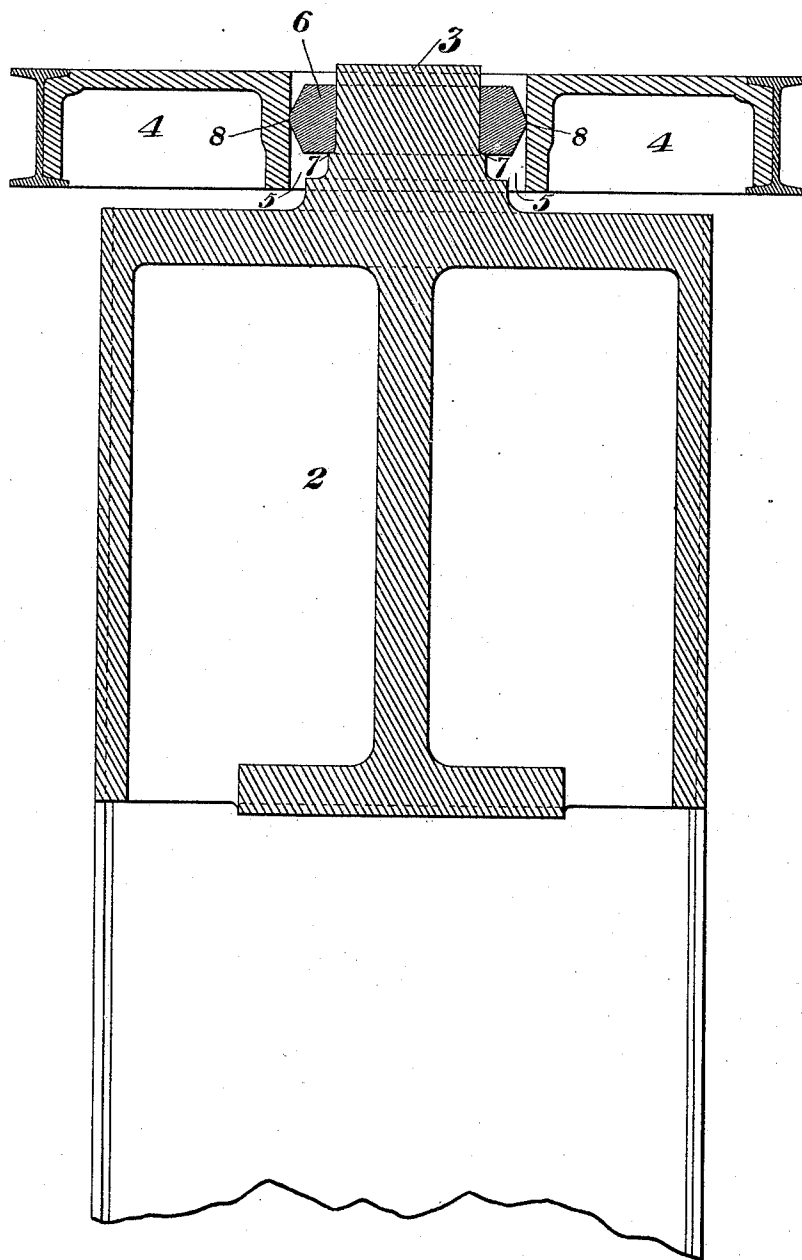


(No Model.)

J. A. BURNS.
JOURNAL BEARING FOR CRANES.

No. 465,691.

Patented Dec. 22, 1891.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES A. BURNS, OF HOMESTEAD, PENNSYLVANIA.

JOURNAL-BEARING FOR CRANES.

SPECIFICATION forming part of Letters Patent No. 465,691, dated December 22, 1891.

Application filed April 22, 1891. Serial No. 389,920. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. BURNS, of Homestead, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Journal-Bearings for Cranes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, which shows in vertical central section the top of a crane-mast provided with my improved journal-bearing.

The object of my invention is to provide a journal-bearing for cranes of such nature that it will automatically accommodate itself to deflection of the mast from the vertical under the strain to which it is put when supporting its burden.

To this end the invention consists in the following items of invention: first, in the combination, with the mast-journal, of an encircling bearing-block fitting in a socket and having an angular exterior, affording a narrow bearing in the socket, and, second, in the combination, with the mast-journal, of an encircling bearing-block fitting in the socket and supported by a shoulder on the journal.

In the drawing, 2 represents the top of a crane-mast, having at the top a cylindrical neck or journal 3.

4 is the top steadiment, consisting, preferably, of a strong frame or casting having a central hole or socket 5, through which the journal passes.

6 is an annular bearing-block, which is fitted around the journal within the socket and is supported at its base by a shoulder 7 on the journal. The exterior of the bearing-block is angular in section, tapering to form an angular annular bearing-ridge 8, which conforms in outline to the interior of the socket, against which it has a narrow peripheral bearing. Now if the crane-mast should be deflected from

the vertical it will not cause the journal to bind in and to strain the bearing, but the bearing-block will tip laterally, thus allowing the crane-journal to follow the mast in its deflection and to rotate freely in the block. The block and the socket in the steadiment may be of circular or any other outline in horizontal section.

The advantage of the device is its extreme simplicity. The parts are easy to be shaped and fitted together, and they coact in the manner above described with great efficiency. Because the bearing-block is supported by the shoulder on the journal and need not be confined at the top the lifting of the mast, which frequently occurs in use, will not endanger the crane, since the block and journal are unrestrained from moving vertically.

Within the scope of my invention the bearing-block supported by the shoulder on the crane-journal may be externally spherical and may have a correspondingly-shaped bearing in the steadiment.

I claim—

1. The combination, with the mast-journal, of an encircling bearing-block fitting in a socket and having an angular exterior, affording a narrow bearing in the socket and enabling it to tip therein, substantially as and for the purposes described.

2. The combination, with the mast-journal, of an encircling bearing-block supported by a shoulder thereon and fitting in a socket, in which it is adapted to tip, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 16th day of April, A. D. 1891.

JAMES A. BURNS.

Witnesses:

THOMAS W. BAKEWELL,
W. BAKEWELL.