No. 865,899. PATENTED SEPT. 10, 1907.

F. H. HOWARD.

JOURNAL BEARING.

APPLICATION FILED NOV. 10, 1906.

Fig. 2.

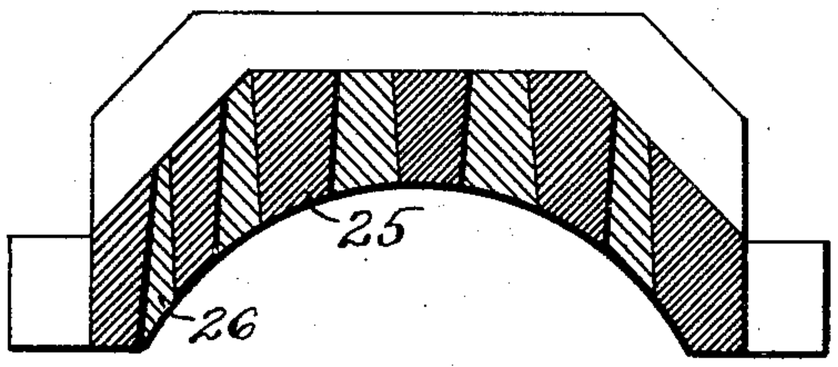
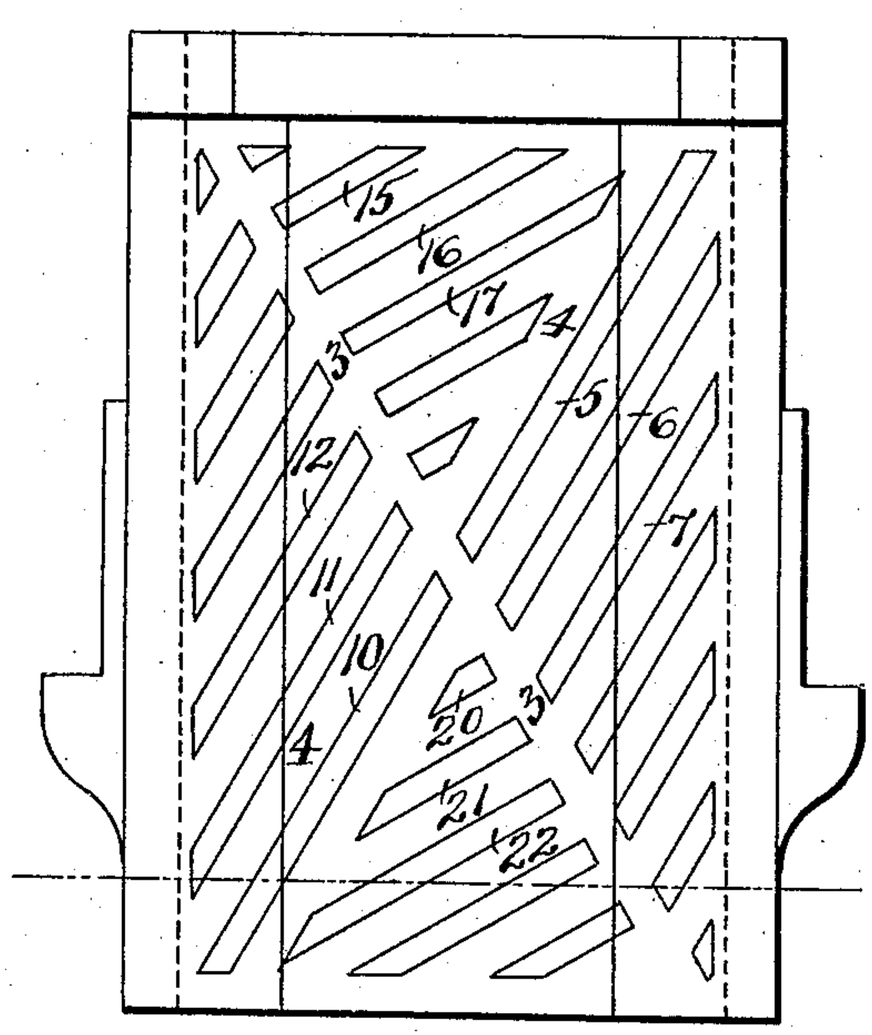


Fig. 1.



