

(No Model.)

A. R. PRITCHARD.
CHUCK FOR HOLLOW WARE.

No. 567,004.

Patented Sept. 1, 1896.

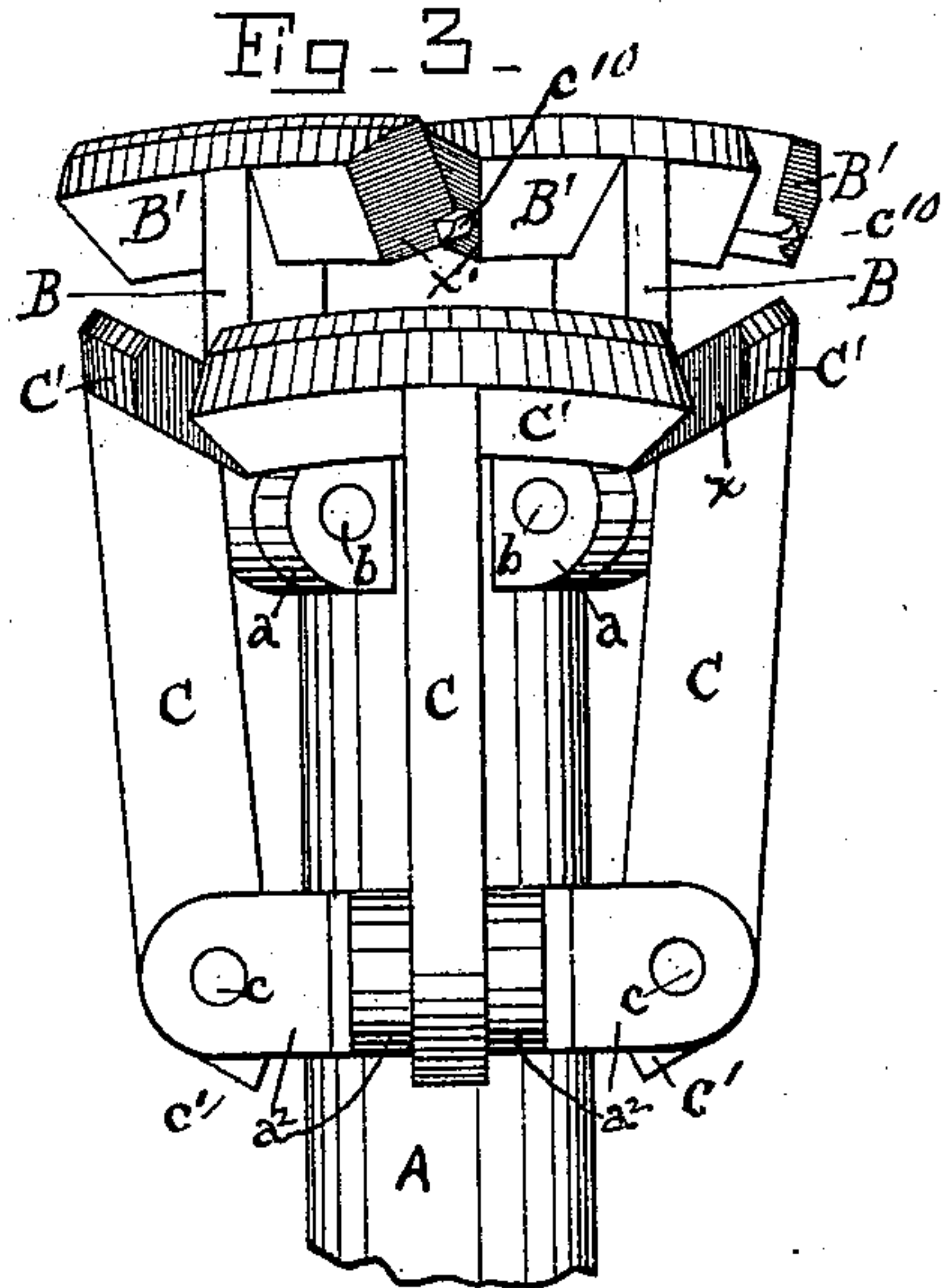
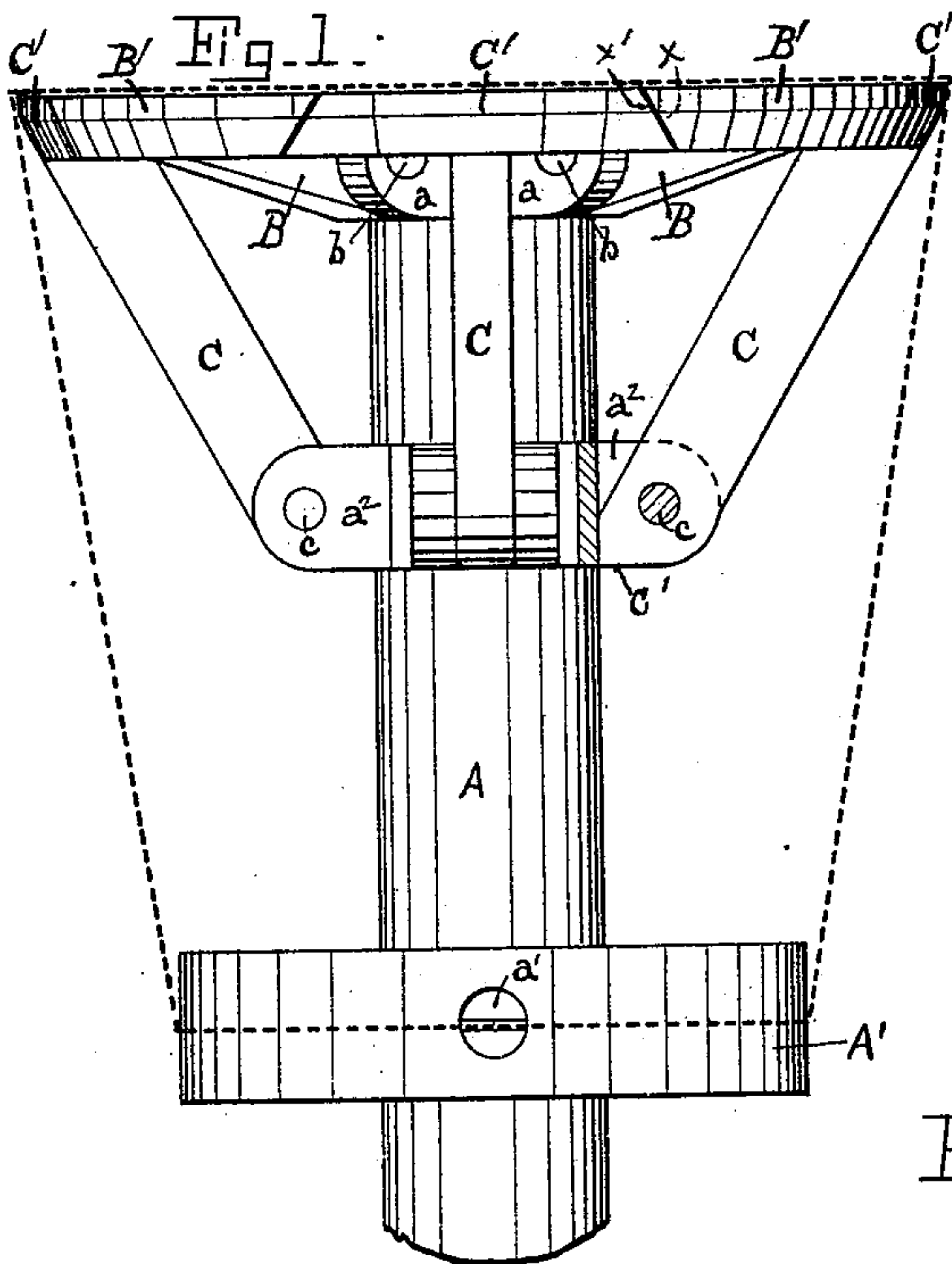


Fig. 2.

