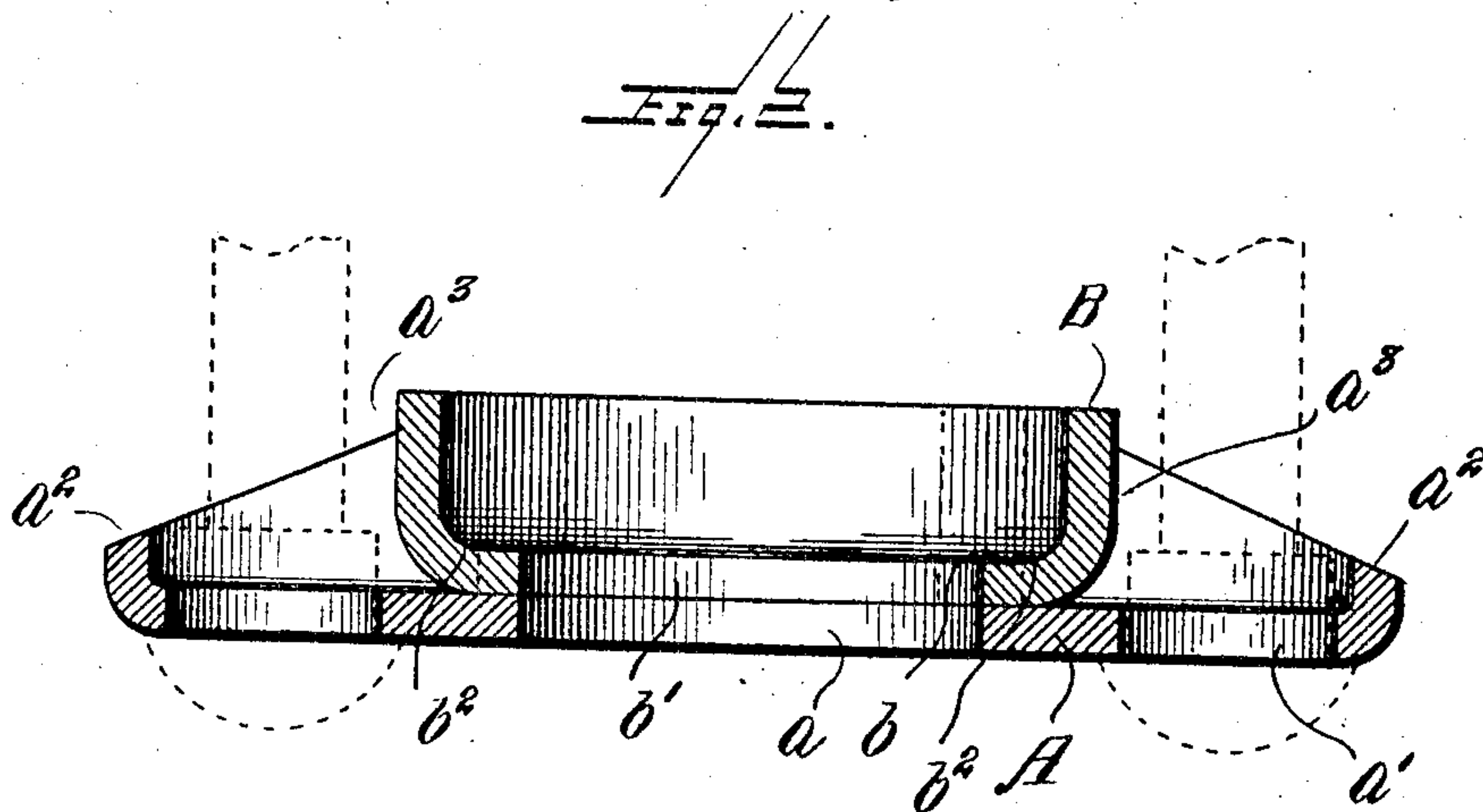
