

No. 834,134.

PATENTED OCT. 23, 1906.

H. HOLLAND.  
TROLLEY BASE.

APPLICATION FILED AUG. 5, 1905.

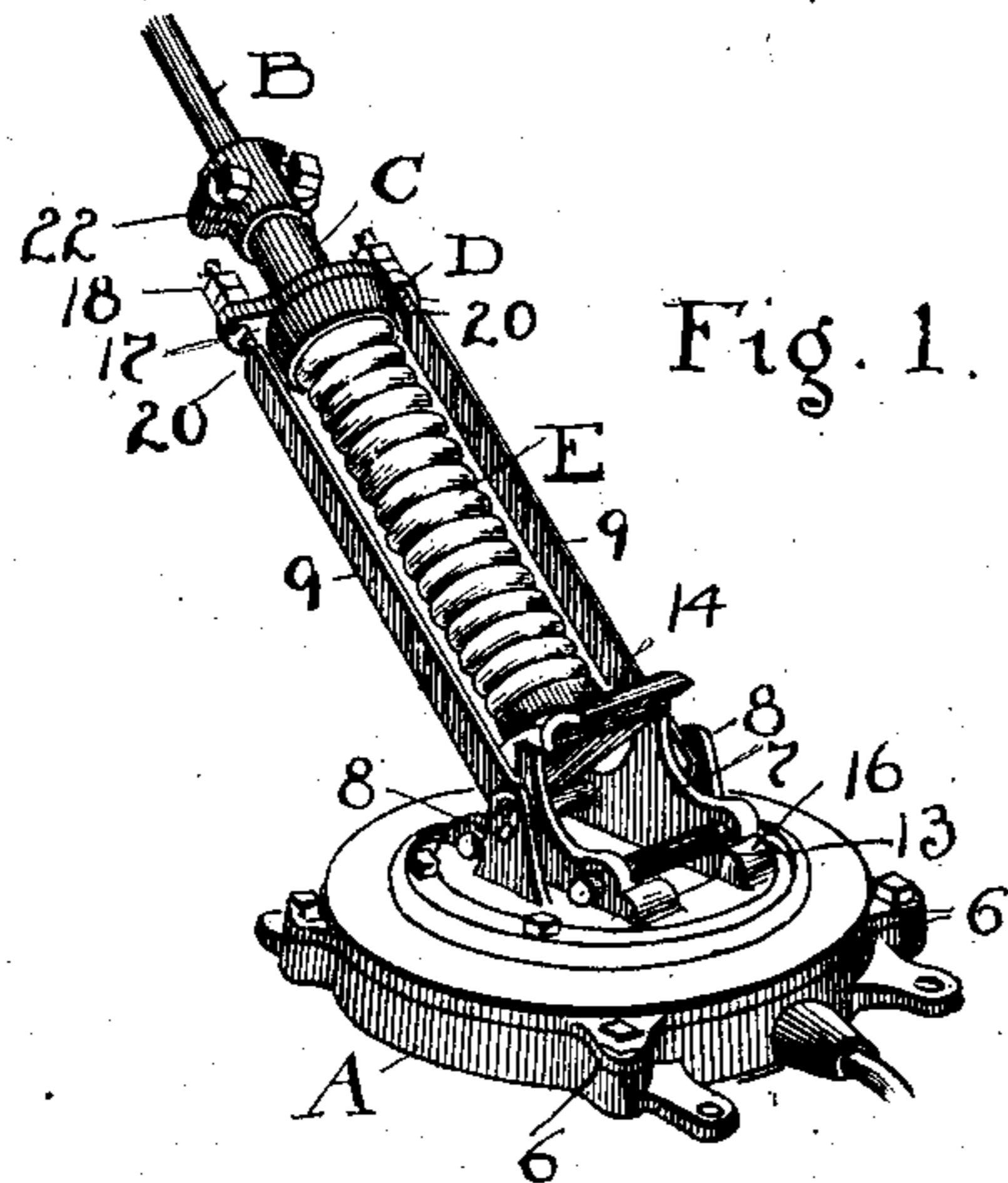


Fig. 1.

