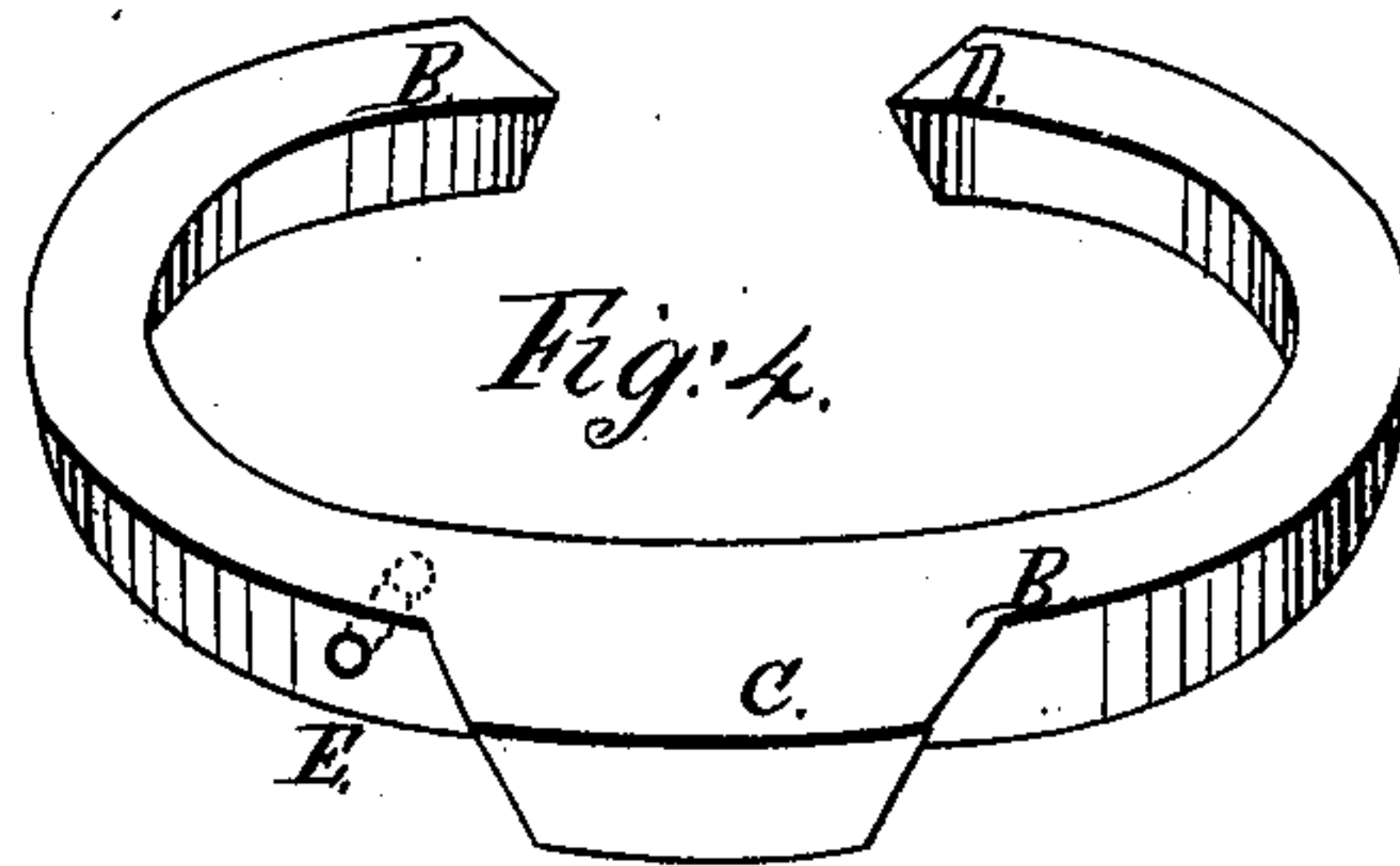