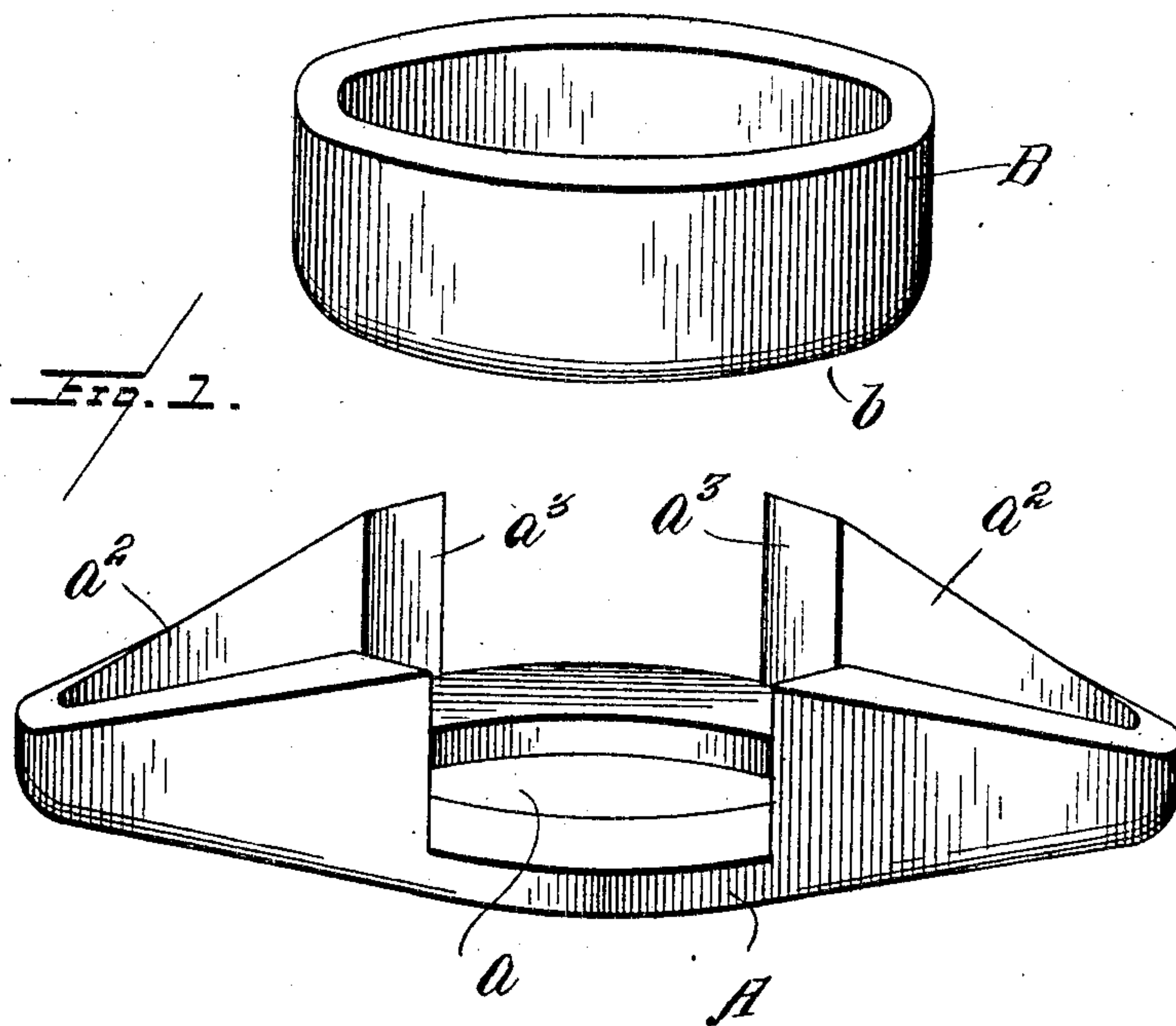


