

(No Model.)

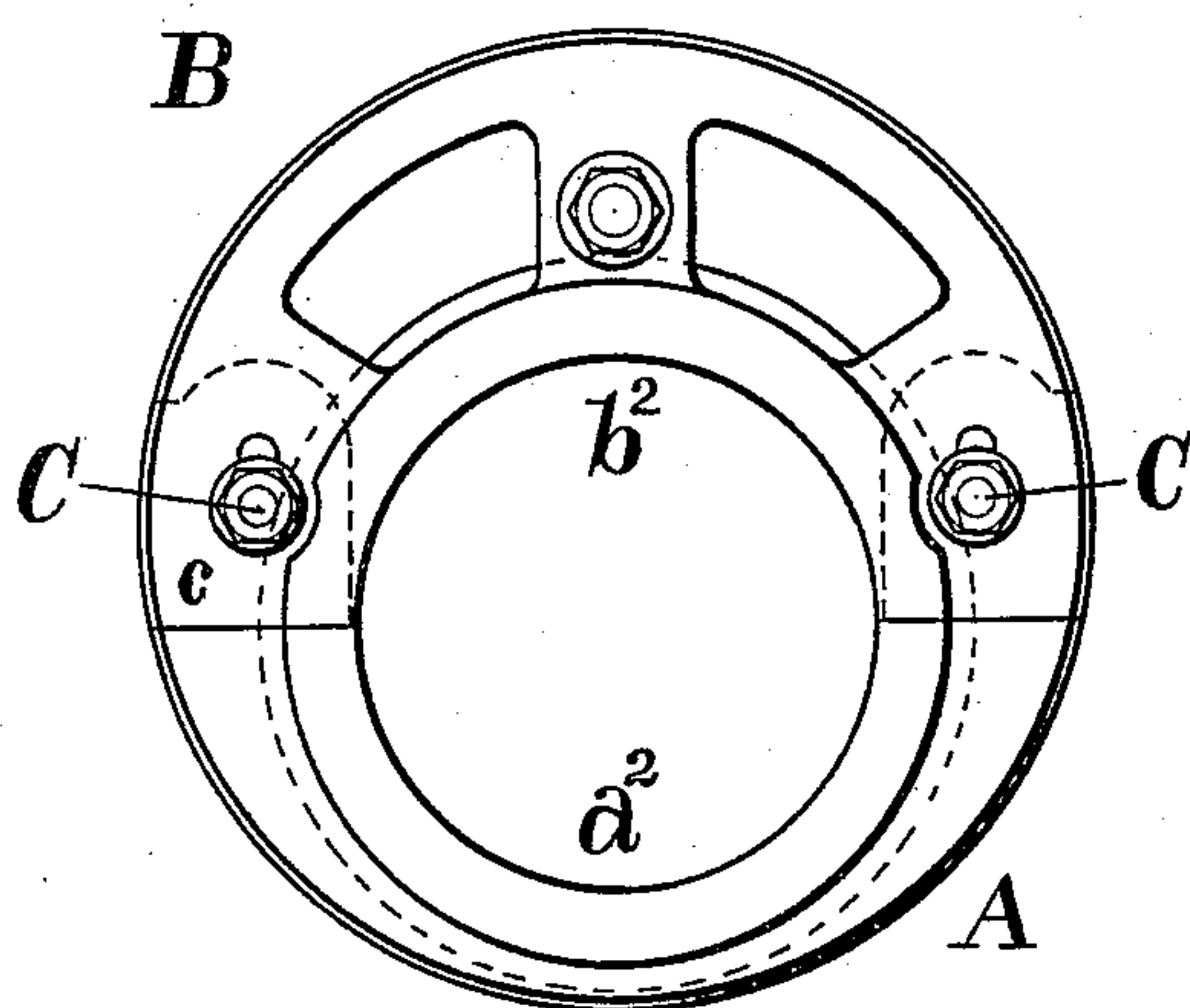
C. W. BARNABY.

ECCENTRIC.

