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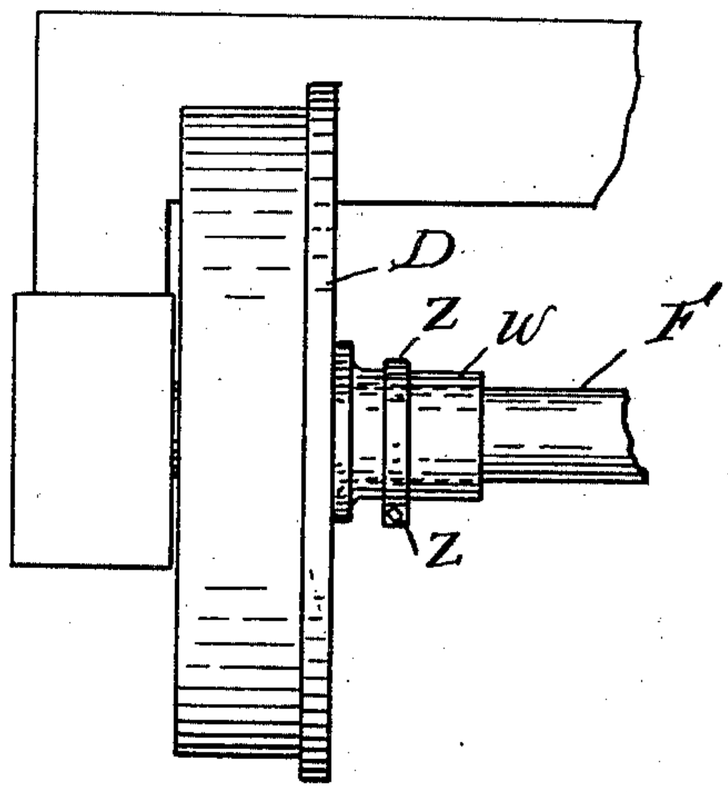
H. G. FARR.

DEVICE FOR DECREASING NOISE RESULTING FROM VIBRATION IN RAILWAY CARS.

NO MODEL. APPLICATION FILED FEB. 24, 1902.



Witnesses:
H. B. Davis.
C. W. Wilbur

Inventor:
Hiram G. Farr.
By O. M. Shaw.
Atty

UNITED STATES PATENT OFFICE.

HIRAM G. FARR, OF WINCHESTER, MASSACHUSETTS.

DEVICE FOR DECREASING NOISE RESULTING FROM VIBRATION IN RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 719,098, dated January 27, 1903.

Application filed February 24, 1902. Serial No. 95,144. (No model.)

To all whom it may concern:

Be it known that I, HIRAM G. FARR, of Winchester, county of Middlesex, and Commonwealth of Massachusetts, have made certain new and useful Improvements in Devices for Decreasing Noise Resulting from Vibration in Railway-Cars, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawing, forming a part of this specification, in which the figure is an elevation showing the device attached to a car-axle.

Like letters of reference indicate corresponding parts in the drawing.

My invention relates especially to a device whereby vibration in the axles of a railroad car or truck may be counteracted or compensated in material degree, and thereby lessen the noise resulting to such extent as not to be objectionable.

The nature and operation of the device will be readily understood by those conversant with such matters from the following explanation.

My invention is designed particularly to take up the vibration imparted to axles and other portions of structure and cars through the impact of the wheels with the rails or from the action of the motor.

To this end in the figure of the drawing a mass of lead *w* is shown encircling the car-axle F, butting against the hub of wheel D and held by a clamp *z* in rigid contact therewith.

Lead is as nearly non-vibratory as any metal or composition and is the cheapest. I find by securing a suitably-sized strip of this material at various portions of the axle of a car liable to vibrate from impact that such lead strip takes up, kills, or lessens such vibration to such extent that the noise resulting is not objectionable. On axles I find that crystallization is materially delayed, if not entirely overcome, by the use of this material, there being very slight indications of vibrations in the middle of said axle, it being checked, practically, at the wheels by the lead.

I do not confine myself to any particular method of attaching the lead, as it may be molded or cast against the parts, the salient feature of my invention being the use of non-vibratory metal, as lead or its equivalent, which will not disintegrate and will stand oxidation without losing this element and will also withstand all the wear ordinarily applied in rigid contact with any parts liable to produce noise by vibration. Moreover, it will be understood that car-wheels are rigid on the axle, that vibration is set up substantially simultaneously in each wheel, and I discover that axles almost invariably crystallize and break at the center. My theory is that this is caused by the vibrations from opposite ends meeting at the center of said axle and substantially opposing each other, tending to spread laterally and causing this crystallization. In any event my experiments demonstrate that by clamping the lead to the axle adjacent the center I effectually overcome this. In great degree this is also the result when clamped to the axle near the wheel and possibly butting the wheel-hub; but it must be in contact with the axle to attain my results, as attaching it to the wheel-web alone will not do this and will, moreover, weaken the web.

Having thus explained my invention, what I claim is—

A car-axle in combination with a mass of lead rigidly and removably attached to said axle independent of the wheel and between the longitudinal center of said axle and said wheel.

HIRAM G. FARR.

Witnesses:
O. M. SHAW,
C. M. WILBUR.