

No. 840,648.

PATENTED JAN. 8, 1907.

J. A. NORTON.  
TROLLEY WHEEL.  
APPLICATION FILED JULY 27, 1905.

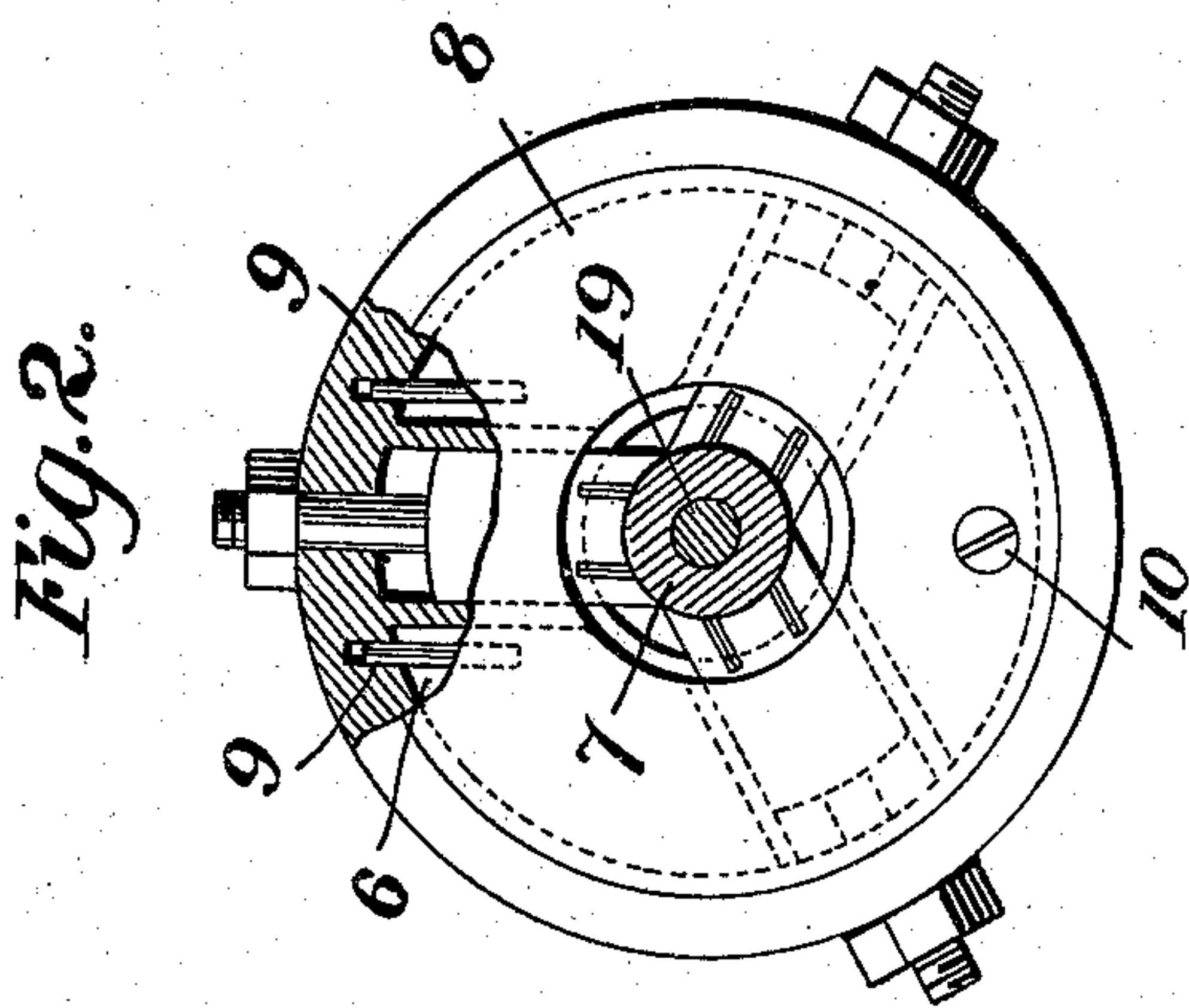
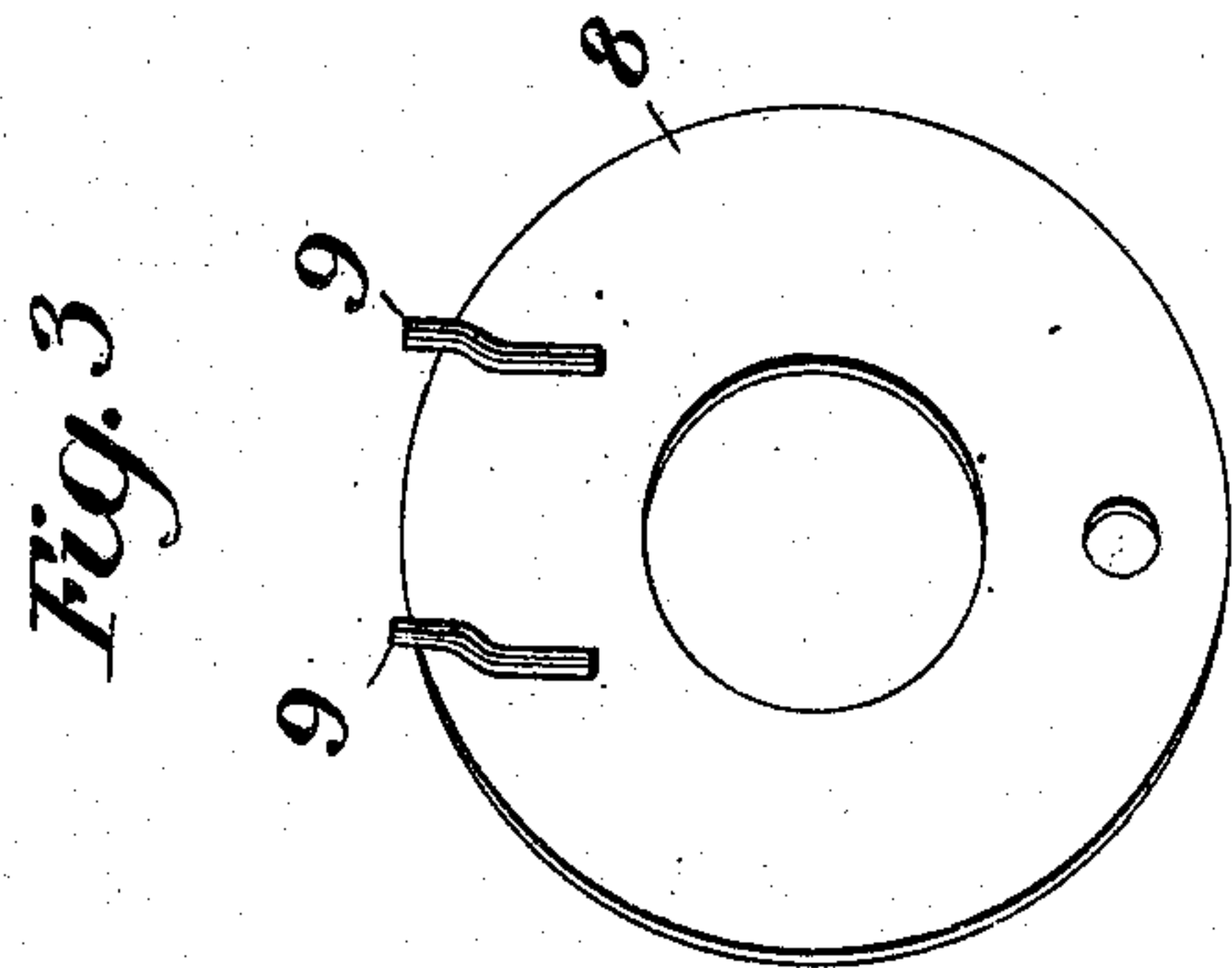


