

(No Model.)

J. J. PHILBRICK.
METHOD OF PRODUCING BARREL STAVES.

No. 432,640.

Patented July 22, 1890.

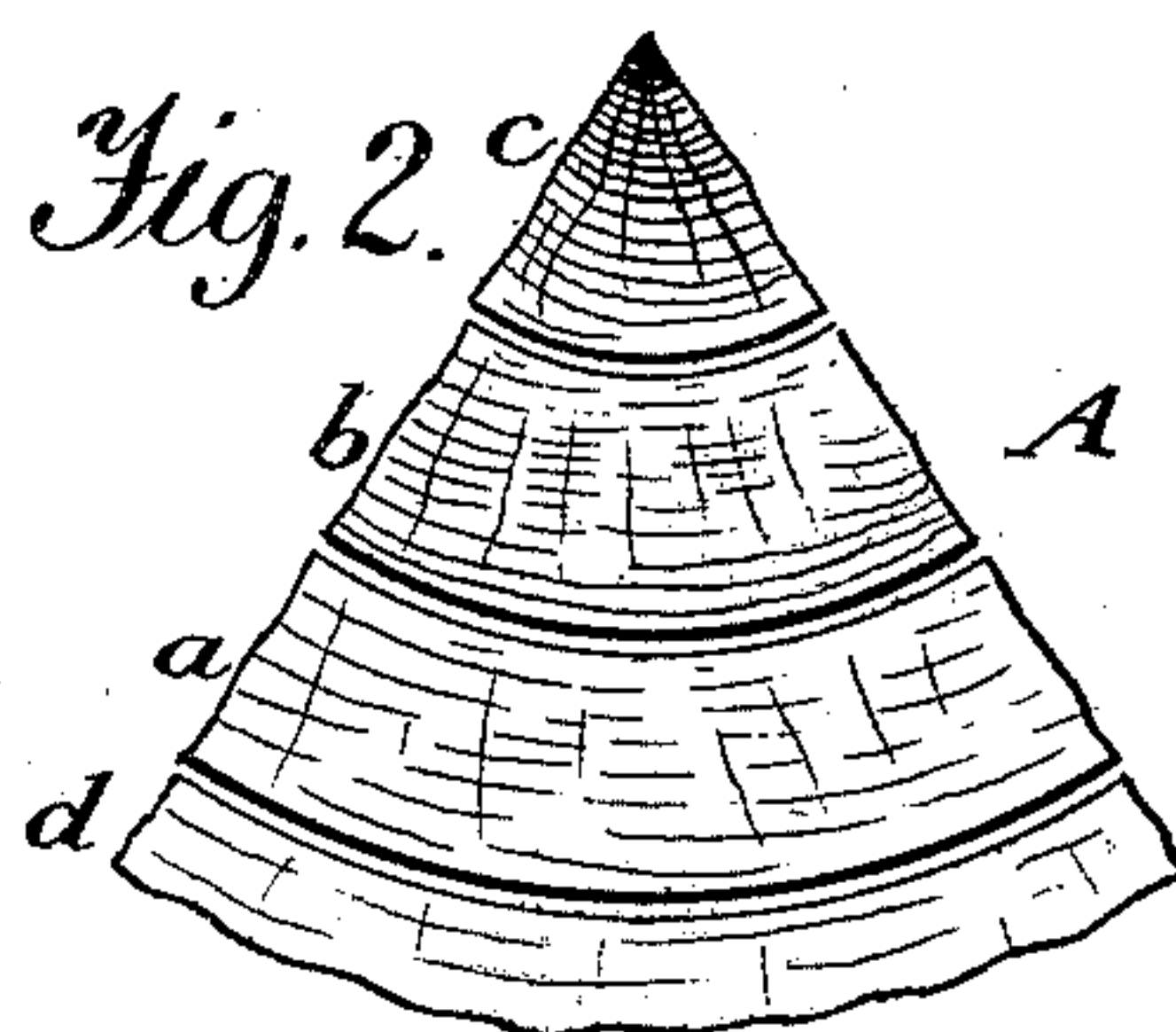
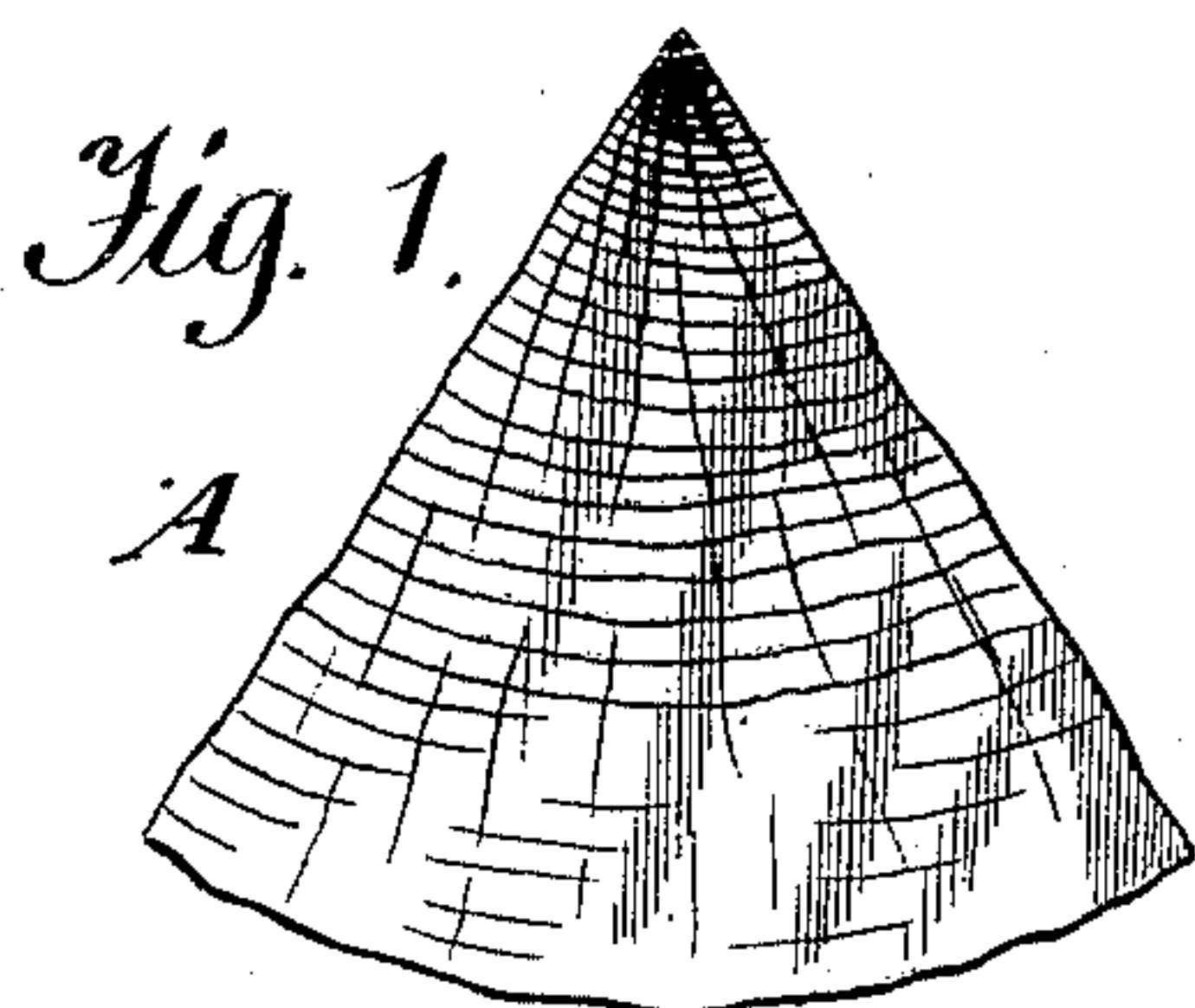


