

PATENTED AUG. 30, 1904.

L. F. FORRESTER.
TROLLEY.

No. 789,070.

APPLICATION FILED JAN. 16, 1904.

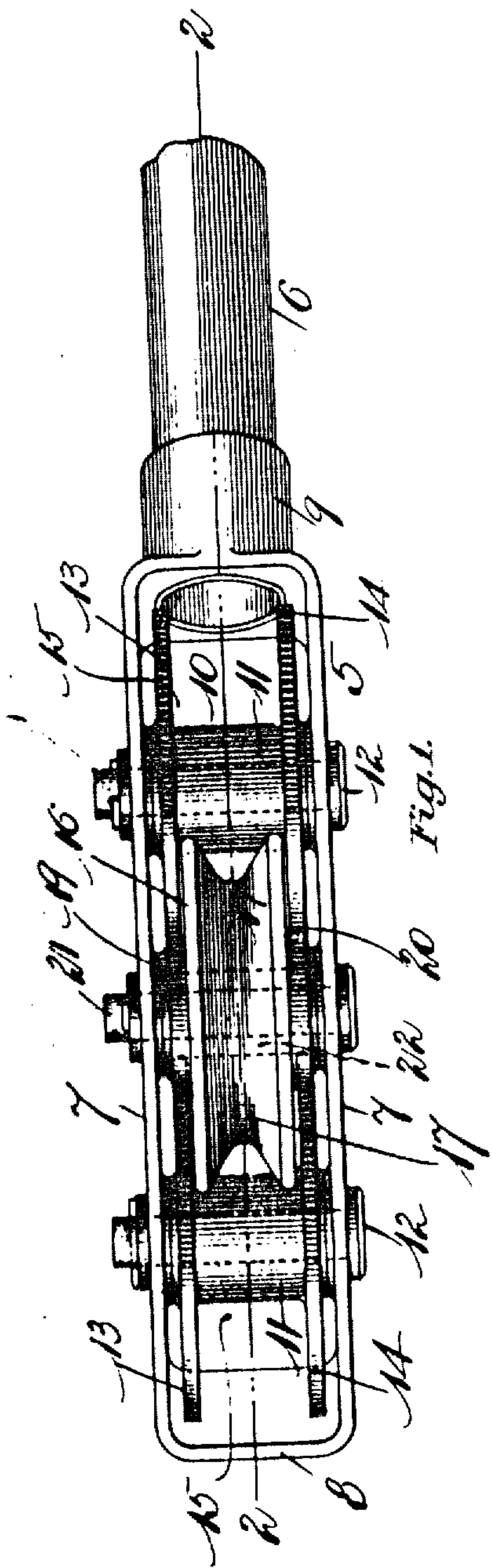


Fig. 1.

