

No. 774,652.

PATENTED NOV. 8, 1904.

E. DENEGRÉ.
DUST GUARD.

APPLICATION FILED JAN. 8, 1904.

NO MODEL.

Fig. 1.

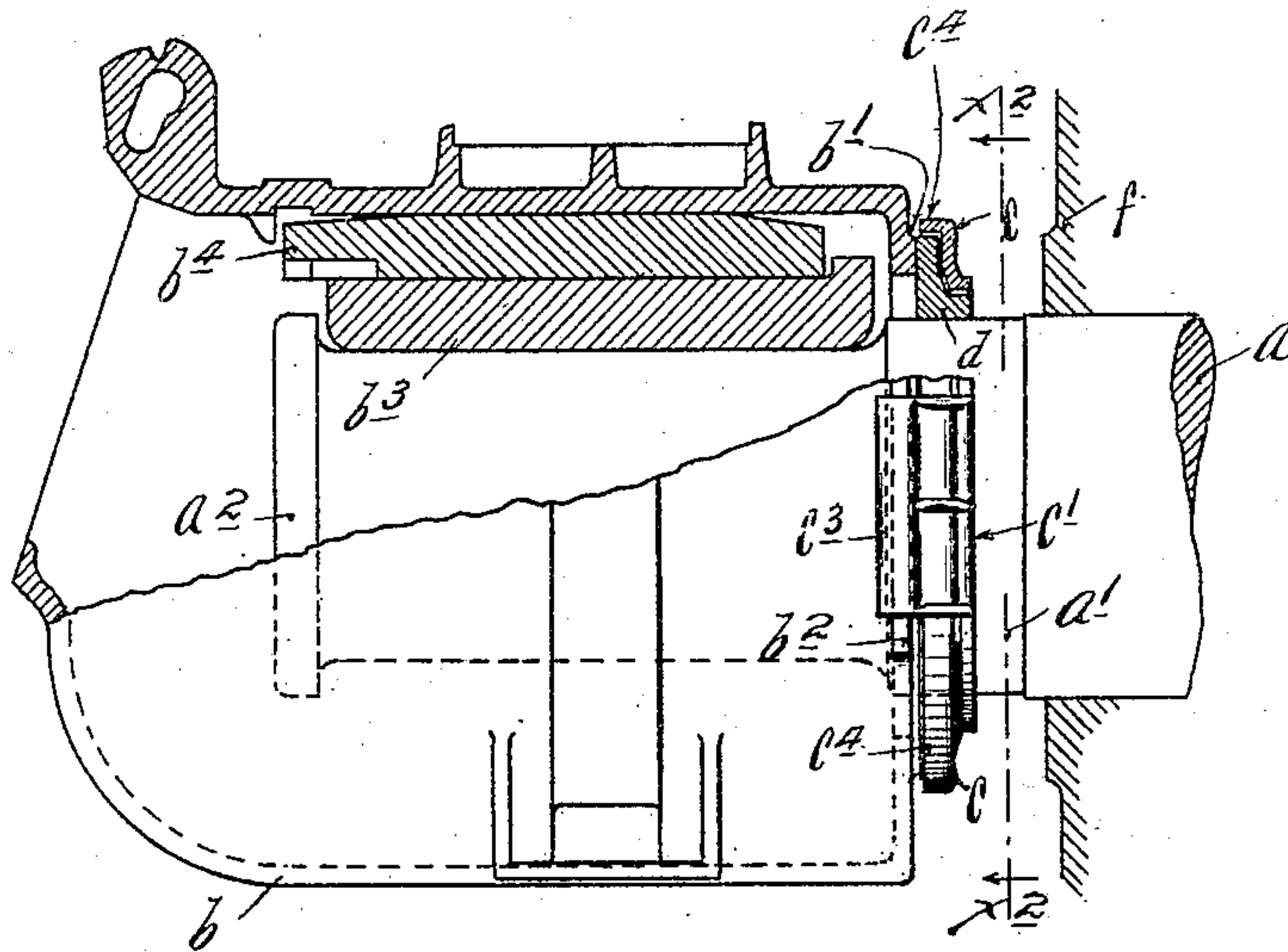


Fig. 2.

