

R. VOLTZ.
TROLLEY WHEEL.
APPLICATION FILED FEB. 21, 1905.

Fig. 1.

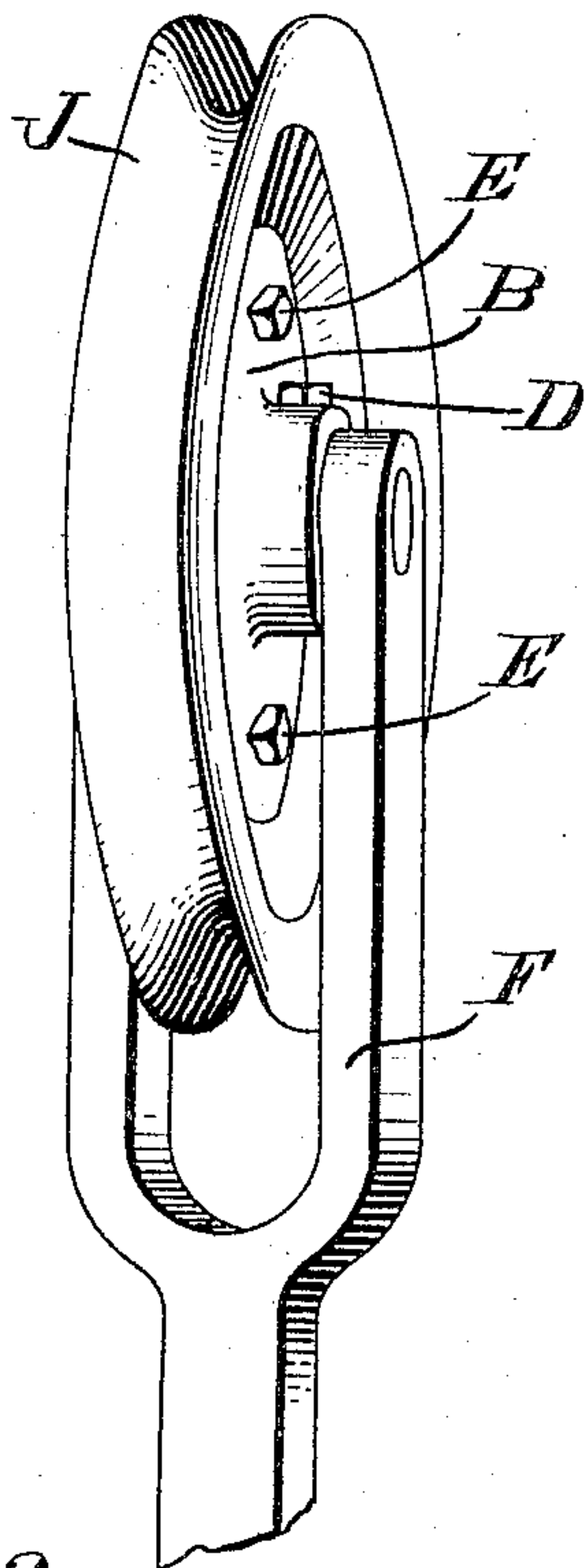


Fig. 2.

