

No. 803,806.

PATENTED NOV. 7, 1905.

E. BROSSY.
TROLLEY WHEEL.
APPLICATION FILED JULY 20, 1904.

Fig. 1.

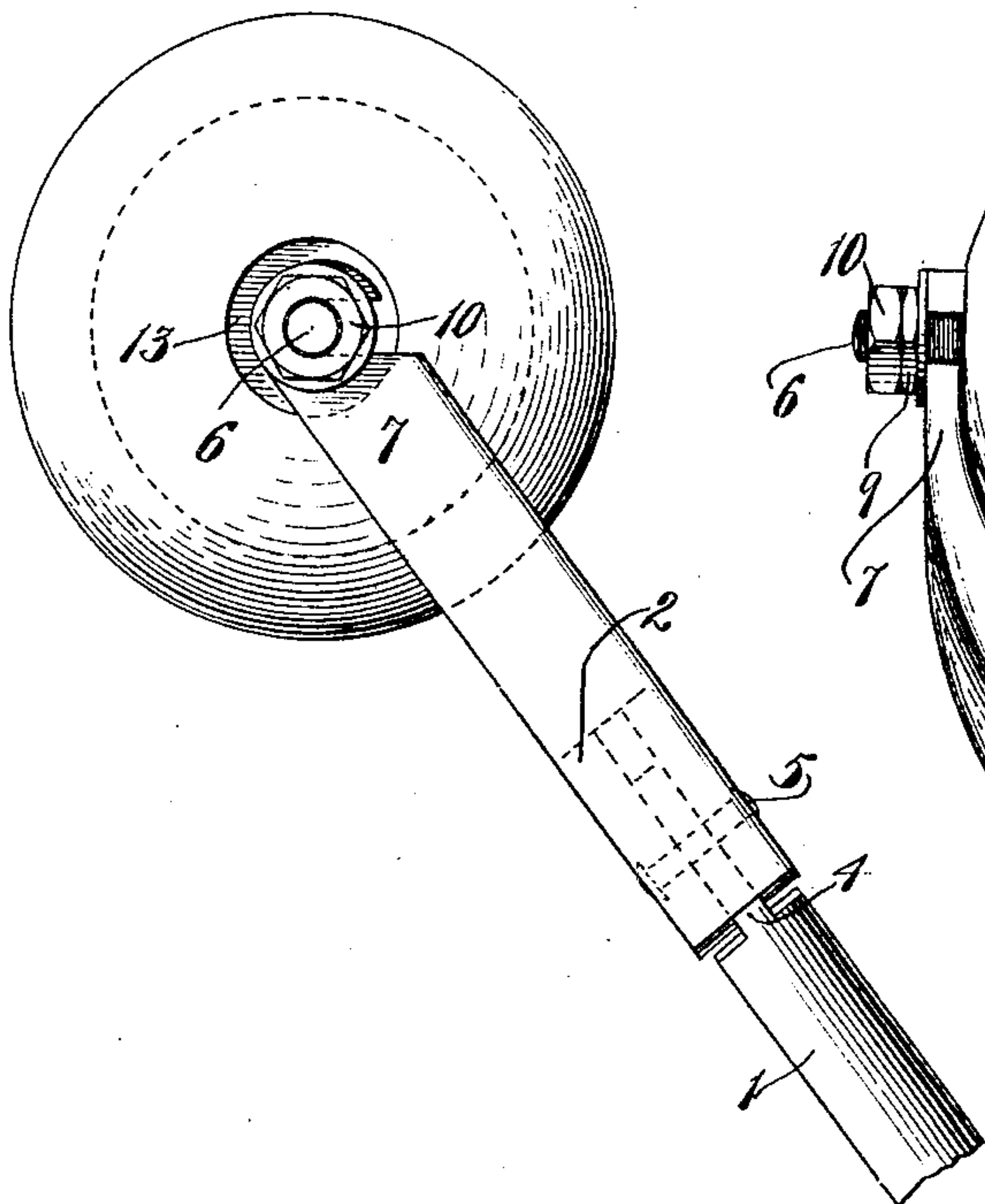


Fig. 2.

