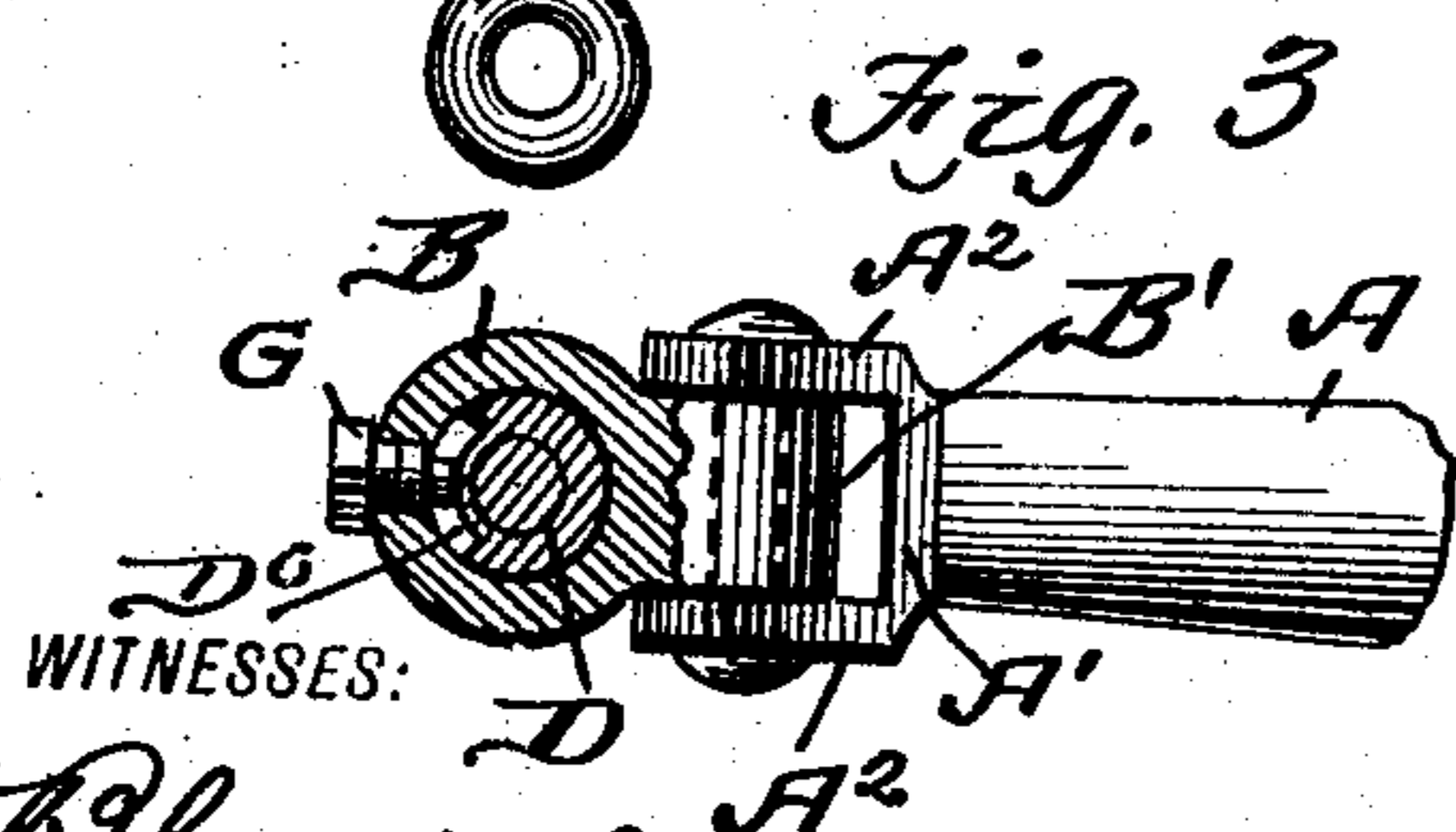
