

C. O. JACKSON.  
TROLLEY APPARATUS.  
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944,869.

Patented Dec. 28, 1909.

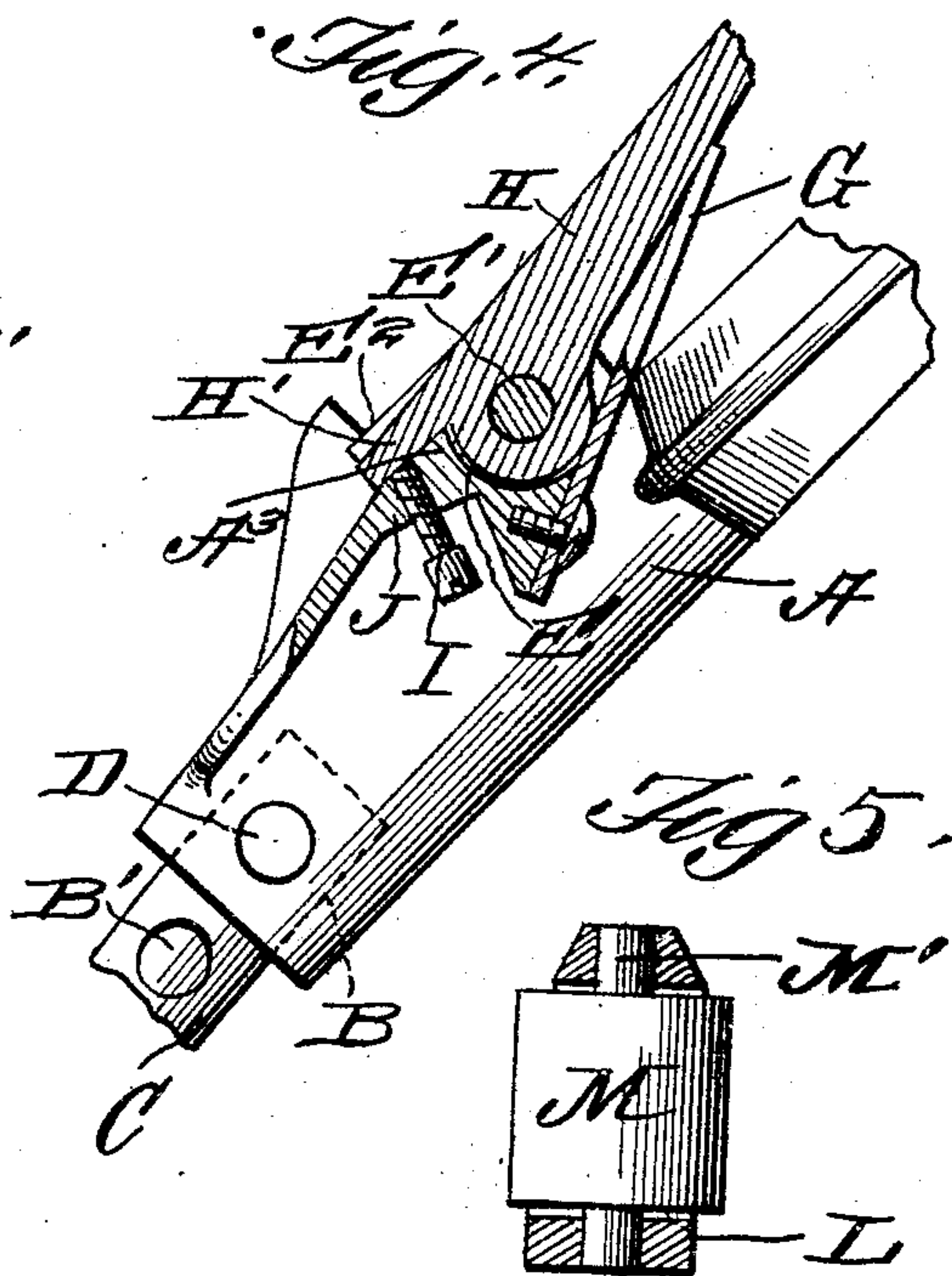
