

I. O. STANT.
TROLLEY WHEEL.
APPLICATION FILED MAR. 3, 1908.

912,199.

Patented Feb. 9, 1909.

Fig. 1.

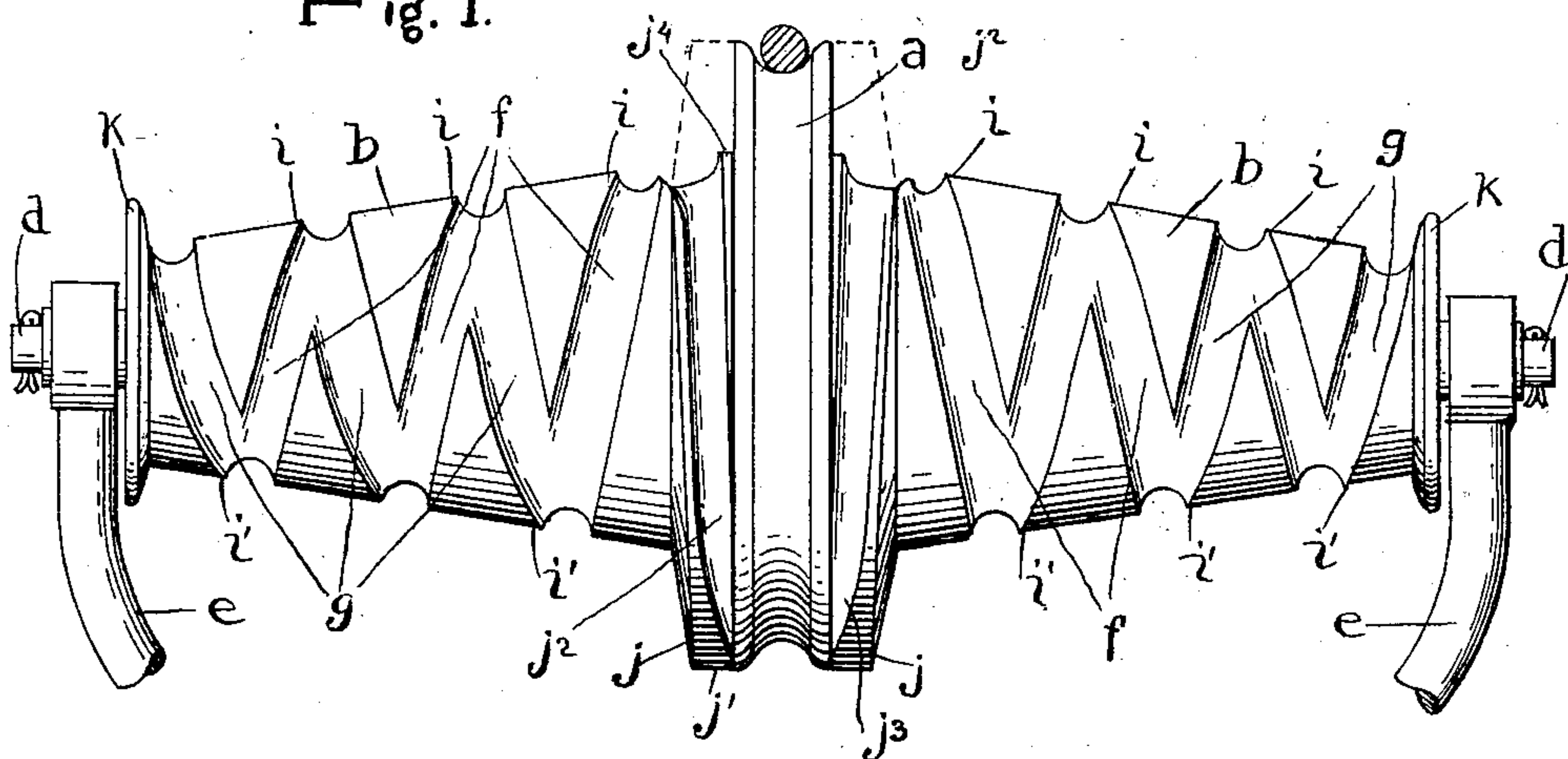


Fig. 2.

