

(No Model.)

A. SCHMIDT.

CONSTRUCTION OF HOGSHEADS OR BARRELS.

No. 483,478.

Patented Sept. 27, 1892.

FIG. 1.

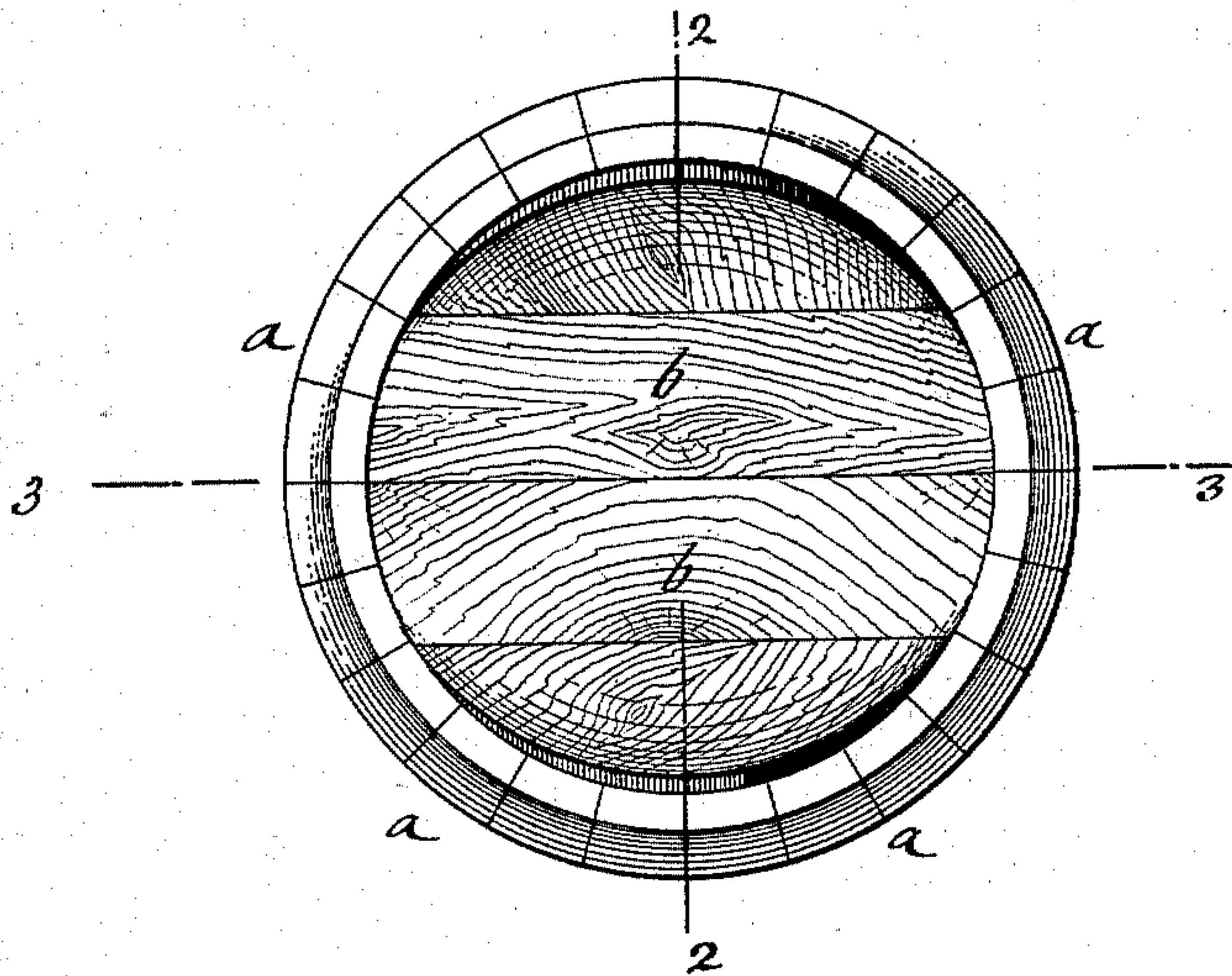


FIG. 2.

