

June 19, 1923.

1,459,691

W. R. PLITT ET AL

CAR WHEEL

Filed May 27, 1921

Fig. 1.

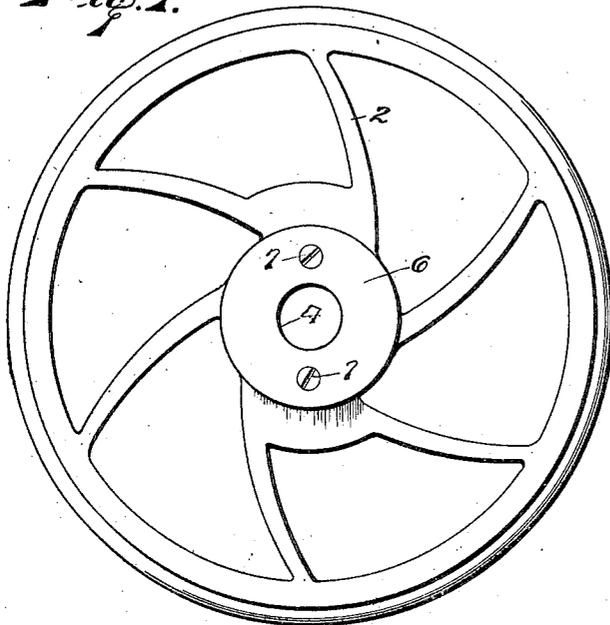


Fig. 3.

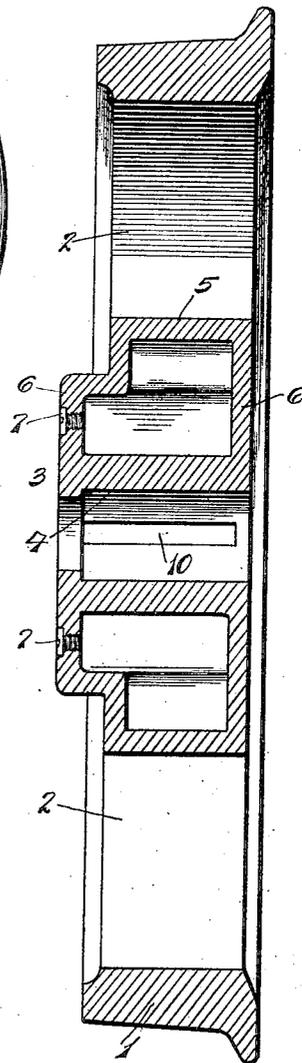
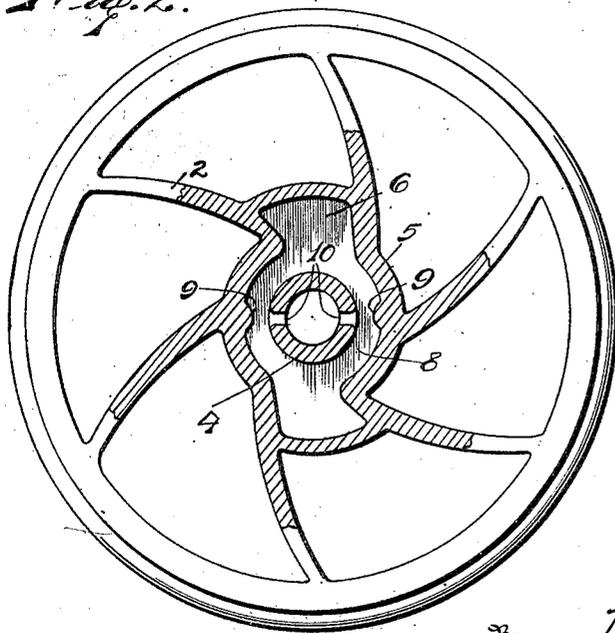


Fig. 2.



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# UNITED STATES PATENT OFFICE.

WALTER R. PLITT AND WILLIAM A. LLOYD, OF MEYERSDALE, PENNSYLVANIA.

