

No. 850,796.

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G. Q. SEAMAN.
TROLLEY STAND AND POLE.
APPLICATION FILED MAR. 26, 1906.

Fig. 1.

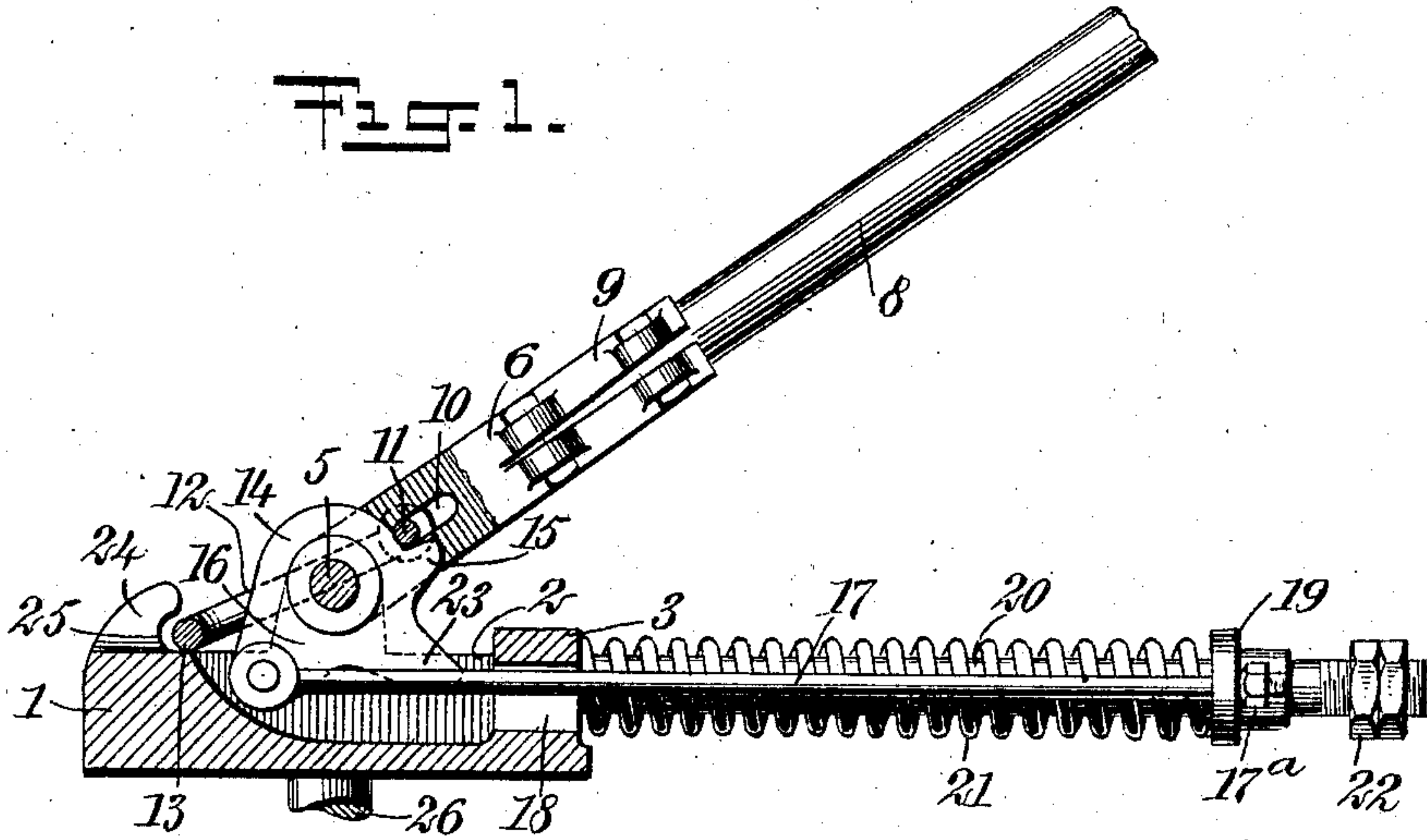


Fig. 2.