Fig. 3.

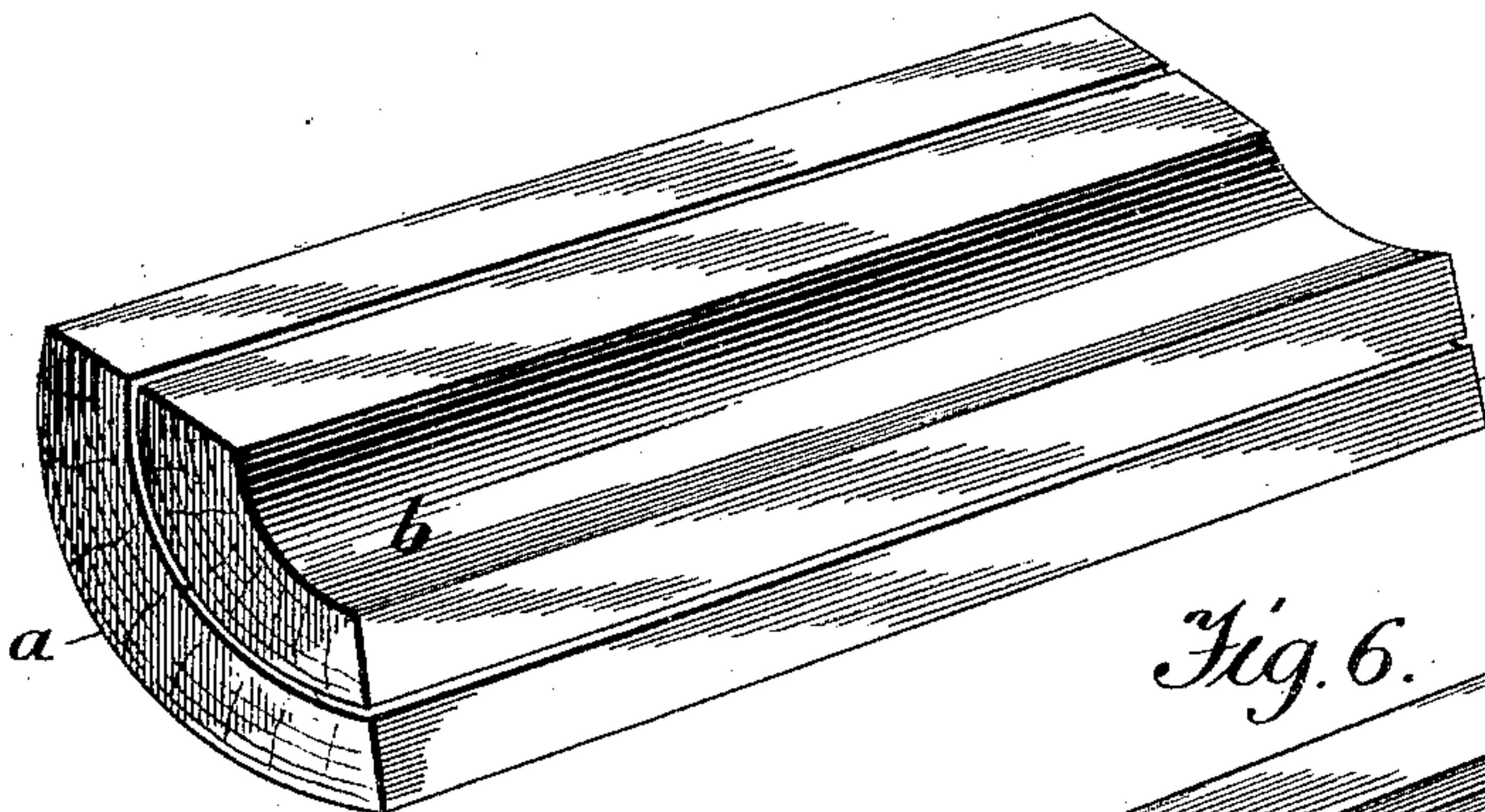


Fig. 6.