No. 849,371.

PATENTED APR. 9, 1907,

J. CLARK.
CLAMPING RING.
APPLICATION FILED DEC. 26, 1906.

2 SHEETS--SHEET 1.



WITNESSES:

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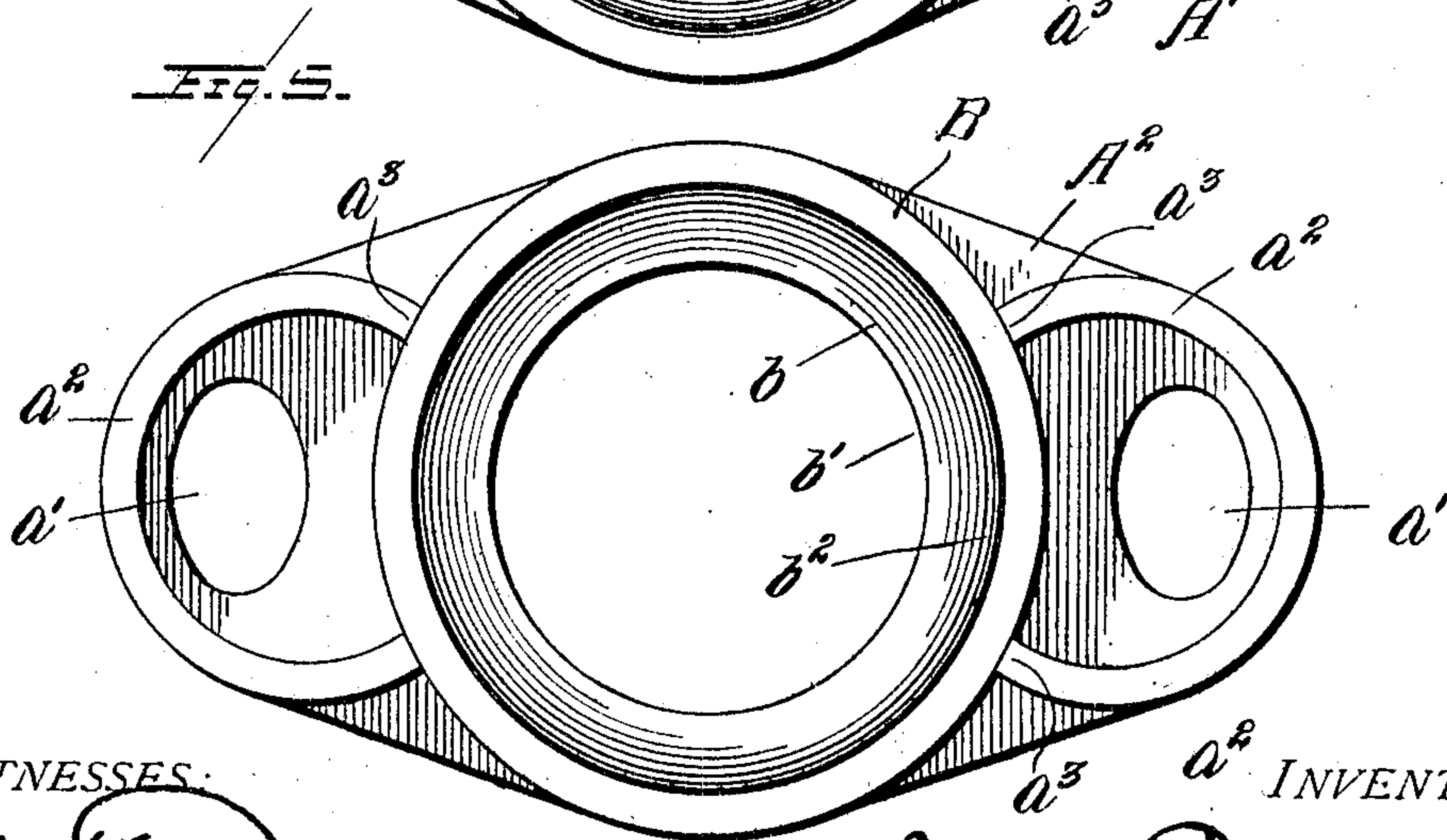
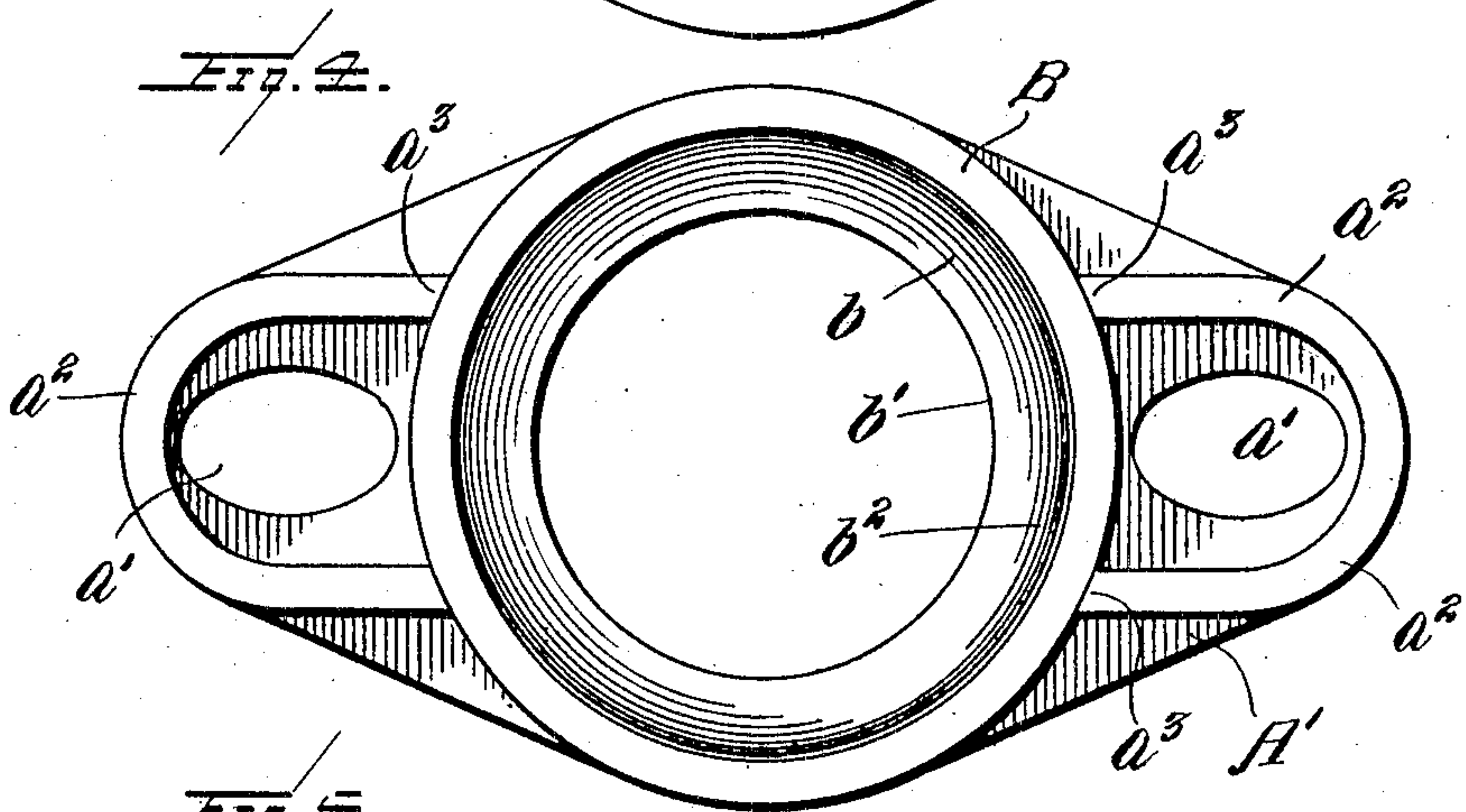
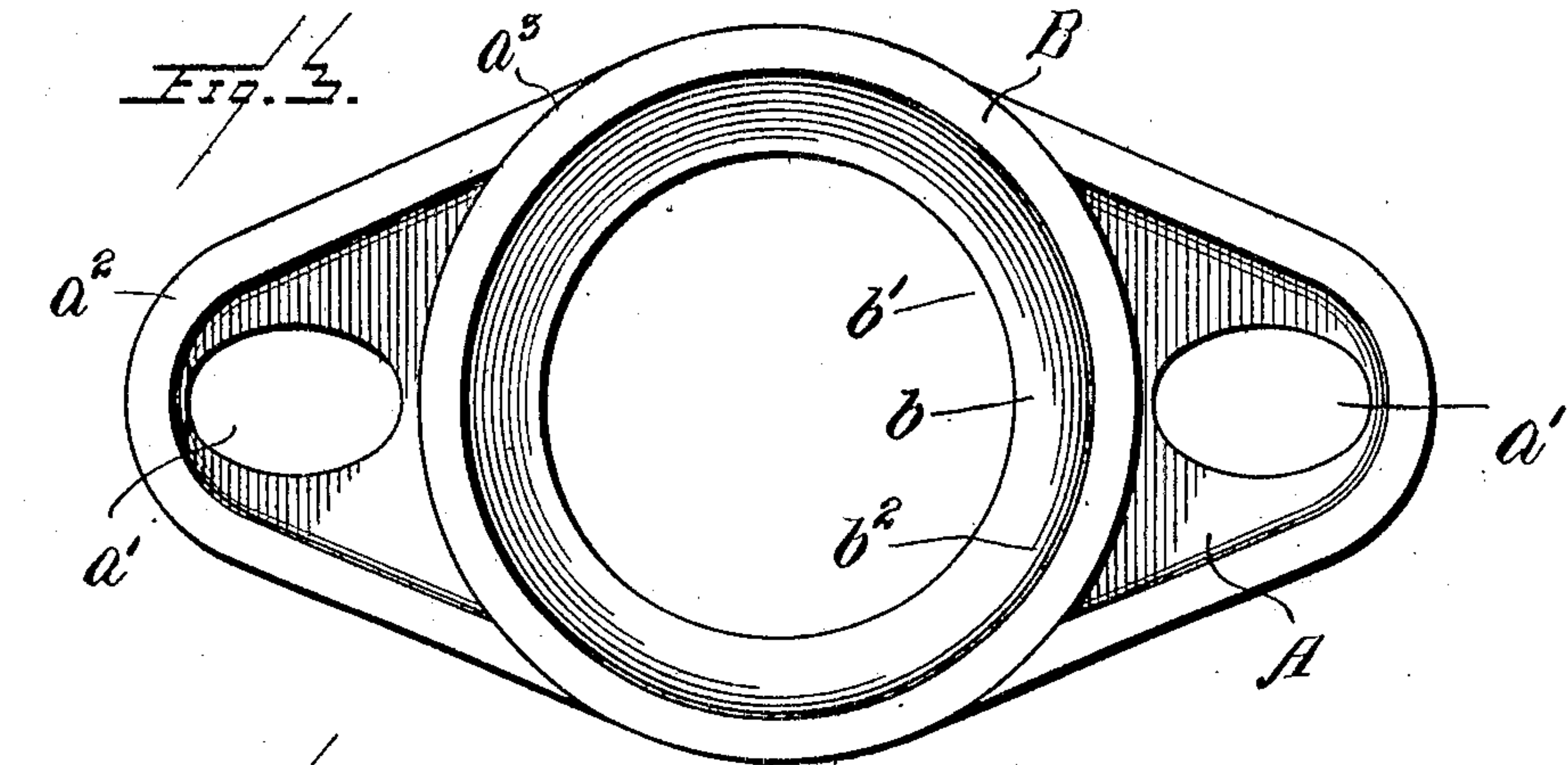
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2 SHEETS—SHEET 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES CLARK, OF BRADFORD, PENNSYLVANIA, ASSIGNOR TO S. R. DRESSER
MANUFACTURING COMPANY, OF BRADFORD, PENNSYLVANIA.