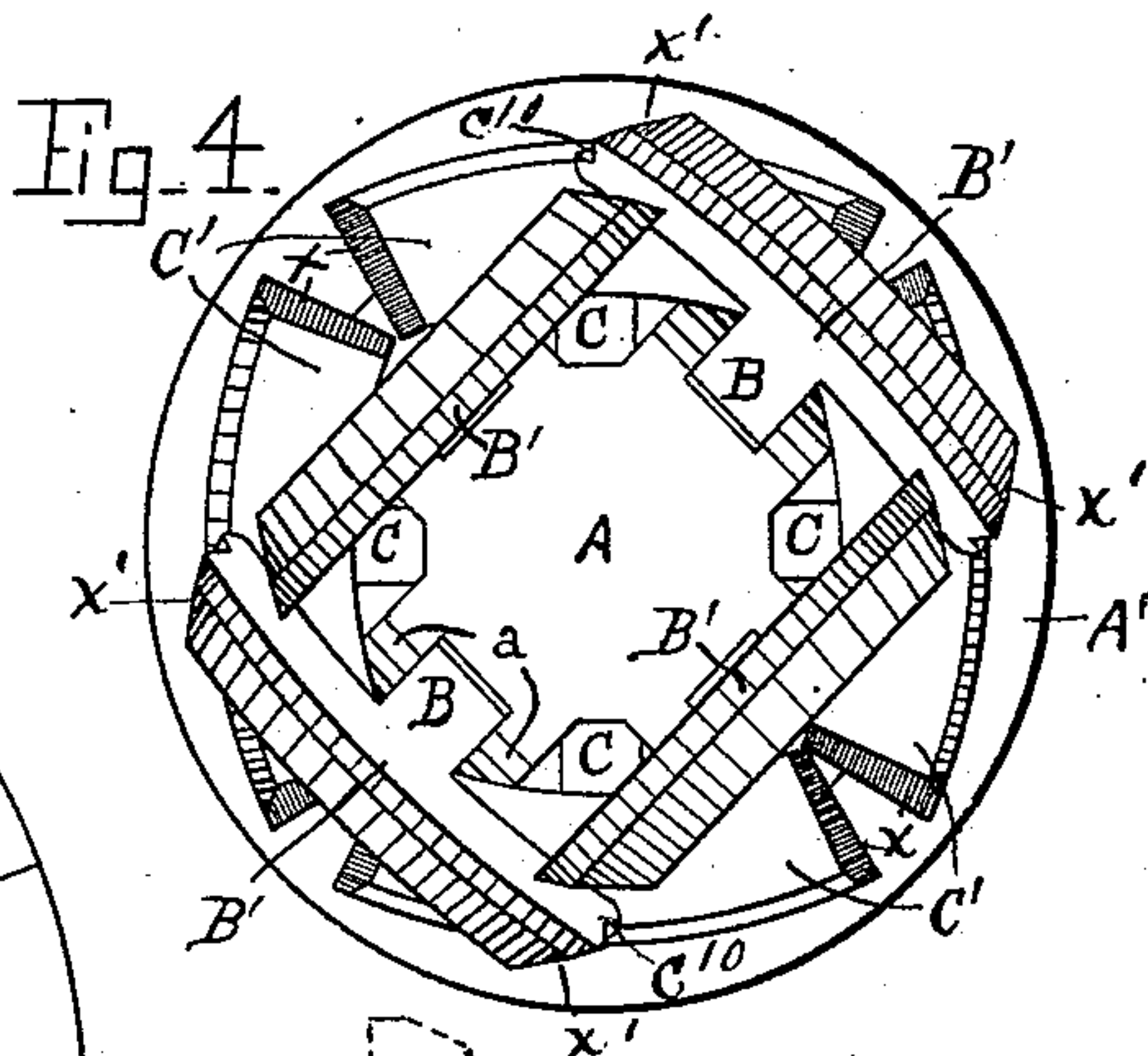
