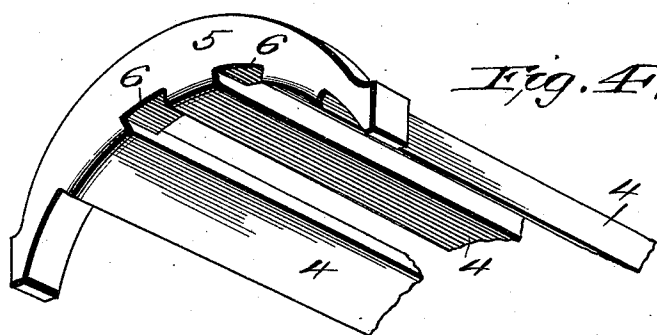
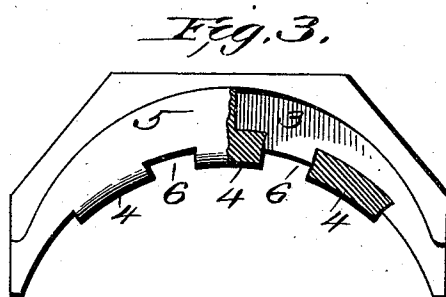
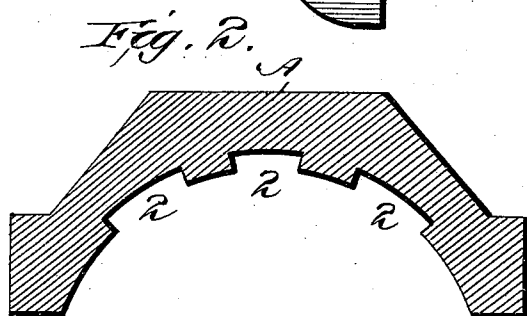
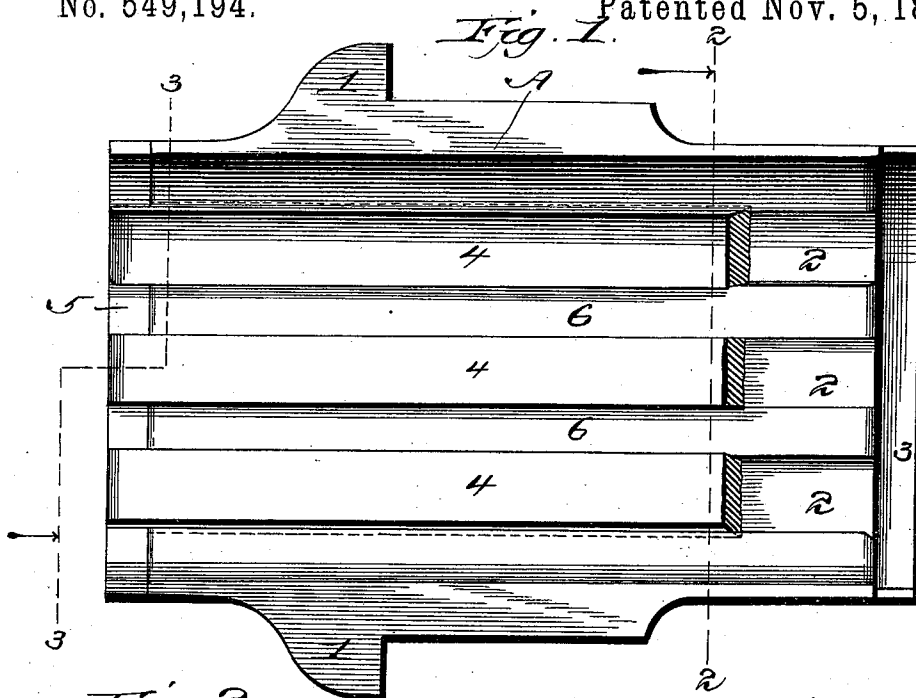


No Model.)

W. J. HEALY.
JOURNAL BEARING.

No. 549,194.

Patented Nov. 5, 1895.



Witnesses:
Geo. R. Hamlin

Inventor:
William J. Healy
by *R. L. DuBois*
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM J. HEALY, OF SUSQUEHANNA, PENNSYLVANIA.

JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 549,194, dated November 5, 1895.

Application filed July 29, 1895. Serial No. 557,441. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. HEALY, a citizen of the United States, residing at Susquehanna, in the county of Susquehanna and State of Pennsylvania, have invented certain new and useful Improvements in Journal Boxes or Bearings; 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 car journal boxes or bearings, and more particularly to that portion of the journal-box commonly known as the "brass" or "shell."

