, which forms a part of the tongue-top, is parallel with the aforesaid line C, and the line H, forming the remaining portion of the tongue-top, is formed on an angle of about thirty degrees with said line F. The opposite side of the tongue at G is formed at an angle of about seventy degrees from the line F. To insure greater strength to the inner connecting-surface at D, a small tongue I is formed upon the edge of the stave containing the main groove, which fits into a groove of corresponding shape in the connecting-stave. From practical experiments I have found that the joint formed in this manner is superior to that formed upon a true radial line, having a tongue and groove of the well-known "dovetail" form, as the various angles have a tendency to lock the joint firmly and to take up any shrinkage occurring from exposure.

The different angles may be varied in relation with one another in several ways, and, if desired, every alternate stave may be made with a groove in each edge and the adjacent staves provided with a tongue on each edge, or the column may be turned into a circular form without altering the principle involved.

In tapered columns constructed of a series of staves with locking-joints I have found it necessary to put the same together by inserting the upper ends of every alternate stave between the lower ends of the remaining ones, as illustrated in Fig. 3, and then forcing the staves together at one time by applying pressure to the ends. If an attempt were made to put a tapered column of this form together by joining all the staves together but one, it would be found that in order to insert the remaining stave in place it would be necessary to contract the column at the base to insert the small end of the stave. After the end of the stave is in this position it is driven in place and requires considerable labor. This method of contracting the column to insert the last stave results in forcing all the joints to yield, and if they have

been glued they will not again unite. By employing the principle illustrated in Fig. 3 a straining of the joints is prevented, with the result that each and every joint is perfect.

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

A wood column having an outer angular circumference and tapering upward, said column made up of wedge-shaped strips with tongue-and-groove edges which, when interlocked have their contiguous points of contact at one side of a radial line through the angles formed by the inner and outer meeting edges of the strips, each strip having on one edge an enlarged angular outlined tongue, and a right-angled shoulder adjacent thereto, which is grooved, and on its opposite edge an angular outlined recess to receive a similar-shaped tongue, and a tongue adjacent to said recess to enter a grooved shoulder, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ELIAS S. STONE.

Witnesses:

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