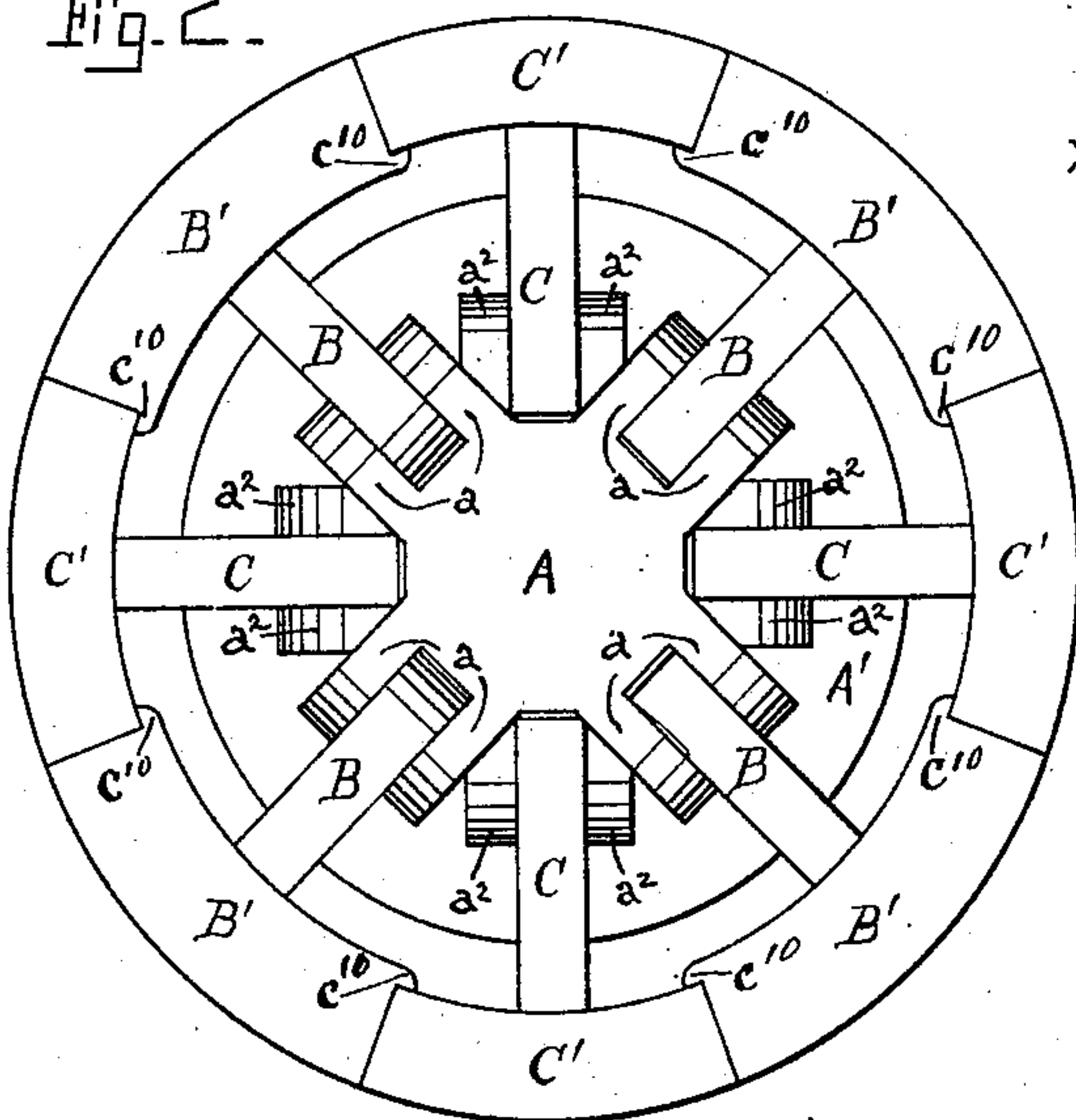
