No. 775,365. PATENTED NOV. 22, 1904.

J. W. HARTMANN.

WOOD COLUMN.

APPLICATION FILED SEPT. 12, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

FIG. 1.

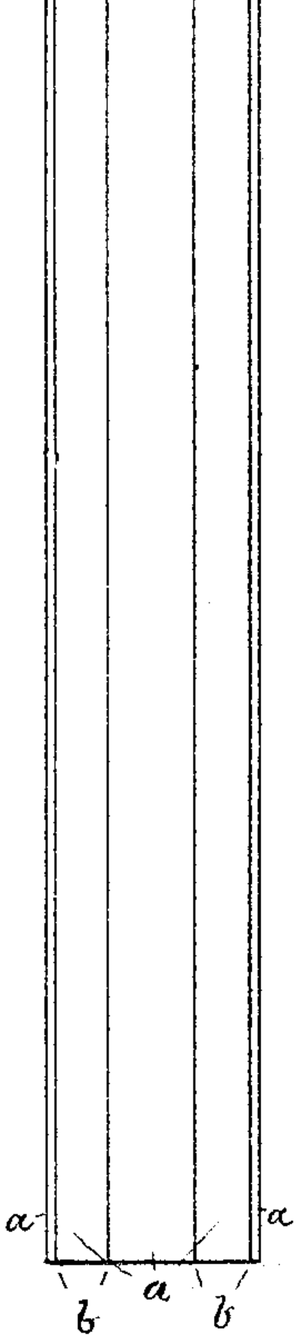


FIG. 2.

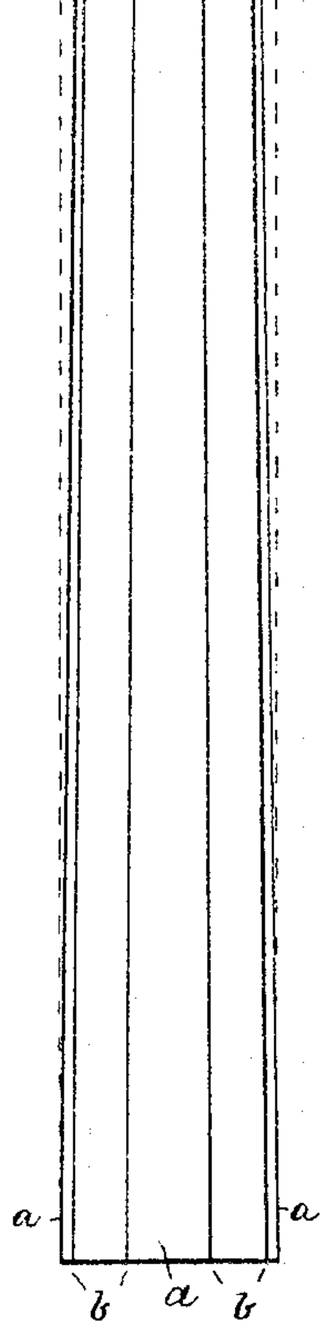


FIG. 3.

