

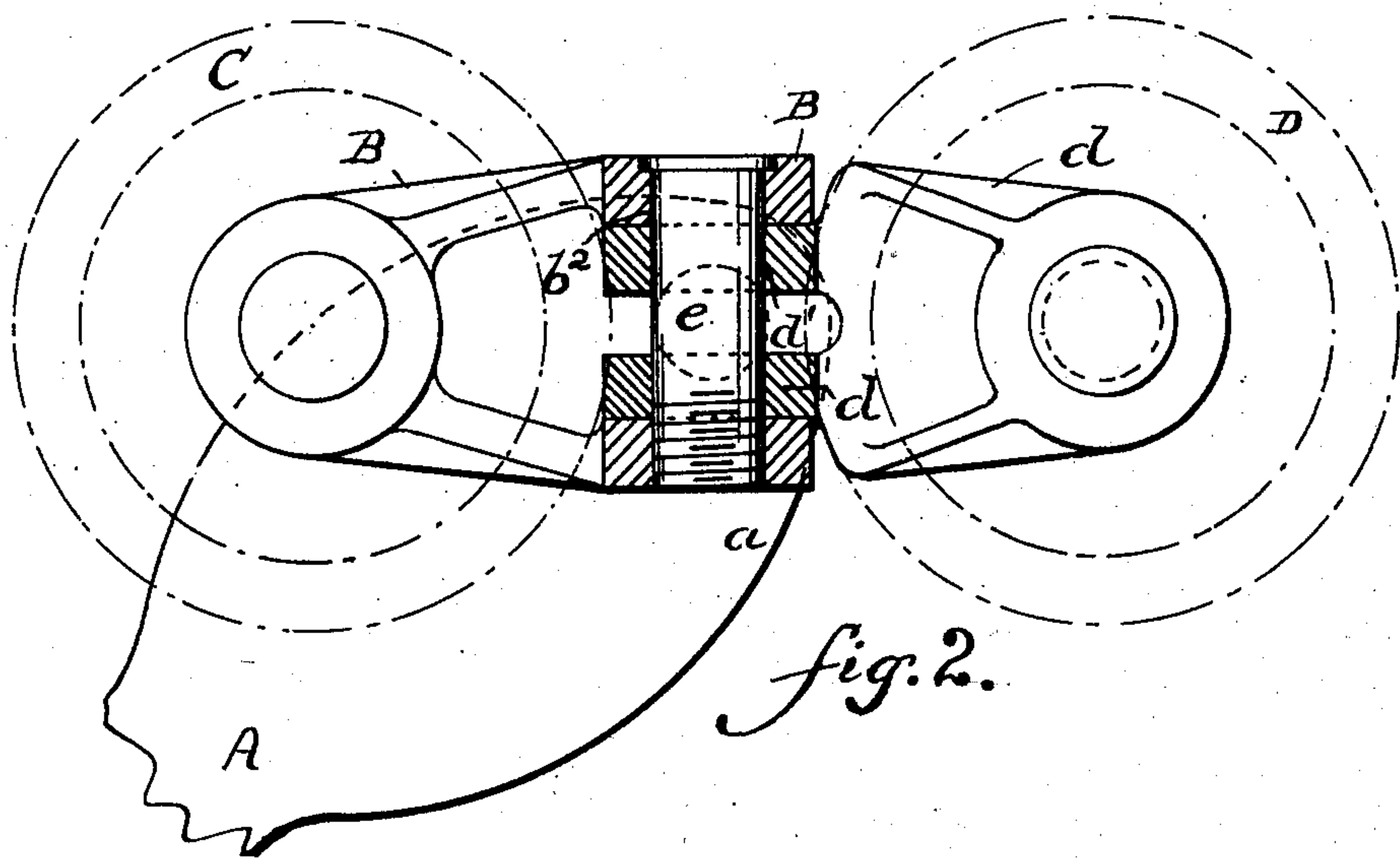
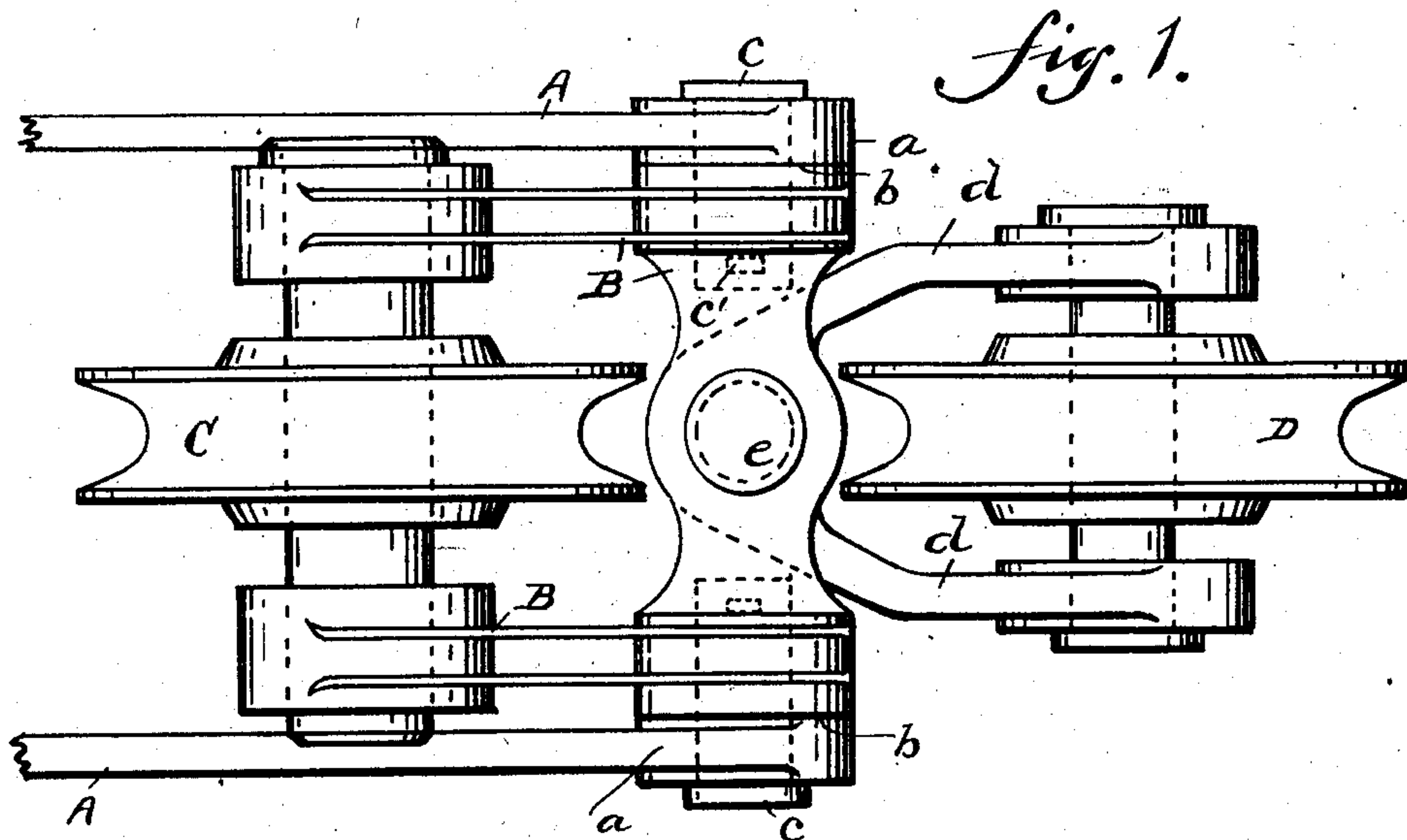
No. 753,554.

