

No. 792,761.

PATENTED JUNE 20, 1905.

W. M. DUNCAN.
JOURNAL BOX FOR CAR WHEELS.
APPLICATION FILED JAN. 3, 1905,

FIG. I.

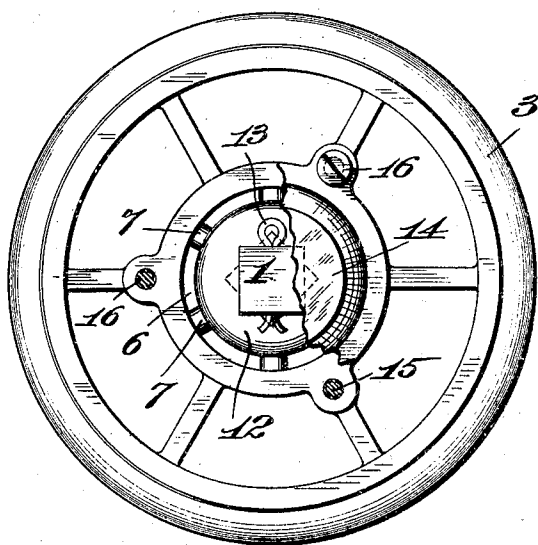


FIG. II.

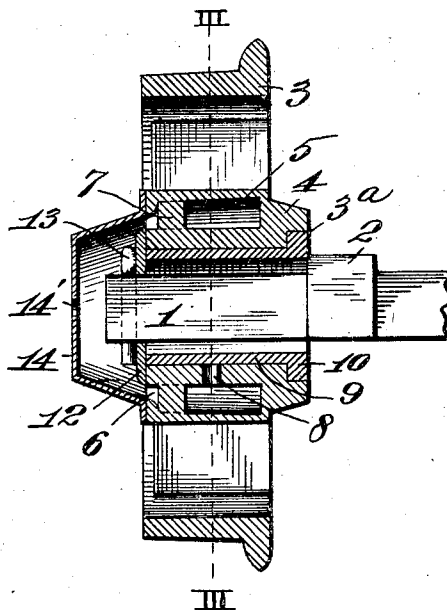


FIG. III.

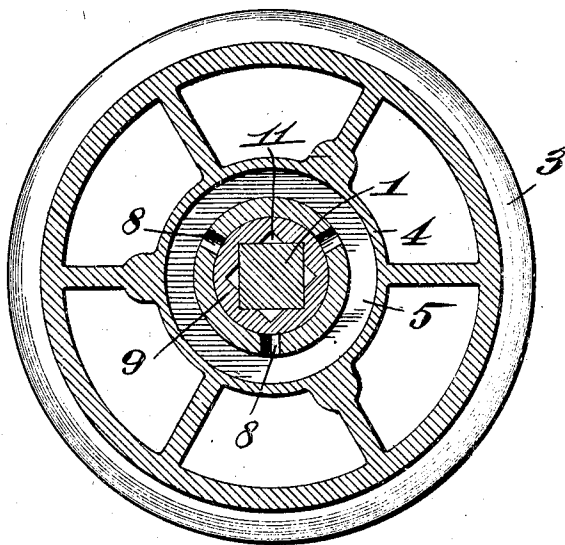
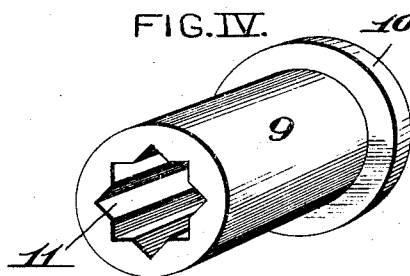


FIG. IV.



ATTEST.

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JOURNAL-BOX FOR CAR-WHEELS.

SPECIFICATION forming part of Letters Patent No. 792,761, dated June 20, 1905.

Application filed January 3, 1905. Serial No. 239,535.