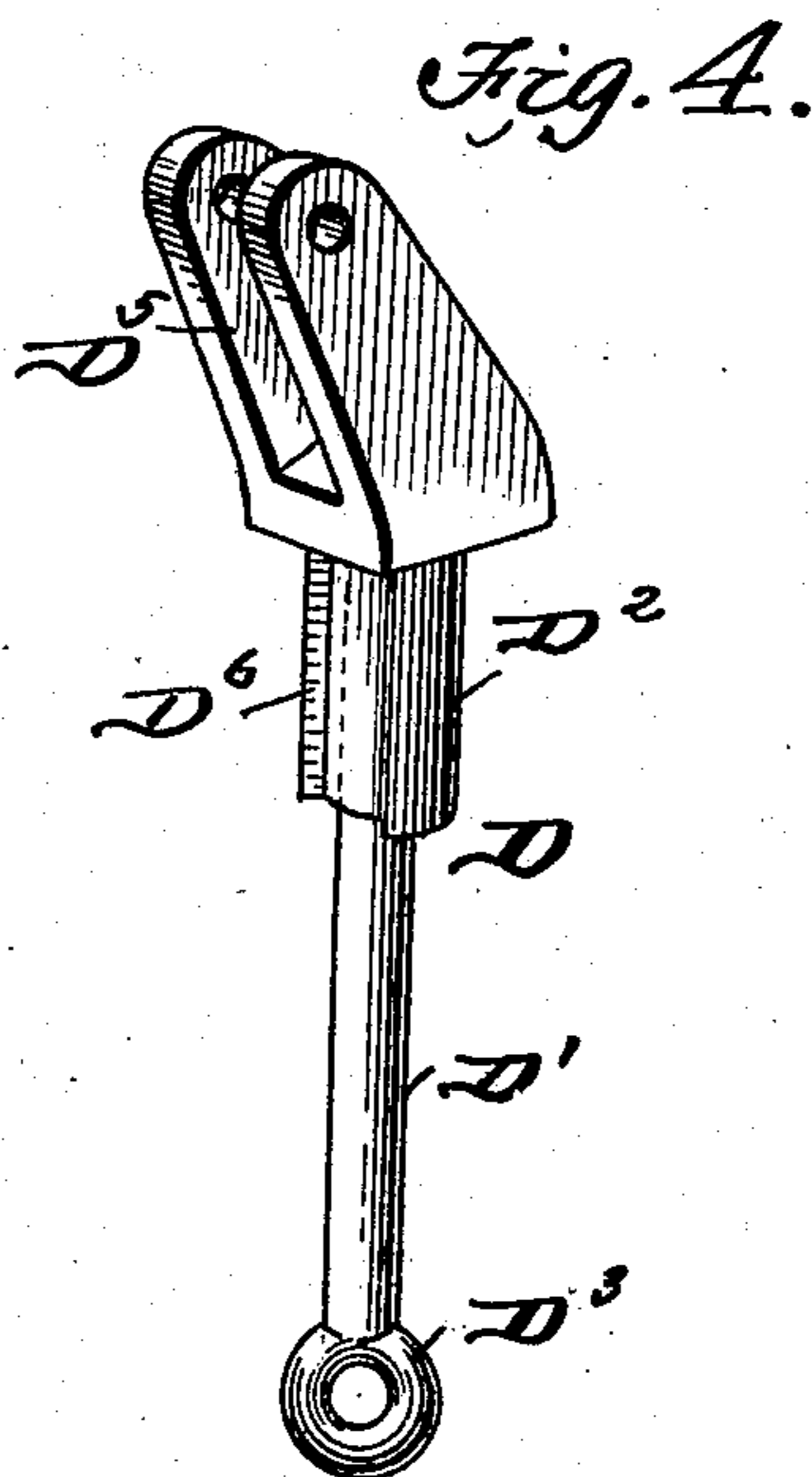
