No. 749,511. PATENTED JAN. 12, 1904.

J. S. ANDERSON.

COMPOSITE BOARD FOR DOORS, PANELS, OR THE LIKE.

APPLICATION FILED NOV. 30, 1901. RENEWED NOV. 30, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

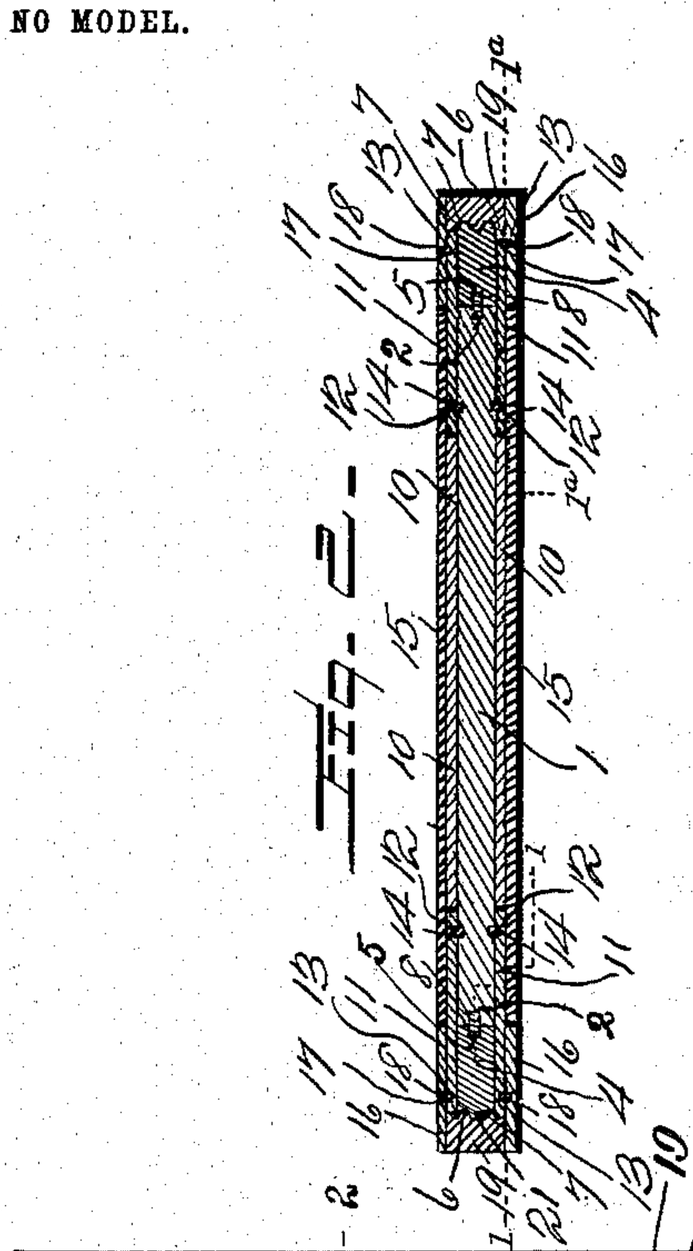

FIG. 2.