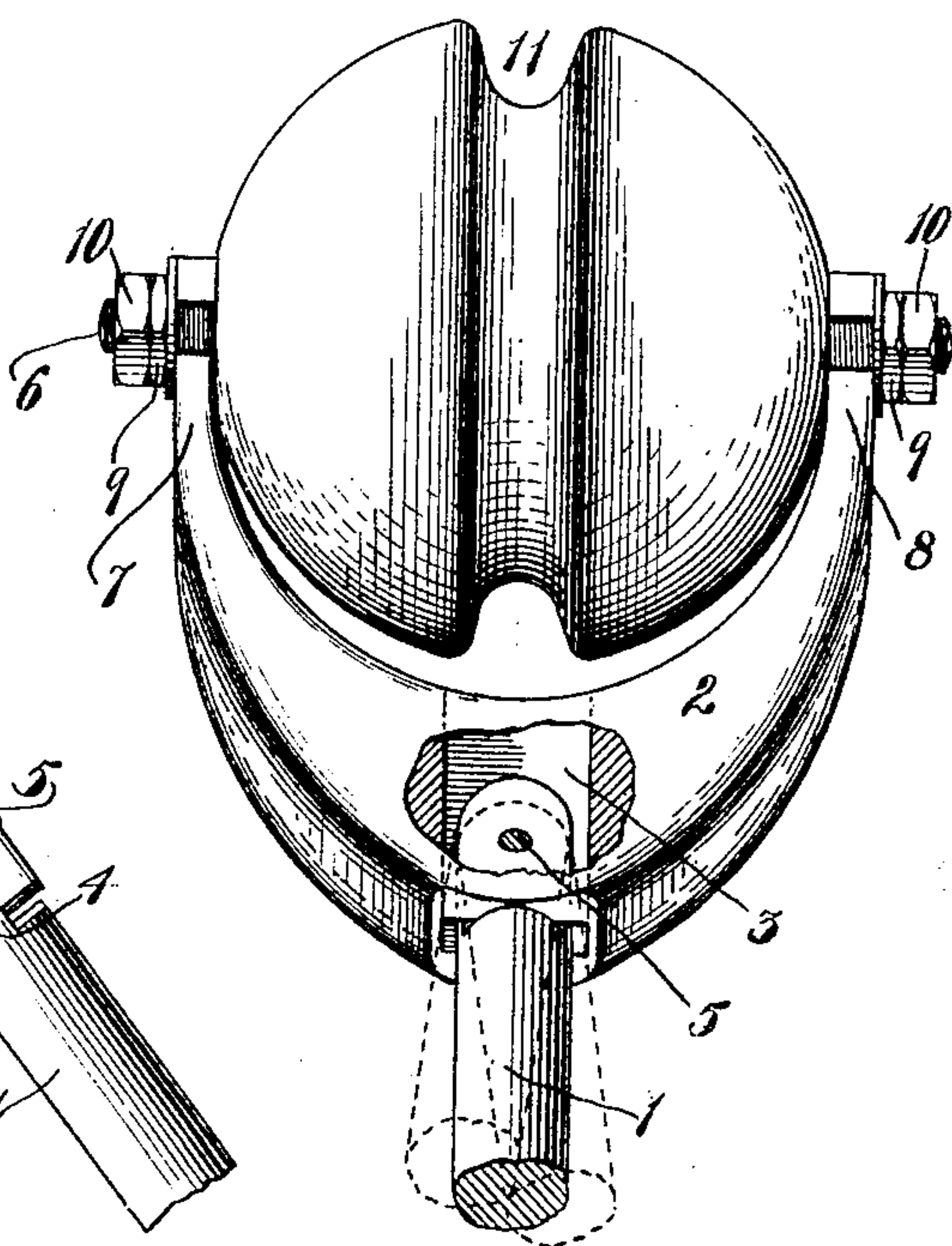
