

No. 702,056.

Patented June 10, 1902.

C. D. HANCOCK.
FASTENING DEVICE.

(Application filed Aug. 10, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

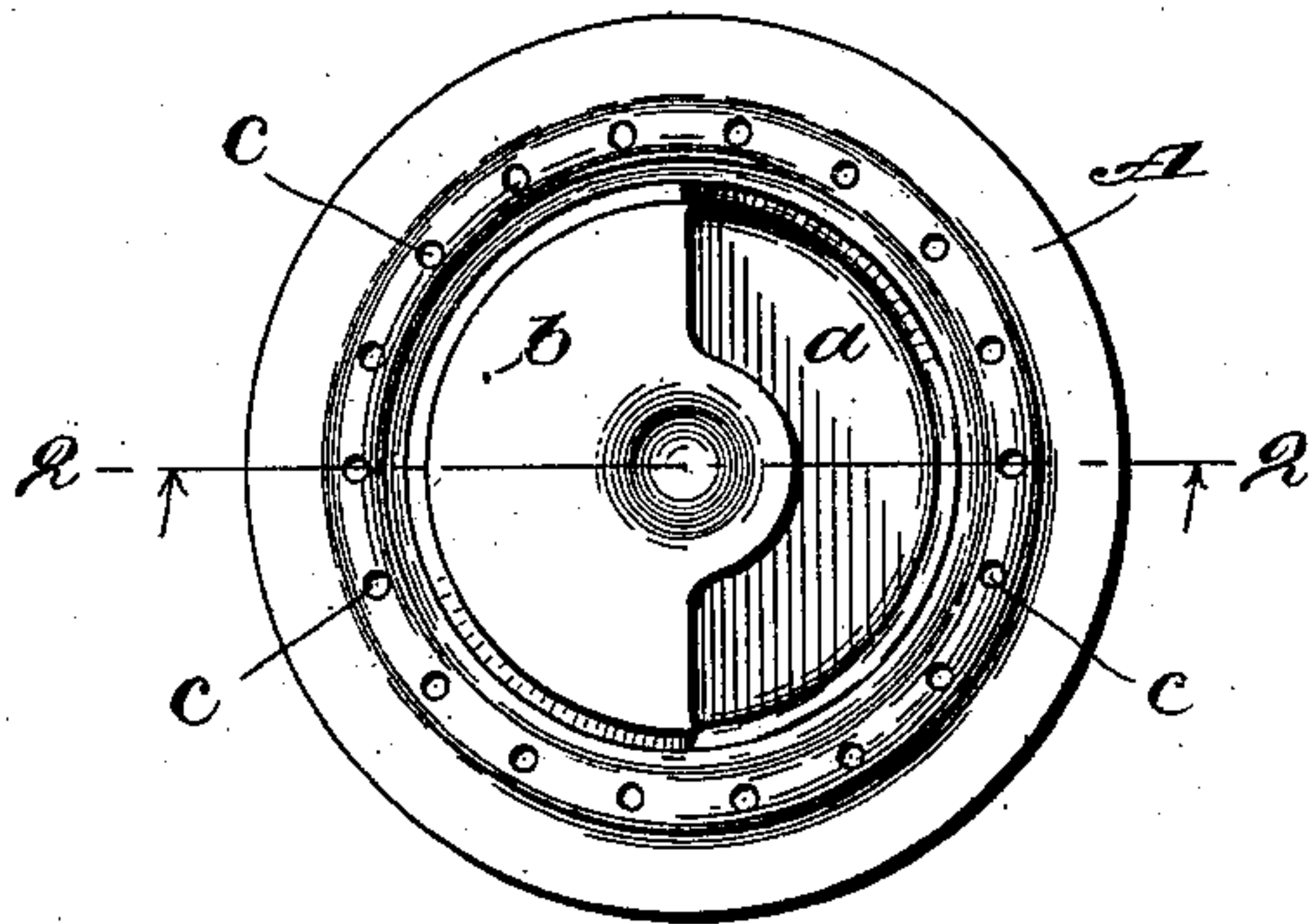


Fig. 2.

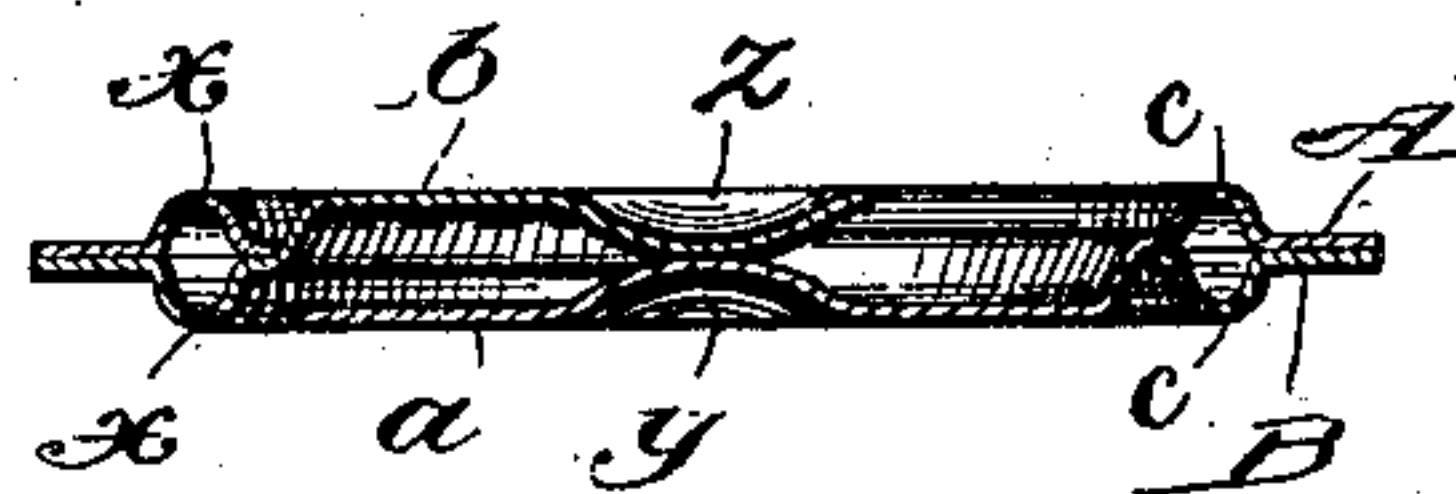


Fig. 3.