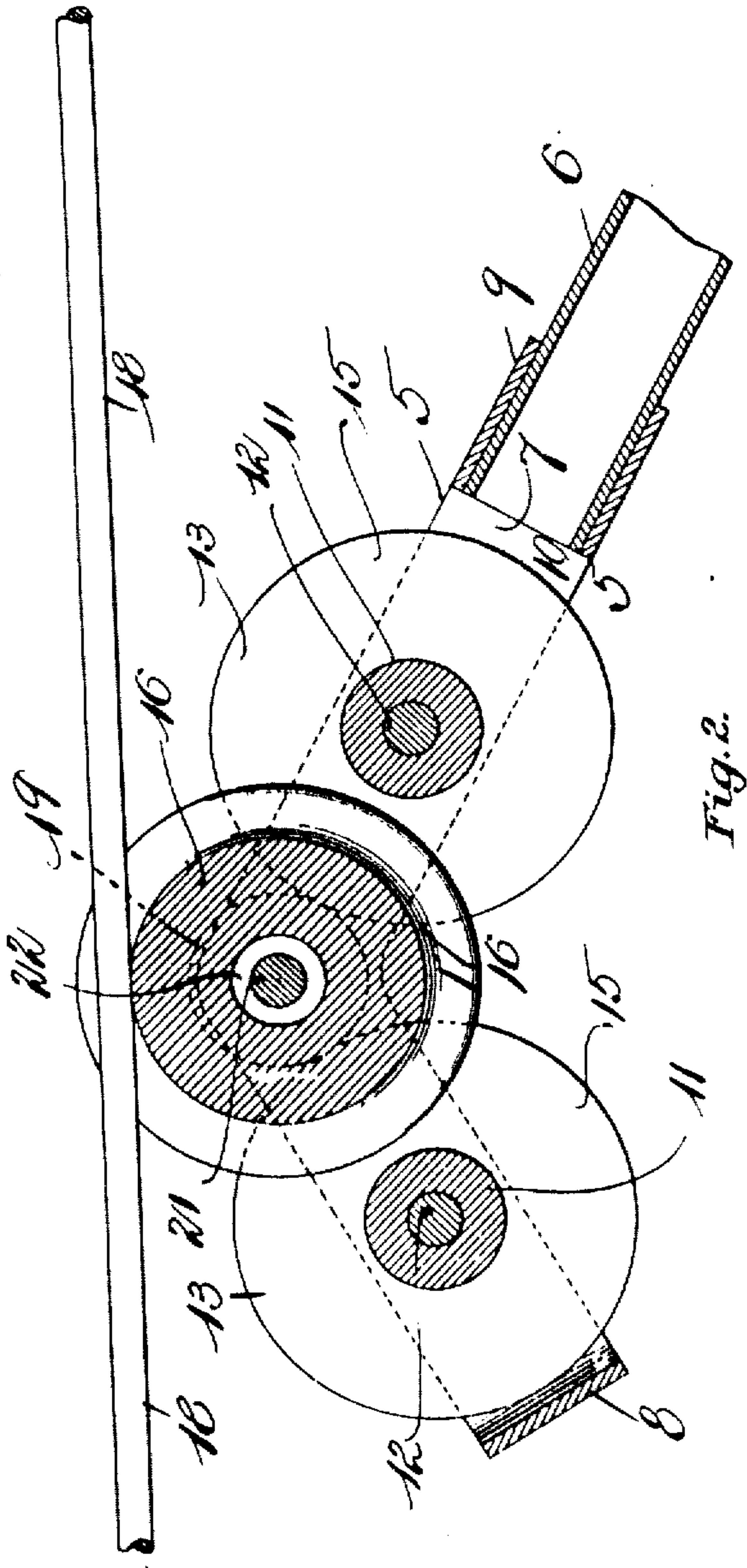


Fig. 2.

Witnesses:
J. A. Jones.
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Inventor:
Lindley F. Forrester
by his Attorney, *Walter S. Ford*

UNITED STATES PATENT OFFICE.

LINDEY F. FORRESTER, OF FOXBORO, MASSACHUSETTS.

TROLLEY.

SPECIFICATION forming part of Letters Patent No. 769,070, dated August 30, 1904.

Application filed January 16, 1904. Serial No. 189,227. (No model.)

To all whom it may concern:

Be it known that I, LINDEY F. FORRESTER, a citizen of the United States, residing at Foxboro, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Trolleys, of which the following is a specification.

This invention relates to an improved trolley for electric railways, the object of the invention being to provide a trolley in which the trolley-wheel rotates with the least possible amount of friction, thus reducing the wear upon the trolley-wire.

The invention consists in a trolley comprising in its construction a frame upon which two carrier-wheels are journaled to rotate, and upon the periphery of these wheels is supported a trolley-wheel having rotatory contact with the peripheries of said carrier-wheels.

The invention further consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a plan view of my improved trolley. Fig. 2 is longitudinal section, partly in elevation, taken on line 2 2 of Fig. 1.

Like numerals refer to like parts throughout both views of the drawings.

In the drawings, 5 is a trolley-frame, and 6 a trolley-pole fast thereto. The trolley-frame 5 has two sides 7 7 and ends 8 9, joining said sides. The sides 7 7 and ends 8 9 inclose a space 10. Two trolley carrier-wheels 11 11 are located in the space 10 and are journaled to rotate upon pins 12 12, fast to the frame 5. Each of the trolley carrier-wheels 11 is provided with two cylindrical flanges 13 14, and between these flanges is an annular groove 15. The trolley-wheel 16 is provided with an annular groove 17 in its periphery in a manner well known to those skilled in this art and runs in contact with a trolley-wire 18. Said trolley-wheel is located between the flanges 13 14 of the trolley carrier-wheels 11, and the annular groove 15 has projecting from opposite faces thereof cylindrical hubs 19 and 20, respectively.

The hub 19 rests upon and rotates in contact with the flanges 13 13, and the hub 20

rests upon and rotates in contact with the flanges 14 14. A guard rod or pin 21 projects through the sides 7 7 of the trolley-frame and through a hole 22, extending through the trolley-wheel 16, the diameter of said hole being much larger than the diameter of the rod 21, so that as the trolley-wheel is rotated it does not bear against said guard-rod, while the hubs of said trolley-wheel rest upon the peripheries of the flanges 13 and 14; but when the trolley-wheel 16 is removed from contact with the trolley-wire 18 the guard-rod 21 prevents the trolley-wheel from becoming accidentally displaced from between the trolley carrier-wheels.

The operation of the device is as follows: The trolley-wheel 16 rests against the trolley-wire 18 and is rotated as said wheel is carried longitudinally of said wire, the friction necessary to rotate said trolley-wheel being very much diminished by reason of the fact that the hubs 19 and 20 rest upon the peripheries of the flanges 13 and 14, respectively, and as said carrier-wheels rotate upon the journal-pins 12 it is evident that the only resistance which it is necessary for the trolley-wheel to overcome in rotating is that of a rolling friction.

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

1. A trolley for electric railways comprising in its construction a frame, two trolley carrier-wheels journaled to rotate upon said frame, and a trolley-wheel supported upon said carrier-wheels.

2. A trolley for electric railways comprising in its construction a frame, two trolley carrier-wheels journaled to rotate upon said frame, and a trolley-wheel supported upon and in rotatory contact with the periphery of said carrier-wheels.

3. A trolley for electric railways comprising in its construction a frame, two trolley carrier-wheels journaled to rotate upon said frame, a trolley-wheel supported upon said carrier-wheels, and a guard-rod fast to said frame and projecting through a hole provided in said trolley-wheel of larger diameter than said rod.

4. A trolley for electric railways comprising

in its construction a frame, two trolley carrier-wheels, each provided with two cylindrical flanges with an annular groove therebetween, a trolley-wheel having a cylindrical hub projecting from each face thereof and resting upon and in contact with the peripheries of said cylindrical flanges.

5 5. A trolley for electric railways comprising in its construction a frame, two trolley carrier-wheels each provided with two cylindrical flanges with an annular groove therebetween, a trolley-wheel having a cylindrical hub pro-

jecting from each face thereof and resting upon and in contact with the peripheries of said cylindrical flanges, and a guard-rod fast to said frame and projecting through a hole provided in said trolley-wheel of larger diameter than said rod. 15

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 20
LINDEY F. FORRESTER.

Witnesses:

CHARLES S. GOODING,
ANNIE J. DAILEY.