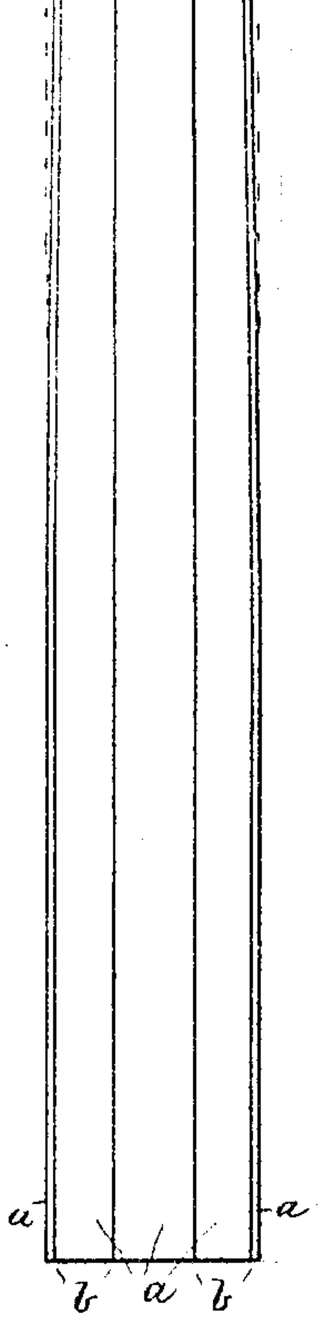
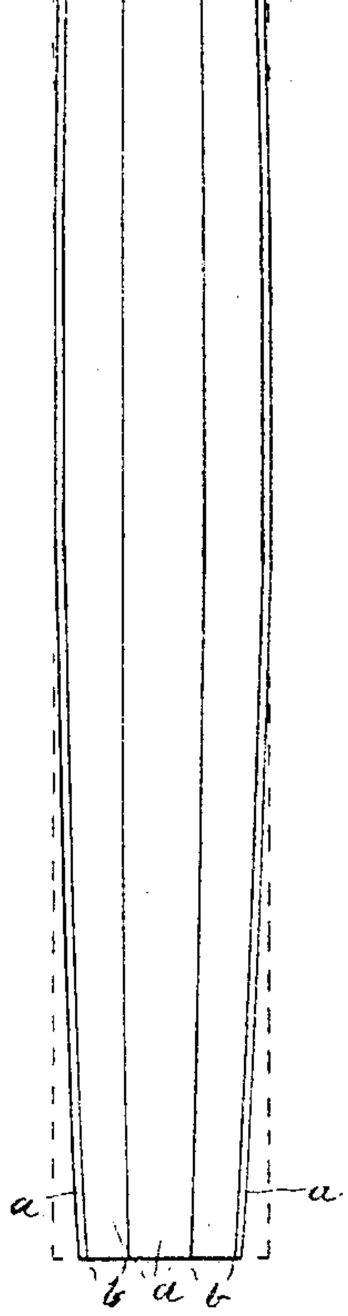


FIG. 4.



Witnesses

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NO MODEL. 2 SHEETS—SHEET 2.

FIG. 5.

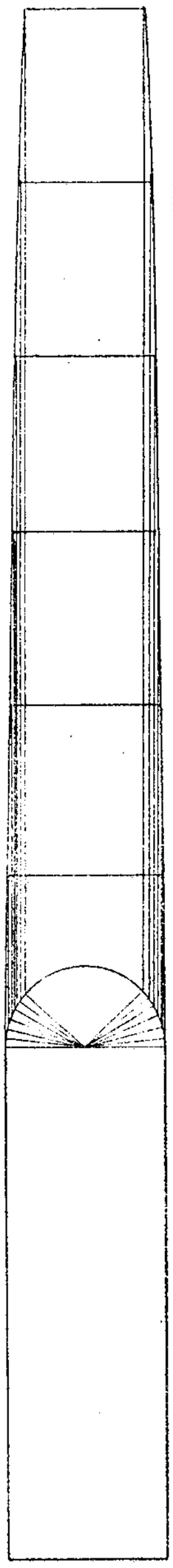

FIG. 6.

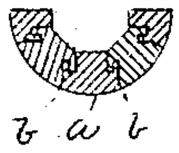

FIG. 10.

FIG. 7.

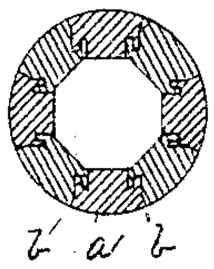

FIG. 8.

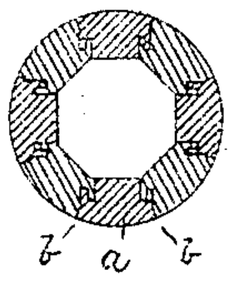

FIG. 9.

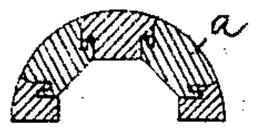

FIG. 12.

