

G. D. EDMANDS.  
Spinning-Ring.

No. 216,731.

Patented June 24, 1879.

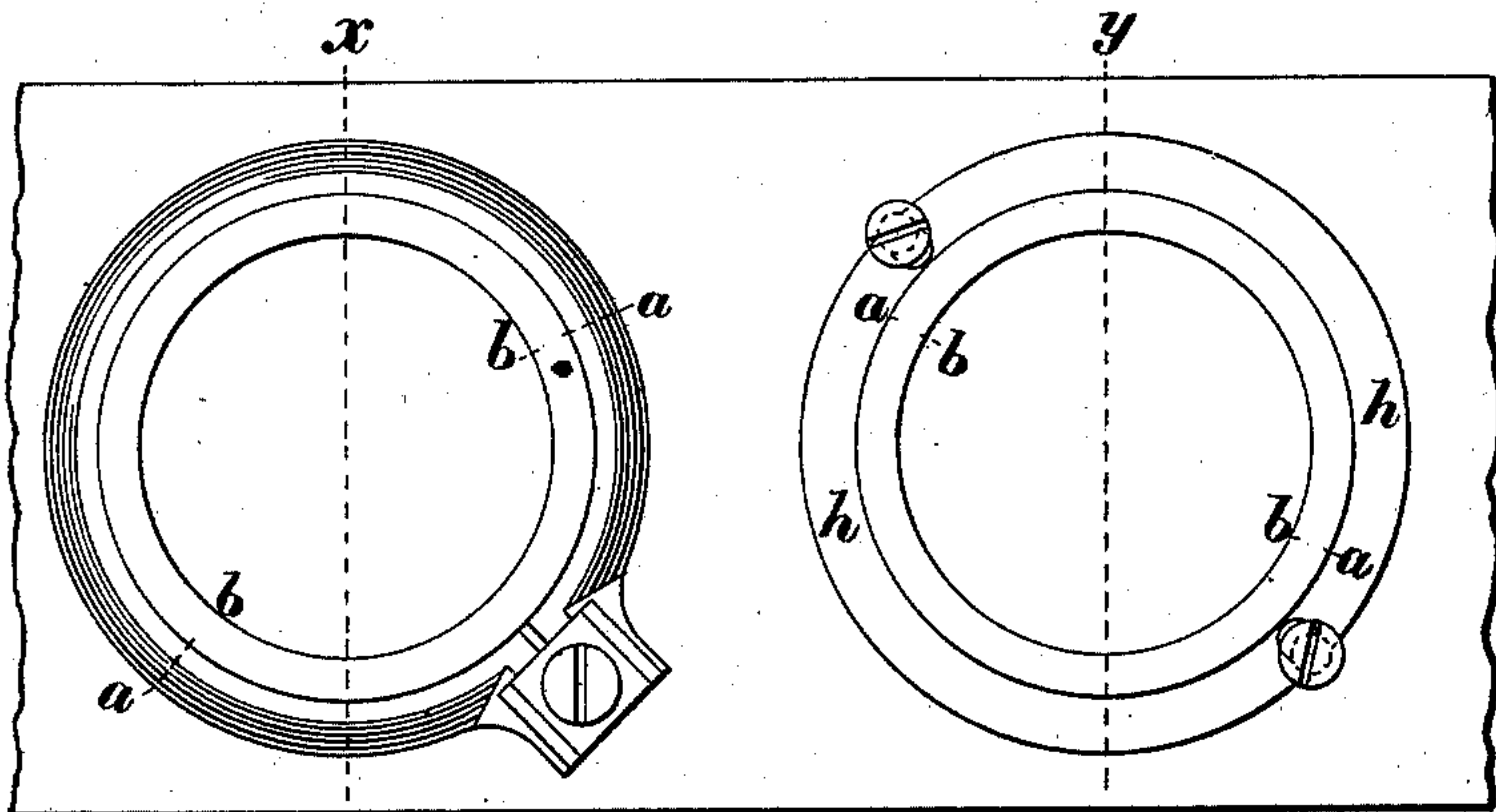


Fig. 6.



Fig. 1.

