

No. 695,506.

Patented Mar. 18, 1902.

M. STOLL & J. W. RUCK.  
TROLLEY.

(Application filed June 21, 1901.)

(No Model.)

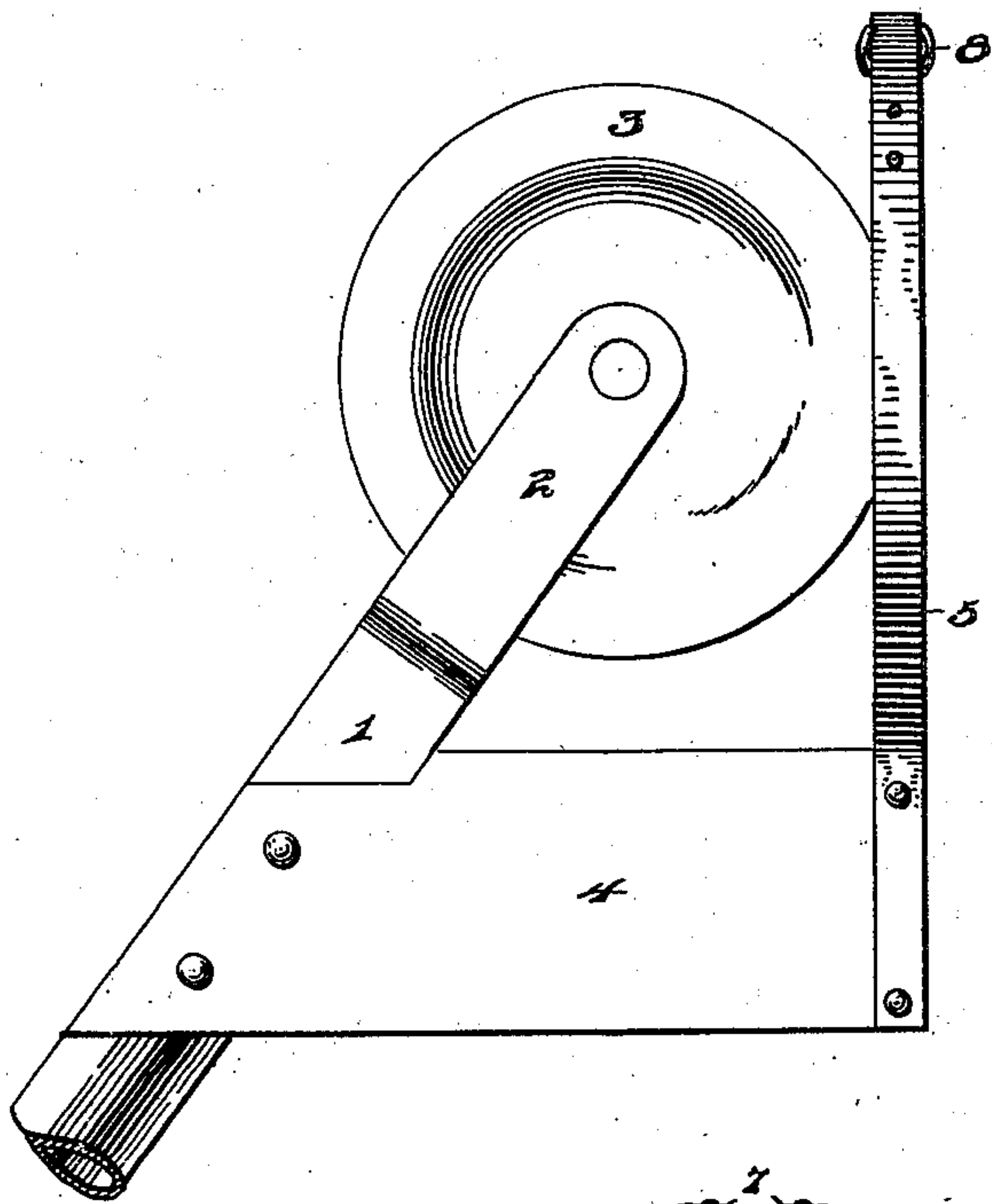


Fig. 1.