Fig. 4

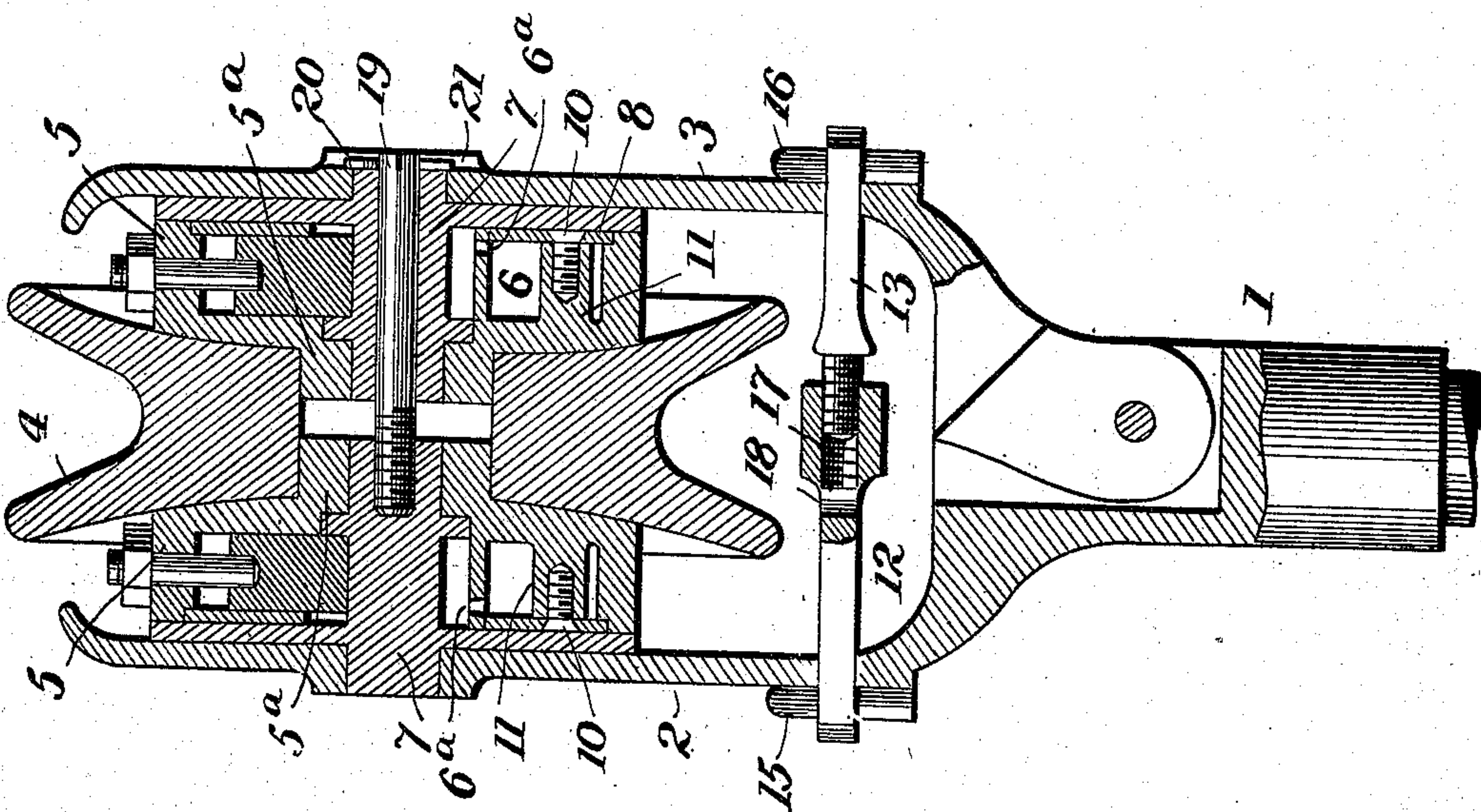
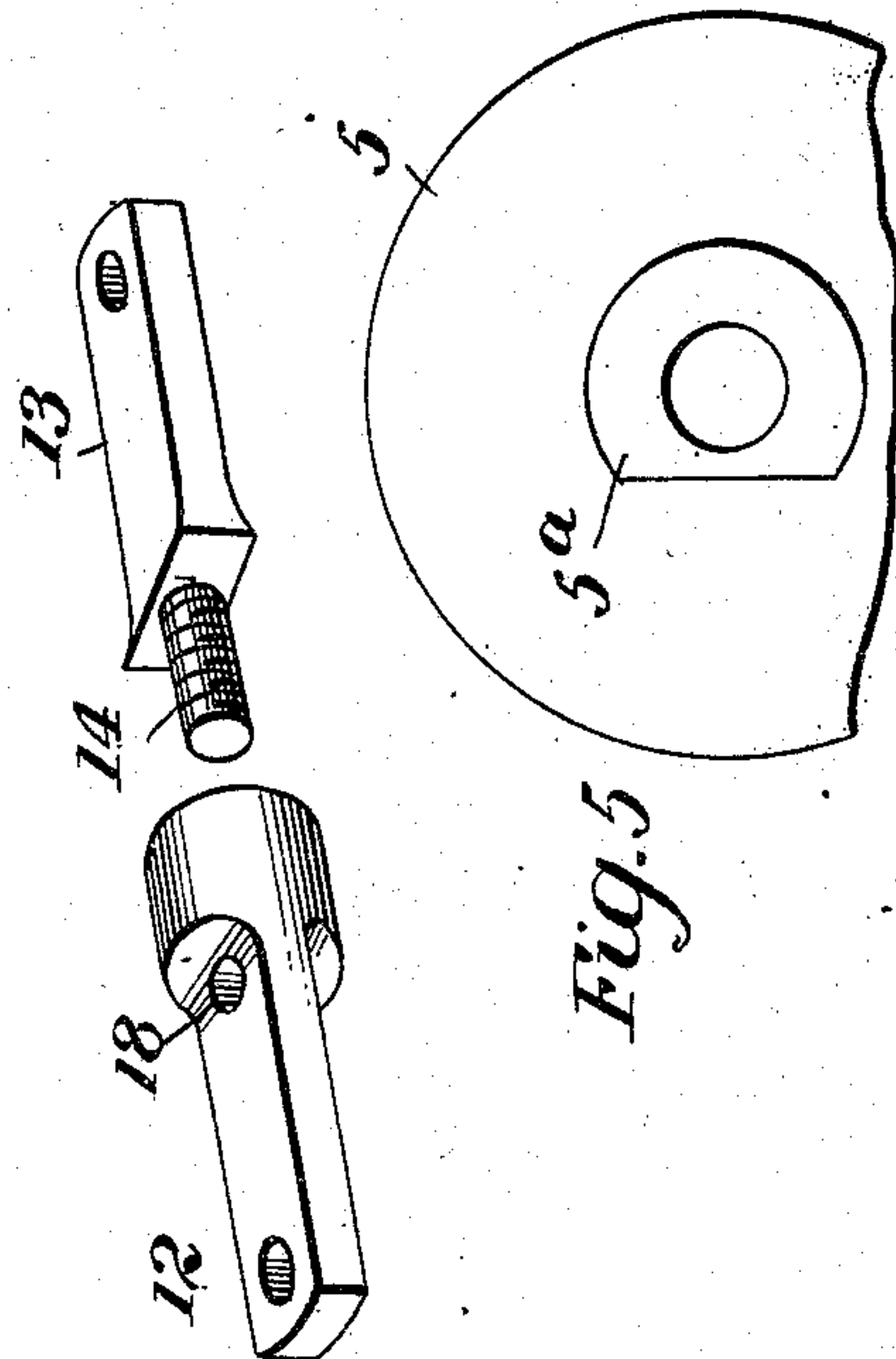