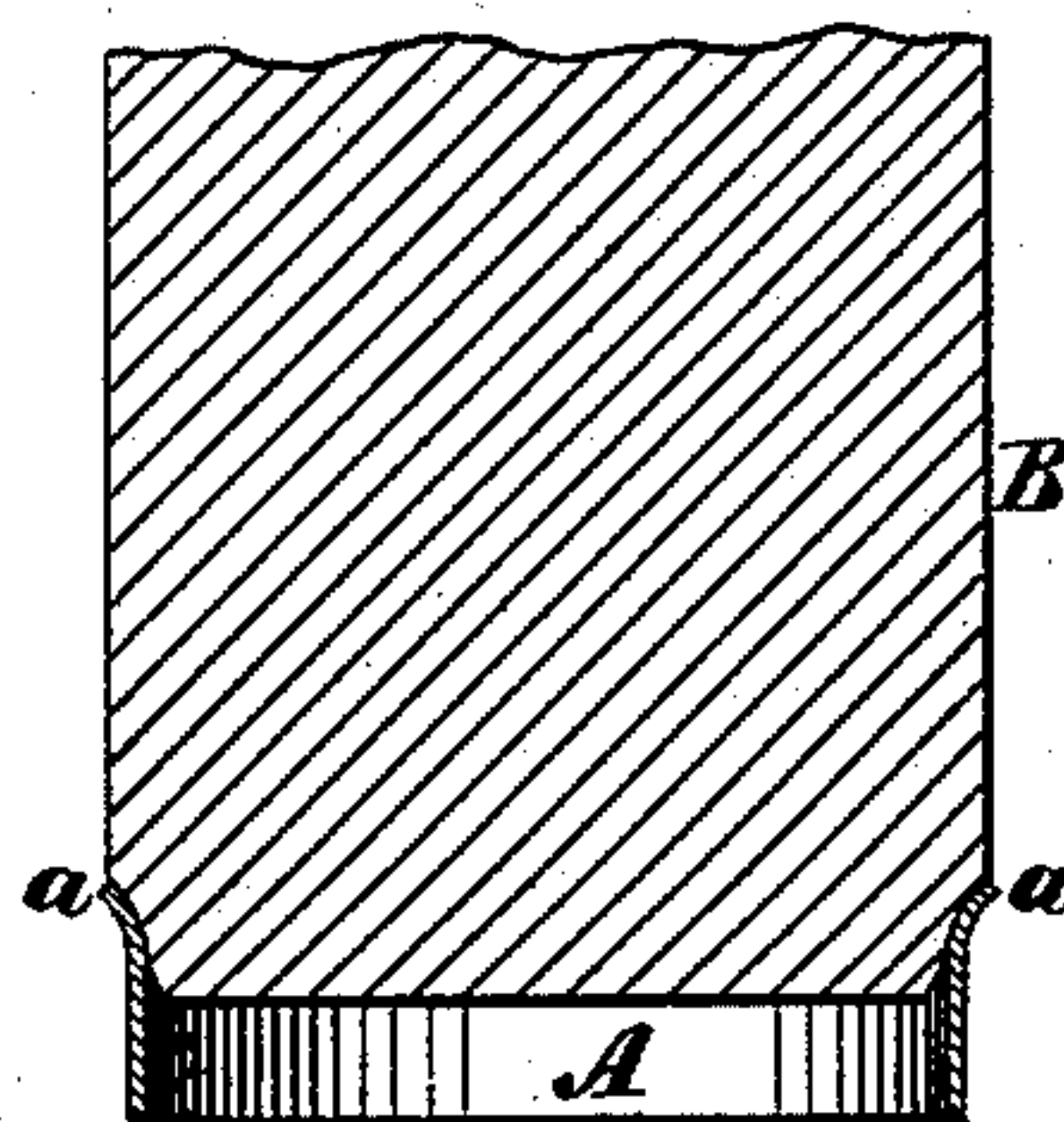


Fig. 2.

