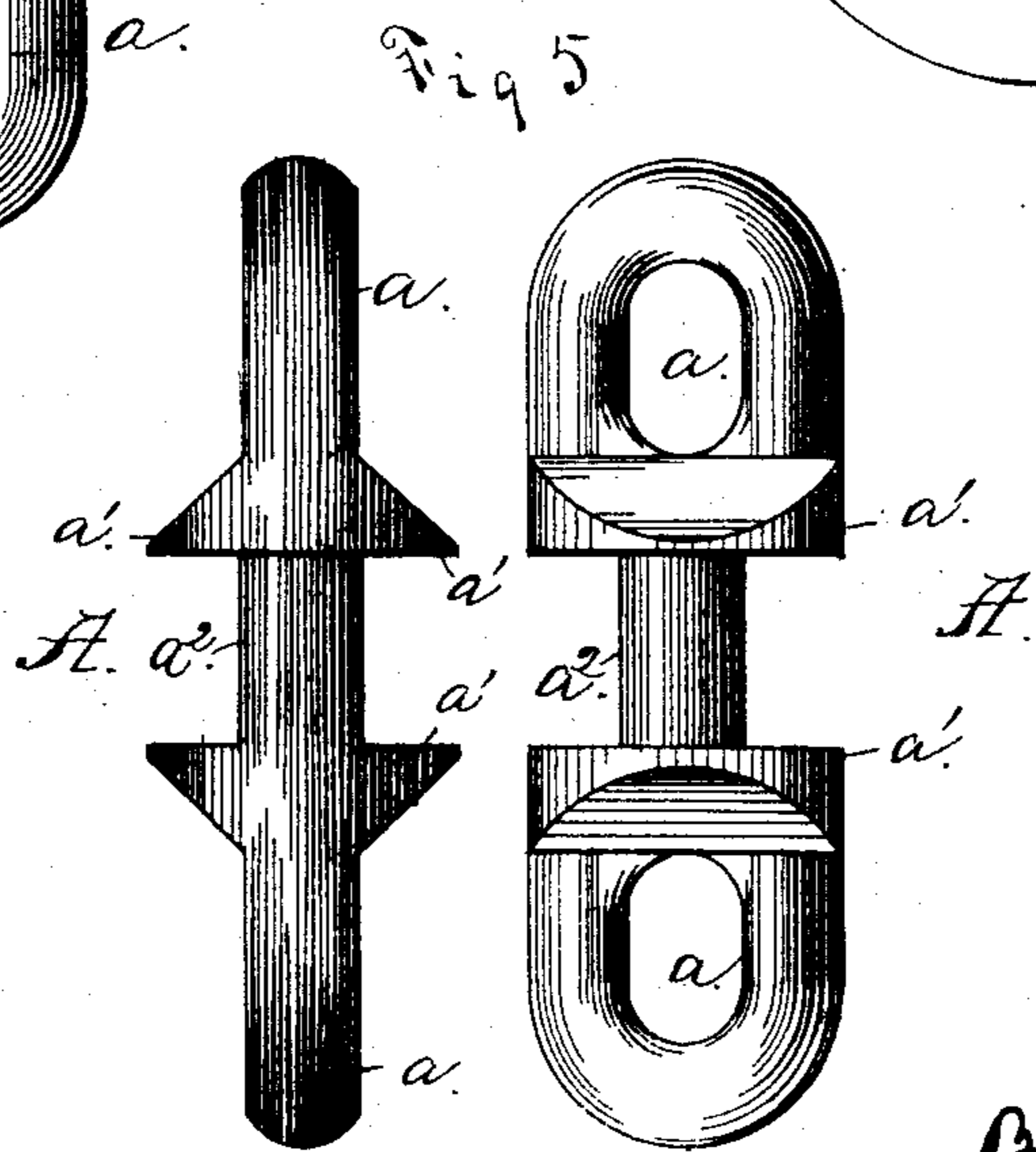