Fig. 1.

Witnesses  
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# UNITED STATES PATENT OFFICE.

JAMES A. NORTON, OF WILKES-BARRE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO WILLIAM L. RAEDER, OF WILKES-BARRE, PENNSYLVANIA.

## TROLLEY-WHEEL.

No. 840,648.

Specification of Letters Patent.

Patented Jan. 8, 1907.

Application filed July 27, 1905. Serial No. 271,436.

*To all whom it may concern:*

Be it known that I, JAMES A. NORTON, a citizen of the United States, residing at Wilkes-Barre, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Trolley-Wheels, of which the following is a specification.

This invention relates to improvements in the construction of wheels adapted to run upon relatively fixed supports or axles, and particularly to means for lubricating the bearings of such wheels. The invention is particularly applicable to trolley-wheels, and such an embodiment thereof is illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of a trolley-head constructed in accordance with the invention. Fig. 2 is an elevation, partly in section, of the outer side of one of the hub-sections of the wheel. Fig. 3 is a detail view of the inner face of the removable cover disk or plate for closing the openings through which lubricant is supplied to the wheel. Fig. 4 is a view of the cross-bar by which the members of the wheel-fork are connected. Fig. 5 is a detail view of a portion of the inner side of one of the hub-sections of the wheel-support.

