No. 751,749. PATENTED FEB. 9, 1904.

J. E. PALMER.

TROLLEY WHEEL.

APPLICATION FILED NOV. 14, 1903.

NO MODEL.

Fig. 1.

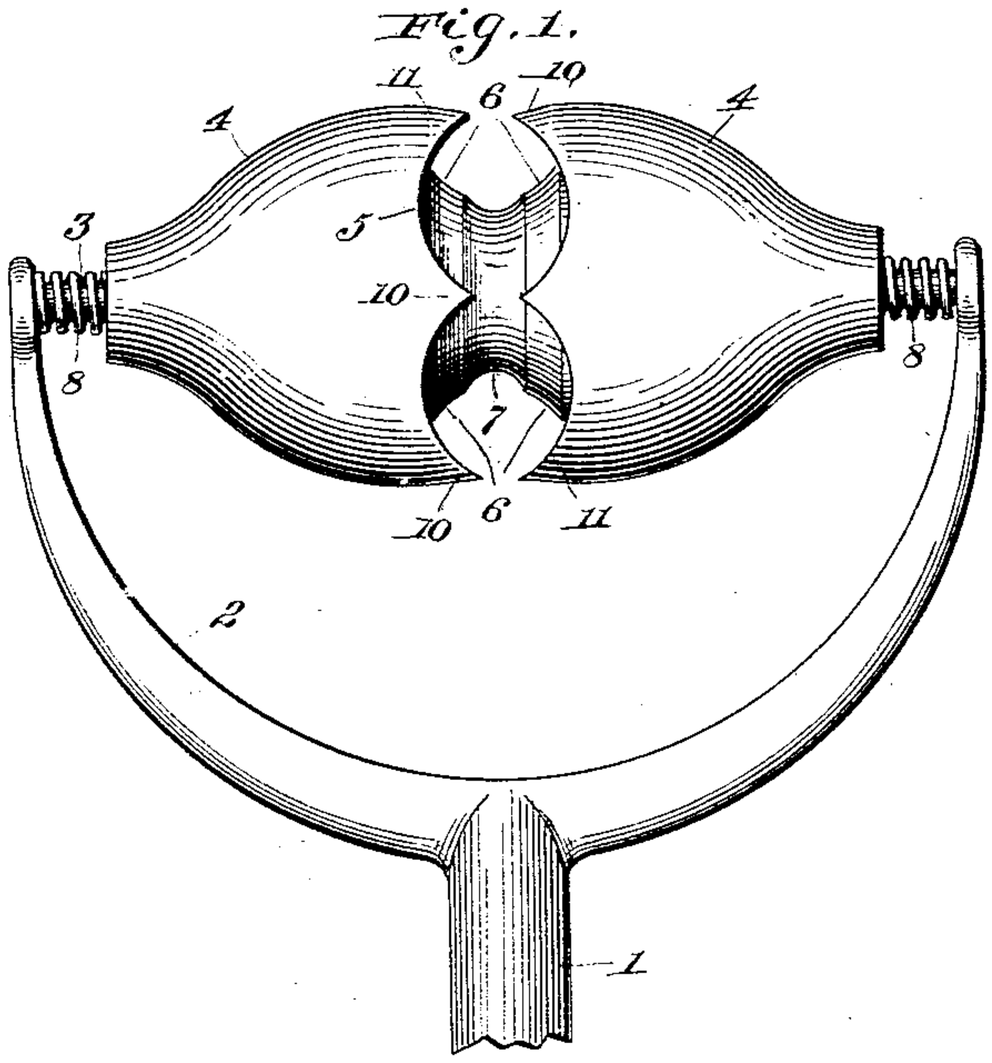
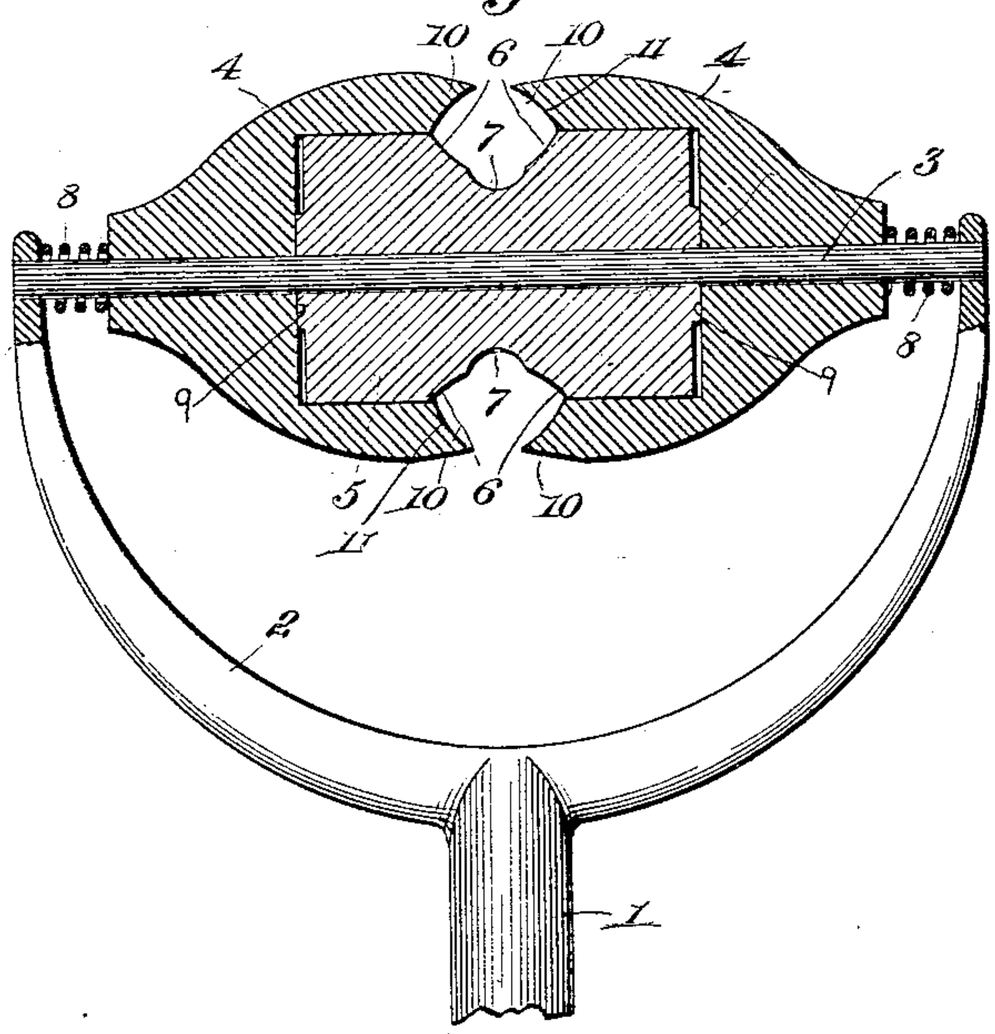


