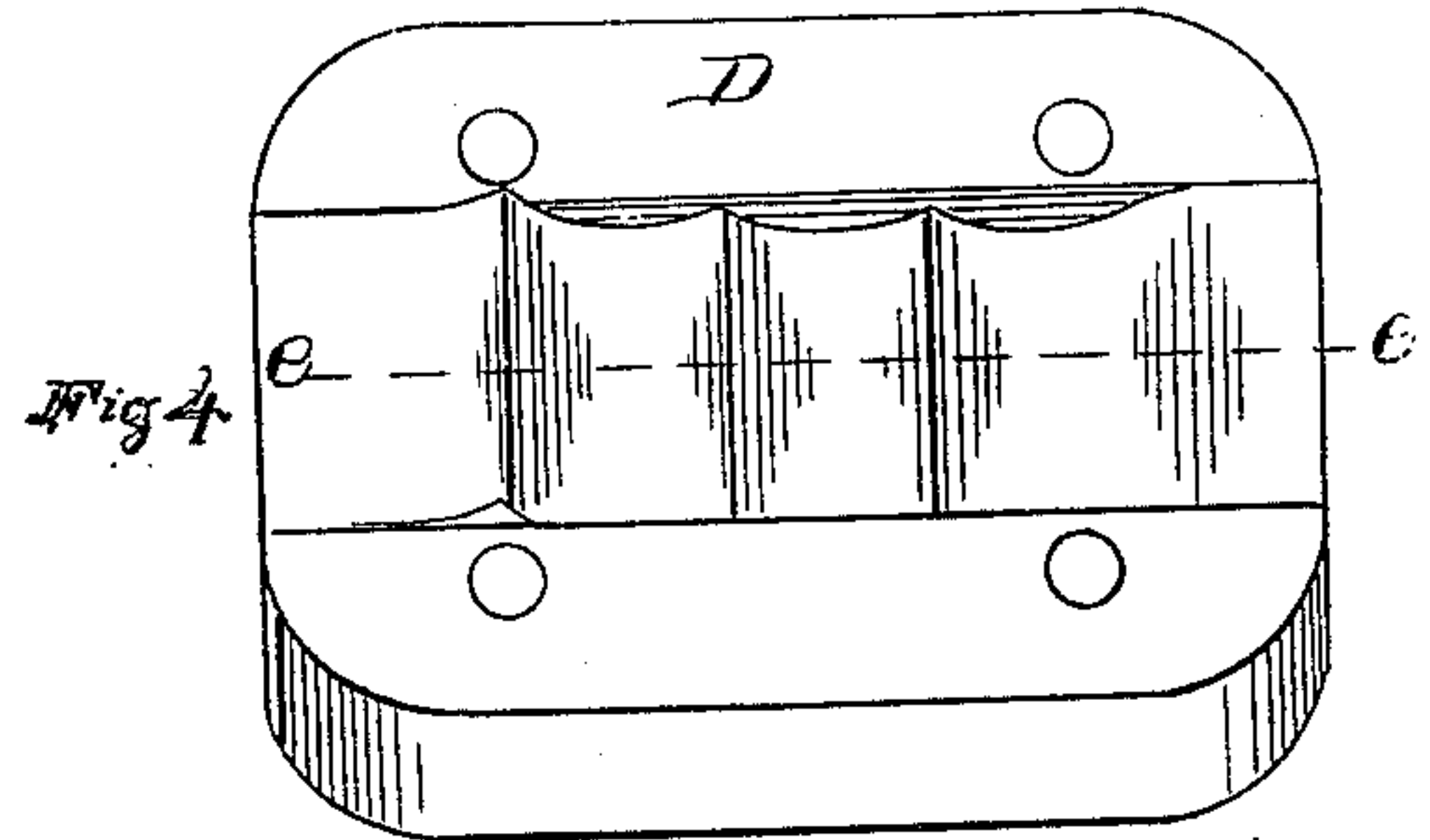