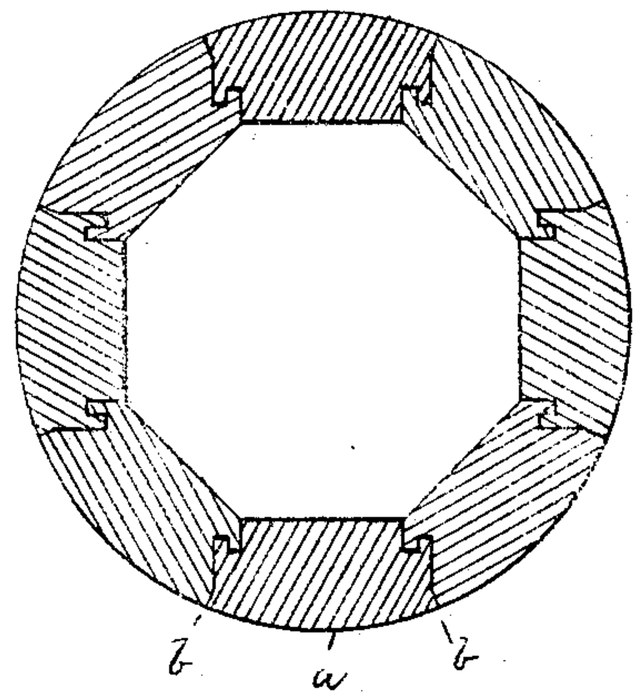

FIG. 11.

Witnesses

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No. 775,365. Patented November 22, 1904.

UNITED STATES PATENT OFFICE.

JOHN W. HARTMANN, OF MOUNT VERNON, NEW YORK.

WOOD COLUMN.

SPECIFICATION forming part of Letters Patent No. 775,365, dated November 22, 1904.

Application filed September 12, 1903. Serial No. 172,932. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HARTMANN, a citizen of the United States, residing at Mount Vernon, in the county of Westchester and State of New York, have invented new and useful Improvements in Wood Columns, of which the following is a specification.

This invention relates to the construction of hollow columns of regular or irregular taper—such, for instance, as is called for in the classic orders of architecture; and it consists in providing the staves whereof these columns are formed with interlocking tongues and grooves, the said interlocking devices being parallel with the edges of the staves and integral therewith.

As it is obviously impossible to secure solid timber of proper dimensions to build columns of colossal order, (this order covers columns of the height used to carry porch-roofs to the top of second story,) the diameter of which is regulated by the height according to the order of architecture, it becomes necessary to build up the columns of staves, the same being nailed to solid blocks or forms introduced at intervals throughout the length of the column or to employ properly-designed staves with abutting surfaces interlocking or otherwise. As the cost of making staved columns is largely regulated by the thickness of the stock required from which the staves are cut, it is of considerable importance or value to provide means whereby the required taper or entasis may be secured in the rough previous to turning in the lathe. This I accomplish by making the staves of variable width with interlocking features, as hereinafter described, whereby the said interlocking portions are maintained at relative distances from the inside face of the staves, thus permitting of the fluting or channeling of the outer surface of the column to any reasonable depth, or to the proper depth called for by the architectural detail, without the liability of cutting into and injuring the integrity of the lock-joints.

My improvements will be readily understood by referring to the accompanying drawings, whereon—

Figure 1 is an elevation of a column of uniform diameter. Fig. 2 is a similar view of a uniformly-tapered column. Fig. 3 shows a column partially tapered, as called for in most of the classic orders of architecture. Fig. 4 represents a column diminished at both ends, a form or style which is sometimes used. In each of the above figures the joint-line of the staves is clearly indicated. Fig. 5 is an elevation of the column represented at Fig. 3. It also shows plan by which the proper entasis or taper is secured. Figs. 6, 7, 8, and 9 are cross-sections of Fig. 5 at their respective levels. Fig. 10 represents the inner side of a stave with interlocking means near each edge thereof. Fig. 11 is an end view of the stave shown in Fig. 10, and Fig. 12 is an enlarged section of a column composed of staves having edges united together, as is the nature of my invention.