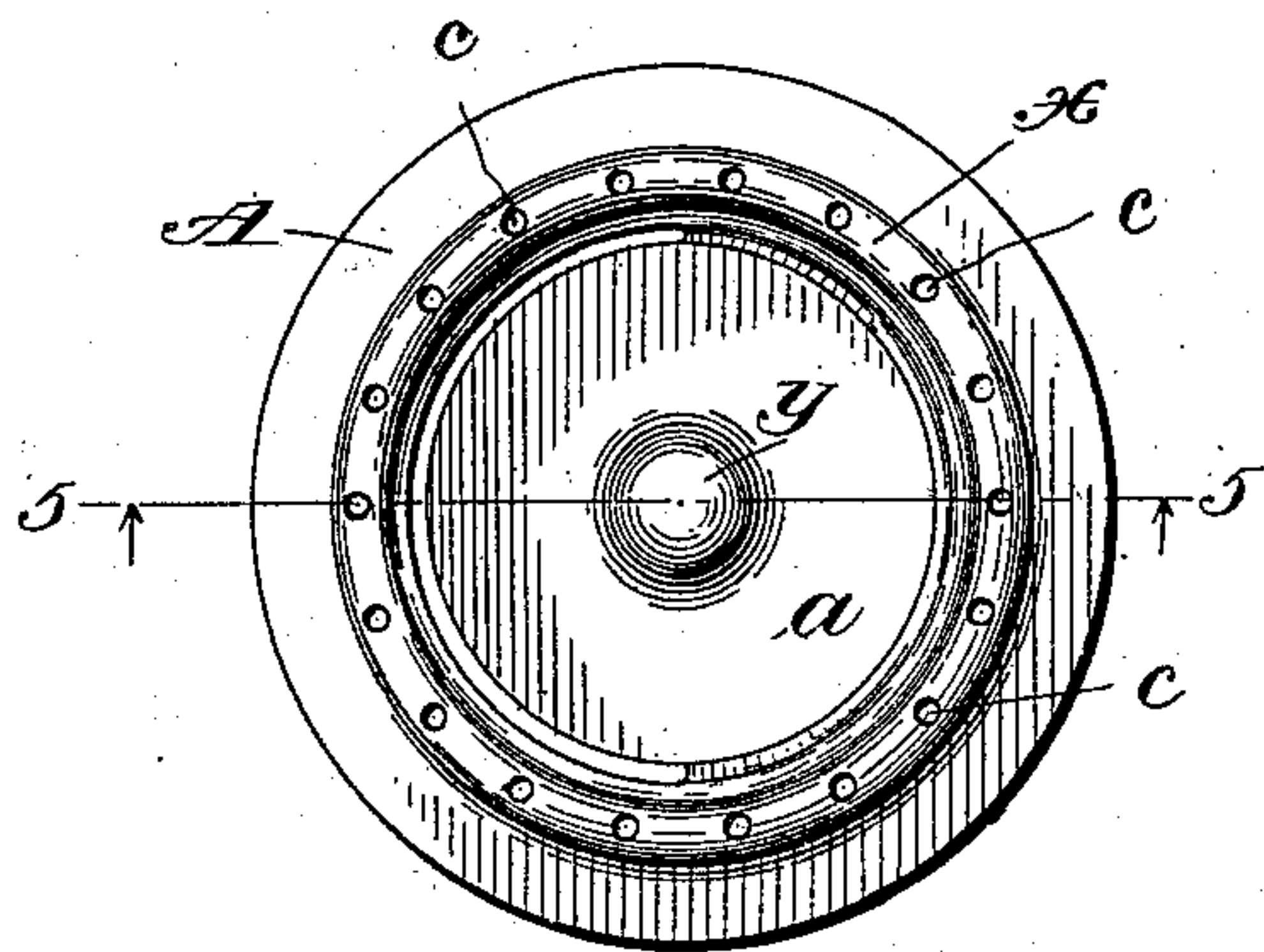


Fig. 4.