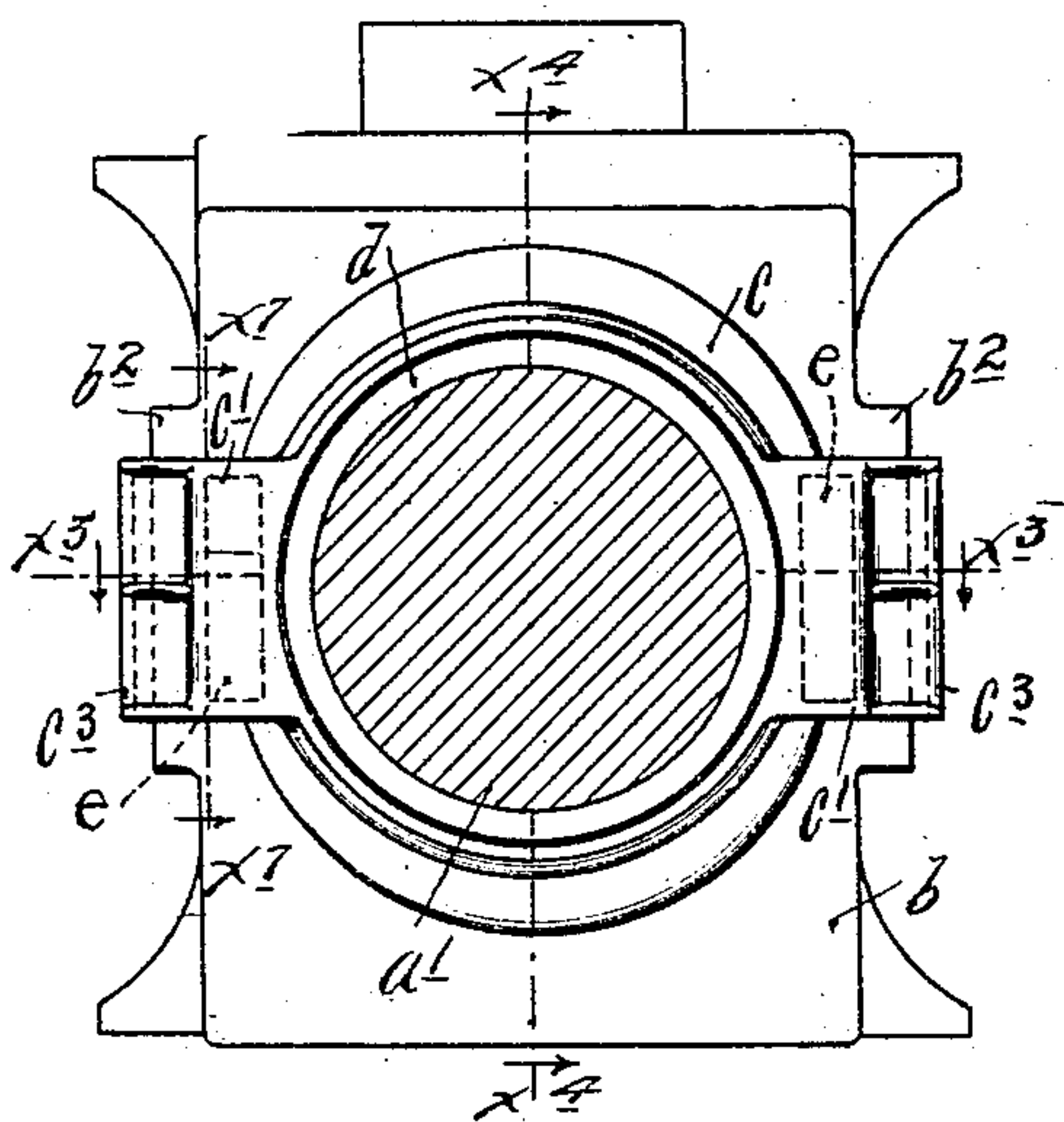


Fig. 3.