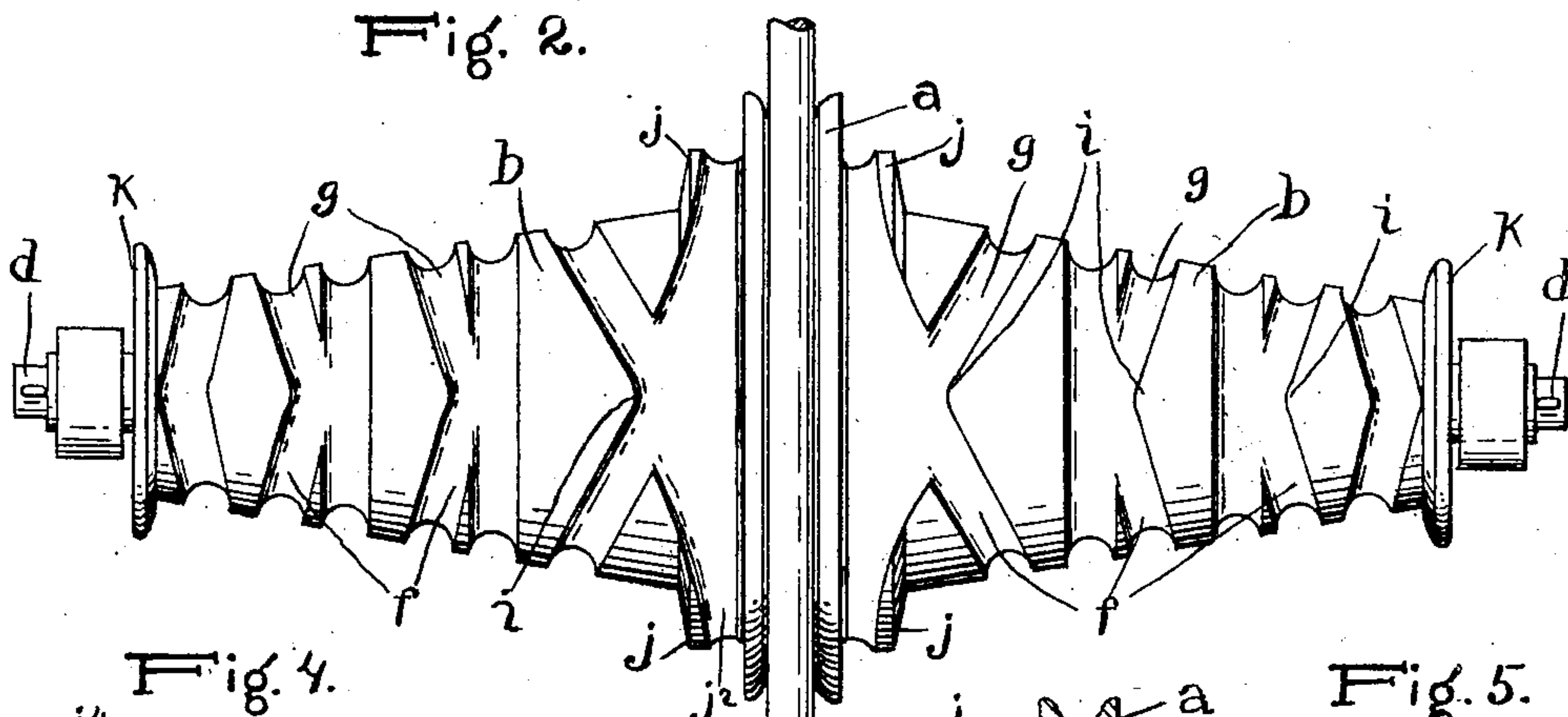


Fig. 4.

