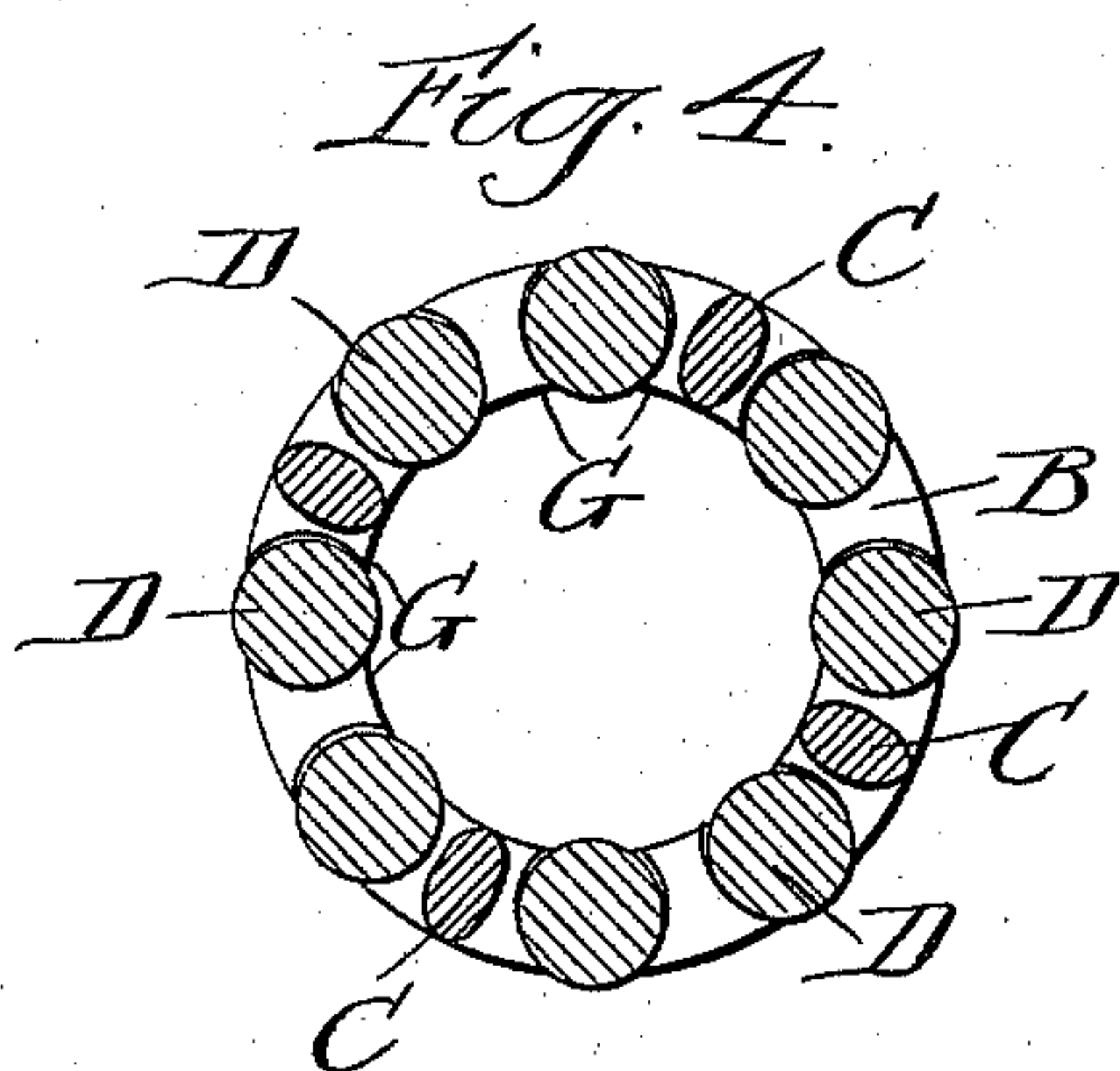
