

No. 704,944.

Patented July 15, 1902.

S. H. SMITH.
COMPOUND LUMBER.
(Application filed Dec. 5, 1901.)

(No Model.)

Fig. 1.

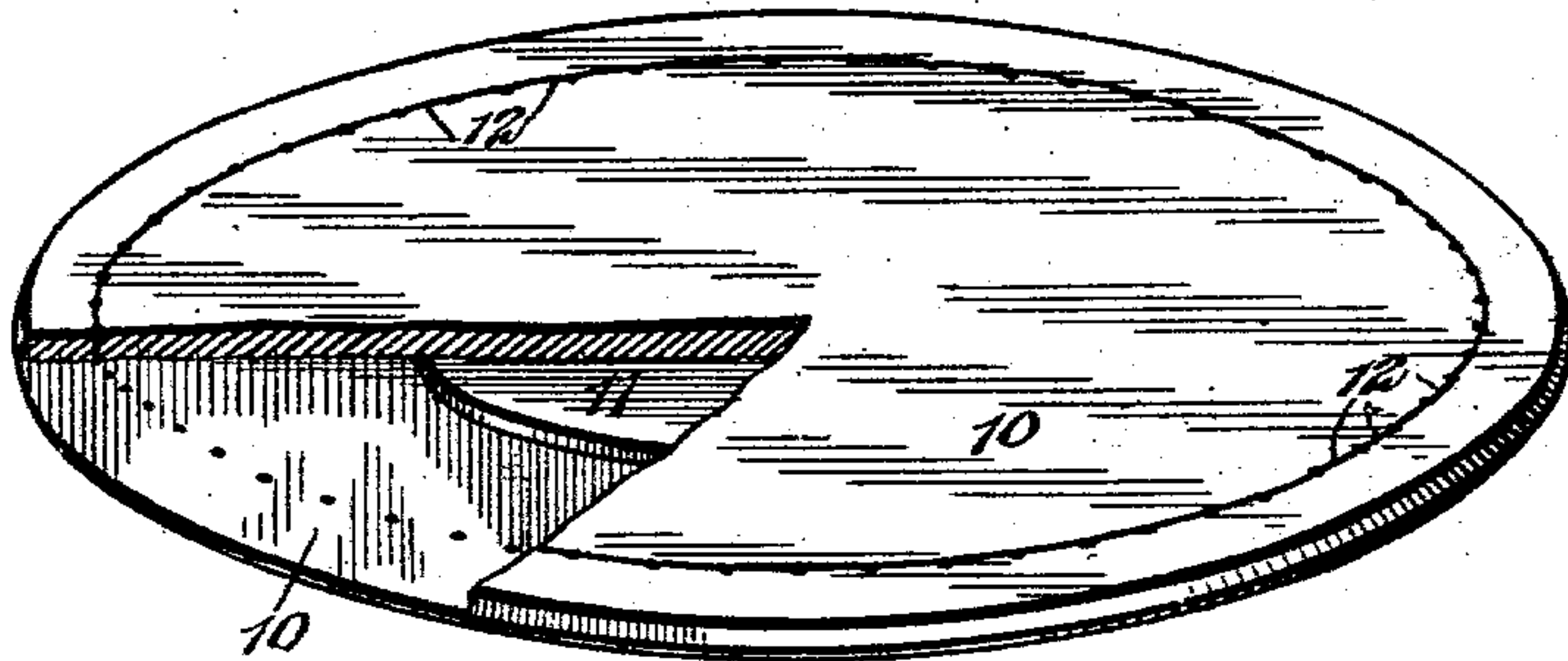


Fig. 2.

