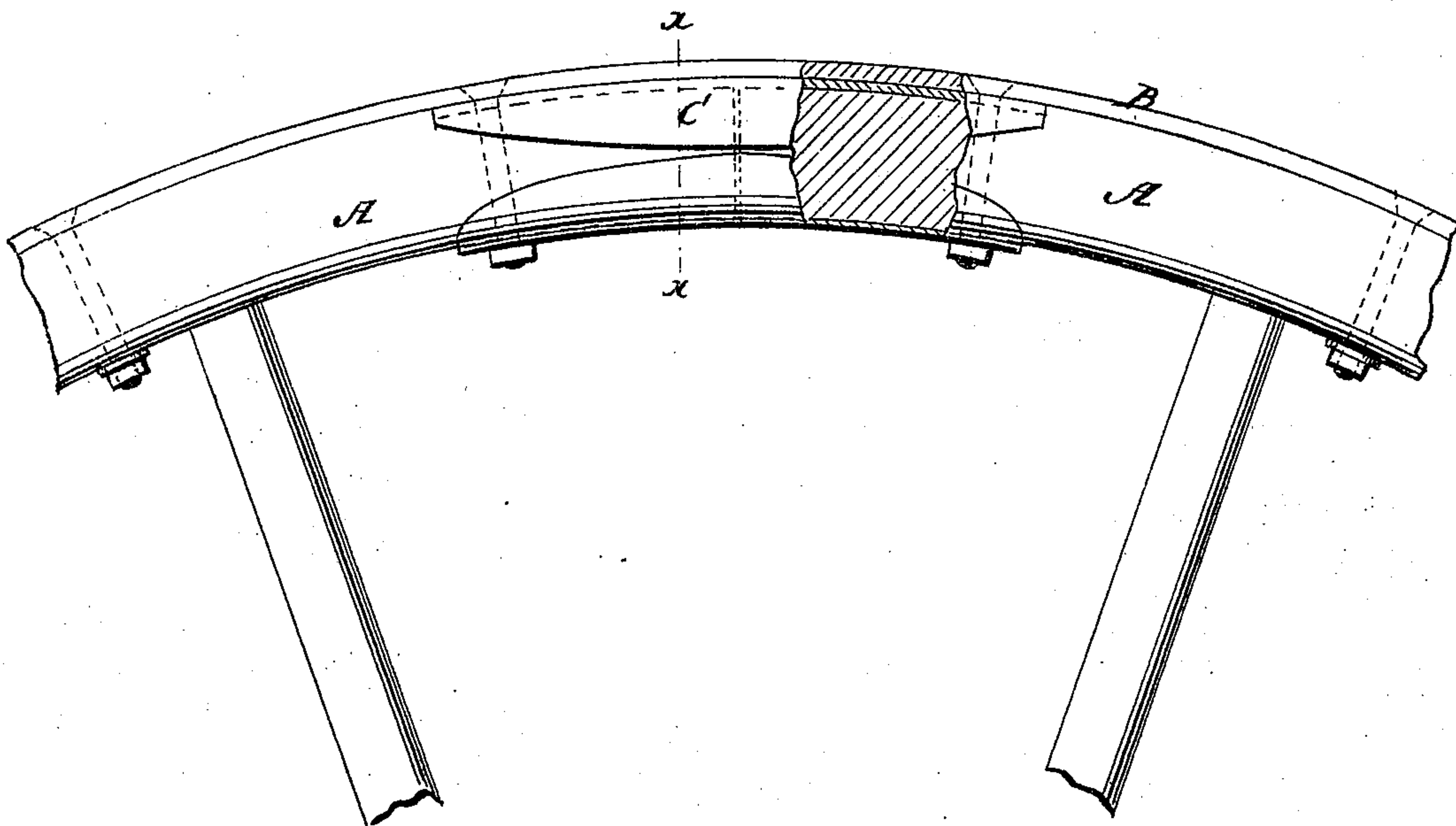


D. T. BOWERMAN.  
FELLY JOINT-CLIPS.

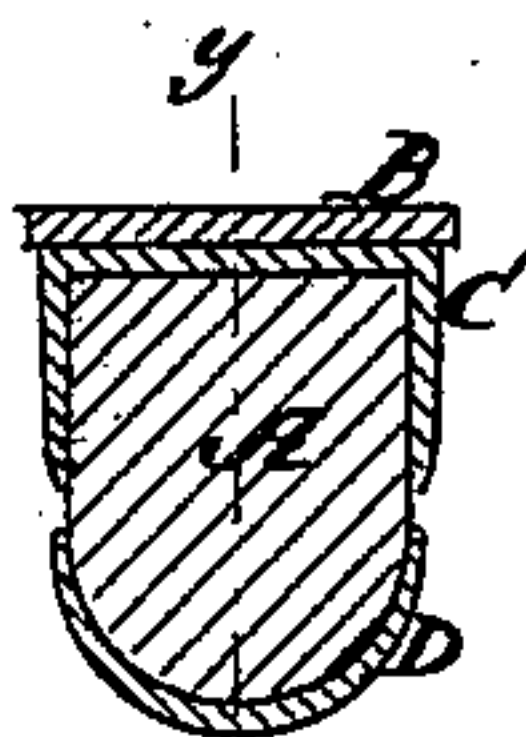
No. 171,547.