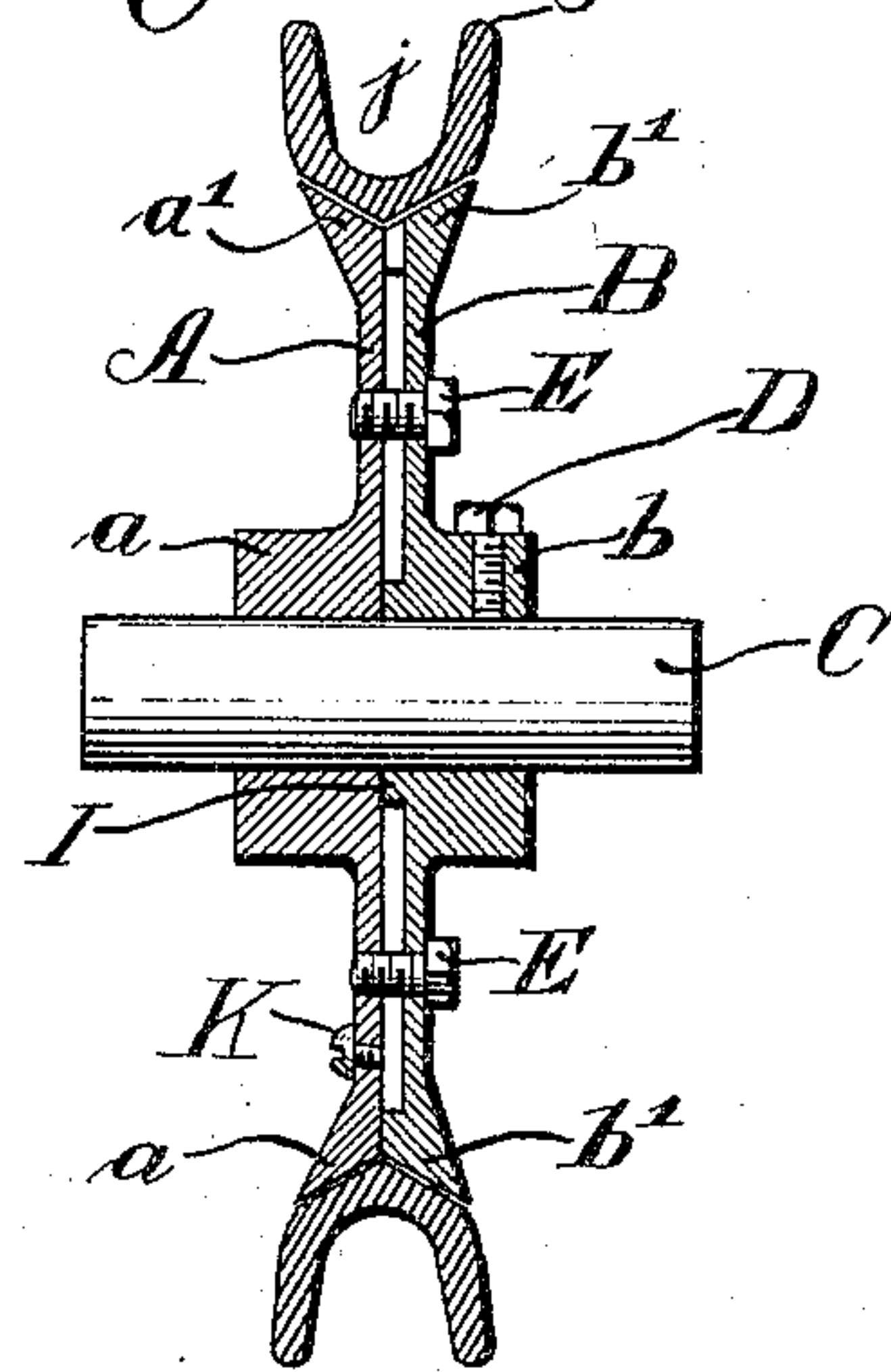


Fig. 3.