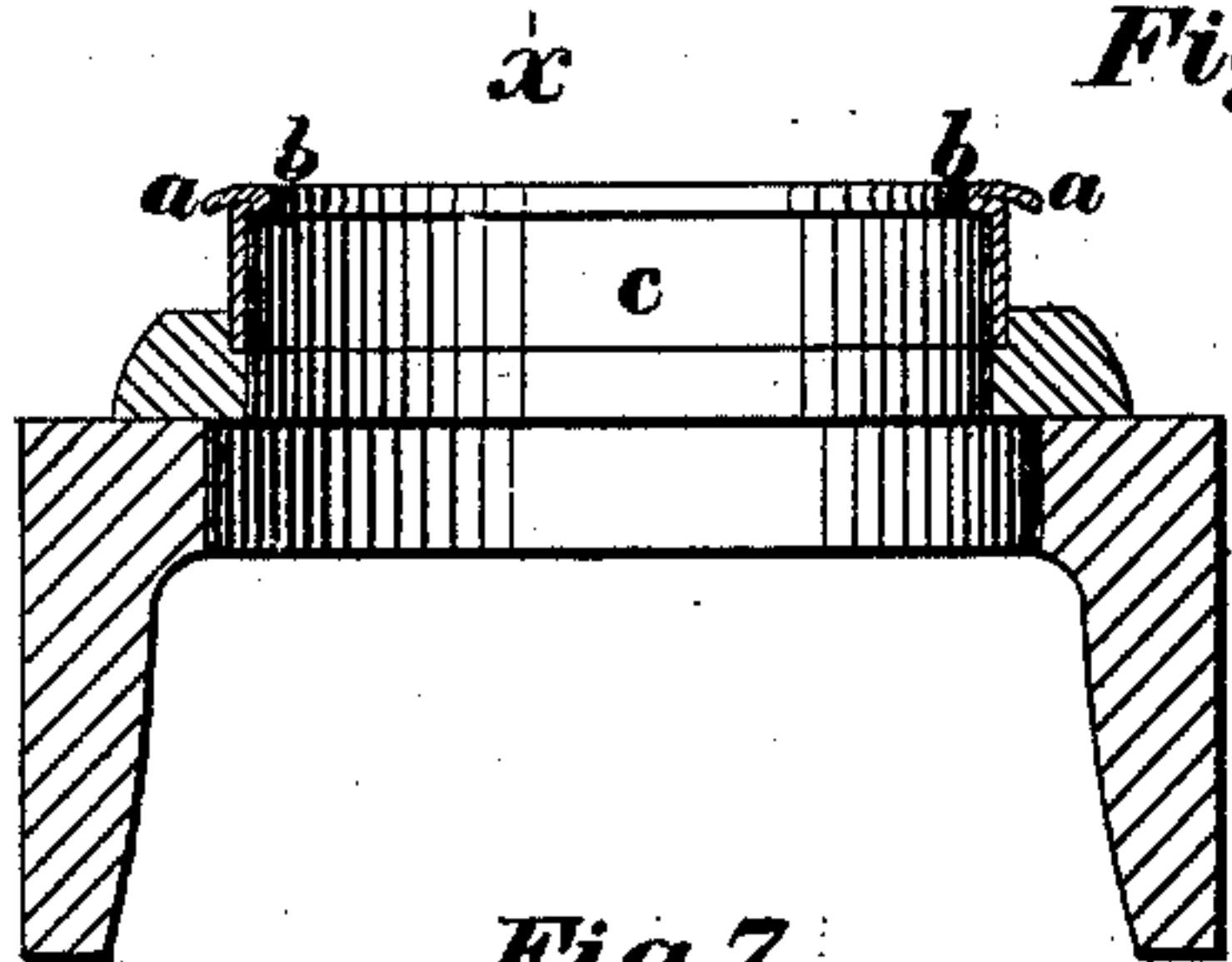


Fig. 7.

