No. 795,690. PATENTED JULY 25, 1905.

J. A. CASEY.

WHEEL.

APPLICATION FILED APR. 12, 1905.

Fig 1.

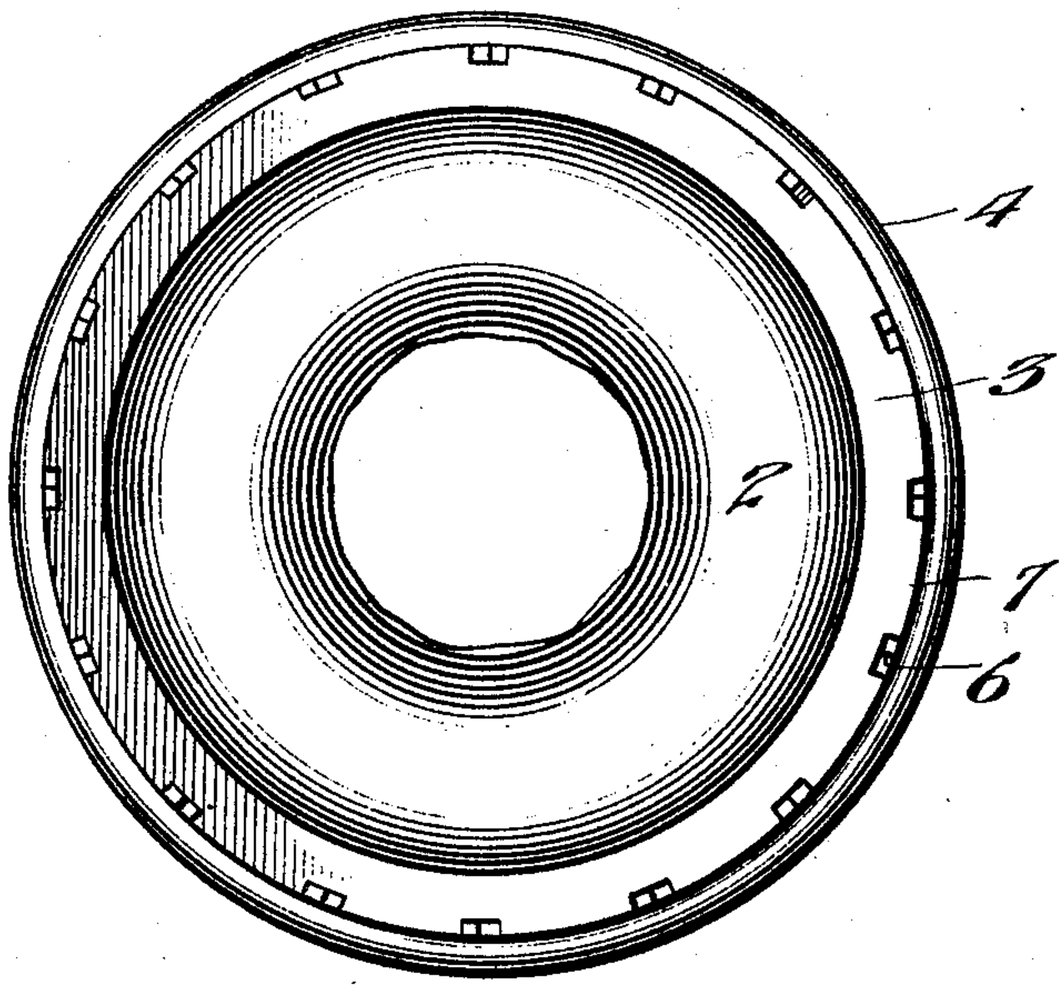


Fig 2.