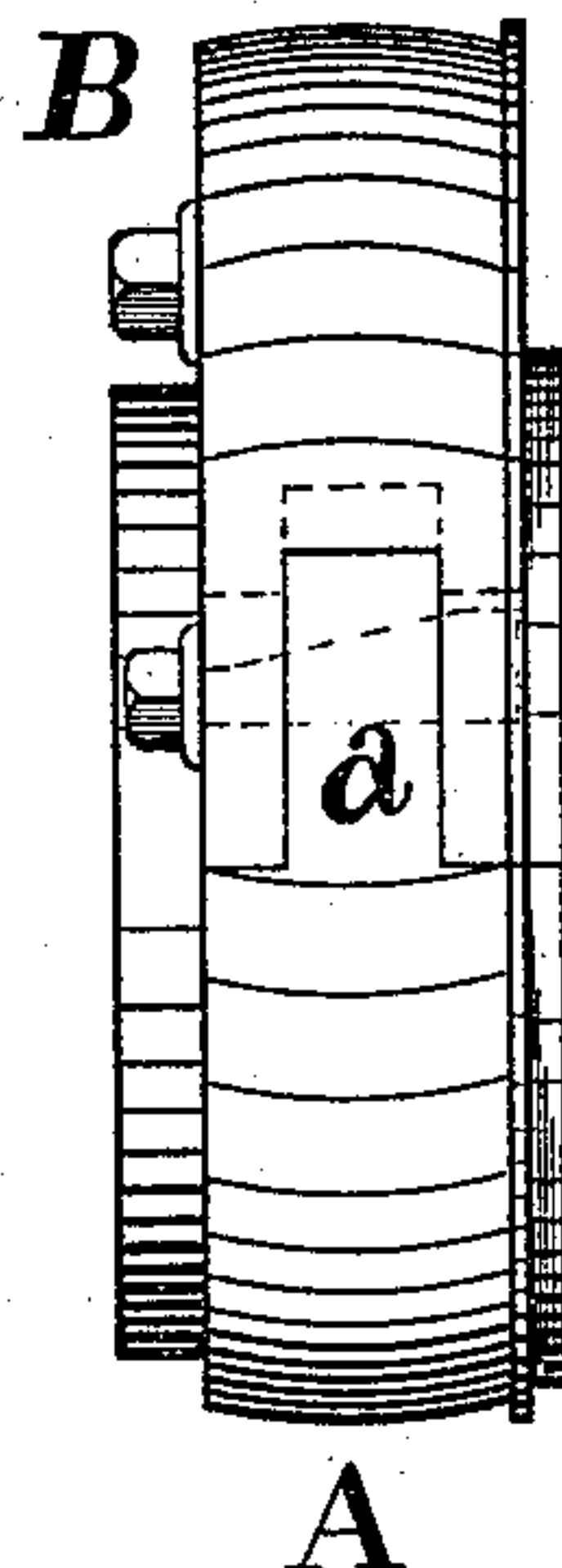
No. 287,406.

Patented Oct. 30, 1883.