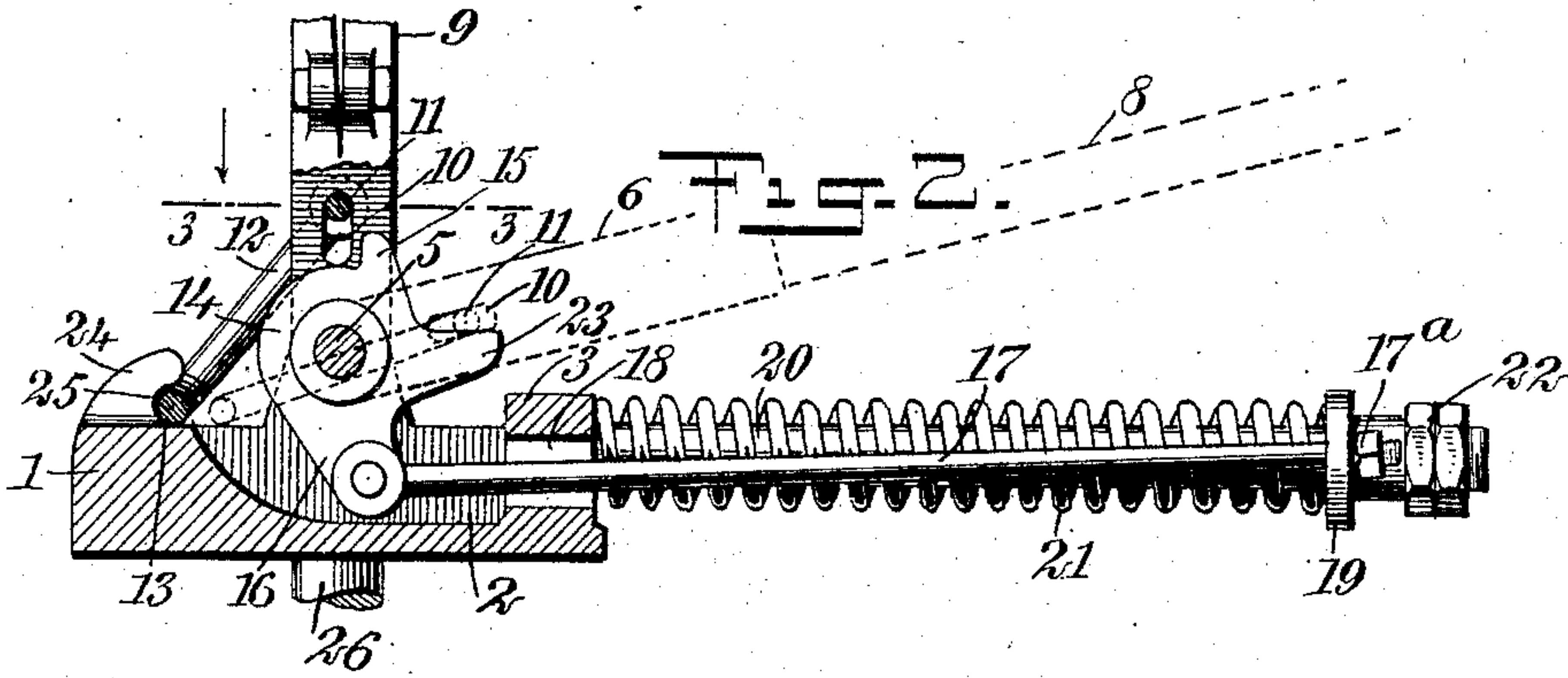


Fig. 3.