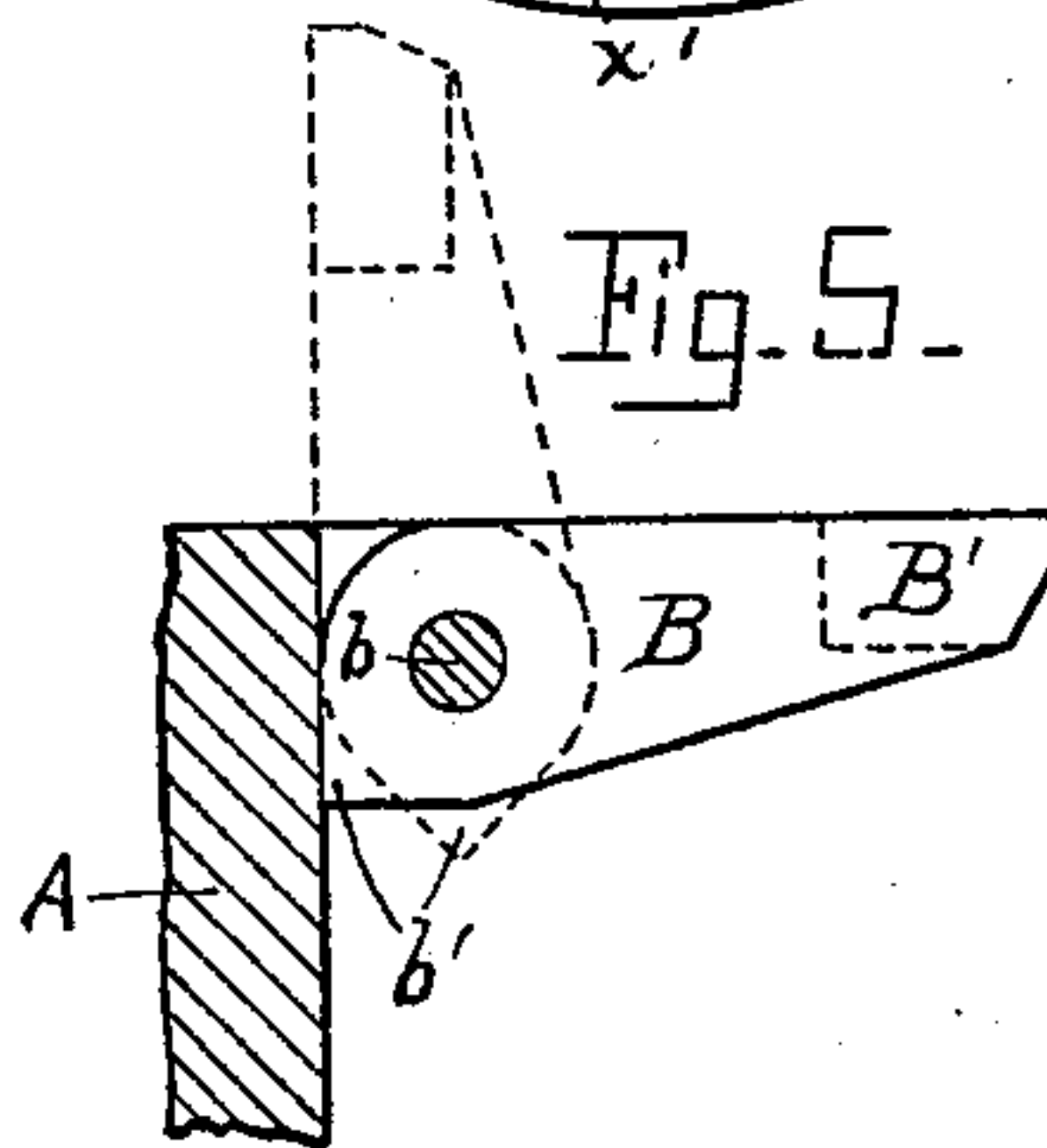