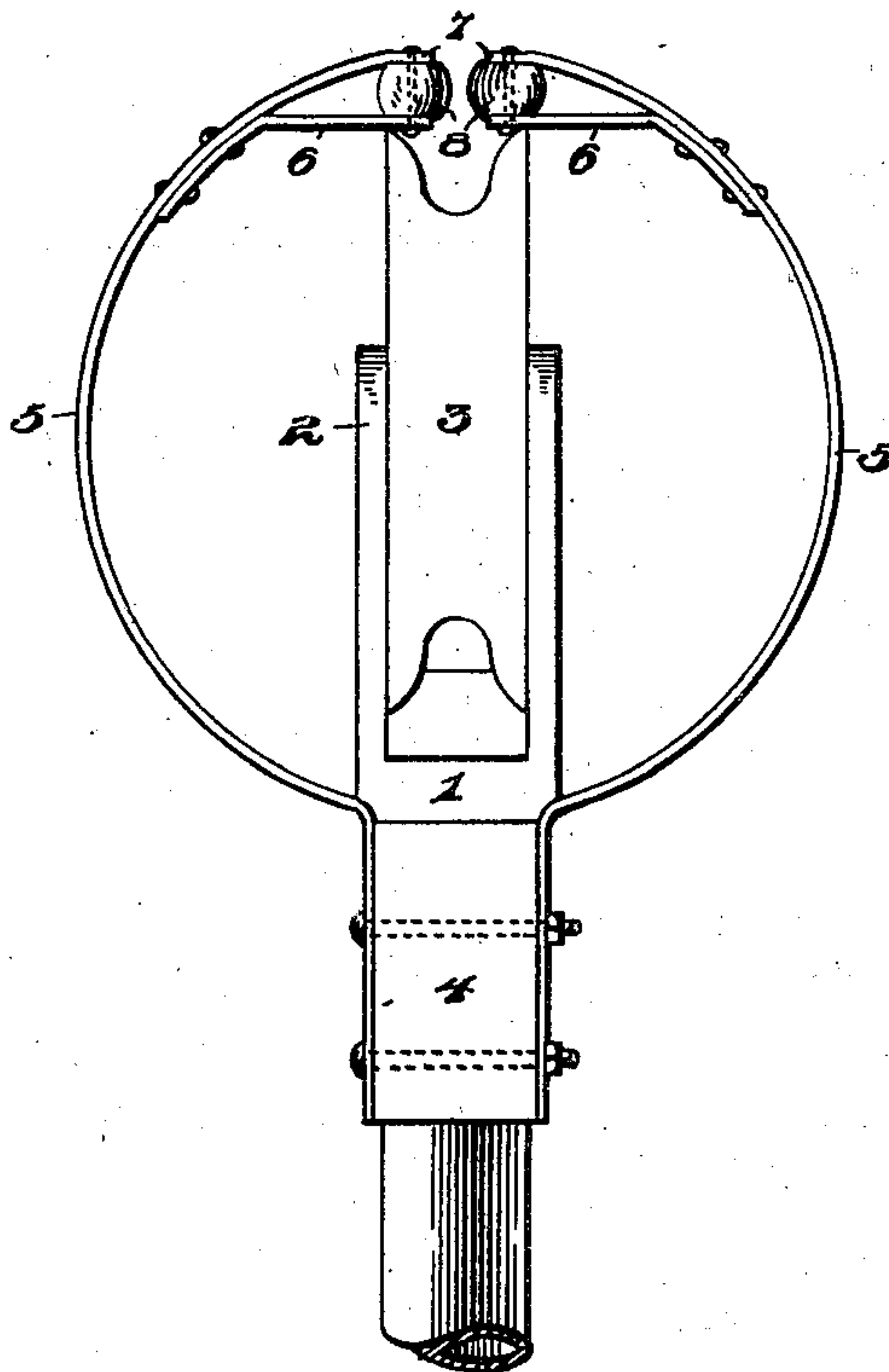


Fig. 2.

Witnesses:

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# UNITED STATES PATENT OFFICE.

MATH STOLL AND JOHN W. RUCK, OF PITTSBURG, PENNSYLVANIA.

## TROLLEY.

SPECIFICATION forming part of Letters Patent No. 695,506, dated March 18, 1902.

Application filed June 21, 1901. Serial No. 65,438. (No model.)

*To all whom it may concern:*

Be it known that we, MATH STOLL and JOHN W. RUCK, citizens of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Trolleys; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in trolleys, and relates more particularly to that class that will not come off the wire or become accidentally disengaged therefrom.

The invention has for its object the provision of novel means whereby the attachment may be easily secured to any trolley now in use and will retain the wire in proper position, but will allow the trolley to be moved from the wire when the occasion requires, but not accidentally disengaged.

The invention also aims to construct an attachment that will be extremely simple, strong, durable, and comparatively inexpensive to manufacture; furthermore, one that will be highly efficient in its operation.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate corresponding parts throughout the views, in which—

Figure 1 is a side elevation of the upper portion of a trolley pole and harp, showing the trolley-wheel and our improved attachment applied in position. Fig. 2 is a front elevation thereof.

In the drawings the reference-numeral 1 indicates the upper portion of the trolley-pole carrying a trolley-harp, in which is mounted a trolley-wheel 3, these parts being of the ordinary and well-known construction. Below the trolley-harp 2, upon the trolley-pole 1, is suitably secured a block 4, upon which are mounted semicircular spring-arms 5, these arms carrying cross-pieces 6, the upper end of the spring-arms and the inner extension of the cross-pieces 6 forming bearings 7, in which are rotatably mounted spherical antifric-

wheels 8, which are normally in close proximity to one another, the lower face of the wheels engaging the upper face of the trolley at certain times.

The operation of our improved trolley is as follows: The trolley-wire passing over the trolley-wheel in the usual manner will be prevented from disengagement therefrom by means of the semicircular spring-arms, in connection with the spherical antifriction-rollers 8, as shown. When it is desired to disengage the trolley, the same is pulled downwardly by means of the usual cord attached to the trolley-pole. The trolley-wire will then be passed between the spherical rollers 8, and the spring-arms will be expanded sufficiently to disengage the trolley-harp from the wire. The trolley-wheel may then be again applied in position by allowing the wire to pass downwardly between the spherical antifriction-rollers, thereby expanding the semicircular spring-arms, allowing the wire to engage in the groove of the trolley-wheel.

The many advantages obtained by this construction will be readily apparent from the foregoing description, taken in connection with the accompanying drawings, and it will be noted that various changes may be made in the details of construction without departing from the spirit of our invention.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In combination with a trolley-pole, a harp and trolley-wheel, a block attached to said pole, semicircular spring-arms, cross-pieces mounted in said arms, bearings arranged in said semicircular spring-arms and cross-pieces, and spherical antifriction-rollers mounted in said bearings, all parts being arranged and operating substantially as described and for the purpose set forth.

In testimony whereof we have hereunto affixed our signatures in the presence of two subscribing witnesses.

MATH STOLL.  
JOHN W. RUCK.

Witnesses:

LOUIS MOESER,  
M. HUNTER.