

No. 610,341.

Patented Sept. 6, 1898.

G. G. BROWN.
END BEARING.

(Application filed Dec. 3, 1897.)

(No Model.)

Fig. 1.

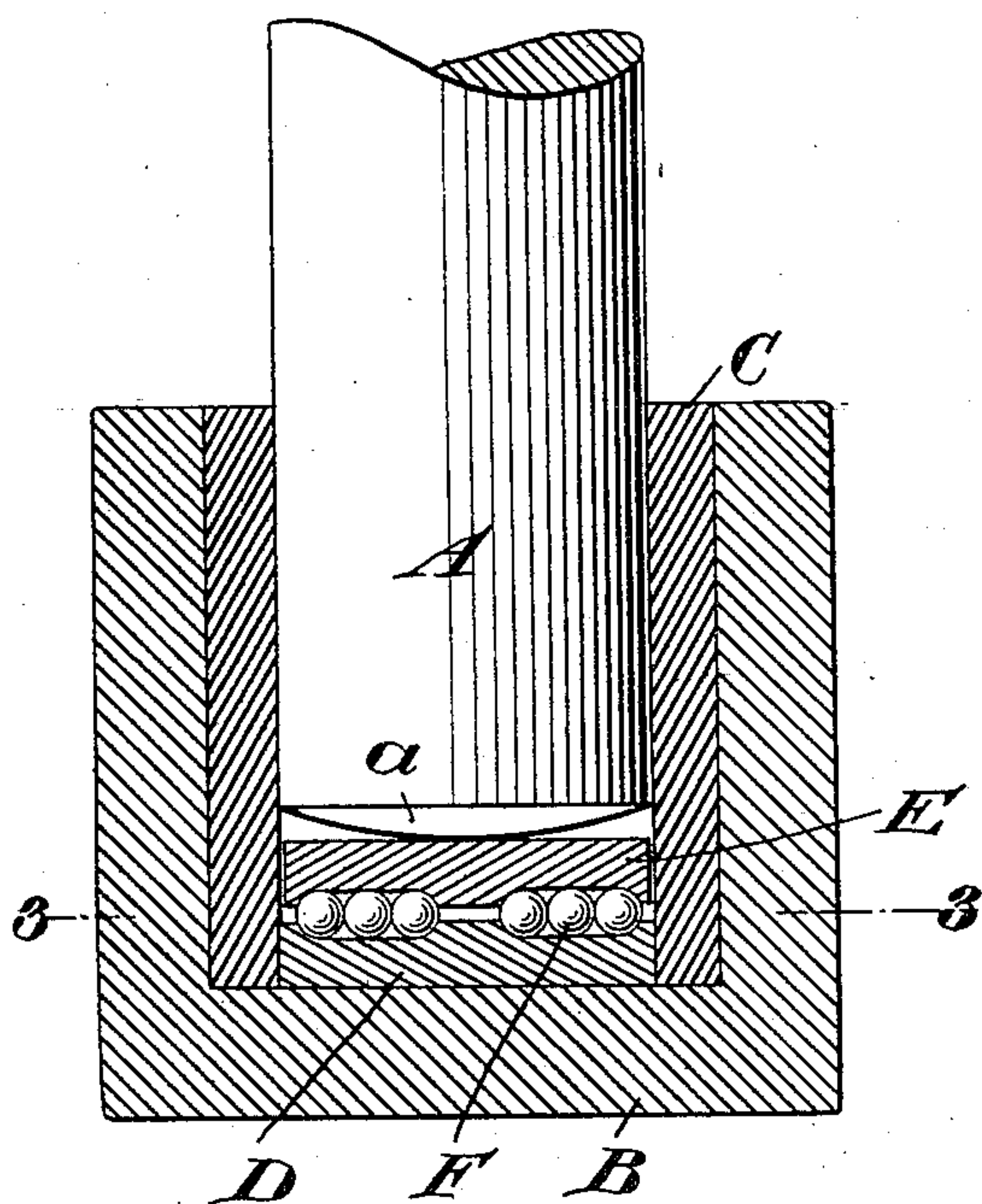


Fig. 2.