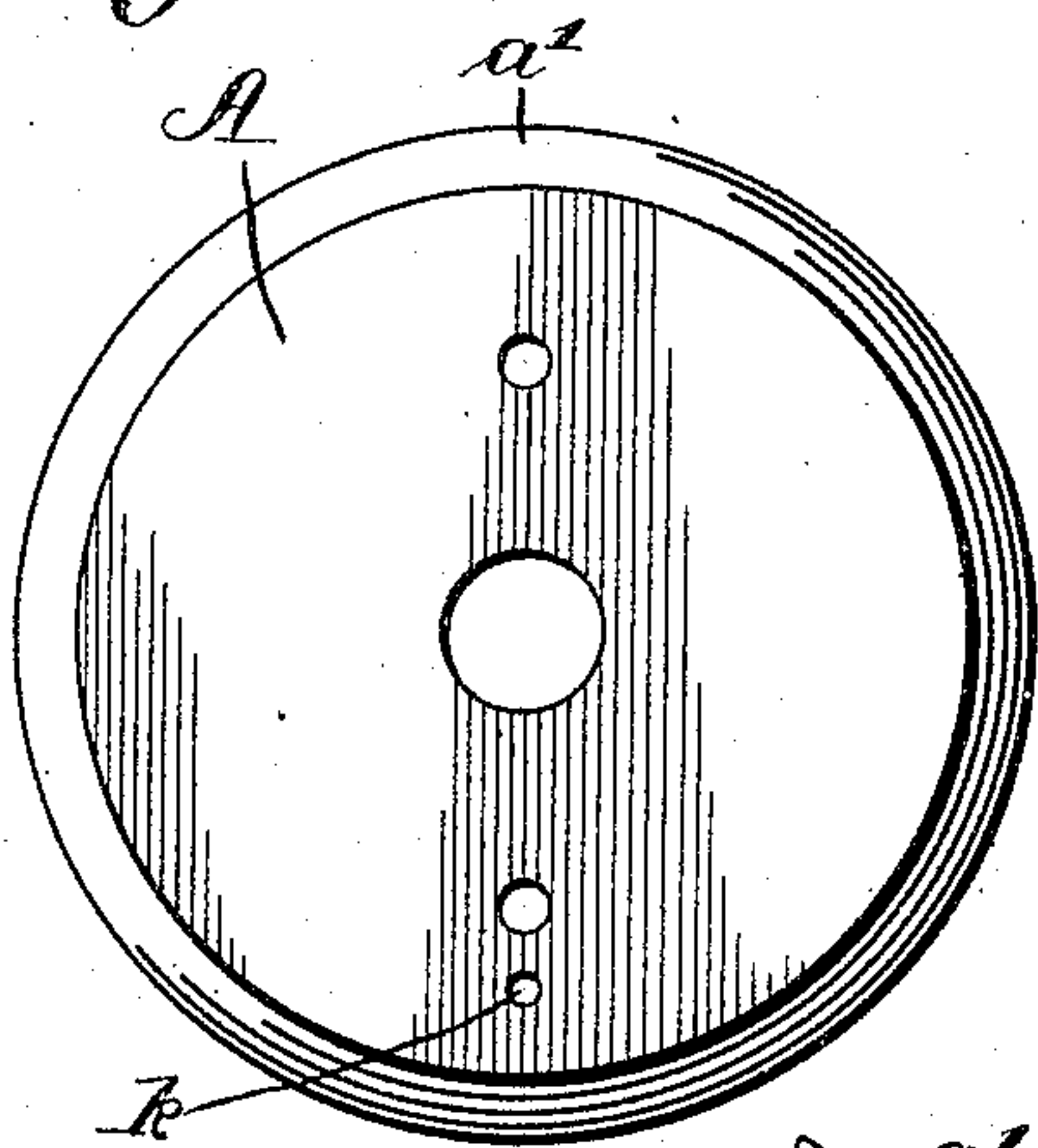


Fig. 4.