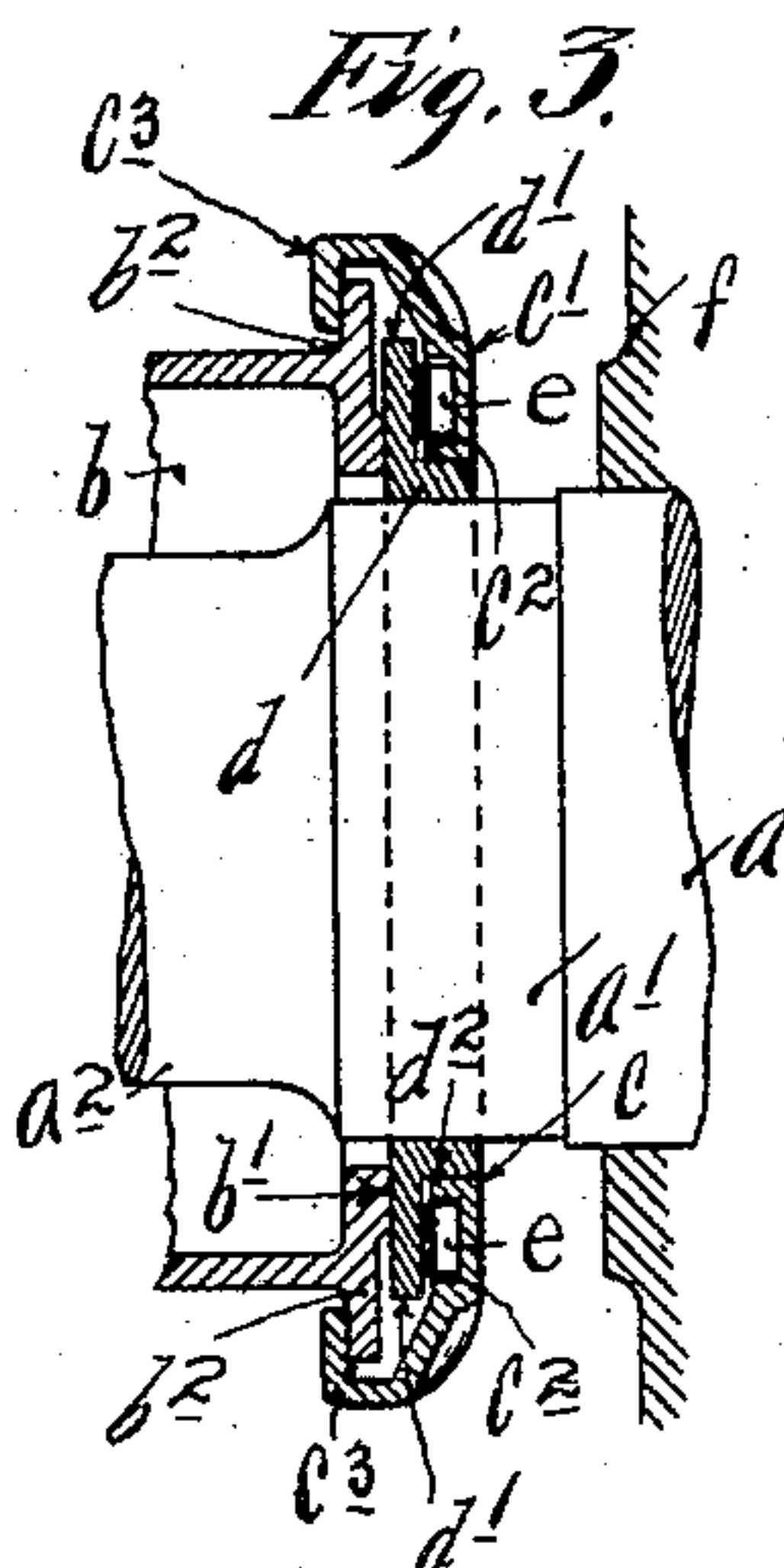


Fig. 4.