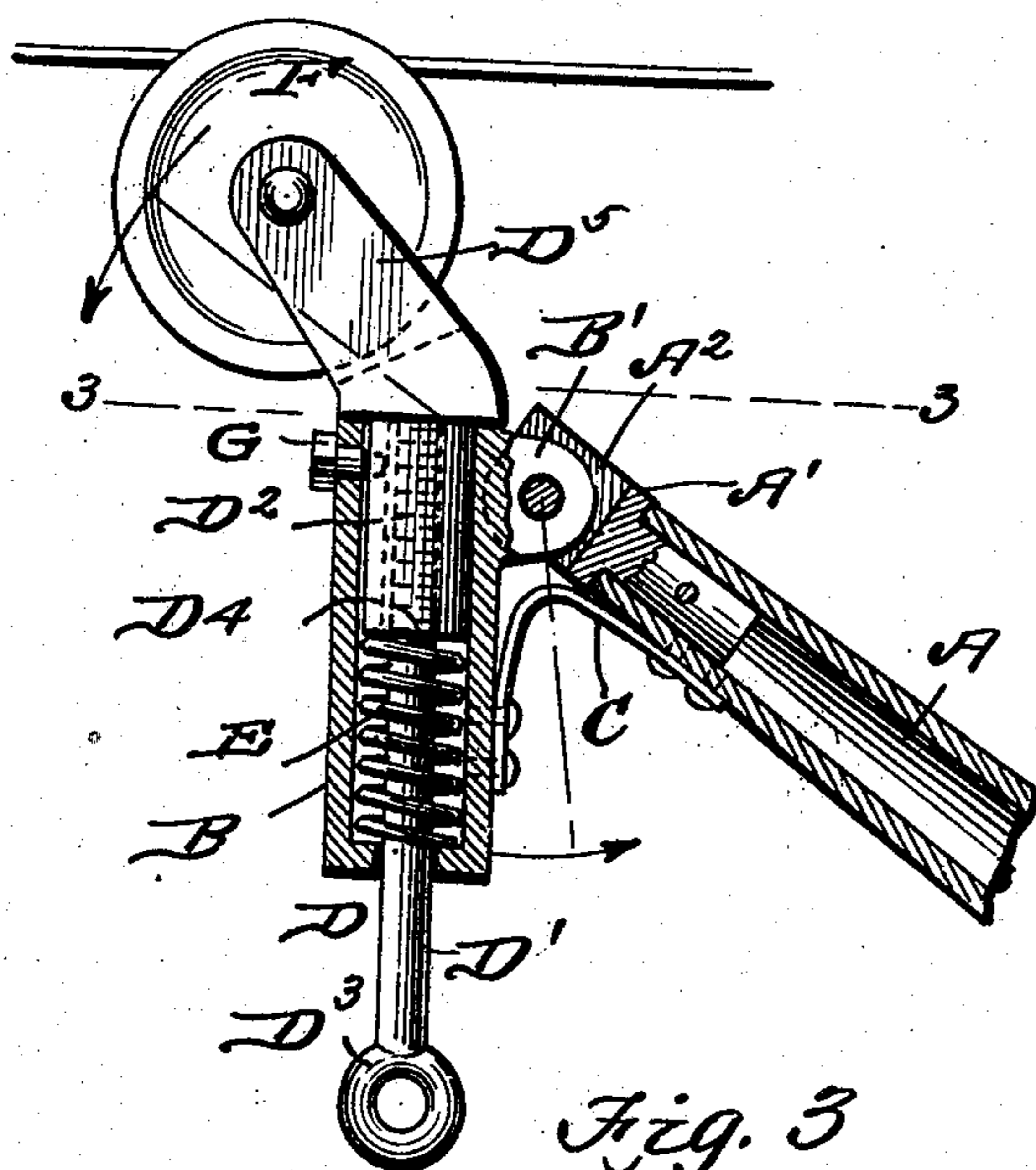
