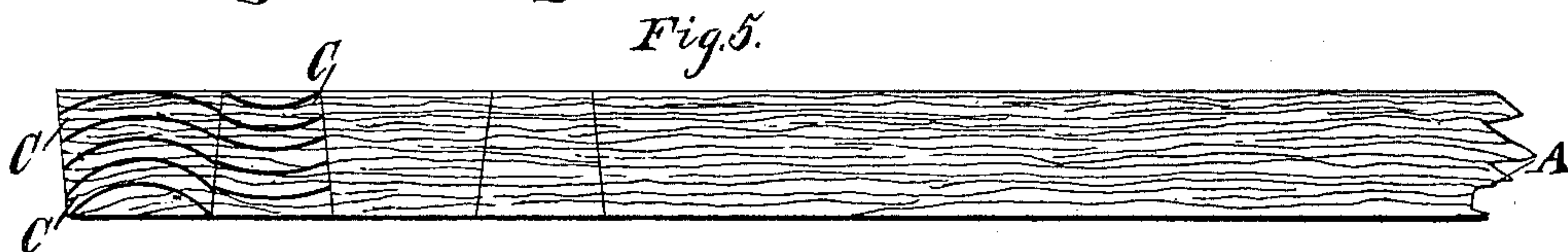
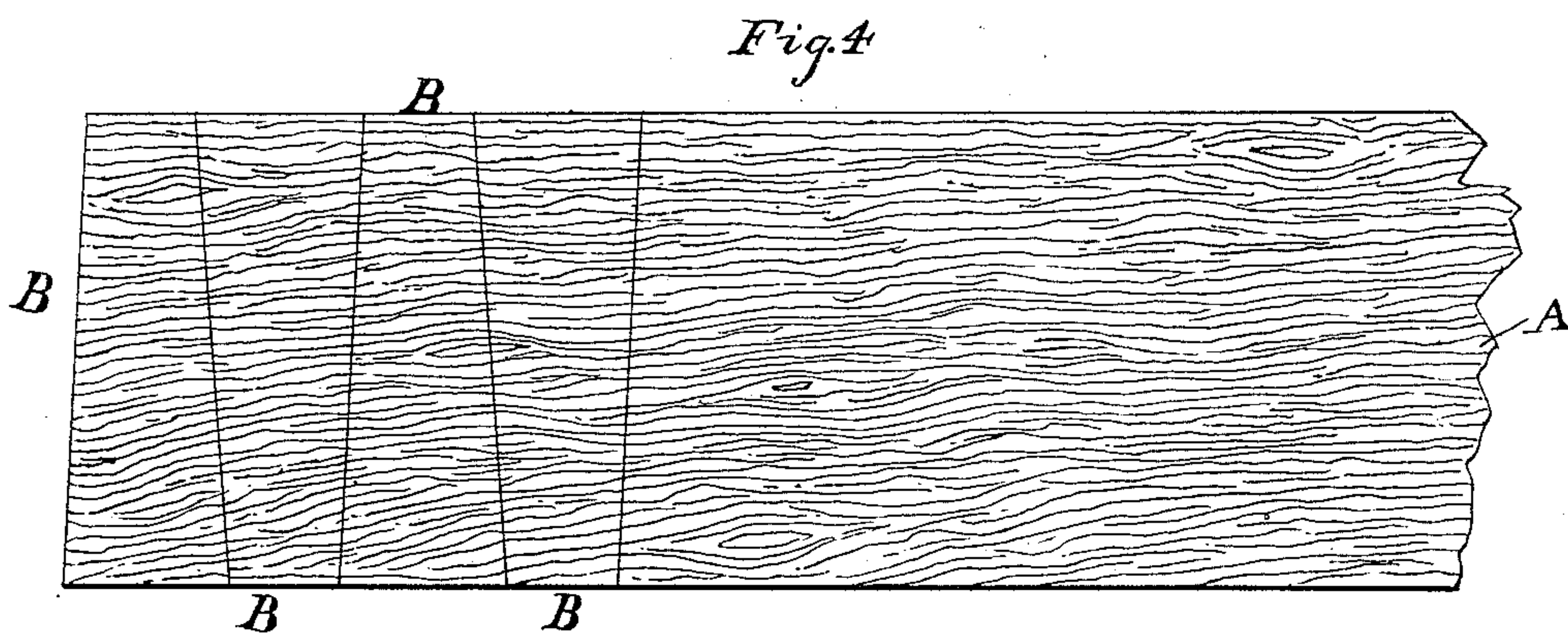