Fig. 5.



Witnesses.

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CHUCK FOR HOLLOW WARE.

SPECIFICATION forming part of Letters Patent No. 567,004, dated September 1, 1896.

Application filed May 2, 1896. Serial No. 590,055. (No model.)

To all whom it may concern:

Be it known that I, ALBERT R. PRITCHARD, a citizen of the United States, and a resident of the city of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Chucks for Hollow Ware, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my chuck when open to its full expansion. Fig. 2 is a top plan view thereof in the same position. Figs. 3 and 4 are respectively a side elevation and a top plan thereof when collapsed; and Fig. 5 is a detail view.

Many articles of hollow ware, such as some forms of coffee-pots and tea-pots, are larger at the bottom than at the top, and when the bottom is fastened to the body portion by double seaming, either by hand or by dies, it is necessary to support the outer edge of the bottom where it joins the body, and after these two parts are joined any internal support must be withdrawn through an orifice at the top of the vessel, which is smaller than the full size of the bottom. In order to provide a chuck which can be so collapsed or reduced in size as to pass through such a smaller orifice and can also be expanded to support the bottom around the edges and on the line or lines where the bottom is fastened to the body portion, I have produced the invention herein described and claimed.

In the drawings, A is a stem forming the main support of my device, which bears a collar A', adjustable and removably held thereon by a set-screw a'. The upper part of this stem bears a series of pairs of lugs a a, arranged equidistantly and extending horizontally from the stem. These lugs constitute supporting-bearings for a series of arms B B B, pivoted at b b b to said lugs a a a in order to swing on their pivots in vertical planes. In the form of device shown in the drawings there are four of these arms B B, and consequently four pairs of lugs a a. Each arm B is provided with an extension or shoulder b', which permits the arm to swing upward and permits it to swing downward into a suitable position, (for instance, horizontally in the drawings,) whereupon the abutment of the shoulder b' against the stem

A stops the downward movement of the arm and holds it firmly in its lowermost position. In Fig. 5 an arm B is shown in full lines in its lowermost position and in dotted lines in its raised position. Each arm B carries on its outer end B', curved in the arc of a circle, having the middle point of the stem A as its center. And each bar B', in the form of my device shown, extends through a little less than one-eighth of the circumference of the circle.

On the stem A and at a suitable distance below the lugs a a is a second series of pairs of lugs a² a², arranged at equal intervals around the stem and equidistant between the positions of the lugs a a, as shown in Fig. 2. The lugs a² a² form supporting-bearings for a second series of arms C C, which are pivoted at c c to said lugs a² a², so that the arms may swing in vertical planes. In the form of device shown there are four of said arms C C. Each arm C bears on its end a bar C', curved in the arc of a circle, having the middle point of the stem A as its center and having the same radius as the circle of the bars B'. Each arm C is also provided with a projection or shoulder c' to bear against the stem A when the bar is in its extreme lower position, as shown in Figs. 1 and 2. The segments or curved bars C' and the segments or curved bars B' are so adjusted that when, in the form shown, they are moved to their respective lowermost positions they form a complete and continuous segmental frame, (circular, oval, or angular,) to the plane of which the stem A is perpendicular, and the motions of the segments are toward and from the produced axis of the stem, which is the same as the axis of the frame. The side edges of the bars are beveled, as shown at x x' in Figs. 1 and 3, the upper bars B' having their narrow sides downward, so as to form a truncated wedge, while the bars C' have their narrow sides upward to form a truncated wedge whose beveled edges match with the beveled edges of the bars B'. This arrangement of beveled edges permits the bars B' to engage with and to disengage from the bars C' with ease, and also permits the bars C' to be crowded into place by the movement of the bars B'. The bars C' have on their inner corners lugs c¹⁰, (see Fig. 2,) which overlap the inner sides of

the bars B' and thus hold the respective bars in exact relations with reference to each other and tend to prevent an excessive jamming of the wedging sides of said bars.

