

(No Model.)

J. L. FOSTER.
TROLLEY FOR ELECTRIC CARS.

No. 559,275.

Patented Apr. 28, 1896.

Fig. 1.

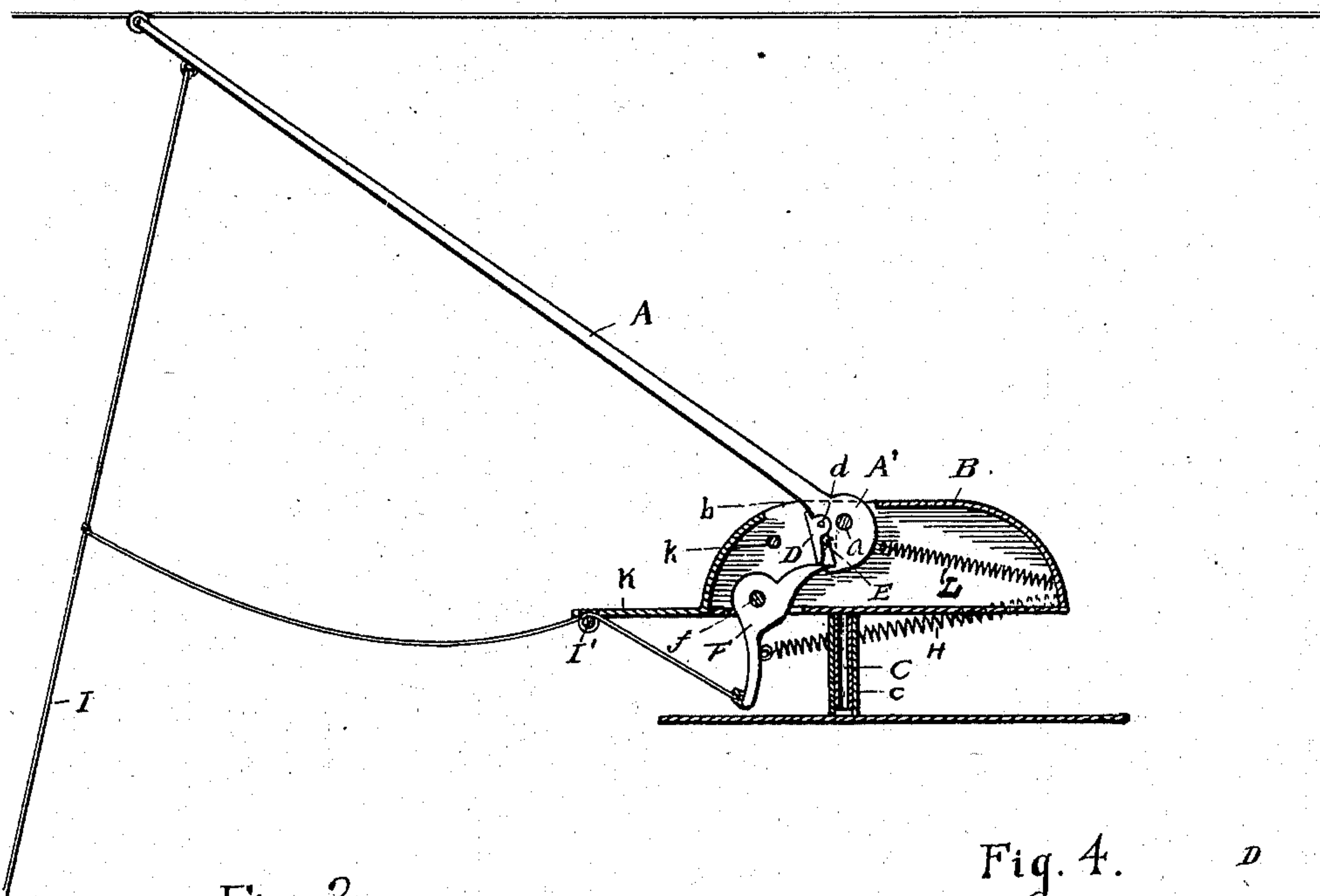


Fig. 2.