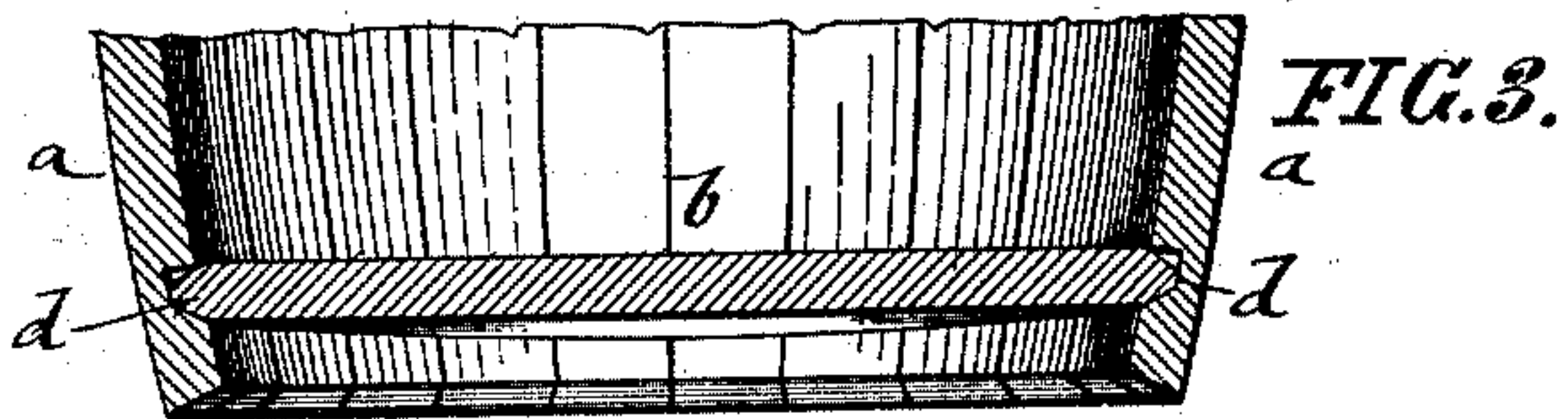
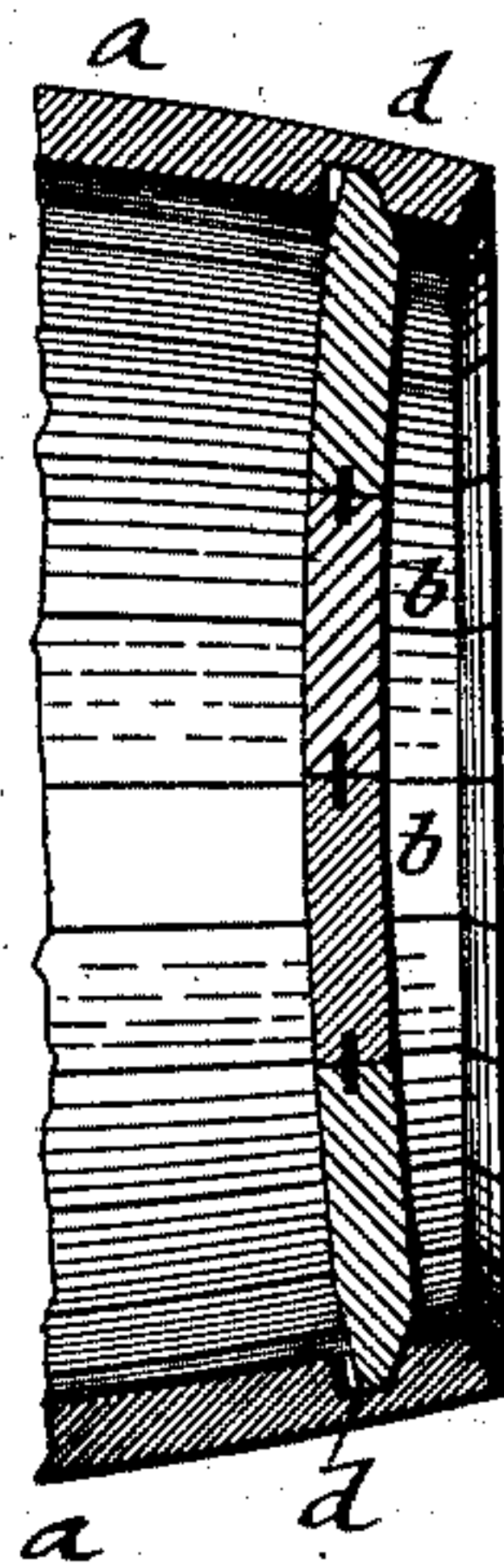