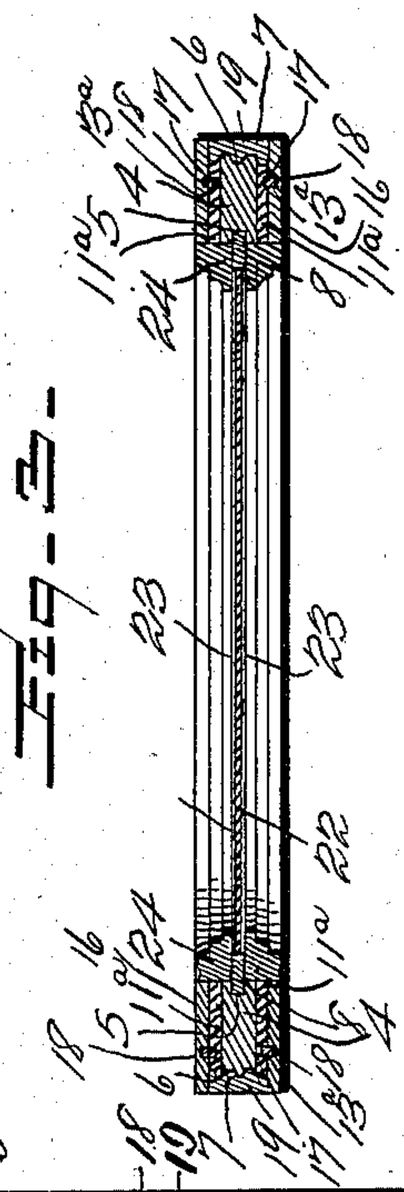

FIG. 3.

FIG. 7.

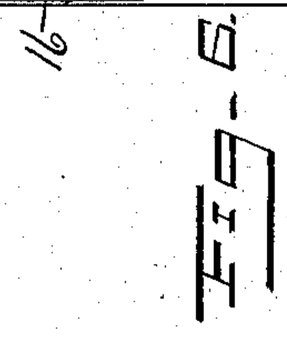

FIG. 6.

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NO MODEL. 2 SHEETS—SHEET 2.

FIG. 4.

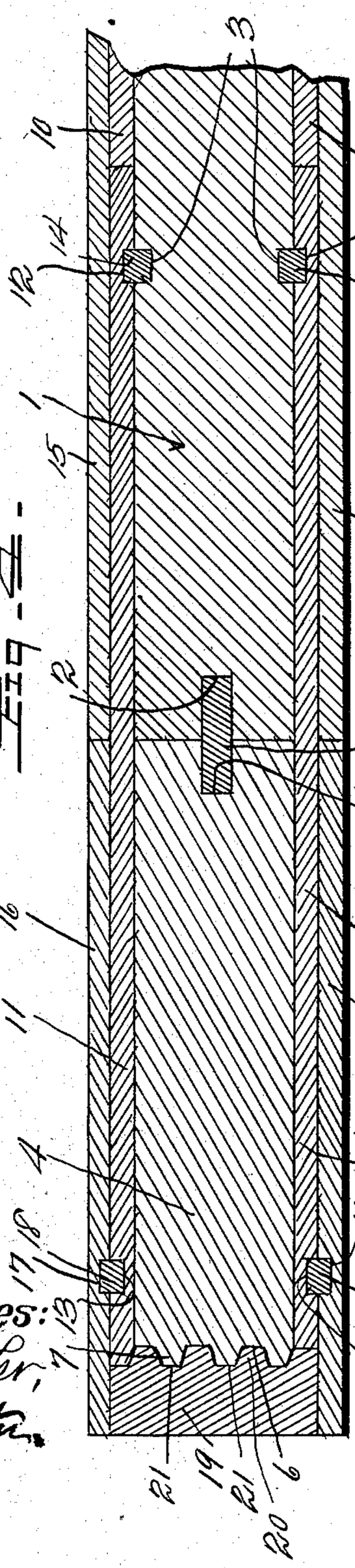
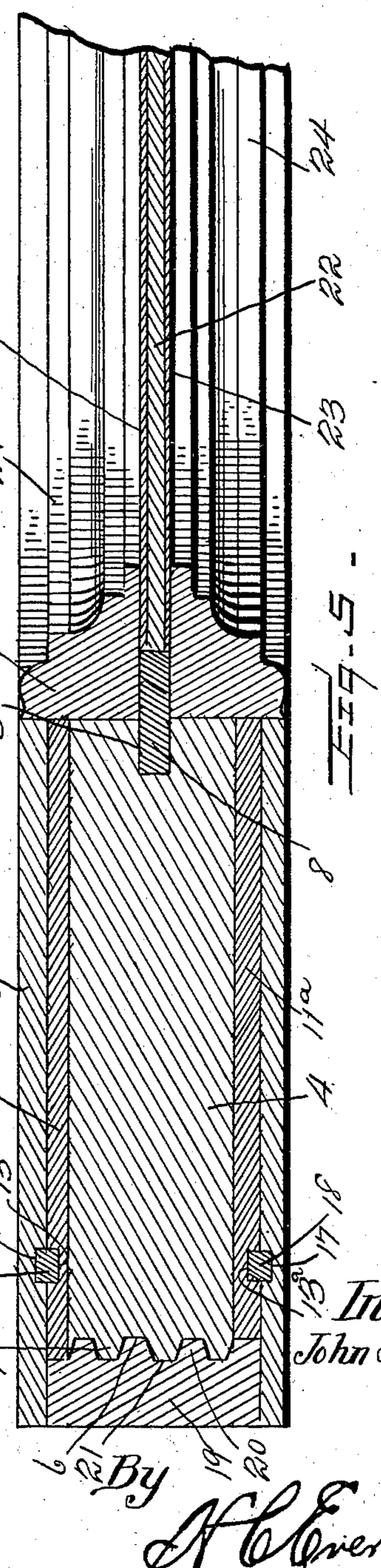