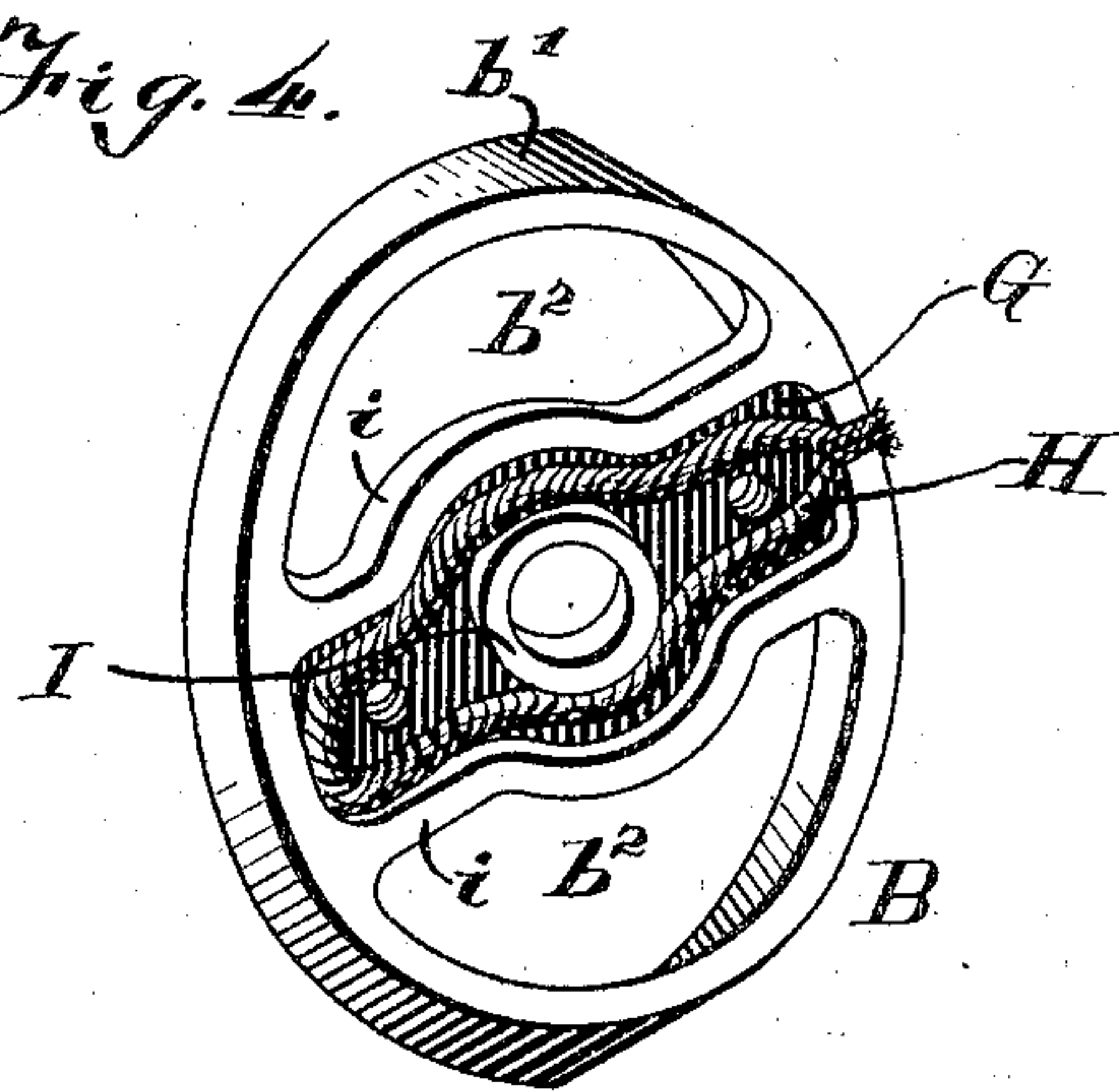
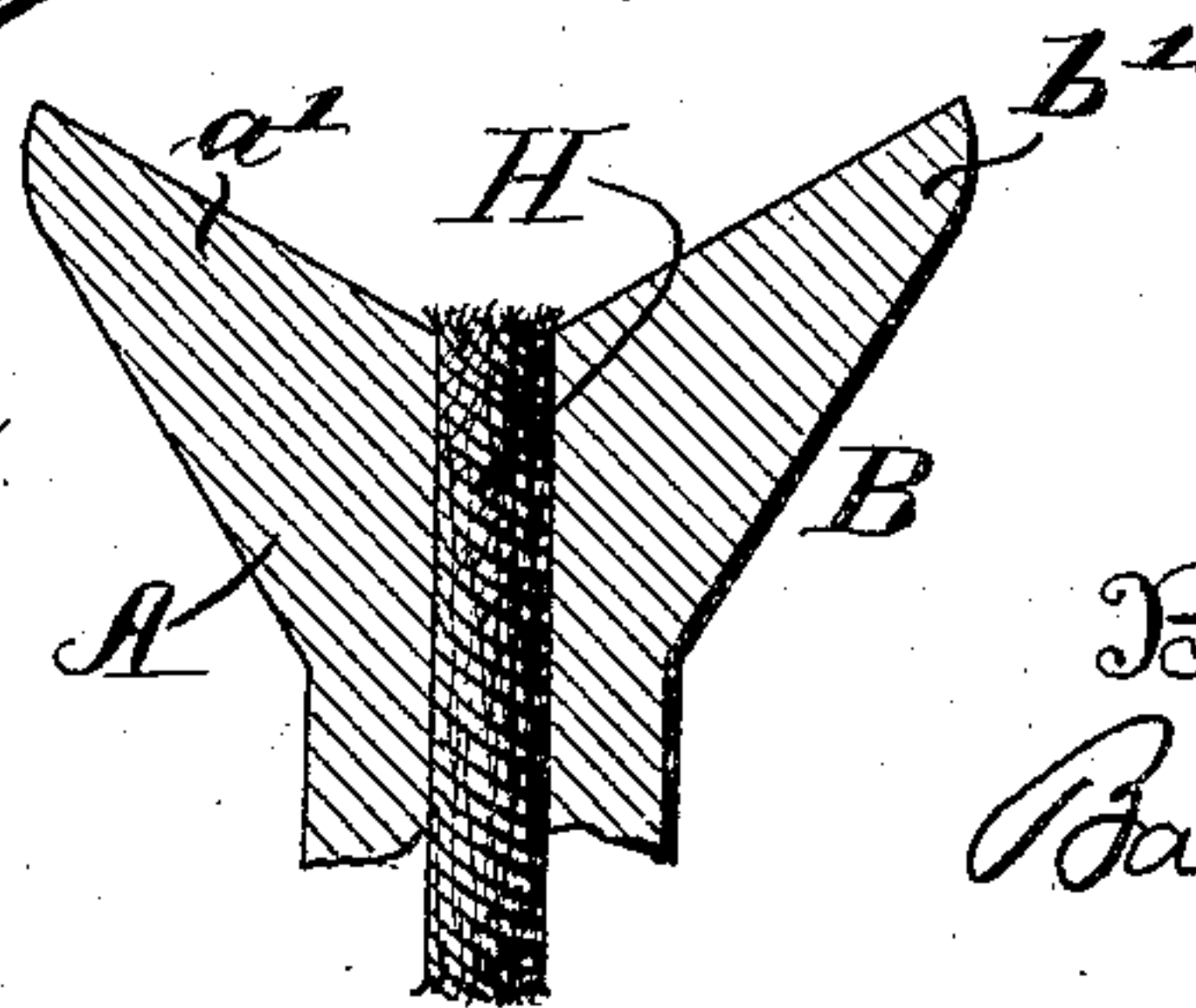