Inasmuch as my invention relates to the construction of a column or shaft only, it has not been deemed necessary to illustrate any particular style of base or cap in connection with same.

Referring again to the drawings, the staves *a* of Fig. 1 are of equal width throughout their whole lengths, the connecting-edges of said staves being designated by the straight parallel lines shown at *b*. In Fig. 2 the staves *a'* are shown with straight taper *b'* at each side thereof to suit the taper of the column. In Fig. 3 the lower portion of the staves *a''* are of even width, the tapering under portion having curved edges, as shown at *b''*. In Fig. 4 both the upper and lower portions of the stave are curved to produce a column with a gradually-diminishing upper and lower end, as shown.

In the construction of my improved column an even number of staves are employed, the contacting edges of one half of the staves being provided with outwardly-faced tongues *c* and grooves *d* and the other half of the staves having inwardly-faced matching grooves *e* and tongues *f* for securely locking the members of the column together, as shown in Fig. 12.

The abutting edges of the staves may be provided with a coat of glue to firmly unite same together, and other forms of locking devices may be employed without departing

from the spirit of my invention, the essential feature of which is that the locking devices shall be parallel with the edges of the staves, that various configurations of staves may be secured together to produce columns of different form.

My invention is applicable for the construction of tubes for containing or conducting liquids or as a covering for pipes, as well as for the making of hollow masts, spars, and other similar use.

The term "swelled" as employed herein is intended to imply a form which is of less width or diameter at the termini than at some point intermediate thereof, and the term "uniformly swelled varying width" in reference to the shape of the staves to imply that the staves are curved or formed from terminus to terminus on lines of varying but oppositely-equidistant points from a central line.

The integral locking devices of the staves which I employ in the construction of a swelled column, as herein described, are preferably of such character as to unite the staves laterally and radially and are arranged upon the staves so that when united in the form of a column the integral locking devices will be at an oblique angle to the radius thereof.

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

1. A column composed of a plurality of swelled staves united by integral locking devices arranged at an oblique angle to the radius.

2. A column composed of a plurality of swelled staves united by integral locking devices arranged so that a locking-surface thereof is at an oblique angle to the radius.

3. A swelled column composed of a plurality of swelled staves united at their adjoining edges by integral locking devices arranged at an oblique angle to the radius.

4. A column composed of a plurality of swelled staves united by integral laterally-acting locking devices.

5. A column composed of a plurality of swelled staves united by integral laterally and radially acting locking devices.

6. A column composed of a plurality of staves of uniformly swelled varying width provided with integral locking devices arranged at an oblique angle to the radius, said staves being collectively united thereby.

7. A column composed of a plurality of staves of swelled irregular widths, the abutting edges of which are united by integral locking devices arranged at an oblique angle to the radius.

8. A column composed of a plurality of staves of greater central width than at the termini provided with integral locking devices arranged at an oblique angle to the radius, said staves being collectively united thereby.

9. A hollow column composed of a series of staves of irregular widths, said staves being of less width at the termini than at a point intermediate thereof to conform with the desired form of swelled column, each stave having integral locking devices arranged at an oblique angle to the radius and parallel with the edges thereof.

10. A column composed of a series of staves of uniformly irregular widths, said staves being of less width at the termini than at other portions thereof, the abutting edges of which are provided with integral locking devices arranged at an oblique angle to the radius thereof.

11. A swelled column composed of a plurality of staves, the several staves of which are locked solely by the integral locking devices thereon.

12. In a column, a swelled stave provided at its lateral edges with integral oblique-angle locking devices.

13. In a column, a stave of greater central width than at the termini provided at its lateral edges with integral oblique-angle joining devices.

14. In a column, a stave of greater central width than at the termini and having tapering edges, the said edges provided with integral oblique-angle joining devices.

15. In a column, a stave having tapering edges and of less width at the termini than at other portions intermediate thereof, the said edges having integral oblique-angle matching grooves, and tongues of locking character and parallel therewith to form a swelled column, as set forth.

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

JOHN W. HARTMANN.

Witnesses:
F. W. HOLD,
GEORGE H. KAPP.