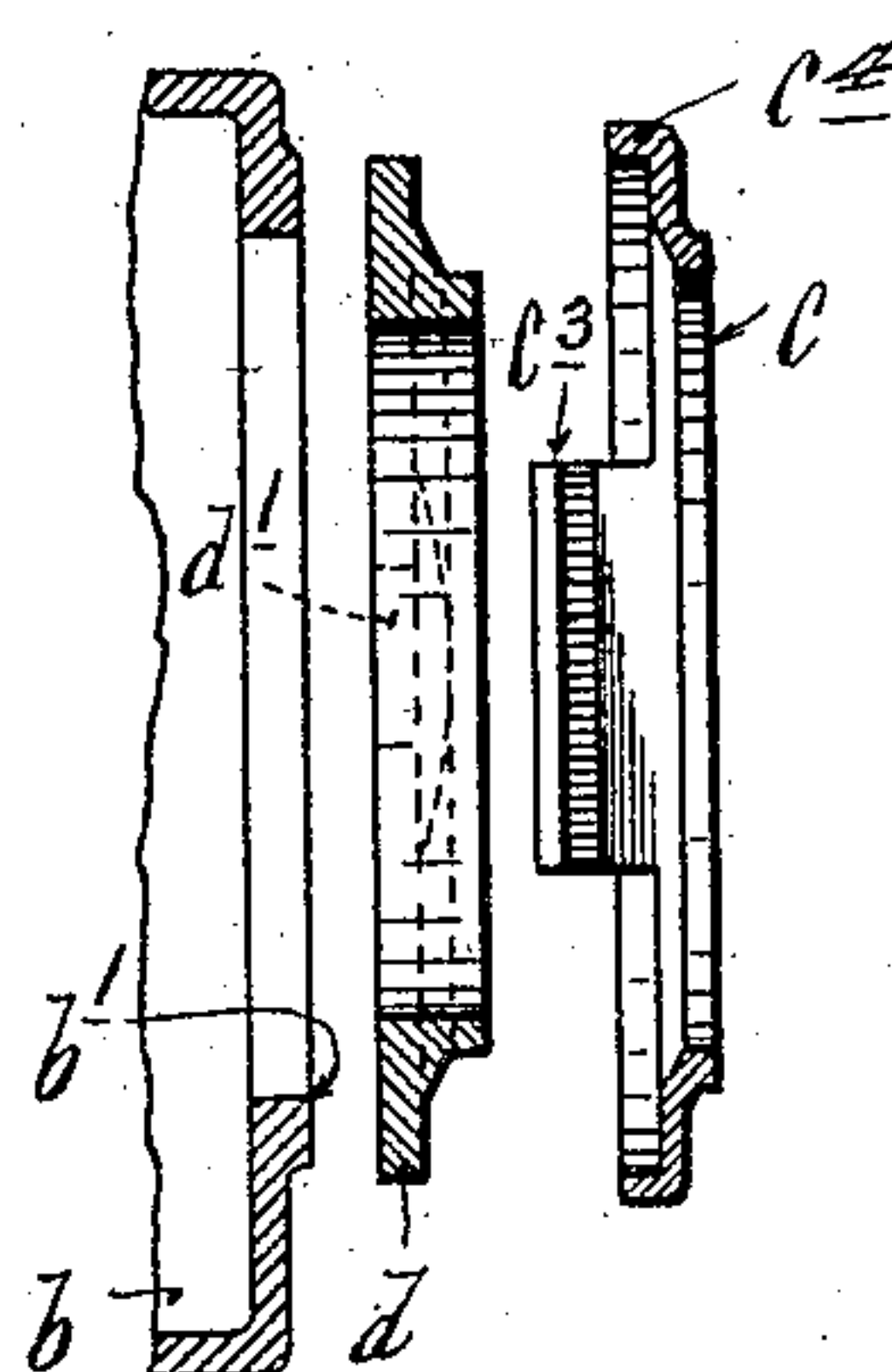


Fig. 5.