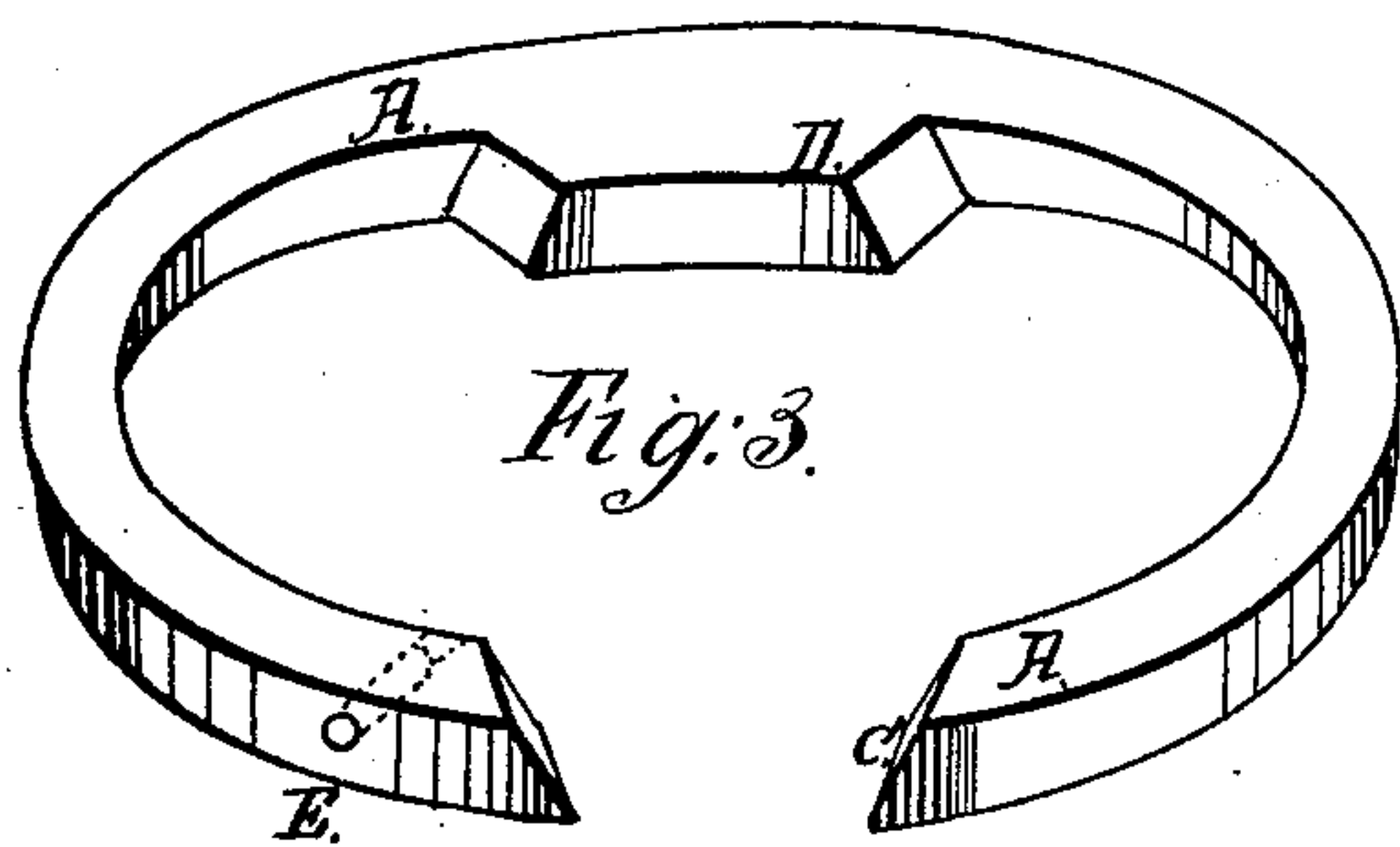