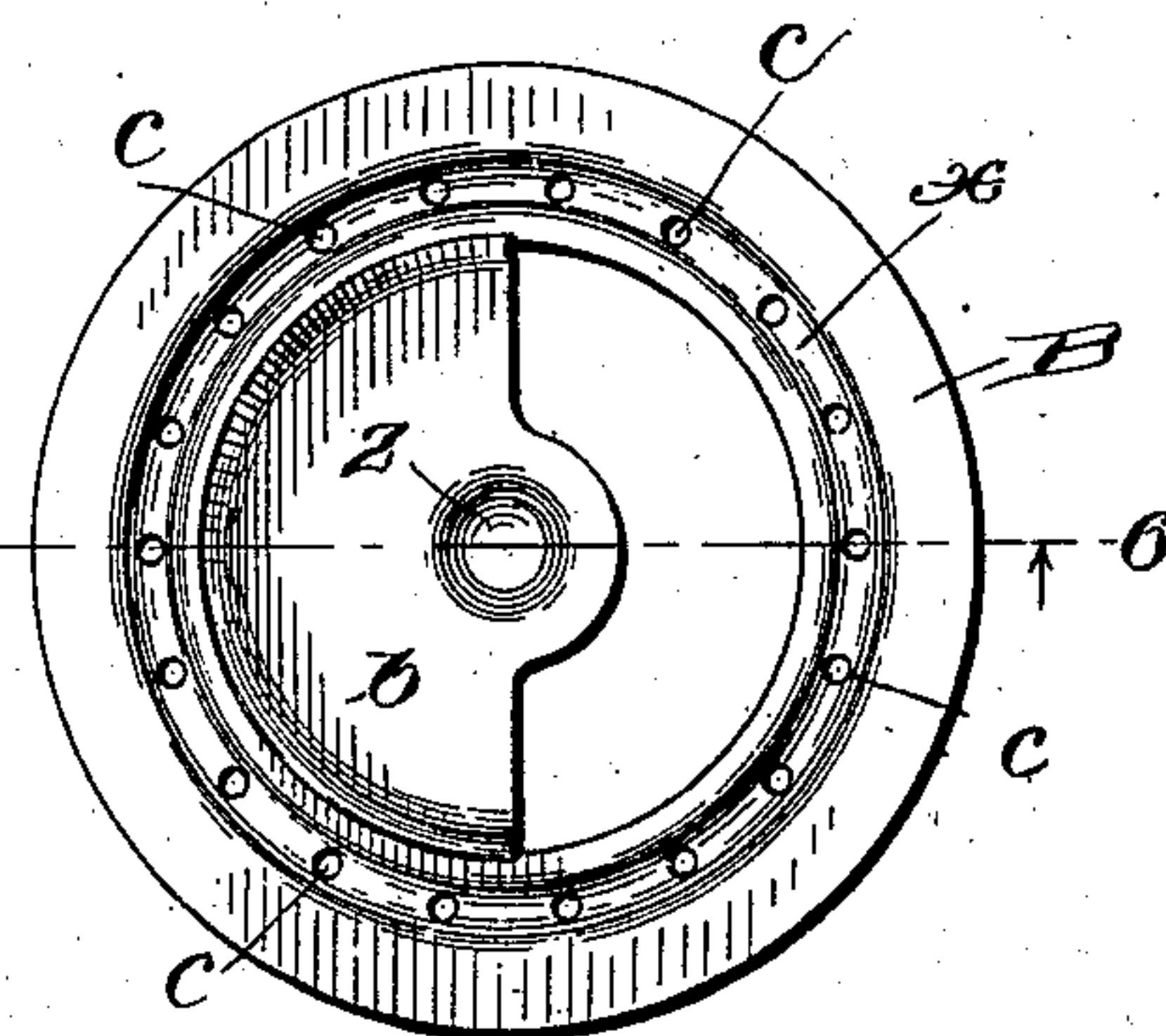


Fig. 5.

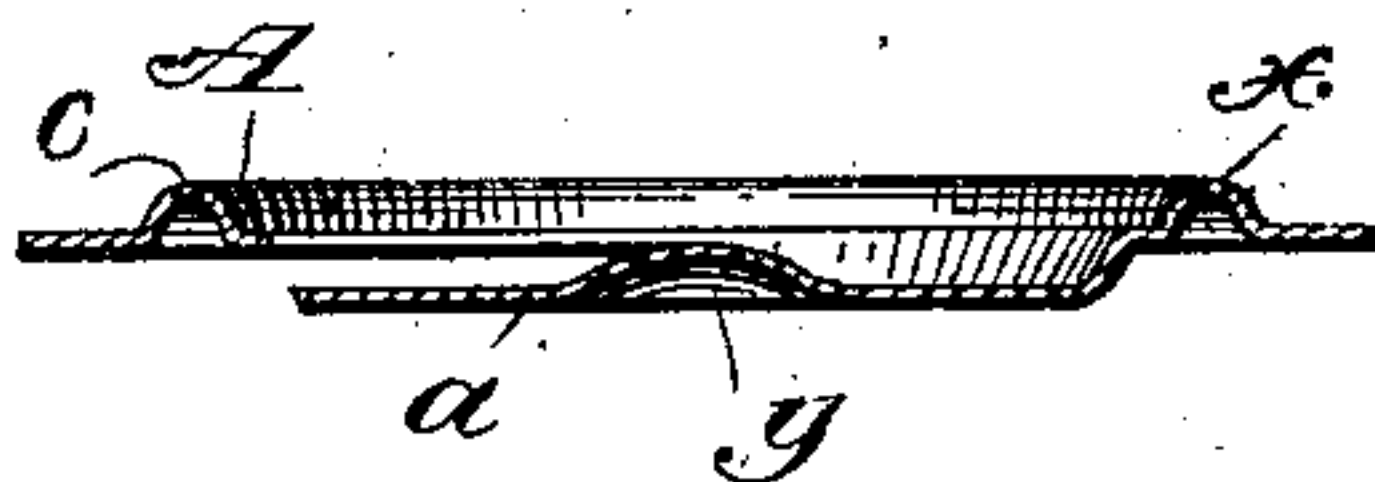


Fig. 6.

