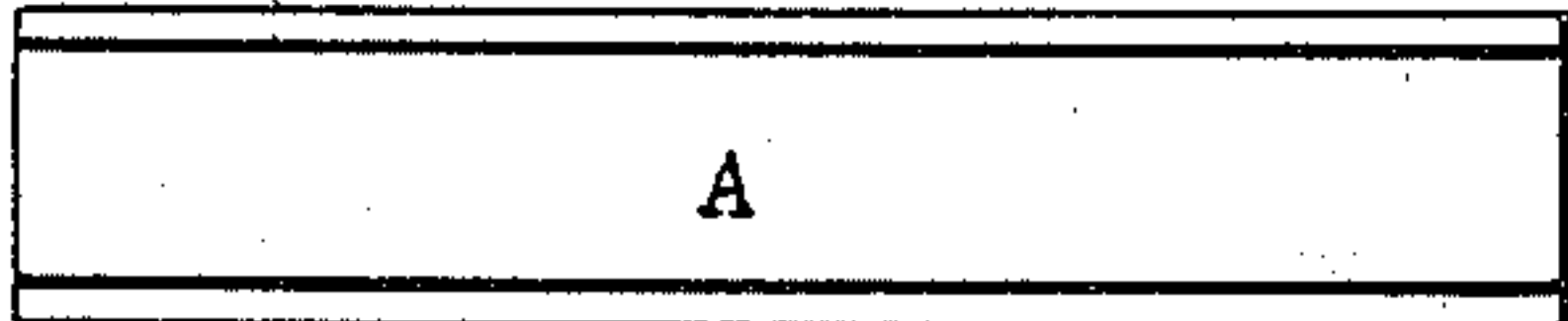


H. M. FITZHUGH.
Manufacture of Barrels.

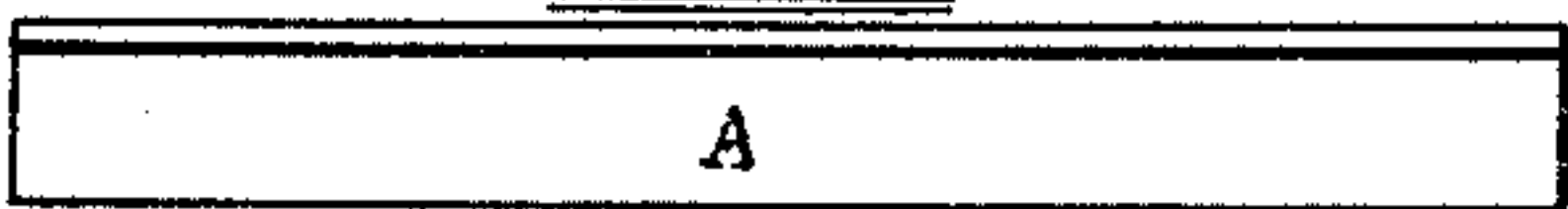
No. 232,254.

Patented Sept. 14, 1880.