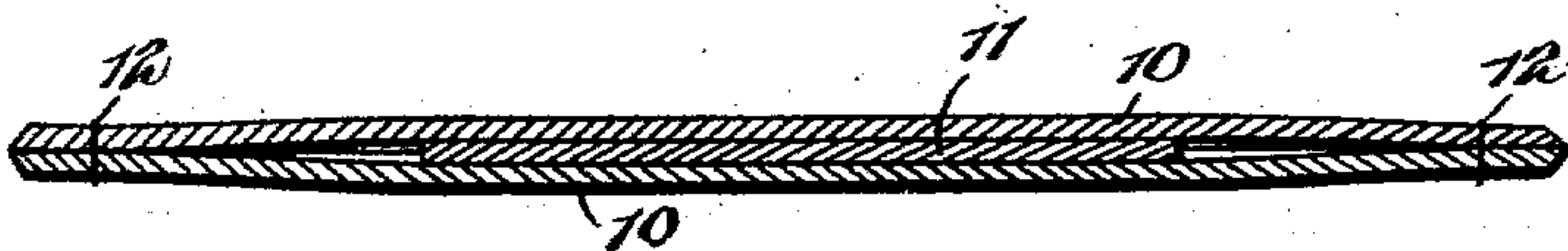


Fig. 3.

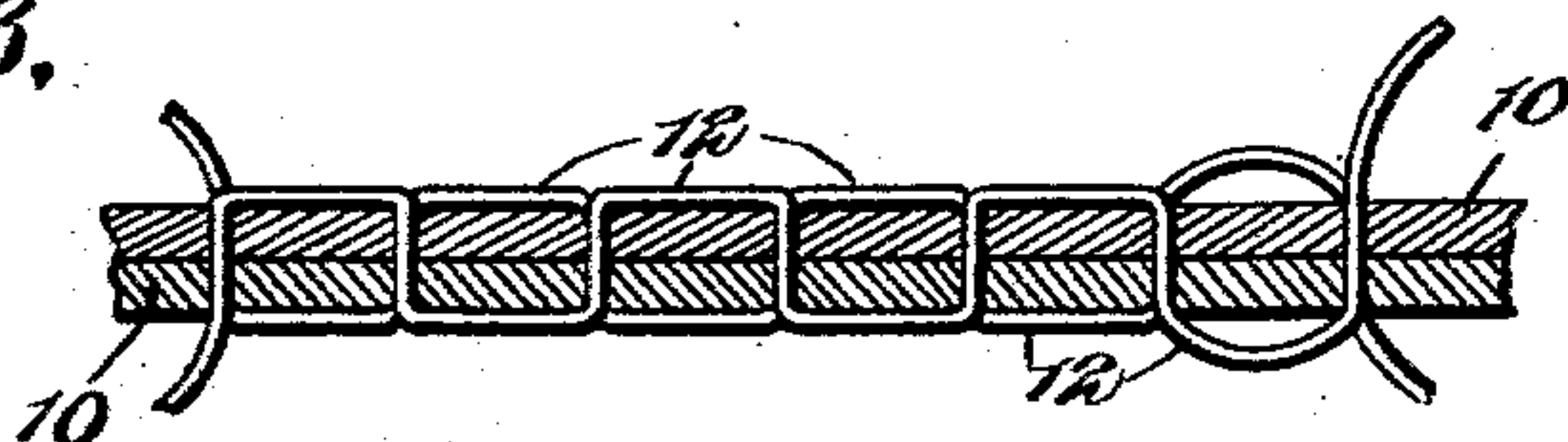
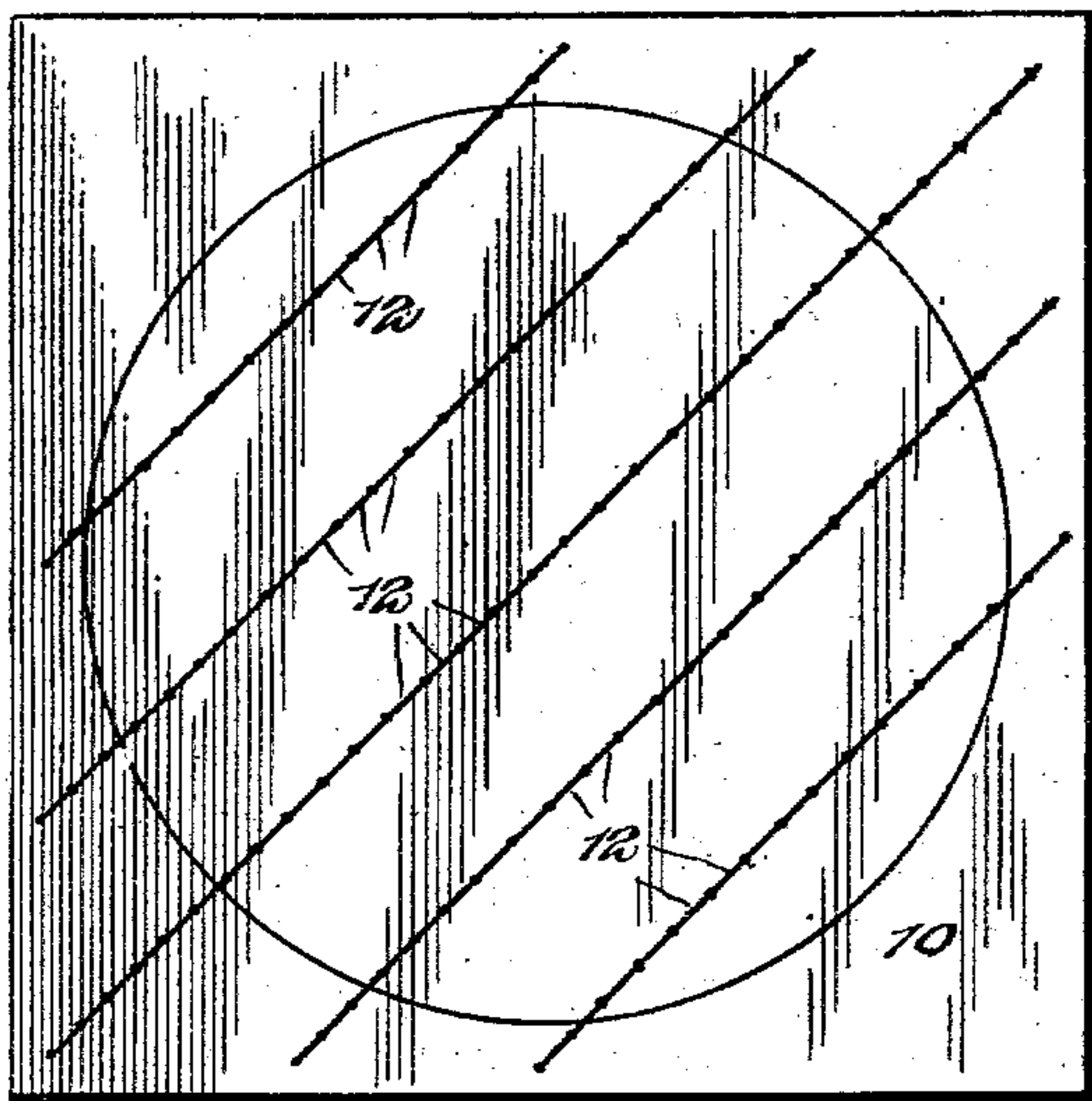


