

(No Model.)

F. F. POOLE.  
TROLLEY.

No. 479,608.

Patented July 26, 1892.

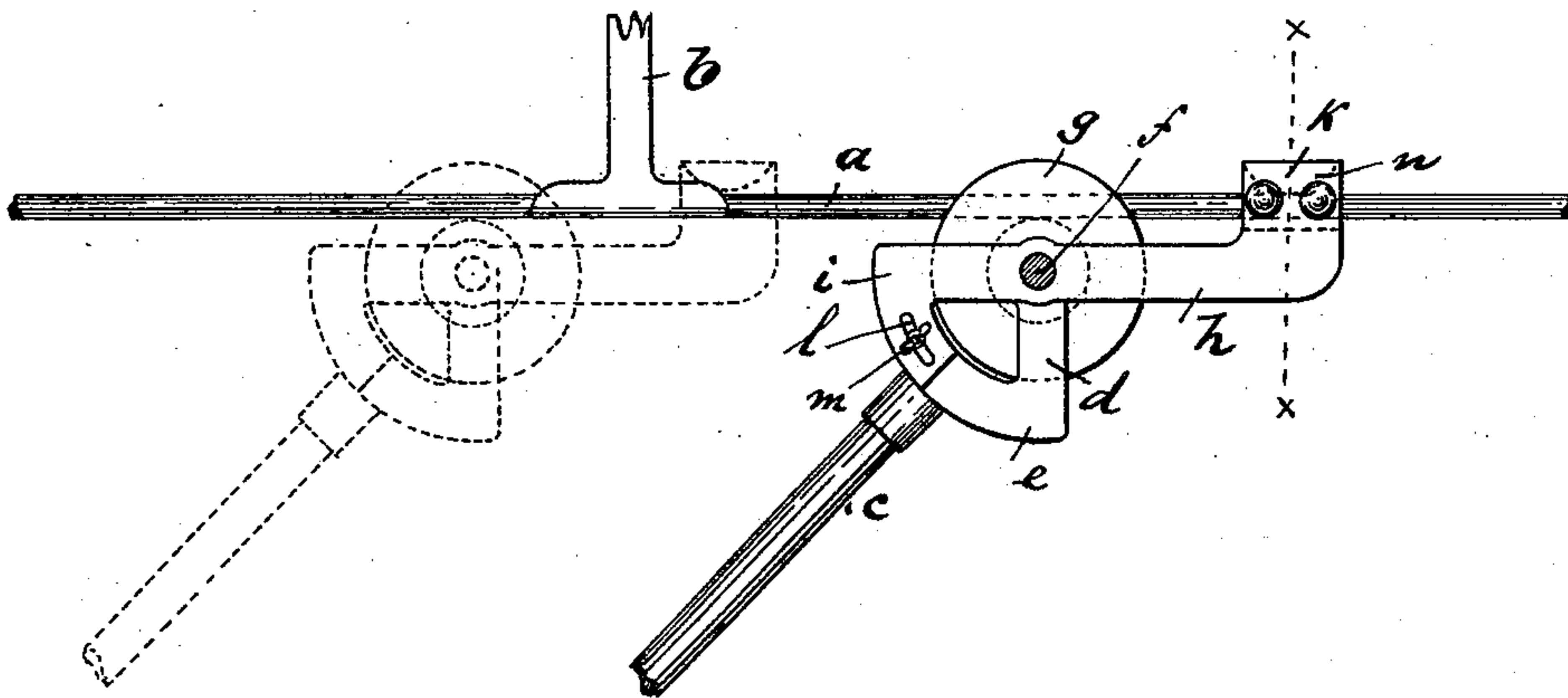


Fig. 1.