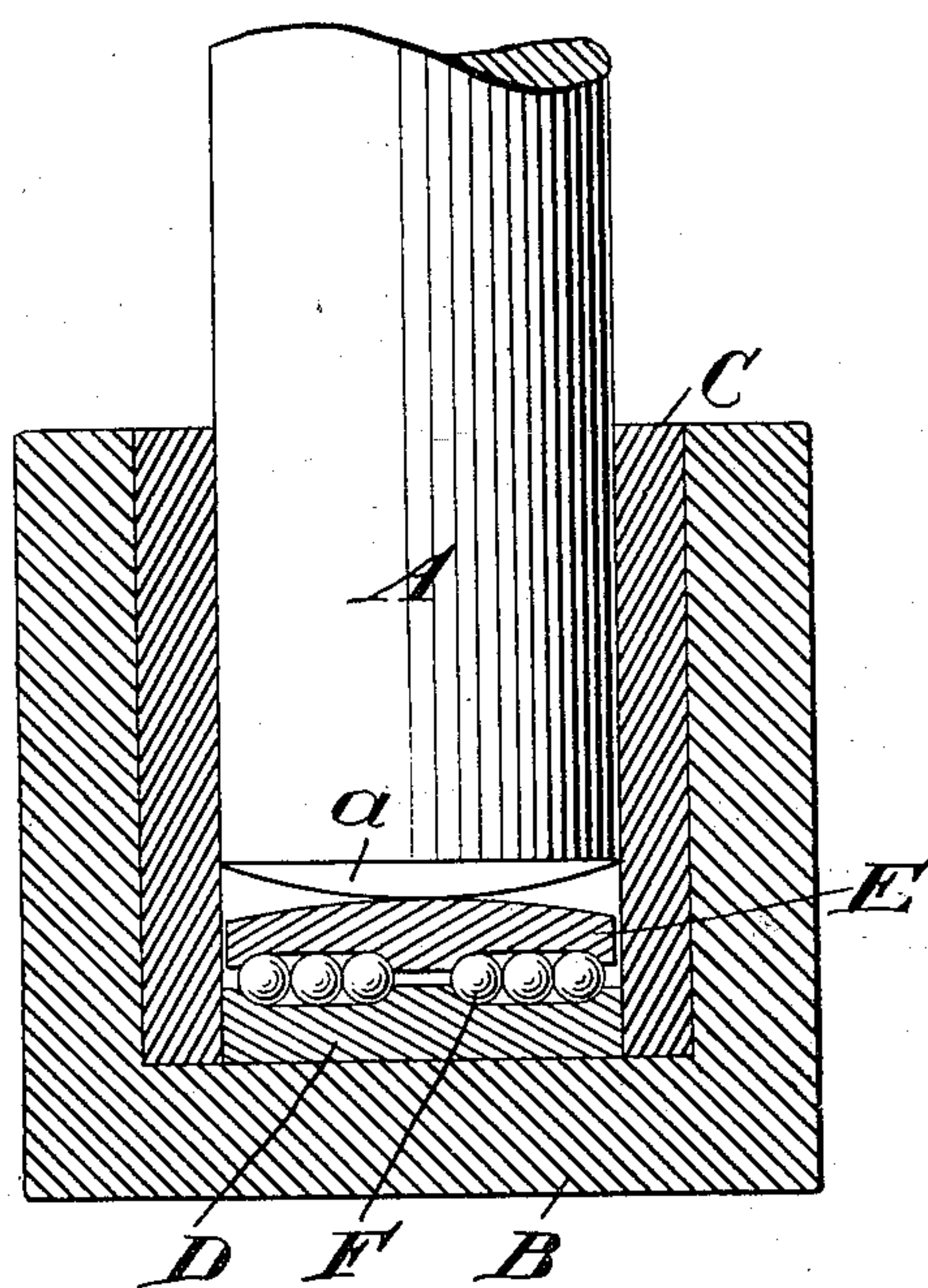
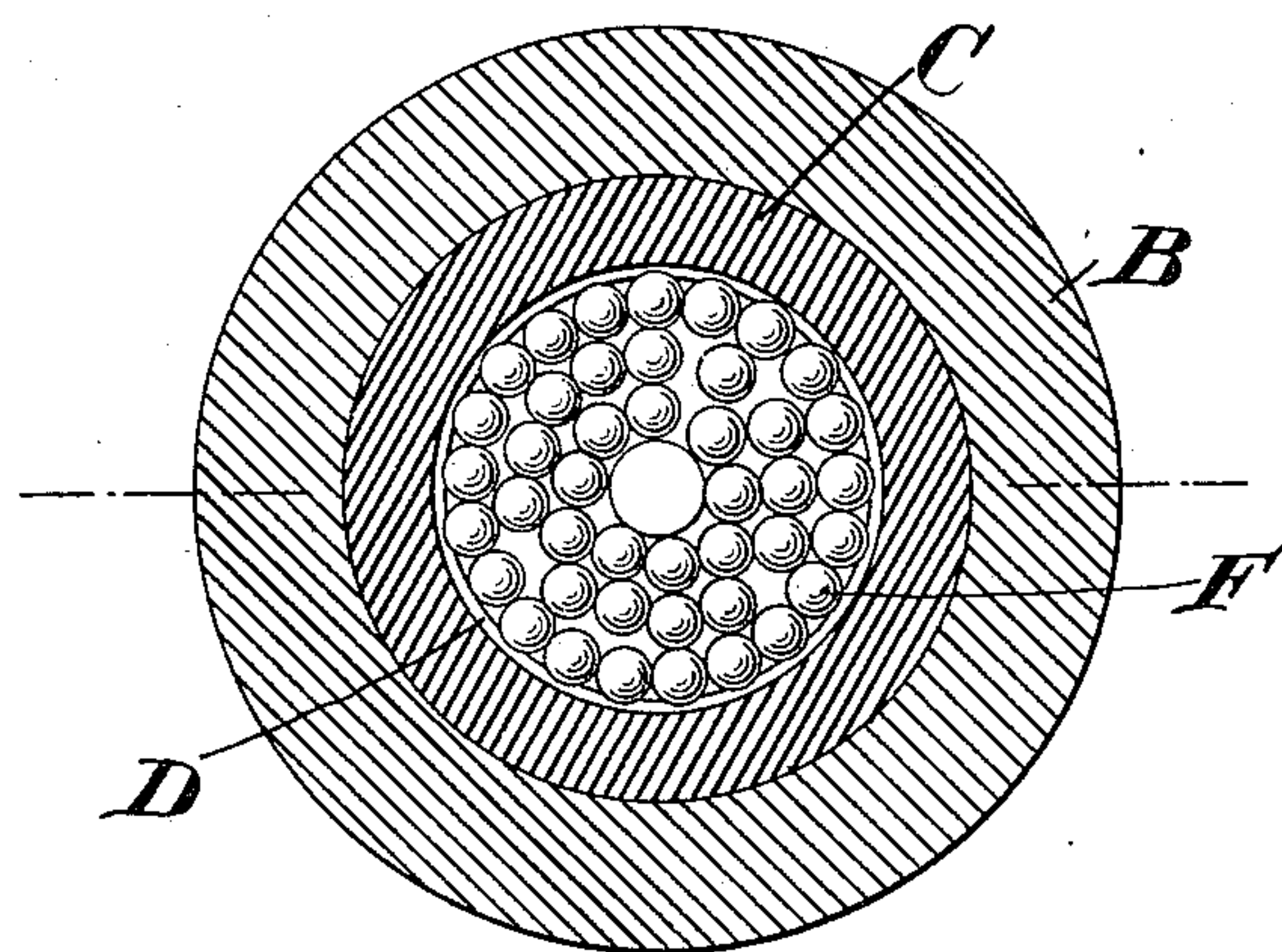


