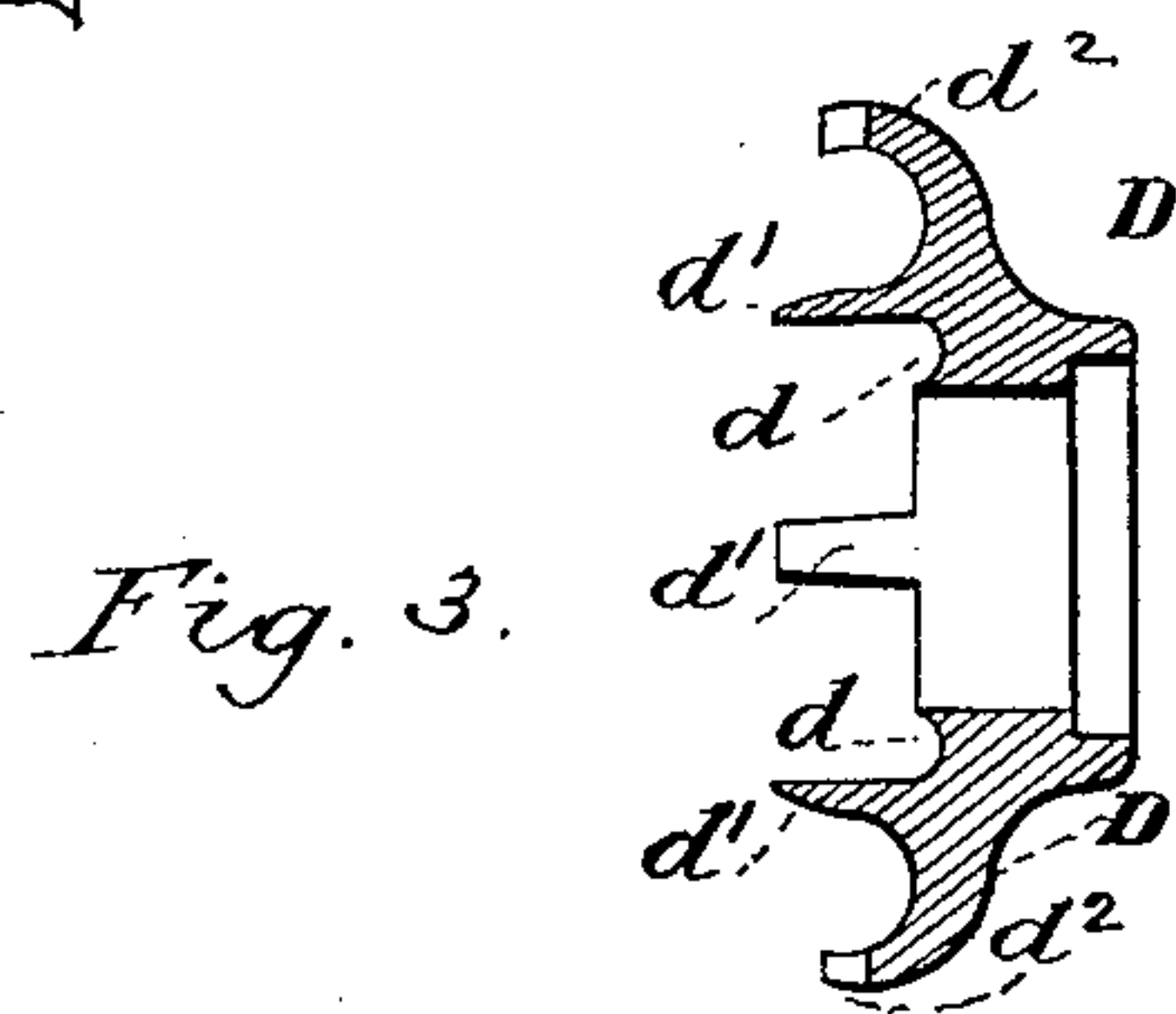
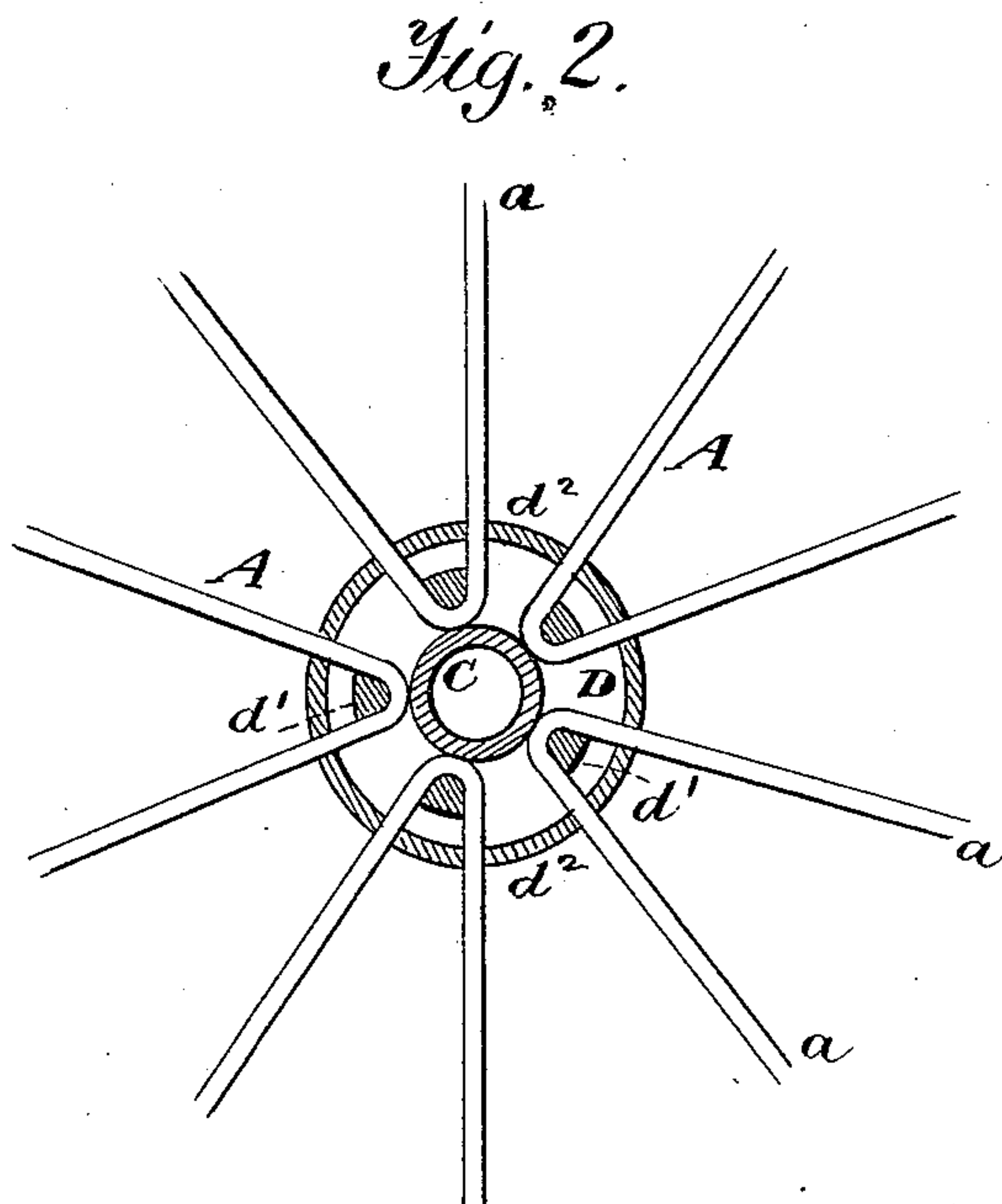