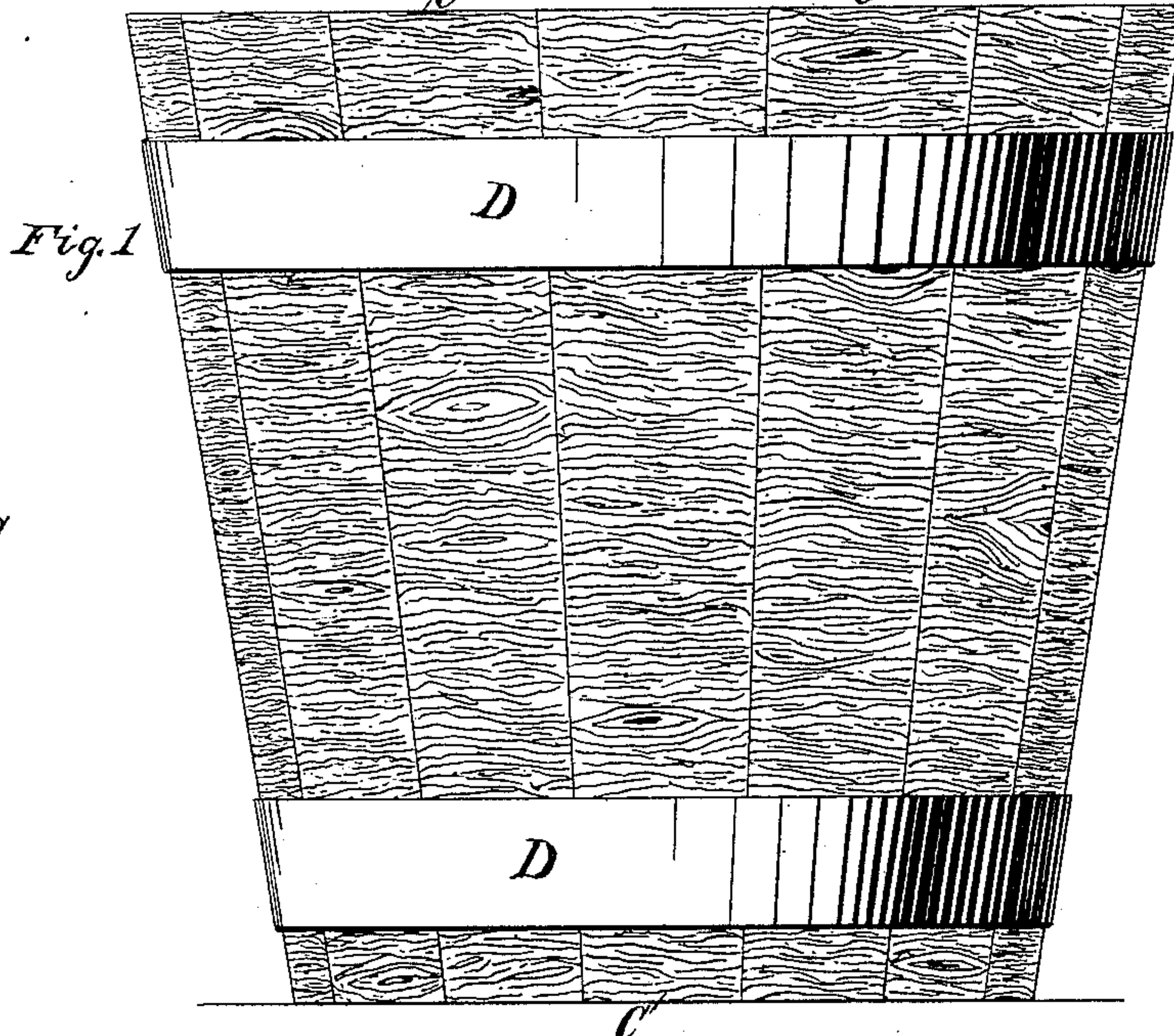
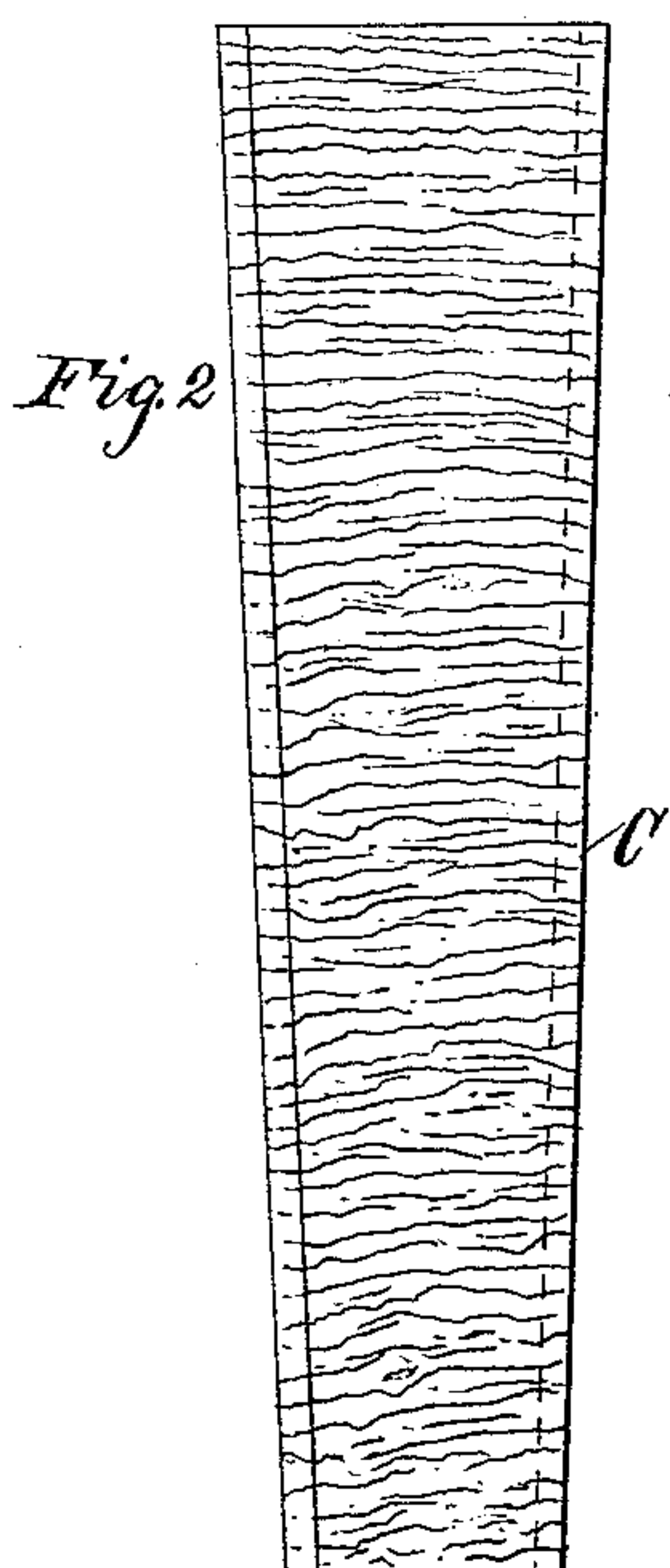