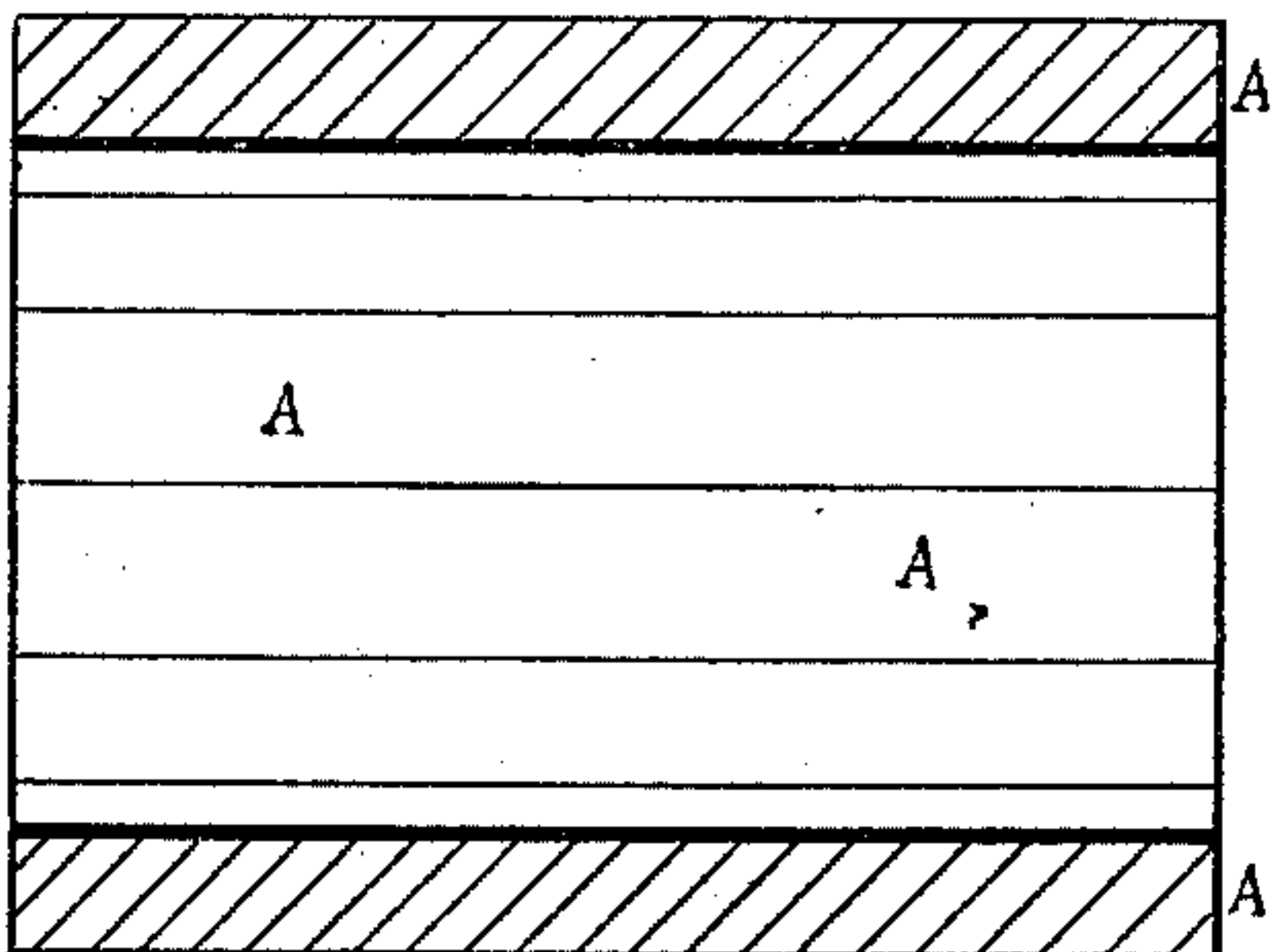
— FIG. I. —