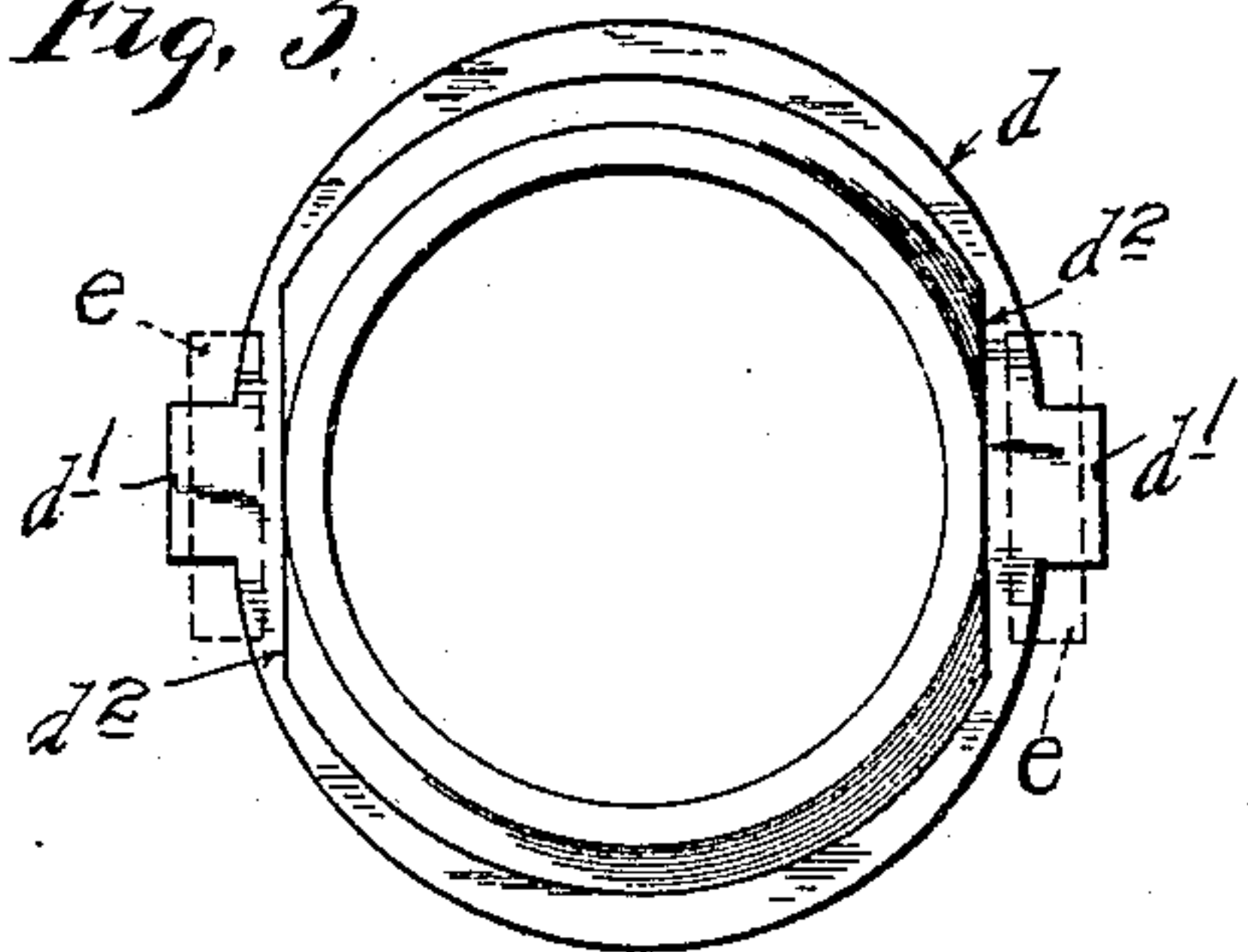


Fig. 6.

