

No. 744,624.

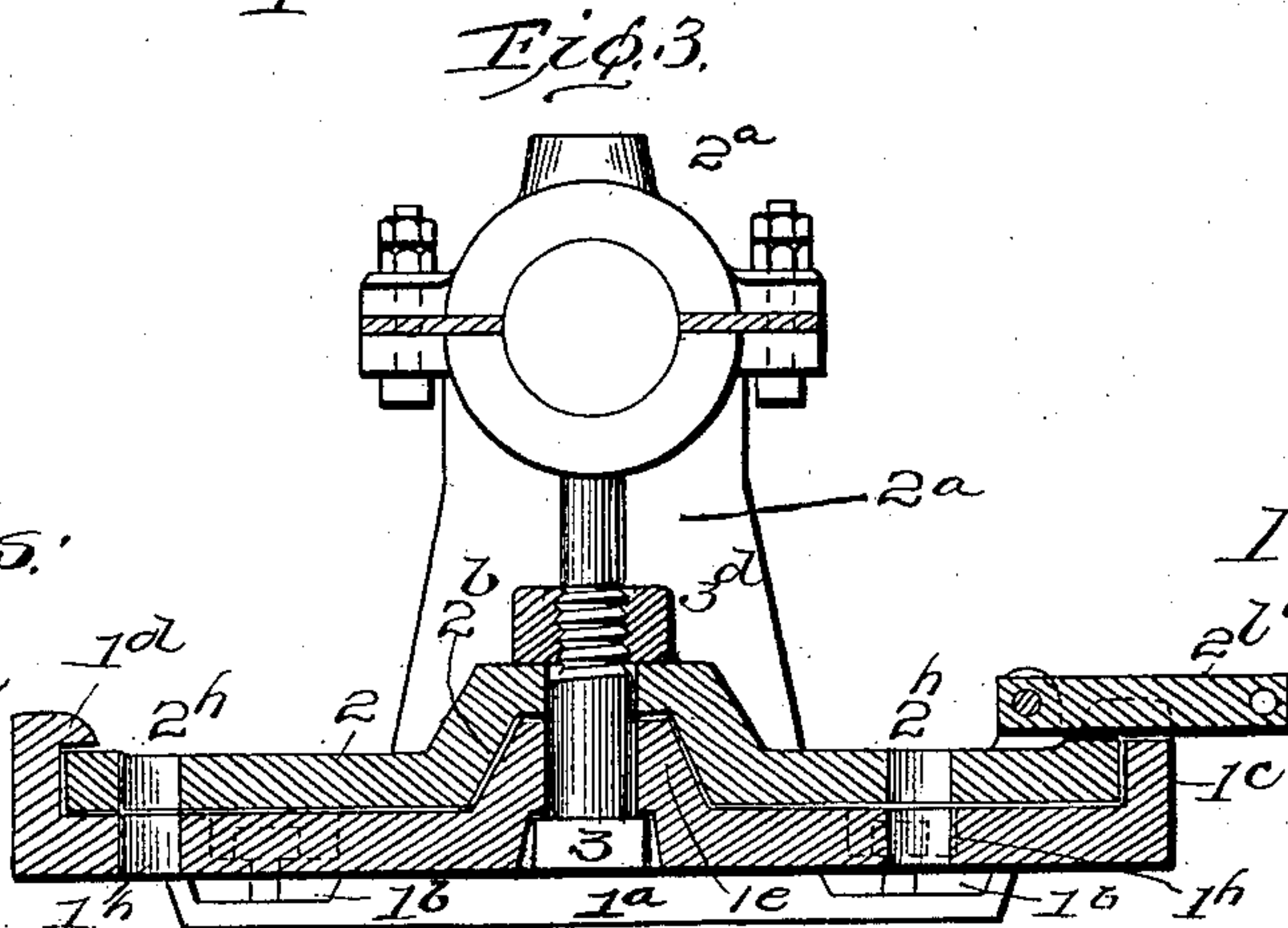
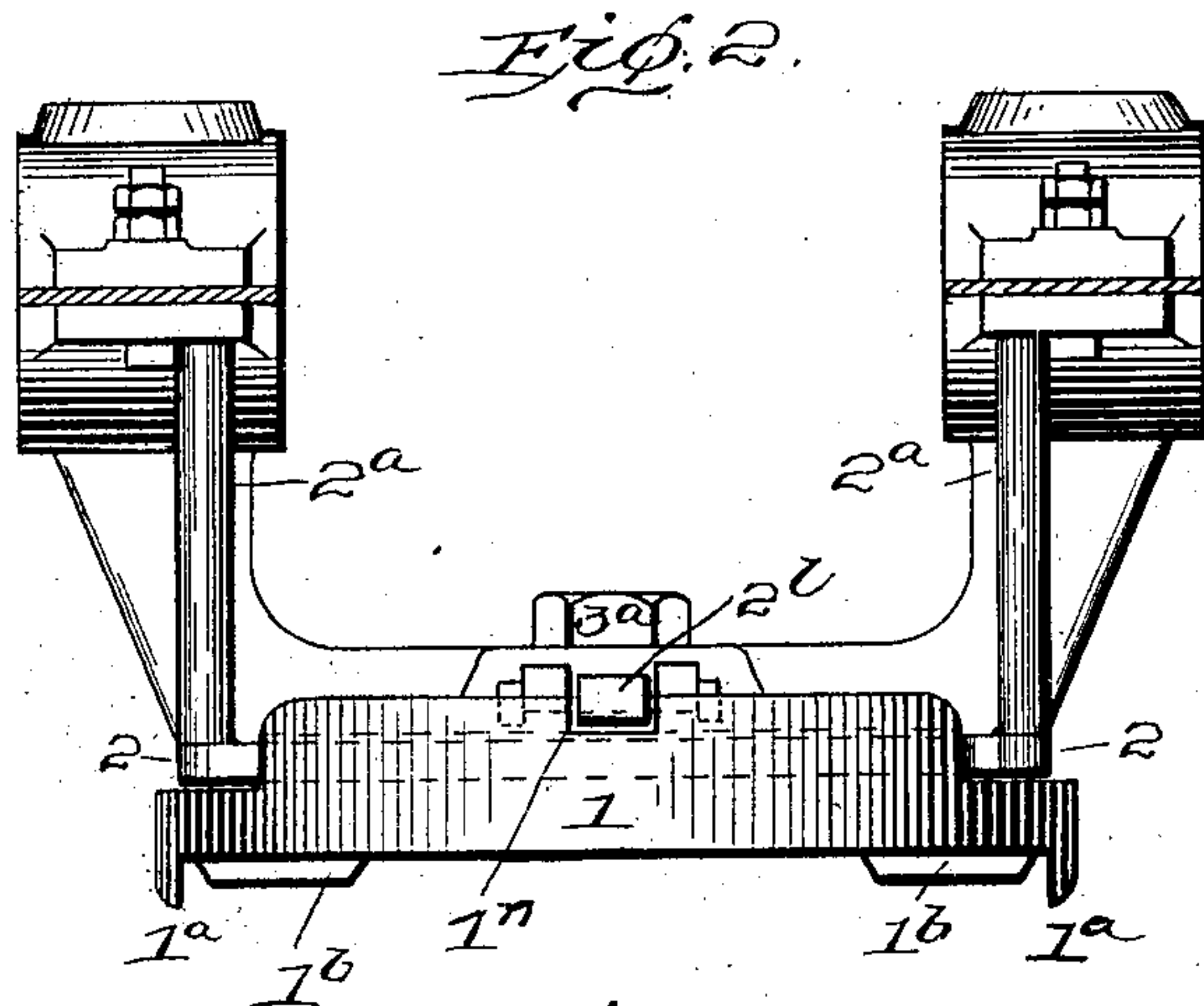