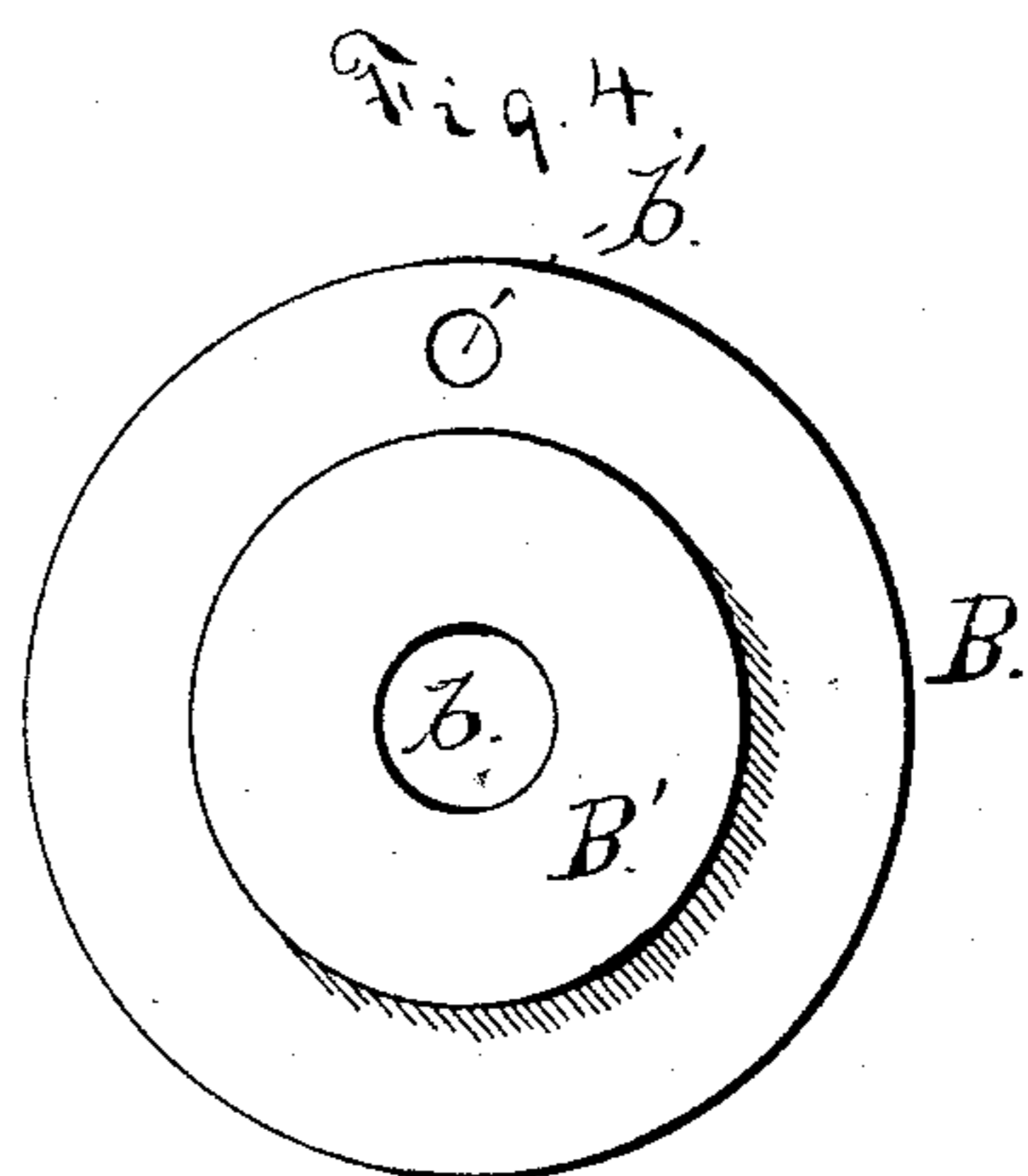