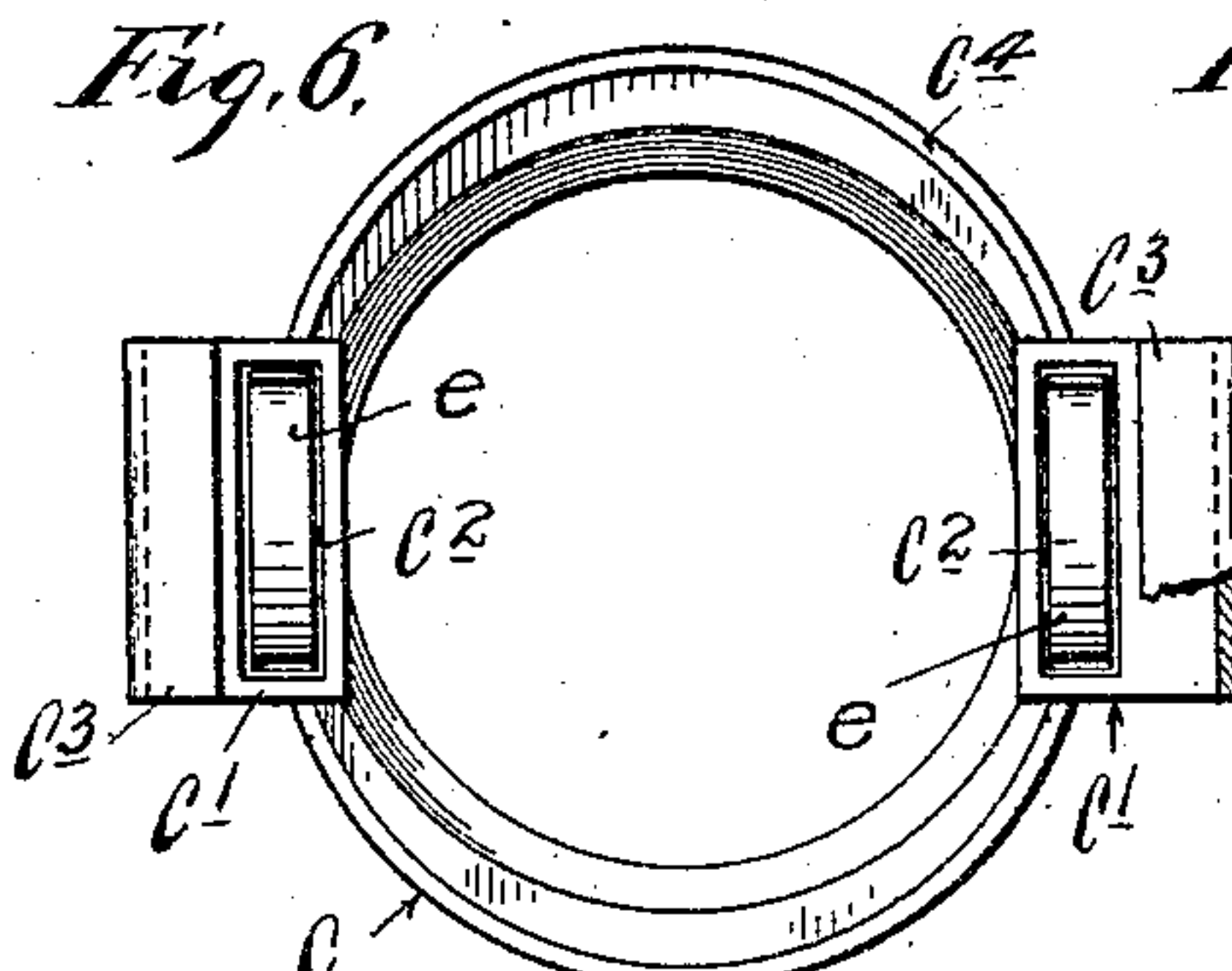
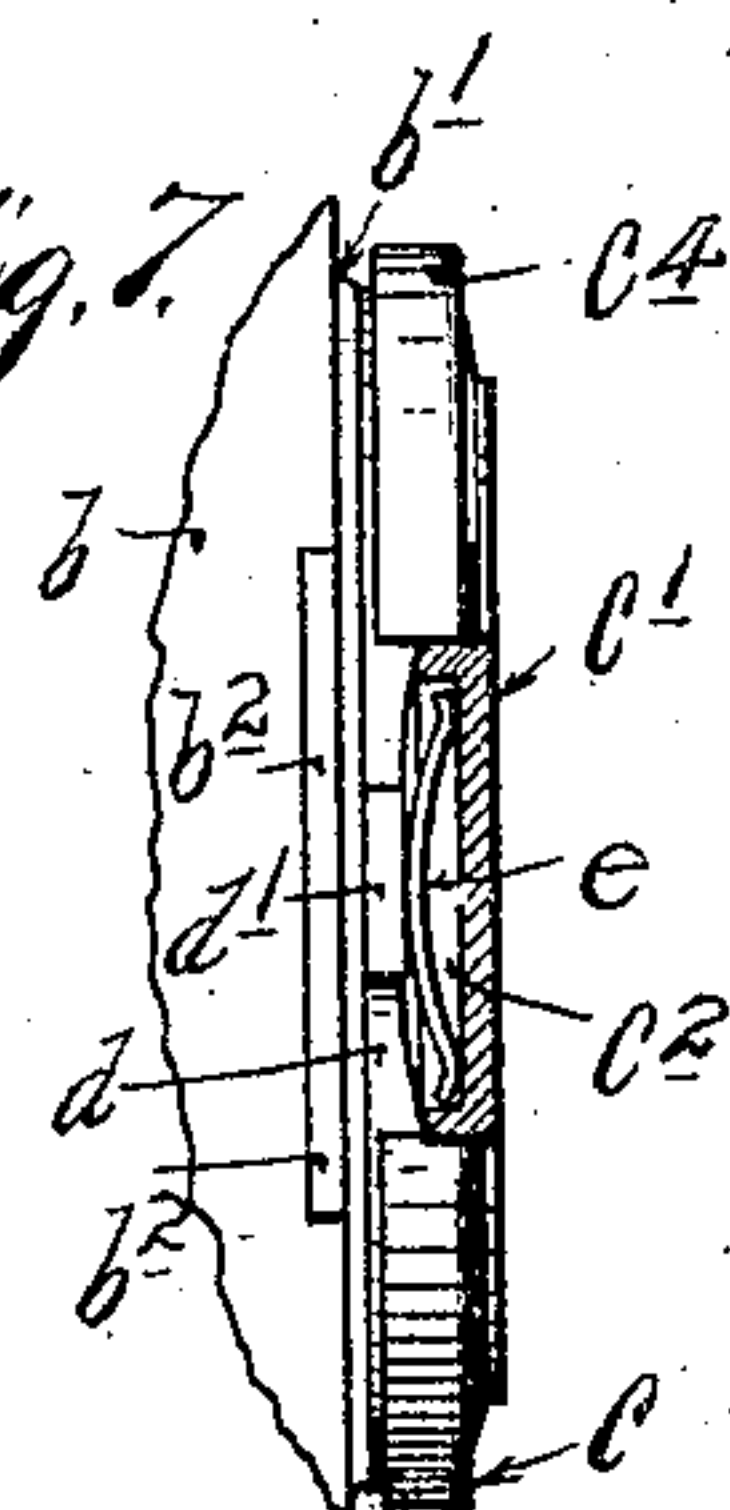