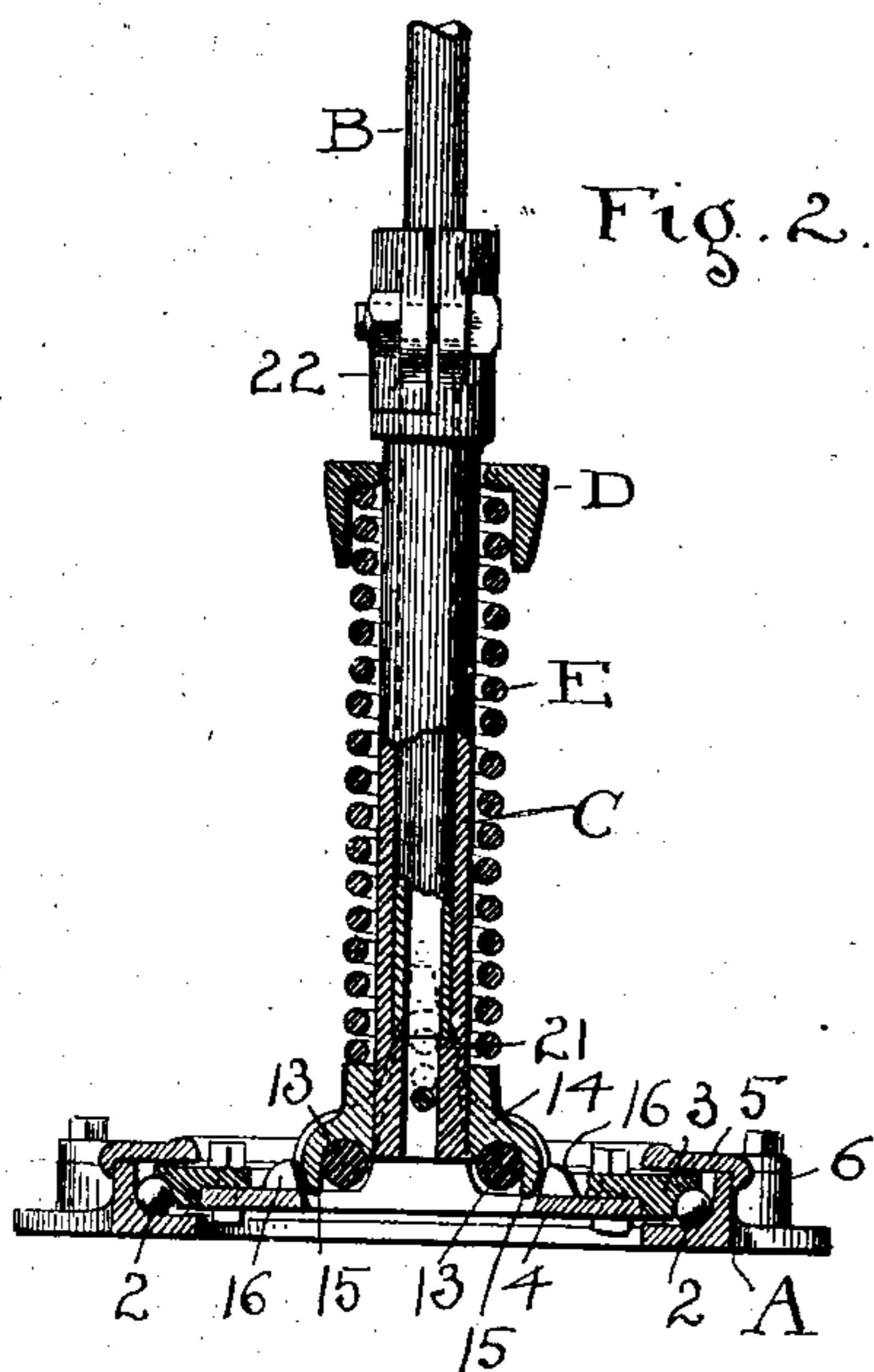


Fig. 2.