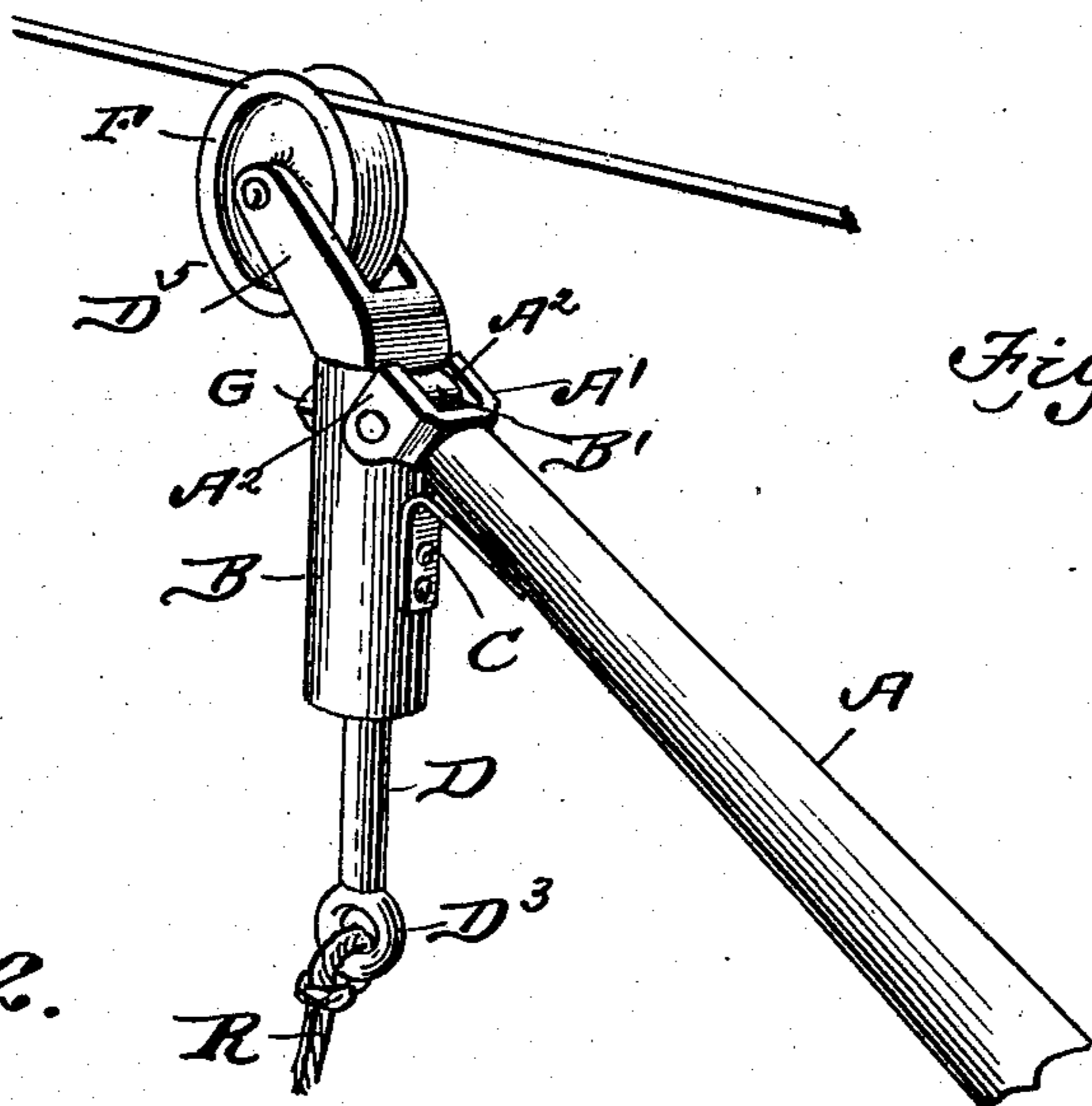