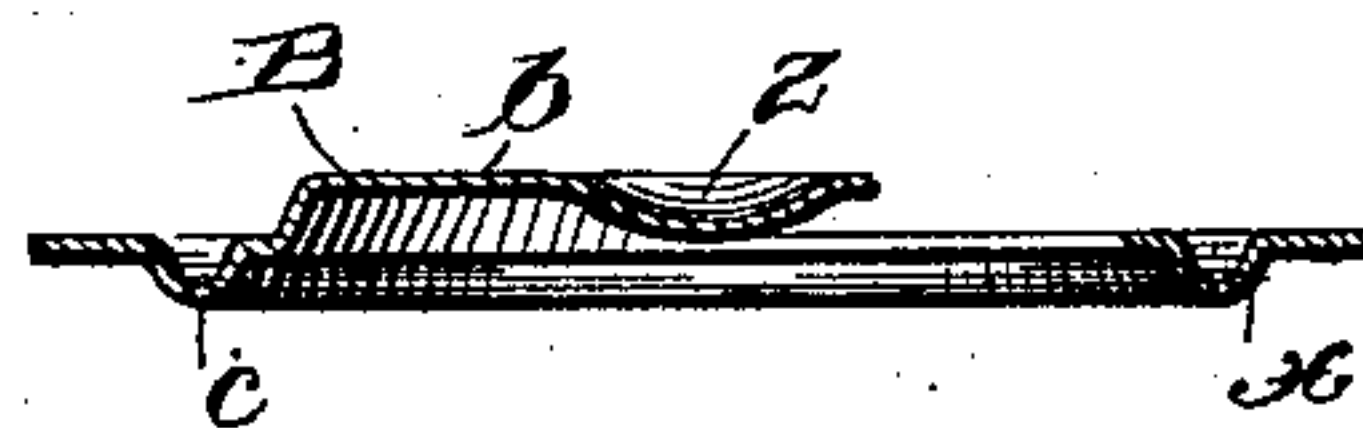


Fig. 7.



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2 Sheets—Sheet 2.

Fig. 8.

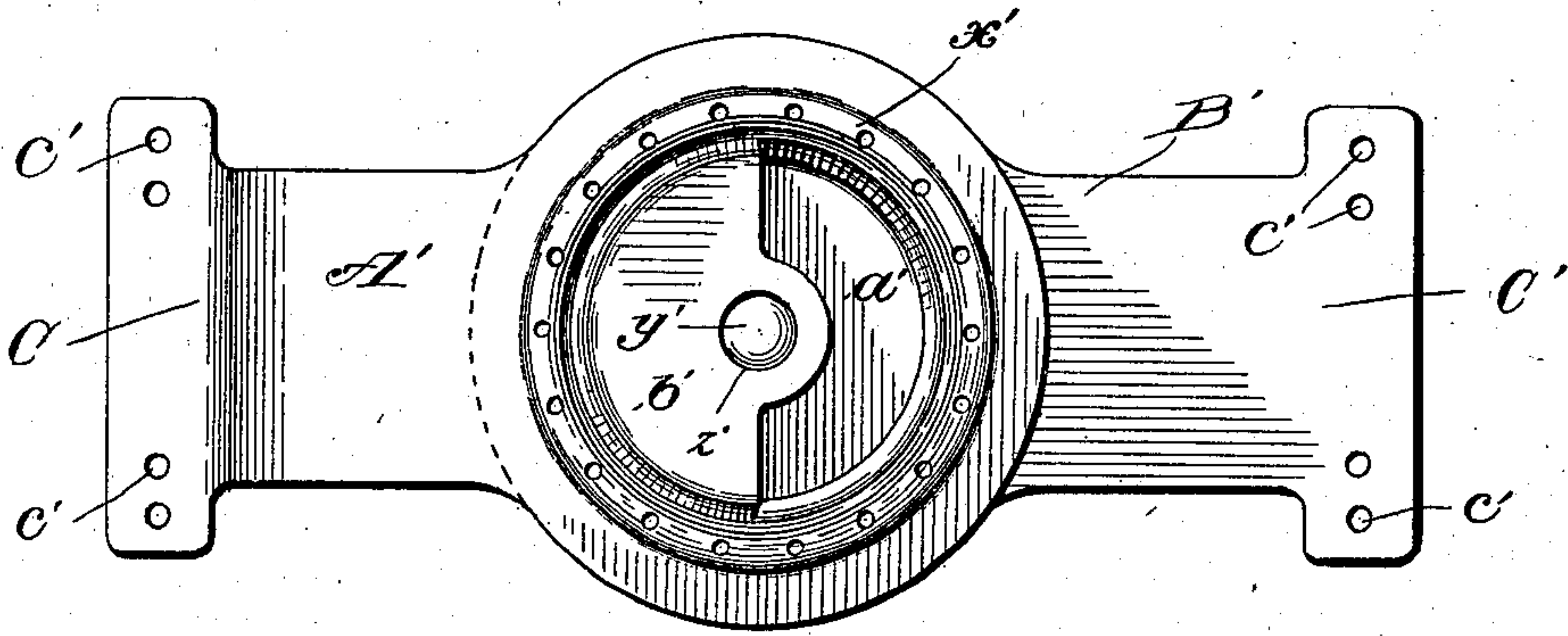


Fig. 9.