Fig. 4.



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SETH H. SMITH, OF HILLSDALE, MICHIGAN.

COMPOUND LUMBER.

SPECIFICATION forming part of Letters Patent No. 704,944, dated July 15, 1902.

Application filed December 5, 1901. Serial No. 84,833. (No model.)

To all whom it may concern:

Be it known that I, SETH H. SMITH, a citizen of the United States, residing at Hillsdale, in the county of Hillsdale and State of Michigan, have invented a new and useful Compound Lumber, of which the following is a specification.

The present invention relates to compound lumber, and while particularly intended for use in the construction of heads for barrels, kegs, and the like it will be evident that it may be employed for other purposes.

The primary object of the invention is to provide lumber which is light in weight, but comparatively strong and will not warp or crack under varying climatic conditions. To this end the lumber is built up of laminated sheets of veneer, the grain of said sheets being disposed in intersecting planes and preferably at right angles. While this formation is very old in the art, the practice has heretofore been, so far as I am aware, to glue these sheets together; but there are serious objections to this construction because of the necessary expense and the amount of time consumed. In the first place glue is comparatively expensive and is affected by dampness. Further than this, the sheets must be pressed together, necessitating expensive machines for the purpose, and the lumber must remain in the presses until the glue is dried or set. A very important object of this invention is to overcome all of these objections by providing novel means for securing the sheets or laminae together, so that they will not split, said means being extremely inexpensive and simple in application.