FIG. 3.

FIG. 4.

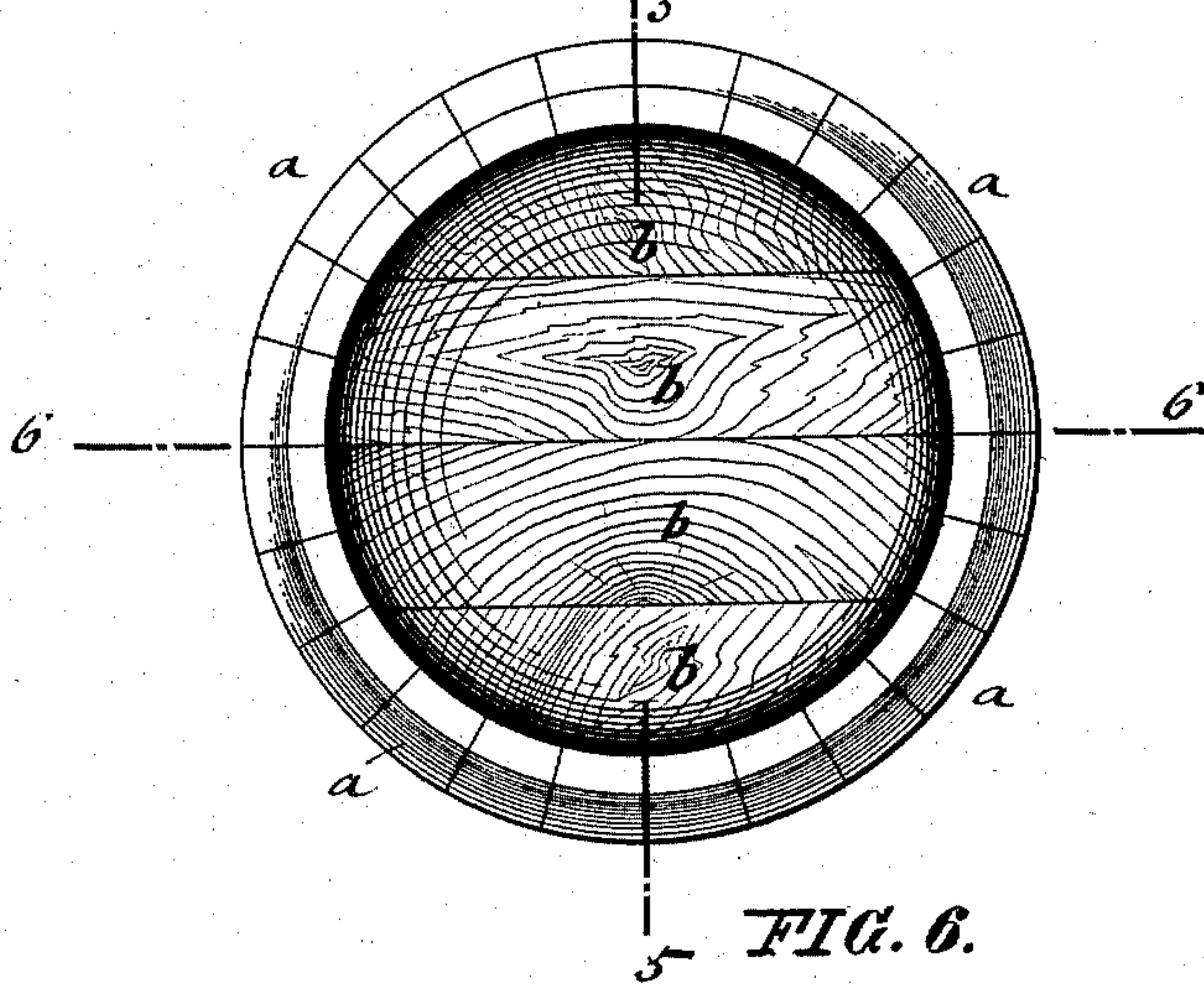


FIG. 5.