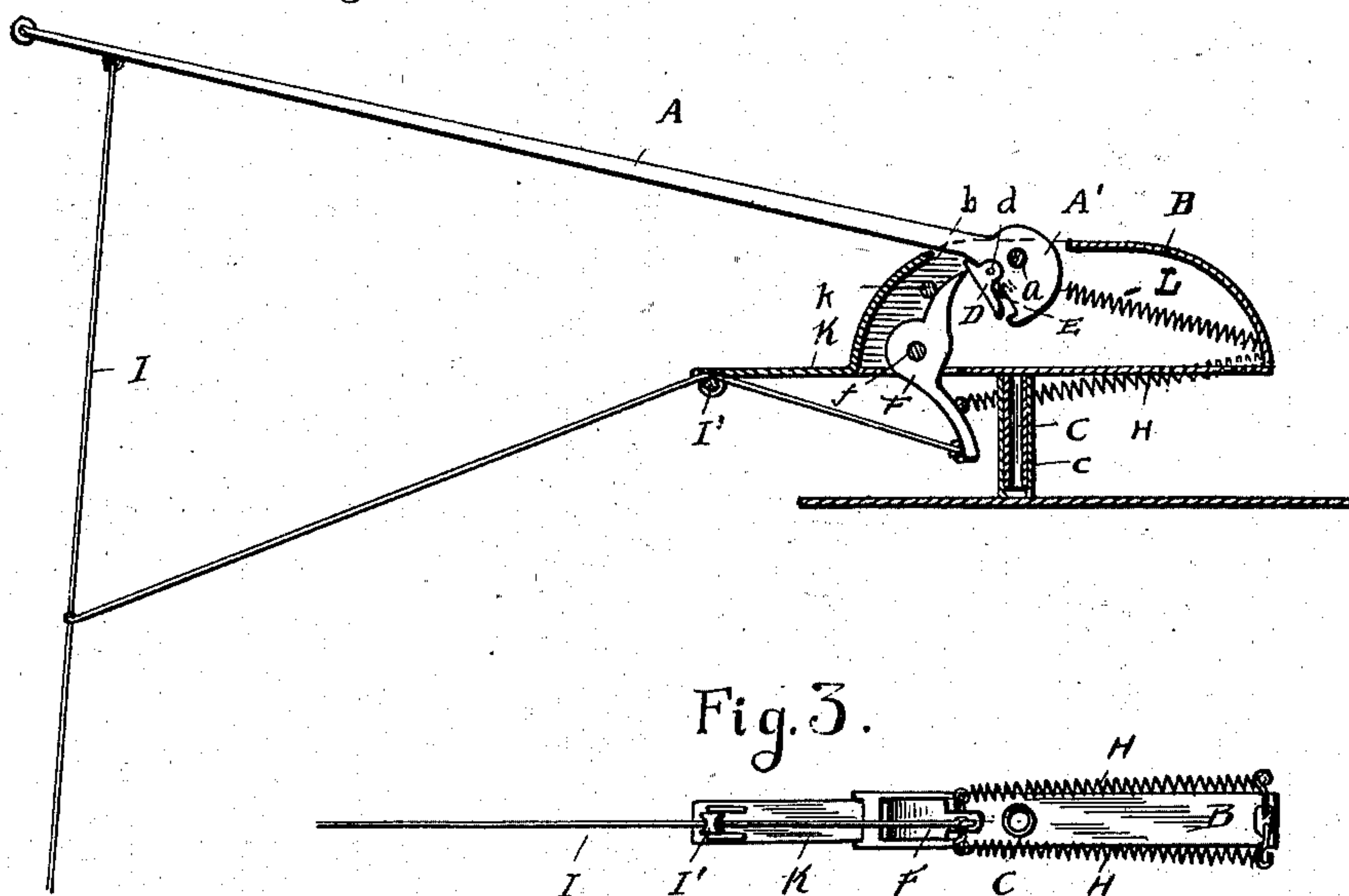


Fig. 4.

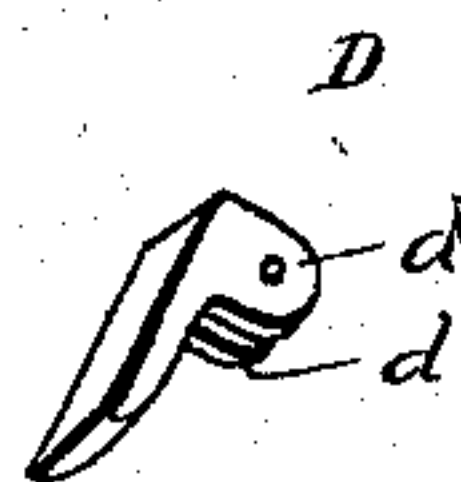
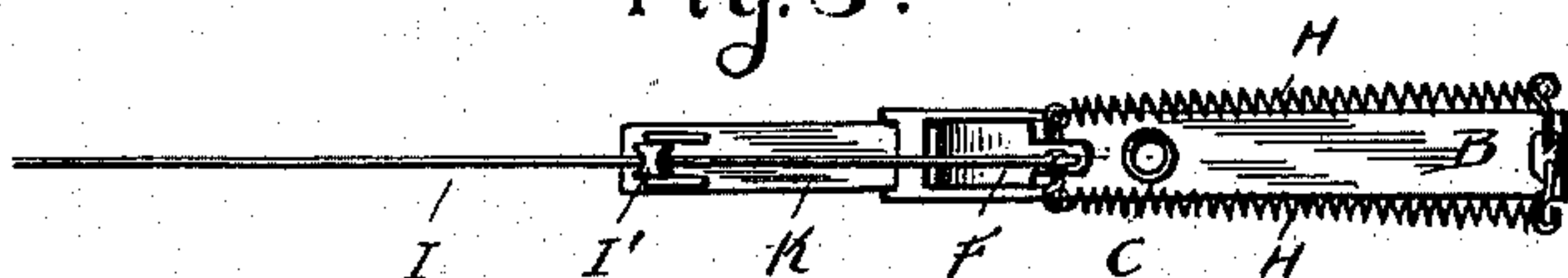


Fig. 3.



