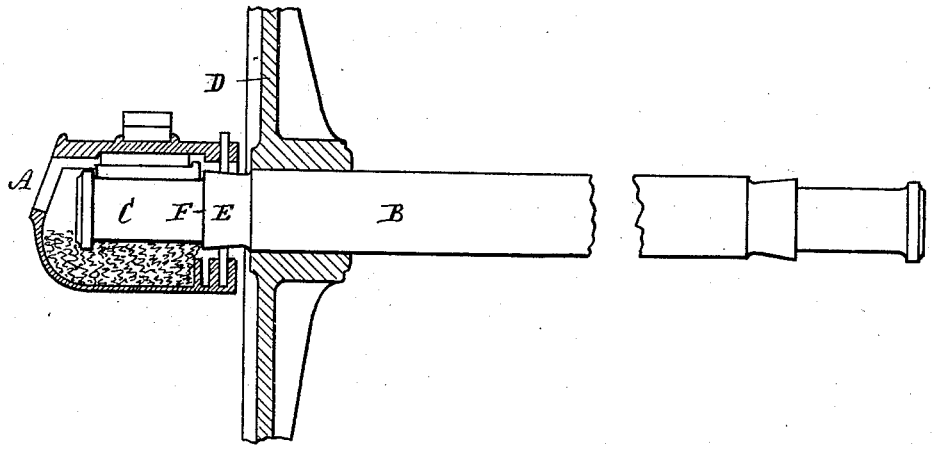
(No Model.)

H. WOLFERTZ.

CAR AXLE.

No. 346,009. Patented July 20, 1886.



Attest:
John Schuman.
T. J. Sprague

Inventor:
Herman Wolfertz.
by his Atty
Thos. J. Sprague

UNITED STATES PATENT OFFICE.

HERMAN WOLFERTZ, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO CHARLES W. WOLFERTZ AND JAMES R. PEMBERTHY, OF SAME PLACE.

CAR-AXLE.

SPECIFICATION forming part of Letters Patent No. 346,009, dated July 20, 1886.

Application filed April 24, 1886. Serial No. 200,071. (No model.)

To all whom it may concern:

Be it known that I, HERMAN WOLFERTZ, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Axles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification.

This invention relates to a new and useful improvement in axle-bearings; and the invention consists in the peculiar formation of the axle for the purpose of preventing the lubricant in the journal-box from being wasted by the action of the centrifugal force when the axle is in motion.

The bearing of a car axle is made of less diameter than the parts adjoining, and the natural consequence of this formation is, that when the car is in motion some of the lubricant will, by the action of the centrifugal force, gradually be drawn from the bearing upon the adjoining portion which is outside the journal-box, and from there it will be thrown off and wasted, as experience has demonstrated. It is usual, in practice, to form shoulders or offsets between the axle-bearing and between that part of the axle upon which the wheel is secured, and which is of larger diameter; but it is clear that this arrangement forms no remedy, neither will a so-called dust-guard. In my improvement the oil is retained within the journal-box by means of a taper formed between the axle-bearing and between the adjoining part on which the wheel is secured, all as hereinafter described, and shown in the accompanying drawing, in which A is the journal-box, B the axle, C the axle-bearing, and D a wheel.

E is a taper, formed between the axle-bearing and that adjoining portion of the axle to which the wheel is secured. This taper has its larger diameter immediately adjoining the bearing, so as to form an offset or shoulder, F. This offset or shoulder is still within the journal-box, and its outer diameter is larger than the diameter of the axle-bearing and of the adjoining portion of the axle.

In practice, it will be seen that all the lubricant which escapes from the bearing is by the centrifugal force collected at the shoulder or offset F, from whence it is again thrown into the journal-box, instead of being wasted, as in the ordinary form of axle, where it is drawn onto the thicker portion of the axle outside the journal-box.

I am aware of the Patents Nos. 29,551 and 312,181, and make no claim to the construction shown therein as forming part of my invention.

I deem it important that the taper extend outside of the journal-box, as shown, whereby all liability of the oil being thrown onto the thicker portion of the axle is avoided.

What I claim as my invention is—

In an axle-bearing, a taper formed between the bearing and the adjoining portion of the axle on the inside, said taper having its largest diameter on the side toward the bearing, and extending outside of said box, substantially as and for the purpose described.

HERMAN WOLFERTZ.

Witnesses:
H. S. SPRAGUE,
WM. TURNER.