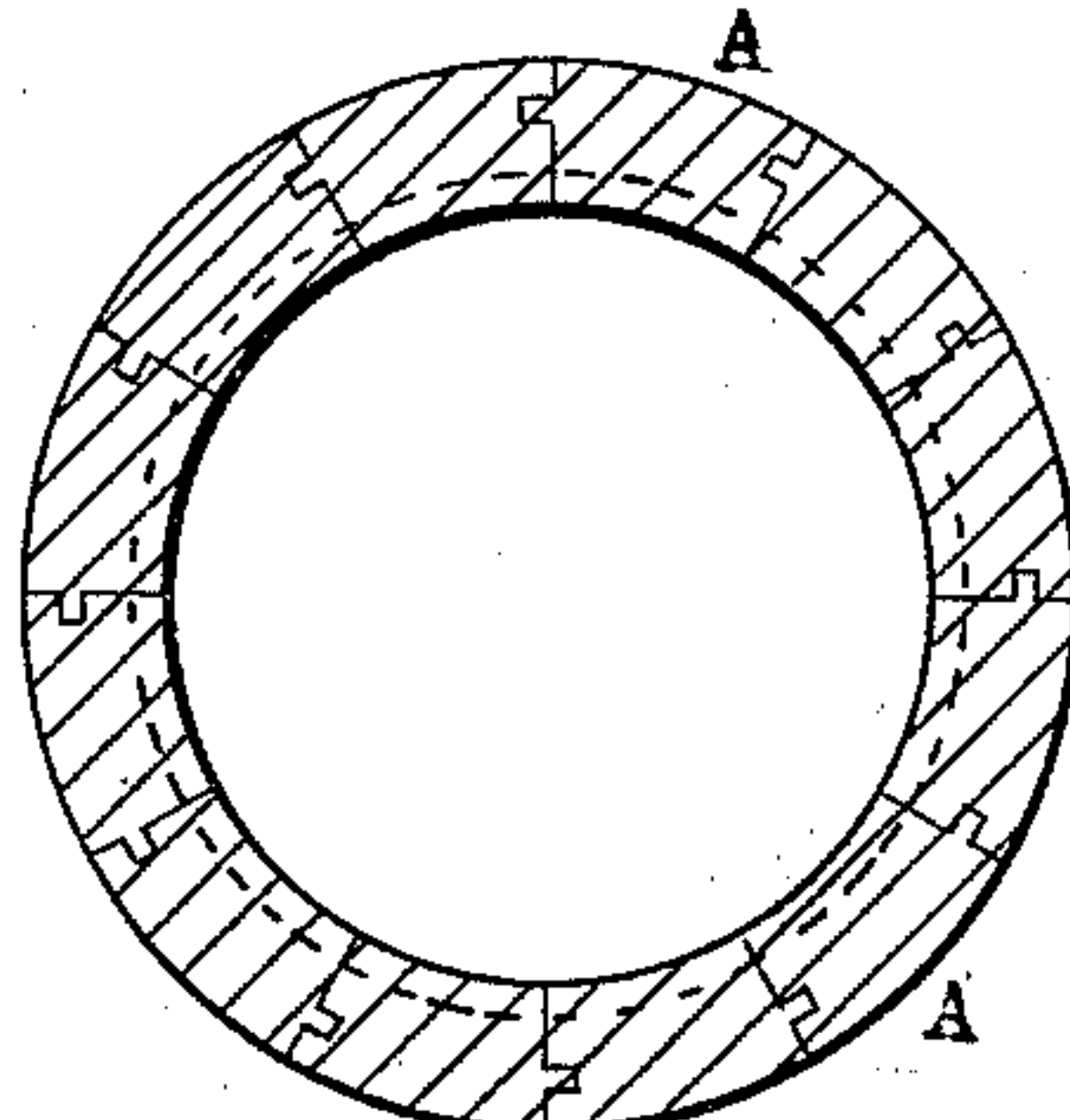