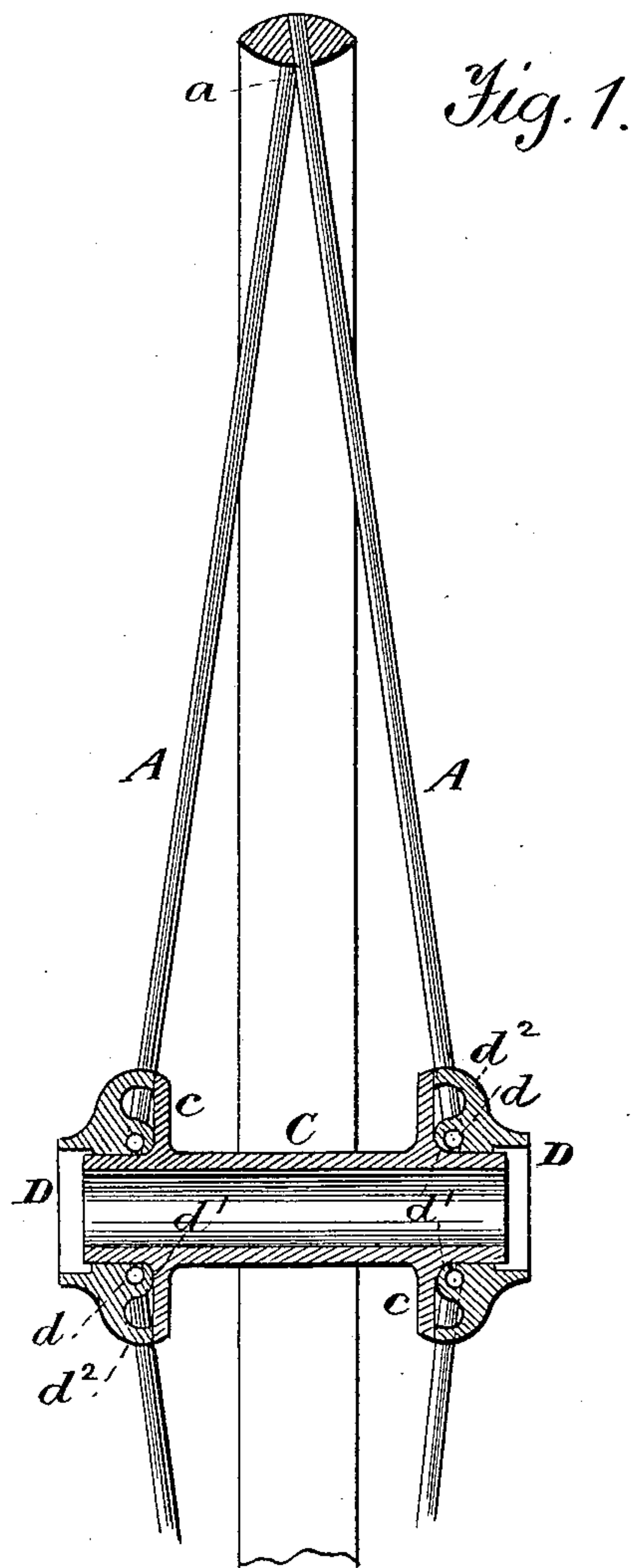