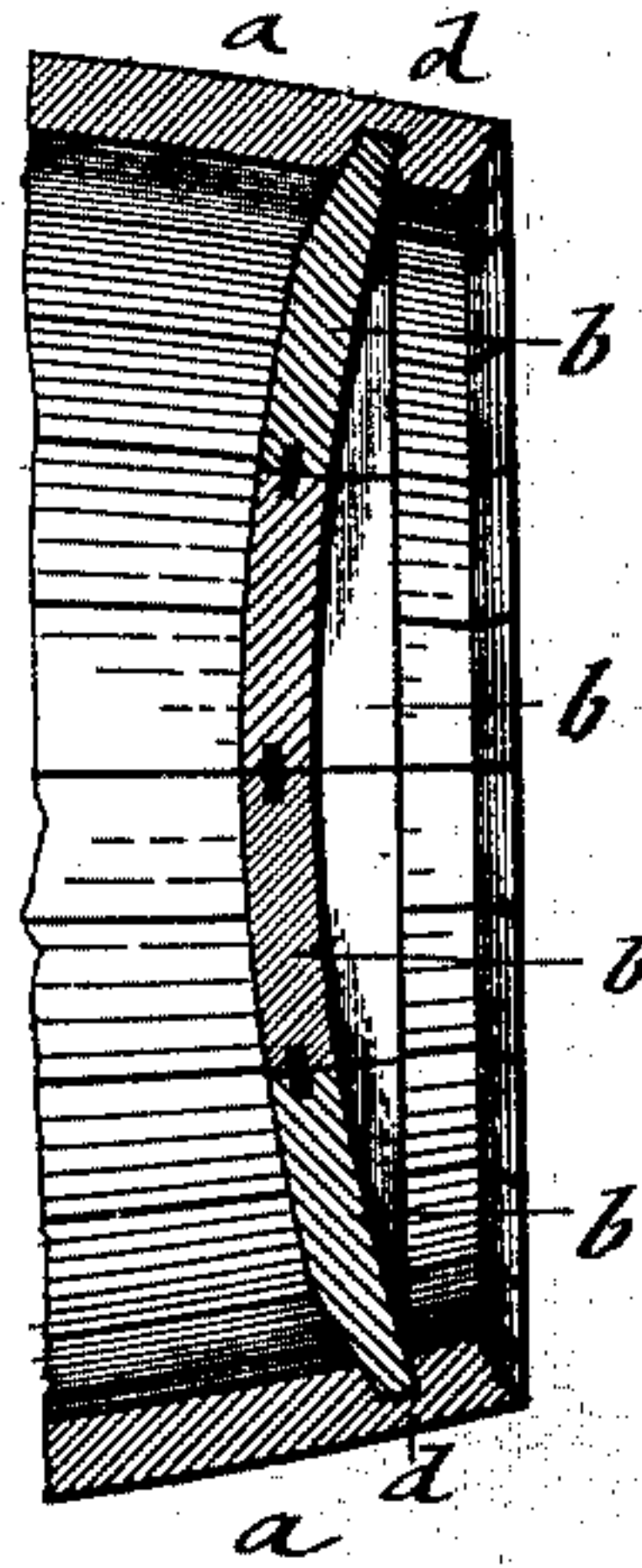
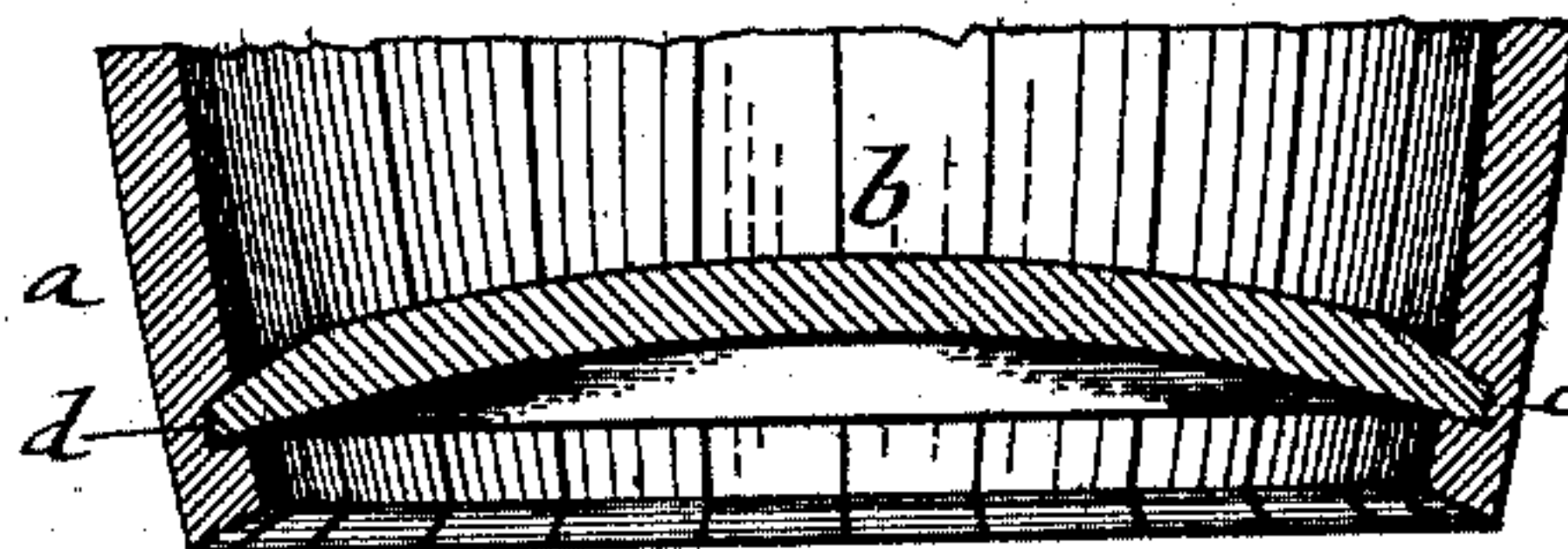


FIG. 6.



WITNESSES:

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CONSTRUCTION OF HOGSHEADS OR BARRELS.

SPECIFICATION forming part of Letters Patent No. 483,478, dated September 27, 1892.

Application filed November 19, 1891. Serial No. 412,375. (No model.)

To all whom it may concern:

Be it known that I, AUGUST SCHMIDT, a citizen of the Empire of Germany, and a resident of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in the Construction of Hogsheads or Barrels, of which the following is a specification.