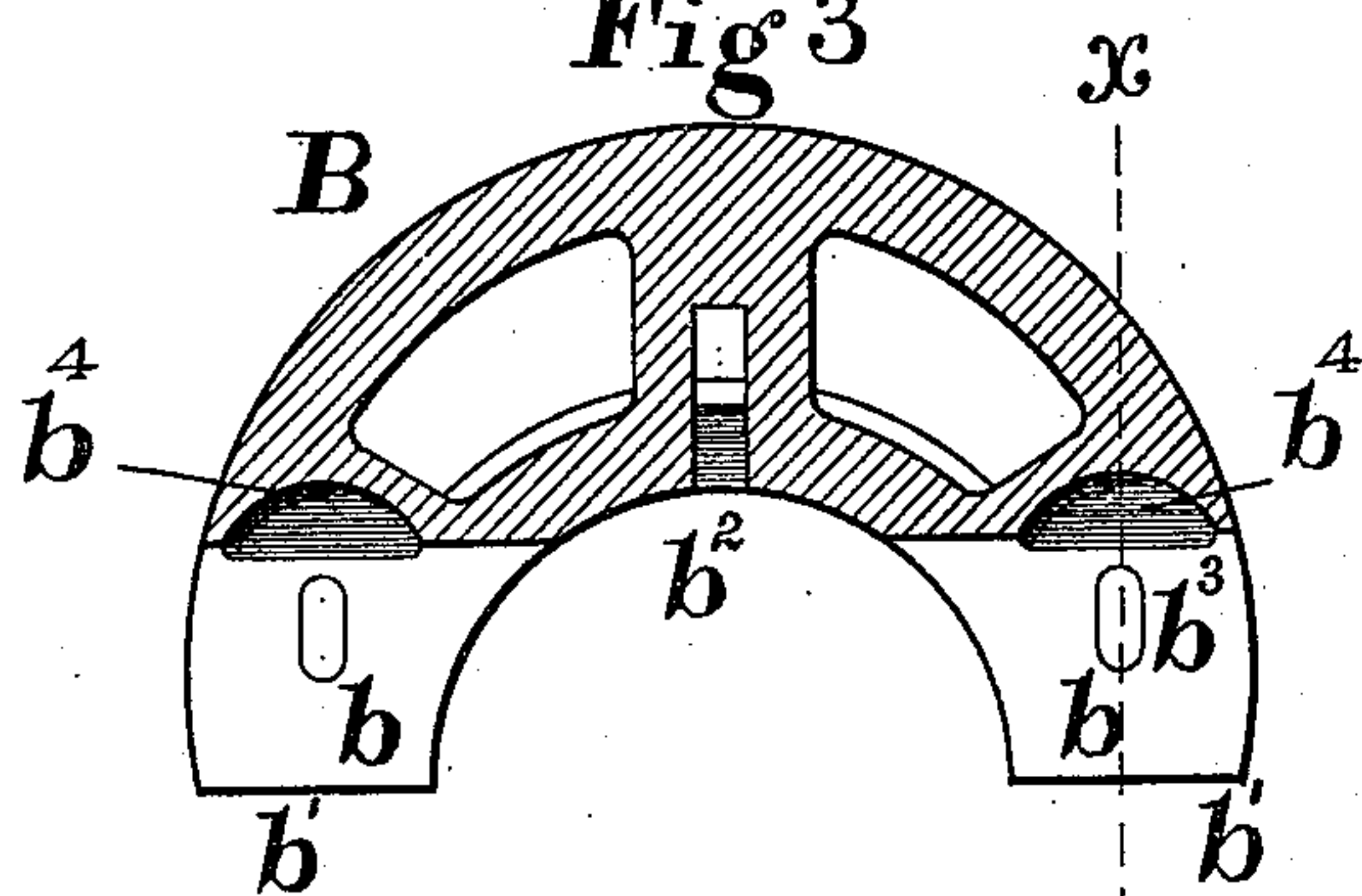
*Fig 1*



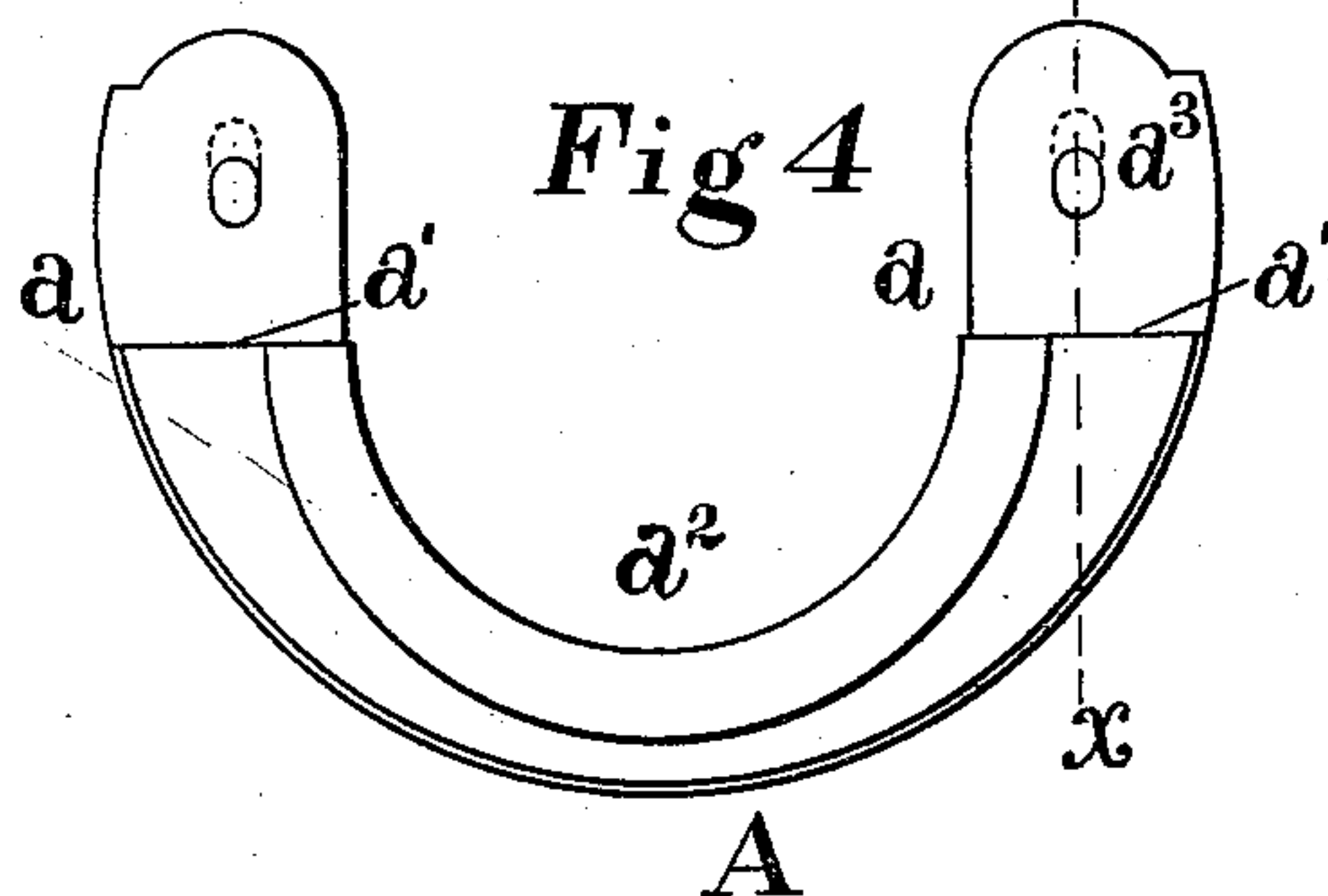
*Fig 2*



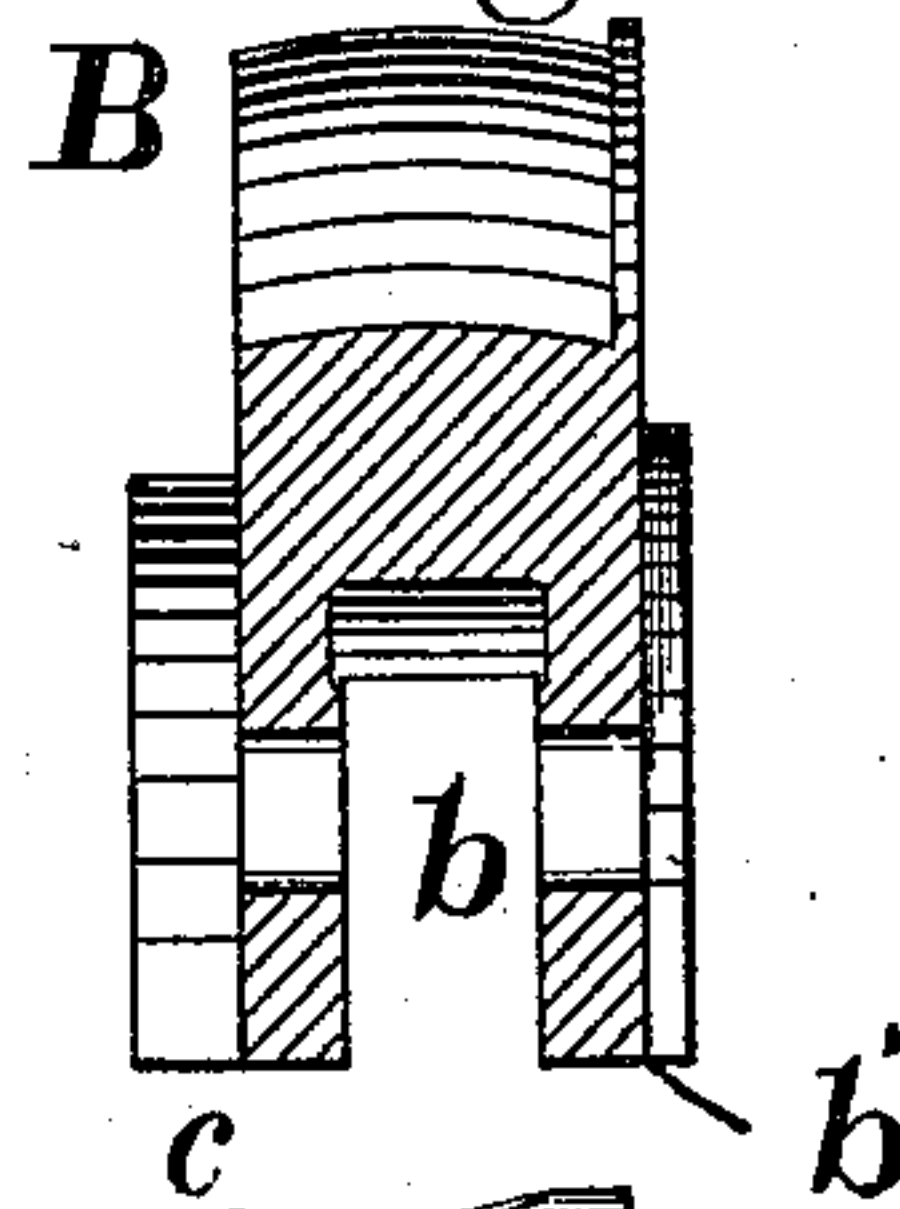
*Fig 3*



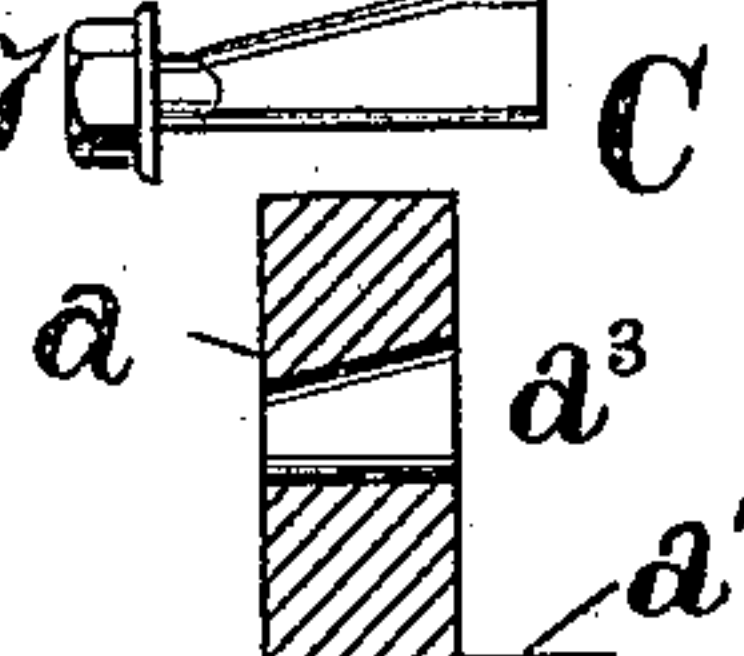
*Fig 4*



*Fig 5*



*Fig 7*



*Fig 6*



Witnesses

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Inventor

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# UNITED STATES PATENT OFFICE.

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## ECCENTRIC.

SPECIFICATION forming part of Letters Patent No. 287,406, dated October 30, 1883.

Application filed August 23, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES W. BARNABY, of Salem, in the county of Columbiana and State of Ohio, have invented certain new and  
5 useful Improvements in Eccentrics, of which improvements the following is a specification.