WITNESSES

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TROLLEY FOR ELECTRIC CARS.

SPECIFICATION forming part of Letters Patent No. 559,275, dated April 28, 1896.

Application filed September 11, 1895. Serial No. 562,197. (No model.)

To all whom it may concern:

Be it known that I, JAMES LEWIS FOSTER, a citizen of the United States, and a resident of Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Trolleys for Electric Cars; 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a sectional view showing invention in operation. Fig. 2 is a similar view showing parts in released positions. Fig. 3 is a bottom plan view of case B, &c. Fig. 4 is a perspective view of catch D.

The object of this invention is to provide a trolley for electric cars having means whereby the arm or pole is relieved from tension when out of contact with the conductor; and the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates the trolley pole or arm, which is formed at its lower end with an enlarged portion A', pivoted at *a*, within a suitable case or closure B, having a slot *b* in its upper portion to permit the necessary play of the arm or pole. Said case is in the present instance formed with a vertical sleeve or socket C, which pivotally engages a stud *c* on the car to permit the arm or pole its necessary swing in a horizontal plane. Other means may, however, be employed to permit such pivotal movement.

D designates a catch formed near its upper end with parallel lugs *d*, which embrace and are pivoted to the rear edge portion of the part A' of the arm or pole. The lower portion of this catch is normally held away from the part A' by means of a spring E.

F designates a pawl or trigger, which is pivoted at *f* within the lower rear portion of the case B. The upper portion of this pawl or trigger is of such shape and is so disposed that it is adapted, when the arm or pole is in contact with the conductor, to engage under-

neath the catch D of the trolley-arm. The lower forwardly-curved portion of the said pawl or trigger is extended through a slot in the bottom of case B, and has connected thereto one or more (two being shown in the present instance) coiled springs H, which are also attached to the case, and which give tension to the arm or pole when in use. The stress of these springs being such as to naturally pull the lower arm of the trigger forwardly, it will be apparent that the engagement of the upper arm of the trigger with the catch D will cause the pole to be elevated into contact position under the full tension of the springs. Just as soon, however, as the pole is released from the conductor it is thrown upwardly to a still greater extent by the action of said springs, which movement carries the catch D free of the trigger, which at once flies back against a stop *k*. The pole being now entirely free from the springs drops by gravity to its lowered position.

L is a spring which is connected at one end to the portion A' of the trolley-arm to the front of and below the pivot thereof. The purpose of this spring is to counteract somewhat the action of the springs H. It will be observed that this spring is not subjected to much stress until the trolley-arm has been elevated to a considerable extent, when it acts to retard the upward throw of the pole and check the force of the contact with the conductor. To bring the pole again into action, the lower arm of the trigger is pulled backward, which causes the engagement of its upper arm with the catch D.

I is the operating-cord, which is connected to the upper portion of the pole and also to the lower arm of the trigger, the latter connection being made over a small pulley I', which is journaled on a rearward arm or extension K of case B.

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

1. The combination with a rigid trolley arm or pole having its pivotal portion provided with a catch device, of a pivoted trigger which engages said device when the pole is in contact with the conductor but which is automatically disengaged therefrom when the upper end portion of said pole rises above the

conductor, and one or more springs connected to the said trigger, the stress of said spring or springs being such that when the trigger is in engagement with the catch device, the pole
5 or arm will be elevated thereby, and means whereby the trigger may be brought into engagement with the catch device, substantially as specified.

2. The combination with the pivoted trolley arm or pole, and the spring-catch pivoted
10 to the rear edge portion of the pivotal part of said arm or pole, of the trigger device having an upper arm adapted when the arm or pole is in contact with the conductor, to take a
15 bearing against the said catch, and springs attached to the lower arm of the said trigger, substantially as and for the purpose specified.

3. The combination with a rigid trolley arm

or pole having its pivotal part provided with a catch device at its rear portion, of a trigger
20 having one of its arms adapted to engage the said catch device when the arm or pole is in contact with the conductor and to be automatically disengaged therefrom when the arm
25 or pole leaves said conductor, a spring or springs connected to the opposite arm of the trigger, a spring connected to the pivotal part of said arm or pole at its lower front portion, and means for engaging the trigger with the
30 catch device, substantially as specified.

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

JAMES LEWIS FOSTER.

Witnesses:

HENRY S. JARRETT,

HENRY I. SMITH.