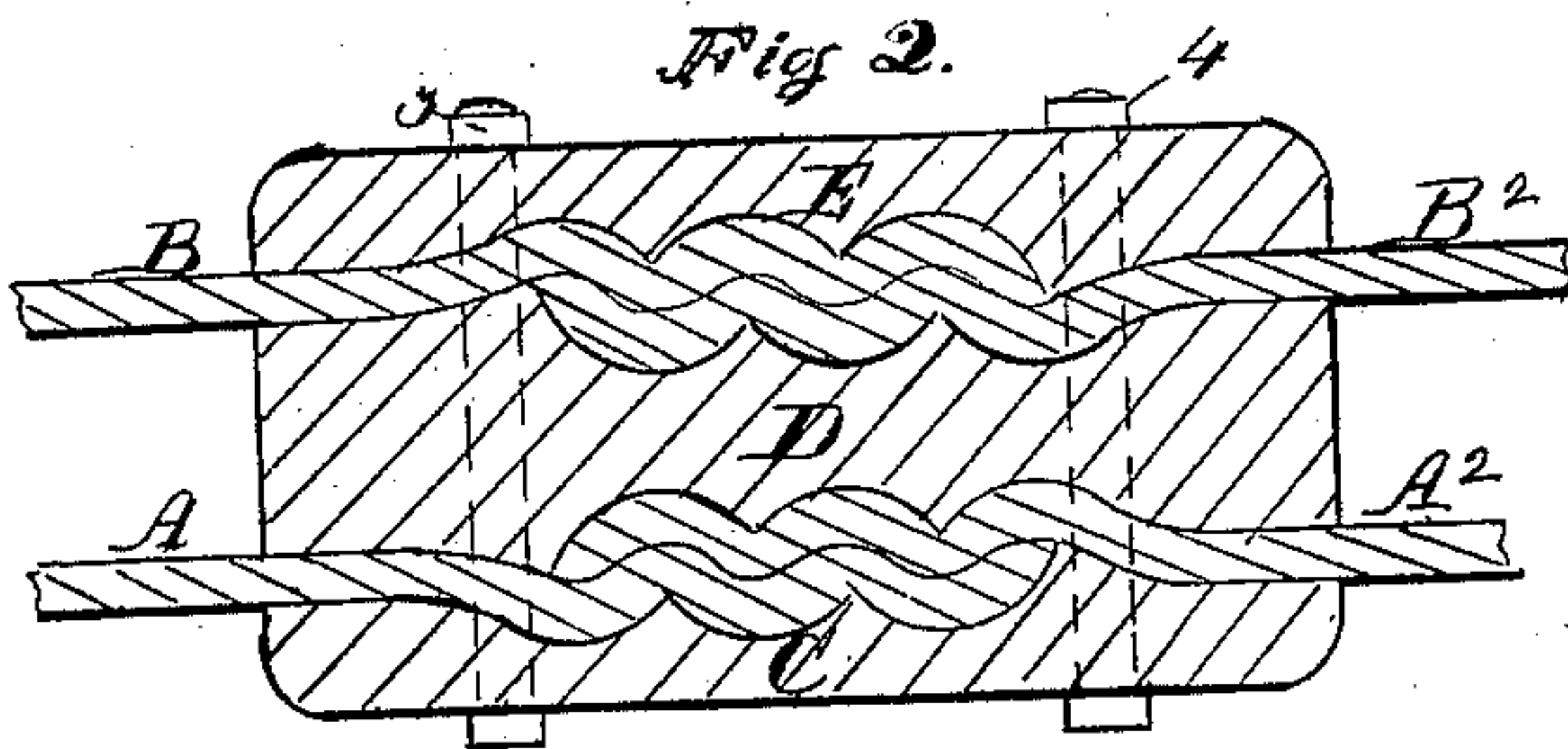
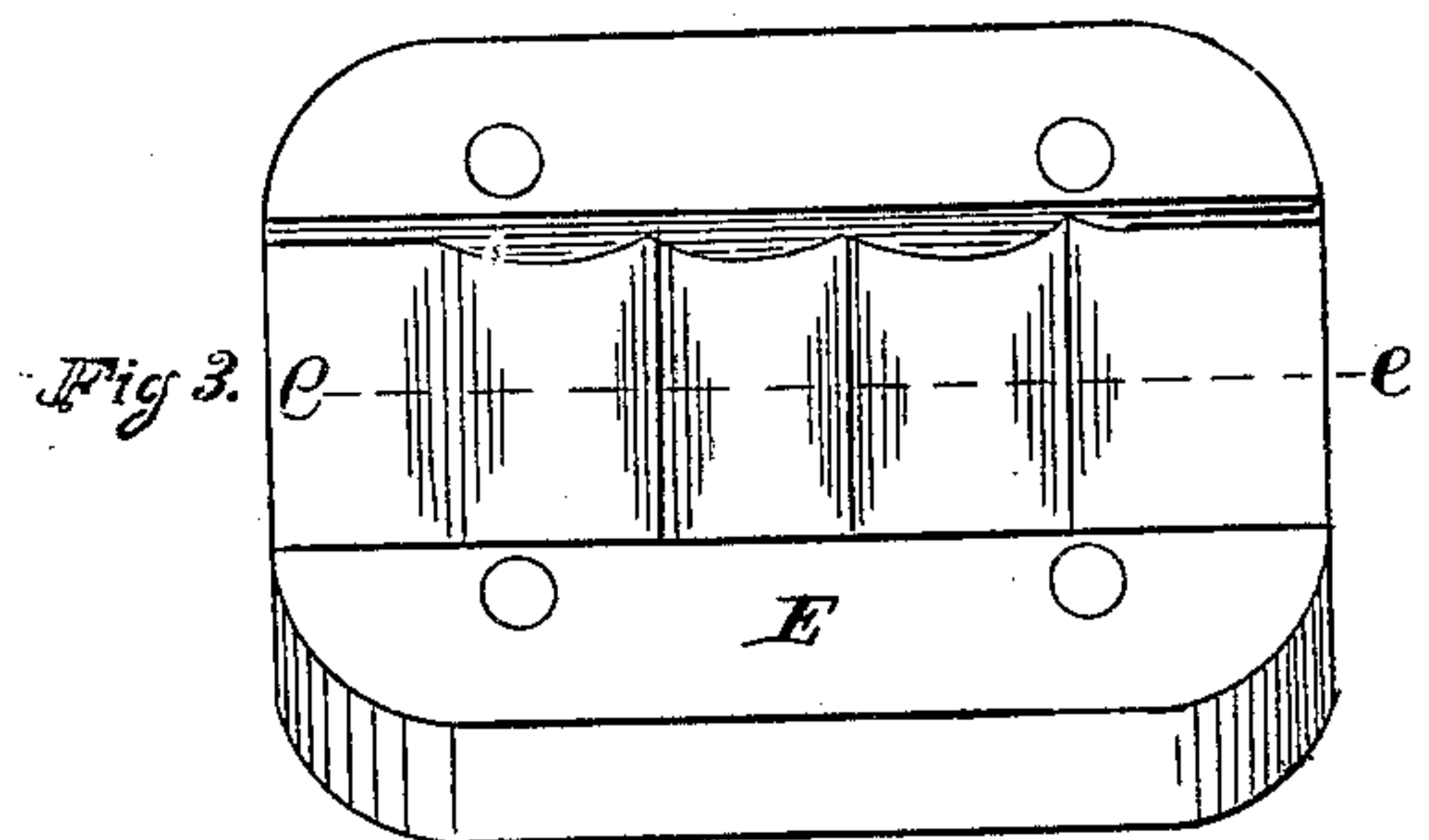
