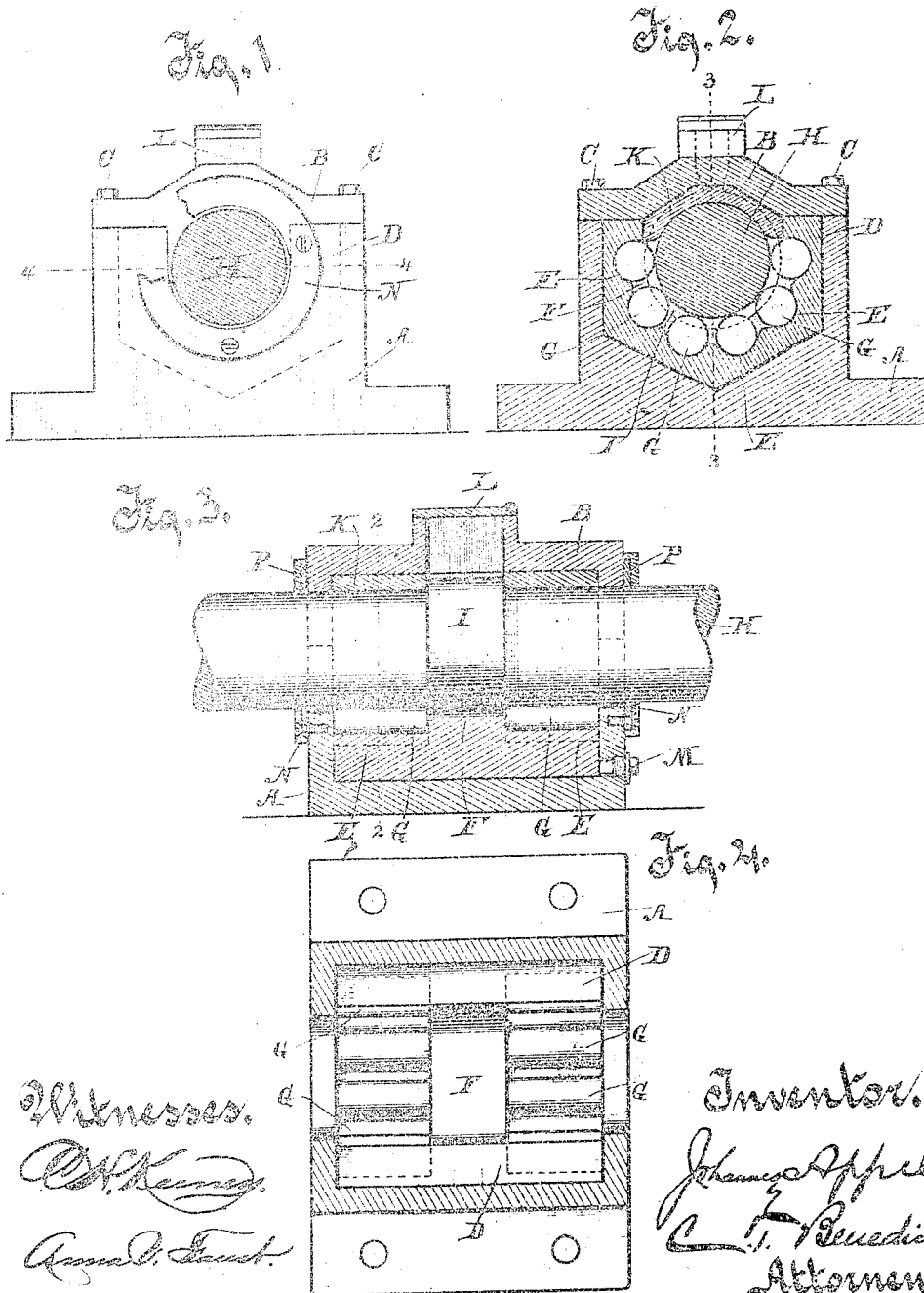


(No Model.)

J. APPEL.  
JOURNAL BEARING.

No. 453,826.

Patented June 9, 1891.



# UNITED STATES PATENT OFFICE.

JOHANNES APPEL, OF FAIR HAVEN, ILLINOIS.

## JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 453,826, dated June 9, 1891.

Application filed February 14, 1891. Serial No. 331,510. (No model.)

*To all whom it may concern:*

Be it known that I, JOHANNES APPEL, of Fair Haven, in the county of Carroll and State of Illinois, have invented a new and useful Improvement in Journal-Bearings, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention relates to improvements in a class of journal-bearings that are especially adapted for use in roller-mills.

The object of my invention is to provide a strong and enduring bearing in which a journal will run with the minimum amount of friction, and which is so constructed as to be in a constant state of lubrication.

In the drawings, Figure 1 is an elevation of my improved journal-bearing, a journal being shown in section therein, and a part of the packing-cap being broken away to show interior construction. Fig. 2 is a vertical section on line 2-2 of Fig. 3. Fig. 3 is a longitudinal section on line 3-3 of Fig. 2. Fig. 4 is a longitudinal section on line 4-4 of Fig. 1.

The pillow-block A, when in use, is bolted to supporting-frame. The pillow-cap B is secured removably to the pillow-block A by screws C. The journal-box D rests in the pillow-block A. The journal-box D is provided with two series of longitudinal recesses or grooves E, which series of grooves are separated from each other medially by a rib F. The grooves E extend from the rib F outwardly in both directions to the ends of the journal-box D, and are curved in cross-section to receive therein the anti-friction rollers G. These rollers G are located beneath and at the sides of the journal H, the rollers being arranged at a little distance apart, so as not to bear against each other, being held in position H, their seats in the grooves E by the arrangement of the grooves and the bearing of the journal H against them, which is supported and rotates on them. The rib F projects inwardly toward the journal H, and a corresponding collar I on the journal H projects outwardly and meets and bears slightly rotatably against the rib F. The ends of the collar I also bear against the ends of the

rollers G and prevent the endwise movement of the journal in the box. The anti-friction rollers G receive thereon and support the principal portion of the weight of the journal and rotate in their bearings or grooves by contact with the journal. A journal-box cap K is let into recesses therefor in the top of the journal-box and covers the journal H. An oil-cup L, formed in the top of the cap B, is provided with a passage downwardly through the cap K to the journal, and is adapted to receive oil and discharge it upon the journal and into the pillow-block chamber, from which the worn-out oil and sediment may be withdrawn through an orifice closed by the plug M. A suitable washer or packing P about the journal is held in place by an annular cap N, secured by screws removably to the pillow-block.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, substantially as described, of a journal-box constructed with two series of longitudinal grooves at distances apart about the journal-aperture, and a medial rib separating the grooves in the box, two series of anti-friction rollers located in the grooves in the journal-box about the journal-aperture, the rollers being thus held against endwise movement, and a journal having a collar projecting therefrom opposite the rib in the journal-box and adapted to bear endwise against the rollers.

2. The combination of a pillow-block, a therein inserted and removable journal-box having a medial rib, anti-friction rollers arranged at each side of the medial rib in grooves therefor in the journal-box, caps on the pillow-block and journal-box, and a journal having a collar projecting radially therefrom opposite the rib in the journal-box and adapted to bear against the ends of the rollers, substantially as described.

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

JOHANNES APPEL.

Witnesses:

GEORGE HARTMAN,  
HENRIKH L. SCHUL.