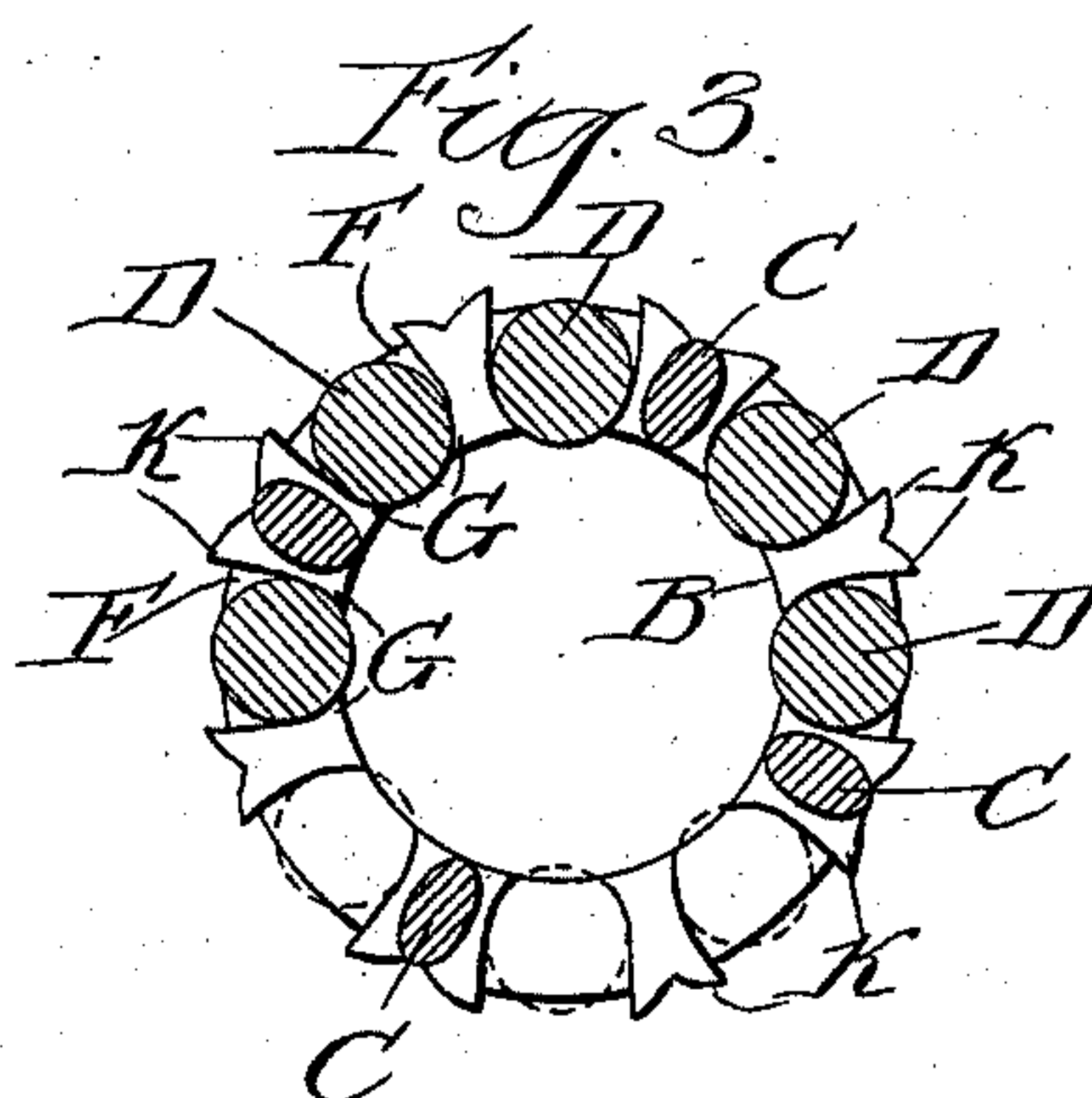
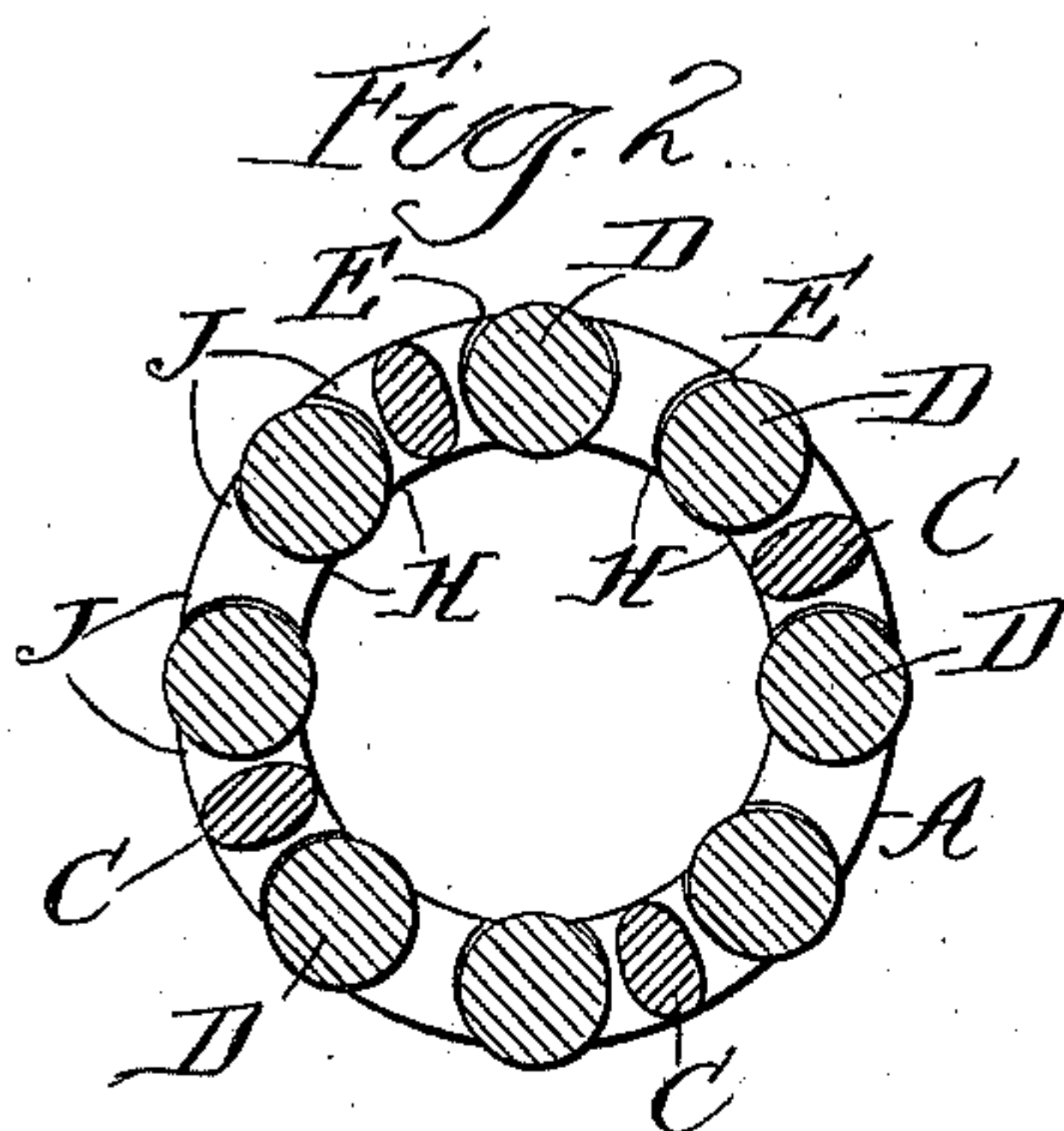