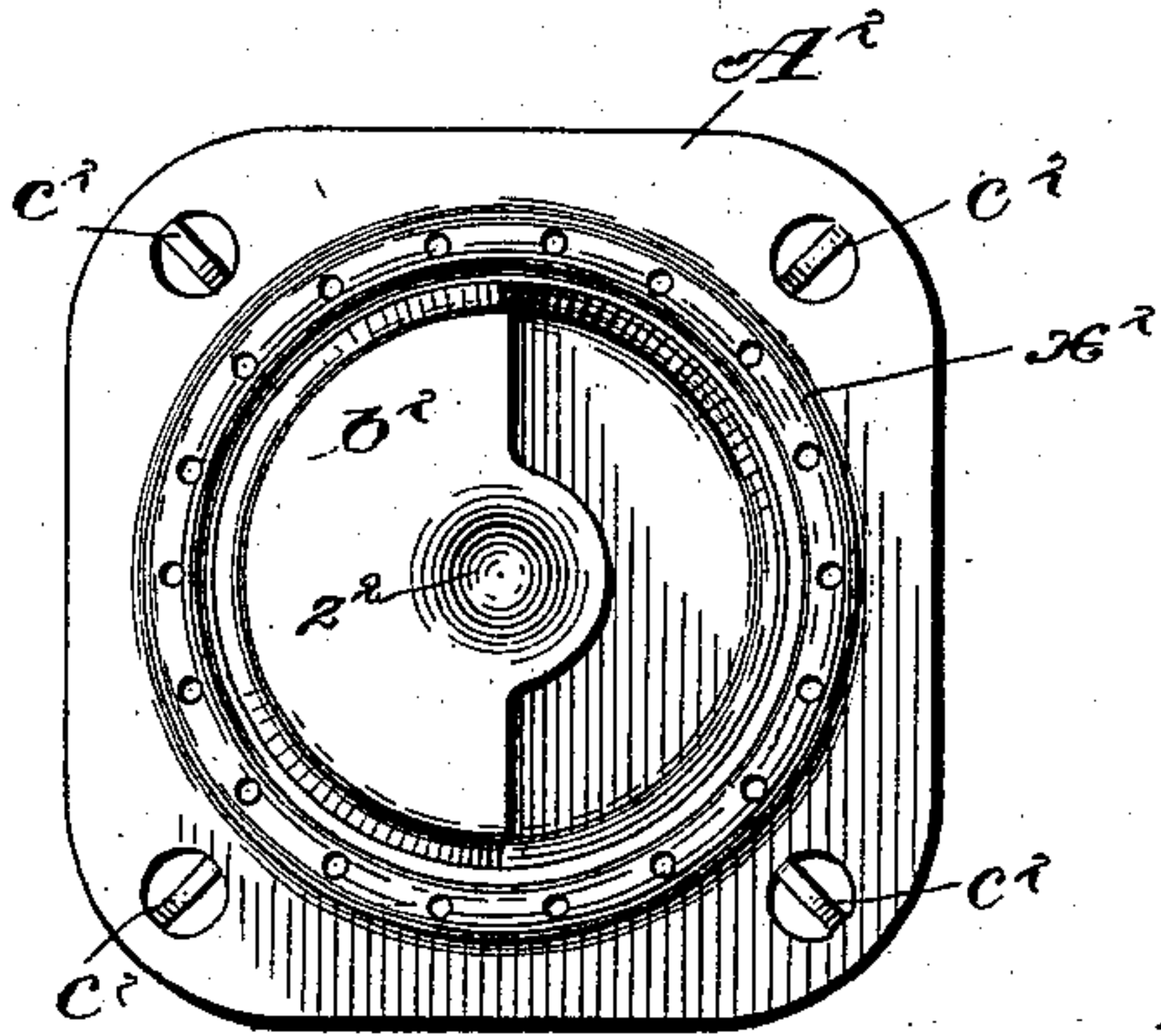


Fig. 10.