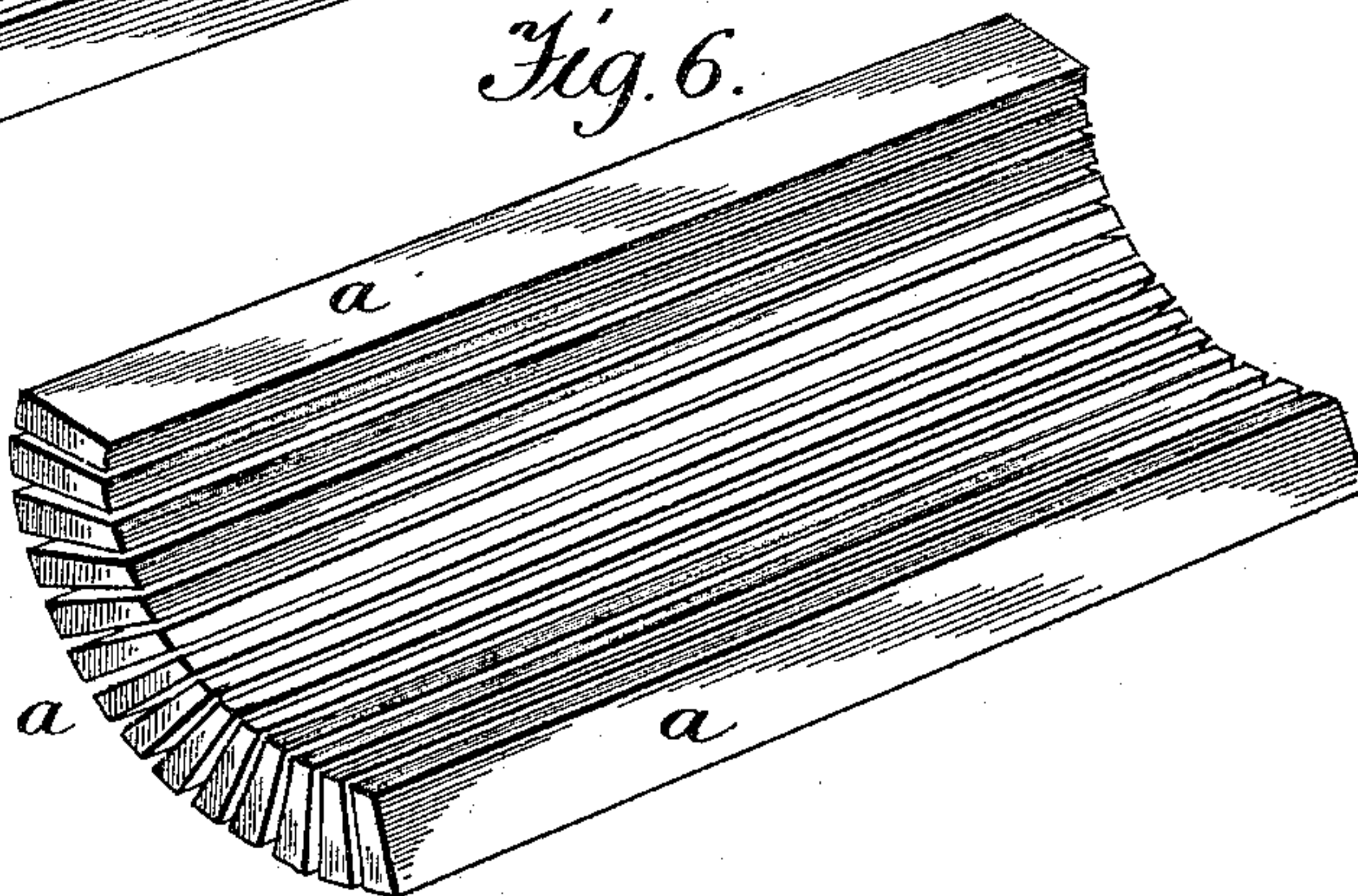


Fig. 4.