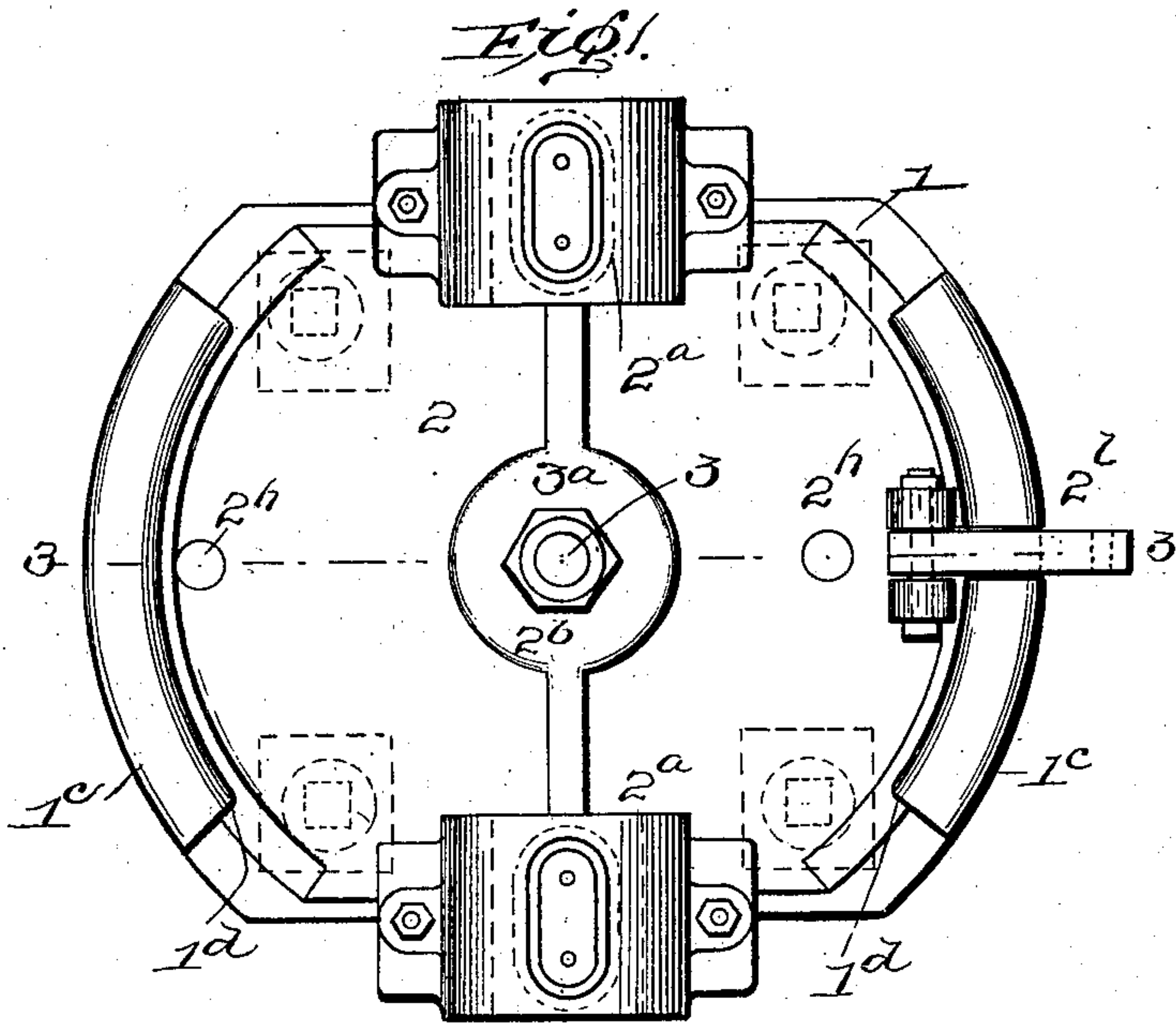
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L. C. SANDS, JR.