To all whom it may concern:

Be it known that I, WILLIAM M. DUNCAN, a citizen of the United States, residing at Alton, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Journal-Boxes for Car-Wheels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a journal-box for car-wheels, the objects of the improvement being the production of a construction by which the journal member to which the wheel is fitted is rendered removable to prevent inside wear at any point and maintain said member in a satisfactory working condition.

Figure I is an elevation of my wheel, partly broken out. Fig. II is a vertical longitudinal section taken through the wheel. Fig. III is a transverse section taken through the wheel on line III III, Fig. II. Fig. IV is a perspective view of the skein or axle-carried journal member.

1 designates the spindle of an axle, which is of non-circular shape in cross-section, preferably square, and extending from an enlargement 2 on the axle, as seen in Fig. II.

3 designates the car-wheel, having a hub 4, in which is an annular oil-chamber 5. This oil-chamber is open at the front side of the wheel, as seen at 6, Figs. I and II, due to the existence of spaces between bracing-webs 7 at the front of the chamber. Extending inwardly from the oil-chamber through the innermost portion of the hub 4 and toward the axis of the hub are ducts 8.

9 designates a skein or journal member having an external cylindrical journal-surface to which the hub of the car-wheel fits to rotate thereon and provided at its inner end with an annular flange 10, that sets into a socket 3^a in the inner end of the wheel-hub and bears against the axle enlargement 2. The skein 9 is provided with a non-circular bore 11, containing a plurality of grooves to provide for the application of the journal member to the

non-circular axle-spindle 1. The bore is preferably of star shape in end view or cross-section of the skein, as seen in Fig. IV. The car-wheel and the journal member 9 are held in position on the spindle by suitable means, such as the washer 12, fitted to the spindle and bearing against the wheel-hub and skein at their forward ends, and a key 13, passing through said spindle.

14 designates an oil-reservoir cap tightly fitted to the outer end of the wheel-hub 4 by suitable means, such as studs 15, projecting from the spokes or web of the wheel, that pass through the flange of the reservoir-cap and are equipped with nuts or screws 16. (See Fig. I.) The reservoir-cap in the position in which it is located incloses the open forward end of the oil-chamber 5 in the wheel-hub, and the interior of the reservoir-cap and oil-chamber are therefore in communication. In the central portion of the oil-reservoir cap is an inlet-aperture 14', through which oil is introduced into said cap.

The greatest point of wearing contact between the axle-carried journal member 9 and the wheel turning on said member is at the bottom of said axle-carried member. When such wear occurs, another point of surface of the spindle-carried journal member may be readily presented lowermost by removing the skein 9 from the axle-spindle and turning it to bring a less worn portion of the member lowermost. Then when the skein is replaced upon the spindle the less worn point of surface will take the wear at the low point of greatest friction. This changing of position of the skein may be continued from time to time until the skein becomes unfit for service, and each time that the spindle-carried journal member is turned in a new position it will be held from rotation on the spindle, due to the spindle being non-circular and the journal member having a bore of such shape as to receive the spindle and permit of its being held non-rotatively in various positions thereon.

While I have shown my journal-box applied

to a self-oiling wheel, no invention *per se* is claimed for the lubricating feature, as the journal-box may be applied to any car-wheel.

I claim as my invention—

5 1. The combination of a non-circular axle-spindle, a journal member having a central bore extending longitudinally therethrough and provided interiorly with a plurality of grooves to receive the corners of said spindle, 10 substantially as set forth.

2. The combination of an axle-spindle of non-circular cross-section, and a journal member having a central bore extending longitudinally therethrough and provided interiorly 15 with a plurality of grooves to receive the corners of said spindle, each of the grooves fit-

ting a plurality of the corners so as to permit of the journal member being inserted in various positions on the axle-spindle, substantially as set forth. 20

3. The combination of an axle-spindle provided with a plurality of longitudinal projections on its exterior, and a journal member having a central bore extending longitudinally therethrough and provided interiorly 25 with a plurality of grooves; each of the journal-member grooves fitting any one of the spindle projections, substantially as set forth.

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Witnesses:

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