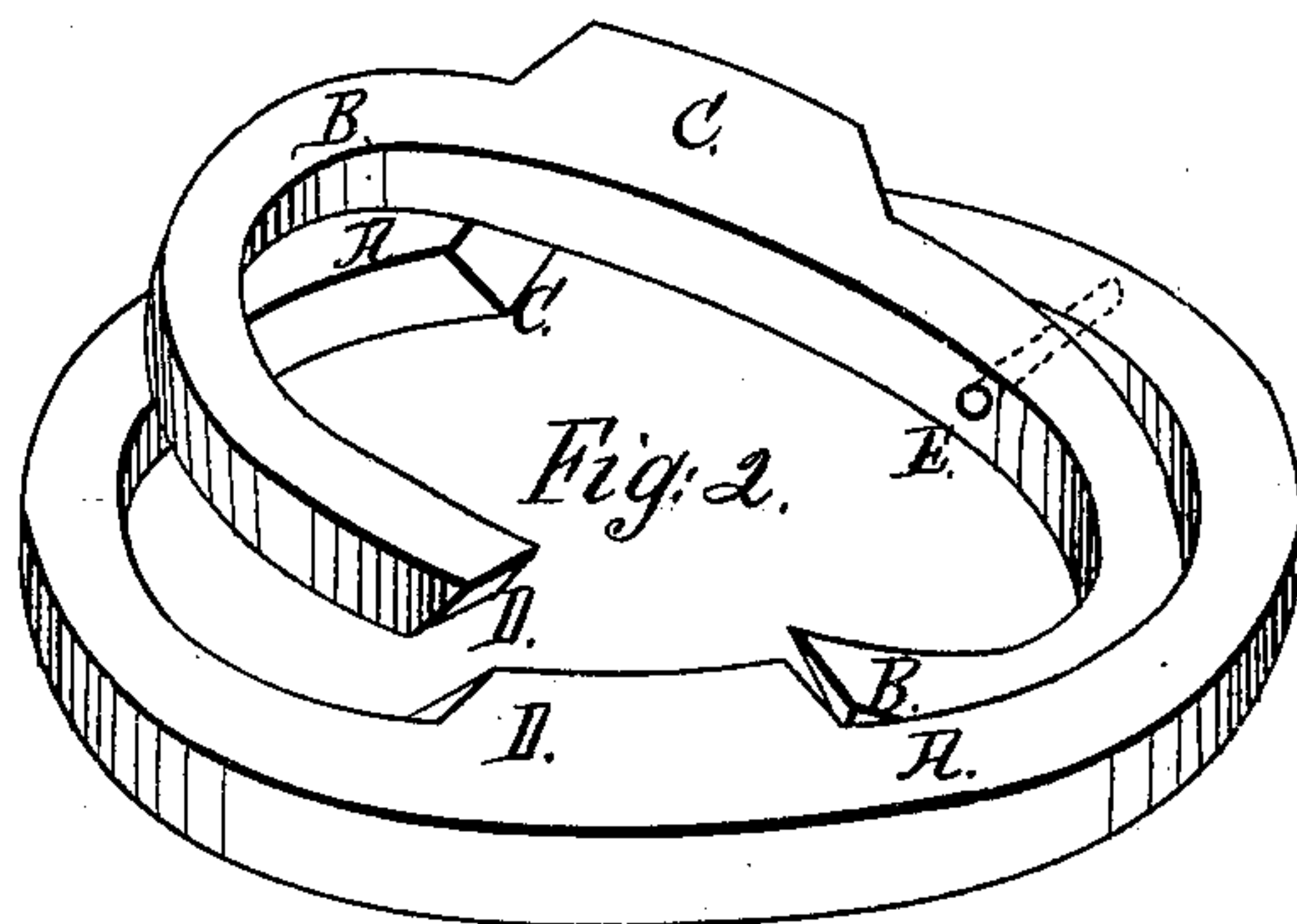
