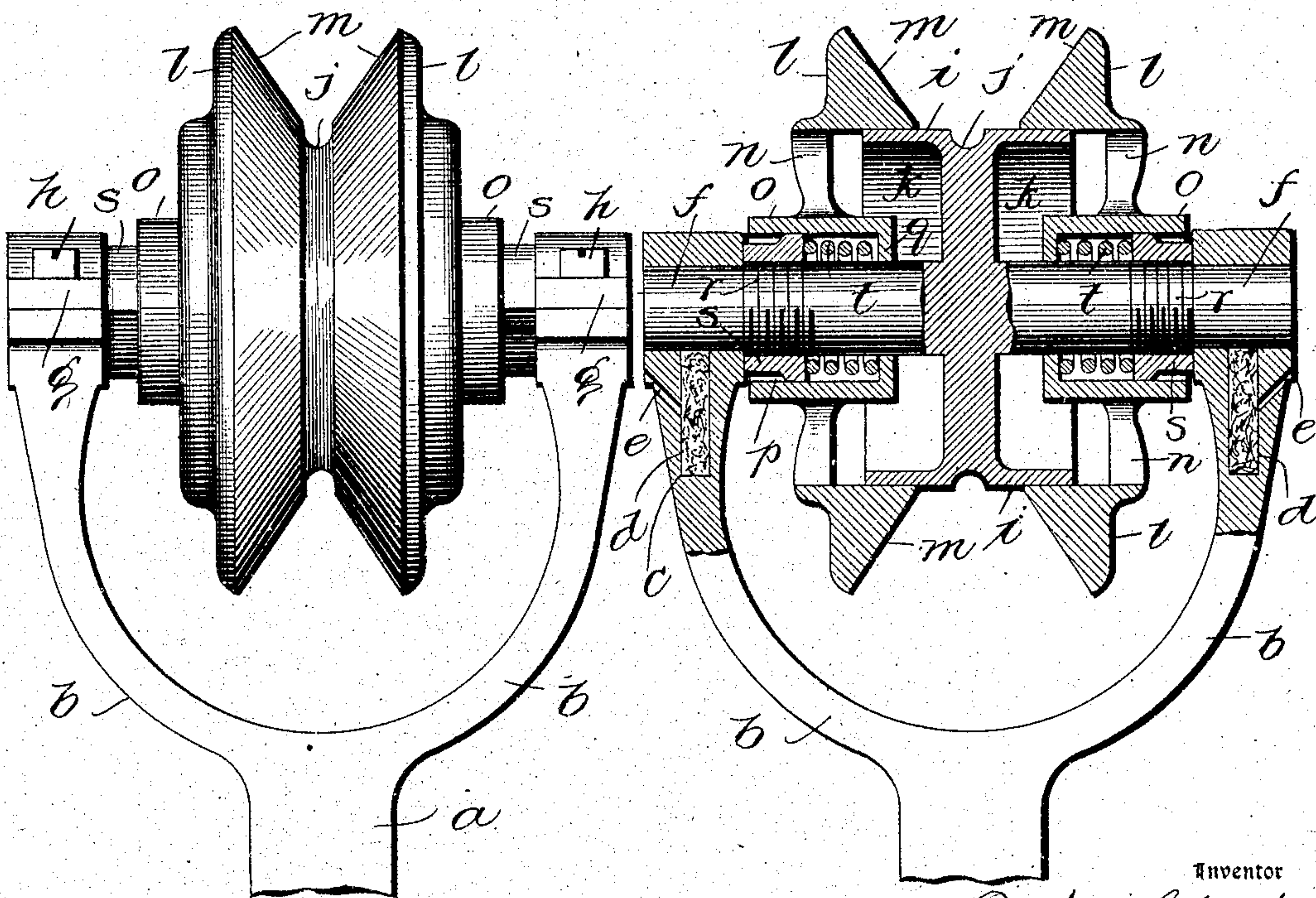