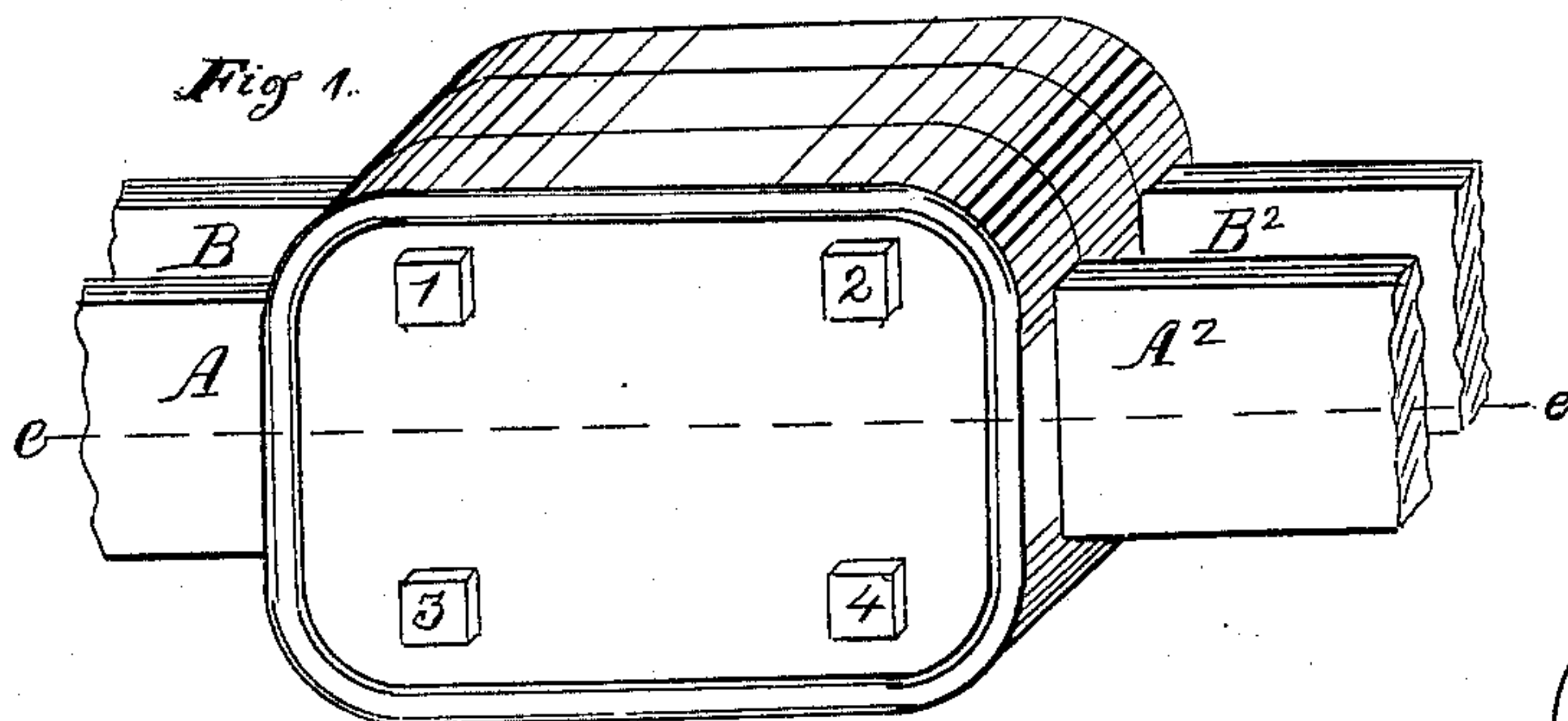