My invention relates to "split" eccentrics—that is to say, those which are divided into two  
10 separate sections radially to the axis of their shaft-opening, in order to enable them to be conveniently placed on and removed from the shafts upon which they are designed to operate—and is likewise applicable to collars, sleeves, pulleys, or other members which it may be desir-  
15 able to place upon shafts in two halves.

The objects of my invention are to simplify and cheapen the construction of eccentrics of the class referred to, and to insure the accurate fitting of the sections when united, without the  
20 necessity of subsequent manipulation.

To these ends my improvements consist in a section having a tongue or lug projecting from its butting-face on each side of the shaft-opening; also, in a section having a recess located  
25 on each side of its shaft-opening and extending without obstruction from said opening to its periphery; also, in the combination of a section having a projecting tongue on its butting-face, on each side of its shaft opening, a  
30 section having recesses in its butting-face adapted to receive said tongues, and bolts by which said sections are coupled one to the other.

The improvements claimed are hereinafter  
35 fully set forth.

In the accompanying drawings, Figures 1 and 2 are side and face views, respectively, in elevation, of an eccentric embodying my invention; Fig. 3, a vertical transverse section  
40 through the larger part or section of the same; Fig. 4, a side view, in elevation, of the smaller section; Figs. 5 and 6, transverse sections at the line  $xx$  of Figs. 3 and 4, through the larger and the smaller sections, respectively, of the  
45 eccentric; and Fig. 7, a view, in elevation, of one of the connecting wedge-bolts.

