

(No Model.)

C. E. GEE.
SELF LUBRICATING BEARING.

No. 308,838.

Patented Dec. 2, 1884.

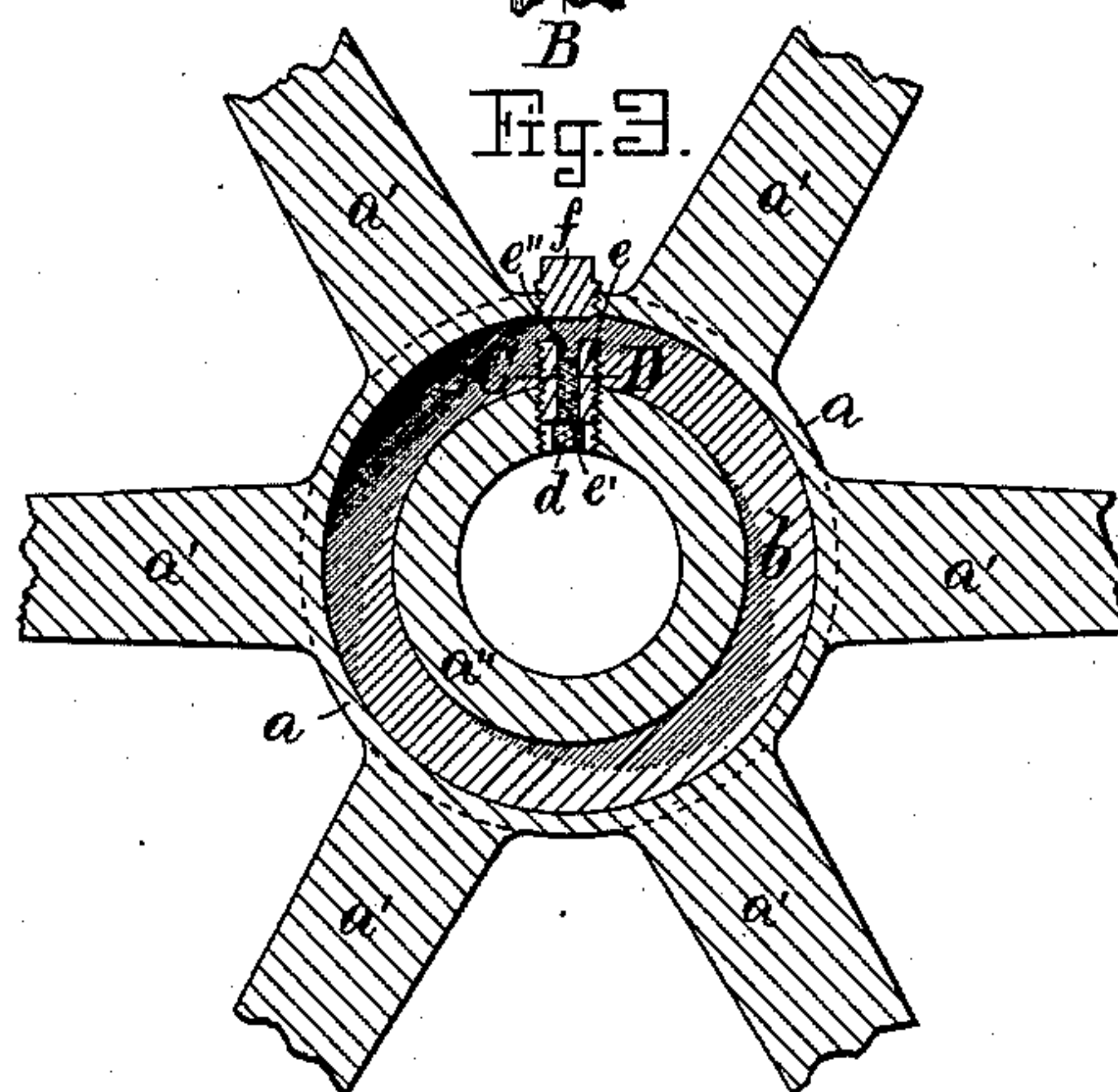