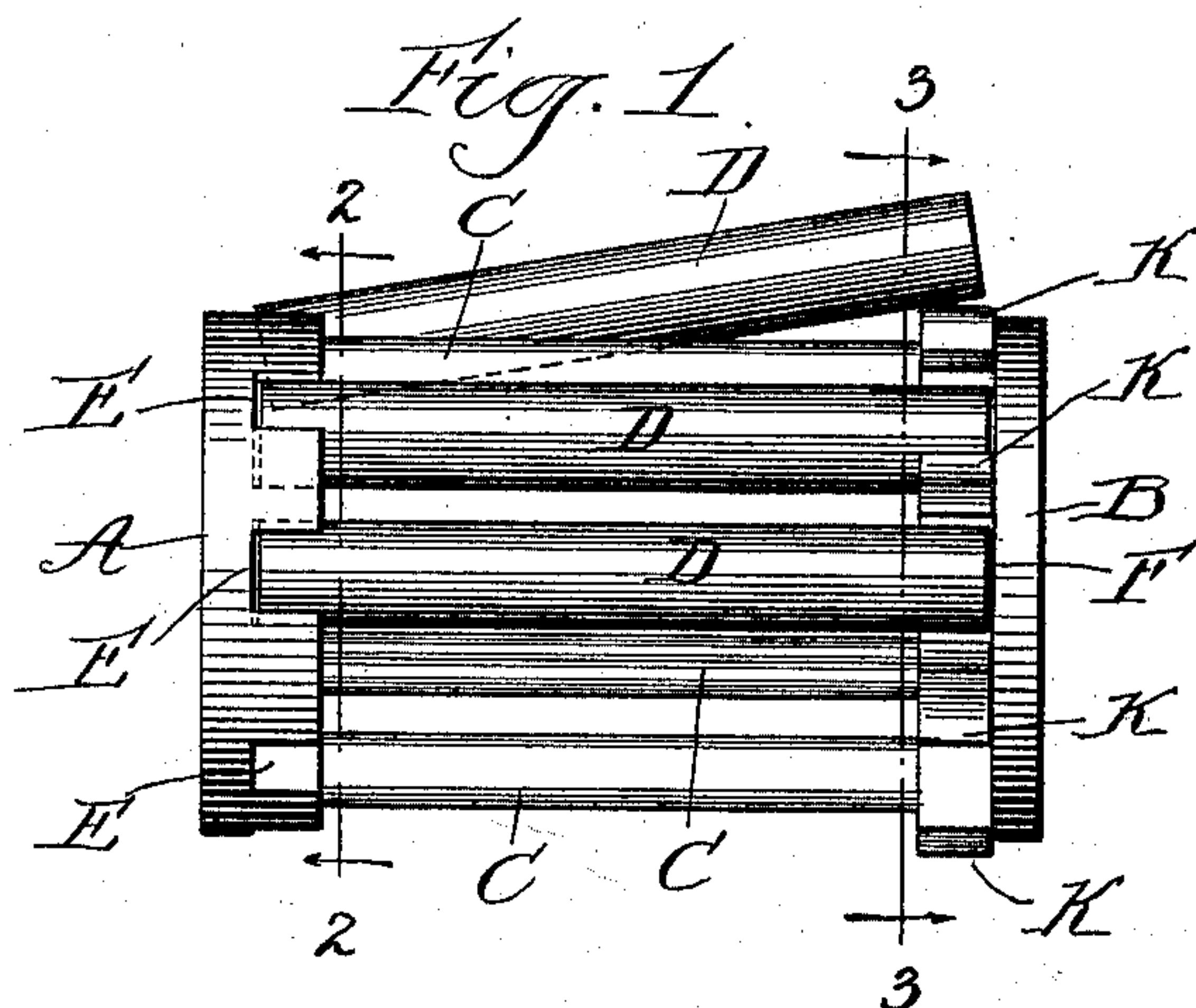