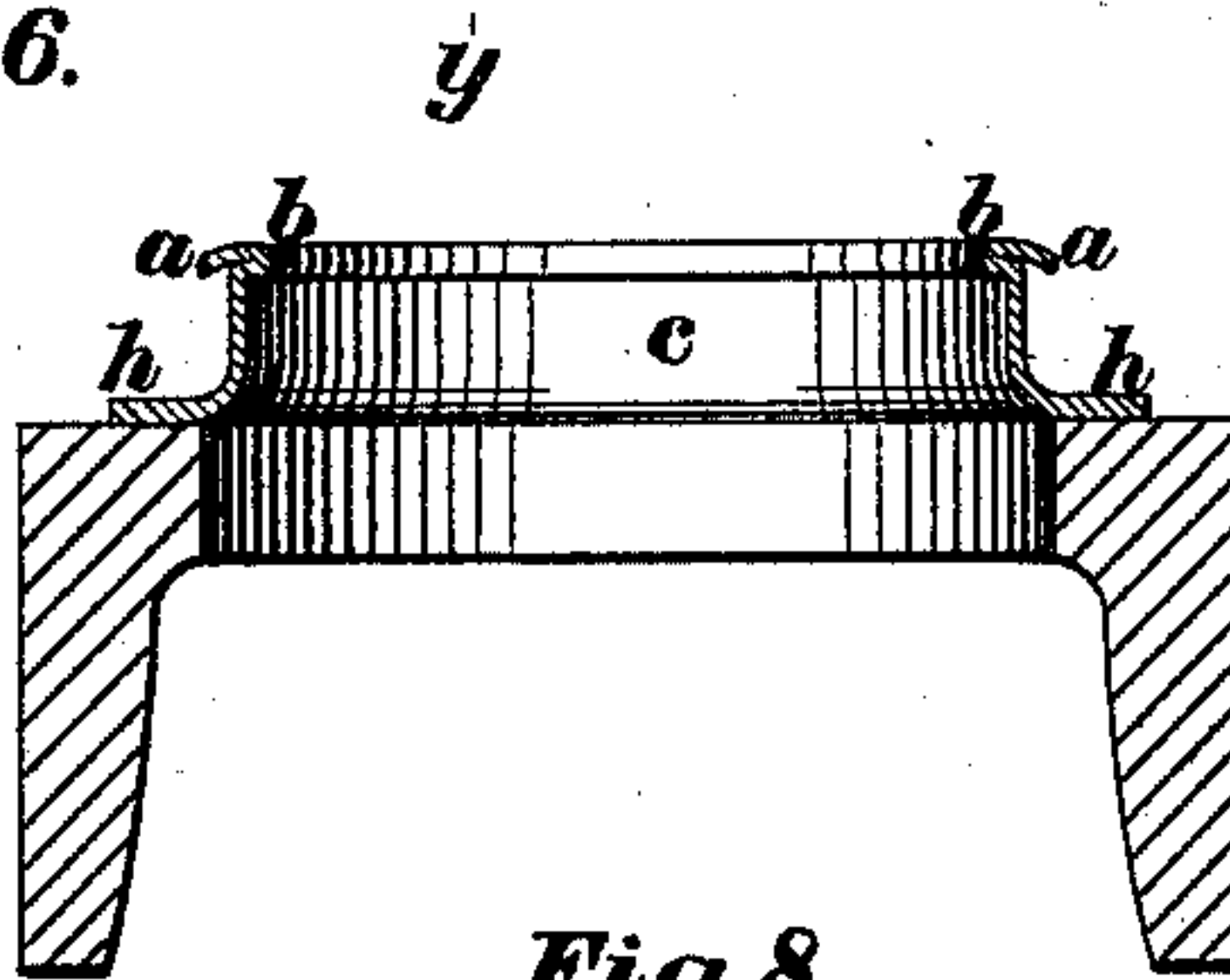


Fig. 8.



Fig. 9.

