

H. SCHWARZWALDER.
Barrel-Head.

No. 210,882.

Patented Dec. 17, 1878.

Fig: 1

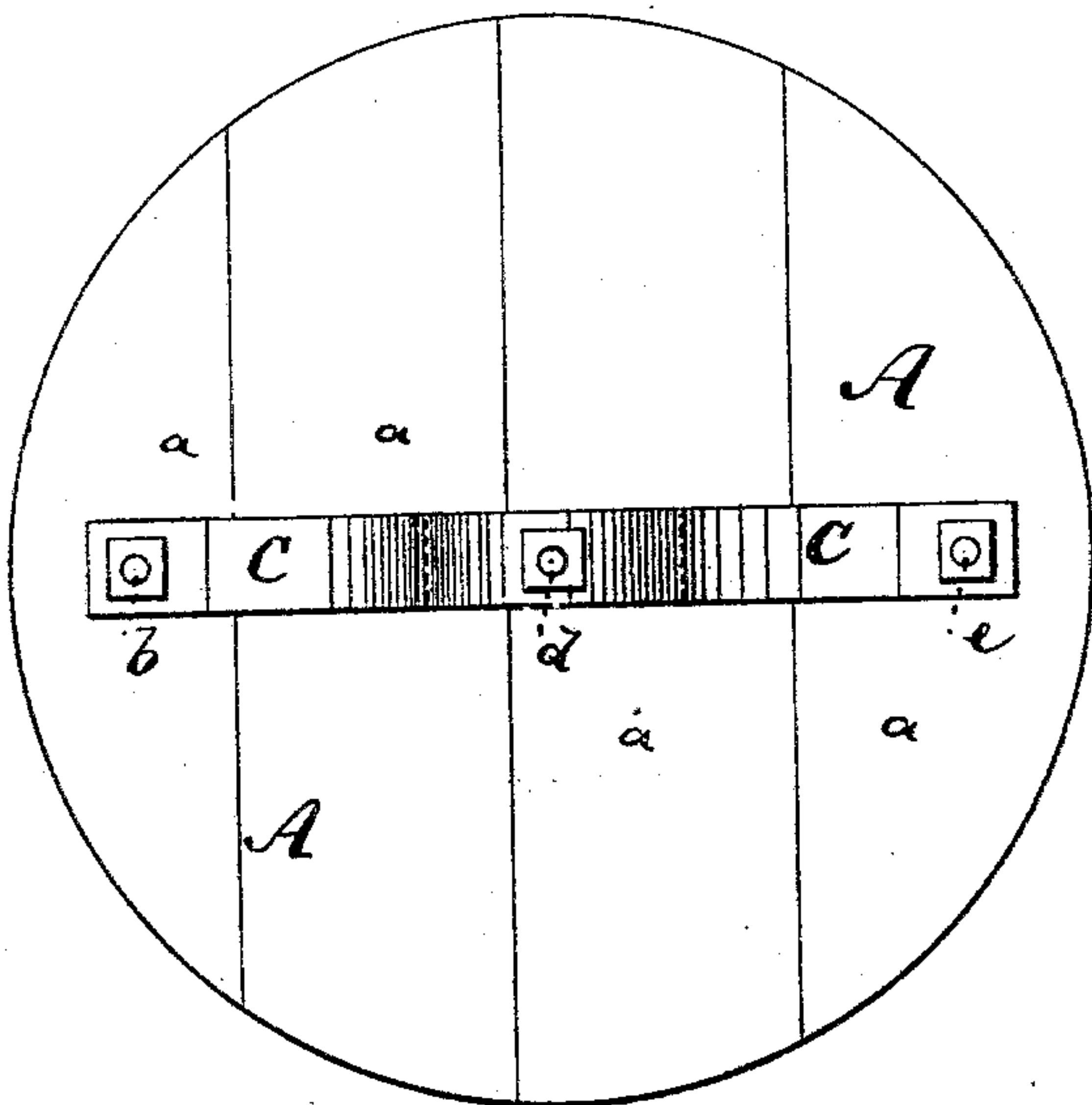
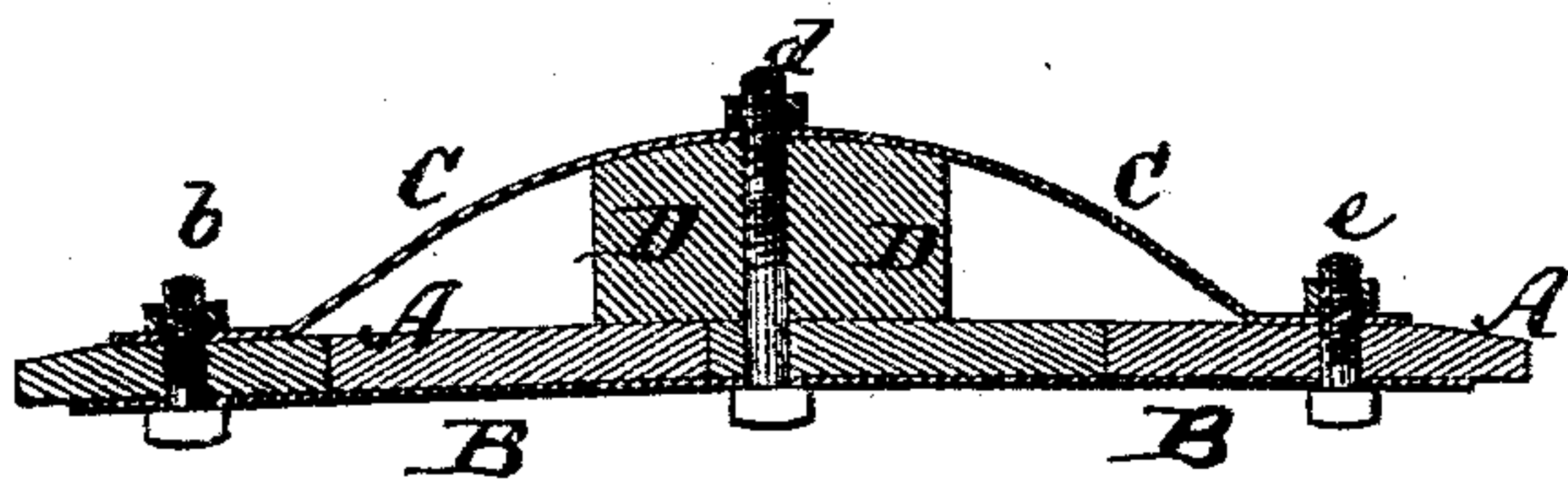