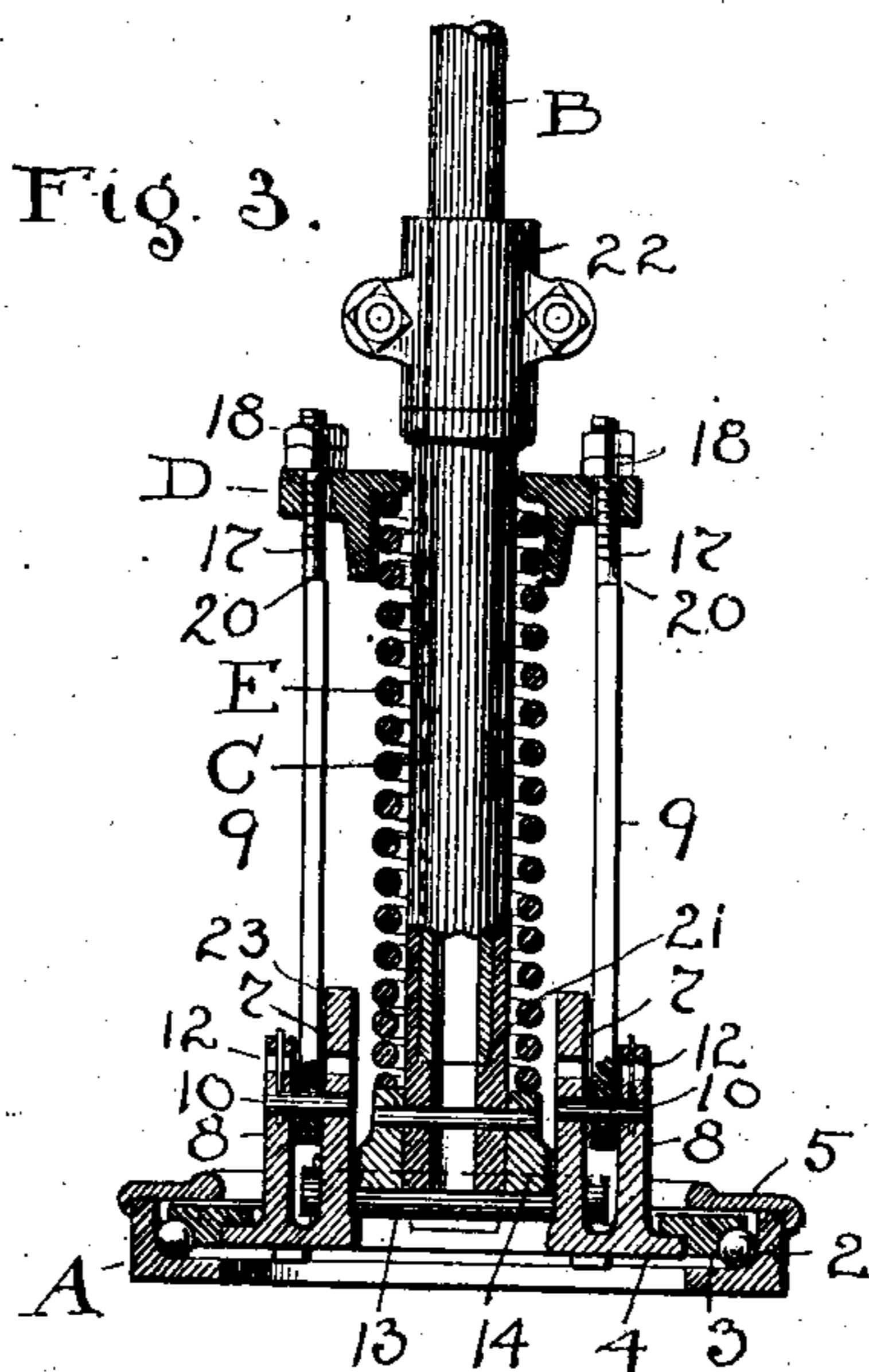


Fig. 3.

