

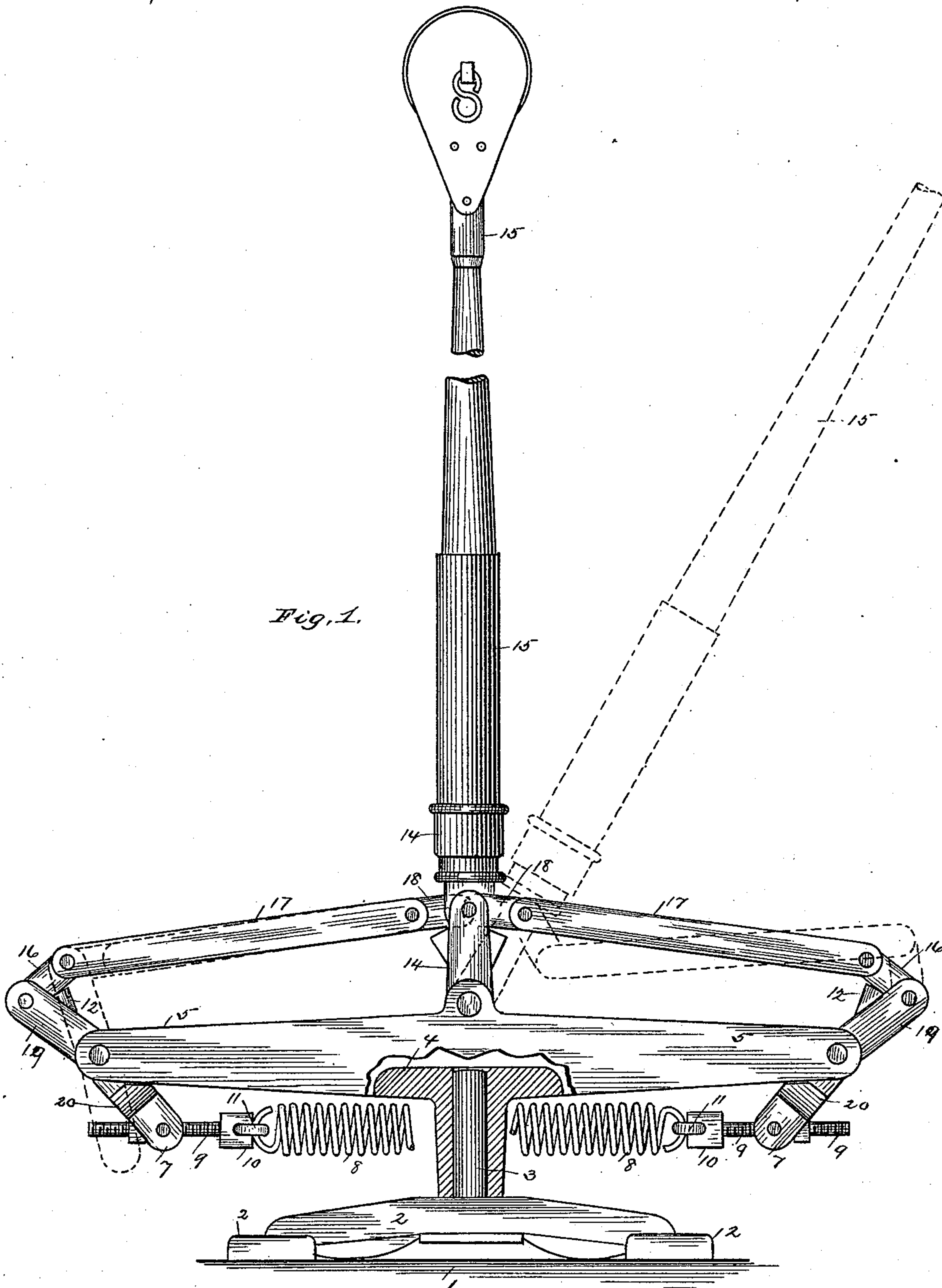
(No Model.)

2 Sheets—Sheet 1.

W. LE R. EMMET.
TROLLEY STAND.

No. 441,753.

Patented Dec. 2, 1890.



Witness:
John H. Kent
M. E. Harrison.

Inventor.
Wm Le Roy Emmet
by his Attorney,
Wm L. Pierce.