FIG. 5.



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No. 749,511. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

JOHN S. ANDERSON, OF JAMESTOWN, NEW YORK, ASSIGNOR OF ONE-HALF TO JAMES H. FREW, OF NEWCASTLE, PENNSYLVANIA.

COMPOSITE BOARD FOR DOORS, PANELS, OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 749,511, dated January 12, 1904.

Application filed November 30, 1901. Renewed November 30, 1903. Serial No. 183,291. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. ANDERSON, a citizen of the United States of America, residing at Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Composite Boards for Doors, Panels, or the Like, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates particularly to a composite wooden board for use in the manufacture of doors, panels, wainscoting, and the like in which tongue-and-groove joints and key-strips are employed for positioning and engaging the different parts, and has for its object to construct a composite board which will not be liable to warp, shrink, or swell, the joints effectually preventing the contraction and expansion of the wood.

Another object of my invention is to produce a composite board which will be simple in construction, strong, durable, and comparatively inexpensive to manufacture. To this end I provide a composite board of five thicknesses jointed and locked together, the grain of the wood being arranged in a certain manner to accomplish the desired result.

My invention consists in the novel features of construction, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a front elevation of a composite board suitable for a door, partly broken away at different parts and on the lines 1 1 and 1ª 1ª of Fig. 2 to show the interior construction thereof of the same. Fig. 2 is a transverse section of the same, taken on the line 2 2 of Fig. 1, through a rail-plate. Fig. 3 is a similar view taken on the line 3 3 of Fig. 1 through a panel. Fig. 4 is an enlarged detail view of that shown in Fig. 2. Fig. 5 is a similar view of that shown in Fig. 3. Fig. 6 is an edge elevation of the board.

1 represents inner rail-plates having the grain of the wood extending transversely of the board and formed with end mortises 2 and side channels 3, and 4 represents stile-bars having the grain of the wood extending longitudinally of the board and formed with mortises 5 at their inner edges, registering with the end mortises 2 of the inner rail-plates 1, and having grooves 6, providing tongues 7 at their outer edges.

8 represents locking-strips having the grain of the wood extending longitudinally of the board and fitting in the mortises 2 and 5 of the inner rail-plates 1 and stile-bars 4, respectively.

To the inner rail-plates 1 and stile-bars 4 are secured outer rail-plates 10, having the grain of the wood extending longitudinally of the board, and outer rail-pieces 11, having the grain of the wood extending transversely of the board, and formed with inner side channels 12, registering with the side channels 3 of the inner rail-plates 1, and having outer side channels 13. On the stile between the outer rail-pieces 11 are filling-pieces 11ª, having sections 13ª of the side channels 13.

14 represents key-strips having the grain of the wood extending longitudinally of the board and fitting in the side channels 3 and 12 of the inner rail-plates 1 and outer rail-pieces 11, respectively.

15 represents veneer facing rail-pieces having the grain of the wood extending transversely of the board, and 16 represents veneer facing stile-pieces having the grain of the wood extending longitudinally of the board and formed with side channels 17, registering with the side channels 13 of the outer rail-pieces 11, and into these channels 13 and 17 are fitted the key-strips 18.

