No. 647,839. Patented Apr. 17, 1900.

C. S. JOHNSON.

TROLLEY WHEEL.

(Application filed Jan. 24, 1900.)

(No Model.)

Fig. 1.

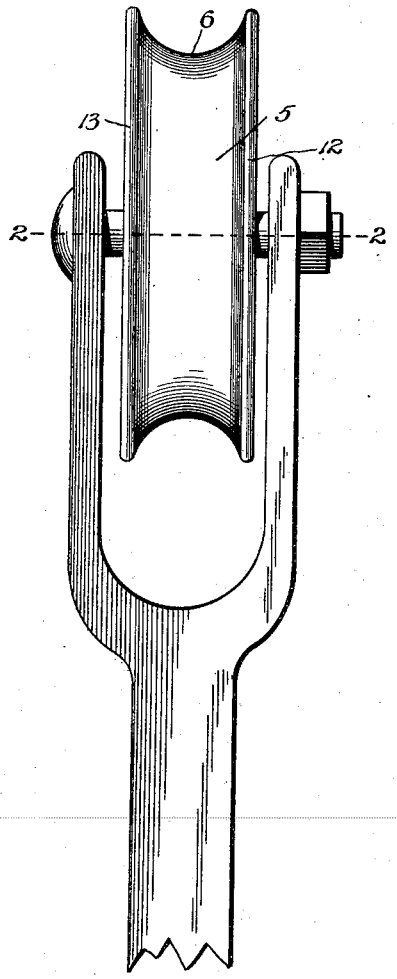


Fig. 2.

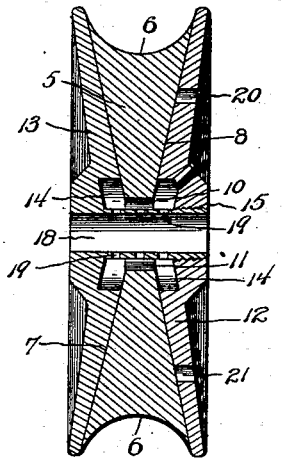
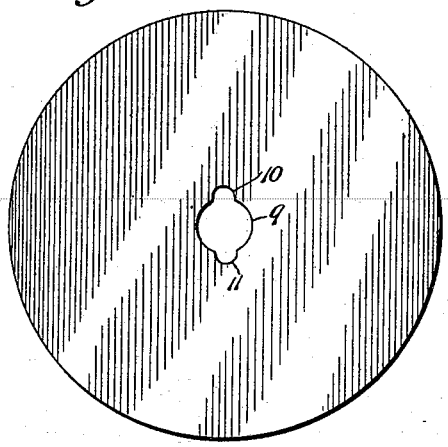


Fig. 3.



Witnesses
Ralph A. Shepard.
H. C. Keyes.

Inventor
C. S. Johnson.
By Munn & Co.
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES S. JOHNSON, OF EAST LIVERPOOL, OHIO.

TROLLEY-WHEEL.

SPECIFICATION forming part of Letters Patent No. 647,839, dated April 17, 1900.

Application filed January 24, 1900. Serial No. 2,657. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. JOHNSON, a citizen of the United States, residing at East Liverpool, in the county of Columbiana, State of Ohio, have invented certain new and useful Improvements in Trolley-Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to trolley-wheels in general, and more particularly to that class employed in overhead systems of electric railways; and one object of the invention is to provide a construction in which the flange portions are separable from the central wearing portion, this central portion being of a metal of high conductivity, while the flange portions are of a more refractory material.

A further object of the invention is to provide means for lubricating the wheels.

In the drawings forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is an elevation showing the edge of the complete wheel. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a side elevation of the central or body portion of the wheel.

Referring now to the drawings, the wheel of the present invention comprises a central or body portion 5, the periphery of which is grooved circumferentially, as shown at 6, while the ends are reëntrant to form conical recesses 7 and 8. A central perforation 9 is formed through the body portion 5 and communicates with the recesses 7 and 8, passages 10 and 11 being formed in the wall of said perforation at opposite points thereof, for a purpose that will be presently explained. Two disks 12 and 13 are formed of equal diameter greater than that of the body portion 5, against the end faces of which they are adapted to lie, said disks each having a conical face to enter the recesses 7 and 8, respectively, as shown in Fig. 2 of the drawings, the central portion of each disk having an annular recess 14, concentric therewith and of greater diameter than the axial perforation of the body 5, so that it is partly closed by the body portion. The passages 10 and 11 open into these recesses. A perforation 15 is formed through the disk 12, equal in diameter to the axial perforation in the body 5 and in alinement therewith. Formed upon the disk 13 at its center is a hollow cylindrical sleeve or bushing 18, adapted to fit into the perforation 15 and having an exterior screw-thread at its outer end to enter a corresponding thread in the perforation 15. It will thus be seen that as the disk 12 is revolved the bushing 18 may be drawn thereinto, bringing the disks 12 and 13 together, thereby holding these disks and the body 15 in close engagement. Perforations 20 and 21 may be formed in the outer face of the disk 12 to receive a wrench, whereby it may be revolved. Perforations 19 are also formed in the bushing 18 and communicate with the recess 14, for a purpose which will be hereinafter mentioned.

An oil-duct 22 is formed in the disk 12 and is provided with a closure whereby oil may be supplied to one of the recesses and from thence may pass through passages 10 and 11 to the opposite recess and through the perforations 19, the recesses 14 being provided with waste to retain the oil.

In practice the spindle for the roller is passed through the bushing 18 and the parts are assembled, the disks 12 and 13 being held against the body 5 through the medium of the bushing 18, with one end of which the disk 12 is in threaded engagement. As the wheel is then operated the oil from the waste will run onto the bushing and thence through the perforations therein to the spindle.

When the body 5 has become excessively worn, the wheel may be dissembled and a new body portion substituted for the worn one, and thus may the same parts, with the exception of the body, be used for a long period, the wearing parts being all protected. Furthermore, the form of the disks permits them to be adjusted to compensate for any wear between them and the body portion.

Having thus described my invention, what I claim is—

1. A separable trolley-wheel comprising a central cylindrical body portion having reëntrant ends and a central axial perforation, a disk having a protruding surface adapted to enter one of the ends of the body portion and having a diameter greater than the body

portion, a central perforation through the disk, a bushing carried by the disk and adapted to lie in the perforation of the body portion, a second disk having a diameter greater than the body portion and provided with a central threaded perforation adapted to engage the end of the bushing, said second disk having a protruding surface adapted to lie in an end of the body portion, recesses in the inner faces of the disks concentric therewith, and passages in the body portion connecting said recesses.

2. A separable trolley-wheel comprising a cylindrical body portion having an axial perforation, disks adapted to lie upon the ends of the body portion and having central perforations, a bushing carried by one of the disks and adapted to lie in the perforations of the body portion and the other disk, recesses in the inner faces of the disks and passages in the body portion connecting the recesses.

3. A separable trolley-wheel comprising a body portion having an axial perforation, disks lying against the ends of the body portion and projecting beyond the periphery thereof, alining perforations in the disks and body portion, a bushing carried by one of the disks and passed through the perforation of the body portion and the other disk, recesses in the inner faces of the disks concentric therewith and passages in the body portion.

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

CHARLES S. JOHNSON.

Witnesses:
S. H. NEVILLE,
JAS. N. ROSE.