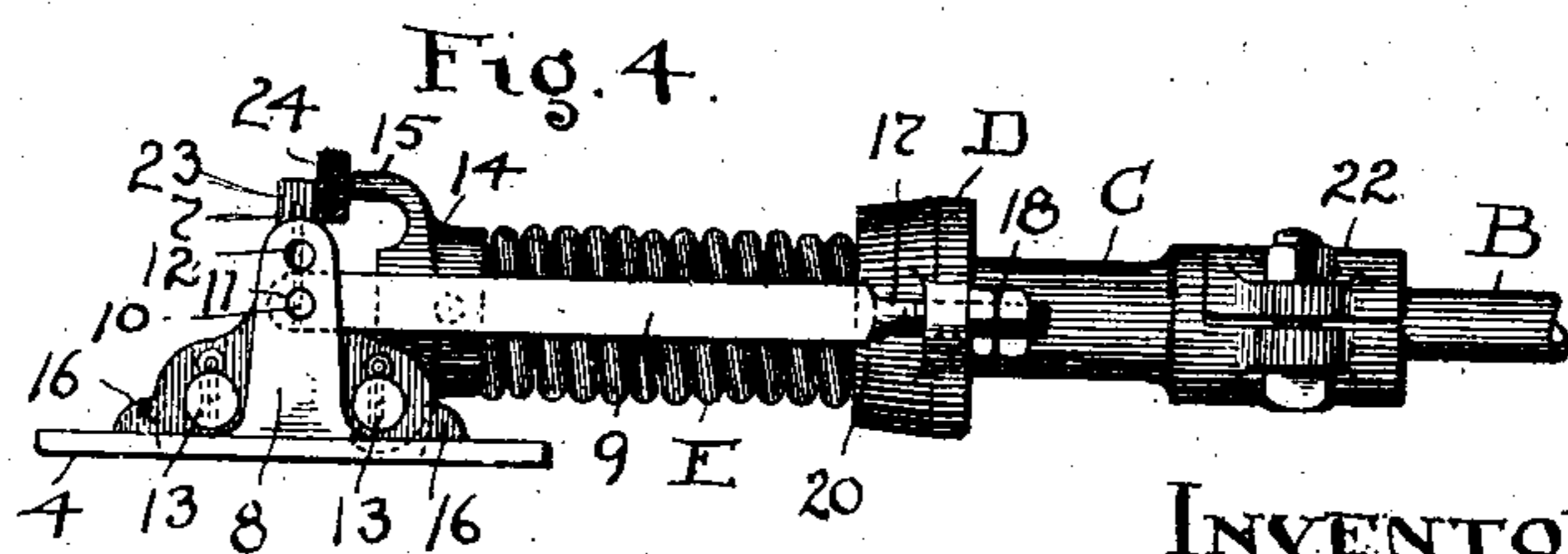


Fig. 4.

ATTEST  
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# UNITED STATES PATENT OFFICE.

HENRY HOLLAND, OF CLEVELAND, OHIO.

## TROLLEY-BASE.

No. 834,134.

Specification of Letters Patent.

Patented Oct. 23, 1906.

Application filed August 5, 1905. Serial No. 272,819.

*To all whom it may concern:*

Be it known that I, HENRY HOLLAND, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Trolley-Bases; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it ap-

10 pertains to make and use the same.

My invention relates to improvements in trolley-bases; and the improvement consists in the construction and arrangement of parts substantially as hereinafter described, and

15 more particularly pointed out in the claims.

One of my objects is to provide a compact device adapted to seat and to fold close upon the roof of the car, and another object is to provide a construction whereby the trolley

20 may be readily held down in a substantially horizontal position for convenience of adjustment or to substitute a new trolley-pole for a damaged pole.

A further object is embodied in the construction of the shouldered spring-rods to prevent complete closing of the spring and to limit the adjustability of its tension.

Another object is embraced in the adjustability of the pivot for the spring rods or bars in respect to the fulcrum-points of the trolley-pole and whereby the same device may be used for either city or suburban cars or where the conditions vary considerably.

In the accompanying drawings, Figure 1 is a perspective view of my improved trolley-base, showing the trolley-pole tilted or inclined as in use. Fig. 2 is a central vertical section of the device with the trolley-pole erect, as it appears when out of use. Fig. 3 is a sectional view at right angles to Fig. 2 with all the parts in the same relation as in said figure. Fig. 4 is a side elevation of the device with the trolley-pole in a horizontal position and showing a part in section interposed between the fulcrum member of the pole and the standard extension on the base.

A represents a flanged ring or support which is formed with a race for balls 2, upon which a rotatable bearing-plate 3 is adapted to rest and ride. Plate 3 is bolted rigidly upon base-plate 4, which supports all the working parts for supporting the trolley-pole B. A ring or cover 5 is bolted to lugs 6 of support A and overlaps member 3 sufficiently to confine it in place. Base-plate 4 and all it carries is thus rotatably supported

in a compact housing, and a broad seating-base is provided, so as to give rigidity and firmness to the structure as a whole.