Fig. 7.



Witnesses,

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UNITED STATES PATENT OFFICE.

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DUST-GUARD.

SPECIFICATION forming part of Letters Patent No. 774,652, dated November 8, 1904.

Application filed January 8, 1904. Serial No. 188,157. (No model.)

To all whom it may concern:

Be it known that I, EDWARD DENEGRÉ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dust-Guards; and I do hereby 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 appertains to make and use the same.

My invention has for its object to provide an improved dust-guard for car-axle journal-boxes; and to this end the invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like notations refer to like parts throughout the several views. In said drawings, Figure 1 is a view, chiefly in elevation, but partly in section, showing my improved dust-guard in working position, some parts being removed and others broken away. Fig. 2 is a vertical cross-section on the line $x^2 x^2$ of Fig. 1. Fig. 3 is a horizontal section on the line $x^3 x^3$ of Fig. 2, some parts being broken away. Fig. 4 is a vertical section on the line $x^4 x^4$ of Fig. 2, showing the packing-ring and guard-plate detached from the box and pulled apart from each other. Fig. 5 is a view in elevation, showing the packing-ring detached, the spring positions being shown in dotted lines. Fig. 6 is an inside elevation showing the guard-plate detached with the springs in their pocket and a portion of one of the hook-lugs broken away, and Fig. 7 is a detail in vertical section on the line $x^7 x^7$ of Fig. 2.