(No Model.)

J. L. KRAUSER.
BUCKET OR TUB.

No. 407,019.

Patented July 16, 1889.



Witnesses
John Bicken
Fr. Bergengren

Inventor:
John L. Krauser
by his Attorney,
Brown & Grainger

UNITED STATES PATENT OFFICE.

JOHN L. KRAUSER, OF LEEPER, PENNSYLVANIA.

BUCKET OR TUB.

SPECIFICATION forming part of Letters Patent No. 407,019, dated July 16, 1889.

Application filed December 5, 1888. Serial No. 292,699. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. KRAUSER, of Leeper, in the county of Clarion and State of Pennsylvania, have invented a new and useful Improvement in the Manufacture of Buckets and Tubs, of which the following is a specification.

Heretofore in the manufacture of tubs and buckets it has been customary to cut the staves from which the tubs or buckets are made so that the grain of the wood will run lengthwise of the staves. Several defects are apparent in tubs or buckets constructed from staves thus formed, prominent among which are the following: If the wood from which the staves are formed is fully seasoned, then, on filling the bucket or tub with water and allowing it to stand in that condition for a considerable time, the expansion of the staves consequent thereupon will either burst the hoops or else will so expand them that when the same bucket is afterward emptied of its contents and then exposed to the sun or dry air it will fall to pieces. This latter will also ensue if the tub or bucket is made of green or unseasoned lumber. I have discovered that if the staves of the bucket or tub be made of wood in which the grain extends widthwise of the staves, instead of in the direction of its length, undue expansion or shrinkage of the wood will not occur, and that it thereby becomes largely immaterial whether the staves are made from green or seasoned lumber.

I will describe in detail a bucket or tub embodying my improvement, and then point out the novel features in claims.

In the accompanying drawings, Figure 1 is a side elevation of a bucket or tub embody-

ing my improvement. Fig. 2 is a side elevation of one of the staves of said bucket or tub. Fig. 3 is an end view of the same. Fig. 4 is a side view of a plank, showing how bolts from which the staves are to be cut are to be sawed from the plank. Fig. 5 is an edge view of the same, also illustrating how staves are to be cut from the bolts.

In carrying out my improvement, I take a plank A in which the grain extends lengthwise of the plank. From this plank I cut bolts B widthwise of the plank, or in such manner that the grain will extend widthwise of the bolts. Preferably the bolts will taper from end to end. From the bolts I cut, with any suitable saw, staves C, which will be, when finished, horizontally curved, and in which the grain will extend crosswise or widthwise of the staves. Preferably, also, the staves will be tongued and grooved, as shown more clearly in Fig. 3. The staves are then placed together and matched to form a tub or bucket, as shown more clearly in Fig. 1. Hoops D may be placed about the tub or bucket.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A stave for a tub or bucket, made of wood and having the grain running crosswise or in the direction of the width of the stave, substantially as specified.

2. A bucket or tub composed of a number of staves made of wood, said staves having the grain of the wood extending crosswise thereof and in the direction of their widths, substantially as specified.

JOHN L. KRAUSER.

Witnesses:

CYRUS KRAUSER,
SAML. K. CLARKE.