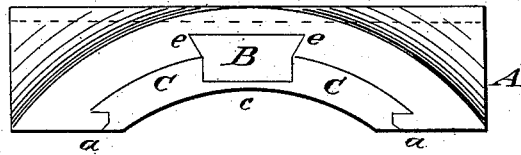


J. SWEENEY.  
Journal Bearing.

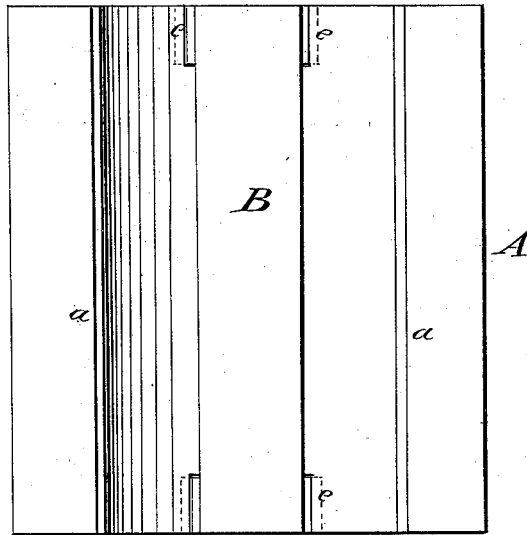
No. 199,669.

Patented Jan. 29, 1878.

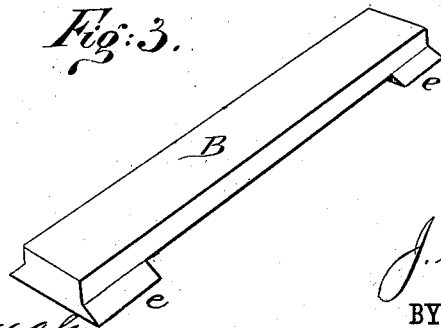
*Fig: 1.*



*Fig: 2.*



*Fig: 3.*



WITNESSES:

*Chas. Nida*  
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INVENTOR:

*J. Sweeney*  
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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN SWEENEY, OF NEW HAVEN, CONNECTICUT.

## IMPROVEMENT IN JOURNAL-BEARINGS.

Specification forming part of Letters Patent No. **199,669**, dated January 29, 1878; application filed June 25, 1877.

*To all whom it may concern:*

Be it known that I, JOHN SWEENEY, of the city and county of New Haven, and State of Connecticut, have invented a new and Improved Journal-Bearing, of which the following is a specification:

This invention relates to bearings intended specially for the journals of car-axles, though adapted also to other purposes, and is an improvement on the patent of Brower, granted June 9, 1863, No. 33,808.

The object of said invention is to make the attachment of the central rib of hard metal independent of the anti-friction inner metal, so that the melting of the latter cannot subject said rib to danger of dislodgment; also, to avoid all necessity for weakening the brass casing of the bearing by perforations. This object is accomplished by dovetailing the central strip of hard metal into the outer casing and omitting all perforations or recesses in either of these parts, the construction, combination, and arrangement of the three metals forming my bearing being as hereinafter more fully set forth.

In the annexed drawings, Figure 1 is a cross-section through the cap of a car-axle box, illustrating one application of my invention. Fig. 2 is a bottom view of the same without the soft-metal lining. Fig. 3 is a perspective view of the rib.

Similar letters of reference indicate corresponding parts.

The letter A designates the body or shell of the bearing, which, in this instance, is the cap of a journal-box for a car-axle. This shell may be made of cheap brass, of cast-iron, or of any other metal.

B designates a rib, which should be made of the best wearing metal or alloy of metals. For instance, an alloy made of copper and tin in suitable proportions may be used. This rib is a narrow strip of metal, having flat sides and dovetail tenons *ee* on its ends, as shown in the drawing, and it is made separate from the shell A, and adjusted in the sand-mold, so

that when the metal is poured in the mold to form the shell the rib B will be firmly united to it.

The shell is formed with lips or flanges *aa*, which leave recesses that are intended to receive a soft-metal filling, C, composed of Babbitt metal or any other suitable metal or alloy of metals.

The filling or lining C should cover the flat face of the rib B, as shown at *c* in Fig. 1, so that in commencing to use the bearing the journal will run in soft metal alone. As the soft metal wears and the journal finds a seat in the box, the flat face of the rib B will be exposed and the journal will find a bearing against it. The parts will then be perfectly true, and the journal will run true without heating.

In practice I may use more than one bearing-rib, B, and I may cast the rib or ribs and the shell separate, and secure them together by bolts or in any other suitable manner. I prefer, however, to cast the shell on the rib, as described.

It will be observed that when the journal first impinges against the flat surface of the rib B a very small amount of wearing-surface will be presented. After a time, as the rib wears, this surface will be gradually increased.

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

The combination of an imperforated outer casing of cheap metal with a longitudinal central rib of hard metal, dovetailed into the inside of said casing, and an inner facing of anti-friction metal secured by flanges on the inside of said casing, the attachment of said central rib to the shell being entirely independent of the anti-friction facing, substantially as set forth.

JOHN SWEENEY.

Witnesses:

C. SEDGWICK,  
ALEX. F. ROBERTS.