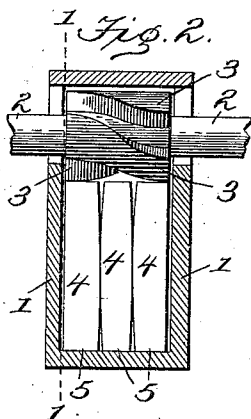
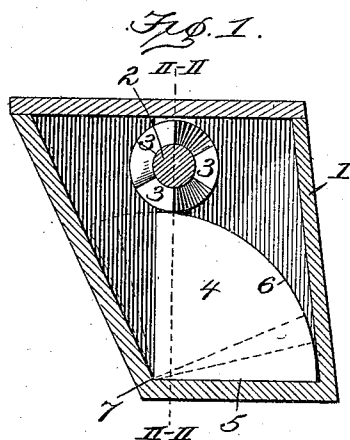


(No Model.)

A. H. McMASTER.  
ANTIFRICTION BEARING.

No. 553,656.

Patented Jan. 28, 1896.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ARTHUR H. McMASTER, OF FOWLER, COLORADO.

## ANTIFRICTION-BEARING.

SPECIFICATION forming part of Letters Patent No. 553,656, dated January 28, 1896.

Application filed August 2, 1895. Serial No. 557,944. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR H. McMASTER, a citizen of the United States, residing at Fowler, in the county of Otero and State of Colorado, have invented certain new and useful Improvements in Antifriction-Bearings, of which the following is a specification.

My invention relates to an improvement in bearings where it is designed to have as little friction as possible, and my object is to provide such a bearing and as simply and as economically as possible.

My invention consists broadly of the employment of a number of segment bearing-pieces, which are placed loosely in the journal-box and support the shaft which at this point is provided with a number of spiral ribs, so that as the shaft is revolved each rib successively engages the segments, which as they are engaged yield or move out of their normal position in the box and after contact with the rib fall or move back to normal position.

My invention further consists of details of construction, that will be hereinafter described and specifically pointed out in the claims.

In order that my invention may be fully understood, I will proceed to describe the same with reference to the accompanying drawings, in which—

Figure 1 is a horizontal section taken on the line I I, Fig. 2. Fig. 2 is a vertical section taken on the line II II, Fig. 1, the shaft being shown in full lines.

In the said drawings, 1 represents the journal box or casing, which may be of a suitable construction and located at any point where desired.

2 represents a shaft having a bearing in the journal-box. This bearing is composed of the spiral ribs 3, which are located on the shaft in the journal-box, and the bearing-segments 4, which are placed loosely in the box or casing. These segments, as will be seen, are formed with the base 5 and the curved face 6, and they are arranged, as shown, so that the ribs on the shaft will bear on them at the upper part of the curved face. The spiral ribs, which are preferably of the same number as the bearing-segments and of the same width, are arranged on the shaft so that as the end of the rib breaks the con-

tact with the last segment the first part of the succeeding rib will bear upon the first segment. Thus it will be seen that at each point of the revolution of the shaft it will only have one bearing-point within the box and that will be constantly changing, so that the friction will be reduced to a minimum. It will be understood, of course, that as the ribs successively come in contact with the segments they yield or move on a pivot-point 7 to a position shown in dotted lines and after the contact they return to their normal position.

The operation of my device will be readily understood from the drawings and the foregoing description.

Although I have shown my device only applied to a shaft and a single journal-box, it will be understood that it can be used wherever an antifriction-bearing is desired. It will be further understood that I do not limit myself to the precise construction shown, as the same result may be accomplished without departing from the spirit of my invention.

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

1. In an anti-friction bearing the combination of the journal box, the segments loosely placed therein, and the spiral ribs located on the shaft and adapted to bear upon the segments substantially as and for the purpose set forth.

2. The combination in an anti-friction bearing, the journal box, the segments loosely placed therein and arranged to return to normal position after being moved, and a spiral rib located on the shaft and adapted to successively bear upon the segments substantially as shown and described.

3. In an anti-friction bearing, the combination of the journal box, the segments loosely placed therein, and the spiral ribs located on the shaft and adapted to engage each segment successively and so arranged that at the end of contact with the last segment by one of the spiral ribs, the succeeding spiral rib will engage the first segment substantially as shown and described.

ARTHUR H. McMASTER.

Witnesses:

CLARENCE L. CAMPBELL,  
WILLIAM H. H. MOREHOUSE.