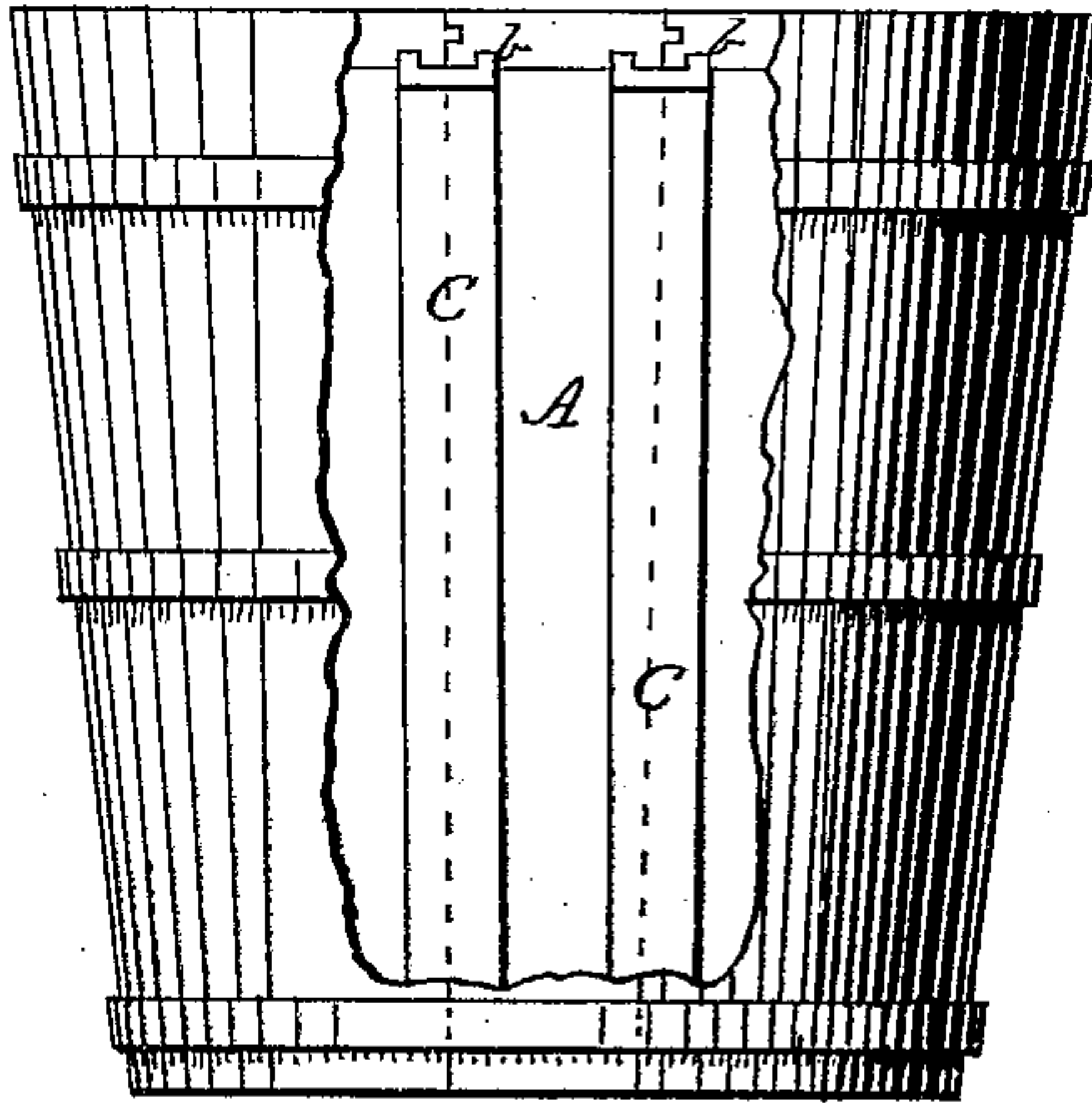


D. F. BOWKER.  
BARRELS.

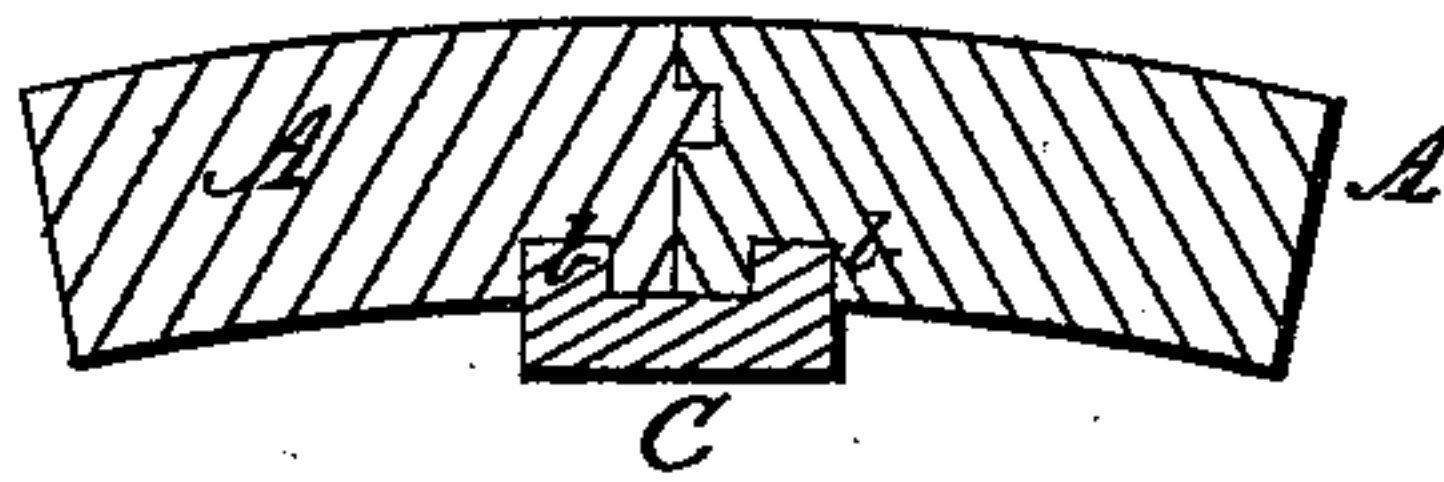
No. 181,241.

Patented Aug. 22, 1876.

*Fig. 1.*



*Fig. 2.*



*Attest:*  
*F. H. Schott.*  
*A. R. Brown,*

*Inventor:*  
*Daniel F. Bowker*  
*Per Geo. W. Balloch*  
*Attorney.*

# UNITED STATES PATENT OFFICE

DANIEL F. BOWKER, OF FITZWILLIAM, ASSIGNOR TO STEPHEN D. OSBORN  
AND JOHN A. WRIGHT, OF KEENE, NEW HAMPSHIRE.

## IMPROVEMENT IN BARRELS.

Specification forming part of Letters Patent No. **181,241**, dated August 22, 1876; application filed  
July 27, 1876.

*To all whom it may concern:*

Be it known that I, DANIEL F. BOWKER, of Fitzwilliam, in the county of Cheshire and State of New Hampshire, have invented certain new and useful Improvements in Barrels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to render the joints of barrels, kegs, wooden oil-cans, and similar packages perfectly tight, and capable of resisting the pressure of liquids, paints and oils of all kinds, much longer and more efficiently than the ordinary barrels and cans now in use; also, to obviate the liability to warping and consequent opening of the joints from atmospheric changes; and it consists in securing a wooden or metal strip or cleat over the inner side of the ordinary tongue-and-groove joint of a barrel or can, as hereinafter more fully described.

In the drawings, Figure 1 is a view of a can or pail embodying my invention; and Fig. 2 is an end view of two staves united by a tongue-and-groove joint, and further secured by a cleat on the inner side of the joint.

A represents a barrel-stave, which is made with a groove on one edge and a tongue on the opposite edge. It is also grooved or chan-

neled longitudinally on its inner side, near the edges, for the reception of the tongues *b b* of the cleat C. This cleat varies in width and thickness according to the relative size of the stave to which it is applied, and is channeled through the center, so as to form tongues on the inner side of each edge, by means of which it is secured over the joint, the tongues *b b* entering the longitudinal grooves on the inner side of the adjacent staves, and holding them firmly together.

Various adhesive compounds capable of resisting the action of liquids and oils may be used, if desired, for the purpose of obtaining further security and uniting the cleats firmly to the barrel or can.

It is obvious that a cleat, made as described, may also be usefully employed in securing the joints of wooden boxes and other packages.

I claim as my invention—

The cleat C, provided with the tongues *b b*, in combination with the channeled staves of a barrel, substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature this 22d day of July, 1876, in presence of two witnesses.

DAN. F. BOWKER.

Witnesses:

EDWARD P. DOLE,  
W. H. LEWIS.