Fig. 5.



Witnesses:
Paul J. Gathmann.
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Inventor.
Richard Voltz.
By his Attorneys
Baldwin & Wright.

UNITED STATES PATENT OFFICE.

RICHARD VOLTZ, OF MICHIGAN CITY, INDIANA, ASSIGNOR OF ONE-HALF
TO OTTO OHMING, OF MICHIGAN CITY, INDIANA.

TROLLEY-WHEEL.

SPECIFICATION forming part of Letters Patent No. 790,937, dated May 30, 1905.

Application filed February 21, 1905. Serial No. 246,732.

To all whom it may concern:

Be it known that I, RICHARD VOLTZ, a citizen of the United States, residing at Michigan City, in the county of Laporte and State of Indiana, have invented certain new and useful Improvements in Trolley-Wheels, of which the following is a specification.

This invention relates to trolley-wheels for electric railroads of the class in which the periphery of the wheel is formed with an annular groove to receive the trolley-wire and which is provided with an oil-chamber to supply a lubricant.

The object of my invention is to provide a trolley-wheel of this class in which the groove for the wire is formed in a rim that rotates about the web or body of the wheel and to which a lubricant is supplied from an oil-chamber within the wheel-body.

A further object of my invention is to so construct the wheel that it may be readily separated into halves to permit the easy removal of the rotary rim when it is worn out.

In carrying out my invention I form the wheel-body of two disks, each having an enlarged and tapered periphery and a centrally-arranged hub and one having laterally-projecting ribs bounding an oil-chamber containing a wick which conducts a lubricant to the periphery of the web. The two web-sections when placed side by side and secured together provide an oil-chamber closed at all points, except where the wick passes to the periphery, and also an annular periphery V-shaped in cross-section to receive the rotary rim, which is also approximately V shape in cross-section. The rim is mounted to rotate freely about the periphery of the wheel-body, but is prevented from separating therefrom.