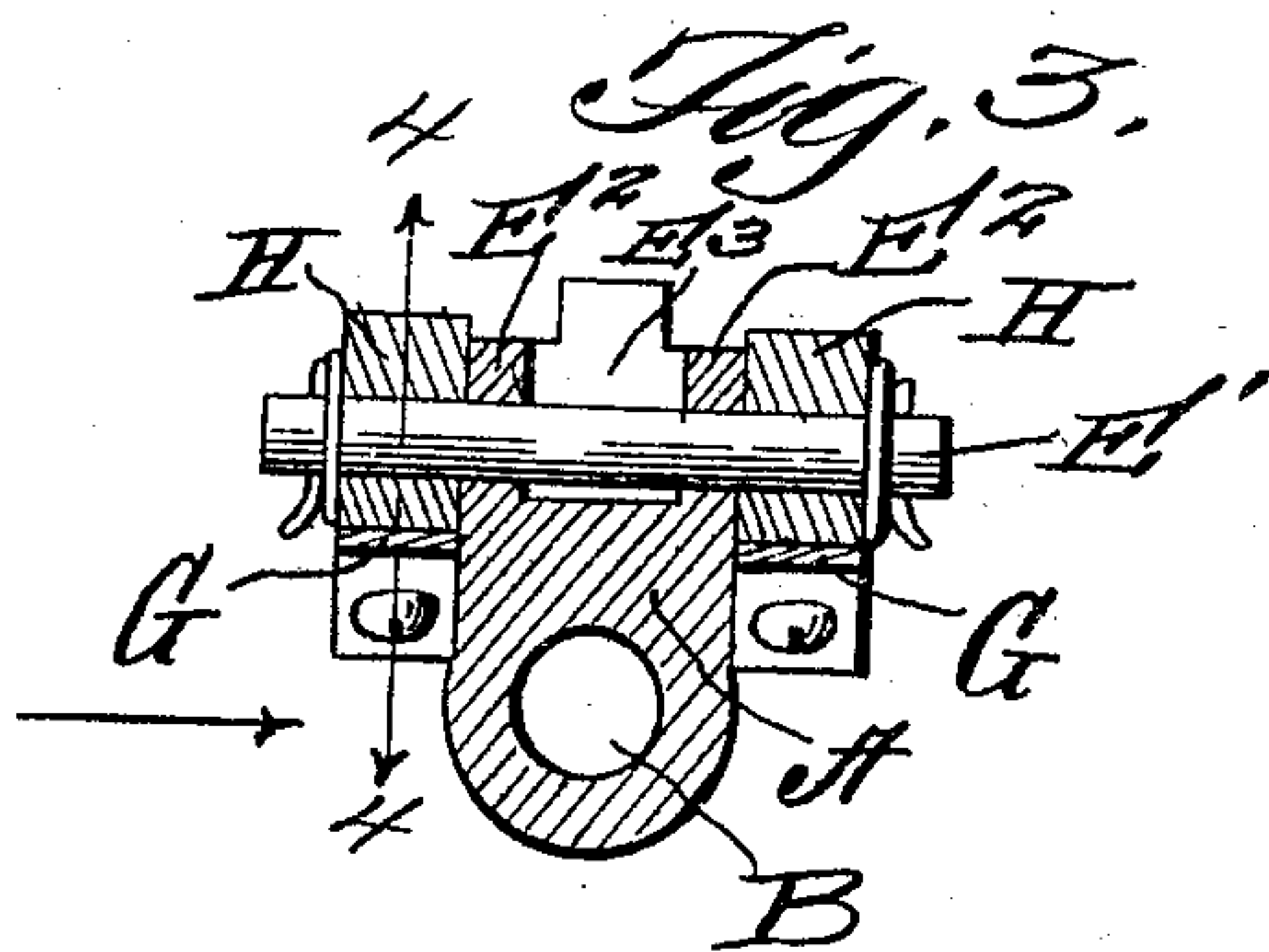
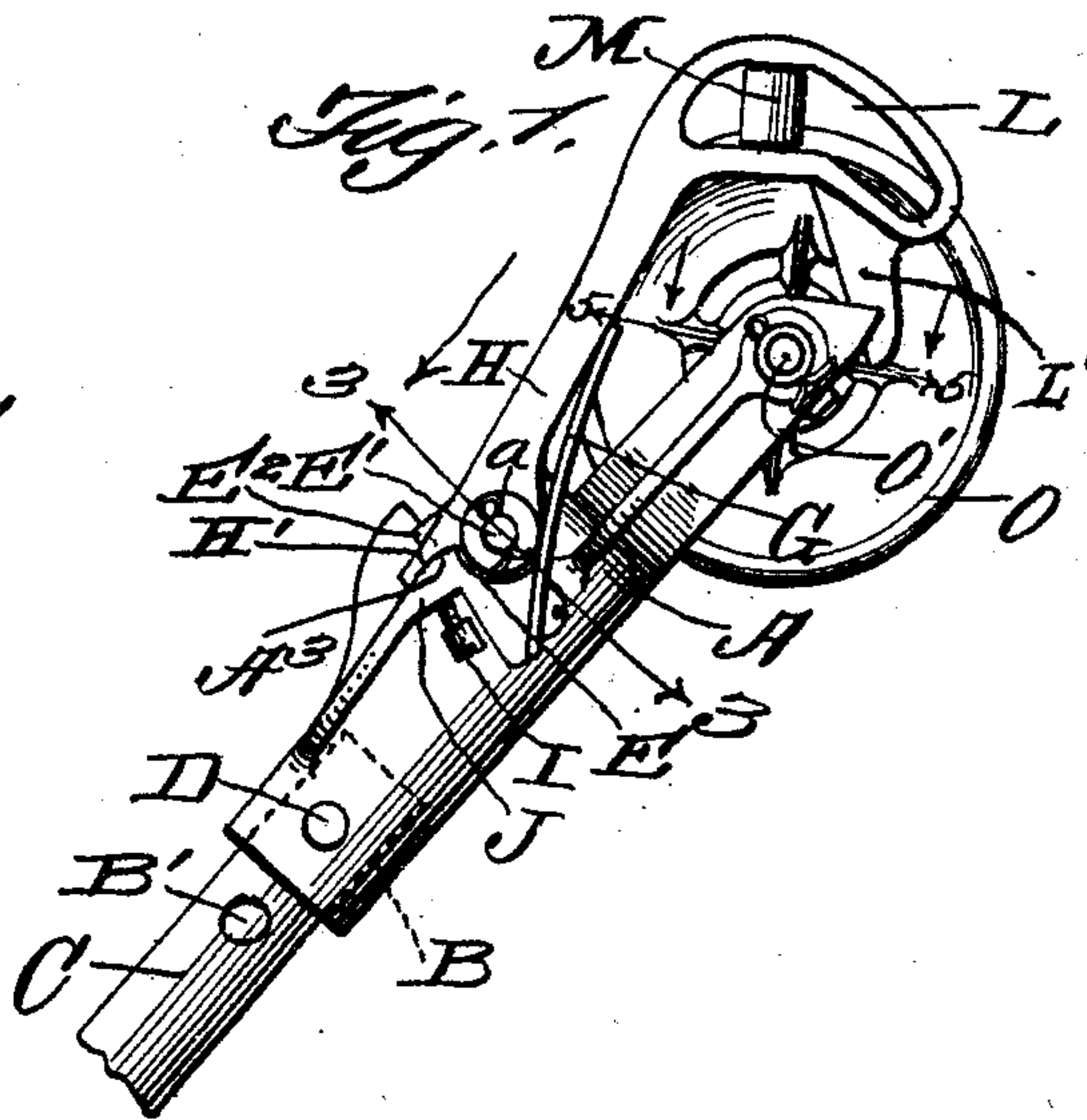