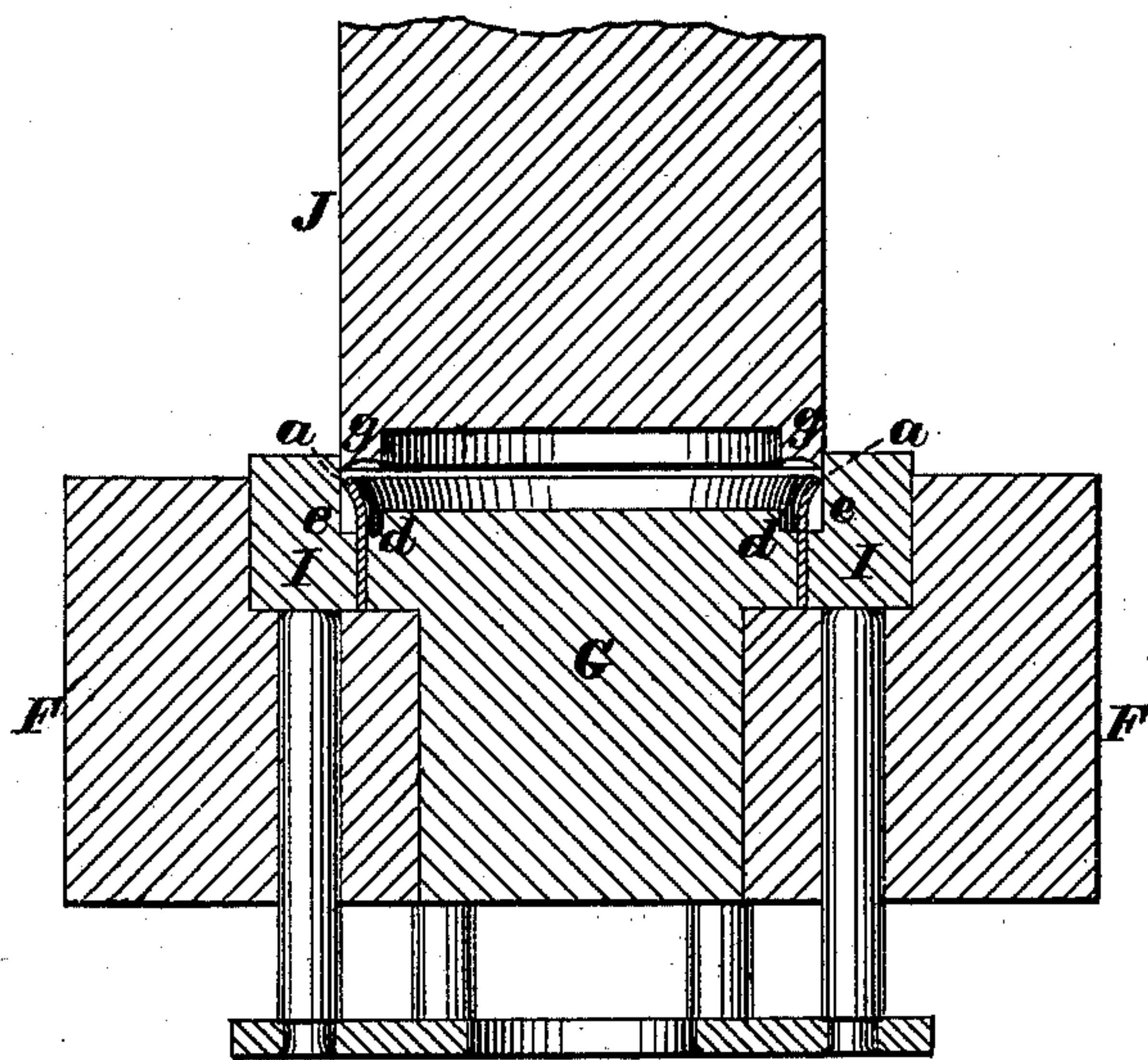


Fig. 3.

