

(No Model.)

E. W. HAVILAND.
ROLLER BEARING.

No. 602,749.

Patented Apr. 19, 1898.

Fig. 1.

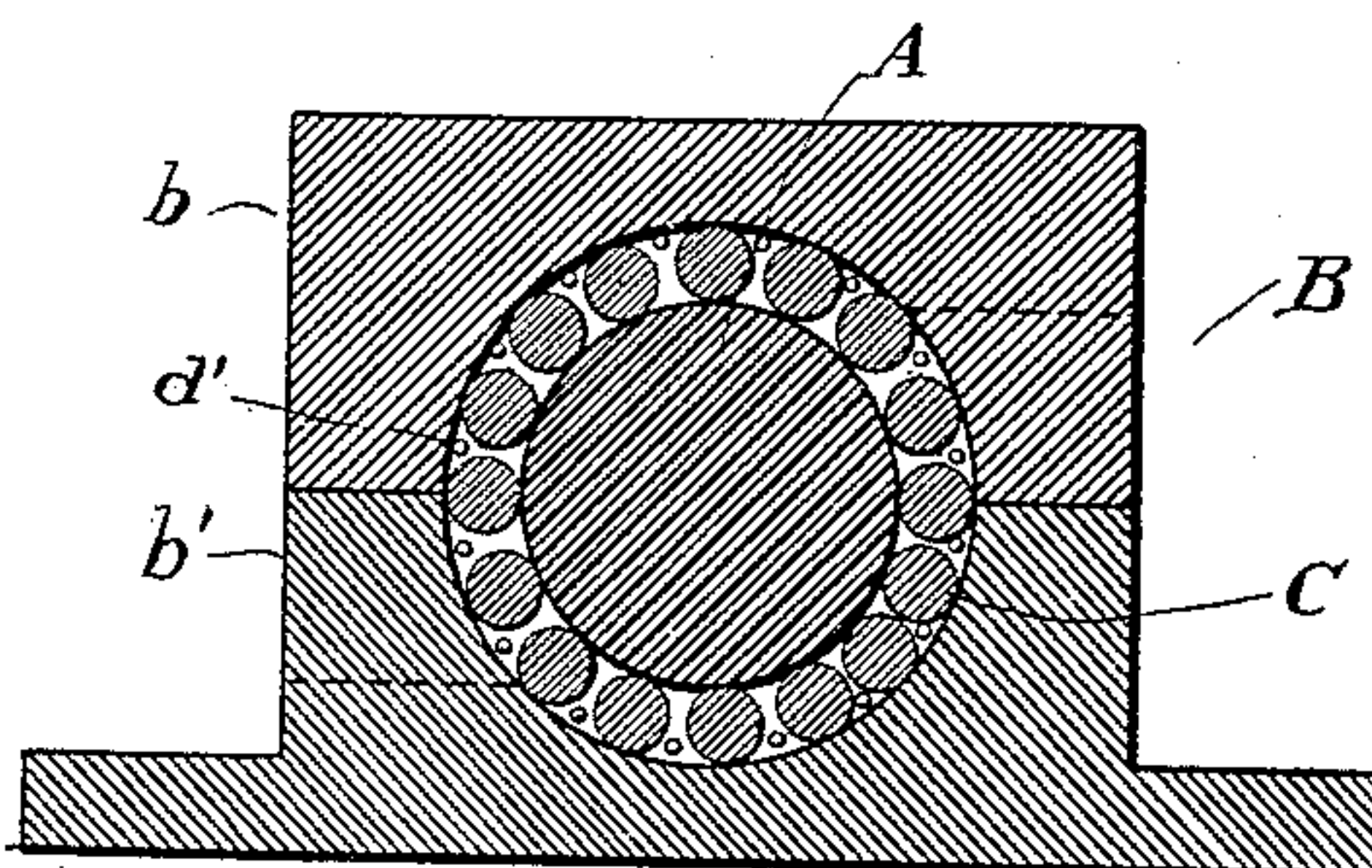


Fig. 2.