Patented Dec. 28, 1875.

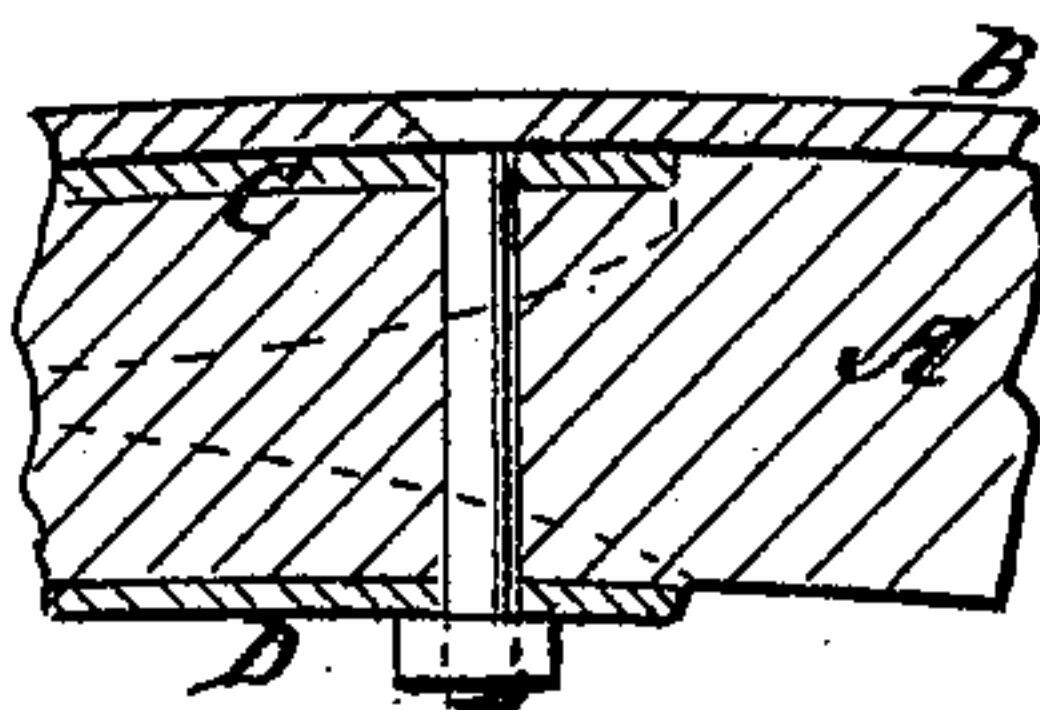
*Fig. 1*



*Fig. 2*



*Fig. 3*



WITNESSES:

*E. Wolff*  
*Alex. F. Roberts*

INVENTOR:

*D. T. Bowerman*

BY

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# UNITED STATES PATENT OFFICE.

DAVID T. BOWERMAN, OF MIDDLETOWN, NEW YORK.

## IMPROVEMENT IN FELLY-JOINT CLIPS.

Specification forming part of Letters Patent No. **171,547**, dated December 28, 1875; application filed October 2, 1875.

*To all whom it may concern:*

Be it known that I, DAVID T. BOWERMAN, of Middletown, in the county of Orange and State of New York, have invented a new and Improved Felly-Joint, of which the following is a specification:

My invention consists, first, of a clip of metal, fitted between the outer periphery of the felly and the tire, with the flanges embracing the two sides of the felly, and extending about half-way to the inner periphery; and, second, of another clip of metal, fitted on the inner periphery of the felly, with its sides embracing the sides of the felly, and extending along the sides of the latter nearly to contact with the sides of the other clip, both of said clips being secured by bolts, also passing through the felly and the tire, and binding all fast together. The first-mentioned clip securely holds the ends of the felly against lateral displacement, and it largely strengthens the wheel-rim against binding inward; but when re-enforced by the other, a very superior joint is produced.

Figure 1 is partly a side elevation and partly a section of a wheel having my improved joint. Fig. 2 is a transverse section on line *xx*. Fig. 3 is a longitudinal section taken on line *yy*.

Similar letters of reference indicate corresponding parts.

A represents the felly; B, the tire; C, the clip to the outer periphery; D, the inner clip, and E the bolts fastening the clips.

The felly is dressed off on the outer face to the depth and length of the bottom plate of

the clip, to produce space for it between the felly and the tire, and the bolts *a* pass through both clips, besides the tire and the felly, and bind all fast together, making a neat and substantial joint.

It will be observed that the upper clip C is provided with right-angular flanges, overlapping the fellies at their line of junction, and that the lower clip D has flanges curved to conform to the lower face of the fellies, preventing any lateral displacement, and taking the side strain.

I am aware that a lower clip having flanges embracing the fellies has heretofore been employed in connection with a bolt having a T-shaped head, which is bent over the fellies, the shank passing through the fellies at their joint; and I therefore lay no claim to such invention, which weakens the rim at its weakest point—viz., the joint between the fellies.

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

The felly-joint support consisting of the upper clip C, having right-angular flanges overlapping each side of the felly-joint, the lower clip D, provided with overlapping flanges, and the two bolts *a a*, passing through the tire, felly, and clips, substantially as and for the purpose set forth.

DAVID T. BOWERMAN.

Witnesses:

R. M. SCOTT,  
HORATIO S. TOWNSEND.