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L. B. MOODY

RESILIENT WHEEL OR TRACK ROLLER

Filed May 21, 1924

Fig. 1.

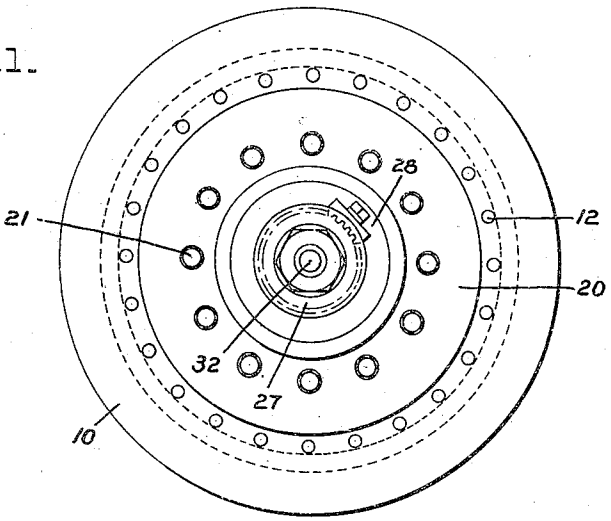
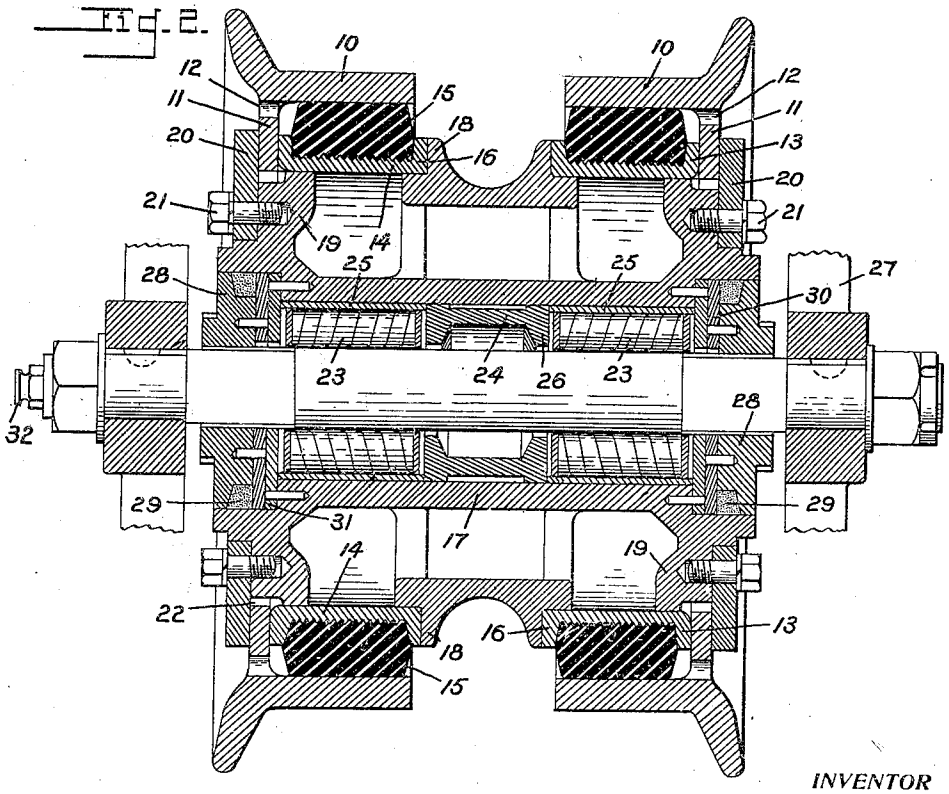


Fig. 2.



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UNITED STATES PATENT OFFICE.

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RESILIENT WHEEL OR TRACK ROLLER.

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(FILED UNDER THE ACT OF MARCH 3, 1883, 22 STAT. L., 625.)

To all whom it may concern:

Be it known that I, LUCIAN B. MOODY, a citizen of the United States, and a legal resident of county of Beadle and State of South Dakota, have invented an Improvement in Resilient Wheel or Track Rollers, of which the following is a specification.

The invention described herein may be used by the Government, or any of its officers or employees in prosecution of work for the Government, or by any other person in the United States, without payment to me of any royalty thereon, in accordance with the act of March 3, 1883.

The subject of this invention is a resilient wheel or track roller for vehicles of the track-laying type.

In vehicles of the track-laying type, the weight of the vehicle is supported on trucks, which carry wheels or rollers riding on a continuous rail formed on the inner side of an endless flexible link track. As the rollers are of metal the shock caused by irregularities in the tracks is considerable.

My invention resides in providing a resilient roller which will include the usual wearing qualities of a metal roller and at the same time considerably reduce the shocks encountered during travel. I, also, provide means for ventilating the roller to prevent undue heating of the resilient elements and I position the resilient elements so that they may be readily replaced or removed by removing only the hub cap and rim without disturbing the primary assembly of the wheel.

To these and other ends, my invention consists in the construction, arrangement, and combination of elements described hereinafter and pointed out in the claims forming a part of this specification.

