(Model.)

T. V. LE ROY.

JOURNAL BEARING.

No. 260,103. Patented June 27, 1882.

Fig. I.

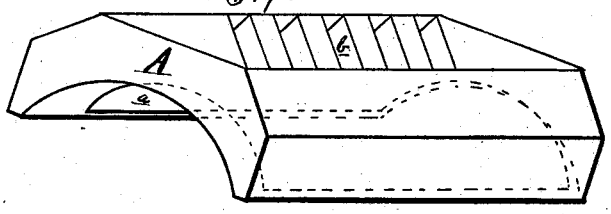


Fig. II.

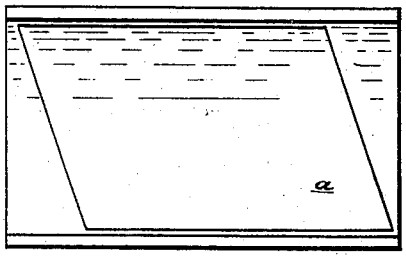
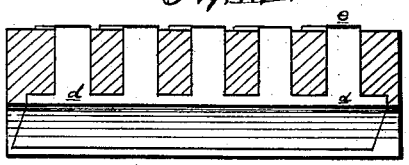


Fig. III.



Witnesses,
Byron Tripler
L. Barnes

Inventor,
T. V. LeRoy
by A. W. Gilman
his attorney

UNITED STATES PATENT OFFICE.

TUNIS V. LE ROY, OF UTICA, NEW YORK.

JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 260,103, dated June 27, 1882.

Application filed April 28, 1882. (Model.)

To all whom it may concern:

Be it known that I, TUNIS V. LE ROY, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Journal-Bearings; and I do hereby 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.

My invention relates to that part of a car-axle box which is known as the "brass" or "bearing;" and the nature thereof consists in combining a hard-metal shell with a soft-metal cast into the shell, as hereinafter described.

Journal-bearings have been heretofore constructed of two metals, the one soft and the other hard; and they have been so constructed that the soft metal forms a lining standing so far beyond the hard-metal part of the bearing as to give the requisite amount of bearing-surface. Thus in the English patent of Baron de Struling, No. 12,876 of 1849, a bearing is described, the interior of which consists of a soft metal compounded of lead, zinc, and antimony, which projects beyond the hard-metal shell and receives the journal.

In the accompanying drawings, Figure I illustrates the hard-metal shell. Fig. II represents the journal side of the bearing, and Fig. III is a longitudinal vertical section.

The shell or hard-metal portion of the bearing A is provided with a cavity, *a*, of about one-fourth of an inch in depth, the ends of which are preferably arranged at an angle with the axis of the journal, so as to hold the soft-metal filling firmly in position. A series of diagonal or spiral openings extend entirely through the shell or hard-metal part from the cavity *a* to the top of the bearing. The soft-metal part of the bearing is usually composed of a mixture of lead, zinc, and tin—for example, three pounds of lead, one pound of zinc, and two ounces of tin.

In pouring the molten compound the shell should be so arranged that the zinc, rising to the top, will form the bearing-surface *d* for the journal, and the lead cushions *c* between the bearing and the axle-box.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. A journal-bearing for the axles of cars or other vehicles, consisting of a shell, A, provided with the cavity *a* on its under side, and a series of openings, in combination with lead or other soft-metal filling.

2. A journal-bearing for car-axles, consisting of a shell, A, having a cavity, *a*, and a series of diagonal openings, *b*, in combination with soft-metal filling the cavity and diagonal openings, as and for the purpose set forth and described.

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

TUNIS V. LE ROY.

Witnesses:
BYRON TRIPLER,
L. BARNES.