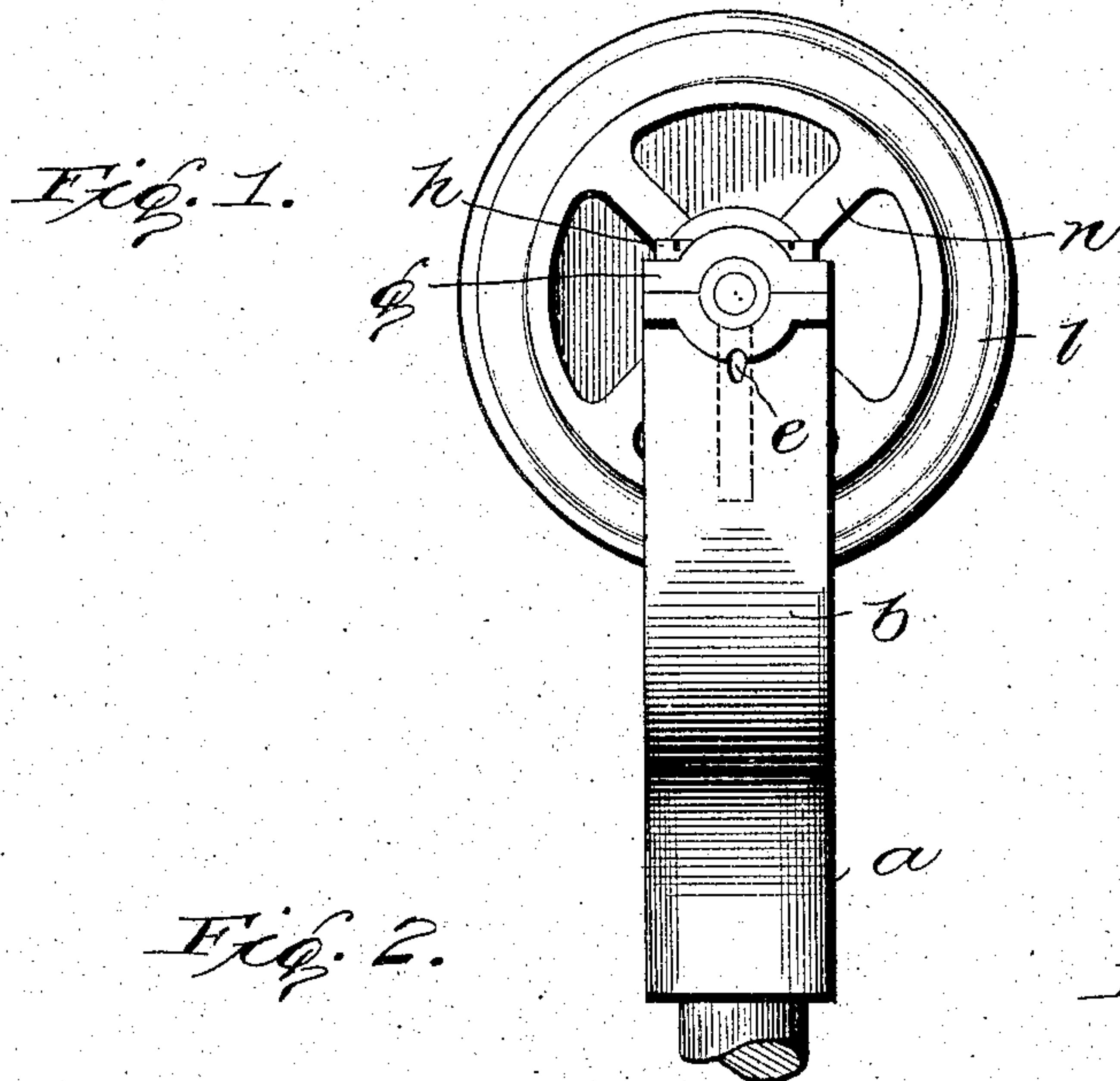