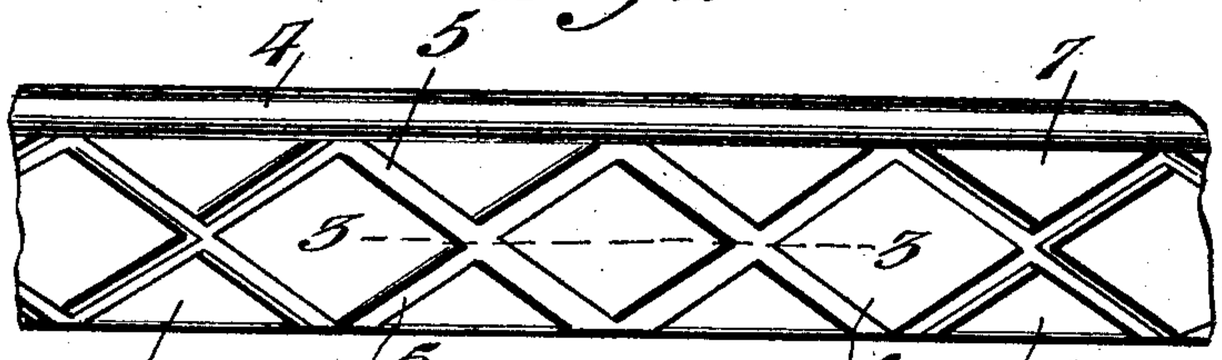
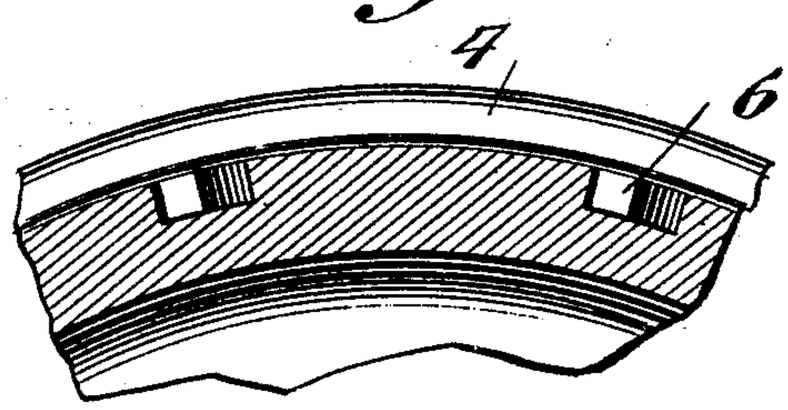


Fig 3.



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UNITED STATES PATENT OFFICE.

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WHEEL.

No. 795,690. Specification of Letters Patent. Patented July 25, 1905.

Application filed April 12, 1905. Serial No. 255,199.

To all whom it may concern:

Be it known that I, JOHN A. CASEY, a citizen of the United States, residing at Jacksonville, in the county of Duval and State of Florida, have invented new and useful Improvements in Wheels, of which the following is a specification.

This invention relates to wheels designed especially for use upon railway-cars, and has for its object to produce a comparatively simple inexpensive device of this character in which the rim or tread of the wheel will frictionally engage the rails, thus to obviate slipping, one wherein the wheels will break and remove sleet or the like from the rails, and one in which the brakes will firmly engage the wheel-treads, thus to insure instantaneous stoppage of the cars.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of a wheel embodying the invention. Fig. 2 is an enlarged detail view of a portion of the wheel-tread. Fig. 3 is an enlarged detail sectional elevation, the section being taken on the line 3 3 of Fig. 2.

Referring to the drawings, 1 designates a wheel composed of the usual or any appropriate material and comprising a web 2, a rim or tread 3, and a rail-engaging flange 4.

In accordance with the present invention the tread 3 has formed therein at equally-spaced intervals around the entire circumference of the wheel a series of intersecting grooves 5, extended in a diagonal direction transversely of the tread, thus to produce a central series of diamond-shaped frictional members or projections 6 and inner and outer marginal projections 7 of semidiamond shape.

In practice the frictional engaging members 6 and 7 present marginal portions which bite into, and thus securely engage, the tread of the rail, thereby wholly obviating slipping of the wheel upon the rails, with the consequent loss of power in driving the cars. It is to be particularly observed in this connection that owing to the grooves 3 intersecting, and thus forming the frictional projections, the latter will act to cut and destroy sleet or ice upon the rails, thereby obviating the necessity for using sand or the like upon the rails and at the same time insuring a positive frictional engagement between the parts. It may be mentioned, further, that in the use of the wheel herein described the brake-shoes will firmly engage the wheel-tread, thereby insuring instantaneous stopping of the cars and at the same time lost motion between and wearing of the shoes and wheel-tread, as common in the use of wheels now commonly employed.

From the foregoing it is apparent that there is produced a simple inexpensive device admirably adapted for the attainment of the ends in view and one wherein an increased friction will be established between the wheel and rails and also between the wheel and brake-shoes, it being understood that in attaining these ends minor changes in the details of construction herein set forth may be resorted to without departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new is—

1. A wheel having a tread provided with intersecting grooves producing projecting engaging portions.

2. A wheel having a tread provided with diagonally-disposed intersecting grooves producing projecting frictional engaging portions.

3. A wheel having a tread provided with diagonally-disposed intersecting grooves producing a series of centrally-arranged substantially diamond-shaped engaging portions, and inner and outer semidiamond-shaped engaging portions.

4. A wheel having a tread provided with transversely-extending intersecting grooves producing projecting frictional engaging portions.

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

JOHN A. CASEY.

Witnesses:
PALMER H. SMITH,
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