It is necessary to construct ale hogsheads or barrels of staves and heads of extra strong and thick pieces of wood, so that they can resist the high pressure to which they are subjected. The heads of ale hogsheads or barrels are usually made with a slight curve, so as to increase the strength of the same, the pieces forming the head being connected by means of dowels at their adjacent sides. On fitting the curved heads into the croze of the staves it is necessary to trim off their forwardly-bent parts to a greater extent than the unbent middle parts, so as to bring them thereby into the plane of the croze. The trimming off of the curved parts of the head and the shape of the croze weakens the connection of the heading-pieces with the staves, so that frequently the abutting end portions of the staves are broken off and the ends of the heading-pieces split by the high internal pressure exerted on the same. Another objection to the ale hogsheads or barrels in use is that the joint of the head with the croze cannot be made tight enough, so that they frequently leak at the croze. Owing to these objections the ale hogsheads or barrels require frequent repairs, which form a continuous source of expense to the ale-brewer.

The object of this invention is to so improve the construction of hogsheads or barrels that a strong and tightly-fitting connection of the heads with the staves is obtained, so that the same can resist the high internal pressure in a more perfect manner, are less liable to leakage, and require less frequent repairing.

The invention consists of a hogshead or barrel composed of annular concave heads, which are made rectangular, or nearly so, at their circumference and trimmed off at their inner edge, and of staves the croze of which is located in one plane with the circumference of each head and made of corresponding shape, so as to fit tightly to the circumference of the heads.

In the accompanying drawings, Figure 1 represents a front elevation of a hogshead or barrel made according to the method heretofore in use. Figs. 2 and 3 are a vertical transverse section and a horizontal section of the same, respectively, on lines 2 2 and 3 3, Fig. 1. Fig. 4 is a front elevation of a hogshead or barrel made according to my improved method. Figs. 5 and 6 are respectively a vertical transverse section and a horizontal section on line 5 5 and 6 6, Fig. 4.

Similar letters of reference indicate corresponding parts.

a in the drawings represents the staves of an ale hogshead or barrel, and *b b* the heading-pieces, which are preferably connected at their adjacent edges by means of steel dowels. The heads, instead of being curved in one direction—that is to say, from the straight center piece toward the upper and lower ends of the heads, as shown in Figs. 1, 2, and 3—are made concave in the direction of the vertical and horizontal axes, which is produced by bending the individual heading-pieces *b b* to the proper curvature and arranging them at a curve toward each other. The bending of the heading-pieces *b b* is accomplished by steaming of the wood in the usual manner. The croze *d*, which is cut into the inner ends of the staves, is located in one plane and adapted accurately to the rectangular or nearly rectangular shape of the circumference of the concave heads of the barrel, which heads require only a slight cutting off at their inner sides, but no trimming or cutting off along their outer circumference, which latter is one of the sources of the weakness of the heads of the hogsheads or barrels made by the method heretofore in use, as the croze, being nearly at right angles to the inner surface of the staves, is cut deeper into the staves at the inner than at the outer end and forms thereby stronger abutments at the ends of the staves, which, in connection with the greater thickness of the circumference of the heads inserted in the croze, produces a greater resistance to the interior pressure of the liquid than the jointing of the heads with the staves by the ordinary method. The concave shape of the heads imparts greater strength to the same and increases the resistance to the internal pressure of the liquid. The result is a

superior and stronger construction of hogs-
heads or barrels, which is characterized by the
concave shape of the heads and the absence
of the curved heads with their beveled-off up-
5 per and lower portions. The joint between
the heading-pieces and the croze of the staves
is rendered more perfect, and consequently
less liable to leakage, while the angle at which
the croze is cut imparts a greater strength
10 and resistance to strains.

I am aware that paper barrels were made
heretofore with concavo-convex heads, and I
do not claim this feature, broadly.

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

A hogshhead or barrel composed of annular
concave heads, which are made rectangular
or nearly rectangular at the circumference
and trimmed off at the inner edge, and staves 20
the croze of which is located in one plane
with the circumference of each head and cor-
responding in shape to the circumference of
the heads, substantially as set forth.

In testimony that I claim the foregoing as 25
my invention I have signed my name in pres-
ence of two subscribing witnesses.

AUGUST SCHMIDT.

Witnesses:

PAUL GOEPEL,

CHARLES SCHROEDER.