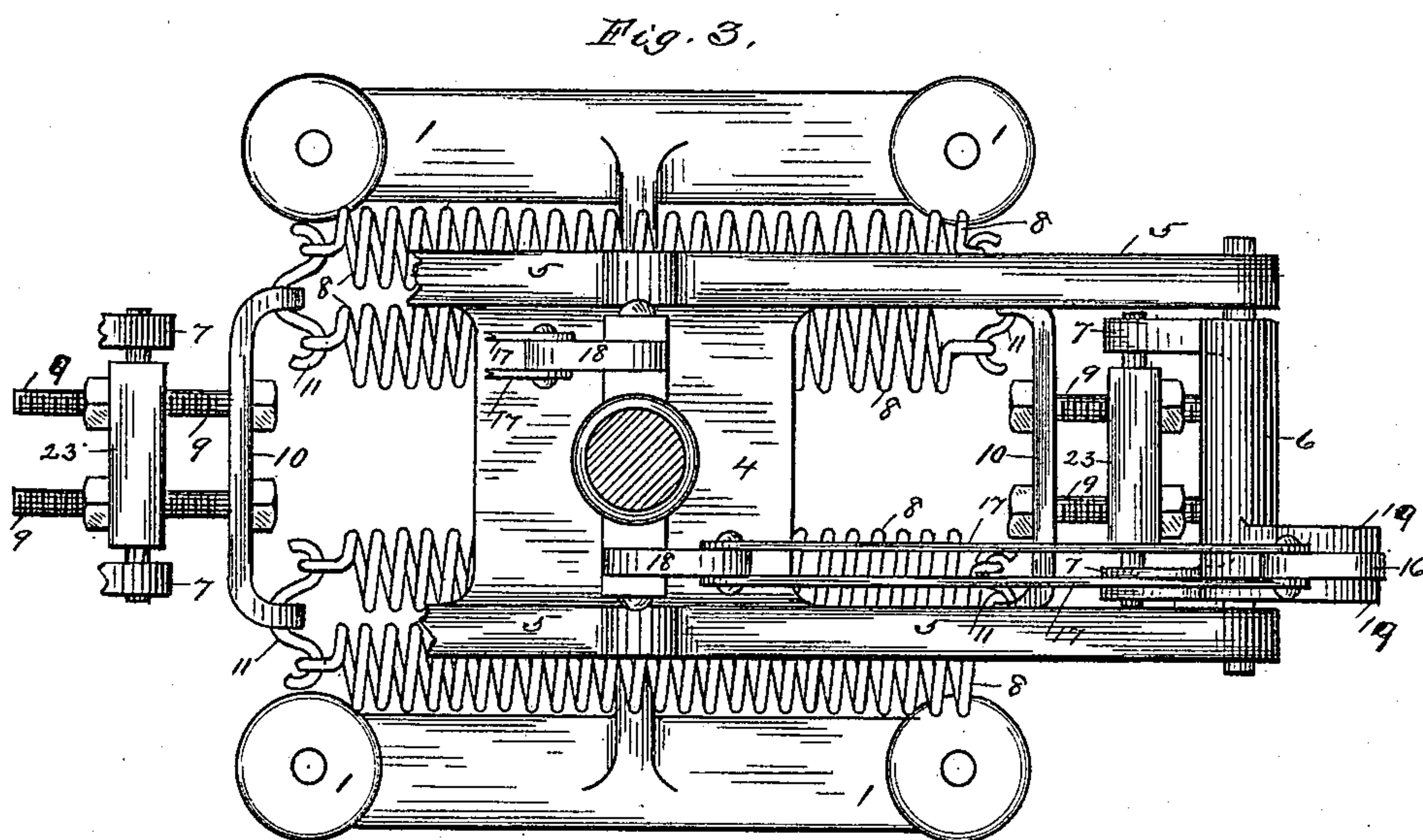
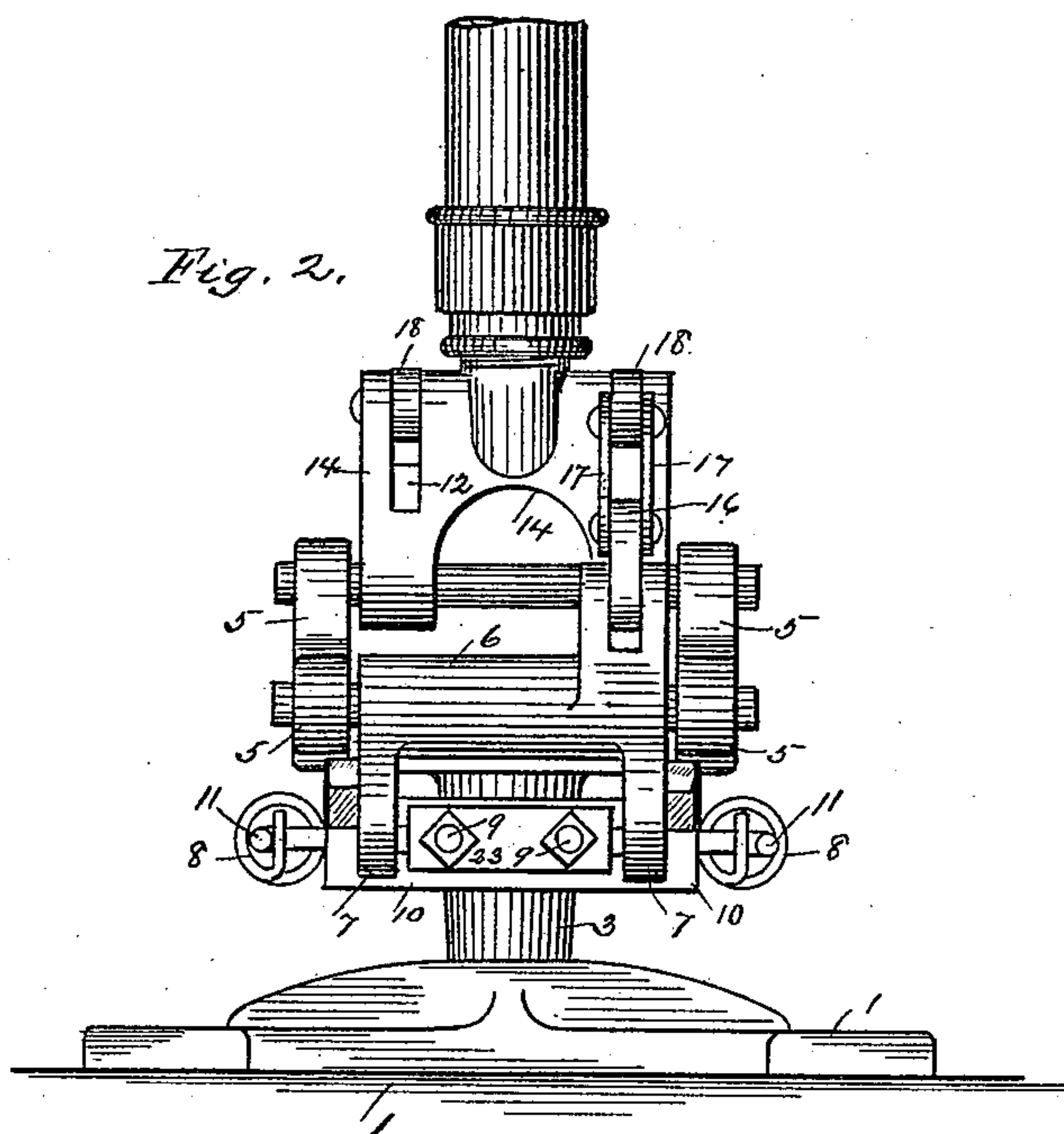
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2 Sheets—Sheet 2.