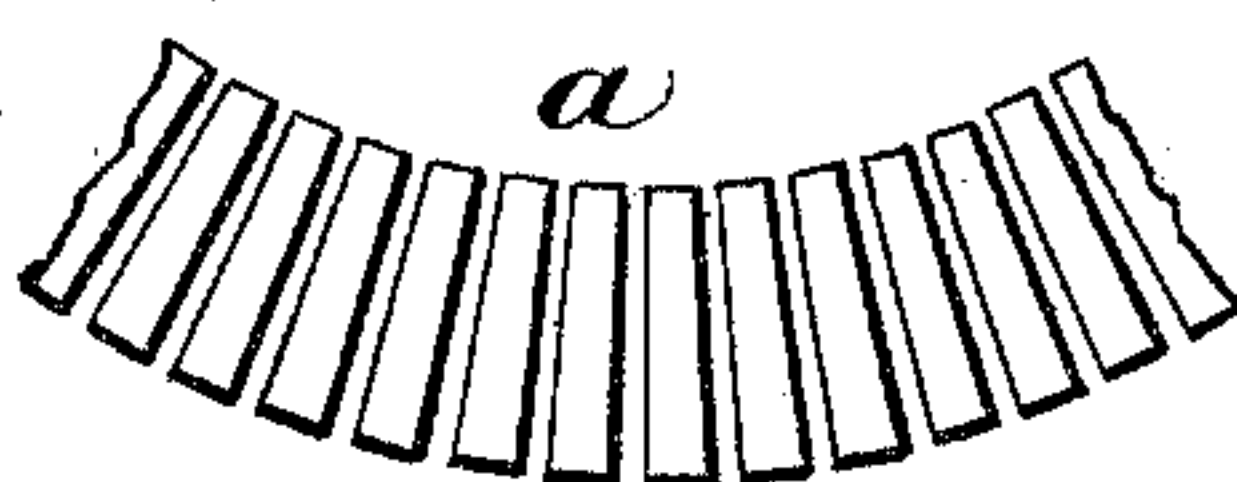
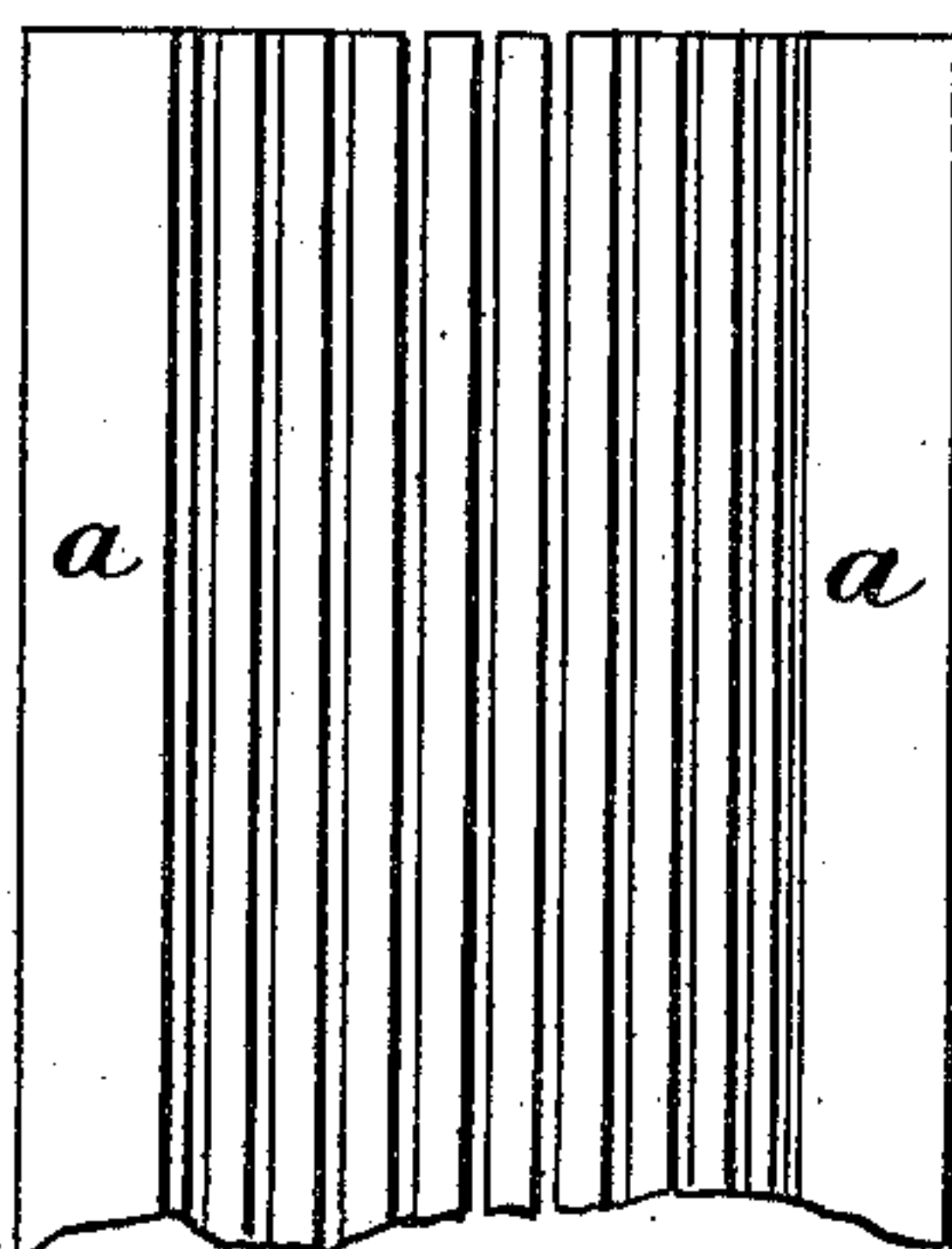


Fig. 5.



WITNESSES:

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METHOD OF PRODUCING BARREL-STAVES.