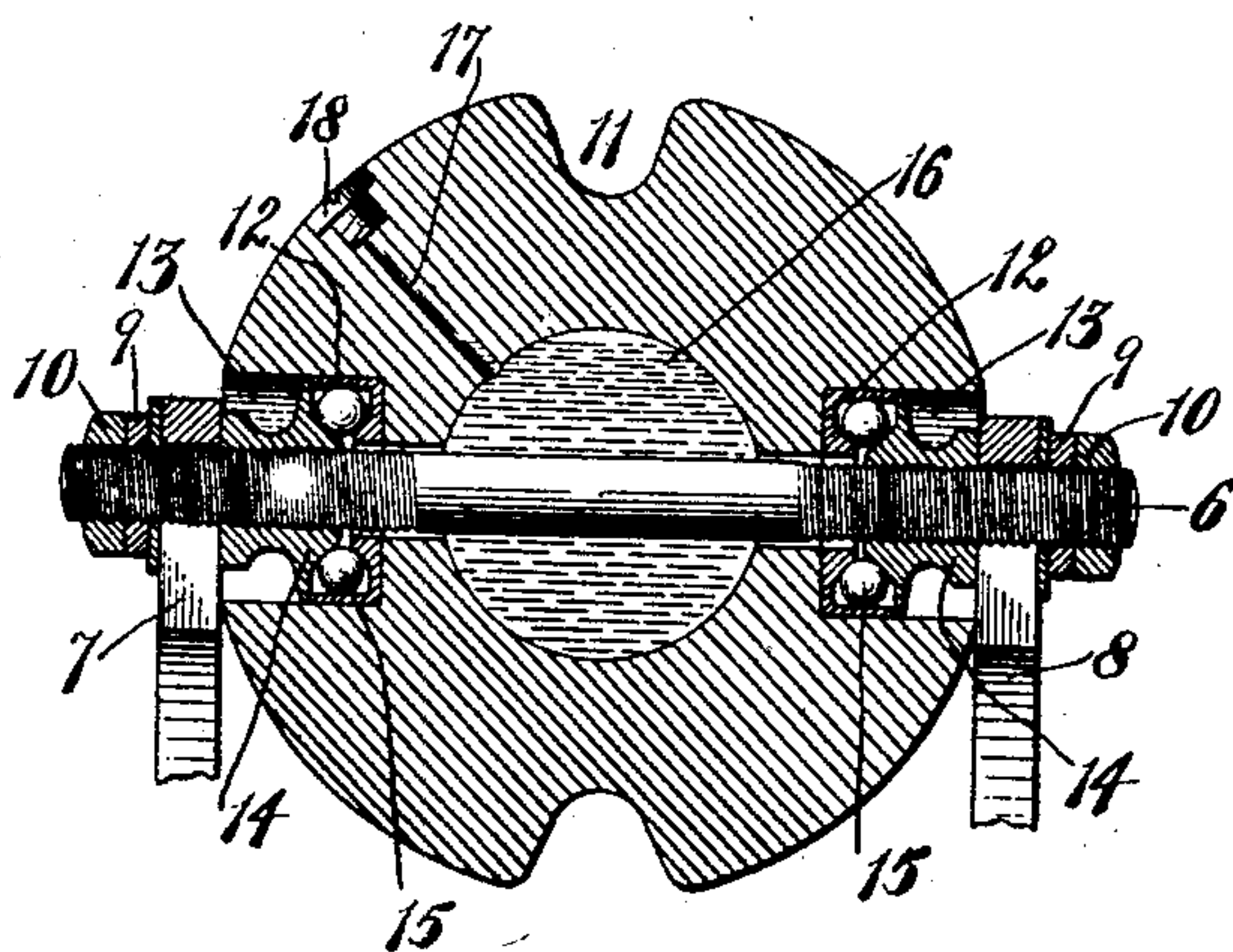