19 represents edge strips having the grain of the wood extending longitudinally of the board and fitting against the stile-bars 4 and outer rail-pieces 11 and between the facing stile-pieces 16. These edge strips 19 are each formed with tongues 20, fitting in the grooves 6 of the stile-bars 4, and with grooves 21, receiving the tongues 7 of the stile-bars 4. Fitting in the openings between the inner exposed edges of the locking-strips 8 and the in-

ner rail-plates 1 are panels, consisting of panel-plates 22, having veneer facing-pieces 23. 24 represents moldings surrounding the panels.

In building the composite board hereinbefore described I connect the stile-bars 4 with the inner rail-plates 1 by inserting the locking-strips 8 in the registering mortises 2 and 5. The outer rail-pieces 11 and filling-pieces 11[a] are placed against the stile-bars 4 and the adjacent ends of the inner rail-plates 1 and secured by inserting the key-strips 14 in the registering side channels 3 and 12. The outer rail-plates 10 can then be fitted between the outer rail-pieces 11.

The edge strips 19 can next be fitted to the edges of the stile-bars 4 and the outer rail-pieces 11 by the interlocking of the tongues and grooves of the stile-bars 4 and edge strips 19. The facing stile-pieces 16 can then be applied to the outer rail-pieces 11 and the sides of the edge strips 19 and secured by the key-strips 18, fitting in the registering channels 13, 13[a], and 17. The facing rail-pieces 15 can next be placed between the facing stile-pieces 16. The panels are placed in the openings between the inner rail-plates 1 and the exposed inner edges of the locking-strips 8 and are secured by the moldings 24, fitting against the panels.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A composite board comprising the inner rail-plates, having end mortises and side channels, the stile-bars having mortises at their inner edges, the locking-strips fitting in the mortises, the outer rail-plates, the outer rail-pieces having inner side channels, registering with the side channels of the inner rail-plates and outer side channels, the facing rail-plates, the facing stile-pieces having side channels registering with the outer side channels of the outer rail-pieces, key-strips located in the registering channels, and the edge strips fitting between the facing stile-pieces.

2. A composite board comprising the inner rail-plates having end mortises and side channels, the stile-bars having mortises at their inner edges, and grooves and tongues at their outer edges, the locking-strips fitting in the mortises, the outer rail-plates, the outer rail-pieces having inner side channels registering with the side channels of the inner rail-plates and outer side channels, the facing rail-plates, the facing stile-pieces having side channels registering with the outer side channels of the outer rail-pieces, key-strips located in the registering channels, and the edge strips fitting between the facing stile-pieces and having tongues and grooves interlocking with the grooves and tongues of the stile-bars.

3. A composite board, comprising the inner rail-plates, having end mortises and side channels, the stile-bars having mortises at their inner edges, the locking-strips fitting in the mortises, the outer rail-plates, the outer rail-pieces having inner side channels registering with the side channels of the inner rail-plates, and outer side channels, the facing rail-plates, the facing stile-pieces having side channels registering with the outer channels of the outer rail-pieces, key-strips located in the registering channels, the edge strips fitting between the facing stile-pieces, the panel consisting of panel-plates and facing-plates and fitting between the inner rail-plates and the exposed edges of the locking-strips, and the molding surrounding the panel.

4. A composite board comprising the inner rail-plates having end mortises and side channels, the stile-bars having mortises at their inner edges, and grooves and tongues at their outer edges, the locking-strips fitting in the mortises, the outer rail-plates, the outer rail-pieces having inner side channels registering with the side channels of the inner rail-plates, and outer side channels, the facing rail-plates, the facing stile-pieces having side channels registering with the outer side channels of the outer rail-pieces, key-strips located in the registering channels, the edge strips fitting between the facing stile-pieces and having tongues and grooves interlocking with the grooves and tongues of the stile-bars, the panel consisting of panel-plates and facing-plates, and fitting between the inner rail-plates and the exposed edges of the locking-strips and the molding surrounding the panel.

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

JOHN S. ANDERSON.

Witnesses:
CHARLES M. WAITE,
C. F. MUNSON.