CENTER IRON FOR WALKING BEAMS AND SAMPSON POSTS.

APPLICATION FILED JULY 16, 1902.

NO MODEL.



Witnessed:

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UNITED STATES PATENT OFFICE.

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CENTER-IRON FOR WALKING-BEAMS AND SAMSON-POSTS.

SPECIFICATION forming part of Letters Patent No. 744,624, dated November 17, 1903.

Application filed July 16, 1902. Serial No. 115,832. (No model.)

To all whom it may concern:

Be it known that I, LOUIS C. SANDS, Jr., a citizen of the United States, residing at Pittsburgh, in the county of Allegheny, State of Pennsylvania, have invented certain new and useful Improvements in Center - Irons for Walking-Beams and Samson-Posts; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of center-irons embodying my invention. Fig. 2 is an elevation thereof; and Fig. 3 is a vertical section taken on the line 3 3, Fig. 1.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of the bearing-irons between a walking-beam and its samson-post, and has for its object the production of a simple and efficient journal for the walking-beam which will permit the work end of the walking-beam to be moved to and from any desired point to accommodate the work to be performed, a feature especially desirable in many classes of work—as, for instance, in sinking deep wells, where drilling and boring tools are alternately required. In this class of devices, owing to the more or less constant vibration of the walking-beam and the periodic jerk incident to spring of the tool-carrying cable, as well as the leverage at all times exerted on the bearing, stability, strength, and limited movement between the parts to avoid lost motion and wear are of primary importance, while facility of rotation is of secondary importance, as the rotation of the devices is occasional, and then only when relieved of the vibration of the beam. To meet these conditions, I construct my bearing of two plates or flat disk members having substantially continuous bearing one upon the other, a central journal or pivot-post and overlapping peripheral flanges, one of said plates provided with pillow-blocks for the journals of the walking-beam and the other of said plates constituting a cap for the samson-post, and such a construction embodies the main

features of my invention. In order that the disks constituting the rotary bearing may be readily separable and at the same time strong and simple in construction, I provide the base member, or that which constitutes the post-cap, with oppositely-disposed arc-shaped overhanging lips, and the upper member or table member I form of segmental shape and with the oppositely-disposed pillow-blocks adjacent to the chords of the segmental disk, whereby the parts may be readily united by first alining the pillow-blocks with the arc-shaped lips of the lower plate and then relatively rotating said plates or disks, and such a construction embodies a secondary feature of my invention.