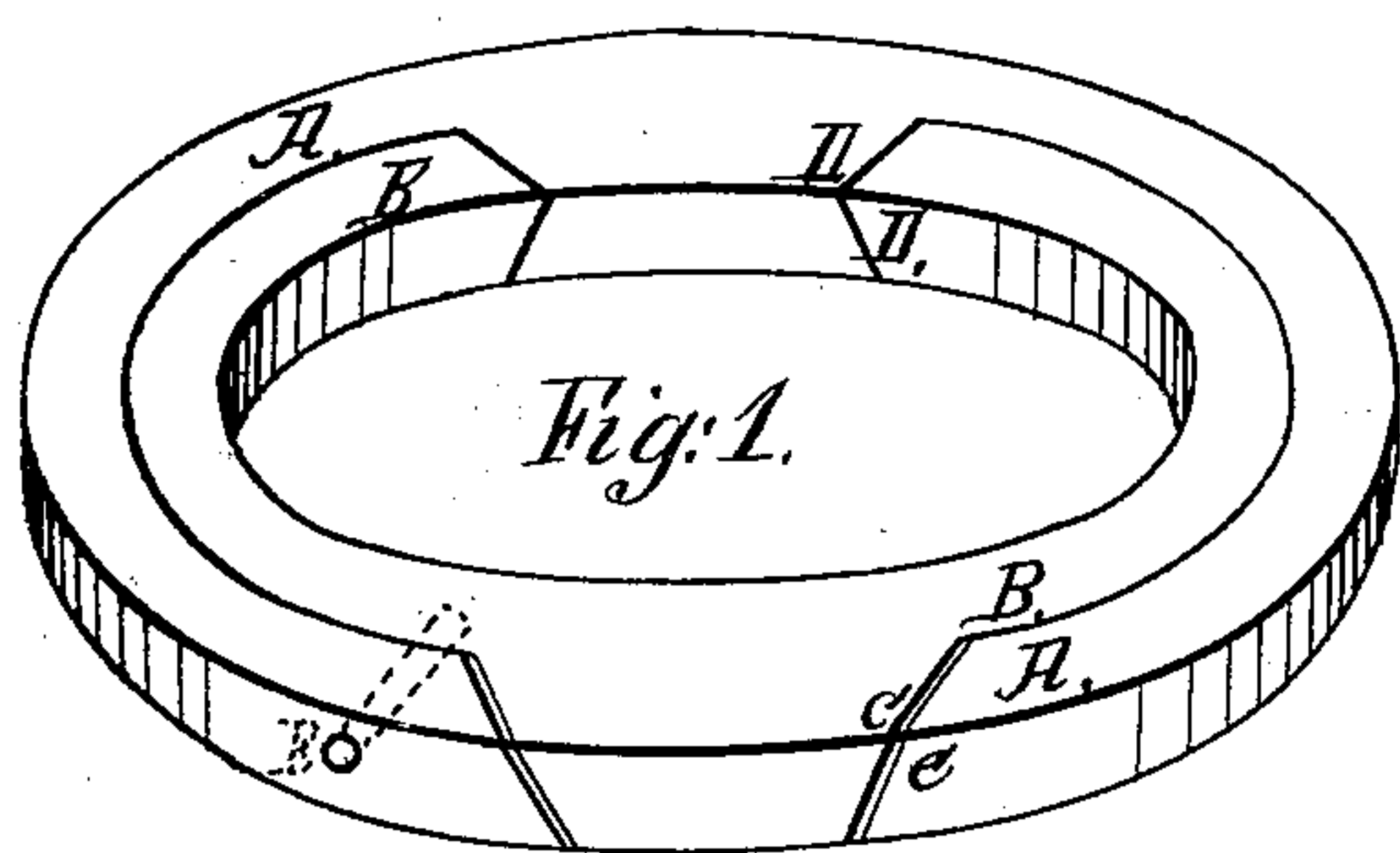