Referring to the drawings, 1 designates the staff or pole of a trolley, to which is connected a harp having two members 2 3, the latter being pivoted or hinged to the former, and to each of said members 2 3 is secured a wheel spindle or bearing 7. On the spindles 7 are rotatably mounted hub-sections 5, each having on its inner face a polygonal projection or boss 5<sup>a</sup>, adapted to enter a socket or passage of similar cross-section formed in a wheel-center 4, which therefore may be readily detached from the hub-sections and replaced when necessary. Each of the hub-sections 5 is divided into a plurality of lubricant-receptacles which open through the outer face of the hub and are provided with apertures or passages 6<sup>a</sup>, through which the lubricant can pass to the relatively stationary spindles or bearings 7, on which the wheel is mounted.

The outer open ends of the lubricant-compartments of each hub-section are closed by a disk or plate 8, seated in a recess provided therefor in the body of the hub-section and secured in position by a plurality of pins 9,

rigidly attached to the disk and extending into sockets in the body of the hub, and by a screw 10 engaging a post 11 in one of the lubricant-chambers. When in position, the outer surface of said cover plate or disk 8 lies flush with the outer face of the hub-section, and when the hub is in position on the spindle 7 said plate bears close against the adjacent annular flange of said spindle. By this construction there is no possibility of lubricant escaping from any of the compartments 6, except through the passages 6<sup>a</sup>—that is, the disks 8 engage the hub-section to which they are connected so closely that no spaces are provided through which the lubricant may escape.

Each of the hub-sections is adapted to contain a sufficient quantity of lubricant to lubricate the wheel for a relatively long period of time. This construction avoids the necessity for frequent examinations of the bearing and insures it being properly lubricated.

The members 2 3 of the harp are connected by a separable rod consisting of two sections 12 13, the former having its inner end enlarged and provided with an internally-threaded passage and the other member having a threaded section 14 engaging said thread. The members of the rod extend through slots in the wheel-supporting frame and are held in position by suitable keys 15 16. The threaded passage 17 of the member 12 of the connecting-rod is provided with a transverse opening 18, through which said passage may be cleaned.

As shown, the bearings or spindles 7 are directly connected by a screw 19, which extends through a passage in the spindle 7 of the harp member 3 and engages a threaded socket in the other spindle, said screw being held from rotation when in position to connect said spindles by a pin 20 passing through an aperture therein and bearing against a projection 21 on the outer face of the harp.

No claim is herein made to the particular construction of trolley-harp illustrated in the drawings and hereinbefore briefly described, as that will form the subject-matter of another application.

It will be seen that while the invention is particularly adapted for use with trolley-wheels and such an embodiment of it is illustrated in the drawings it is not limited to this particular use, but may be embodied in other



forms than the one selected for purposes of illustration.

Having thus described the invention, what is claimed is—

5 1. The combination with a stationary support or bearing, of a wheel rotatably mounted on said support and having its hub provided with an interior lubricant-chamber that extends through one end thereof and a  
10 passage or passages for conducting lubricant from said chamber to the stationary bearing, and a plate adapted to cover and close the end of said chamber through which lubricant is supplied thereto, said plate having a radial  
15 projection extending beyond its periphery and engaging the hub.

2. The combination with a stationary support or bearing, of a wheel rotatably mounted on said support and having a sectional hub  
20 each section being provided with independent lubricant-chambers that open through the outer faces of the hub-section and passages for conducting lubricant from said chambers to the stationary bearing, and

plates adapted to be detachably engaged with the outer faces of the hub to close the openings through which lubricant is supplied to said chambers. 25

3. The combination with a stationary support or bearing, of a wheel rotatably mounted on said support and having its hub provided with an interior lubricant-chamber that extends through one end thereof and a  
30 passage or passages for conducting lubricant from said chamber to the stationary bearing, and a plate adapted to be seated in a recess formed in the end of the hub through which said lubricant-chamber opens and to close  
35 said end of said chamber, said plate having on its inner face a radial projection adapted to enter a suitable socket in the hub. 40

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

JAMES A. NORTON.

Witnesses:

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