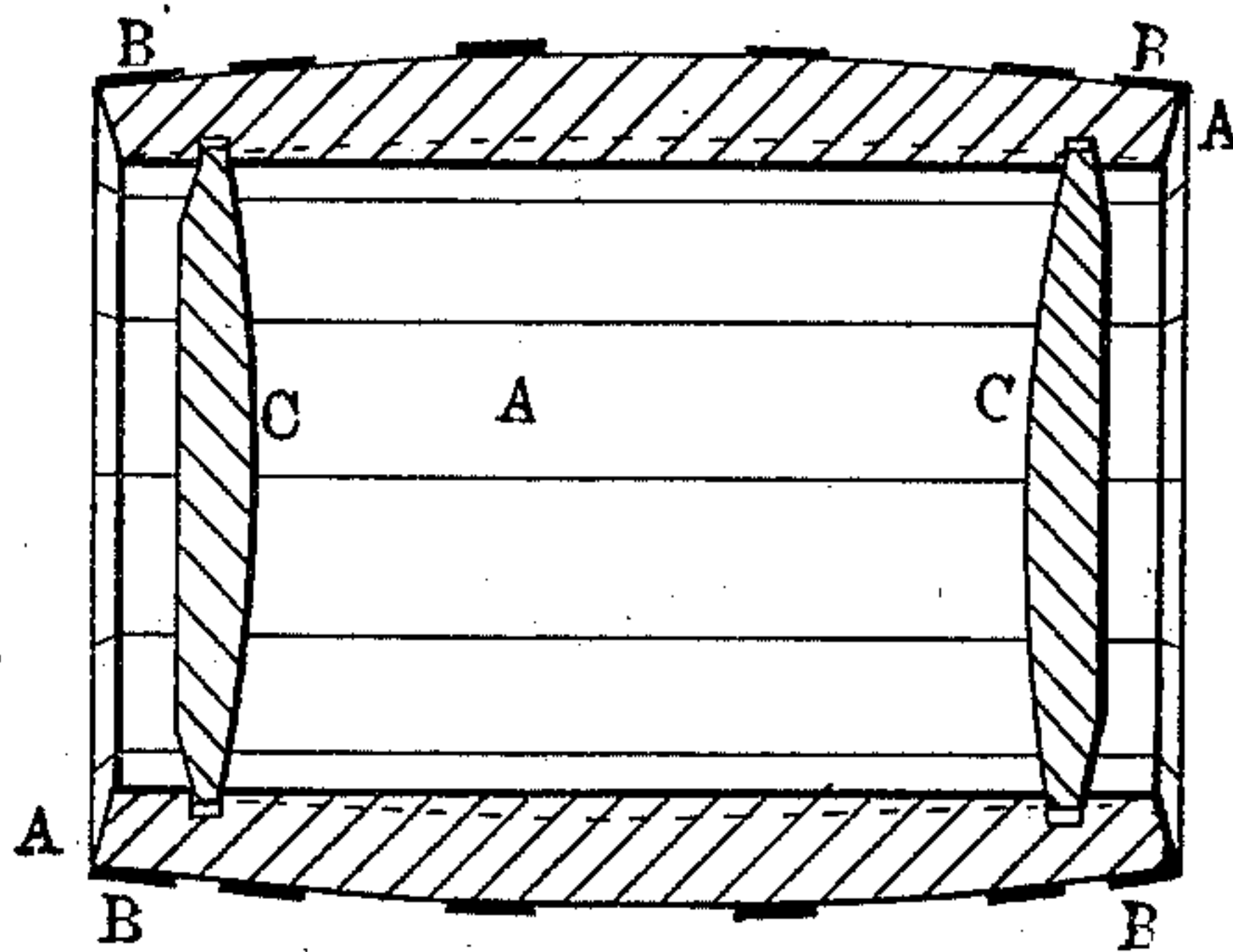
— FIG. II. —