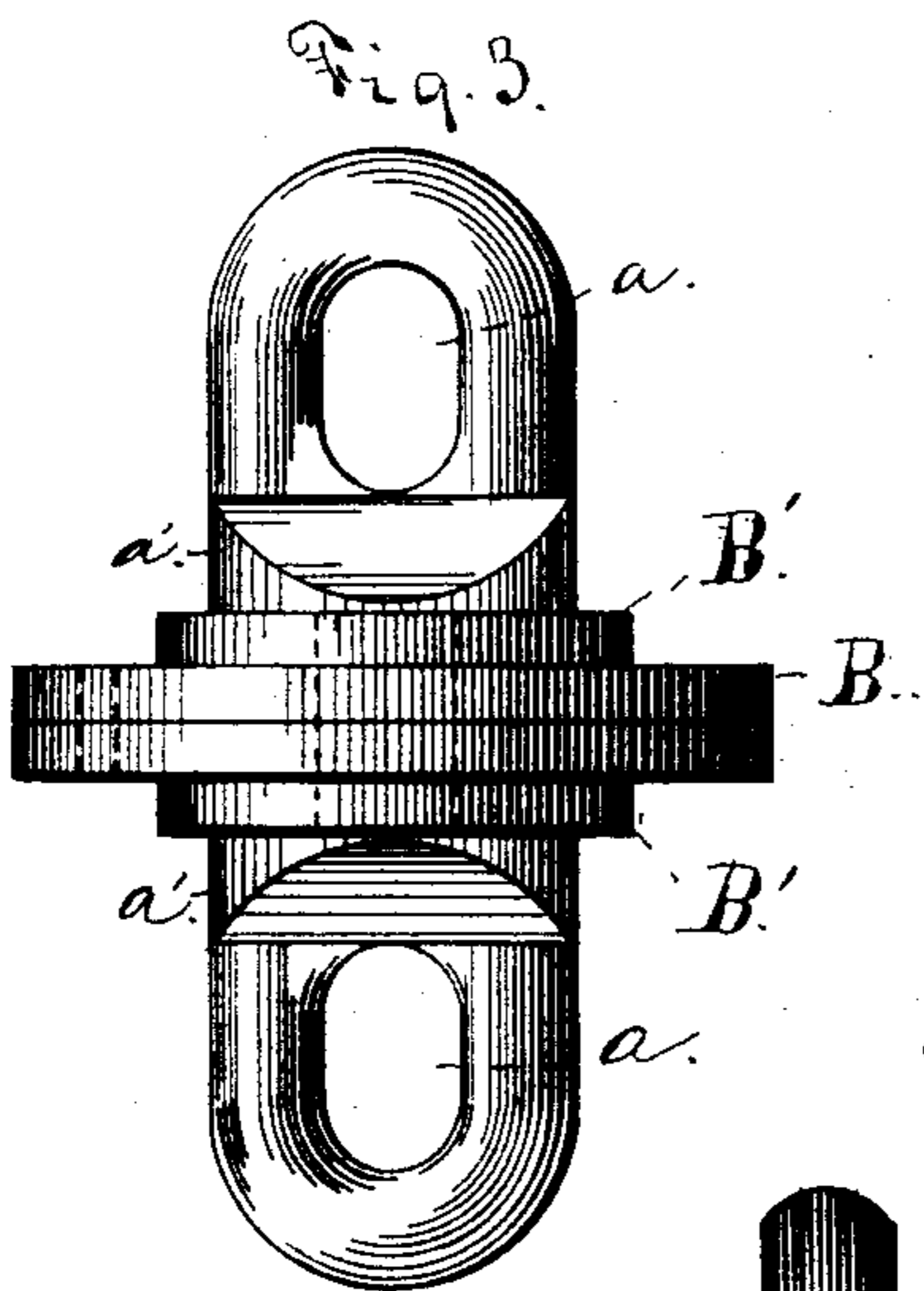