A practical embodiment of my invention is illustrated in the accompanying drawing, in which,

Fig. 1 is a view of my improved wheel in elevation; and

Fig. 2 is a longitudinal sectional view taken on the axis of the wheel.

Referring to the drawing by numerals of reference:

10—10 indicate separable metal rims, conveniently flanged, each of which is formed with an inwardly projecting annular web 11, provided with a plurality of ports 12, as clearly shown in Fig. 2. The inner sides of the webs 11 contact the outermost annular flanges 13 of opposite base bands 14, which are threaded or serrated to embeddedly seat resilient elements 15 consisting of rubber rings confined between the outer flanges 13 and inner flanges 16 and interposed between the base bands 14 and rims 10. The inner sides of the resilient members have direct access to the surrounding air, while their outer sides are ventilated through the ports 12.

The rims and base bands are assembled on a hub 17, the inward movement of the base bands being arrested by a shouldered annular portion 18 centrally disposed on the hub 17 and the bands being supported by the portion 18 and annular flanges 19 formed on the hub. The rims are movably confined between the outer flanges 13 of the base bands 14 and a hub cap 20, secured to the hub by means of screws 21 to maintain a rigid assembly. The rims are spaced from the hub about their entire peripheries as shown at 22 thereby permitting the hub and its attendant structure to yieldingly rest upon and compress the resilient members 15.

The hub 17 carried suitable friction reducing elements comprising rollers 23, while between the roller cages, I, provide a spacer 24. The rollers run on bushings 25 and embrace a gudgeon 26 passing transversely through the hub and secured to the truck 27 of the vehicle. Positioned at either end of the hub and embracing the gudgeon are sleeves 28 carrying dust washers 29 and maintaining encircling pegged washers 30 and 31 in contact with the hub 17 and roller bushings 25.

The gudgeon 26 is provided with an oil valve 32 at one of its ends and it will be understood that the gudgeon is hollow and formed with oil ports (not shown) for lubricating the rollers 23.

To replace a resilient member, it is only necessary to remove the hub cap and rim when the resilient member may be pried off and a new member mounted on the base band, or if desired, the base band may also be removed.

While in the foregoing there has been illustrated and described such combination and arrangement of elements as constitute the preferred embodiment of my invention,

it is nevertheless desired to emphasize the fact that interpretation of the invention should only be conclusive when made in the light of the subjoined claims.

I claim:

1. A resilient wheel embodying separable rims each formed with an inwardly projecting annular web, base bands spaced from the rims and abutting the webs, resilient elements carried by the base bands and engaging the rims, a hub within the base bands, annular flanges formed on the hub for supporting the bands and spaced from the webs of the rims about their entire peripheries, a centrally disposed annular portion formed on the hub for supporting and spacing the bands, caps secured to the hub and abutting the web of the rims for maintaining the rims and bands in assembly, a gudgeon, and anti-friction elements interposed between the hub and the gudgeon.

2. A resilient wheel, embodying separable rims each formed with an inwardly projecting annular web, base bands spaced from the rims and abutting the webs, resilient elements carried by the base bands and engaging the rims, a hub within the base bands, annular flanges formed on the hub for supporting the bands, an annular portion formed on the hub intermediate the flanges for supporting and spacing the bands, means secured to the hub and abutting the webs of the rims for maintaining the rims and bands in assembly, a gudgeon, and anti-friction elements interposed between the hub and the gudgeon.

3. A resilient wheel embodying separable rims, base bands spaced from the rims, resilient elements carried by the base bands and contacting the rims, a hub within the base bands and spaced from the rims, a centrally disposed annular portion formed on the hub for spacing the bands, a gudgeon, and anti-friction elements interposed between the hub and the gudgeon.

4. A resilient wheel embodying separable rims, base bands spaced from the rims, resilient elements carried by the base bands and contacting the rims, a hub within the base bands, a centrally disposed annular portion formed on the hub for spacing the base bands, a gudgeon, and anti-friction elements interposed between the hub and the gudgeon.

5. A resilient wheel embodying separable rims, each formed with an inwardly projecting annular web, said webs being formed with a plurality of ports, base bands spaced from the rims, resilient elements carried by the base bands and contacting the rims, the sides of said resilient members being exposed to ventilation, a hub within the base band, a gudgeon, and anti-friction elements interposed between the hub and the gudgeon.

6. A resilient wheel embodying separable rims, base bands within the rims, resilient elements carried by the base bands and contacting the rims, a hub within the base bands, means for spacing the base bands, a gudgeon and anti-friction elements interposed between the hub and the gudgeon.

7. A resilient wheel embodying a rim, base bands spaced from the rim, resilient elements carried by the base bands and contacting the rim, a hub within the base bands and spaced from the rim, caps carried by the hub and abutting the rims for maintaining the base bands in position, a gudgeon, and anti-friction elements interposed between the hub and the gudgeon.

8. A resilient wheel, embodying a rim, base bands spaced from the rim to permit circulation between the bands and rim, resilient elements carried by the base bands and contacting the rim, a hub within the base bands and adapted to space them, a gudgeon, and anti-friction elements interposed between the hub and the gudgeon.

LUCIAN B. MOODY.