Witnesses

D. M. Stewart

Caleb J. Diebel,

Frank H. Howard,

Inventor

by M. L. Stewart

Attorney

UNITED STATES PATENT OFFICE.

FRANK H. HOWARD, OF BROOKSIDE, NEAR READING, PENNSYLVANIA.

JOURNAL-BEARING.

No. 865,899. Specification of Letters Patent. Patented Sept. 10, 1907.

Application filed November 10, 1906. Serial No. 342,766.

To all whom it may concern:

Be it known that I, FRANK H. HOWARD, a citizen of the United States, residing in Brookside, near Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Journal-Bearings, of which the following is a specification.

My invention relates to journal bearings adapted for railway cars or like purposes, and my object is to provide a bearing of improved construction, which will facilitate proper lubrication, and insure satisfactory service.

The invention is fully described in connection with the accompanying drawing and the novel features are specifically pointed out in the claims.

Figure 1 is a plan view of a journal bearing embodying my invention. Fig. 2 is a sectional elevation of the same.

The general form of bearing shown in the drawing is well known as applied to car journals: The essential features of my improved construction consisting in the grated form indicated, and in the soft metal filling thereof. It will be seen the main portion of the bearing is grated in form so as to provide obliquely arranged bars and intervening open spaces, extending through the whole thickness of the bearing.

As shown the grating comprises two main diagonal bars 3 and 4, crossing each other about midway of the length of the bearing, with connecting bars arranged in four series each forming a V-shaped section of the bearing. The side sections are each made up of a series of parallel bars with oblique spaces between them marked 5, 6, 7, and 10, 11, 12 respectively, of varying lengths, and all extending parallel with the main diagonal bar 4; while the front and rear, or end, sections, are made up of parallel connecting bars separated by spaces 15, 16, 17 and 20, 21, 22 respectively, and extending obliquely between the spreading main bars 3 and 4. The intervening spaces between the several bars, extend, as already stated, through the whole thickness of the bearing, and the width of the spaces increases towards the curved bearing surface 25, owing to the inwardly tapered cross-sectional form of the bars, so that the fusible bearing metal 26 with which said spaces are preferably filled in the finished bearing, is solidly packed therein under the bearing pressure notwithstanding the fact that the openings extend entirely through the bearing.

In this grated form of bearing, the main diagonal bars with their connecting branches to the solid outer portions, forms a well braced construction of great strength notwithstanding the openings provided between the bars; while the obliquely intersecting bearing metal with which said slotted openings are preferably filled, provides a series of zig-zag courses across the journal for thoroughly spreading the lubricant, while at the same time combining with it; and also serves to prevent cutting by any grit or the like that may find its way to the bearing. In case extreme overheating should occur because of failure of the supply of lubricant, causing the melting of the fusible filling metal, the bearing is still serviceable without it, and the cooling of the journal may be more quickly and thoroughly effected because of the facility with which a copious supply of water or lubricant may be directly supplied to the journal through the openings between the bars of the bearing.

What I claim is:—

1. A one-part journal bearing of grated form having separate series of parallel bars intersecting each other obliquely, and spaces between the bars filled with a different bearing metal forming broken zig-zag lines extending across the bearing, substantially as set forth.

2. A grated journal bearing having main diagonal bars crossing each other midway of the length of the bearing to form converging V-shaped sections, and connecting bars extending parallel with one of said main bars in the side sections and obliquely across the end sections, the spaces between the bars being filled with bearing metal.

3. A grated journal bearing having main diagonal bars crossing each other midway of the length of the bearing to form converging V-shaped sections, and connecting bars extending parallel with one of said main bars in the side sections and obliquely across the end sections, said bars being tapered toward the bearing surface and the spaces between the same being filled with bearing metal.

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

FRANK H. HOWARD.

Witnesses:
D. M. STEWART,
W. G. STEWART.