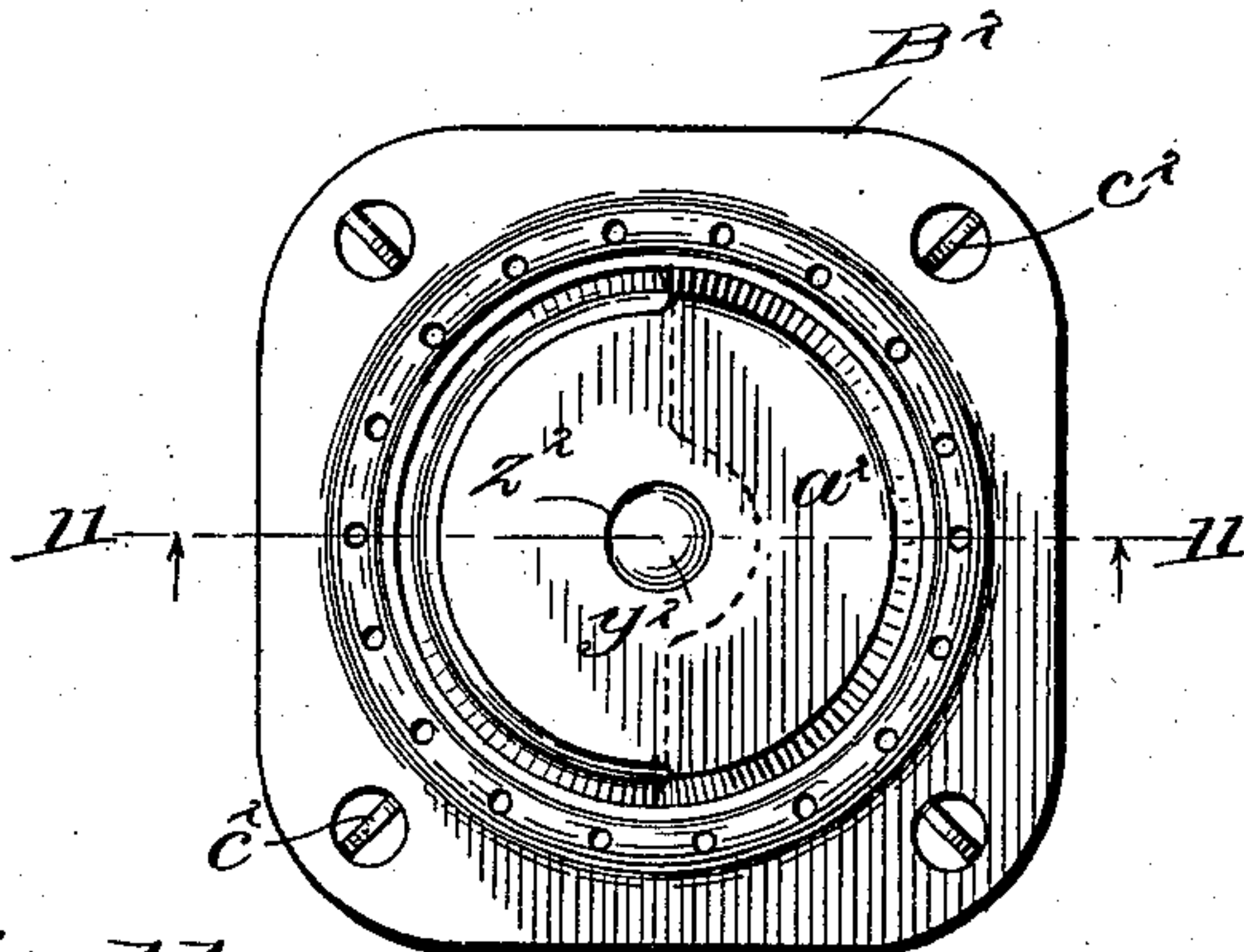


Fig. 11.

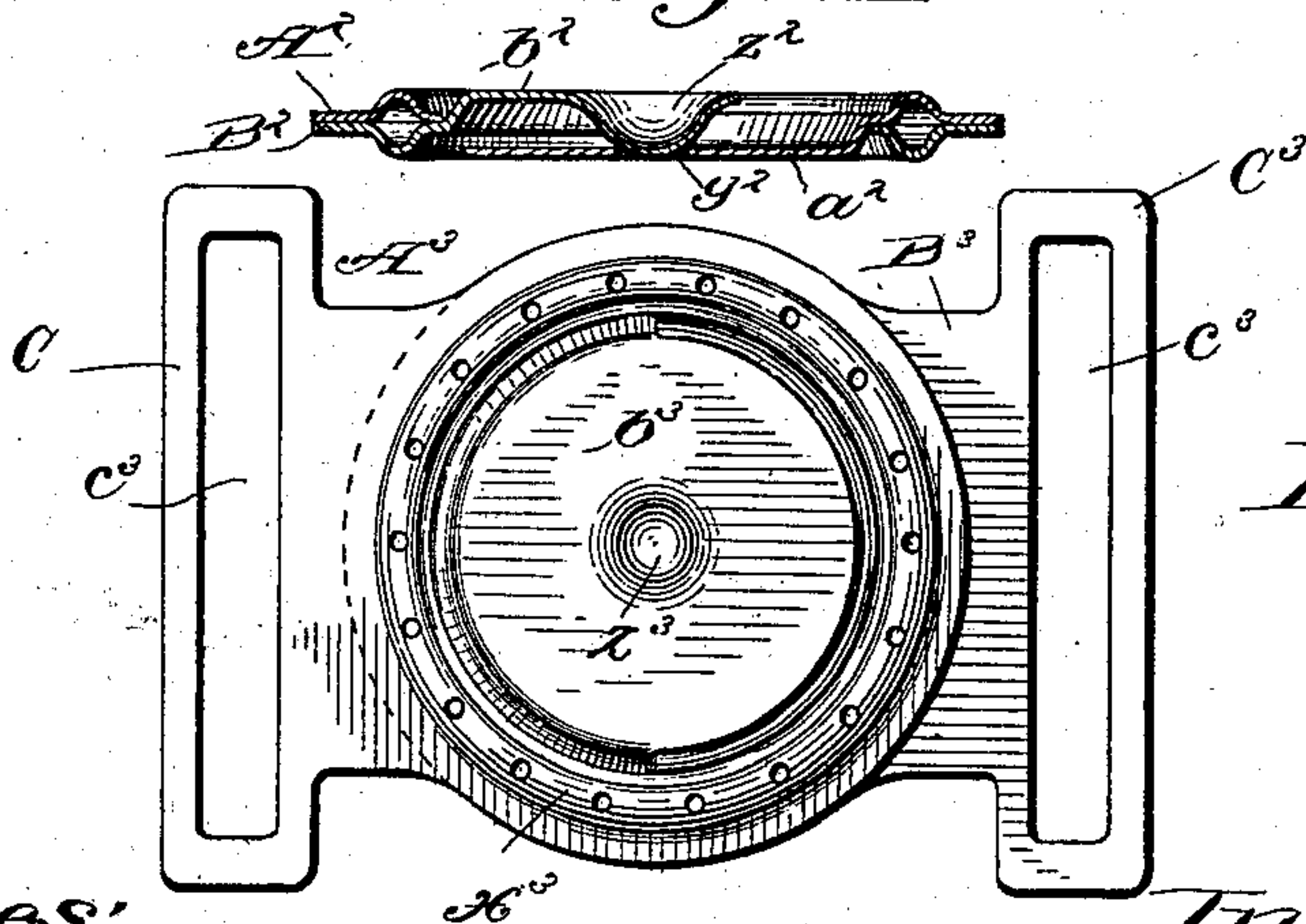


Fig. 12.

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UNITED STATES PATENT OFFICE.

CHARLES D. HANCOCK, OF CHICAGO, ILLINOIS.

FASTENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 702,056, dated June 10, 1902.