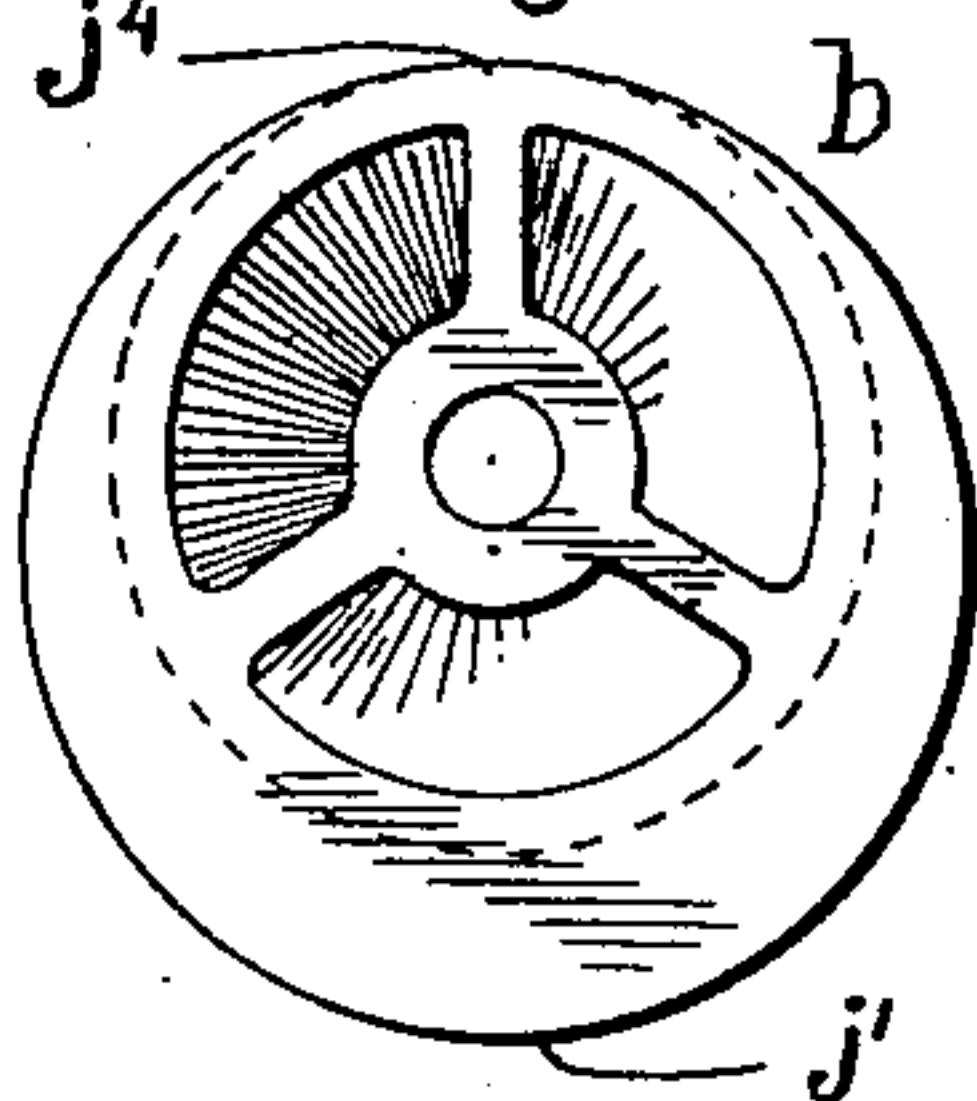


Fig. 5.

