

G. R. MENEELY.

Journal-Boxes.

No. 133,472.

Patented Nov. 26, 1872.

Fig. 1.

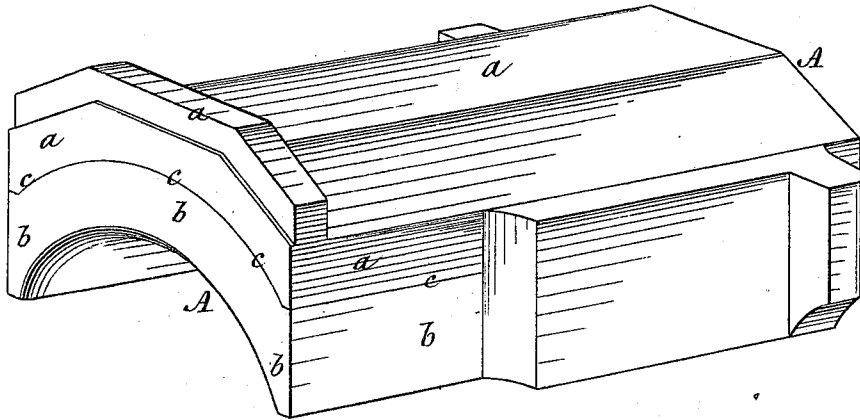
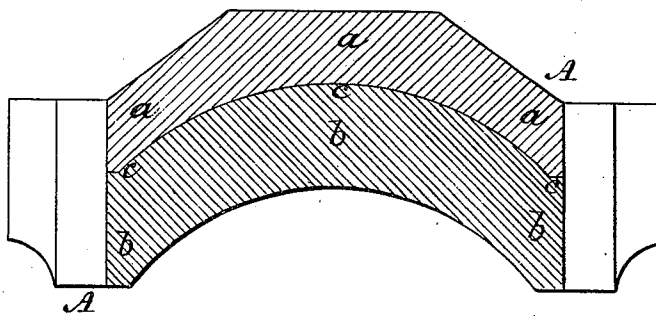


Fig. 2.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN JOURNAL-BOXES.

Specification forming part of Letters Patent No. 133,472, dated November 26, 1872.

To all whom it may concern:

Be it known that I, GEORGE R. MENEELY, of West Troy, in the county of Albany and State of New York, have made certain new and useful Improvements in Journal-Boxes for Railroad-Car Axles and other purposes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents in perspective one part or half of a journal-box, which will illustrate my invention; and Fig. 2 represents a cross-section through the same.

In addition to the process of welding brass, or alloy of copper, to iron or steel, and the manufacture of journal-boxes having iron or steel backs, and a hard brass or bronze lining, made by such process, I have also discovered that a journal-box may be made with some degree of economy and of great value without using either an iron or steel back, and which would avoid one of the incidents that such iron or steel backs are liable to—namely, allowing the iron or steel of the journal or axle, by long and great wear, to come in contact with the iron or steel back of the journal-box, which would cause them to heat, clog, and fracture, and cause accident.

My present invention consists in a new article of manufacture, viz., a journal-box in which the back, which is the strengthening part of the box, is made of soft, tough bronze, and the lining or wearing part made of bell metal; and by bronze and bell metal are meant certain alloys of copper well known to those skilled in the art to which they pertain.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawing, first premising that, as both the back or tough metal and the lining or hard metal are used in a fluid or molten state, it is immaterial whether the lining be flowed into, and so welded to the back, or whether the lining be first made and the metal to form the back be flowed onto, into, or over such lining; either way will answer, but the union of the two metals is made by flowing or casting one of

them in a molten state onto the other in a hardened condition by being cooled or less heated.

In the drawing, A represents part of a journal-box of any suitable shape, size, or form, and furnished with such recesses, flanges, or shoulders as may be required. The back or tough-metal portion of the box is shown at *a*; the lining or hard-metal portion is shown at *b*. The line of weld or union between these two metals, though distinctly marked by a line, *c*, in the drawing, is not so in practice, as one metal, the molten one, seems to run into, over, and around the surface of the other metal so as to form a very visible but not regular line of union. The metals seem to fuse and change places at the line of union, and to leave no semblance of a crack or unwelded portion.

A journal-box thus made of brass or bronze—one part tough for strength, and the other part hard to resist wearing, and these two parts fused or welded together by pouring one metal onto or over the other metal, though more expensive than those with an iron or steel back and bell-metal lining—possesses a quality which the latter does not, viz., it does not lie open to the objection that, after long use, an iron or steel back and an iron or steel axle are liable to come together without notice. Besides, the all bronze or brass boxes, of two metals of different consistencies, as above described, have equal strength with those that have iron or steel backs, and may be repaired, or the remaining metal, after the boxes are worn out, reused to greater advantage than those having iron or steel backs.

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

A journal-box, composed of a tough-bronze back for strength, and a bell-metal or hard-bronze lining to resist wear, said two metals being united by pouring one in a molten state upon the other, substantially as described and represented.

GEO. R. MENEELY.

Witnesses:

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