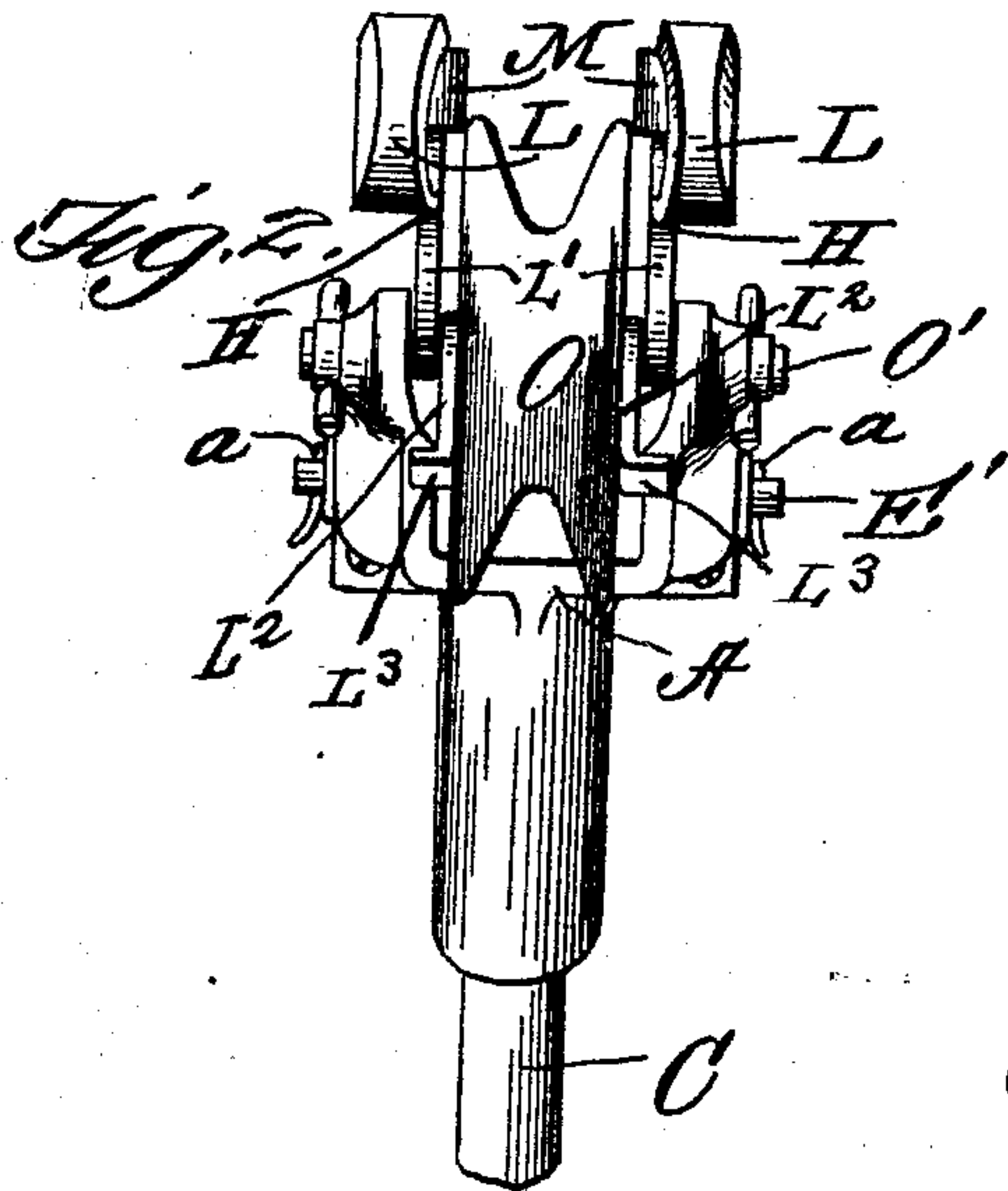
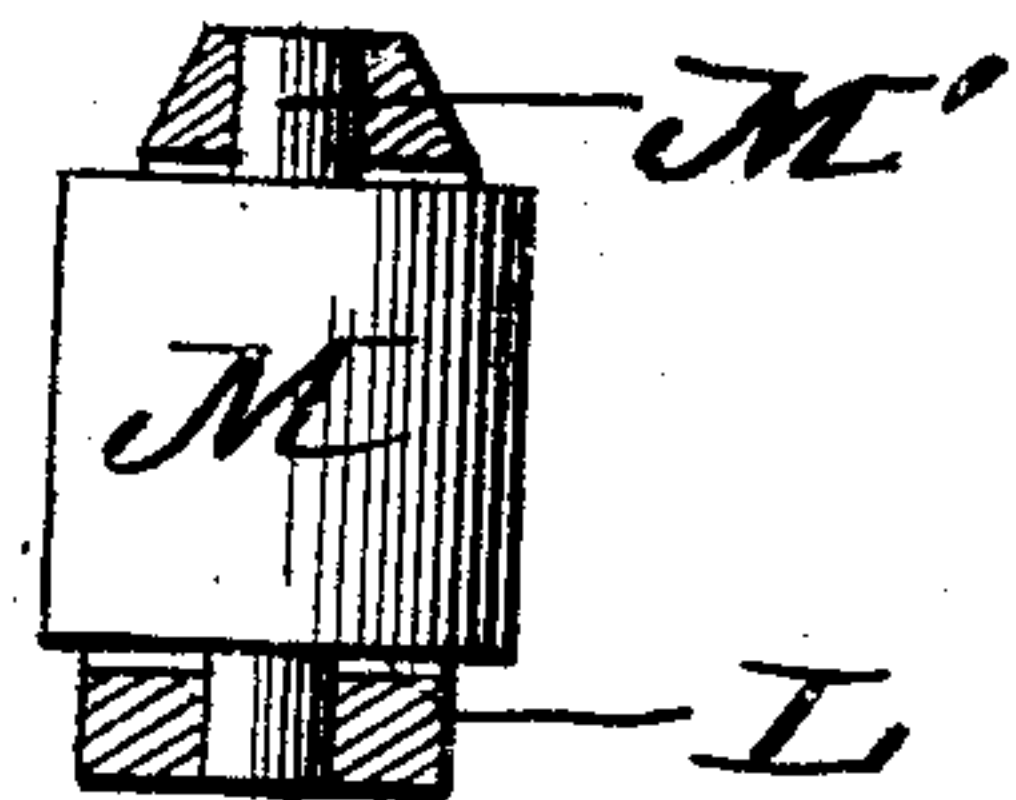