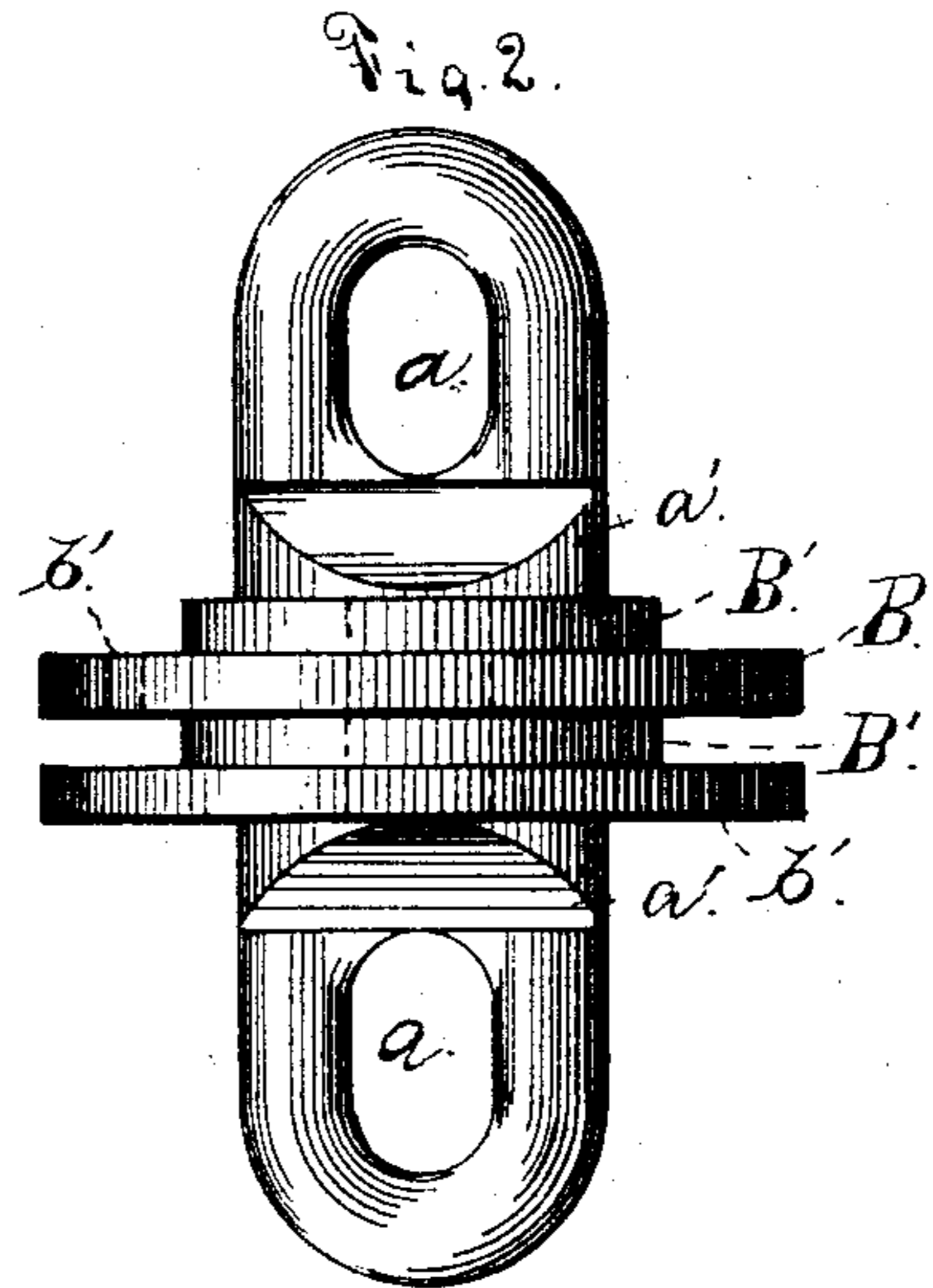