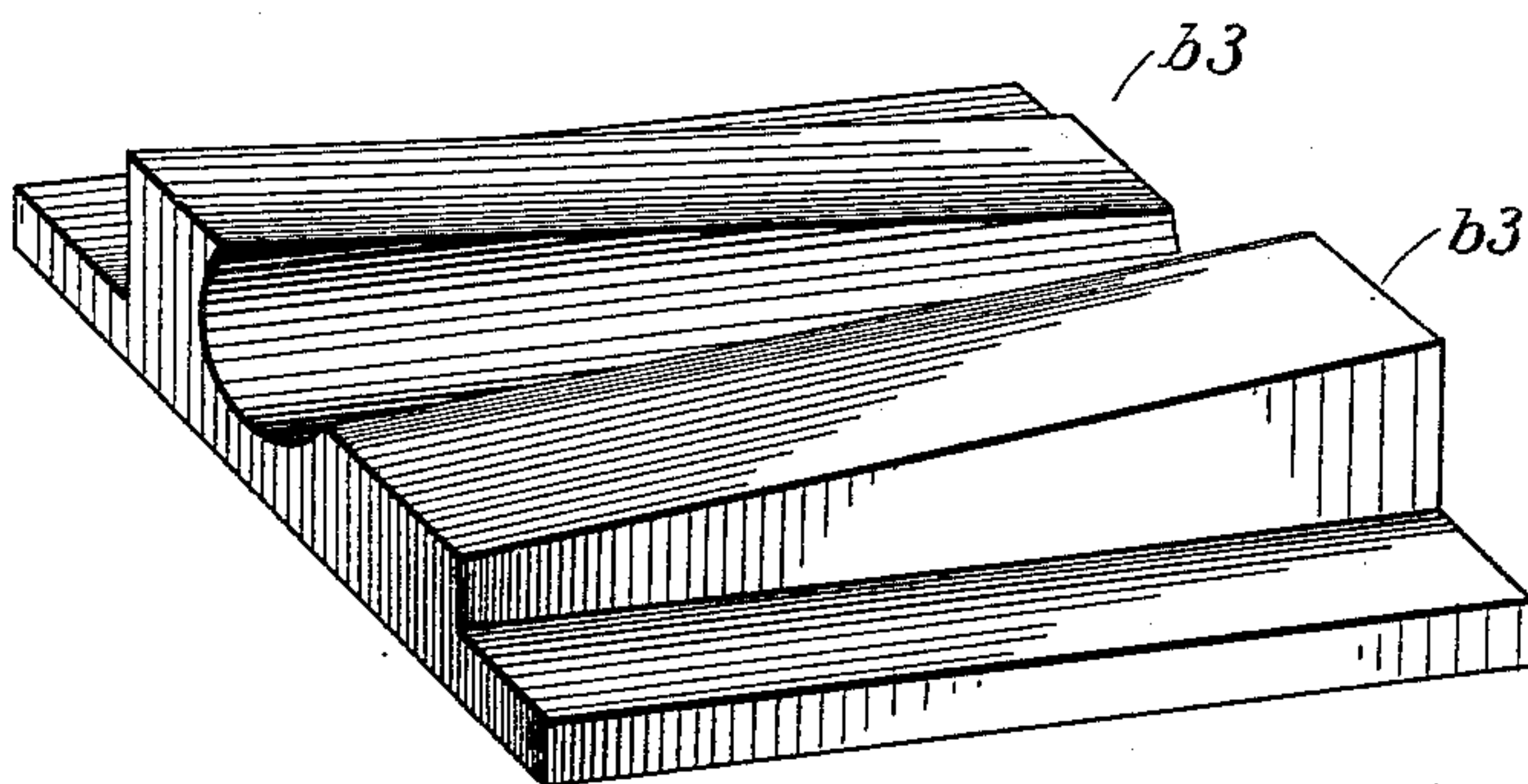
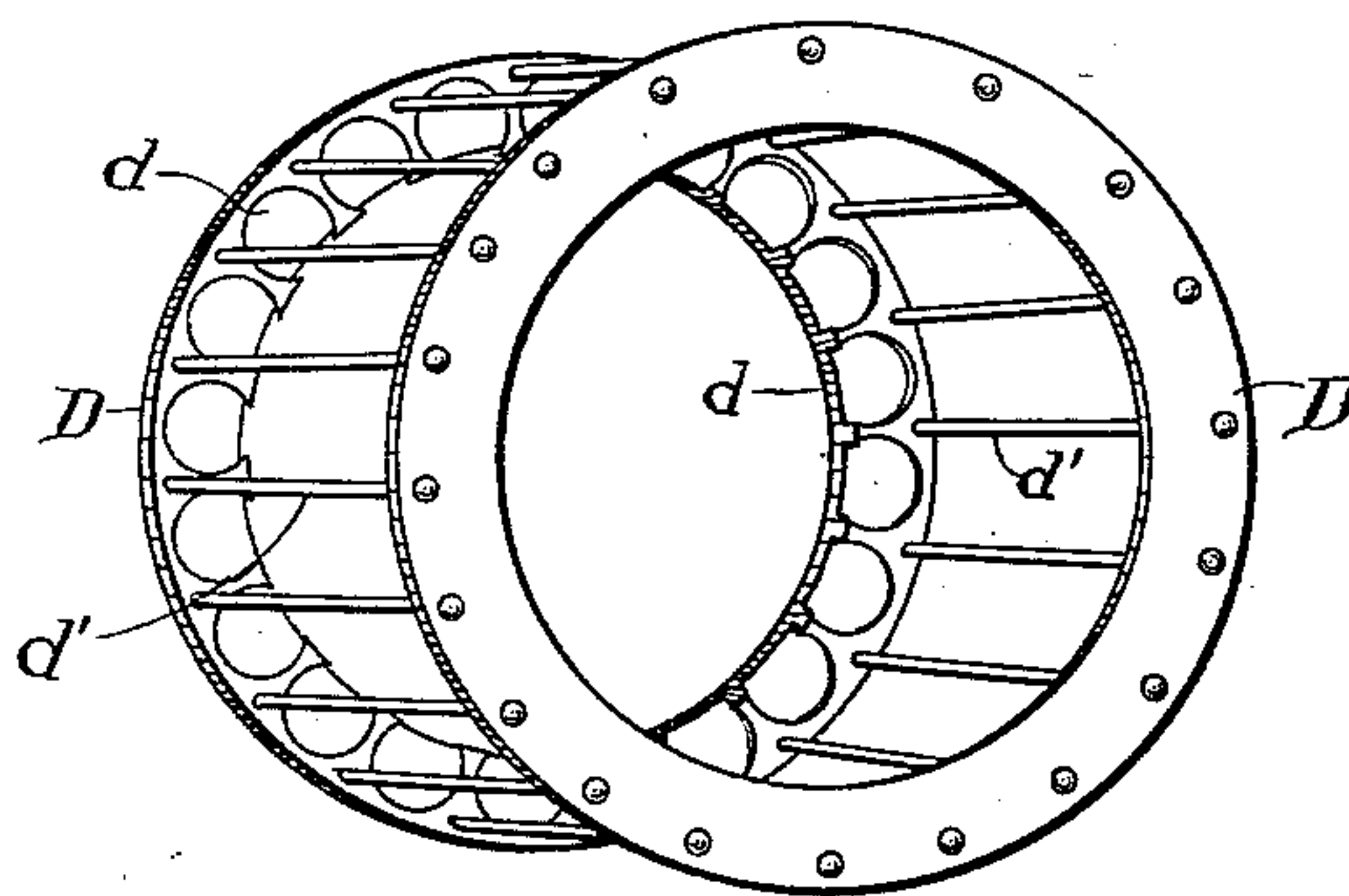