CAR WHEEL.

Application filed May 27, 1921. Serial No. 472,966.

*To all whom it may concern:*

Be it known that we, WALTER R. PLITT and WILLIAM A. LLOYD, citizens of the United States, residing at Meyersdale, in the county of Somerset and State of Pennsylvania, have invented certain new and useful Improvements in Car Wheels, of which the following is a specification.

This invention relates to car wheels and is intended more particularly for mine car wheels but is, of course, applicable to all wheels which rotate upon an axle. The object of the invention is to provide a strong and durable wheel which will run easily at all times and in which the wear between the axle and the hub will be minimized. The invention is illustrated in the accompanying drawings and will be hereinafter fully described and specifically pointed out in the claim.

In the drawings—

Figure 1 is a side elevation of a car wheel embodying our invention;

Fig. 2 is a similar view, partly broken away and in section;

Fig. 3 is a transverse section on the line 3—3 of Fig. 2.

In the drawing, the reference numeral 1 indicates the tread or rim of the wheel, 2 indicates the spokes and 3 denotes the hub, these parts being cast as one integral structure. The hub includes a central sleeve 4 of hard chilled metal and the rim 1 may also be hard chilled metal but the other parts may be of softer material. The hub includes an irregularly shaped web 5 connecting the several spokes and the end portions of the said web are disposed at a greater distance from the center of the wheel radially than the intermediate portions, the said web being connected with the central sleeve 4 by end walls 6 thereby defining a space or chamber between the central sleeve and the webs into which oil or other lubricant may be fed through filling openings in the outer end wall 6 normally closed by plugs 7. It will be noted upon reference to Fig. 2 that the end portions of the oil chamber are of considerable capacity and are connected with each other through narrow side portions or channels 8 which are disposed con-

centric with the inner sleeve 4 of the hub. On the inner surfaces of the webs 5, at about the centers of the narrow channels 8, are ridges or longitudinal projections 9 which have substantially semicircular cross sections and constitute splashers to direct the oil into and through the openings 10 formed radially through the inner sleeve 4, and provided with beveled or rounded outer edges.

The wheel is secured upon the car axle in the usual or any preferred manner by the employment of stop rings, nuts, or other well-known devices. The entire inner surface of the inner sleeve 4 of the hub is smooth and as it is a hard chilled surface it will run upon the axle readily without cutting into the same or being worn away by the axle. The lubricant chamber is intended to be filled with oil and as the wheel rotates the oil will flow from end to end of the said chamber through the intermediate channels 8 and this circulation of the oil will cause it to strike against the projections 9 with considerable force so that it will be thrown toward the sleeve 4 and will pass through the openings 10 therein to reach the axle around which it will form a thin film between the axle and the inner surface of the hub sleeve 4, as will be readily understood.

Our improved wheel is exceedingly simple and may be produced at a low cost. By employing a hard chilled inner hub sleeve and lubricating the axle in the manner shown and described, we attain a very easy running wheel which will be very durable and in which the wear will be minimized.

Having thus described the invention, what is claimed as new is:

A car wheel consisting of a hub, spokes and a rim forming integral parts; radial projecting front and rear flanges on said hub, cylindrical walls extending between said flanges and connecting some of the spokes forming a cylindrical chamber around said hub, other short cylindrical walls connecting the remaining spokes and extending from the rear flanges, and offset flanges between said first cylindrical walls and said short walls forming pockets communicating with said cylindrical chamber,

narrow apertures with wide mouths being provided through the hub extending the entire length of said chamber, and splash ridges of semicircular cross sections across said cylindrical chamber opposite said apertures, and of the same length as the latter, whereby the lubricant contained in said chamber will be forced through said apertures by said ridges during the rotation of the wheel. 10

In testimony whereof we affix our signatures.

WALTER R. PLITT. [L. S.]  
WILLIAM A. LLOYD. [L. S.]