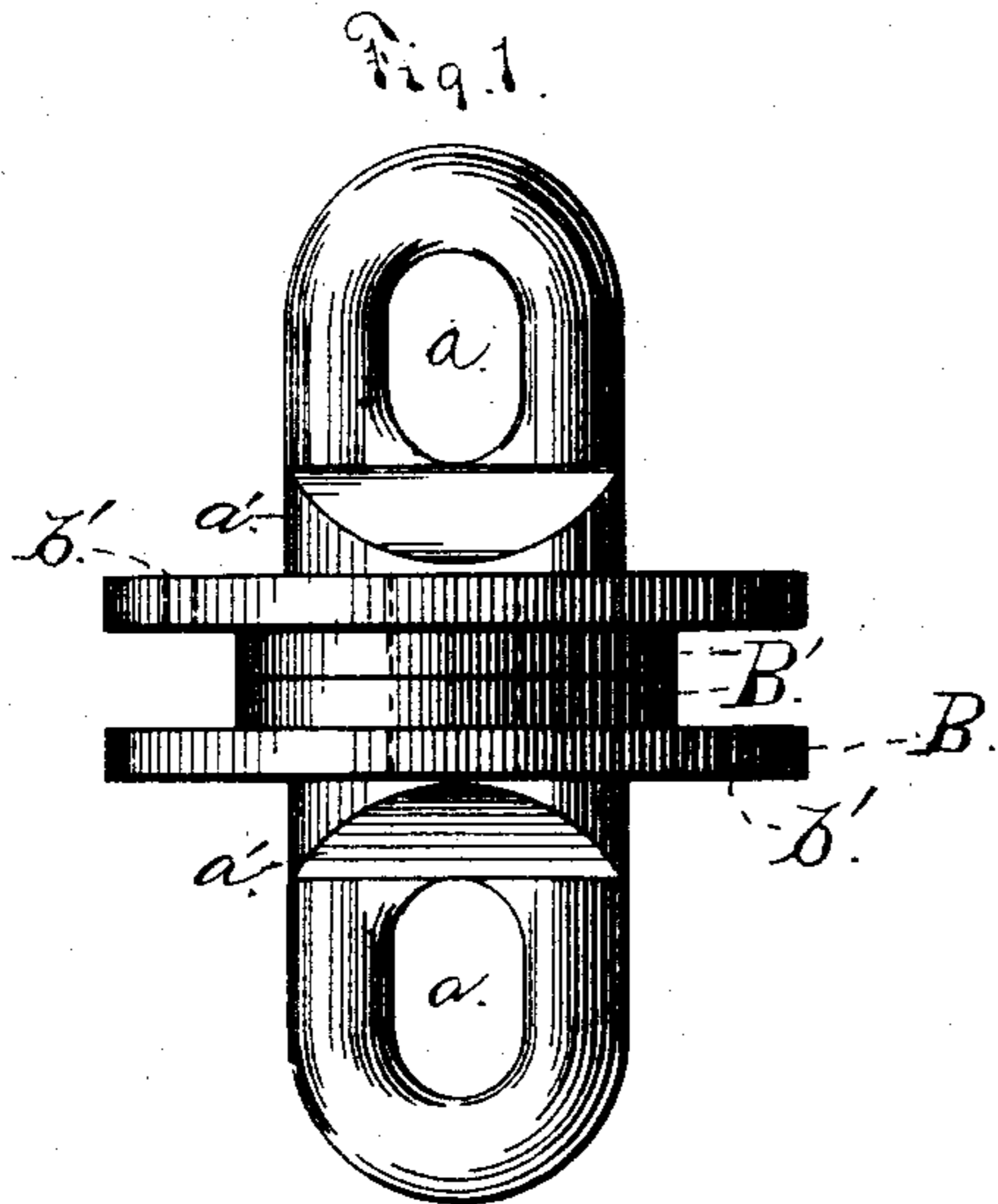