(No Model.)

W. F. BAUER.
ROLLER BEARING.

No. 603,869.

Patented May 10, 1898.



Witnesses
Wm J. Hanning
Sp^{rs} M. Rheem.

Inventor
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By Brown & Darby Attys

UNITED STATES PATENT OFFICE.

WILLIAM F. BAUER, OF SPRINGFIELD, OHIO, ASSIGNOR TO THE WARDER, BUSHNELL & GLESSNER COMPANY, OF SAME PLACE AND CHICAGO, ILLINOIS.

ROLLER-BEARING.

SPECIFICATION forming part of Letters Patent No. 603,869, dated May 10, 1898.

Application filed December 16, 1897. Serial No. 662,104. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. BAUER, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented a new and useful Improvement in Roller-Bearings, of which the following is a specification.

This invention relates to roller-bearings.

The object of the invention is to provide a roller or antifriction bearing for shafts, spindles, and the like of simple and improved construction, economical in manufacture, and wherein handling of same is facilitated.

The invention consists, substantially, in the construction, combination, location, and relative arrangement of parts, all as will be more fully hereinafter set forth, shown in the accompanying drawings, and finally specifically pointed out in the appended claims.

Referring to the accompanying drawings and to the various views and reference signs appearing thereon, Figure 1 is a view in side elevation of a roller-bearing constructed and arranged in accordance with the principles of my invention. Fig. 2 is a transverse sectional view of the same on the line 2 2, Fig. 1, looking in the direction of the arrows. Fig. 3 is a transverse sectional view of the same on the line 3 3, Fig. 1, looking in the direction of the arrows. Fig. 4 is a view similar to Fig. 3, the section being taken in the same plane, showing the arrangement after the antifriction-rollers have been assembled and the bearing completed.

