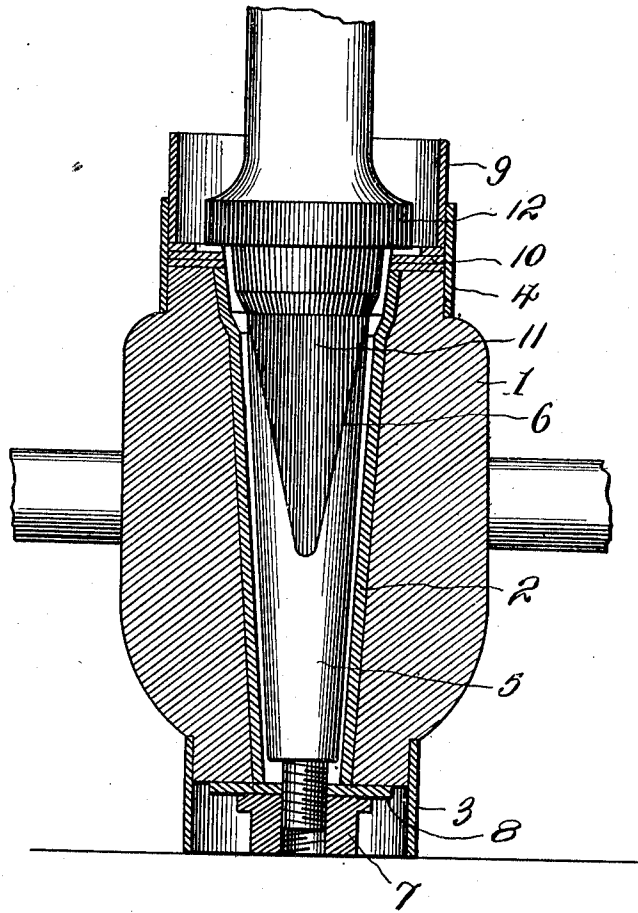


J. L. CRAMER.
PROCESS OF BABBITTING WORN VEHICLE SPINDLES.
APPLICATION FILED MAY 18, 1910.

980,071.

Patented Dec. 27, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN L. CRAMER, OF CRYSTAL, MICHIGAN.

PROCESS OF BABBITTING WORN VEHICLE-SPINDLES.

980,071.

Specification of Letters Patent.

Patented Dec. 27, 1910.

Application filed May 18, 1910. Serial No. 562,022.

To all whom it may concern:

Be it known that I, JOHN L. CRAMER, a citizen of the United States, residing at Crystal, in the county of Montcalm and State of Michigan, have invented new and useful Improvements in Processes of Babbitting Worn Vehicle-Spindles, of which the following is a specification.

This invention relates to a process for repairing worn vehicle spindles by applying Babbitt or other bearing metal to the worn portion of the spindle when the same is in position upon the hub of the vehicle wheel, and has for its object to render the process more expeditious and greatly cheaper.

Spindles when worn away from constant friction with the boxing of the vehicle hub are rendered entirely useless, and in order to repair the same some suitable metal is ordinarily welded over the worn places of the spindle. This method requires a great length of time and is not only costly but unsatisfactory, as the welded portions frequently form projections that prevent the entire spindle from closely engaging with the boxing, thus causing the wheel to wobble and to bear against only certain parts of the boxing. A spindle thus repaired renders the vehicle dangerous, as the weld is liable to become disconnected and the spindle broken.

In order to more fully illustrate my improved process, reference is to be had to the accompanying drawings, in which:—

The figure represents a cross sectional view of a vehicle hub with the worn spindle in place upon the boxing thereof, and the Babbitt or other bearing material applied to the worn portions of the spindle.

In the drawing, the numeral 1 designates a vehicle hub of any ordinary description and 2 the metallic boxing for the hub. The hub 1 is provided with the usual metallic bands 3 and 4.

The numeral 5 designates the spindle, and 6 the worn portions of the spindle.

In the illustration it will be noted that the boxing and spindle are sustained in an inverted position and the nut 7 for the threaded extremity of the spindle is only connected thereto by engaging one or two of

the threads. Positioned around the end of the spindle and between the nut 7 is a disk 8, which is constructed of card-board or the like. Inserted around the interior of the band 4 is a card-board collar 9 which is positioned upon the offset or inner face of the hub 1 and which is provided with a plurality of card-board washers 10. Before the spindle 5 is inserted within the boxing 2, the same is thoroughly cleansed and wiped dry, while the boxing is adapted to receive a coating of oil or other lubricating material.

It will be noted that by applying the nut 7 as heretofore stated a space is left between the boxing and the spindle, so that the spindle does not contact with the oiled boxing 2. The Babbitt metal 11 is poured within the paper collar 9 and allowed to run upon the spindle adjacent the boxing. The Babbitt metal will readily adhere to the worn portion 6 of the spindle and the same will also adhere to the collar 12 of the said spindle so as to enlarge the same and to prevent the entrance of dust or dirt to the boxing. When the metal 11 has been applied, the nut 7 is screwed in as tightly as possible so as to compress the collar 12 against the paper washers 10. When the metal upon the spindle has worn after constant use of say six months or more, the spindle may be removed from the boxing so that one of the washers 10 may be taken away and the nut 7 may be then more securely tightened upon the threaded extremity of the spindle when the same is repositioned within the boxing 2 so as to cause the spindle to tightly engage with the boxing.

I claim—

The herein-described method of repairing axles, which consists first in thoroughly cleaning the spindle and collar of the axle to render the same susceptible to a union with another metal, second of preparing the boxing of the vehicle so as to render the same non-susceptible to adhesion with a metal, then applying paper-washers to the opposite ends of the boxing, then applying a paper ring to the interior of the sand band of the hub, then inserting the spindle

through the washers and boxing, then placing a nut on the extreme end of the threaded portion of the spindle and causing the same to bear against the paper washer, and then
5 applying melted bearing metal through the paper collar to permit the same to surround and adhere to the spindle.

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

JOHN L. CRAMER.

Witnesses:

JAS. McCracken,
T. J. Pinkston.