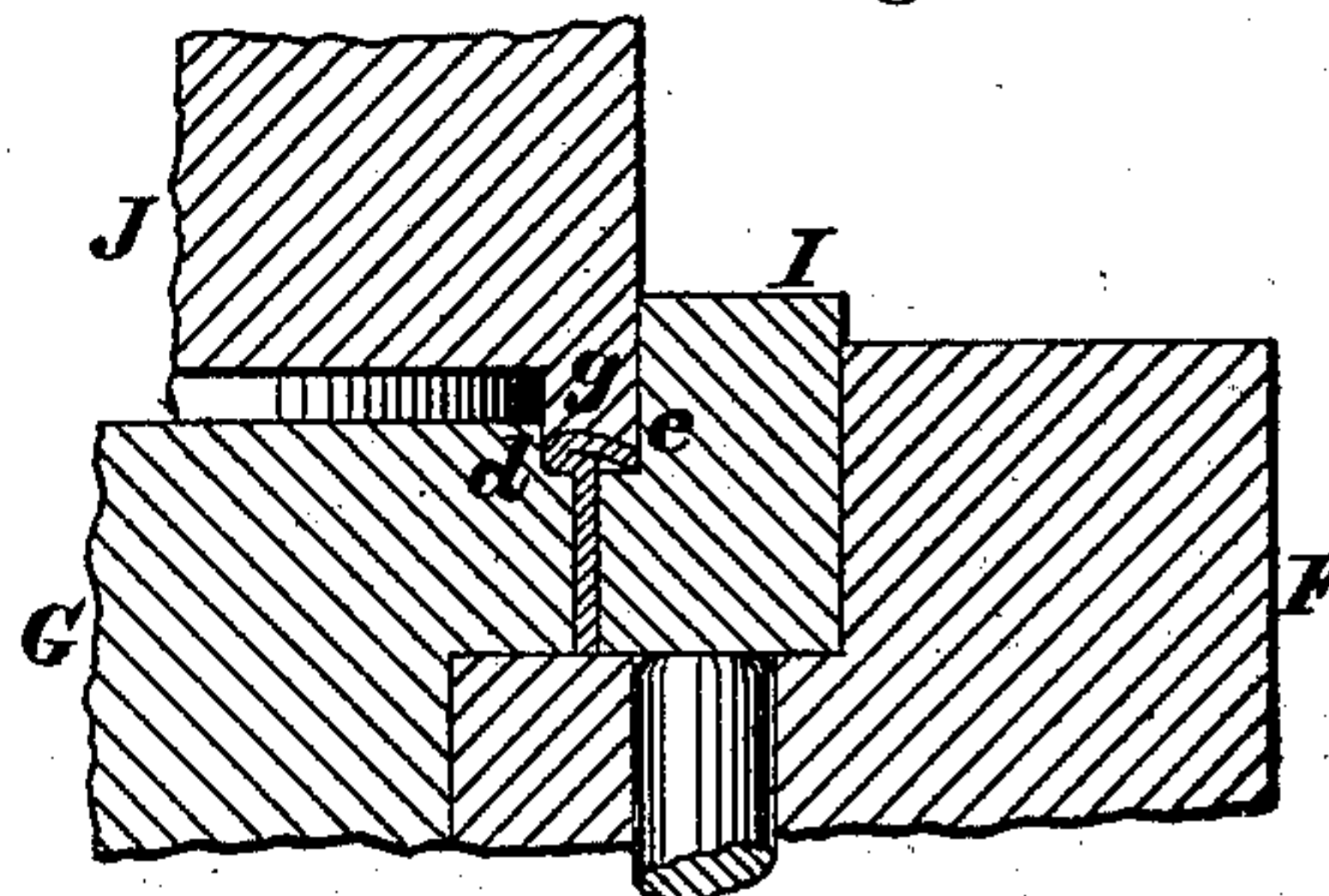


Fig. 4.