Fig. 3.



Witnesses:

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EMILE BROSSY, OF WEST HOBOKEN, NEW JERSEY.

TROLLEY-WHEEL.

No. 803,806.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed July 20, 1904. Serial No. 217,340.

To all whom it may concern:

Be it known that I, EMILE BROSSY, a citizen of the United States, and a resident of West Hoboken, in the county of Hudson and State of New Jersey, have invented new and useful Improvements in Trolley-Wheels, of which the following is a specification.

My invention relates to improvements in trolley-wheels, and has more particularly for its object to provide certain improvements in the construction, form, and arrangement of the several parts whereby the wheel will be permitted to run with a small amount of friction, a supply of lubricant being carried within the wheel, and in which the wheel-support may have a limited lateral swinging movement in the plane of the pole.

In the accompanying drawings, Figure 1 represents the trolley-wheel and its adjacent parts in side elevation. Fig. 2 is a front view of the same, a portion of the harp being broken away to show the hinge connection between it and the trolley-pole; and Fig. 3 is a transverse central section through the wheel.

The trolley-pole is denoted by 1.

The harp is denoted by 2, and it is permitted a limited lateral swinging movement in the plane of the pole as follows: The base of the harp is provided with a longitudinal slot 3, within which the reduced end 4 of the pole is inserted. A rivet 5 is used for pivoting the harp to the pole. The slot 3 is slightly wider than the width of the reduced end 4 of the pole, thus permitting the harp to swing a short distance to either side of a longitudinal extension of the pole. An axle 6 is secured to the arms 7 and 8 of the harp, in the present instance by nuts 9 and 10.

The wheel proper is of spherical form and is provided with a circumferential groove 11, arranged to receive the trolley-wire. The spherical wheel is mounted on the axle 6 as follows: Bearing-cups 12 are forced into recesses 13 in the opposite sides of the wheel. Bearing-cones 14 are adjustably mounted on the axle 6, and rollers 15 are interposed between the cups and cones.

The spherical wheel is provided with a centrally-arranged chamber 16, through which the axle 6 passes. This chamber 16 is fitted to contain a supply of lubricant. A duct 17 leads from the surface of the wheel to the chamber 16 for the purpose of filling the chamber with lubricant. A screw-cap 18 is provided for closing the outer end of the duct

after the chamber 16 has been supplied with lubricant. This screw-cap 18 is flush with the surface of the wheel, and therefore does not interfere with the bringing of the wheel into engagement with the trolley-wire. The lubricant in the chamber 16 runs slowly along the axle 6 into the space between the bearing cups and cones, thus serving to lubricate the roller-bearing between the wheel and axle.

The spherical wheel is preferably cast in a single piece, thus doing away with means for fastening the sections together, as would be necessary if the wheel was made in sections. The wheel carries its own supply of lubricant sufficient to lubricate the antifriction-bearings for a considerable length of time.

The arrangement of the parts is such as to produce an extremely strong structure in which the liability of the parts to become deformed is reduced to a minimum.

One of the advantages of the spherical form of wheel is that no sharp corners are presented on the periphery of the wheel at the sides of the wire-receiving groove. When a sharp corner is presented at this point, as in the ordinary wheel, the tendency of the wheel is to ride off the wire when the wheel comes in contact with a switch. A further advantage of the spherical form of wheel is that the liability of the flanges at the sides of the groove becoming bent is obviated. This is a common fault in the wheels where a small amount of metal is provided at the sides of the groove. An advantage which arises from the use of a greater amount of metal by the spherical form is that the wheel is less liable to become heated. It therefore keeps its lubricant from drying up a longer period than where less metal is used. This form of wheel also absolutely prevents the liability of the wheel becoming caught in the span-wires when the wheel is used in overhead work.

The limited rocking movement of the wheel-support with respect to the pole reduces the liability of the wheel from running off the trolley-wire when the direction of the wire is changed. This is especially true, as the lateral movement of the support is in the plane of the trolley-pole and not in a vertical plane.

It is evident that changes might be resorted to in the form, construction, and arrangement of the several parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein set forth; but

What I claim is—

1. A trolley-wheel having a circumferential groove for receiving the trolley-wire, the said wheel having a spherical surface so as to
5 eliminate sharp corners on the periphery of the wheel at the sides of the said groove and for strengthening the wheel at this point.

2. A trolley-wheel having a circumferential groove for receiving the trolley-wire, the said
10 wheel having a spherical periphery and provided with a centrally-arranged chamber for containing a supply of lubricant, an axle extending centrally through the wheel trans-

verse to the trolley-wire groove and roller-bearings located entirely within the wheel in- 15
terposed between the wheel and the axle and communicating with the lubrication-chamber.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 18th day of July, 20
1904.

EMILE BROSSY.

Witnesses:

FREDK. HAYNES,
HENRY THIEME.