Fig. 3.



Witnesses:
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END-BEARING.

SPECIFICATION forming part of Letters Patent No. 610,341, dated September 6, 1898.

Application filed December 3, 1897. Serial No. 660,599. (No model.)

To all whom it may concern:

Be it known that I, GOVEURNEER G. BROWN, of New York, (Brooklyn,) in the county of Kings and State of New York, have invented
5 a new and useful Improvement in End-Bearings, of which the following is a specification.

My invention relates to a new and useful improvement in end-bearings for upright shafts, by means of which the shaft may be
10 supported with a minimum amount of friction and wear resulting therefrom.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

15 Figure 1 represents a vertical central section through one form of my improved bearing, representing the lower end of an upright shaft in its position within the bearing. Fig. 2 is a similar view representing a modified
20 form of top plate, and Fig. 3 is a horizontal section through the bearing in the plane of the line 3 3 of Fig. 1.

The upright shaft is represented herein by A, its lower end preferably having a convex
25 form, as shown at *a*. The bearing in which the said shaft is mounted to rotate comprises a bracket B, of cup shape, within the bore of which is located a sleeve C, of hollow cylindrical form, which sleeve may be made
30 of any suitable material—such, for instance, as brass. This sleeve is adapted to receive the lower portion of the shaft A therein with an easy rotating fit. Upon the base of the bracket B, within the sleeve C, is located a
35 bottom plate D, of some suitable hard material. Above this plate D is located a top plate E, of some suitable material, the said plates being preferably made of hardened steel. Between the two plates and serving to space
40 them apart there is located a plurality of antifriction-balls F. The end *a* of the upright shaft A rests upon this top plate E, which top plate in turn rests upon the said antifriction-balls F. The top plate E is permitted a free

rotary movement within the sleeve C, and the
45 balls F are preferably retained in their position by dishing the adjacent faces of the plates E and D.

The central portions of the two plates are preferably not dished, thereby preventing the
50 liability of one of the balls F becoming centered between the two plates and receiving thereby an uneven amount of wear relative to the other balls. The space between the
55 two plates is preferably as fully filled with these antifriction-balls as can be inserted in a single plane.

In the form shown in Fig. 1 the top plate E is provided with a flat upper face, while in
60 the form shown in Fig. 2 the said plate is provided with a convex upper face.

The shaft when mounted in the above manner rotates normally upon the top plate E, its
65 only point of bearing being at the center of the convex end of the said shaft. When, however, any undue weight or strain is placed upon the said shaft, it will cause the plate E to rotate upon the antifriction-balls F, there-
70 by relieving the shaft A of all undue frictional strain.

What I claim is—

In combination, an antifriction-bearing for upright shafts comprising a suitable bracket,
75 top and bottom bearing-plates located therein and a plurality of antifriction-balls interposed between the said plates, and an upright shaft entering said bracket and resting upon the top bearing-plate, its only point of bearing
80 being at the center of its lower end, whereby the shaft rotates normally on the top plate and under undue weight or strain will cause the top plate to rotate on the antifriction-balls, substantially as set forth.

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Witnesses:

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