Heretofore journal brasses or shells have been grooved or recessed longitudinally or otherwise, thereby adapting them for the reception of raised bearing-strips for the journal, so that the frictional surface will be reduced and the heat caused thereby lessened in proportion. It is also old and well known to the art to which my invention appertains to longitudinally groove the journal brasses or shells in such manner that the bearing-strips may be slid in said grooves from the end of the shell and then secured therein.

The object of my invention is to provide superior means for locking the bearing-strips against endwise displacement and at the same time provide the shell with transverse end recesses for the reception of the lining-metal, so that the bearing can be used until the lengthwise strips are worn down to the shell or the collars of the journal have worn out the end linings, thereby leaving the shell intact and ready to be refilled with a fresh lining.

A further object of my construction is to so dispose the end lining in the shell that it will lie flush with or beneath the end and inside surfaces of the shell in order to prevent the metal from breaking off and to thoroughly protect the shell from frictional contact with the journal, so that it can be used over and over again.

To these ends my invention consists in the peculiar features and combinations of parts

more fully described hereinafter, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents an inverted plan view of my improved journal brass or shell with the bearing-strips in position and shown broken away at one end of the shell to disclose the longitudinal and transverse grooves; Fig. 2, a sectional view taken on line 2 2 of Fig. 1 with the bearing-strips removed, showing the longitudinal grooves; Fig. 3, a combined elevation and section taken on line 3 3 of Fig. 1, showing the bearing-strips in position and the contour of the end rabbets; and Fig. 4, a perspective view showing a portion of the integral longitudinal and transverse bearing-strips removed from the shell.

A represents a journal shell or brass which may be formed of brass, cast-iron, malleable iron, steel, or any other metal best suited to the purpose and which is provided with the usual flanges or ears 1, whereby the shell may be held in position in the journal-box. This shell I groove or recess longitudinally to provide the parallel dovetail seats 2, which may be of any desired number and width. The shell is also recessed at each end to provide the transverse curved rabbets 3, which intersect the longitudinal grooves 2.

To apply the bearing-surface for the journal and its collars, the shell A is placed on a suitable mandrel and lead, Babbitt metal, white metal, composition metal, or any other suitable metal poured into the respective seats and rabbets. The mandrel should be of such form that the metal will fill the longitudinal seats 2 and project to provide the bearing-strips 4, while the end rabbets 3 will be allowed to fill flush with the end of the shell to form the bearing-faces 5 for the respective journal-collars.

From the foregoing construction it will be seen that longitudinal air-spaces 6 will be provided between the raised strips 4, which will tend to lessen the amount of friction-generated heat which proves so injurious in many cases.

The advantages of the present construction are several and obvious and will now be enumerated.

A substantial shell may be employed and

is practically indestructible, because as soon as the bearing-strips, both for the journal and journal-collars, become worn out the shell can be removed from the journal-box, placed
5 on a suitable mandrel, the old bearing metal removed and new metal poured in, and all the seats and rabbets filled quickly, easily, and simultaneously, owing to their intersection. The dovetail seats also act to prevent the
10 bearing-strips from becoming loosened, while all the bearing-metal is formed integral, and hence is tightly held in the shell against displacement in any direction. The friction is also reduced to a minimum, as the bearing-
15 surface is comparatively small. Hence the general wear and tear on the whole shell is lessened.

A still further advantage resides in the fact that the whole bearing may be employed with
20 a journal that has become reduced in diameter owing to wear. This may be accomplished by simply using an unfilled shell, placing it on a mandrel of the diameter of the journal, and filling with the requisite amount of bearing metal.
25

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

1. A journal box or bearing comprising a shell provided with raised longitudinal bearing-strips separated by an airspace, and transverse bearing strips for the journal collars. 30

2. In a journal box or bearing, the combination with a shell having a plurality of parallel dove-tailed longitudinal grooves or recesses formed in its bearing face and extending from end to end and intersecting curved transverse grooves or rabbets in its end or face portions, of raised bearing strips secured in the longitudinal grooves and separated by
35 air spaces, and bearing material secured in the curved transverse rabbets, substantially as described.

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

WILLIAM J. HEALY.

Witnesses:

EUGENE CHRISTEN,
A. W. COOK.