B.F. Zinn,

Open Or Middle Ring

N<sup>o</sup> 84,155.

Patented Nov 17, 1868.



Witnesses.

John L. Zinn.  
Frank E. Beltzhoover.

Inventor.

Benjamin F. Zinn.

# United States Patent Office.

BENJAMIN F. ZINN, OF MOUNT ROCK, PENNSYLVANIA.

*Letters Patent No. 84,155, dated November 17, 1868.*

## IMPROVED OPEN OR MIDDLE RING.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern :*

Be it known that I, BENJAMIN F. ZINN, of Mount Rock, Cumberland county, Pennsylvania, have invented a new and useful Improvement in Open or Middle Rings; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the ring when closed.

Figure 2 is a perspective view of the ring when open.

Figures 3 and 4 are perspective views of the several parts of the ring when separated.

I construct the part A A of an oval or circular shape, and with the trapezoidal aperture C in the one side thereof, and the extension D, of a similar shape and size, on the opposite side.

I construct the part B B of a shape precisely similar to and of such a size that it will exactly fit within the part A A, having also the trapezoidal aperture D in the one side thereof, and the extension C, of the same shape and size, on the opposite side.

I connect the parts A A and B B thus constructed, by the bolt and screw, or rivet, E, upon which they open and shut.

When the ring is closed, the trapezoidal extension D, of the part A A, fits in the similarly-shaped aperture D, of the part B B, forming thereby a semi-dovetail, and the trapezoidal extension C, of the part B B, fits in the similarly-shaped aperture C, of the part A A, forming thereby another semi-dovetail.

When the ring is in use it appears as shown in fig. 1.

When I desire to use the ring, I open it, as shown in fig. 2, and insert the end C, of the part A A, into the parts which I desire to connect, until these parts rest on the extension D, when I close the parts A A and B B, and the parts connected slide to the opposite ends of the ring; or, I insert the end C, of the part A A, into the one part until said part rests on the extension D, and insert the end D, of the part B B, into the other part, until said part rests on the extension C, when, closing the parts A A and B B, the connected parts slide from the extensions C and D to the opposite ends of the ring.

I am aware that Letters Patent have been granted for open or middle rings, formed by combinations somewhat similar to mine. I expressly disclaim what-

ever combinations or inventions have been patented; and claim that my ring is a new and useful improvement on all others—

First, in that it is neat and compact, presenting, when in use, as shown in fig. 1, a ring perfectly similar, in shape and size, to the ordinary one.

Second, in that, by the trapezoidal apertures and extensions on both sides, two semi-dovetails are made, thereby giving the ring additional strength and durability. All other combinations have but one semi-dovetail.

Third, in that, by connecting the parts by the bolt and screw, or rivet, E, instead of an additional or adventitious hinge, the ring can be removed and adjusted with greater facility and dispatch; for example, when the ring is used in agriculture to connect the single and double-tree, by placing the extension D, of the part A A, against the "frizon" of the double-tree, the parts A A and B B will open sufficiently, as shown in fig. 2, to remove the double-tree, without altering the position of or removing the single-tree.

The nature and object of my invention are to furnish a more convenient and easily-adjusted connecting-medium between any two things which are usually connected by the common ring or link; and it is an improvement, because it is easily removed and replaced under all circumstances, and is as strong and permanent when in use as the common link or ring.

It is applied in agriculture to connect the single-tree and double-tree of the wagon and the plow; to mend chains in which links or rings are broken; to connect one chain with another, &c.

In general, it is designed to be applied and used in forming any connection, and for any purpose in which a ring or link is or can be used.

What I claim, and desire to secure by Letters Patent of the United States, is—

The oval or circular parts A A and B B, with the trapezoidal extensions C and D, and the trapezoidal apertures C and D, and the rivet, or bolt and screw, E, connecting the parts A A and B B, all combined and operating in the manner and for the purpose herein set forth.

BENJAMIN F. ZINN.

Witnesses:

JOHN Q. ZINN,

FRANK E. BELTZHOVER.