No. 824,628. PATENTED JUNE 26, 1906.

J. B. CURTIS.

SELF LUBRICATING JOURNAL BEARING.

APPLICATION FILED OCT. 21, 1905.

Fig 1.

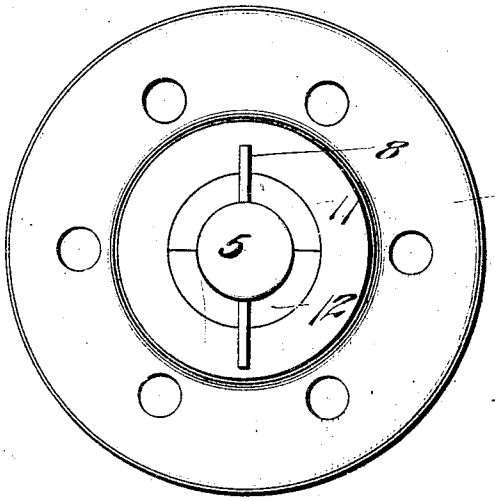


Fig 3.

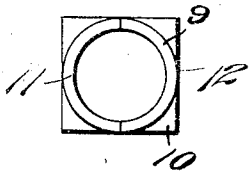


Fig 4.

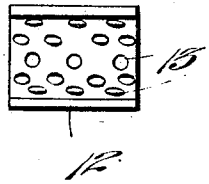


Fig 2

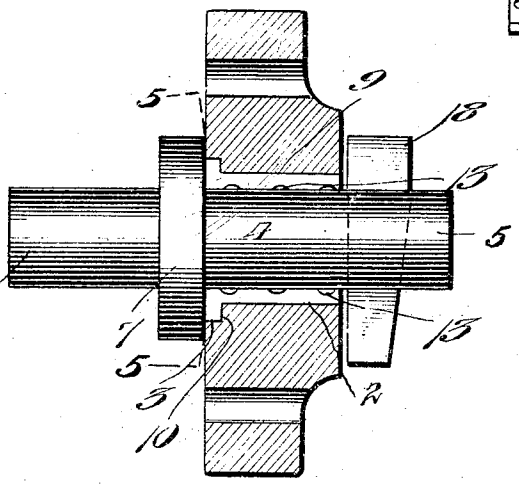
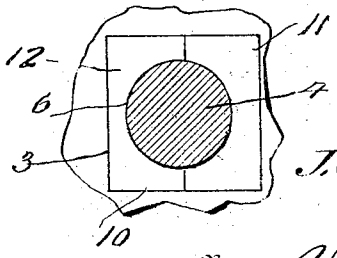


Fig 5



Witnesses

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SELF-LUBRICATING JOURNAL-BEARING.

No. 824,328. Specification of Letters Patent. Patented June 26, 1906.

Application filed October 21, 1905. Serial No. 283,311.

To all whom it may concern:

Be it known that I, JOHN B. CURTIS, a citizen of the United States, residing at No. 1234 Prospect avenue, Bronx, New York, in the county of New York and State of New York, have invented new and useful Improvements in Self-Lubricating Journal-Bearings, of which the following is a specification.

This invention relates to a self-lubricating journal-bearing for the supporting or bracing elements of derricks, such as guy-supporting spider-plates or brace-irons of derricks, the object of the invention being to provide a device of this nature which obviates the necessity of frequently lubricating these elements of a derrick which are difficult of access and reduces wear upon the supporting-pins and which permits of the ready removal of a worn pin or journal-bushing when occasion requires.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view showing the application of the invention in connection with a spider-plate and its supporting-pin. Fig. 2 is a sectional view of the same. Fig. 3 is a plan view of the sectional bushing. Fig. 4 is an inner face view of one of the sections thereof. Fig. 5 is a section on line 5 5 of Fig. 2.

Referring now more particularly to the drawings, the numeral 1 designates the bracing element of a derrick, which is shown in the present instance in the form of a spider, but may consist of a bracing-arm of ordinary construction, the invention being equally well adapted for application to the spiders of guide-derricks or the bracing-arms of bracing-derricks, the bracing element being provided in each case with a bore or opening to receive the usual supporting-pin, as will be readily understood by those versed in the art.

The bore or opening in the spider or bracing element 1 is indicated at 2 and is provided at its base with an enlargement 3, forming a recess at the bottom of the spider. The bore or opening 2 is of greater diameter than the journal portion 4 of the supporting-pin 5, which journal portion 4 extends therethrough, the other journal portion 6 of the pin being properly formed to fit within a receiving socket or opening in the derrick structure in the well-known way. At the point of junction of the two journals 4 and 6 the pin is formed with a collar or head 7, which constitutes a seat-support on which the spider or bracing element 1 is adapted to rest. The outer or upper end of the journal 4 projects beyond or above the spider and is slotted to receive a tapered key 8, which holds the spider in position thereon.

Arranged within the bore 2 is a sectional journal-bushing 9, which may be made of "metalline" or some other similar metal adapted for the purpose. This bushing is provided at one end with a flange 10 to seat within the recess 3 in the bracing element. As shown, the bushing consists of two substantially cylindrical sections 11 and 12, provided upon their inner faces with pits or recesses 13 to reduce frictional contact with the journal and to receive and retain a suitable lubricant. The sections 11 and 12 when assembled in the bore 2 provide an antifriction bearing-bushing for the journal and are maintained in assembled relation and held from rotation by the flange 10, which latter is preferably of rectangular form and fits within the recess 3, which is of corresponding form, and is retained therein by the weight of the spider and strain thereon pressing the flange against the seat-collar 7.

From the foregoing description, taken in connection with the accompanying drawings, the construction and mode of operation of my improved journal-bearing for derrick elements will be readily understood. As is well known, these elements are arranged at points on the derricks where they cannot be readily seen and are ordinarily inaccessible, and as the pins are not often lubricated they quickly run dry and rust and wear away to such an extent that they frequently snap and derange the parts of the derrick while the derrick is in use. My invention obviates this difficulty to a considerable extent, as the bushing will reduce friction on the journal of the pin and keep the same lubricated for a long period, thus preventing rusting and wear and prolonging the life of the pin much beyond the usual period.

Having thus described the invention, what is claimed as new is—

In a self-lubricating journal-bearing for the bracing elements of derricks, the combination of a supporting-pin having two journal portions, one having an extension provided with a transverse tapered slot and the other being adapted to fit and turn within a receiving-opening in the derrick structure, there

being an annular head on the pin between said journal portions, a bracing element mounted upon the first-named journal portion and formed with a bore for the passage of the same, the base of said bracing element being arranged to bear upon the contiguous face of the head, and the adjacent end of the bore being enlarged to provide a recess of angular form, a sectional bushing in the bore and about the coöperating journal portion of the pin, said bushing having one of its ends resting against the head and formed with an angular flange seated in said recess and coöperating with the walls of the recess to hold the bushing from rotation, and a tapered key fitted in the transverse tapered slot in said journal extension and holding the bracing element from movement on its journal portion away from the head, substantially as described.

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

JOHN B. CURTIS.

Witnesses:
MARGARET E. CURTIS,
CARRIE V. FEY.