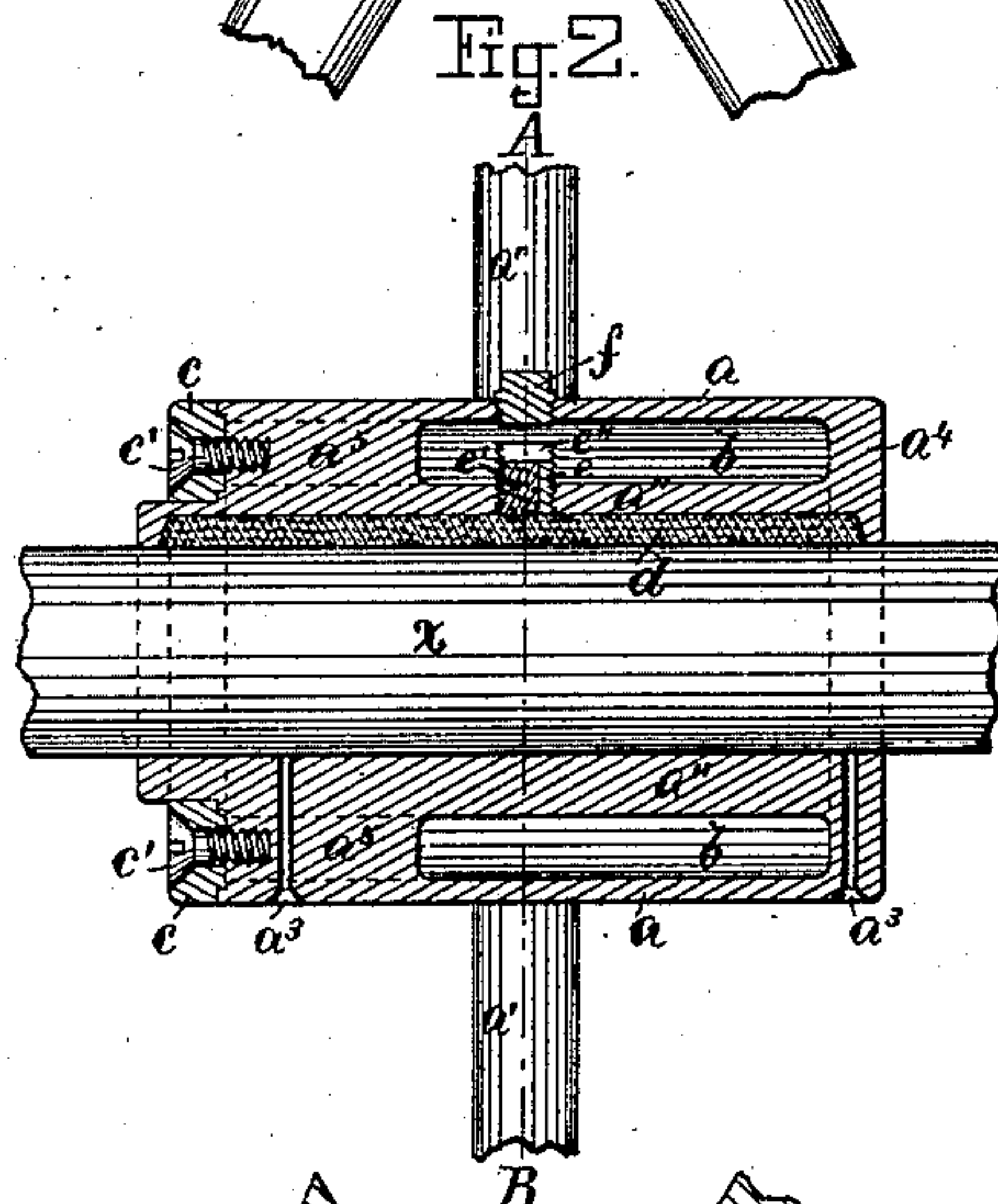
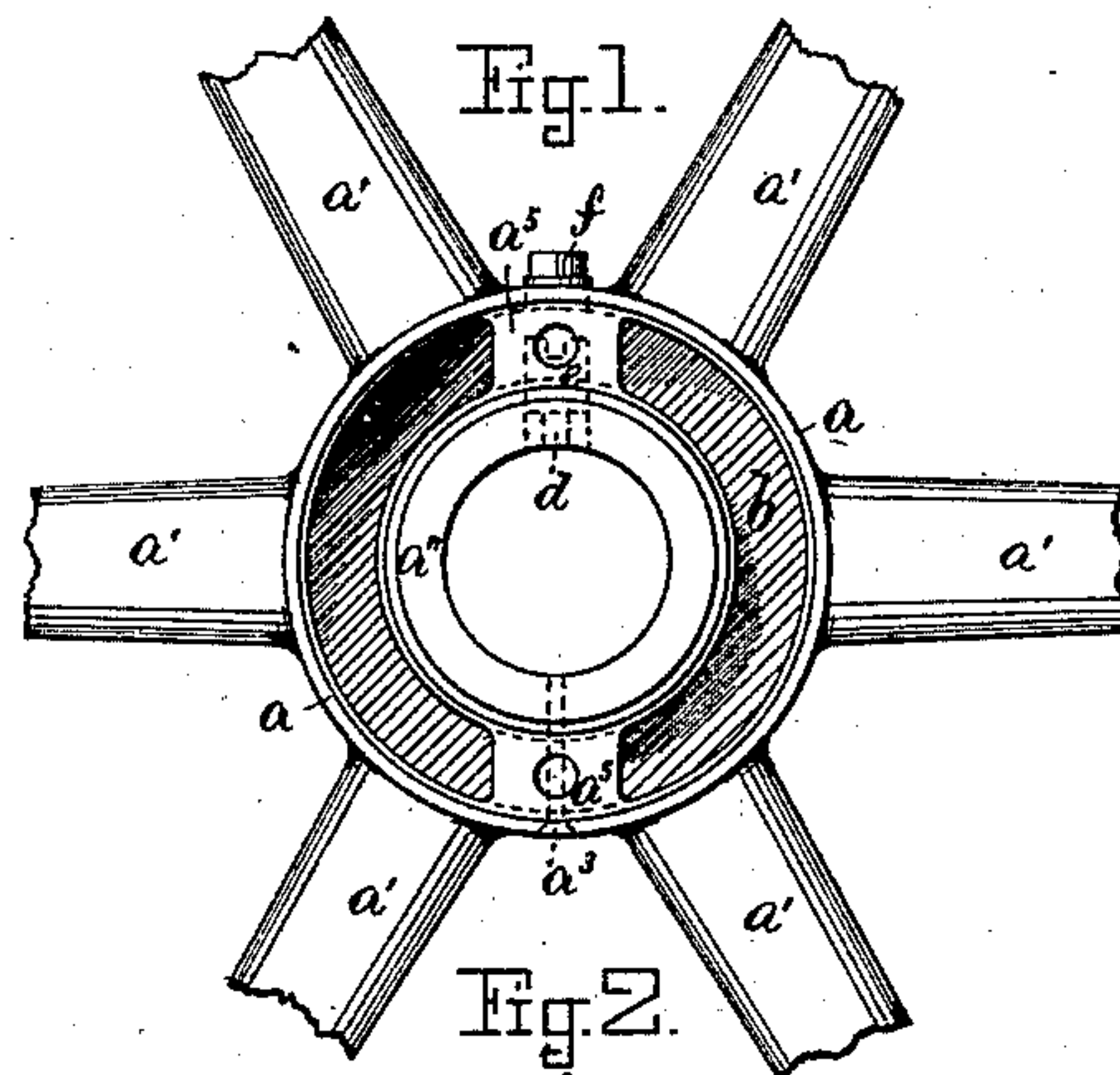