The nature of the invention will be readily understood by referring to the following specification, when taken in connection with the accompanying drawings, wherein—

Figure 1 is a perspective view of a barrel-head constructed in accordance with the invention, portions being broken away to more clearly illustrate the structure of the same. Fig. 2 is a longitudinal sectional view through the same. Fig. 3 is a detail sectional view taken on the line of stitching. Fig. 4 is a slightly-modified form showing a different arrangement of stitching and illustrating a blank from which a head may be turned.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

Referring to the first three figures of the drawings it will be seen that the head comprises a pair of facing sheets 10, formed of veneer and having the grain of the wood disposed in planes at right angles to each other. An intermediate strengthening-sheet 11 is arranged between the two facing sheets and terminates short of the outer edges of the same. These outer edges are brought together and secured over the intermediate strengthening-sheet by a continuous line of fastening devices that extend entirely around the head, contiguous to the periphery thereof. These fastening devices are preferably in the form of stitches 12, that pass entirely through the sheets, either textile or metal binding material being employed. In the manufacture of these heads I have found that strong thread is an excellent binding medium, although wire is very satisfactory. The method of construction is very simple. The sheets are first placed in proper relation and then sewed, after which the body thus formed is placed upon a lathe and turned up to proper form. For certain classes of barrels or kegs the two facing sheets will of themselves constitute a sufficiently strong structure, in which case the intermediate strengthening-sheet 11 is dispensed with.

In Fig. 4 there is illustrated a piece of the compound lumber, which may be either employed in the construction of the boxes or as a blank from which a head may be turned up. In this case the arrangement of the two facing sheets, as above described, is adhered to; but instead of a circular line of stitching independent lines are run diagonally or obliquely across the grain of both sheets.

By this arrangement of a continuous line of fastening means it will be observed that both sheets are secured together their entire widths across the grain, and as a result said sheets cannot split with the grain nor can the stitches pull through, for the reason that the greater portion of the stitching crosses the grain of both sheets. Lumber or barrel-heads as thus constructed are much cheaper than if glued together, and as soon as leav-

ing the lathe after being turned up are ready for use. The sheets will furthermore not separate if exposed to moisture, and actual use has proven that they are sufficiently strong to be employed for all ordinary purposes.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In an article of the class described, the combination with wooden sheets placed together with the grain of the wood disposed in intersecting planes, of a continuous line of fastening means passing through the sheets and securing them together, said fastening means extending in continuous lines along the outer faces of both sheets.

2. In an article of the class described, the combination with wooden sheets placed together with the grain of the wood disposed in intersecting planes, of a continuous line of fastening means passing through the sheets and securing them together, portions of said line of fastening means intersecting the grain of the wood of both sheets.

3. In an article of the class described, the combination with wooden sheets placed together with the grain of the wood disposed in intersecting planes, of a binder stitched through the sheets to secure them together,

said binder extending in continuous lines over the outer faces of both sheets.

4. In an article of the class described, the combination with wooden sheets placed together with the grain of the wood disposed in intersecting planes, of a binder passing through the sheets and comprising a line of stitching, said line intersecting the grain of the wood of both sheets.

5. In compound lumber, circular sheets of veneer placed together with the grain of the wood disposed in intersecting planes, and a binder passing through the sheets and comprising a circular line of stitching that extends entirely around the lumber contiguous to the periphery thereof.

6. In compound lumber, facing sheets of veneer placed together with the grain of the wood disposed in intersecting planes, an intermediate strengthening sheet located between the facing sheets and terminating short of the side edges thereof, and fastening devices passing through the facing sheets to fasten their edges together over the strengthening-sheet.

7. In compound lumber, a series of sheets of veneer placed together with the grain of the wood disposed in intersecting planes, and a binder passing through the sheets and comprising a circular line of stitching which intersects the grain of the wood of the several sheets.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SETH H. SMITH.

Witnesses:

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ARTHUR L. GERMSEY.