The same part is designated by the same reference sign wherever it occurs.

In carrying out my invention I provide a suitable cradle or bracket comprising the heads A B, suitably spaced apart a distance corresponding to the length of the rollers to be employed and suitably connected by the rods or braces C. These parts may be cast integrally or may be suitably joined in any other or convenient manner. The heads A and B comprise rings, and on the inner face of ring A are formed suitably-spaced cylindrical seats E of a size adapted to receive loosely and endwise therein the ends of the rollers D. The diameter of these rollers is preferably greater than the radial thickness of ring A, and therefore the ends of the roll-

ers are not completely surrounded by the walls of the seat E, but are sufficiently surrounded by the walls of said seat, as clearly shown at H J in Fig. 2, to retain said rollers therein until they are withdrawn therefrom endwise, at the same time permitting the peripheries of the rollers to project slightly beyond both the inner and outer peripheries of the ring. The ring B is suitably provided or formed with cooperating and corresponding seats F, similarly arranged and spaced with respect to seats E and adapted to receive the other ends of the rollers. These seats F, however, are peculiarly formed in the following respects: The side walls of the seats at the inner portion of the ring B are so formed as to partially embrace or inclose the ends of the rollers, as clearly shown at G, Figs. 3 and 4, thereby retaining the end of the roller therein, but at the same time permitting the periphery of the roller to project slightly beyond the inner periphery of ring B. At the outer portion of ring B, however, the side walls of these seats are formed into flaring lips K, as shown in Fig. 3, spread apart a distance sufficient to enable the ends of the rollers to readily and easily pass therebetween when being introduced laterally to the seat F.

In practice I prefer to cast or otherwise form the cradle or frame, and particularly ring or head B, of suitable malleable material—such, for instance, as steel, malleable iron, brass, or the like—whereby when the rollers B are placed in position—that is, after one end thereof is inserted endwise in seat E in ring A and the other end is dropped between lips K and into seat F in ring B—said lips are then forced or hammered down, so as to partially overlap or embrace such end, as clearly shown in Fig. 4, but permitting the periphery of the roller to project slightly beyond the outer periphery of said ring B.

From the foregoing description it will be readily seen that I produce an exceedingly simple and inexpensive roller-bearing. The rollers are plane cylinders throughout their entire length, and the necessity of forming gudgeons or journals on the ends thereof is avoided. Moreover, when the parts are assembled and the lips K are hammered or otherwise forced down into the position shown

in Fig. 4 the rollers are held in their seats in the cradle or casting without danger of falling out while being handled.

Having now set forth the object and nature of my invention and a form of construction embodying the same, what I claim as new and useful and of my own invention, and desire to secure by Letters Patent of the United States, is—

10 1. In a roller-bearing, a cradle or bracket comprising end rings, and connecting-rods cast integrally therewith, one of said end rings provided with cylindrical seats and the other of said rings provided with seats having flared
15 lips, in combination with rollers having one end adapted to be received endwise in the cylindrical seats in one of said rings and the other end adapted to be passed between said flared lips into the seat formed in the other of
20 said rings, whereby, when said lips are hammered down said rollers are held in said cradle, as and for the purpose set forth.

2. In a roller-bearing, a cradle or basket comprising end rings and connecting-rods

cast integrally therewith, one of said end rings 25 provided on the inner face thereof with cylindrical seats, and the other of said rings provided on the inner face thereof with seats having flared lips, in combination with plane cylindrical rollers of a diameter greater than 30 the radial thickness of said rings, one end of said rollers arranged to be received endwise in said cylindrical seat, and the other end arranged to be passed laterally between the flared lips of the corresponding seat in the 35 other ring, whereby the peripheries of said rollers extend slightly beyond the inner and outer peripheries of said rings, said rollers being held in place by forcing said lips down and partially around the end of said rollers, 40 as and for the purpose set forth.

In witness whereof I have hereunto set my hand, this 11th day of December, 1897, in the presence of the subscribing witnesses.

WILLIAM F. BAUER.

Witnesses:

MAURICE KANE,
HENRY C. DIMOND.