W. LE R. EMMET.
TROLLEY STAND.

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Witnesses:

John H. Perry
H. E. Harrison

Inventor.

Wm Le Roy Emmet
by his Attorney
Wm L. Pierce

UNITED STATES PATENT OFFICE.

WILLIAM LE ROY EMMET, OF EAST ROCKAWAY, NEW YORK.

TROLLEY-STAND.

SPECIFICATION forming part of Letters Patent No. 441,753, dated December 2, 1890.

Application filed September 18, 1890. Serial No. 365,400. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LE ROY EMMET, a citizen of the United States, residing at East Rockaway, Queens county, State of New York, have invented or discovered certain new and useful Improved Trolley-Stands, of which improvement the following is a specification.

In the accompanying drawings, which make part of this specification, Figure 1 is a side elevation of the stand and pole, the latter partly broken away and showing in dotted lines the relative positions of pole and links when the pole is drawn down from a vertical position. Fig. 2 is an end elevation of the stand with pole broken off; and Fig. 3, a plan view of the stand with the arms at the left-hand end of the stand broken away, thus omitting one rocking lever.

One purpose of my invention, generally stated, is to secure a variable and regulated pressure of the right degree of intensity upon the trolley-pole in its several positions. Further, to secure said pressure by the use of coiled springs and without undue strain on said springs; also, by one set of springs to present either side of the pole to the wire, which permits the slant of the pole to be changed at will, and meets the tendency of the pole to warp, and also allows trolley-pole to be turned over vertically when direction of the car is reversed. I also show swiveling devices applied to a pole which can be also turned backward and forward. The construction is simple, cheap, easily repaired, and of small size and attractive.

In the several views, 1 is the roof of the car, to which is secured any suitable pedestal-frame 2, having a pivot 3, upon which swivels the main frame. Said main frame is preferably but not essentially built as follows: From the center piece 4 on the two edges thereof, normally parallel to the line of the trolley-wire, extend in both directions double duplicate extensions 5 5. Between the outward ends of said extensions are pivoted the two rocking levers 6 6, each rocking lever having a downward projection 7 at each end thereof, between which projections is pivoted by lugs a block 23, through which adjustable bolts 9 9 pass to a yoke 10. At each end of

said yoke 10 is a double hook 11. Connecting said opposite hooks are four single coiled springs 8 8. Referring again to said rocking levers 6 6, there is on each two lugs 12 12, and also an extension 19. Connecting said arm 19 with a pole-base fixture 14 for the pole 15 are three links 16, 17, and 18. The pole-base fixture is hinged to the main frame.

The operation of these devices is as follows: The required amount of tension upon the pole is obtained by screwing up the springs, and these tend by their equilibrium to maintain the pole in a vertical position by pulling upon the rocking levers. When the pole is deflected from the perpendicular, the rocking lever on the side toward which said deflection takes place is prevented from moving beyond a certain point by the lugs 12 12 on said lever meeting the extensions 5 5 on the main frame. At the same time the opposite rocking lever is drawn by its links in such a direction as to strain the springs connected therewith, and the tension of said springs thus opposes the motion of the pole from the vertical. When the motion of the pole from the vertical is in the opposite direction, the action of the rocking levers is identically the same as above described, except interchanged. Also, the relative positions of the link-connections are so determined and their angles are so limited by lugs 13 13 on the pole-base fixture and the lugs 20 20 on the rocking levers that the tension of the pole at various heights is adjusted to the requirements of service without subjecting the springs to unnecessary strain.

The joints of the link-connections between the rocking levers and the pole-base fixture are so arranged that they do not oppose the motion of the pole in either direction. The pole, also, may be drawn down into a horizontal position without too great strain upon the springs, owing to the careful relative adjustment of the pivots of pole-base fixture, links, rocking levers, &c.

When the trolley-pole is vertical, the lugs on the lower extensions of the rocking levers bear against the extensions of the main frame and serve to hold the pole in said position.

I claim—

1. A trolley-pole pivoted at its lower end

and attached in opposite directions to extensions on a pair of rocking levers, said rocking levers, and a battery of springs connected between other extensions on said rocking levers, substantially as set forth.

2. A trolley-pole pivoted at its lower end and attached in opposite directions to extensions on a pair of rocking levers, said rocking levers, a battery of springs connected between other extensions on said rocking levers, and means for opposing the rocking motion of said levers in one direction, substantially as set forth.

3. The combination of a pole, a frame to which said pole is hinged, rocking levers pivoted to said frame and connected to the pole, springs connecting said rocking levers, and a pivot upon the roof of the car, upon which said frame swivels, substantially as set forth.

4. The combination of a pole, a frame to which said pole is hinged, rocking levers piv-

oted to said frame, a succession of links connecting said rocking levers with said pole, springs connecting said rocking levers, and a pivot upon the roof of the car, upon which said frame is swiveled, substantially as set forth.

5. The combination of a pole, a pole-base fixture to which said pole is attached, a frame having opposite extensions normally lengthwise of the car, upon which frame said pole-base fixture is hinged, a pair of rocking levers pivoted between the extensions of said frame and connected to said pole-base fixture, and springs with adjustable tension connecting said rocking levers, substantially as set forth.

In testimony whereof I have hereunto set my hand.

WILLIAM LE ROY EMMET.

Witnesses:

JAMES A. MCKEAN,
WM. L. PIERCE.