By detaching the securing devices and separating the disks from each other the rim may be removed and replaced by a new one.

In the accompanying drawings, Figure 1 is a perspective view of a trolley-head for an overhead trolley embodying my improvements. Fig. 2 shows a vertical central section of my improved trolley-wheel. Fig. 3 shows a side view or inside elevation of one of the trolley-disks. Fig. 4 is a perspective

view of the inside of the other disk. Fig. 5 is a detail view, on an enlarged scale, showing how the wick passes to the periphery of the wheel-body.

The body of the wheel is composed of two circular disks A B of the same diameter and each having a hub *a b* mounted on a short shaft C, one of the hubs, *b*, being secured to the shaft by a screw D, while the two disks are secured to each other by the screws E. The shaft C may be mounted in any suitable way on a trolley-head. As shown it is mounted in the fork F of a trolley-head. The disk A is formed with an enlarged periphery or annular laterally-projecting flange *a'*, and the disk B is formed with a similar flange *b'*. The peripheries of the disks are tapered, as clearly shown in Figs. 2 and 5, and when they are secured together an annular groove is formed in the periphery of the wheel substantially V shape in cross-section. The web or body of the disk A is substantially solid, as indicated in Fig. 3, being perforated only to receive the shaft C and screws E. The disk B is, however, formed with large openings *b²*, and it has a recess G to contain a lubricant and a wick H. An annular flange I is formed on the disk B, surrounding the shaft C, and flanges *i* surround the recess G. In this way a recess or chamber of suitable size to contain a lubricant and a wick is provided. The chamber may, however, be formed in other suitable ways. The oil-chamber can be conveniently filled through an opening *k*, which may be closed by a screw K.

The rotary rim J may be made of any suitable conducting material and is formed with an annular groove *j*, adapted to receive the trolley-wire. The interior of the rim is tapered, as clearly indicated in Fig. 2, to correspond with the taper of the disks, and the arrangement is such that the rim may freely rotate without being permitted to separate from the wheel or to move to any appreciable extent laterally in either direction. The rim is properly lubricated in the manner before specified.

By this arrangement of parts I am enabled to provide a very efficient trolley-wheel. The

rim, which is the part that is subjected to the most wear, may be easily removed and replaced by a new one without discarding other parts of the wheel. In separating the parts
 5 the axle C is first removed from the trolley pole or fork, and then the screws E are loosened. After this the disk A may be taken off, and then the rim J may be separated. The parts may be reassembled in obvious ways.

10 While my improvements are especially designed for an overhead trolley, they may be applied to trolleys or wheels of other kinds.

I claim as my invention—

1. A trolley-wheel comprising two disks
 15 having tapered peripheries and having also an oil-chamber between them connected with the peripheries of the disks, means for detachably connecting the disks with each other, and a rim formed with a peripheral groove to re-
 20 ceive a trolley-wire and having an inner annular tapered surface embraced by the disks and mounted to rotate thereon.

2. A trolley-wheel comprising two disks having tapered peripheries and having also an
 25 oil-chamber between them connected with the

peripheries of the disks, a wick in the oil-chamber for conveying oil to the peripheries of the disks, means for detachably connecting the disks with each other, and a rim formed with a peripheral groove to receive a trolley-
 30 wire and having an inner annular tapered surface embraced by the disks and mounted to rotate thereon.

3. In a trolley-wheel, the combination of a disk having a tapered periphery, a chambered
 35 middle portion to contain a lubricant, and an annular flange surrounding a central opening in the middle portion; a second disk having a tapered periphery, means for detachably connecting the disks with each other, and a rim
 40 formed with a peripheral groove to receive a trolley-wire and having an inner annular tapered surface embraced by the disks and mounted to rotate thereon.

In testimony whereof I have hereunto sub-
 45 scribed my name.

RICHARD VOLTZ.

Witnesses:

HENRY KOELLN,
 CHARLES LUBS.