Base-plate 4 is provided with two pairs of vertical standards 7 and 8, respectively, at each side of its vertical center, and each pair of standards 7 and 8 are spaced apart sufficiently to permit a link or bar 9 to have free movement between them. Links 9 are pivotally secured to the standards by a cross-pin 10, mounted within either set of the oppositely-disposed openings 11 or 12 in said standards. Openings 11 and 12 are arranged in a vertical line one above the other, and pin 10 can be changed to either set of openings, so that the pivot for link 9 may be raised or lowered in respect to the fulcrum-points of the trolley-pole.

A pair of cross shafts or pins 13 are fastened in parallel lines equally distant at each side of the vertical center of face-plate 4 and come close upon the bottom of standards 7. A tubular socket C for trolley-pole D is provided with a T-shaped head 14 pinned, or secured thereto at its lower end, and which head has semicircular grooves across its bottom corresponding to and adapted to rest upon shafts 13. When pole 3 is tilted either to the right or the left, one or the other of the shafts 13 becomes the pivot or fulcrum of its movement, and lips 15 upon head 14 thereupon pass beneath the shaft engaged and combine with lugs 16 on plate 4 to prevent head 14 from being removed or dislodged from its position or relation with plate 4.

The spring tension for pole B is obtained by a yoke D, sleeved upon socket C, and a coiled spring E is seated within yoke D and bears at its opposite end against the shoulder of head 14. Links 9 have threaded ends 17, which pass through the nuts 18, which engage ears on yoke D, and whereby a certain degree of adjustment of the spring tension is obtainable. As the pivot or fulcrum of the trolley-pole is lower and to one side of the pivot of the link-bar 9, the radial movement of said parts in either direction of the vertical center will cause a compression of spring C, and this compression may be made more or less by adjusting-nuts 18; but as springs C are preferably closely coiled a limit to this adjustment is necessary; otherwise the coils of the spring will contact before the limit of movement of trolley-pole B would be reached, and the parts would come to a set position and seriously strain the device. I

therefore provide shoulders 20 upon links 9 to limit the adjustment of yoke B thereon, so that the spring can never become fully closed upon itself.

- 5 Socket C has a shouldered portion 21, against which the lower end of the trolley-pole abuts, and a clamp member 22, bolted to the upper end of socket C, frictionally holds pole B in place. Standards 7 are preferably of such length or are provided with  
10 extensions 23, so that when trolley-pole B is drawn to a substantially horizontal position a rod or bar 24 may be interposed between extension 23 and head 14 to hold the parts in  
15 this tilted position. A new trolley-pole may then be readily substituted for a damaged one, or adjustment of the parts can be conveniently made without danger of the trolley-pole engaging the feed-wire, as would occur  
20 if it remained in an upright position.

The conditions for city and suburban cars differ—that is, the height of the cars and distance of the trolley-wire from the ground vary so materially in places that the tension  
25 of the spring in one place is not sufficient for another. I therefore provide more than one set of openings for pin 10, which when changed from one to the other will make up in the difference of movement in the parts  
30 and provide for a different degree of tension dependent upon the place where the device is to be used.

What I claim is—

- 35 1. In a trolley base or stand, a base-plate, a trolley-pole socket having double fulcrum-rests upon said plate, a coil-spring and a sliding yoke upon said socket, a link connected

with said yoke and adjustable pivot connections for said link and said base-plate.

2. In a trolley base or stand, a base-plate, a 40 trolley-pole socket having double fulcrum-rests upon said plate, a coil-spring and a sliding yoke upon said socket, links for said yoke, standards upon said base-plate, sets of openings in said standard and a pivot-pin 45 for said link adapted to be secured in either of said sets of openings.

3. In a trolley base or stand, a base-plate, a trolley-pole socket provided with a head adapted to make double fulcrum engagement with said plate, a sliding yoke and a 50 coil-spring upon said socket, a link connecting said yoke and said base-plate, and standards upon said base-plate at each side of said socket adapted to form a rest for an inter- 55 posing locking member when inserted between said standard and said yoke and tilted.

4. In a trolley base and stand, a base-plate having vertical standards, a pair of cross-shafts mounted between said standards, a 60 trolley-pole-supporting member having a head pivotally engaged with said cross-shaft, lips depending from said head at the sides of said shaft; lugs upon said base-plate opposite said lips, sliding yoke and coil springs upon 65 said pole-supporting member and links connecting said yoke with said standards.

In testimony whereof I sign this specification in the presence of two witnesses.

HENRY HOLLAND. 70

Witnesses:

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