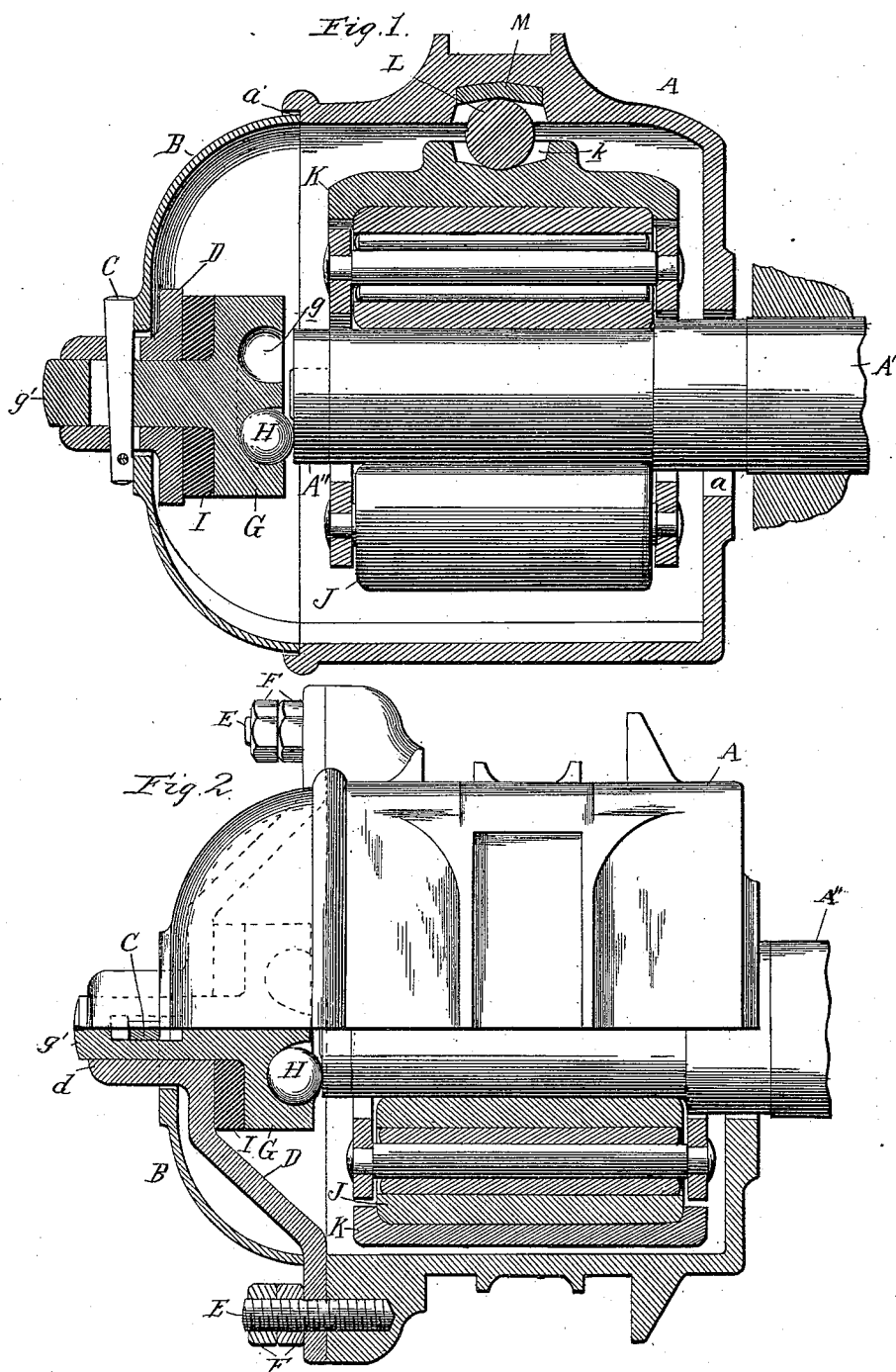


W. S. SHARPNECK.
ANTI-FRICTION JOURNAL BOX.

Patented May 7, 1889.



WITNESSES
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UNITED STATES PATENT OFFICE.

WILLIAM S. SHARPNECK, OF CHICAGO, ILLINOIS.

ANTI-FRICTION JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 402,987, dated May 7, 1889.

Application filed September 3, 1888. Serial No. 284,471. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. SHARPNECK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Anti-Friction Journal-Boxes, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention is an improvement on the devices shown in my patents, Nos. 373,756 and 392,465; and it consists in the peculiar construction, arrangement, and combination of parts, hereinafter more particularly described and shown, and then definitely pointed out in the claims.

In the accompanying drawings, which show one form of my invention, Figure 1 represents a vertical central longitudinal section of my improvement, and Fig. 2 a plan with half of it in section.

Referring now to the details of the drawings, A represents the shell having an opening at *a* for the insertion of the axle A'; and is closed at the other end by a cap, B, fitting in a groove, *a'*, and is held in position by a key, C, which passes through a keyway in a cross-bar, D, fastened to the shell A by studs E and nuts F. The center of the bar D has an opening, *d*, in which is set an end bearing-block, G, having a circular recess, *g*, in which rests a ball, H, and a slotted shank, *g'*, through which the key C passes, the slot being large enough to allow the bearing-block G considerable longitudinal motion as it is pressed by the end motion of the axle A', which motion is resisted by spring I, of rubber or any suitable material.

Around the axle is a series of anti-friction rollers, J, substantially the same as shown in my patent, No. 373,756, before referred to. These rollers are held in place by a semicircular block, K, provided with a groove, *k*, in which is set a roller, L, in substantially the same manner as in my patent, No. 392,465; but in place of working against a groove in the under side of the shell, as in that case I set in said groove a plate, M, of hard metal, preferably steel, to take all the wear caused

by said roller L. On the end of the axle A', 50 I set a hard ring, A'', preferably of steel, which fits on a teat or pin on the end of the axle.

By the construction above set forth I obtain many advantages, for by slipping out the key 55 C the cap B can be readily removed for inspection, and as readily replaced. The spring I allows of the yielding of the bearing-block to the end motion of the axle and the quick return of the axle to its place, while the ring 60 A'' and plate M afford hard wearing-places for the ball and roller, which can be readily replaced should they become worn.

What I claim as new is—

1. The combination, in a journal-box and 65 with the shell A thereof, of the bar D, cap B, and key C, substantially as described.

2. The combination, in a journal-box and with the shell thereof, of an axle working therein and a bearing-block, and a spring for 70 holding said block against the end of the axle, substantially as described.

3. The combination, in a journal-box and with the shell thereof, of an axle working therein, a holder, as the cross-bar D, and a bearing-block constructed to move endwise 75 therein under the pressure of the axle, substantially as described.

4. The combination, in a journal-box and with the shell thereof, of an axle working 80 therein, a cross-bar, D, attached to the shell, a movable bearing-block, and a cushion, as the spring I, between said cross-bar and bearing-block, substantially as described.

5. The combination, in a journal-box and 85 with the shell thereof, of an axle working therein, a system of anti-friction rollers supporting a roller, as L, and a removable hardened plate to receive the wear of said roller, substantially as described. 90

In testimony whereof I affix my signature, in presence of two witnesses, this 1st day of September, 1888.

WILLIAM S. SHARPNECK.

Witnesses:

A. P. BOYNTON,
S. B. BOYNTON.