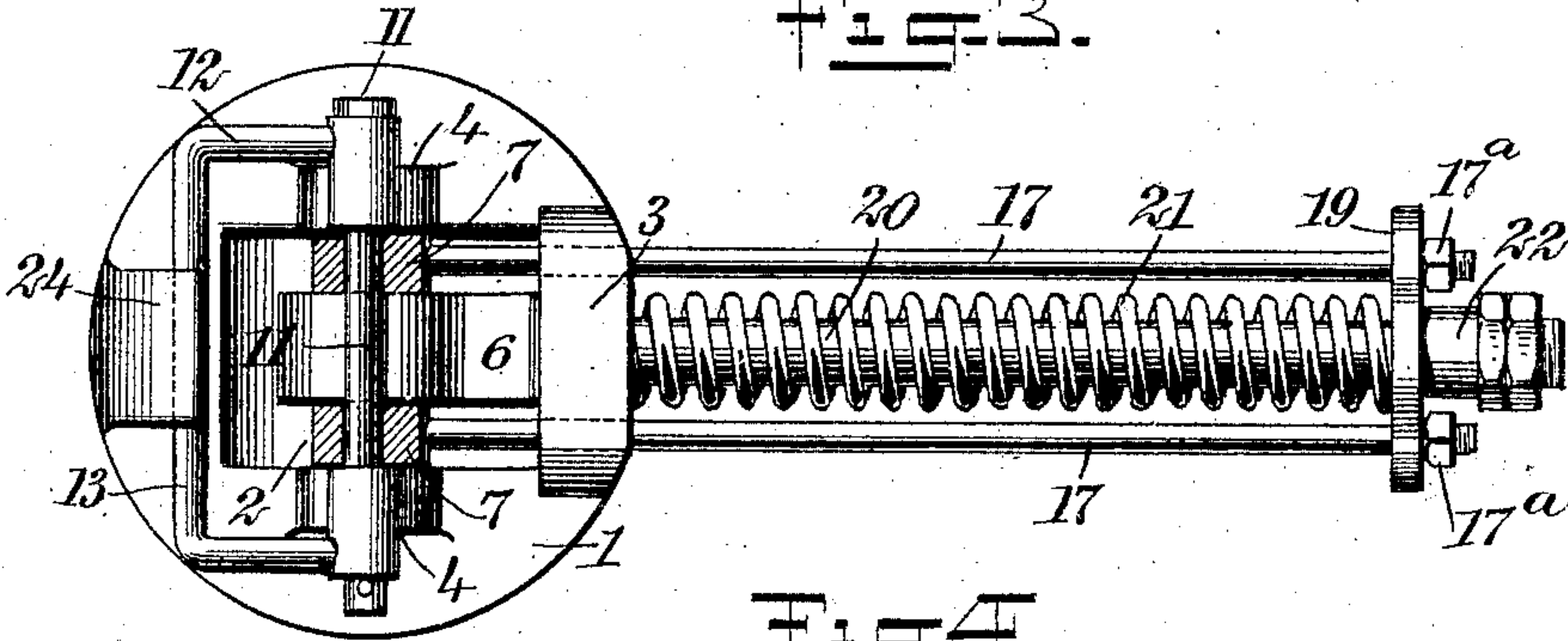
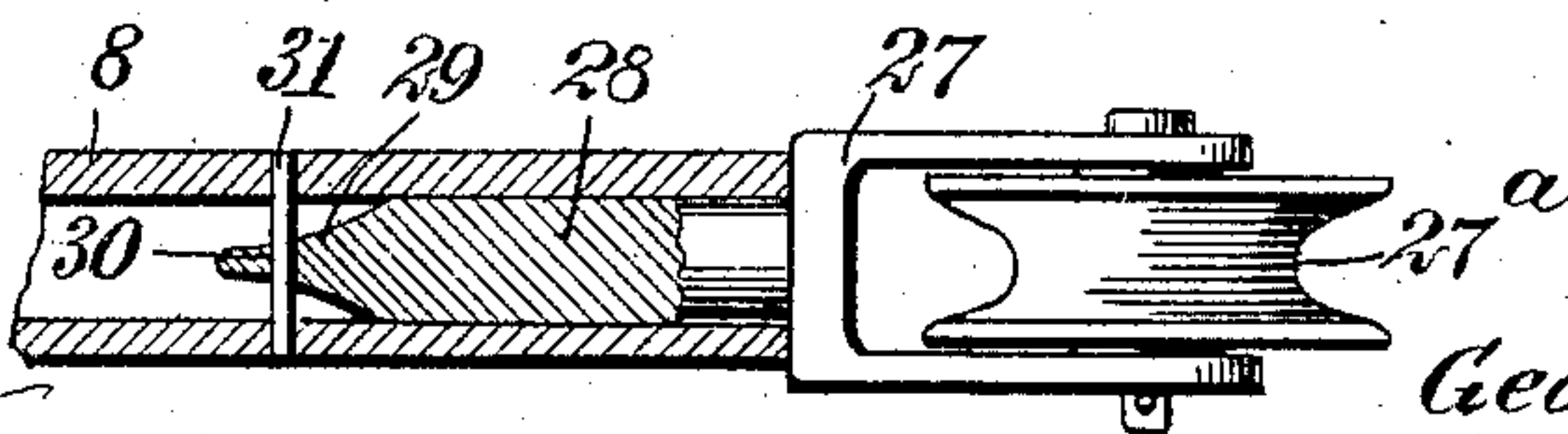


Fig. 4.