Fig. 3.



WITNESSES

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ROLLER-BEARING.

SPECIFICATION forming part of Letters Patent No. 602,749, dated April 19, 1898.

Application filed November 27, 1896. Serial No. 613,538. (No model.)

To all whom it may concern:

Be it known that I, EBENEZER W. HAVILAND, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Roller-Bearings; 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.

This invention relates to improvements in antifriction-bearings, and has more particular relation to roller-bearings.

The invention consists of certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more fully described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a central vertical section through a bearing embodying my invention. Fig. 2 represents an enlarged detail perspective view of one-half of the bearing-box, and Fig. 3 represents an enlarged detail perspective view of the roller-support and guiding-rings.

A in the drawings represents the shaft; B, the bearing-box; C C, the antifriction-rollers, and D D the roller-supporting rings. The said bearing-box B comprises two separable sections *b* and *b'*, respectively. The said section *b*, which comprises one-half of the bearing-box, is formed upon its sides with oppositely-inclined surfaces *b*³. The section *b'* is similar to said section *b*, the inclines being arranged in opposite directions, so that when said sections are fitted together they will lock each other firmly in place. The office of this peculiar jointing between the two sections, in addition to that heretofore described, is to place the joint upon the internal bearing-surface of the box, so that the antifriction-rollers will roll smoothly over the same and not catch or bend, as they would were the joint of the usual horizontal type. The said antifriction-rollers C are adapted to be applied between the box B and the shaft A and are supported and guided in the proper position by the rings D. Each of these rings is provided upon its inner surface with a plurality of spaced sockets *d*, adapted to receive the respective ends

of the rollers C and thereby hold said rollers the proper distance apart and prevent them from bending one against the other. The said rings D are connected and braced by cross-bars *d'*.

It will be observed from the foregoing description that while the rollers C are suitably spaced and guided they at the same time contact with both the shaft A and the inner bearing-surface of the box B.

Instead of mounting the ends proper of the rollers C in the sockets *d* I sometimes prefer to reduce the ends of said rollers to form journals, which are mounted in reduced sockets in the said rings; but the action is substantially the same as that heretofore described.

It will also be observed that when the respective sections of the bearing-box B are applied together the said sections are effectually locked against longitudinal movement in relation to each other and at the same time present an inclined joint upon the inner surface, so that the rollers mounted about said shaft A will roll smoothly over the joint between said sections. By preventing the rollers C from touching each other in their revolution the friction in the bearing is reduced to a minimum.

I intend to apply my invention principally to heavy shafting for transmitting great power, although said invention may be employed in any connection where an antifriction-bearing is desirable.

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

1. An antifriction-bearing box comprising two sections one of which is provided with two oppositely-inclined upwardly-facing surfaces arranged slightly out of a horizontal plane, and the other with two downwardly-facing oppositely-inclined faces also arranged slightly out of a horizontal plane; the oppositely-inclined faces of the respective sections being constructed and arranged to engage with one another and firmly lock the sections together against any longitudinal movement in either direction, substantially as described.

2. In an antifriction-bearing, the combination with a shaft, of a bearing-box surrounding the same and comprising two sections each

having oppositely -inclined edges so constructed that when the two sections are applied together they will be firmly locked against any longitudinal movement, and anti-
5 friction-rollers mounted between said sections and the shaft, substantially as described.
In testimony whereof I have signed this

specification in the presence of two subscribing witnesses.

EBENEZER W. HAVILAND.

Witnesses:

WINFRED E. ALLEN,
HERMAN STABLER.