Fig. 2.



Witnesses:

G. J. Meyers

G. E. McNeil

Inventor:

John E. Palmer,

By Royal E. Burnham,

Atty.

No. 751,749. Patented February 9, 1904.

UNITED STATES PATENT OFFICE.

JOHN E. PALMER, OF SOMERVILLE, MASSACHUSETTS.

TROLLEY-WHEEL.

SPECIFICATION forming part of Letters Patent No. 751,749, dated February 9, 1904.

Application filed November 14, 1903. Serial No. 181,169. (No model.)

To all whom it may concern:

Be it known that I, JOHN EDWIN PALMER, a citizen of the United States, residing at Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Trolley-Wheels, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to trolley-wheels; and its primary object is to provide the wheel with means for preventing it becoming disengaged from the trolley-wire and with means for making the wheel adaptable to the conditions incident to rounding curves, &c.

Novel details in the arrangement and construction of the several parts of the trolley-wheel will be apparent from the detail description hereinafter when read in connection with the accompanying drawings, forming part hereof, and the appended claims.

In the said drawings a preferable embodiment of the invention is delineated for purposes of illustration, and when referring to the same like reference characters refer to corresponding parts in both views, whereof—

Figure 1 is a plan view, and Fig. 2 is a longitudinal vertical central sectional view.

Referring more particularly to the drawings, 1 designates the trolley-fork, on the prongs 2 of which is hung the shaft 3. The shaft 3 carries independently-rotatable longitudinally-movable sections 4. Between sections 4 is placed on shaft 3 an independently-rotatable section 5, having inwardly-inclining surfaces 6, leading to a circumferential centrally-disposed groove 7, for normally carrying the trolley-wire. Section 5 is partially enveloped at its ends by sections 4, and the latter sections are held normally in proximity to each other by coiled springs 8 on shaft 3 and interposed between prongs 2 of fork 1 and sections 4 and which exert an inward pressure against sections 4. Section 5 prevents the spring from causing sections 4 to come in contact with each other, section 5 bearing against sections 4 at hubs 9. Sections 4 carry inwardly-projecting hook-shaped members 10, overhanging section 5.

When the trolley is in use, section 5 is engaged by the trolley-wire, which runs in groove 7, the section rotating on shaft 3. Sections 4 rotate or remain substantially still on the shaft.

In rounding curves or under any other conditions when the trolley-wire is not at substantially right angles to the shaft the wire will engage the inclining surfaces 6 of section 5, thereby securing more running-space.

The overhanging hooks 10 serve to prevent the wire from leaving the pulley, and should this happen under extraordinary conditions, the trolley being returned to the wire and the wire coming between inwardly-inclining faces 11 of the hooks 10, the hooks and the section carrying them will be opened by the wire and the wire permitted to drop into position between sections 4 and on section 5.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a trolley-wheel, a shaft, suitable support therefor, independently-rotatable sections thereon, another independently-rotatable section between said other sections for engaging the trolley-wire, and hooks on said first-mentioned sections and overhanging said wire-engaging section for preventing the disengagement of the wire therefrom, substantially as described.

2. In a trolley-wheel, a shaft, suitable support therefor, independently-rotatable sections thereon, another independently-rotatable section between said other sections for engaging the trolley-wire, hooks on said first-mentioned sections and overhanging said wire-engaging section for preventing the disengagement of the wire therefrom, and means for keeping said hooks of one section adjacent the hooks of the other section, substantially as described.

3. In a trolley-wheel, a shaft, suitable support therefor, independently-rotatable sections thereon, another independently-rotatable section between said other sections for engaging the trolley-wire, hooks on said first-mentioned sections and overhanging said wire-engaging section for preventing the disen-

gagement of the wire therefrom, and means for normally holding said sections together, substantially as described.

4. In a trolley-wheel, a shaft, suitable support therefor, independently-rotatable sections thereon, another independently-rotatable section between said other sections for engaging the trolley-wire, hooks on said first-mentioned sections and overhanging said wire-engaging section for preventing the disengagement of the wire therefrom, inclines on said hooks for causing the same to spread apart when downwardly pressed against by the trolley-wire, and means for normally holding said sections together, substantially as described.

5. In a trolley-wheel, a shaft, suitable support therefor, independently-rotatable sections thereon, another independently-rotatable section between said other sections for engaging the trolley-wire, hooks on said first-mentioned sections and overhanging said wire-engaging sections for preventing the disengagement of the wire therefrom, and coiled springs on said shaft for holding said sections together, substantially as described.

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

JOHN E. PALMER.

Witnesses:

PHILIP HIGHLEY,

JOSEPH J. GILES.