No. 786,795.

PATENTED APR. 11, 1905.

E. W. CLARK.
TROLLEY WHEEL.
APPLICATION FILED JULY 28, 1904.



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UNITED STATES PATENT OFFICE.

EDWIN W. CLARK, OF COLUMBUS, GEORGIA.

TROLLEY-WHEEL.

SPECIFICATION forming part of Letters Patent No. 786,795, dated April 11, 1905.

Application filed July 28, 1904. Serial No. 218,524.

To all whom it may concern:

Be it known that I, EDWIN W. CLARK, a citizen of the United States, residing at Columbus, in the county of Muscogee and State of Georgia, have invented certain new and useful Improvements in Trolley-Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in trolley-wheels; and the objects of my invention are to provide a simple, cheap, and easily-operated trolley-wheel, one that will adjust itself to all conditions of actual service without losing contact with the conducting-wire and one that will not wear out the wire, more especially in passing around curves or where the wire is not over the center of the track or where the car rocks.

With these objects in view my invention consists in the construction and combinations of parts, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents an end view of my improved trolley-wheel. Fig. 2 is a side view thereof, and Fig. 3 is a longitudinal horizontal section.

a represents the supporting-pole forked in the usual way and terminating in two upwardly-projecting arms *b b*. Each of these arms is provided with a bored-out portion *c*, in which is inserted waste *d* for the purpose of oiling the same, the oil being supplied through the hole *e*. By this simple means the bearings of the wheel are always kept lubricated. The top of each of the arms *b* is recessed in the form of a semicircle to form a bearing for the shaft *f* of the trolley-wheel proper, and a cap-piece *g*, fastened by screws *h*, serves to hold the wheel in position in the arms *b*, the construction being the same on both sides of the wheel.

The shaft *f* of the trolley-wheel has made integral with it on its center the drum *i*, provided with a semicircular depression *j*, in which the conducting-wire engages under ordinary circumstances. It is not necessary, however, that this depression should be used, as the outer surface of the drum *i* may be

perfectly cylindrical, if desired. The drum *i* is recessed on each side, as shown at *k*, for the reception of the hubs of the slidable wheel-flanges. These wheel-flanges consist of an upright portion *l*, beveled off on the inside, as shown at *m*, and with the central part bored out so as to loosely fit the cylindrical surface *i*. Spokes *n* connect this outer flange with the hub *o* of the flange, which is recessed, as shown at *p*, one end of the hub, as shown at *q*, being in contact with the shaft *f*. This shaft *f* is screw-threaded, as shown at *r*, and on the screw-threaded portion is secured a nut *s*, while a spiral spring *t* is confined in the space between the head of the nut *s* and the part *q* of the hub. The result of this construction is that the wheel-flange can easily slip outwardly from the position shown in Fig. 2 to that shown in Fig. 3, for example, against the tension of the spring *t*. In rounding a curve, therefore, one or both of the flanges will slip outwardly and will not tend to bend or cramp the wire, as is the case with the ordinary trolley-wheel. The construction of the wheel-flange, spring, and nut is the same on both sides of the wheel. It should be further noted that these wheel-flanges revolve freely and easily around the main drum *i*, the result being that in rounding a curve where the wire is swung from a position at right angles to the axle *f* to a position inclined thereto the wheel-flanges will slip outwardly and, if necessary, revolve freely on the cylindrical surface *i* and axle *f*. The result of this construction is that in rounding a curve scarcely no resistance is offered more than is presented under ordinary conditions, as it is simply necessary to compress the springs *t*, which are not made very heavy. The same is true when the car rocks, throwing the wire against one or the other of the wheel-flanges, or when the wire is not exactly over the center of the track.

The springs are located within the trolley-wheel throughout and entirely protected from the action of the weather, and the whole makes a very compact, economical, and efficient trolley-wheel.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a trolley-wheel, the combination of supporting-arms and a trolley-wheel mounted
5 therein, said wheel consisting of a freely-revoluble central axle provided with a drum, and spring-pressed flanges overlapping said drum revolubly and slidably mounted independently thereof on said axle, substantially
10 as described.

2. In a trolley-wheel, the combination of supporting-arms, an axle provided with an enlarged drum revolubly mounted in said arms, flanges overlapping said drum slidably and
15 revolubly mounted independently thereof on said axle, and springs normally tending to press said flanges toward each other, substantially as described.

3. In a trolley-wheel, the combination of
20 supporting-arms, an axle revolubly mounted in said arms provided with screw-threaded portions, said axle being provided with a drum in the center, wheel-flanges provided with recessed hubs revolubly and slidably mounted
25 on said axle and said drum, nuts engaging the screw-threaded portion of said axle, and

springs located between said nuts and the hubs of the wheel-flanges, substantially as described.

4. In a trolley-wheel, the combination of 30 supporting-arms, an axle revolubly mounted in said arms and screw-threaded near each end thereof, a cylindrical drum mounted on said axle, said drum being recessed on each end and provided with a central circumferential 35 groove, wheel-flanges revolubly and slidably mounted on said axle and said drum, said wheel-flanges consisting of outer portions provided with inclined faces, a hub and spokes connecting said hub, said hub being recessed 40 for the reception of the springs, nuts engaging the screw-threaded portions of said shaft, and springs located between said nuts and in the recesses of the hubs of the wheel-flanges, substantially as described. 45

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

EDWIN W. CLARK.

Witnesses:

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