CLAMPING-RING.

No. 849,371.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed December 26, 1906. Serial No. 349,428.

To all whom it may concern:

Be it known that I, JAMES CLARK, a citizen of the United States, residing at Bradford, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Clamping-Rings; and I do hereby 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.

My invention consists in the novel features hereinafter described, reference being had to the accompanying drawings, which illustrate one form in which I have contemplated embodying my invention and several modifications thereof, and said invention is fully disclosed in the following description and claims.

The object of my invention is to provide a clamping-ring for pipe-couplings (adapted especially for the smaller sizes thereof) formed, preferably, of wrought metal, such as wrought iron or steel, and constructed to provide great strength and durability and capable of being very cheaply manufactured.

In carrying out my present invention I construct the ring preferably in two parts—to wit, a plate member, which is provided with bolt-holes arranged therein, preferably two in number, located at opposite sides of the central pipe-aperture, said plate member having exterior marginal portions which are bent upon one side of the plate to form a reinforcing-flange, portions of which are cut away to form reinforcing-shoulders disposed substantially perpendicularly to the main body of said plate member. The second part of the clamping-ring is a flange member comprising an annular portion disposed perpendicularly to the plate member and having portions at one end turned inwardly to form an annular flange parallel with the plate member, the inner edge of which forms an annular aperture adapted to register with the pipe-aperture in the plate member. When the parts of the clamping-ring are assembled, the flange member is seated upon the plate member between and in engagement with the reinforcing-shoulders thereof, the inturned flange of the flange member engaging the face of said plate member, as hereinafter more fully described.

In the said drawings, Figure 1 represents a perspective view of the two parts or members of my improved clamping-ring, showing

them separated for greater clearness of illustration. Fig. 2 is a sectional view of the complete clamping-ring. Fig. 3 is a top plan view of the same. Figs. 4 and 5 are views similar to Fig. 3, showing slight modifications of my invention.

The clamping-ring herein shown and described is adapted especially for the smaller sizes of pipe-couplings, which usually employ only two clamping-bolts connecting the clamping-rings to compress the usual packings or packing-rings; but it may be employed for larger sizes, if found desirable, and for rings provided with bolt-holes for a greater number of bolts.

In the form shown in Figs. 1 to 3; A represents what I term the "plate member," which consists of a flat plate, preferably of wrought iron or steel, having a central pipe-aperture *a*, the plate here shown being of substantially oval form and having a bolt-hole *a'* at either end, said bolt-holes being in line with the center of the pipe-aperture. Exterior marginal portions of the plate member A are bent or forced angularly, so as to extend on one side of the plate member, forming exterior reinforcing-flange portions *a² a³*, which have portions cut away adjacent to the pipe-aperture, as shown, forming substantially perpendicular reinforcing-shoulders *a³ a³*. I prefer to have the height of the flange portions *a²* increase gradually from the portions adjacent to each bolt-hole toward the shoulders *a³ a³*; but this is not essential. The shoulders *a³ a³* are cut away on a curve or bevel, so as to fit the exterior of the flange member, as hereinafter described, and said shoulders are arranged equidistant from the center of the pipe-aperture *a*. B represents the flange member, also composed of wrought iron or steel, and which consists of an annular portion disposed substantially perpendicular to the face of plate member A and of greater internal diameter than the pipe-aperture *a*, the exterior diameter being such that it will fit within the four reinforcing-shoulders *a³*, as shown in Figs. 2 and 3. The end of the flange member nearest the plate member, which I term its "inner" end, is bent or curved inwardly to form an annular flange *b*, the inner edge of which forms a circular aperture *b'*, registering with the pipe-aperture *a* in the plate member when the parts are assembled and said flange *b* engaging

portions of the plate member around the said pipe-aperture. The inwardly-extending flange b forms the bottom of an annular packing-recess b^2 , which receives the packing or packing-ring, of rubber or other suitable material.

When the clamping-ring is subjected to the strain of the bolts, as indicated in Fig. 2, in which the bolts are shown in dotted lines, the annular flange b will reinforce and be reinforced by the adjacent portion of the plate member A and the flange member will reinforce and be reinforced by the reinforcing-shoulders a^3 of the exterior flange portions a^2 , as will be readily understood, thus making a very strong construction, which may be made from relatively thin metal and yet provide great strength and durability.

The members A and B may be entirely separate from each other and may be assembled for use as shown in Figs. 2 and 3. In some instances, however, I unite the two members A and B, as by welding or brazing the engaged parts—to wit, the flange b and adjacent portions of the plate member and the reinforcing-shoulders a^3 may also be welded or brazed to the adjacent portions of flange member B, if desired. I may also form the plate member and flange member integrally, if desired, by forming the plate member with its exterior reinforcing flange and shoulders and forming the flange member integrally from interior marginal portions of the plate member and expanding them into contact with said shoulders; but I prefer to form the two members separately, as herein shown and described.