(No Model.)

O. E. WADHAMS.
CHAIN PUMP BUCKET.

No. 287,348.

Patented Oct. 23, 1883.



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UNITED STATES PATENT OFFICE.

ORLO E. WADHAMS, OF GOSHEN, CONNECTICUT.

CHAIN-PUMP BUCKET.

SPECIFICATION forming part of Letters Patent No. 287,248, dated October 23, 1883.

Application filed April 30, 1883. (No model.)

To all whom it may concern:

Be it known that I, ORLO E. WADHAMS, a citizen of the United States, residing at Goshen, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Chain-Pump Buckets; 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.

My invention relates to improvements in buckets for chain-pumps; and it consists in the link and the peculiar construction of the rubber disks, as will be hereinafter explained and claimed.

In the drawings, Figures 1, 2, and 3 are side views of the buckets with the elastic disks in different positions. Fig. 4 is a detail view of the rubber disk, and Fig. 5 shows the link with the disks removed.

The link A is preferably made in the form shown, with the eyes a at its opposite ends, the shoulders a' , and the connecting-shank a'' between the said shoulders a' , as shown. The disks B are of rubber or other suitable elastic material, and are provided with the central opening, b , which is slipped over the eyes and shoulders and around the shank a'' , whereby the disk is held on the link. The disks are formed with a circular extension, B' , projected from one side and concentric with the disks B, as shown in Fig. 4. Through the disks B, near their outer edges, I form the holes b' , through which the water can slowly pass back into the well when the pump is stopped, to prevent freezing.

In the operation of chain-pumps it is well understood a number of the buckets are coupled together and form an endless chain, working in a tubular stock.

The disks B are made of a diameter slightly larger than the diameter of the bore of the stock, and their flexibility permits their edges to be bent down slightly as they are drawn through the tubular stock. In practice I use two of the disks, and they are sprung into

position on the shank a'' , and their extensions B' permit their being arranged in the various positions shown—namely, that shown in Fig. 1, wherein the extensions of the disks are abutted together; that shown in Fig. 2, wherein the extensions are projected in both cases up, so that the extension of the lower disk abuts against the face of the upper disk, or that shown in Fig. 3, where the disks proper rest against each other and form practically a single disk of double thickness, as shown.

It will be seen that my disks may be changed from one to any of the other arrangements described, so that when the edges of the disks have become worn in the arrangement shown in Fig. 1, in which the disks are very flexible, they may be changed to the position shown in Fig. 2, wherein they are less flexible, and when they have become worn in this arrangement they may be changed to the arrangement shown in Fig. 3, wherein the disks, being placed face to face, form practically a single disk having comparatively little flexibility. When the disks are reversed, it will be understood the worn edge is turned down and the unworn one up, providing a fresh wearing-edge. These disks may also be adjusted, as described, to adapt the buckets to shallow or deep wells.

When the disks are arranged as shown in Figs. 1 and 2, they are turned so as to bring the holes b' in the two disks diametrically opposite each other, as shown in Figs. 1 and 2; but in the arrangement of disks shown in Fig. 3 they must be turned to bring the holes coincident, to permit the water to pass back when the pump is stopped, while in the former case a water-space is formed between the disks. I prefer to make both the disks with the projected extension B' ; but it will be seen that by making the extension on one only and of a length equal to both, the arrangement of disks shown in Figs. 1 and 3 can be accomplished, but that shown in Fig. 2 cannot be had except by forming both disks with extensions, as is preferred, as before stated. This reversibility of the disks also allows the buckets to be adapted to old or much-worn tubes.

It will be also understood that where it is desired to make the extension on one only of the disks the shank a'' could be made shorter,

instead of making the single extension equal the length of two ordinary ones.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a chain-pump bucket, the combination, with a suitable link, of the elastic disks placed on and removable from the same, whereby they may be reversed, the said disks being constructed of equal diameter, with their opposite faces planed or formed smooth and parallel to each other, and an extension, B', projected from one of the disks and formed concentric with and of less diameter than the same, substantially as and for the purposes set forth.

2. The chain-pump bucket substantially as

described and shown, composed of the link, the disks B B, made of equal diameter, and having their opposite faces planed or formed smooth and parallel to each other, the concentric extensions projected from and made of less diameter than the disks, the said disks being sprung on and removable from the link, whereby they may be reversed, all arranged and operating substantially as and for the purposes set forth.

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

ORLO E. WADHAMS.

Witnesses:

WILLIAM BENNETT,
RALPH F. COOK.