Application filed August 10, 1901. Serial No. 71,588. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. HANCOCK, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Fastening Devices; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates in general to fastening devices, and more particularly to such devices which comprise two coöperating members adapted to be secured to two separate articles or to two parts of the same article which it is desirable to unite.

The object of my invention is to provide a fastening device of the character referred to the members of which may be securely and easily attached to the articles or parts of an article, and may be readily and conveniently engaged and disengaged from each other and which when engaged will effectively retain the articles or parts of an article united.

A further object of my invention is to provide a fastening device of the class mentioned which will be simple in construction, efficient in use, and inexpensive in manufacture.

The invention will be more fully described hereinafter with reference to the accompanying drawings, in which the same is illustrated as embodied in several convenient and practical forms, and in which—

Figure 1 is a plan view of the two members of my fastening device in engagement; Fig. 2, a cross-section on line 2 2 of Fig. 1, looking upwardly in the direction of the arrows; Fig. 3, a plan view of one member of my fastening device; Fig. 4, a plan view of the other member of the device; Fig. 5, a section on line 5 5 of Fig. 3 looking upwardly; Fig. 6, a section on the line 6 6 of Fig. 4 looking upwardly; Fig. 7, a cross-sectional view of a retaining-plate; Fig. 8, a plan view of a modified form of my fastening device, showing the two members in engagement; Fig. 9, a plan view of another modified form of my invention looking downwardly on Fig. 11; Fig. 10, a plan view from the under side of Fig. 9 looking upwardly from the bottom of

Fig. 11; Fig. 11, a transverse section on the line 11 11 of Fig. 9; and Fig. 12, a plan view of still another modified form of my invention, showing the two members in engagement.

Similar reference characters indicate similar parts in the several figures of the drawings.

My fastening device consists, essentially, in two engaging members, each of which comprises an overlapping portion raised or projecting above the body portion on each member, such overlapping portion being provided with means for interlocking with similar means upon the other member. Any suitable means may be provided for attaching the members to the articles or the two parts of a single article which are to be united.

My invention is capable of a variety of uses—such, for instance, as detachably connecting portions of suspenders, for fastening gloves, clothing, (in which use it performs the function of buttons or hooks and eyes,) for supporting curtains or portières, for uniting the parts of horse-blankets, for fastening leggings, corsets, umbrellas, or the ends of balleties.

Referring more particularly to Sheet 1 of the drawings, reference-letter A indicates one of the members of the fastening device, each of which comprises an annular raised or depressed portion *x*, within which is a circular portion *a*, adapted to overlap a similar portion on the other member, such overlapping portion *a* preferably extending above the surface of the member and to the opposite side thereof from the annular raised portion *x*. Any suitable means may be provided upon the overlapping portion *a* for engaging the overlapping portion of the other member. For convenience I have shown such engaging means to comprise a boss *y*, projecting inwardly or toward the plane of the body portion of the member, as clearly shown in Fig. 5. Any suitable means may be provided for attaching the member to the article or part of an article—such, for instance, as a series of perforations *c* through the annular raised portion *x*, through which attaching means may pass after passing through the article—as, for instance, the points *d* of the plate D. (Shown in Fig. 7.)

The other member B of my fastening de-

vice, as embodied in the form illustrated on Sheet 1 of the drawings, is similar to the member just described in that it comprises a raised annular portion x and semicircular projecting portion b , which is provided with means for engaging the boss y on the member A, and thereby locking the two members together. Such engaging means is shown as consisting in a boss z , similar to the boss y of the member A, as clearly shown in Fig. 6. The member B may be attached to the article in any desired way—as, for instance, by means of fastening-plate D, the projections d of which extend through perforations c in the annular raised portion x .

In Fig. 8 I have illustrated a modified form of my invention, each member of which is provided with a portion C' , through which perforations c' extend, thereby adapting this embodiment of my invention especially for use in fastening corsets, the fastening-rivets or other means passing through the perforations c' . The circular projecting portion a' of the member A' , which overlaps the corresponding projecting portion of the other member B' , is provided with a boss y' , similar to that provided at y in the member A. (Shown on Sheet 1 of the drawings. The member B' in Fig. 8 is provided with a semicircular projecting portion b' , which overlaps the portion a' on the member A' , such portion b' being provided with an opening z' , which engages the boss y' of the other member of the fastening device when the parts are in engagement, as shown in Fig. 8.

In Figs. 9, 10, and 11 I have illustrated a modified form of my fastening device, which is particularly adapted for use in lieu of hooks and eyes or buttons for fastening together portions of garments. In this form of my invention the members A^2 and B^2 are provided with annular raised portions x^2 and also with projecting portions a^2 and b^2 , respectively, which overlap when the members of the device are in engagement. A boss z^2 projects from the portion b^2 of the member B^2 , while a perforation y^2 , adapted to engage the boss, is formed through the portion a^2 of the member A^2 . The members of the fastening device, as illustrated in Figs. 9, 10, and 11, may be secured to garments or other articles in any desired manner—such, for instance, as by straps c^2 , formed integral with the body portions of the engaging members, around which thread may be passed to sew the members of the fastening device to the portions of the garments or other articles.

Fig. 12 illustrates a modification of my invention, which is well adapted for use as a fastening device to unite the ends of a belt or to connect the usual detachable parts of suspenders together. The two members A^3 and B^3 are provided with extensions C^3 , each of which is provided with an elongated slot c^3 , through which the ends of the belt or portions of the suspenders or ends of other ar-

ticles are passed and secured. In this modification each member is provided with an annular raised portion x^3 and with projecting portions a^3 and b^3 , which overlap, and thereby overlapped retain the members A^3 and B^3 in engagement through suitable interlocking means z^3 —as, for instance, the bosses shown on Sheet 1 or a boss and cooperating aperture, as shown in Figs. 8 to 11, inclusive.