(No Model.)

E. R. KINNEY.  
METALLIC WHEEL.

No. 390,682.

Patented Oct. 9, 1888.



*Witnesses.*  
*A. Ruppert.*  
*W. V. Burris.*

*Inventor.*  
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*Atty.*

# UNITED STATES PATENT OFFICE.

EDWIN R. KINNEY, OF TOLEDO, OHIO.

## METALLIC WHEEL.

SPECIFICATION forming part of Letters Patent No. 390,682, dated October 9, 1888.

Application filed June 16, 1888. Serial No. 277,343. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN R. KINNEY, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Spoke Sockets for Metallic Wheels; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The special object of the invention is to secure the double spoke of a metallic wheel to its axle-box so that it cannot work loose or rattle, but may be rigidly held, as hereinafter described.

Figure 1 of the drawings is a vertical section across the axle-box; Fig. 2, a vertical section longitudinally of the axle-box; and Fig. 3, a sectional view of my spoke-ring, showing its peculiar construction.

In the drawings, A represents a double metallic spoke, which consists of a bar bent in the middle to form an acute angle which rests on the outer surface of the axle-box B, while the two ends *a a* are passed through the rim or felly up to the tire, which is shrunk on in the usual way; or the ends of the double spoke may be secured in any other approved manner.

C is an axle-box, which I cast with an annular flange, *c*, near each end, to form an abutment against which the spokes may be supported.

D is my spoke-ring, which is forced on the ends of the axle-box C and up to the flange *c*.

It is provided with the grooves *d*, which receive the spoke-bar, the projections *d'*, which are clinched around it, as shown in the drawings, and the flange *d''*, which comes into close contact with the flange *c* of the axle-box. The projections are made to clinch the spokes before the ring D is driven on the axle-box, and then, like the flange *d''*, are caused to bear against the flange *c*. I thus prevent all tendency to looseness in the spokes and the possibility of their rattling while the clinches are held securely in position.

I am aware that it is not new to have two spokes in one piece and to use an axle-box rolled with an annular corrugation to form a stop for the hub-section; but my axle-box and each annulus are cast together so as to cost very little, while the purpose of my annulus *c* is not to be a stop for the hub-section, but to form an abutment for the clamp projections *d'* *d''* and for the spoke which rests against it.

Hence what I claim as new, and desire to protect by Letters Patent, is—

The combination, with an axle-box having annular flanges *c*, of the rings D D, having grooves *d*, to receive the spokes, flanges *d'*, to be bent around them, and flanges *d''*, to bear against the axle-box flanges *c*, whereby the spokes may rest with their ends on the axle-box and be pressed against the axle-box flanges, as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN R. KINNEY.

Witnesses:

H. C. NICHOLAS,

C. S. CURTIS.