SPECIFICATION forming part of Letters Patent No. 432,640, dated July 22, 1890.

Application filed December 30, 1889. Serial No. 335,399. (No specimens.)

To all whom it may concern:

Be it known that I, JOSIAH J. PHILBRICK, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in the Method of Producing Barrel-Staves; 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.

15 This invention relates to certain new and useful improvements in the art of sawing barrel-staves; and it has for its object to provide a means for producing barrel-staves in the rough for tight cooperage which shall be of 20 uniform thickness and width, and in which the flinty or hardest grain of the wood will appear upon the faces of the staves. I accomplish these objects by the method hereinafter described for sawing the bolts, and of afterward resawing the same upon lines radial with the heart of the tree from which the bolts 25 have been produced.

To the above ends, and to such others as the invention may pertain, the same consists 30 in the process of sawing and resawing, which will be more particularly hereinafter described, and shown in the accompanying drawings, which drawings form a part of this specification, like letters of reference indicating like parts throughout the several views, and in which—

Figure 1 is an end view of a section of a log as it appears when in readiness for resawing into stave-bolts. Fig. 2 is a similar view 40 showing the parts in their relative positions after the resawing. Fig. 3 is a perspective view of the same with the heart and outside bark and sap-wood removed. Fig. 4 is an end view of a resawed bolt. Fig. 5 is a longitudinal view of the heart side of the bolt after resawing, in which the parts are shown in their relative position as to the curve of the bolt. 45 Fig. 6 is a perspective view of the same.

Reference now being had to the details of 50 the drawings by letter, A designates a segment of a log as it appears when in readiness for

sawing. The segment A is separated, by means of a band or other saw adapted to the purpose, into a series of bolts, as shown at *a* and *b*, the saw-kerfs being upon arcs of circles which 55 correspond with the circumference of the tree. In the drawings I have shown the segment separated into two stave-bolts; but of course the number of bolts produced will depend upon the diameter of the tree and upon the 60 width of the bolt produced. The outer bark and sap-wood *d*, and also the heart *c*, are discarded, and the bolts *a* and *b* are separated by resawing longitudinally into a series of parallel strips or staves, as shown clearly in 65 Figs. 4 and 6 of the drawings.

It will be observed that staves produced in accordance with the method above described the grain of the wood upon the faces of the staves will be upon the lines of radiation 70 from the center of the tree from which they are produced. I thus produce a stronger and much more serviceable stave than it is possible to produce by sawing the staves in such manner as to present in the face of the stave 75 a grain running at right angles to the lines of radiation.

By my process of cutting timber for staves there will be found to be a great saving in 80 timber, as the heart-wood is separated in sawing and may be utilized for tool-handles or other purposes for which the heart-wood of oak or other like timbers is best adapted, while the bark and outer sap-wood are separated and may be utilized for fuel. It will be 85 further observed that in resawing the bolts in accordance with my process the outer edges of the staves will be thicker than the inner edges, thus providing sufficient material upon the outer edge of the stave to permit the hol- 90 lowing or rounding of the stave without cutting away the thin edge.

By my process I am therefore enabled to produce a much more serviceable stave than heretofore, and also to utilize all the timber 95 in the tree.

A stave produced by my process can be readily distinguished from staves of other forms by reason of the grain of the wood being radically different in relation to the length 100 and thickness of the stave incident to the novel manner of forming the stave.

I attach importance to the step in my process which consists in severing the segments into bolts by sawing upon circular lines corresponding with the circumference of the log, 5 as by this sawing a complete bolt will be detached from the log at each separate sawing, thus obviating the necessity of resawing, which would be required if sawed upon straight lines.

10 Having thus described my invention, what I claim to be new, and desire to secure by Letters Patent, is—

The herein-described process of producing barrel-staves, which consists in first separating 15 the log into proper lengths corresponding with the length of the stave to be produced, then separating the log into segments, next

severing the segments into bolts by sawing upon circular lines corresponding to the circumference of the log, and finally sawing the 20 bolts longitudinally upon lines parallel with the lines of radiation from the heart of the tree, whereby a stave is produced whose edges shall be parallel with the circumference and the face parallel with the lines of radiation 25 from the center of the tree from which it is cut and tapered from the outer edge inward, substantially as and for the purpose specified.

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

JOSIAH J. PHILBRICK.

Witnesses:

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CHAS. H. SMITH.