Fig: 2



Witnesses

John C. Tunbridge
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UNITED STATES PATENT OFFICE.

HENRY SCHWARZWALDER, OF NEW YORK, N. Y.

IMPROVEMENT IN BARREL-HEADS.

Specification forming part of Letters Patent No. **210,882**, dated December 17, 1878; application filed November 19, 1878.

To all whom it may concern:

Be it known that I, HENRY SCHWARZWALDER, of the city, county, and State of New York, have invented certain new and useful Improvements in Barrel-Heads; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification.

Figure 1 is an outer face view of my improved barrel-head; Fig. 2, a central vertical section of the same.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to a new manner of re-enforcing the heads of large barrels and casks, with a view toward dispensing with the central stays or braces now used in large barrels to connect the heads thereof.

My invention consists in bracing each barrel-head by means of an arched metal plate, which is raised in the center by a plug placed against the barrel-head, all the parts being secured by bolts, as hereinafter more fully described.

I desire it to be well understood that the invention is to be used only on casks and barrels of which the heads have such diameters as to necessitate the use of additional strengtheners.

In the accompanying drawing, the letter A represents the barrel-head, of proper size, strength, and material. It is usually constructed of several pieces of planking, *a a*, which are placed edge to edge, and connected by a metallic plate, B. This plate is secured

to the head by means of three or more bolts, *b d e*, as shown.

Against the outer face of the head is secured an arched metal brace, C, whose ends bear against the barrel-head, to which they are secured by the bolts *b* and *e*. The center of the brace C is raised off the head to make room for a plug or block, D, which is interposed between said brace and the barrel-head, as shown. The bolt *d* extends through said plug and brace, and through the barrel-head, as shown. In this manner the head is properly braced and strengthened, and yet disconnected from the other barrel-head.

The plate B, instead of being in line with the brace C, may be placed out of line of the same; or two such plates, B, may be used in combination with a single brace, C; or two such braces in combination with one such plate; or an equal number of plates and braces may be used.

The barrel-head A may be made straight or concave.

I claim—

1. The combination of the barrel-head A with the arched brace C, plug D, and bolts *b d e*, substantially as herein shown and described.

2. The combination of the barrel-head A with the arched brace C, plug D, plate B, and bolts *b d e*, substantially as herein shown and described.

HENRY SCHWARZWALDER.

Witnesses:

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