There are other minor features of invention, all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings, 1 indicates the base member of the center-iron, which may constitute the cap of the samson-post and which is in the form of a flat plate or disk having at or adjacent to its periphery downwardly-projecting lugs or flanges 1^a and at intervals on its under surface projections 1^b, which engage the top of the samson-post to prevent the lateral displacement of said member or post-cap. This disk 1 may, if desired, have the form of the segment of a circle and may be secured to the top of the samson-post by lag-screws, as indicated in dotted lines, Fig. 1, or in any other suitable manner.

Upon the upper surface of the base member 1, at or adjacent to the periphery thereof, are oppositely-disposed arc-shaped flanges 1^c 1^c, terminating in inwardly-projecting lips 1^d, which overlap the table member or companion member 2 when the same is in position on the base member 1, the height of the flange 1^c or space beneath the lips 1^d thereof being preferably no greater than will accommodate and permit the rotation of the table member 2, so as to minimize the vibration of the member 2 and consequent lost motion and the wear arising therefrom.

Upon the upper surface of the base mem-

ber 1 and centrally thereof is the vertical projection or pivot-post 1^c, which is preferably hollow to permit the passage of the center-bolt 3, which adds strength and security to the connection between the members 1 and 2.

2 indicates the table member of the center-iron, which member is in the form of a flat disk having at its center and on its under surface a cup or cavity 2^b, corresponding with and for the reception of the pivot-post 1^c of the base member, said cup perforated for the passage of the center-bolt 3, which extends up through the base member 1. The table member 2 is of such thickness at its edge as will permit it to pass under the overhanging lips 1^d of the arc flanges 1^c, while the plate is throughout its under surface substantially in contact with the upper surface of the post-cap or base member 1 of the center-iron.

In order that the table member 2 of the center-iron may be readily applied to the base member or post-cap 1, said member 2 is preferably given the shape of a segment of a circle, and the pillow-blocks 2^a for the journals of the walking-beam are located adjacent to the chords thereof, so that the parts 1 and 2 may be readily interlocked by applying the table 2 to the post-cap 1, with the pillow-blocks 2^a 2^a adjacent to and alined with the arc-shaped fingers 1^c and lips 1^d, and then rotating the table member one quarter-revolution or until the periphery of the rotary table passes under the overhanging lips 1^d of the post-cap or base member 1 and the parts assume the position shown in Fig. 1 of the drawings, which is the position they occupy when the walking-beam is operating.

It will be noted that when the members 1 and 2 of the center-iron are in this position (see cross-section, Fig. 3) the table and the cap-plate contact throughout and the overhanging lips 1^d of the flanges 1^c so bind vertically on the table in the plane of the walking-beam as to prevent any material vibration of the member 2 in response to the action of the walking-beam, while the pivot-post 1^c prevents any lateral thrust, thus reducing the lost motion and consequent wear to a minimum.

In order to prevent the relative rotary movement of the members 1 and 2, there may be provided in each of said members one or more sets of alined or registering pin-holes 1^h 2^h, through which and into the samson-post may be passed suitable pins when the parts are in the position shown in Figs. 1 and 3 of the drawings, and in lieu thereof or for separate use, if desired, the table member 2 of the center-iron may be provided with a pivoted latch 2', which engages a keeper-notch 1ⁿ in the arc-shaped flange 1^c of the base member or post-cap 1.

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

1. A center-iron for walking-beams and samson-posts, comprising a post-cap or base member and a table or rotary member, said members being of disk form and in contact throughout, and said members being provided with overlapping peripheral flanges, and pillow-blocks for the journals of the walking-beam, substantially as and for the purposes specified.

2. A center-iron for walking-beams and samson-posts, comprising a post-cap or base member and a table or rotary member, said members being of disk form and in contact throughout, and said members being provided with a central pivot-post, peripheral overlapping flanges, and pillow-blocks for the journals of a walking-beam, substantially as and for the purposes specified.

3. A center-iron for walking-beams and samson-posts, comprising a post-cap or base member and a table or rotary member, said members being of disk form and in contact throughout, one of said members having the form of the segment of a circle and having pillow-blocks at or adjacent to the chords thereof, and one of said members having peripheral flanges which overlap the other of said members, substantially as and for the purposes specified.

4. A center-iron for walking-beams and samson-posts, comprising two disk members which are in contact throughout, one of said members having the form of a segment of a circle and provided at or adjacent to its chords with pillow-blocks for the journals of a walking-beam, and the other of said members provided at its center with a pivot-post and at its periphery with flanges which overlap the periphery of the first-named member, substantially as and for the purposes specified.

5. A center-iron for walking-beams and samson-posts, comprising two separable disk members one of which is provided with a central pivot-post and oppositely-disposed overlapping arc-shaped flanges, and the other of which is provided with oppositely-disposed pillow-blocks for the journals of a walking-beam, said disk members being in contact throughout, and means for locking the said members against relative rotation, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 11th day of July, 1902.

LOUIS C. SANDS, JR.

Witnesses:

E. H. GOODWIN,
JOHN EATON.