5 In Fig. 1 a coffee-pot body with its bottom in place is shown upon my chuck. Any one skilled in the art of manufacturing hollow or sheet-metal ware will thus immediately understand that my chuck forms a suitable in-
10 ternal support for a vessel having two openings, one of which is smaller than the other, and which smaller opening is that through which the chuck must be removed after operations upon the ware. In the example
15 shown in the drawings this chuck is used in any well-known, circular, double-seaming machine, and the bottom and body of the vessel are thus fastened together, and it is therefore not considered necessary to show any
20 such well-known circular double-seaming device.

I do not limit my claims to the form or construction shown, nor more than the state of the art requires.

25 What I claim is—

1. In a chuck for hollow ware, a segmental supporting-frame continuous when expanded, means for supporting the respective segments of the frame in the continuous position and
30 means whereby the segments and their supports are movable toward the interior of the frame, whereby the same may pass through a smaller orifice than the complete frame.

2. In a chuck for hollow ware, a segmental
35 supporting-frame continuous when expanded, a support therefor, an arm connecting each segment of the frame to said support and pivoted thereto, and stop devices for limiting the movements of each arm to and from a
40 position in which the segments form a continuous frame.

3. In a chuck for hollow ware, a support, a series of segments adapted to form a continuous frame when expanded and pivoted to
45 the support to move toward and from the axis or produced axis of the frame, and stop devices for limiting the movements of said segments from the axis to form a complete frame.

4. The combination of the stem A, the series of arms B pivoted thereto to swing in
50 planes passing through the axis of the stem A, the series of arms C also pivoted to said stem to swing in planes passing through the axis of said stem, a bar on each arm forming
55 part of a segmental ring, continuous when expanded, means upon the arms B C for holding said arms when in the position in which the segments form the complete ring, substantially as described.

60 5. The combination of the stem A, the series of arms B pivoted thereto to swing in planes passing through the axis of the stem A, the series of arms C also pivoted to said

stem to swing in planes passing through the axis of said stem, a bar on each arm forming
65 part of a segmental ring, means upon the arms B C for holding said arms when in the position in which the segments form the complete ring, said segment C' having bearing
70 devices for abutment against the segment B', substantially as described.

6. The combination of the stem A, the series of arms B pivoted thereto to swing in
75 planes passing through the axis of the stem A, the series of arms C also pivoted to said stem to swing in planes passing through the axis of said stem, a bar on each arm forming
80 part of a segmental ring, means upon the arms B C for holding said arms when in the position in which the segments form the complete ring, said segments B' and C' having
correspondingly-beveled abutting edges, substantially as described.

7. The combination with the stem A, the series of arms B pivoted thereto to swing in
85 planes passing through the axis of said stem, the series of longer arms C also pivoted to said stem to swing in planes passing through the axis of said stem, a bar on each arm forming
90 part of a segmental ring, means upon the arms B C for holding said arms when in the position in which the segments form the complete ring.

8. The combination of the stem A, the series of arms B pivoted thereto to swing in
95 planes passing through the axis of the stem A, the series of arms C also pivoted to said stem to swing in planes passing through the axis of said stem, a bar on each arm forming
100 part of a segmental ring, means upon the arms B C for holding said arms when in the position in which the segments form the complete ring, said segment C' having bearing
105 devices for abutment against the segment B', and said segments B' and C' having correspondingly-beveled abutting edges, substantially as described.

9. The combination of the stem A, the series of arms B pivoted thereto to swing in
110 planes passing through the axis of the stem A, the series of longer arms C also pivoted to said stem to swing in planes passing through the axis of said stem, a bar on each arm forming
115 part of a segmental ring, means upon the arms B C for holding said arms when in the position in which the segments form the complete ring, said segment C' having bearing
120 devices for abutment against the segment B', and said segments B' and C' having correspondingly-beveled abutting edges, substantially as described.

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Witnesses:

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