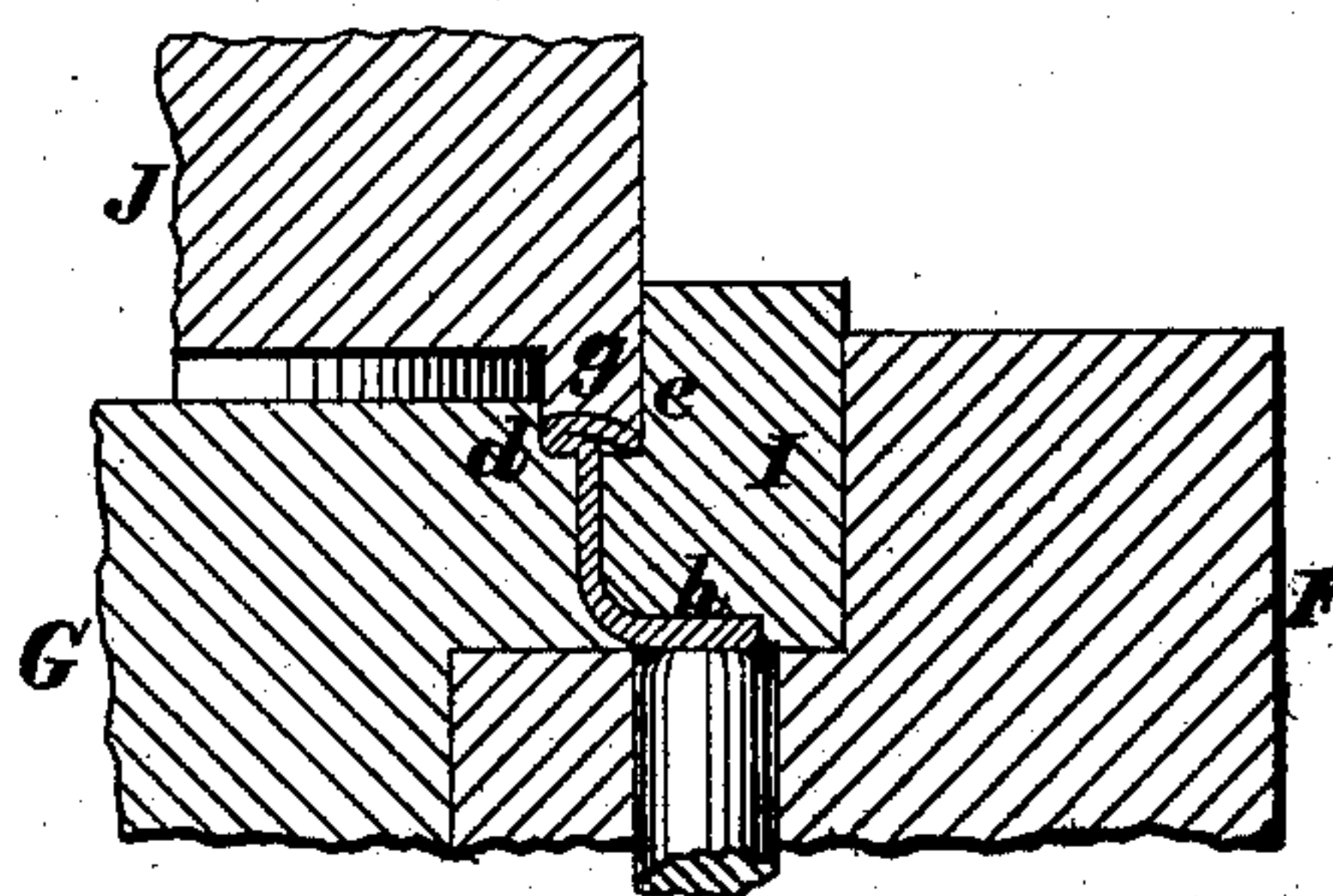


Fig. 5.

Witnesses:

C. A. Kemmenway.  
C. B. Dodd.

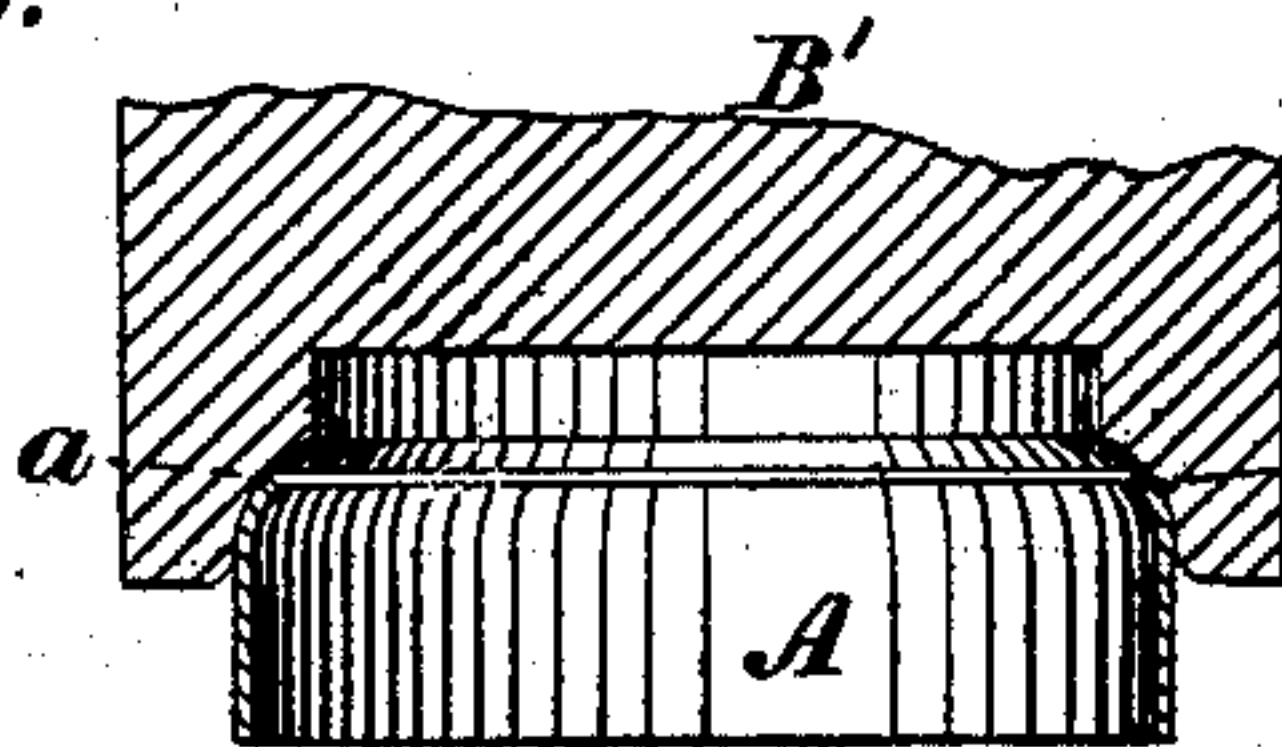


Fig. 10.