Fig. 5.



Witnesses

*R. H. Brownlee,*  
*A. R. Clark,*

By

Inventor  
*Charles O. Jackson,*  
*A. L. Stough*  
Attorney



# UNITED STATES PATENT OFFICE.

CHARLES O. JACKSON, OF FAIRMONT, WEST VIRGINIA.

## TROLLEY APPARATUS.

944,869.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed April 3, 1909. Serial No. 487,686.

*To all whom it may concern:*

Be it known that I, CHARLES O. JACKSON, a citizen of the United States, residing at Fairmont, in the county of Marion and State of West Virginia, have invented certain new and useful Improvements in Trolley Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in attachments to trolley poles for preventing a trolley wheel jumping a wire, and consists essentially in the provision of a head through which the trolley pole extends and to which it is held by set screws, and in the provision of spring-pressed members having rounded ends, one being mounted upon either side of the trolley wheel, suitable anti-friction rollers being mounted in bearings at the free rounded ends of said members.

My invention comprises various details of construction and combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a perspective view of my trolley attachment. Fig. 2 is an end view. Fig. 3 is a cross sectional view on line 3—3 of Fig. 1. Fig. 4 is a sectional view on line 4—4 of Fig. 3, and Fig. 5 is a detail sectional view through the arms forming support for an anti-friction roller.

Reference now being had to the details of the drawings by letter, A designates a boxing or head having a longitudinal aperture B therein for the reception of the trolley pole C, said boxing being held in place by means of a pin D which may be held in one or another of the apertures B' in said pole and also passing through registering apertures in the trolley head or boxing. Said boxing is recessed away, as at E, upon either side and E' is a pin passing through the walls E<sup>2</sup> intermediate said recesses and a recess E<sup>3</sup>. Pivotaly mounted upon said pin E' are the members H, each having a projection H' upon one end adapted to contact