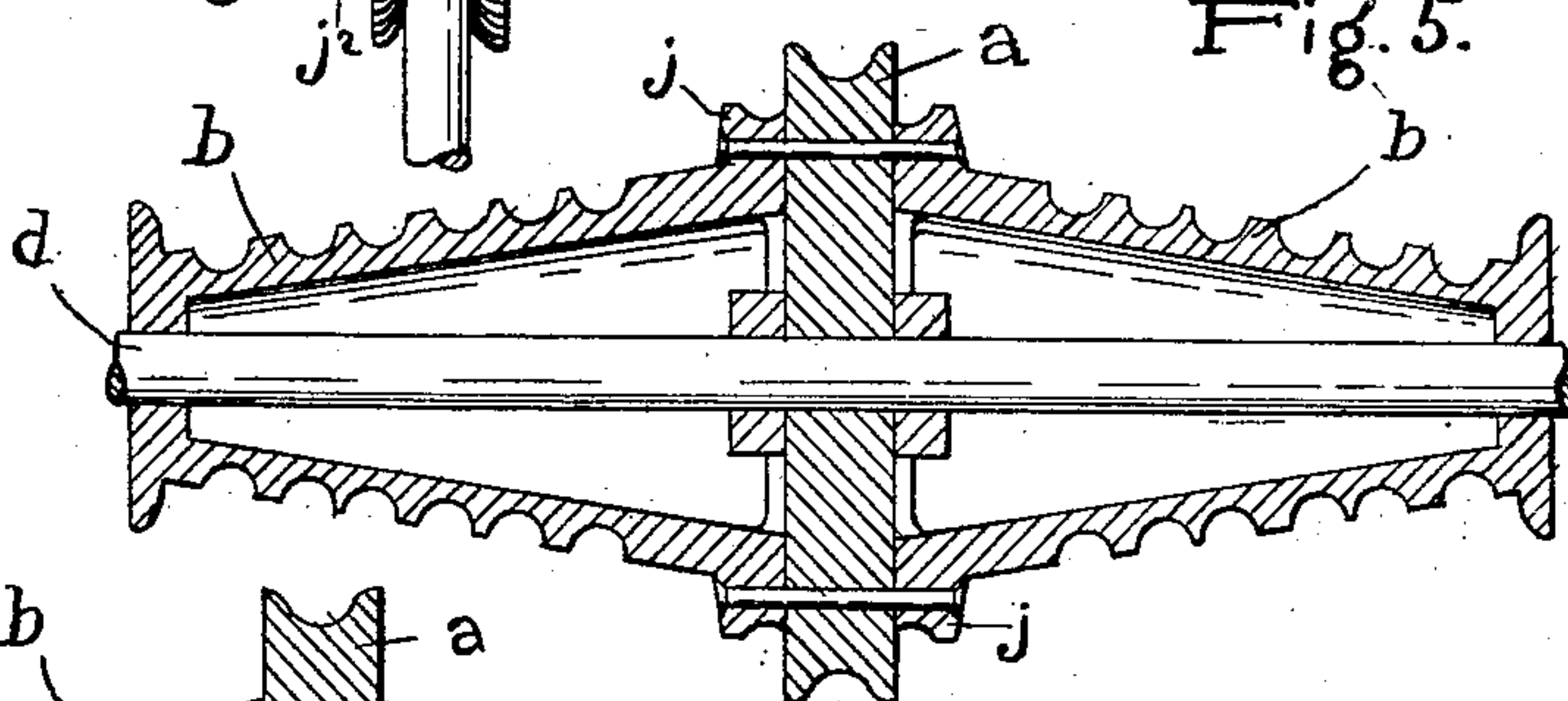
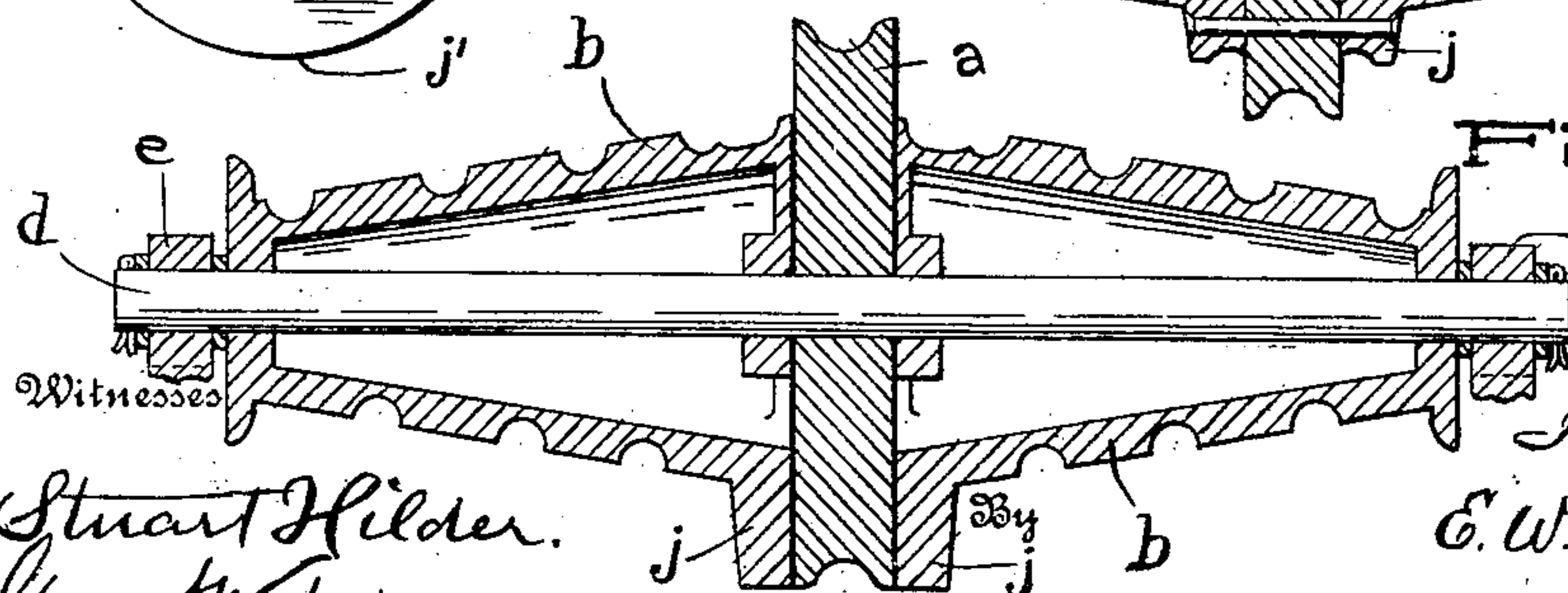


Fig. 3.



