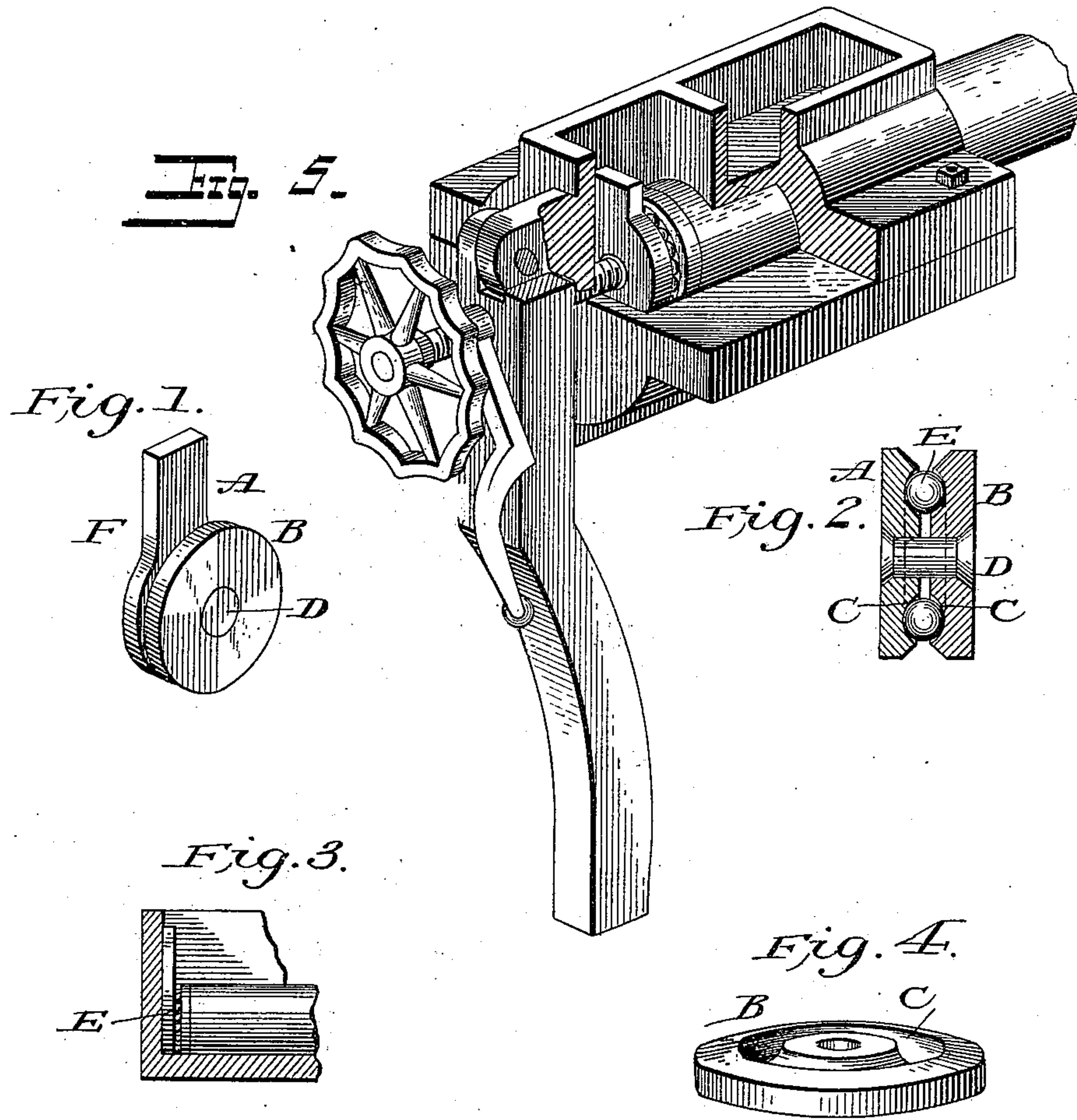


(No Model.)

A. W. STRAUB.
BALL BEARING.

No. 554,629.

Patented Feb. 11, 1896.



Witnesses:
J. M. Fowler Jr.
C. S. Rogers.

Inventor:
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per
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UNITED STATES PATENT OFFICE.

AMBROSE W. STRAUB, OF PHILADELPHIA, PENNSYLVANIA.

BALL-BEARING.

SPECIFICATION forming part of Letters Patent No. 554,629, dated February 11, 1896.

Application filed February 16, 1894. Serial No. 500,346. (No model.)

To all whom it may concern:

Be it known that I, AMBROSE W. STRAUB, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Ball-Bearings, of which the following is a specification, reference being had therein to the accompanying drawings.

10 My present invention is a ball-bearing for use at the end of spindles and shafts having an end-thrust—such as grain-mills, wind-wheels, disk-harrows, &c.; and it consists in certain novel features hereinafter described and claimed.

15 In the annexed drawings, Figure 1 is a perspective view of my improved bearing. Fig. 2 is a sectional view of the same. Fig. 3 is a view showing the same in operative position. Fig. 4 is a view showing the inner face of one of the disks; and Fig. 5 is a perspective view of the grinding-mill with the journal-box, the top or lid thereof partially removed, showing the removable end ball-bearing in operative position.

25 In carrying out my invention I employ two disks A B, which are provided with annular grooves C in their inner faces. The disks are held together by a central headed pivot-pin D, and a number of balls E are fitted in the annular grooves and held by and between the disks. One of the disks is provided with an offset or spur F, which engages a slot or notch in the frame of the journal-box, and thereby prevents rotation of said disk.

30 The two disks being held in proper relative position with the balls between them by the headed pivot-pin or rivet D may be removed as a whole when it becomes necessary to examine or repair any machine to which they may be applied, and also enables me to make

and furnish them as distinct articles of manufacture and commerce, which may be separately forwarded and placed in position without danger of losing or displacing any of the balls.

In practice the bearing is fitted in the end of the journal-box, as shown in Fig. 3, and the end of the shaft or spindle bears directly against the inner disk. When the shaft in its rotation is given an end-thrust it will bind against the said inner disk, and will consequently impart a rotary movement to said disk, which will be taken up by the balls, thus reducing the friction on the end of the shaft and the journal-box to a minimum and overcoming the wear on the parts. The disks as well as the balls are made of hardened metal and do not easily become heated, so that but a small expenditure of power is necessary to operate the machine.

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

35 In combination with a journal-box, a removable ball-bearing, comprising two disks A and B, the disk A having a spur or peripheral projection adapted to engage in a recess in the journal-box and prevent the rotation of the said disk A, a central pin D adapted to hold said disks in proper relative position, the adjacent faces of the said disks provided with annular grooves, C, and anti-friction-balls located in said grooves, substantially as herein shown and described.

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

AMBROSE W. STRAUB.

Witnesses:

CARL E. R. MARTIN,
WALTER W. CALMORE.