WITNESSES

Geo. W. Naylor.
J. R. Munroe

INVENTOR

George Q. Seaman

BY *Munn & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE Q. SEAMAN, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
THOMAS O'CONNOR, OF BROOKLYN, NEW YORK.

TROLLEY STAND AND POLE.

No. 850,796.

Specification of Letters Patent.

Patented April 16, 1907.

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To all whom it may concern:

Be it known that I, GEORGE Q. SEAMAN, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Trolley Stand and Pole, of which the following is a full, clear, and exact description.

This invention relates to trolley-stands such as are mounted upon the roofs of trolley-cars for supporting the trolley-pole and for maintaining the same in connection with the overhead trolley-wire.

The object of the invention is to produce a trolley-stand of simple construction which will operate automatically to depress the trolley-pole in case the trolley-wheel becomes displaced from the wire, the general purpose of the invention being to prevent injury to the guy-wires or overhead construction.

A further object of the invention is to provide means for mounting the trolley-wheel which will enable the same to be detached readily by the overhead construction in case it becomes fouled therewith. In this way the dislocation of the trolley-pole from the stand is prevented.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section through the stand, the pole and a portion of the arm to which the same is attached being shown in elevation, the upper portion of the pole being broken away. This view shows the trolley stand and pole in the normal position. Fig. 2 is a view somewhat similar to Fig. 1, but representing the trolley-pole in action—that is, in the relation which the parts assume immediately upon the release of the wheel by the trolley-wire previous to the automatic depression of the pole. Fig. 3 shows the trolley-stand in plan, the lower portion of the arm being shown in cross-section on the line 3 3 in Fig. 2; and Fig. 4 is a longitudinal sec-

tion through the outer extremity of the trolley-pole and illustrating the manner of mounting the trolley-wheel therein.

Referring more particularly to the parts, 1 represents the base of the trolley-stand, the said base being preferably of substantially circular form, as shown in Fig. 3, and provided with a substantially central recess 2, at the rear whereof a transverse rib 3 is formed. At each side on the upper face of the base 1 a bearing 4 is provided, and these bearings are connected by a through-bolt 5, which affords means for attaching the arm 6 of the trolley-pole, said arm 6 being formed with forks 7 at its lower extremity, through which the bolt 5 passes, as shown. The upper portion of the arm 6 is formed into a split sleeve 9, which affords means for clamping and holding the trolley-pole 8 in position, as shown. The forks 7 of the arms 6 are provided near their upper portion with longitudinally-disposed slots 10. These slots afford means for guiding a cross-bar 11 with a shackle 12, the said shackle having a lower cross-bar 13, which normally rests against the upper face of the base near the forward portion thereof. Between the forks 7 there is loosely mounted on the bolt 5 a trigger 14, which simply consists of a loose collar, the upper portion whereof, as indicated in Fig. 1, is substantially circular, the rear edge of the trigger being formed with an upwardly-projecting tooth or nib 15. The lower side of the trigger 14 is formed with a downwardly-projecting ear 16, to which there is pivotally attached a pair of draw-bars 17, which draw-bars extend rearwardly and pass through guide-openings 18, formed in the rib 3, their rear extremities being attached to a cross-head 19, which is slidably mounted upon a guide-bar 20, which guide-bar is rigidly attached on the outer face of the rib 3 and extends substantially horizontal therefrom. The cross-head 19 is forced rearwardly by means of a helical spring 21, which is disposed around the guide-bar 20, as shown. To the extremity of the guide-bar 20 stop-blocks 22 are attached, as shown, which limit the rearward movement of the cross-head.

On the under side of the trigger 14, a sub-

able distance behind the tooth 15, a downwardly and rearwardly projecting toe 23 is formed.

On the upper face of the base 1 and toward the forward edge thereof an upwardly and rearwardly projecting dog 24 is formed, which overhangs, as shown, so as to form a recess 25, adjacent to which the cross-bar 13 of the shackle normally lies, as indicated in Fig. 1. The base 1 is provided with a swivel-bolt 26, which is adapted to be set in a base-plate attached in the roof of the car.