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UNITED STATES PATENT OFFICE.

IRA O. STANT, OF DUBLIN, INDIANA, ASSIGNOR OF ONE-HALF TO CHARLES M. EVANS, OF DUBLIN, INDIANA.

TROLLEY-WHEEL.

No. 912,199.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed March 3, 1908. Serial No. 419,066.

To all whom it may concern:

Be it known that I, IRA O. STANT, a citizen of the United States, resident of Dublin, in the county of Wayne and State of Indiana, have made a certain new and useful Invention in Trolley-Wheels; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a side view of my trolley wheel with the eccentric flange shown as raised in dotted lines. Fig. 2 is a plan view of the invention. Fig. 3 is a section on the line 3—3, Fig. 2 with conductor wire omitted. Fig. 4 is an end view of one of the cone wheel idlers. Fig. 5 is a central vertical section of a modified form of the invention.

The invention has relation to trolley wheels, having for its object the provision of means whereby the wheel will be automatically replaced upon or centered with respect to the wire conductor, without regard to whether the car is going forward or backward, and without stopping the car.

With this object in view, the invention consists in the novel construction and combination of parts, as hereinafter set forth.

In the accompanying drawings, illustrating the invention, the letter *a*, designates the usual trolley wheel, and *f*, *b*, the cone shaped wheels constituting my invention, and which are arranged one at each side of the wheel *a*, all of such wheels being mounted upon the spindle *d*, having bearings at its ends in the fork *e*, of the trolley pole.

Each cone shaped wheel *b*, has a spiral groove *f*, therein, running in one direction and intersecting a spiral groove *g*, running in the opposite direction. At diametrically opposite points at top and bottom of the cone wheel where the two spiral grooves intersect, the side walls of the grooves are extended inward or towards the upper or larger end of the cone wheel, as shown at *i*, *i'*, whereby the cone wheel, the spiral groove of which engages the wire conductor, will be thrown slightly to one side or laterally deflected as said extensions *i*, *i'*, strike the same, and the spiral groove leading towards the larger end of the cone and the trolley wheel proper caused to engage such conductor.

At the upper or larger end of each cone wheel an eccentric flange *j*, is provided, which at its point *j'*, of greatest eccentricity is about on a level with or it may be somewhat above the trolley wheel itself when the cone wheel is turned by the frictional action or contact of the wire conductor, so that when the cone wheel has been moved to cause the conductor wire to engage the portion of the spiral at the top thereof, a groove *j²*, of the flange *j*, forming a continuation of the spirals *f*, and *g*, will engage the wire, which will be gradually raised by the eccentric flange until it escapes from the groove thereof and falls upon the trolley wheel. The groove *j²*, of the eccentric flange leads inward and becomes less deep towards the point of greatest eccentricity of the flange, as shown at *j³*. At the smaller end of the cone wheel an annular flange *k*, is provided, acting as a deflector to prevent the cone wheel in case of bounding from escaping from the wire entirely.

The cone wheels *b*, *b*, are idlers upon the spindle *d*, and inasmuch as the eccentric flanges thereof hang normally downward through force of gravity and their point of least eccentricity, shown at *j⁴*, is in line with the inclined or conical surface of the wheel, no obstruction is offered to the passage of the trolley wheel from the wire conductor to a side line or switch thereof, or vice versa. In some cases the trolley wheel may be made in one piece with the cone wheel or rigidly secured thereto, as shown in Fig. 5 of the drawings.

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

A trolley wheel having at each side thereof a cone wheel idler provided with intersecting spiral grooves running in opposite directions, the side walls of said grooves having inward deflecting extensions at the points of intersection, said cone wheel having at its larger end an eccentric flange provided with a groove communicating with said spiral grooves and leading towards the trolley wheel.

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

IRA O. STANT.

Witnesses:

WILLIAM E. FLOYD,
CHARLES M. EVANS.