No. 867,125.

PATENTED SEPT. 24, 1907.

G. W. GRISDALE, JR.
TROLLEY WHEEL SUPPORT.
APPLICATION FILED MAR. 5, 1906.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE WILLIAM GRISDALE, JR., OF PHILADELPHIA, PENNSYLVANIA.

TROLLEY-WHEEL SUPPORT.

No. 867,125.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed March 5, 1906. Serial No. 304,345.

To all whom it may concern:

Be it known that I, GEORGE WILLIAM GRISDALE, JR., a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Trolley-Wheel Supports, of which the following is a specification.

This invention relates to an improved trolley wheel support such as are employed in connection with overhead current wires, and the object of the invention is to provide a cheap and simple device that will insure a permanent engagement of the trolley wheel with the wire at all times irrespective of the irregularities of the wire or the vibrations given the latter and the trolley pole through the movement of the car.

With this briefly stated object in view, the invention comprises certain details of construction and peculiar combination and arrangement of parts as will be fully set forth in the following specification and pointed out in the claims reference being had to the drawings, in which;—

Figure 1 is a perspective view of the outer end of a trolley pole having my improvement applied. Fig. 2 is a vertical sectional elevation of the same. Fig. 3 is a detail horizontal section on the line 3—3 of Fig. 2, and Fig. 4 is a detail perspective view illustrating the fork in which the wheel is journaled and the shaft carried thereby.

In the drawings A, designates the upper end of a trolley pole of the usual construction, in the outer end of which is fixedly held a head A', having two ears A², A², extending therefrom, between which is pivotally held a lug B', projecting from the upper end of a cylindrical sleeve B. The sleeve B, is normally held in vertical position or at an acute angle to the pole by means of a substantially inverted V-shaped spring C, which is securely fastened at its ends to the sleeve and the pole as shown most clearly in Fig. 2 of the drawings.

Held in the sleeve is a shaft D, of uneven diameters. The lower end D', is smaller than the upper end D², and projects some distance below the end of the sleeve and terminates in an eye or ring D³, to which a cord or rope R, is connected for the purpose of drawing the pole downwardly to disengage the trolley wheel from the current wire. Surrounding the portion D', of the shaft and bearing against the lower end of the sleeve and a shoulder D⁴, formed by the larger end D², is a spring E, that is designed to elevate the shaft and

wheel and hold the latter into constant engagement with the trolley wire. The upper end of the shaft D, terminates in a forked head D⁵, in which is journaled the trolley wheel F, of any approved construction. The section D², of the shaft is provided throughout its length with a slot D⁶, into which is projected the end of a screw G, carried by the sleeve B, the function of which is to permit a limited revolatory movement of the shaft and wheel so that the latter may readily slip over the irregularities of the wire and the hangers employed for supporting the wire, and also to permit an easy movement of the wheel when the car is rounding a curve.

Ordinarily the sleeve and wheel are held in the position with relation to the pole as shown in Fig. 2 of the drawing, and it will be understood that should the wheel come in contact with an obstruction, the spring C, will permit the wheel a slight movement in the direction indicated by the arrows and therefore reduces the shock and prevents injury to the wheel, but the moment the wheel has passed the obstruction, the spring C, will draw the cylinder and wheel to their normal position. It will be further understood that the spring E, will also act and project the wheel upwardly and constantly hold it into engagement with the wire and thereby prevent its jumping as is a common fault with the constructions now employed.

In order to provide for a quick and easy connection of the shaft to the cylindrical sleeve, I propose to make it in sections and thread the upper end of the portion D', and screw it into a threaded socket of the upper end D², this arrangement being illustrated most clearly in Fig. 2 of the drawing.

From the foregoing it will readily be seen that I provide an exceedingly cheap, simple and efficient device for the purpose stated.

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

1. The combination with a trolley pole having a bifurcated head at one end, of a sleeve having a lug that is journaled in the said bifurcated head, a spring connected to the pole and sleeve and adapted for holding the said sleeve at an acute angle with relation to the pole, a shaft held in the sleeve and having one end provided with a forked head and its opposite end with a ring, the body portion of the said shaft being of uneven diameters, thereby providing a shoulder intermediate its ends, a spring surrounding the smaller portion of the shaft and engaging the shoulder and the lower end of the sleeve, the larger portion of the shaft having a slot throughout its

entire length, a screw-bolt projected through the sleeve and into the said slot, and a trolley wheel journaled in the forked head of the shaft substantially as specified.

5 2. The combination with a trolley pole, of a sleeve pivotally held thereto, a spring connected to the pole and sleeve, a shaft mounted in the sleeve, said shaft being reduced for a portion of its length to provide a shoulder, a spring surrounding the reduced portion and engaging the shoulder and the end of the sleeve, the larger portion

of the shaft having a slot, a screw-bolt carried by the sleeve and projecting into the slot to limit the rotary movement of the shaft, and a forked head formed upon one end of the shaft, and having a trolley wheel journaled therein substantially as specified. 10

GEORGE WILLIAM GRISDALE, Jr.

Witnesses:

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