PATENTED MAR. 1, 1904.

A. S. DEEM.  
TROLLEY.

APPLICATION FILED AUG. 8, 1903.

NO MODEL.



*Arthur S. Deem,*

Inventor

Witnesses

*Florence Kelly*  
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# UNITED STATES PATENT OFFICE.

ARTHUR S. DEEM, OF READING, PENNSYLVANIA.

## TROLLEY.

SPECIFICATION forming part of Letters Patent No. 753,554, dated March 1, 1904.

Application filed August 8, 1903. Serial No. 168,708. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR S. DEEM, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Trolleys, of which the following is a specification.

This invention relates to improvements in trolleys for electric-railway cars employing overhead electric conductors; and the object of the invention is to provide a trolley by the use of which the electric current will not be broken by reason of the trolley-wheel becoming disengaged and to afford increased contact for electric current by virtue of a plurality of contact-wheels.

A further object is the making of these wheels automatically adjustable to the overhead conductor while traversing a curve or other than the straight line. This I accomplish by pivotally mounting the rear contact-wheel to the main frame, which carries the front contact-wheel, thus permitting sufficient lateral motion to cover all probable curves or angles of the overhead conductor. It will be seen that no matter how rapidly the car is moving or how sharp the curve both wheels will at all times contact with the overhead wire.

The invention is intended particularly as an improvement on the device shown and described in United States Letters Patent No. 733,015, issued to me on the date of July 7, 1903.

The details of construction are fully described in the following specification and clearly illustrated in the accompanying drawings, in which—

Figure 1 is a plan view, and Fig. 2 a side view, partly in section, of my device.

The harp A is of the usual construction, having jaws *a*, to which the trolley is pivoted.

The device consists of a two-part frame, the main portion B being mounted on the harp at *b* and carrying the front contact-

wheel C. The body of the frame B extends the entire width of the trolley, and the jaws of the harp are pivoted thereto by means of pins *c*, which enter from either side, but do not reach to the center. These pins are secured by suitable keys *c'* passing through them.

The rear wheel D is mounted in a supplemental frame *d*. This frame is formed approximately in the shape of a jaw and has at its front an opening *d'* passing entirely through it. The body portion of the main frame B has also a central opening *b''*, and these openings are adapted to register and are then held in pivotal position by means of a pin *e* passing through them, forming a swinging frame for the rear wheel D, while the front wheel remains rigidly in position in relation to the harp.

My device will adjust itself to the overhead conductor under all conditions.

That the details of construction may be varied somewhat is quite evident; but,

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

A trolley comprising a harp, a main frame B pivotally mounted on the harp, pins *c* which enter the frame B from either side but do not reach to the center, keys *c'*, a contact-wheel C mounted in said frame, a supplemental jaw-shaped frame *d* having central opening *b''*, a pin *e* passing through the opening *b''* and the body of the frame B forming a swinging connection for said supplemental frame, and a rear wheel D pivotally mounted in said supplemental frame, all substantially as set forth.

In testimony whereof I have signed my name to this specification in presence of two witnesses.

ARTHUR S. DEEM.

Witnesses:

ED. A. KELLY,  
GEO. M. MILLER,