The upper extremity of the trolley-pole 8 is preferably of tubular form, as shown in Fig. 4, and at the end of the pole a wheel-fork 27 is attached, said fork having an integral shank 28, which is received in the tubular end of the pole, as indicated. This shank 28 is formed with a reduced tip 29 and provided with an opening 30, through which a transverse pin 31 passes, which attaches the shank to the pole, as indicated. It should be understood that the shank 28 does not fit tightly within the pole, from which arrangement, if a great force is applied to the fork 27 tending to withdraw the same from the end of the pole, the pin 31 will readily give way and permit the removal of the fork. This arrangement is adopted so that when the trolley-wheel becomes dislodged from the trolley-wire if the overhead wires exert any considerable force upon the trolley-fork, which might otherwise pull down the overhead construction, the result would be simply that the trolley-wheel would be pulled out of its socket at the end of the pole.

The mode of operation of the mechanism for depressing the pole which has been already described will now be stated.

Referring to Fig. 1, which represents the parts in their normal relation, it will be observed that the trolley-arm 6 is supported by means of the shackle 12, the cross-bar 11 whereof rests against the forward or upper edge of the tooth 15. The force of the spring 21 constantly tends to force the arm 6 in an upward direction in such a way that the operating-wheel 27^a is held against the trolley-wire. When the trolley-wheel becomes dislodged from the trolley-wire, the spring 21 suddenly forces the arm 6 into a substantially vertical position, as indicated in Fig. 2, and moving forwardly in this way the cross-bar 13 of the shackle 12 engages with the dog 24 and the cross-bar 11 is forced upwardly within the slots 10. In this way the bar 11 is raised sufficiently to clear the tooth 15. When this occurs, the trolley-arm becomes unsupported and immediately falls rearwardly, the cross-bar 11 passing over the tooth 15 and coming to rest against the toe 23, which then supports the trolley-arm in a depressed position, as indi-

cated in dotted lines in Fig. 2. In this way when the trolley-wheel is dislodged the pole 65 is automatically depressed, so that the upper end of the pole is well below the level of the overhead construction, thus preventing injury to the same.

In order to enable the degree of depression in the spring 21 to be adjusted, the draw-bars 17 are preferably connected to the cross-head 19 by means of adjustable nuts 17^a.

The trolley may be replaced by hand in its normal elevated position.

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

1. In a trolley-stand, in combination, a base, an arm pivotally mounted upon said base, a trolley-pole carried on said arm, a trigger, a spring pressing said trigger, a shackle slidably mounted at its upper portion upon said arm and having its lower end constantly resting upon said base and adapted to slide across said base, said trigger having a tooth adapted to be engaged by said shackle, said base having a projection adapted to be engaged by said shackle to release said tooth.

2. In a trolley-stand, in combination, a base, an arm having forks pivotally mounted on said base, a trigger pivotally mounted between said forks and having an upwardly-projecting tooth, a spring pressing said trigger, a shackle having its upper end slidably mounted in the said forks and adapted to engage said tooth, the lower portion of said shackle resting on said base, said base having a projection adapted to engage said shackle when said trigger is moved by said spring to release said tooth.

3. In a trolley-stand, in combination, a base, an arm having forks pivotally mounted on said base, said forks having slots formed therein, a trigger pivotally mounted between said forks, a guide-bar rigid with said base and projecting substantially horizontally therefrom, a spring on said guide-bar, a cross-head slidably mounted on said guide-bar, draw-bars connecting said cross-head with said trigger, said trigger having a tooth formed thereupon normally lying near said slots, a shackle having its cross-bar passing through said slots and adapted to engage said tooth, the lower portion of said shackle resting upon said base, said base having a projection adapted to engage said shackle to release said tooth.

4. In a trolley-stand, in combination, a base, a trolley-arm pivotally attached to said base and having slots formed therein, a shackle having an upper cross-bar passing through said slots and a lower cross-bar resting on said base, a trigger pivotally mounted adjacent to said arm and engaging said upper cross-bar, a spring connected with

said trigger and normally affording means for supporting said arm, said base having a projection adapted to engage said lower cross-bar when said arm is in an abnormally-
5 raised position.

5. A trolley-pole having a tubular extremity, in combination with a wheel-fork having a shank mounted in said extremity, said shank having a reduced tip, and a trans-

verse pin passing through said tip and attaching the same to said pole.

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

GEORGE Q. SEAMAN.

Witnesses:

F. D. AMMEN,
JNO. M. RITTER.