(No Model.)

J. W. GARRATT.

JOURNAL BEARING.

No. 386,808. Patented July 31, 1888.

Fig. I.

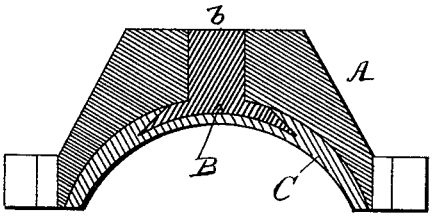


Fig. II.

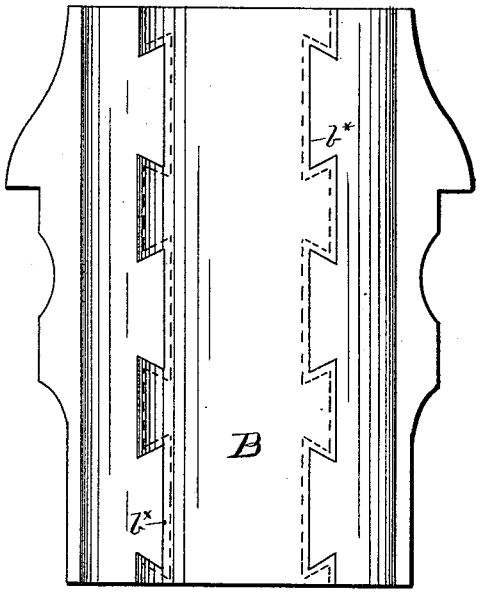
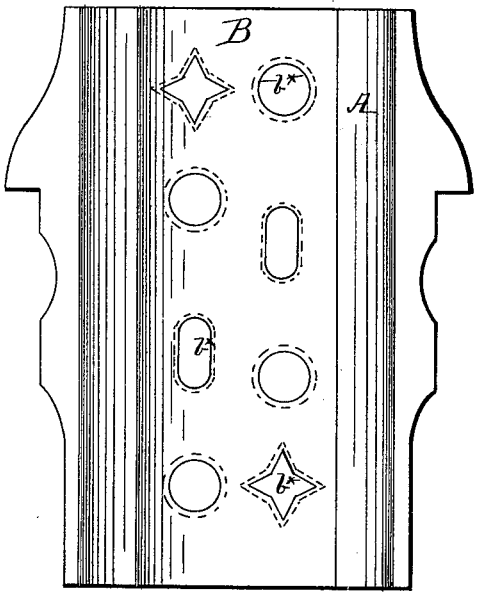


Fig. III.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN W. GARRATT, OF ST. LOUIS, MISSOURI.

JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 386,808, dated July 31, 1888.

Application filed September 1, 1885. Serial No. 175,915. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. GARRATT, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Journal-Bearings of Railway-Cars; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to shells or boxes for journal-bearings of railway-cars, and has for its object the production of simple and inexpensive device for this use which shall combine the desirable qualities of expensive shells with greater strength and durability and with facilities for renewing the lining or wearing surface, and for presenting a second wearing-face of approved character in case the soft-metal surface is melted or worn through. I form the outer shell or box of malleable iron or soft cast-steel, which substances possess characteristics which render them peculiarly suited and desirable for this use. They are cheap and readily produced, thus reducing the initial cost and rendering them uninviting to thieves, who are liable to remove brass shells and sell them on account of the value such a body of brass possesses. On the plain inner circumference of this outer shell I secure a brass, bronze, or other soft-metal lining in some convenient manner, preferably by forming projections on the back of the inner or brass shell to protrude through openings in the back of the outer shell and be riveted thereto, if desired. There may be one or several such projections and a corresponding number of openings in the back of the journal-box. This inner shell can be made to cover any desired width or lateral area of the under side of the outer shell, and may have projections along the edge, or openings or cuts in the body, if desired, of suitable shape, or both, with undercut sides to lock to the shell a Babbitt coat which is poured round it and forms the wearing-surface for the journal.

To produce the proper thickness of Babbitt metal without waste, a mandrel of the same size as the journal is laid upon the box at a slight distance between it and the inner circumference of the brass shell, and the space is filled with Babbitt or other suitable journal metal completely covering the inner brass shell, which will lie around the dovetail projections and run under the undercut portions, completely and effectually cementing the Babbitt to the brass shell.

It is apparent with this construction that if from heating or wear the Babbitt bearing is melted or worn away the brass shell will come into service and permit the car to run on without accident or harm and without materially increasing the frictional resistance to which the journal is subjected.

The accompanying drawings illustrate what I consider the best means for carrying my invention into practice.

Figure I is a transverse section through the shell, showing the soft-metal lining and the under-cuts in the body of the brass shell. Figs. II and III are inverted plan views, of a shell with brass plates having different forms of under-cut with the Babbitt removed.

Similar letters of reference indicate corresponding parts in all the figures where they occur.

A is a malleable-iron outer shell having a plane curved under surface. B is a brass shell fitted to the curved under surface of the outer shell, and having extension *b* on its back to pass through and fasten to outer shell, A, and under-cuts *b**, formed in the sides or around openings in the brass therein.

C is a Babbitt-metal lining locked to part B by being run into the under-cuts *b**.

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

In a journal-box, the combination, with the outer shell, A, having a plane curved under surface, of an inner shell, B, of brass fitted to the curved under surface of the outer shell and having under-cuts, as described, and a lining of Babbitt or other journal-box metal molded in said journal-box and locked thereto between the under-cuts of the shell B and the curved under surface of the shell A, as set forth.

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

JNO. W. GARRATT.

Witnesses:
CHAS. H. GLEASON,
R. M. PRINGLE.