The members of my fastening device may be made in any desired way, one method of manufacture thereof being the stamping or embossing of the members in dies or molds of the desired form, by which operation the annular raised portion is formed and the overlapping portion is forced to the opposite side of the member from the annular raised portion, the boss projecting from the overlapping portion being formed at the same operation. The slot formed in the periphery of the projecting overlapping portion may then be cut or sheared approximately half the distance around the circumference of the projecting portion and of slightly greater diameter to permit the engagement of the other member therewith. It would also be entirely practicable to form each member at a single operation, the peripheral slot being cut and the raised and projecting portions thereof being formed by a single apparatus of the requisite construction.

Both of the engaging members of the fastening device may be of the same shape as shown in Fig. 5, or, if desired, the overlapping portion of one member may be cut away, as shown in Figs. 4 and 6, for instance, thereby decreasing the distance necessary to lap the members into engagement.

The operation of my invention will be readily understood from the above description of the structure of the engaging members and may be briefly described as follows: Each of the members is secured to the article which is to be united to another article or is secured to a part of a single article which is to be united to another part thereof by any suitable fastening means—as, for instance, the plate D, the projecting points d of which pass through the perforations c , formed in the raised or sunken annular portion of each member, and then are bent over to securely attach the member to the article. The members may, however, be attached by sewing through the perforations in the sunken annular portion or through the integral straps c^2 , or the members may be attached by rivets passing through the perforations, as shown in Fig. 8, or the ends of the article may be passed through elongated slots c^3 , as shown in Fig. 12, and thereby secured to the laterally-projecting portions C^3 . The members of the fastening device are engaged by inserting the overlapping portion of one member in the semicircular slot in the other member, thereby permitting the projecting portions of the members to overlap, they being held in such

overlapped position by suitable interlocking means—such, for instance, as bosses on both members or a boss on one member and an opening through the other. The members
5 may be readily disengaged from each other by a relative longitudinal movement or by a slight rotary movement of either member, whereby the interlocking means are disengaged and the two members of the fastening
10 device separated from each other.

It should be noted that the circular slot (shown in Fig. 5) and the cut-away portion (shown in Fig. 4) extend approximately half of the circumference of the raised overlap-
15 ping portions, thereby forming shoulders which come into contact when the members are engaged. These shoulders, through their contact, serve as fulcrums about which the members may be relatively rotated to disen-
20 gage the interlocking means when it is desired to separate the two parts of the fastening device.

While I have shown the interlocking means on the overlapping portions as centrally lo-
25 cated, they may be located at any point within the circumference of the projecting overlapping portions, it being only necessary that they should be brought into contact when the members are in engagement, and thereby
30 slightly press the overlapping portions apart, so as to hold the members of the fastening device firmly together.

While I have described more or less precisely the details of the several embodiments of my invention, I do not wish to be under-
35 stood as limiting myself thereto, as I contemplate changes in form, the proportion of parts, and the substitution of equivalents as circumstances may suggest or render expedient
40 without departing from the spirit of my invention.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

45 1. A fastening device comprising two members each having an offset portion and an opening at one side of said offset portions, whereby the offset portion on one member may pass through the opening in the other
50 member and be received within the recess formed by the offset portion on the other member, said offset portions extending in opposite directions when the members of the device are in engagement, substantially as de-
55 scribed.

2. A fastening device comprising two members having offset portions projecting in oppo-
60 site directions and openings at either side of said offset portions forming shoulders, whereby the offset portion of one member may pass through the opening in the other member and be received within the recess formed by the offset portion thereon and the shoulders on

the members brought into contact, substan-
tially as described. 65

3. In a two-part fastening device, the combination with a member having a circular off-
set portion and a peripheral slot extending
substantially around one-half of the circum-
ference of said offset portion said slot adapt-
70 ed to permit the passage therethrough of the oppositely-projecting offset portion of the other member, of interlocking means for retaining the offset portions of the members in
engagement and thereby uniting the two
75 members of the fastening device, substantially as described.

4. In a fastening device, a member comprising an annular raised portion, a circular
projecting portion having a peripheral slot
80 through one-half of its circumference said slot adapted to permit the passage there-
through of a reversely-projecting portion on a cooperating member of the fastening de-
vice, a boss located upon said circular pro-
85 jecting portion adapted to interlock with the other member of the fastening device, substantially as described.

5. In a fastening device, the combination with a member having a circular projecting
90 portion through one-half of the periphery of which a slot extends, of a cooperating member having a semicircular oppositely-projecting portion, interlocking means located on the
projecting portions of the two members
95 whereby they are retained in engagement with the shoulders formed between the body portion and projecting portion of one member in contact with the corresponding shoulders
of the other member, substantially as de-
100 scribed.

6. In a two-part fastening device, the combination with a member having an annular
raised portion, a circular portion projecting
105 from the side of said member opposite the annular portion, and having a slot extending
around one-half of the periphery of said circular portion, of a cooperating member hav-
ing an annular raised portion, a semicircular
portion projecting from the side of said sec-
110 ond member opposite from its annular portion and interlocking bosses extending from said projecting portions in the same direc-
tion as the annular raised portions thereof,
whereby when the semicircular portion of one
115 member is passed through the peripheral slot in and overlaps the circular projecting portion of the other member, the bosses will interlock and retain the members in engagement, substantially as described. 120

In testimony whereof I sign this specification in the presence of two witnesses.

CHARLES D. HANCOCK.

Witnesses:

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