The reference-letters a , a' , and a^2 represent the car-axle, the part a being the body portion, the part a^2 the journal, and a' the intermediate portion subject to the dust-guard.

The box b may be of the ordinary or any suitable construction and is provided with a raised boss b' , surrounding the axle-passage at the rear end of the box, and which boss is machined or faced to afford the surface to be packed. Said box b is also provided with lock-flanges b^2 at the sides of its rear end.

The reference-letters b^3 and b^4 represent, respectively, the brass and the key applied in the usual way.

The guard-plate is integral and is made up of the main or body portion c , lateral extensions or ear-lugs c' , provided with spring-pockets c^2 on their inner profile faces, and which ear-lugs c' have also formed integral therewith hook-lugs c^3 for engagement with the lock-flanges b^2 of the box. The body portion of the guard-plate is provided with the customary opening or axle-passage and with an intumed peripheral flange c^4 , adapted to embrace or encircle the packing-ring d , and is of proper shape in cross-section to receive and seat the said packing-ring.

The packing-ring d is preferably composed of gray iron, practice having demonstrated that to be the best material for the purpose, but may of course be composed of any other suitable material. Said packing-ring d is provided with lateral extensions or ear-lugs d' , adapted to underlie the lateral extensions or ear-lugs c' of the guard-plate when the parts are in working position. The hub of the packing-ring d is cut away directly adjacent to the ear-lugs d' , as shown at d^2 , to afford clearance for the proper application of the springs e . Said springs e are half elliptic in form, adapted to rest in the pockets c^2 , provided in the ear-lugs c' of the guard-plate, with the bow portions of the springs bearing against the ear-lugs d' of the packing-ring when the parts are in working position, as best shown in Figs. 2, 3, and 7. The packing-ring is interposed between the guard-plate and the box, the inner profile face thereof being machined or planed and adapted to pack the boss b' of the box. The hub portion of the packing-ring snugly fits the axle and is adapted to pack the same. The packing-ring is integral or solid.

In applying the dust-guard in working position the springs e are compressed under the act of making the hook-flanges c^3 of the guard-plate engage with the lock-flanges b^2 of the box and thereafter react between the guard-plate and the packing-ring, thus serving yieldingly to clamp the dust-guard to the box and

to hold the packing-ring with its face tightly hugging the face of the box-boss b' . The tension of strength of the springs e is such that when the parts are in working position
 5 the dust-guard will be carried by the box, thus relieving the axle from any of the load thereof and avoiding the wear and tear on the axle which would otherwise be produced.

It is of course obvious that the dust-guard
 10 is free to move with the axle in respect to the box under the motions peculiar to the service, while at all times the packing-ring will be yieldingly held in its proper packing position.

Actual service has demonstrated the efficiency of the dust-guard above described for
 15 the purposes had in view.

With the dust-guard constructed as above described it must be obvious that no parts are exposed where they can be easily tampered
 20 with, displaced, or lost and that the springs are securely housed and carried with the guard-plate and ring in all the movements incidental to the service without sliding wear and tear on the springs. Hence the tension of the
 25 springs is constant and they will last for a longer time.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with a journal-box, of
 30 a dust-guard comprising a guard-plate having

means for engagement with the box and provided with spring-pockets, a packing-ring interposed between the guard-plate and the box, and springs seated in said pockets and reacting between the guard-plate and the packing-
 35 ring and serving yieldingly to clamp the dust-guard to the box, and to hold the packing-ring in packing position, and always moving with the guard-plate thereby avoiding sliding friction on the springs, substantially as de-
 40 scribed.

2. The combination with a journal-box provided with lock-flanges, of the guard-plate c having the ear-lugs c' , with spring-pockets c^2 , and provided with the hook-lugs c^3 for en-
 45 gagement with said box-flanges, the packing-ring d , provided with the ear-lugs d' , interposed between the guard-plate and the box, and the springs e seated in said pockets c^2 of the guard-plate and reacting between the
 50 guard-plate and the lugs d' of the packing-ring, when the parts are in working position, all for coöperation, substantially as described.

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

EDWARD DENEGRÉ.

Witnesses:

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 JAMES D. DENEGRÉ.