Inventor:

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# UNITED STATES PATENT OFFICE.

GEORGE D. EDMANDS, OF MILFORD, MASSACHUSETTS.

## IMPROVEMENT IN SPINNING-RINGS.

Specification forming part of Letters Patent No. **216,731**, dated June 24, 1879; application filed February 10, 1879.

*To all whom it may concern:*

Be it known that I, GEORGE D. EDMANDS, of Milford, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in the Manufacture of Spinning-Rings, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to the manufacture of spinning-rings from sheet metal; and it consists in a spinning-ring made from sheet metal, and having a double-flanged race projecting in opposite directions from, and at right angles, or nearly so, to, the cylindrical body of the ring, one portion of which is double, or composed of two thicknesses of metal folded upon each other, as will be described.

Figure 1 of the drawings is a central vertical section of a short open-ended tube from which my improved spinning-ring may be produced. Fig. 2 is a central vertical section of a swaging die and the same tube after the operation of swaging has taken place. Fig. 3 is a central vertical section of the dies for forming the double-flanged race in one position. Fig. 4 is a partial section of the same in another position. Fig. 5 is a similar partial section, illustrating a modification of the dies adapted to forming the race-flanges upon a ring provided with a base-flange. Fig. 6 is a plan of a portion of the ring-rail with two rings mounted thereon, each ring being secured to said rail in a different manner. Fig. 7 is a transverse vertical section on line *x x* on Fig. 6. Fig. 8 is a similar section on line *y y* on Fig. 6. Fig. 9 is a central vertical section of a modified form of my improved spinning-ring; and Fig. 10 is a central vertical section of a modified form of the swaging-die, illustrating its operation upon the plain tube to prepare it for making the form of ring shown in Fig. 9.

A, Fig. 1, is a plain tube, formed from a flat disk of sheet metal by striking it up in dies in a well-known manner.

To produce a spinning-ring from said tube by my improved process, I first subject one end of said tube to a swaging operation by forcing the die B into it to spread it, as shown in Fig. 2, or by forcing onto it the die B' to contract it, as illustrated in Fig. 10. The tube thus expanded or contracted is then placed between the male and female supporting-dies G and I, mounted in the die-holder F, and beneath the male die J, provided with the annular downwardly-projecting lip *g*, as shown

in Fig. 3, said dies shown in Fig. 3 being constructed substantially as described in another application of even date herewith.

As the die J is moved downward it strikes upon the upper end, *a*, of the tube A, which is inclined outward, as shown in Figs. 2 and 3, or inward, as shown in Fig. 10; and as the wall of the rabbet *e* in the one case or the wall of the rabbet *d* in the other case will prevent the said inclined portion of the tube from being thrown outward or inward to a greater distance from the perpendicular portion of the ring, and as that part is compelled to move downward with the die J, it follows that the convex side of the curved inclined portion of the tube will be thrown outward or inward toward the perpendicular wall of the rabbet opposite to the one against which the extreme end *a* of the tube bears as it is being forced downward, causing a doubling or folding of the metal at *b*, as shown in Figs. 7, 8, and 9, and the part *a b* is pressed down into a horizontal, or nearly horizontal, position, and at right angles to the cylindrical body *c* of the ring, and projecting about equal distances upon each side thereof, as shown.

If it is desired to form a ring having a base-flange, *h*, as shown in Fig. 8, it is only necessary to use a larger disk of sheet metal to form the tube, and not draw it all into the female drawing-die, in a manner well known in the art, and the after operations are precisely the same as above described, except that the female supporting-die I must be made in two or more segments, to enable it to be removed from the ring after it is completed, as described in another application of even date herewith.

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

A spinning-ring made from sheet metal, having a double-flanged race projecting in opposite directions from, and at right angles, or nearly so, to, the cylindrical body of the ring, one portion of which race is double, or composed of two thicknesses of metal folded upon each other, and the other portion is of a single thickness, substantially as shown and described.

Executed at Boston, Massachusetts, this 30th day of January, A. D. 1879.

GEO. D. EDMANDS.

Witnesses:

N. C. LOMBARD,  
E. A. HEMMENWAY.