*L. E. Truesdell.*  
*Truss Bridge.*

*No. 78,403.*

*Patented May 26, 1868.*



*Witnesses.*

*W. H. Sherman*  
*James Coleman*

*INVENTOR.*

*L. E. Truesdell*

# United States Patent Office.

L. E. TRUESDELL, OF CHICAGO, ILLINOIS.

*Letters Patent No. 78,403, dated May 26, 1868.*

## IMPROVEMENT IN LOCK-BARS FOR BRIDGES.

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, L. E. TRUESDELL, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Corrugated Lock for Connecting Metal Bars; and I do hereby declare the following to be full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a perspective view of my invention.

Figure 2 is a transverse longitudinal central section of the same on lines *c c*.

Figures 3 and 4 are vertical longitudinal sections of the clamps employed in holding the bars, showing the manner of corrugating the same.

Similar letters of reference, where they occur in the separate figures, denote like parts in both of the drawings.

It is found that in the manufacturing of iron bridges, or any structure where two or more iron bars are to be connected, for the purpose of adding length thereto, by lapping and perforating the ends thereof to receive the bolts by which the same is held together, the strength of the bars is materially lessened, as a portion of the iron must necessarily be cut away; and it is to overcome this difficulty that my invention is designed, which consists in corrugating the ends of the bars in such a manner, that as the same are lapped together, the convexed portion of the one shall lock into the concaved part of the other, and are firmly held together by means of bolts passing through clamp-plates, enclosing the same, which are also fluted, internally corresponding with the corrugations in the ends of the bars, whereby the entire strength of the same is obtained, as no portion thereof is cut away.

To enable others skilled in the art to construct and use my invention, I will proceed to describe the same with reference to the drawings.

A and A<sup>2</sup>, B and B<sup>2</sup>, represent the bars as connected. The ends thereof are provided with a series of transverse corrugations or channels, formed therein by swaging or crimping the same when hot, and in such a manner that as the same are lapped or placed together, the convexed portion of the one shall lock into and closely fill the concaved part of the other, and are firmly held together by means of bolts, 1, 2, 3, and 4, passing through clamp-plates C, D, and E, which are provided with a groove cut therein longitudinally to a depth equivalent to the thickness of the bars. The grooves within said clamp-plates are fluted transversely, corresponding with the corrugations in said bars, whereby, as said clamp-plates are bolted together, the inner sides thereof come in contact with and against the outer sides of said bars, which firmly compress the same together; thus the entire and original strength of the bars longitudinally is obtained, as said bolts pass through the clamp-plates outside of the bars.

I have said that my invention is intended for connecting bars in bridges, or any structures of a like nature. It may also be used in the connecting of any bars or rods of iron where the entire and original strength is desired.

It may also be used singly, that is to say, where only two bars are connected, forming one continuous bar, or may be used where several bars are connected at one point, and running parallel with each other, as shown in the drawings.

Having thus described the nature and object of my invention, what I claim as new, and desire to secure by Letters Patent, is—

The corrugated ends of two or more bars of iron, A and A<sup>2</sup>, B and B<sup>2</sup>, when firmly held together within the compressible sides of fluted clamp-plates C, D, and E, as and for the purpose specified.

L. E. TRUESDELL.

Witnesses:

N. H. SHERBURNE,  
JAMES COLEMAN.