Fig. 4.



Witnesses

Henry Chadburn.
John H. Foster.

Inventor

Charles E. Gee.
by Wm. Andren, atty.

UNITED STATES PATENT OFFICE.

CHARLES E. GEE, OF LOWELL, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO WILSON W. CAREY, OF SAME PLACE.

SELF-LUBRICATING BEARING.

SPECIFICATION forming part of Letters Patent No. 308,838, dated December 2, 1884.

Application filed April 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. GEE, a citizen of the United States, residing at Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Self-Lubricating Bearings; and I do hereby declare that the same are fully described in the following specification and illustrated in the accompanying drawings.

This invention relates to improvements in self-lubricating bearings particularly designed for hubs for loose pulleys, although the invention is equally well adapted, with a slight modification, for stationary bearings.

The invention is carried out as follows, reference being had to the accompanying drawings, where—

Figure 1 represents an end view of the improved bearing, showing its end cap as being removed. Fig. 2 represents a central longitudinal section. Fig. 3 represents a cross-section on the line A B shown in Fig. 2, and Fig. 4 represents a cross-section of the adjustable feed-screw on the line C D shown in Fig. 3.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

a is the hollow hub, and a' a' are the arms of the pulley, cast in one piece with said hollow hub, as shown. In one piece with the hollow hub a is cast the bearing-sleeve, a'' , adapted to run loosely on the shaft x , as seen in Fig. 2, and between the outer and inner shells, a and a'' , is left the annular oil-chamber b , adapted to contain the lubricant.

f is a removable screw-plug screwed through a corresponding perforation in shell a , through which perforation the chamber b is filled with the lubricant, after which the plug f is screwed into said perforation to prevent the escape of the lubricant at this place.

The chamber b is closed in one end by means of the wall a^4 , cast in one piece with shells a a'' , as shown in Fig. 2; but in its other end it is left open to permit the core used in casting the improved bearing to be removed, the said shells a a'' being only connected by means of two or more braces, a^5 a^5 , cast in one piece

with said shells, as shown in Figs. 1 and 2. The said open end of the bearing is closed by means of the annular ring c , secured by means of screws c' to the braces a^5 a^5 ; or, if so desired, the ring c may be made in the form of a nut and screwed onto the projecting end of sleeve a'' without departing from the essence of my invention.

Centrally below the screw-plug f is located the adjustable feed-screw e , that is screwed through a corresponding screw-threaded perforation in the bearing-sleeve a'' , as shown in Figs. 2 and 3, and said screw e has a transverse slot, e'' , in its upper end, by means of which and an ordinary screw-driver said feed-screw e can be turned around in its bearing in sleeve a'' , so as to regulate the amount of oil to be automatically fed from chamber b to the axle x . The feed-screw e has a vertical slot, or, if so desired, a central longitudinal perforation, in which is placed a wick or porous absorbent, e' , (shown in Figs. 2, 3, and 4,) through which the oil is slowly permitted to pass from chamber b to the longitudinal wick or absorbent d , that is laid in a longitudinal groove or recess on the inside of sleeve a'' , as shown in Figs. 2 and 3, which wick d lies in contact with the axle x and transfers the oil to its surface as the pulley rotates. By screwing the feed-screw e down upon the wick d the latter, as well as wick e' , is correspondingly compressed and the oil-feed to the shaft proportionately reduced, and vice versa, according to the amount of lubrication desired and the nature of the lubricant that is used.

a^3 a^3 are ordinary oil-holes through the solid portions a^4 and a^5 of the hub, through which the axle x may be lubricated in the usual manner, if so desired; but such oil-holes are not essential and may be dispensed with.

By the construction of this my improved self-lubricating bearing, as shown and described, I produce a very strong, durable, and simple automatic lubricating device, that is easily filled by the lubricant, and by means of the slotted or perforated feed-screw e , its wicking e' , and longitudinal wicking d on the grooved inside of sleeve a'' the feed of the oil can be regulated and adjusted with great nicety.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

5 The improved self-lubricating bearing cast in one single piece and composed of outer shell, *a*, and bearing-sleeve *a'*, with annular oil-chamber *b* between them, combined with screw-plug *f*, the adjustable feed-screw *e*, with its wick *e'*, and the longitudinal wick *d* in the

grooved sleeve *a''*, and cap or nut *c*, as and for the purpose set forth.

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

CHARLES E. GEE.

Witnesses:

C. C. HUTCHINSON,
WM. F. HILLS.