In the construction of split eccentrics, as practiced prior to my invention, the butting-  
50 faces of the two sections have been planed flat, and the two sections connected by means of

studs screwed into the smaller section and having squared projections entering similarly-formed holes cored in the larger section, mortises being formed in the projections of the studs and in the body of the larger section of  
55 the eccentric, through which connecting-bolts were passed for the purpose of securing the two sections together. Such construction is objectionable in involving the necessity of lay-  
60 ing out, drilling, and tapping the holes for the studs, making and attaching the studs so that their rough, forged, or even finished surfaces would approximate the position and direction of the sides of the holes against which they  
65 were drawn by the action of the bolts in drawing the sections together, and in the difficulty experienced in obtaining a proper and accurate joint between the sections by reason of the imperfect contact of the projections of the studs with the cored holes. The expense, de-  
70 lay, and unsatisfactory result above referred to I have found in practice to be wholly obviated by the employment of my improvements.

To carry out my invention I cast upon the smaller section, A, of the eccentric, two tongues  
75 or lugs,  $a$ , each of which projects perpendicularly from the butting-face  $a'$  of the section, and to afford all practicable strength should extend from its periphery to its shaft recess or opening  $a^2$ . A recess,  $b$ , is formed in the but-  
80 ting-face  $b'$  of the larger section, B, of the eccentric on each side of its shaft-opening  $b^2$ , said recesses being in line, one with the other, transversely to the shaft-opening and in line and corresponding in width with the opposite  
85 tongues,  $a$ , of the smaller section, A. Each of the recesses  $b$  extends unobstructedly from the shaft-opening  $b^2$  to the periphery of the section, and is thus adapted to be planed out for its entire extent, so as to accurately fit the  
90 sides of the tongue  $a$ , which enters it, the tongues as well as the butting-faces of both the sections being likewise planed, so that neat and accurate fitting of all the surfaces in contact may be attained. The two sections, after be-  
95 ing properly finished as above, are secured firmly together around the shaft, preferably by wedge-bolts C, which pass through mor-  
100 tices  $a^3$  in the tongues and  $b^3$  in the metal of the larger section, B, on each side of the re-



cesses  $b$ , and are secured by nuts  $c$ . To afford sufficient space to admit the portions of the tongues exterior to the mortises  $a^3$  without involving unnecessary machine work or weakening of the section B, pockets  $b^4$  of greater width than the tongues may be cored in the bottoms of the recesses  $b$ , contact of the tongues therewith not being necessary beyond the wedge-bolts C.

10 In eccentrics constructed in accordance with my invention there is no tendency for the butting-faces to be drawn out of line in connecting the sections, nor any possibility of such derangement by reason of the perfect contact of the sections, which is wholly on finished surfaces. The sections will necessarily match in every direction when drawn together on the shaft, the shaft bringing them to the correct position in one direction and the tongues and recesses in the other. The eccentric may, if desired, be secured upon the shaft at the same time that its sections are connected together by making the fit such that the shaft will be tightly clamped as the sections are brought to their meeting position. For greater security against slipping, keys, wedge-bolts, or set-screws may be employed in the usual manner, and it is preferable that the connecting-bolts should be used merely to draw and hold the two sections firmly together, so as to form practically a solid eccentric, which may be moved and adjusted upon the shaft without disturbing the connection of its sections, and is held in desired position upon the shaft by the devices ordinarily employed for the purpose. It will further be obvious that my improvements are applicable, without variation of principle,

to pulleys, hubs, collars, or any other attachments which are to be placed upon a shaft in two sections.

I claim as my invention and desire to secure by Letters Patent—

1. An eccentric-section having a tongue or lug projecting from its butting-face on each side of a semi-cylindrical shaft-opening, and within the end boundaries of the butting-face, said tongue and butting-face being adapted to be acted on by a planing or finishing tool, substantially as set forth.

2. An eccentric-section having a recess located in its butting-face on each side of and transverse to its shaft-opening, and extending without obstruction from said opening to its periphery, so as to be adapted to be acted on by a planing or finishing tool, substantially as set forth.

3. An eccentric-section having an unobstructed recess on each side of and transverse to its shaft-opening, and a cored pocket of greater width than said recess at the bottom thereof, substantially as set forth.

4. The combination of an eccentric-section having a projecting tongue on its butting-face on each side of a semi-cylindrical shaft-opening, a section having recesses in its butting-face adapted to receive said tongues and bolts passing through mortises in the tongues and in the metal on each side of the recesses, and serving to connect the sections one to the other, substantially as set forth.

CHARLES W. BARNABY.

Witnesses:

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