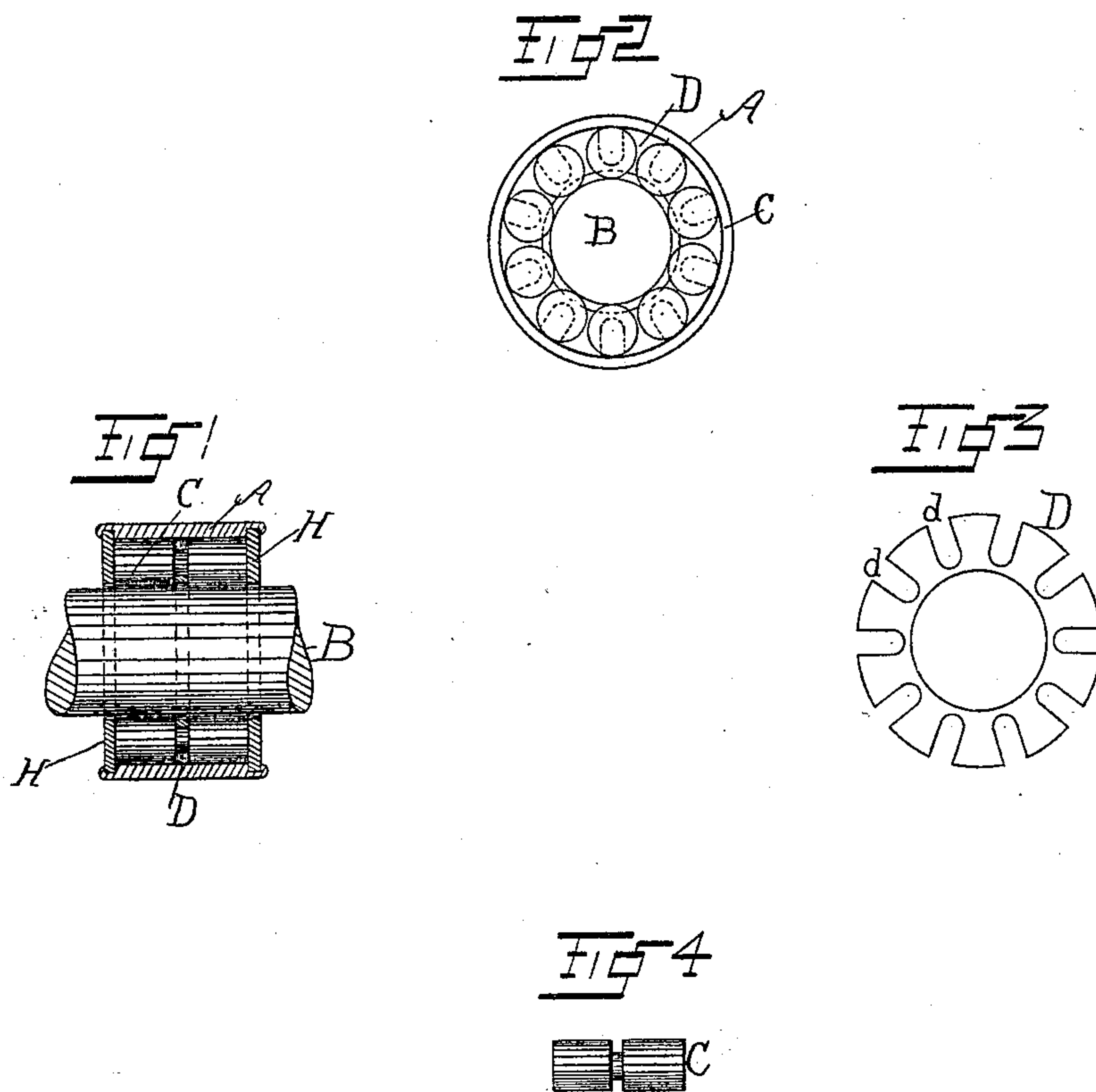


(No Model.)

M. N. LOVELL.
ANTI-FRICTION ROLLER BEARING.

No. 449,047.

Patented Mar. 24, 1891.



WITNESSES

W. Marks, Jr.

S. D. Robbins.

INVENTOR

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UNITED STATES PATENT OFFICE.

MELVIN N. LOVELL, OF ERIE, PENNSYLVANIA, ASSIGNOR TO THE LOVELL MANUFACTURING COMPANY, LIMITED, OF SAME PLACE.

ANTI-FRICTION ROLLER-BEARING.

SPECIFICATION forming part of Letters Patent No. 449,047, dated March 24, 1891.

Application filed January 2, 1891. Serial No. 376,456. (No model.)

To all whom it may concern:

Be it known that I, MELVIN N. LOVELL, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Anti-Friction 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 anti-friction roller-bearings; and it consists in certain Improvements in the construction thereof, as will be hereinafter fully set forth, and pointed out in the claim.

My invention is illustrated in the accompanying drawings as follows:

Figure 1 is a longitudinal section of an anti-friction roller-bearing journal-box containing my invention. Fig. 2 is an end view of the journal-box shown in Fig. 1 with the end ring H removed. Fig. 3 is a diagram view of the spacing-ring, (marked D,) and shown in the other figures. Fig. 4 is an elevation view of one of the anti-friction rollers.

The form of the journal-box shown is the same as that shown in another application by me—to wit, Serial No. 375,194. The parts shown are designated by letters of reference as follows: A is the barrel or cylinder of the journal-box; B, the shaft of the machine to which the box is applied; C, the anti-friction rollers; D, the spacing-ring, and H the end rings or heads of the case.

The barrel A is formed of a piece of metal tubing, and the heads H are seated in internal rabbets in the ends of said barrel, and then firmly secured by clinching the ends of the barrel down over them. The rollers C are provided with grooves at their middle and are arranged around the inner wall of the barrel. The spacing-ring D is of slightly less diameter than the caliber of the barrel and the radial notches *d* in the ring-yoke over the rollers at the point of their reduced diameter. The spacing-ring not only holds the rollers from contact with each other, but also

retains them in the barrel when the shaft is removed. When the shaft is revolved, the rollers all roll at a fixed distance apart and carry the ring D around the shaft with them.

I am aware that notched spacing-rings are common; but heretofore they have been made of greater diameter than the cylinder and a groove has been provided to receive the outer periphery of the ring. In such cases the ring served to prevent longitudinal movement of the rollers, as well as to space them. In my device the rollers are held against longitudinal movement by the end rings H, and the spacing-ring, being of less diameter than the cylinder, it will have a perfectly free action with no tendency to bind, as is the case where the ring D is of greater diameter than the cylinder and seated in a groove. In my construction the ring D serves to keep the rollers from falling away from the wall of the cylinder when the shaft is not in place and to keep the rollers from rubbing together.

As stated in the application above referred to, the object of my invention is to construct an anti-friction roller-bearing which can be made and sold generally as an article of trade and applied to the journals of various kinds of machines.

What I claim as new is—

As an article of manufacture, an anti-friction roller-bearing adapted to be transported and handled as an article of commerce and applied to the journals of various machines, consisting of a plain cylindrical case or barrel A, having at its ends internal ledges or rabbets, end rings H, seated in said rabbets and firmly secured therein, anti-friction rollers C within said case, which rollers are grooved around their middle, and a radially-notched ring D of less diameter than the barrel-caliber, which ring yokes over said rollers at their grooved spaces.

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

MELVIN N. LOVELL.

Witnesses:

JNO. K. HALLOCK,
WM. P. HAYES.