with a projection A<sup>3</sup> of the boxing in order to limit the outer throw of said members. A cotter pin *a* is passed through an aperture in each end of the pin E' and serves to hold the members upon the ends of the pin E'. A spring G is fastened at one end to an inclined edge of said projection of the head, being held thereto by means of a screw or other suitable fastening device and the end of each spring bears yieldingly against the edge of one of said members and is adapted to normally hold the same at its farthest throw in one direction. A set screw I is mounted in a wing J projecting from the head and is adapted to bear against the projection H' of said member H and serves to limit the throw of the same. Each of said members H has an elongated slot L which is curved and an anti-friction roller M is mounted upon a pin M' passing through the walls of said curved slots. The trolley wheel, designated by letter O, is mounted upon a pin O' held in suitable bearings in the forked end of said head. Said anti-friction rollers are so mounted upon their bearings that they will project slight distances beyond the inner faces of the members H and serve as means for preventing the trolley wheel coming in contact with said members and also form means for preventing the trolley line wire from coming in contact with the members in the event of the trolley line moving laterally outside of the groove of the wheel. Projecting from said member H are the integral extensions L' which, as the members yield, are adapted to contact with the inner edges of the projection A of the trolley head in order to guide said members. Washers L<sup>2</sup> are mounted upon the pin O' and have angled fingers L<sup>3</sup>, as shown clearly in Fig. 2 of the drawings, and which angled fingers extend over the edges of the trolley head and prevent the washers from rotating. The outer edges of the free ends of said slotted members are convexed and project beyond the trolley wheel and are adapted to yield when they come in contact with irregular places in the line or at crossings or curves.

What I claim to be new and desire to secure by Letters Patent of the United States is:—

1. An attachment for trolleys comprising, in combination with a pole, a trolley head adjustably mounted thereon, a trolley wheel



mounted upon said head, independent spring-pressed members pivotally mounted upon the trolley head, one upon either side of the wheel, said members having elongated slots  
 5 and curved at their outer ends, an anti-friction roller mounted one in each of said slots, and projections upon the slotted ends of said members adapted to guide the members as they yield against the tension of the  
 10 spring which bears against the same, as set forth.

2. An attachment for trolleys comprising, in combination with a pole, a trolley head adjustably mounted thereon, a trolley  
 15 wheel mounted upon said head, independent spring-pressed members pivotally mounted upon the trolley head, one upon either side of the wheel, said members having elongated slots and curved at their outer ends,  
 20 an anti-friction roller mounted one in each of said slots, projections upon the slotted ends of said members adapted to guide the members as they yield against the tension of the spring which bears against the same, and  
 25 means for limiting the outer throw of said members, as set forth.

3. An attachment for trolleys comprising, in combination with a pole, a trolley head adjustably mounted thereon, a trolley wheel  
 30 mounted upon said head, independent spring-pressed members pivotally mounted upon the trolley head, one upon either side of the wheel, said members having elongated slots and curved at their outer ends, an anti-fric-  
 35 tion roller mounted one in each of said slots, projections upon the slotted ends of said members adapted to guide the members as they yield against the tension of the spring which bears against the same, projections  
 40 upon said trolley head each of said members having a projecting portion adjacent to its pivotal end and adapted to bear against a

projection of the trolley head to limit its throw in one direction, as set forth.

4. An attachment for trolleys comprising, 45  
 in combination with a pole, a trolley head adjustably mounted thereon, a trolley wheel mounted upon said head, independent spring-pressed members pivotally mounted upon the  
 50 trolley head, one upon either side of the wheel, said members having elongated slots and curved at their outer ends, an anti-friction roller mounted one in each of said slots, projections upon the slotted ends of said  
 55 members adapted to guide the members as they yield against the tension of the spring which bears against the same, projections upon said trolley head, each of said members having a projecting portion adjacent to its  
 60 pivotal end, a screw mounted in a threaded aperture in a projection of said head and adapted to adjust the outer throw of said member, as set forth.

5. An attachment for trolleys comprising 65  
 a pole, a head mounted thereon, a trolley wheel mounted upon said head, the opposite sides of said head being recessed, a pin passing through the walls of said recess, spring-pressed members pivotally mounted upon  
 70 the ends of said pin, each of said members having a curved slot, an anti-friction roller journaled in each of said slots, an integral finger projecting from the free slotted end of each of said members and extending one  
 75 upon either side of the trolley wheel, said head having recesses upon either side of the wheel in which said integral fingers are guided, as set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

CHARLES O. JACKSON.

Witnesses:

C. W. HAWKINS,  
 J. S. LE MASTERS.