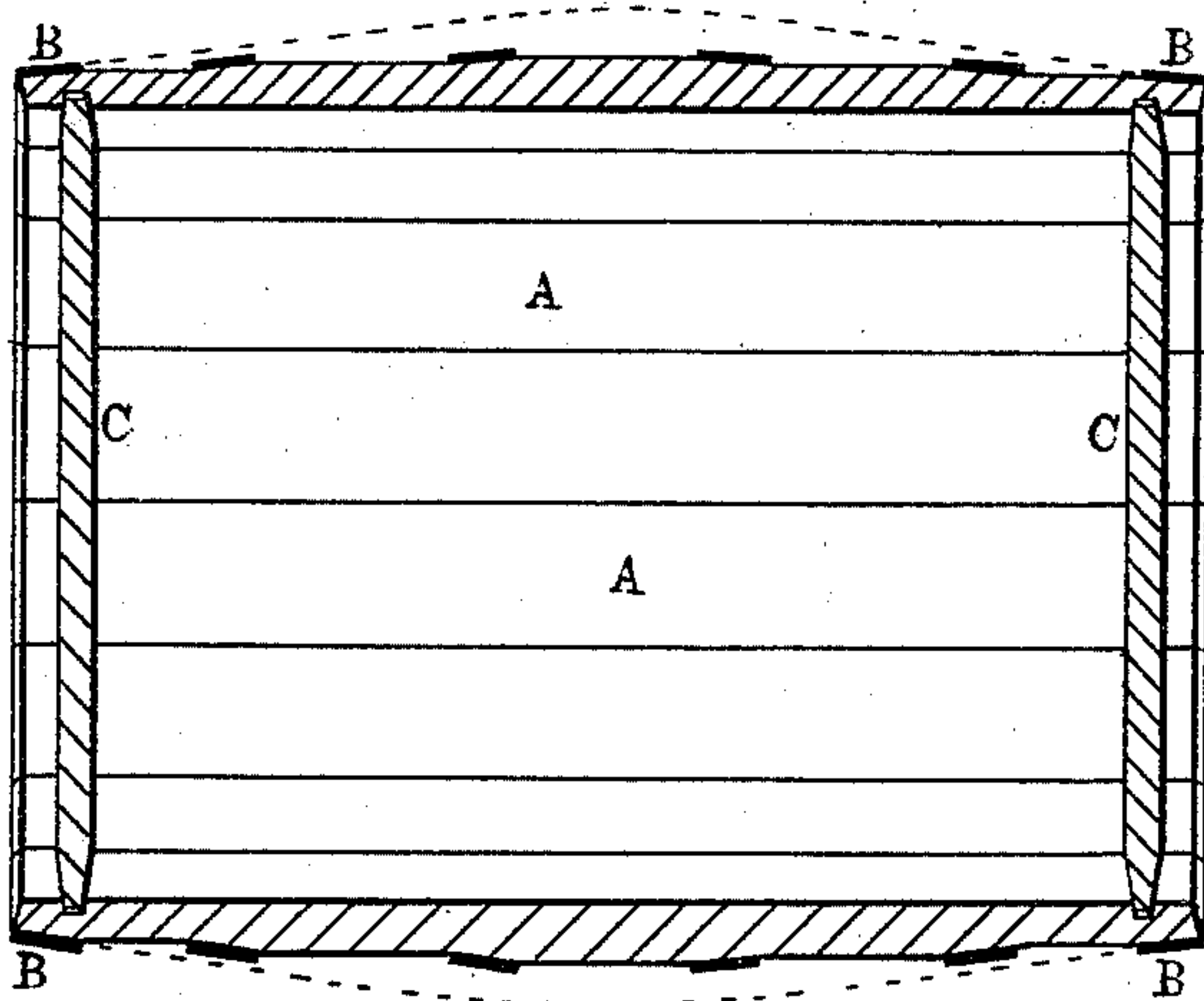
— FIG. III. —



— FIG. IV. —



— FIG. V. —



— FIG. VI. —

— WITNESSES —

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— INVENTOR —

Harry M. Fitzhugh,
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UNITED STATES PATENT OFFICE.

HENRY M. FITZHUGH, OF BAY CITY, MICHIGAN.

MANUFACTURE OF BARRELS.

SPECIFICATION forming part of Letters Patent No. 232,254, dated September 14, 1880.

Application filed February 16, 1880.

To all whom it may concern:

Be it known that I, HENRY M. FITZHUGH, of Bay City, in the county of Bay and State of Michigan, have invented certain Improvements in the Manufacture of Barrels, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of this invention is the construction of a barrel whereof the exterior and interior surfaces are formed and shaped by means of special machinery from straight parallel staves without bending or the use of fire; and the said invention, briefly stated, consists in constructing the barrel in two separate and distinct operations, the first operation being the formation of a rough, practically cylindrical barrel, and the second the turning of the barrel to effect the desired configuration.

The staves from which my improved barrel are made are preferably sawed from cants or bolts by means of a cylindrical or barrel saw; but they may be cut from boards or planks, if desired. The edges of the staves are cut in such manner as to form, when the staves are united, true radial joints, which joints are preferably tongued and grooved. The staves are then set up in a circular form, and the rough barrel held in that shape by two or more trusses, capable of being contracted in diameter to draw the staves tightly together. The rough barrel is then turned exteriorly and interiorly to the required shape by means of special machinery, after which the barrel is headed and hooped off.

In the further description of my said invention, which follows reference is made to the drawings, forming a part hereof, and in which—

Figures I and II represent, respectively, a side and an edge view of a stave such as is used in forming the rough cylindrical barrel. Fig. III is a longitudinal section of the rough cylindrical barrel. Fig. IV is a longitudinal

section of the completed barrel. Fig. V is a transverse section of the completed barrel. Fig. VI is a longitudinal section of the barrel, having a different exterior conformation, as hereinafter described.

Similar letters of reference indicate similar parts in all the views.

In the said drawings, A A represent the staves, and B B the hoops. C C are the heads, which are united to the staves in the usual manner.

In the construction of lager-beer barrels I prefer a cylindrical interior, as greater strength is thereby effected; but in other barrels, where unnecessary weight is a disadvantage, I hollow out the interior, as shown in dotted lines, Fig. IV.

In Fig. VI the barrel is shown as having a cylindrical interior and the thickness of the central portion of the staves reduced by tapering the barrel only at points where occupied by the hoops. The dotted lines, Fig. VI, show the size the exterior of the barrel would require to be to give the necessary draw to the hoops provided a regular outline was preserved.

I claim as my invention—

1. The method of constructing a staved barrel having an exterior bilge, consisting of, first, forming the said barrel of a practically cylindrical shape, then turning the exterior of the said barrel so as to have the requisite taper for the hoops, substantially as herein specified.

2. The within-described method of constructing a staved barrel having an exterior bilge, consisting in, first, forming the said barrel of a series of practically straight parallel staves, then turning it exteriorly and interiorly to the required shape, then inserting the heads, and then hooping it off, substantially as herein specified.

HENRY M. FITZHUGH.

Witnesses:

WM. T. HOWARD,
JNO. T. MADDOX.