In Fig. 4 I have shown a slight modification of my invention, in which the exterior flange portions a^2 a^2 of the plate member (here indicated by A') are severed from the plate member adjacent to the shoulders a^3 and are bent inwardly over said plate member, so that said flange portions a^2 a^2 provide parallel portions on opposite sides of each bolt-hole extending into engagement with the flange member B.

In Fig. 5 I have shown another slight modification of my invention, in which parts of the flange portions a^2 a^2 are also severed from the plate member and are bent inward in a curve on each side over the face of the plate member (here lettered A²) so that the flange portions a^2 a^2 will form segments of a circle around the bolt-holes and the shoulders a^3 a^3 , engaging the flange member B, will be disposed substantially radially to the center of such segments.

It is obvious that either of these forms may also be readily adapted for clamping-rings having more than two bolt-holes.

What I claim, and desire to secure by Letters Patent, is—

1. A clamping-ring for pipe-couplings comprising a plate member having a central pipe-

aperture, bolt-holes exterior thereto, and exterior flange portions provided with reinforcing-shoulders, disposed substantially perpendicularly to the face of said plate member, and a flange member having annular portions disposed perpendicularly to the face of said plate member and engaging said shoulders, substantially as described.

2. A clamping-ring for pipe-couplings comprising a plate member having a central pipe-aperture, bolt-holes exterior to said aperture, and exterior flange portions cut away to provide reinforcing-shoulders disposed substantially perpendicularly to the face of said plate member, and a flange member having an annular portion disposed substantially perpendicularly to the face of said plate member and engaging said shoulders, and having at its inner end an inwardly-extending annular flange, engaging portions of said plate member surrounding said pipe-aperture, substantially as described.

3. A clamping-ring for pipe-couplings comprising a plate member provided with a central pipe-aperture, bolt-holes, and exterior flange portions adjacent to said bolt-holes, having reinforcing-shoulders, disposed substantially perpendicularly to the face of said plate member, and a separate flange member having an annular portion fitting within said shoulders and having portions engaging the face of said plate member, substantially as described.

4. A clamping-ring for pipe-couplings formed of wrought metal and comprising a plate member having a central pipe-aperture, bolt-holes, and exterior flange portions adjacent thereto and provided with reinforcing-shoulders disposed substantially perpendicularly to the face of said plate member, and a separate flange member having an annular portion disposed substantially perpendicularly to the face of said plate member, fitting within said shoulders and having an internal diameter greater than said pipe-aperture, said flange member having an inwardly-extending annular flange engaging portions of said plate member surrounding said pipe-aperture, substantially as described.

5. A clamping-ring for pipe-couplings formed of wrought metal and comprising a plate member having a central pipe-aperture, bolt-holes, and exterior flange portions adjacent to said bolt-holes, said flange portions being partially severed from the plate member proper, bent inwardly over the face of the same and provided with reinforcing-shoulders substantially perpendicular to the face of the plate member, and a flange member fitting within said shoulders and having portions at one end engaging the face of the plate member, substantially as described.

6. A clamping-ring for pipe-couplings formed of wrought metal, and comprising a plate member having a central pipe-aper-

ture, bolt-holes located around said aperture, and having its outer marginal portions adjacent to said bolt-holes bent up to form exterior flanges, said flanges being partially severed at the plane of the face of said plate member, the severed portions of said flanges being bent inwardly over the face of said plate member and having their ends substantially perpendicular to the face thereof to form reinforcing-shoulders, and a flange member, having an annular portion, substantially perpendicular to the face of said plate member, fitting within said shoulders, and of an internal diameter greater than said

pipe-aperture in the plate member, the flange member having at its inner end an inwardly-extending flange, parallel with and engaging the face of the plate member, the inner edge of said flange forming an aperture registering with the pipe-aperture in the plate member, substantially as described. 15 20

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

JAMES CLARK.

Witnesses:

EMMA M. KOCH,
F. P. SCHOONMAKER.