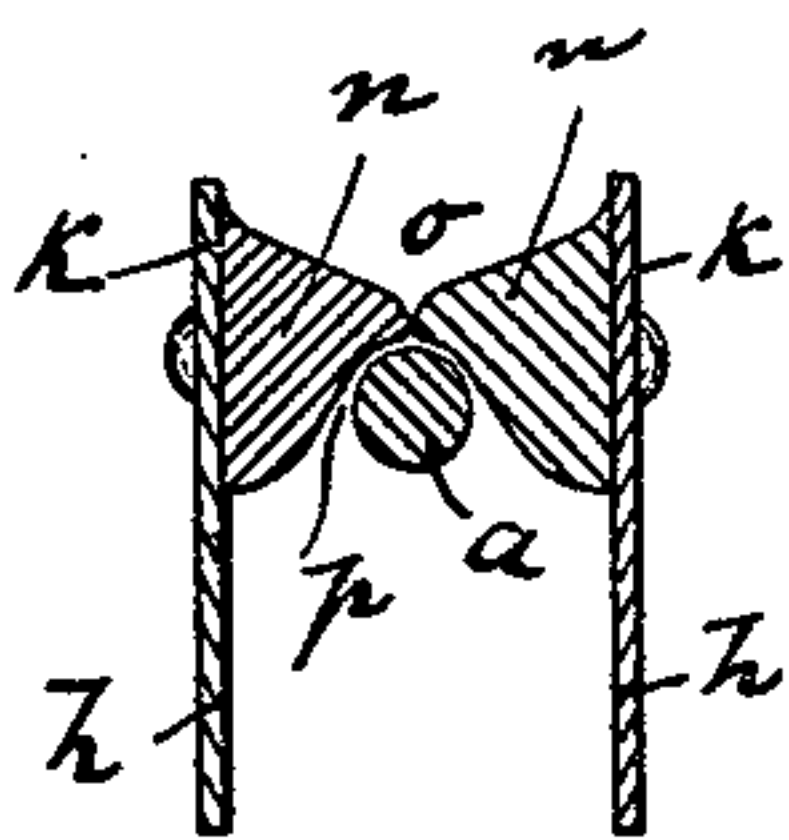


Fig. 3.

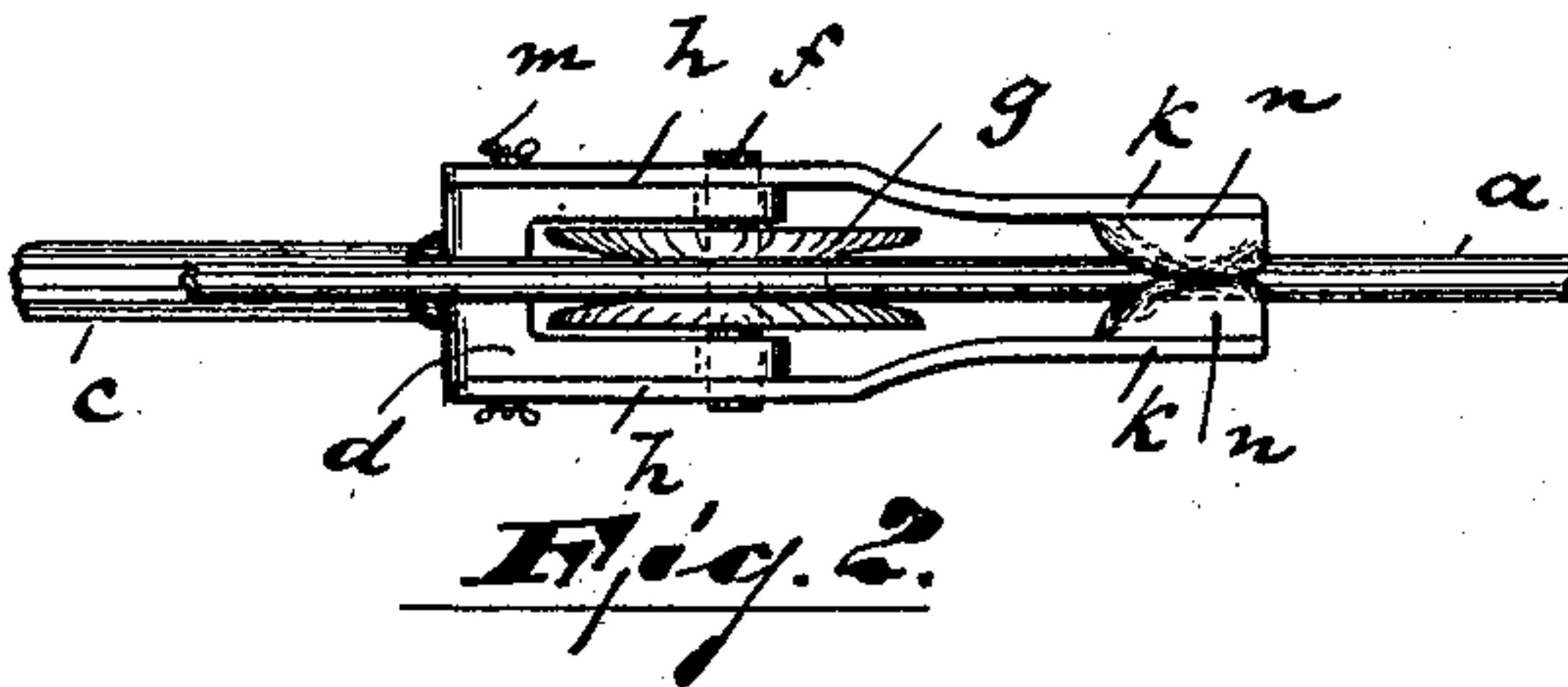


Fig. 2.

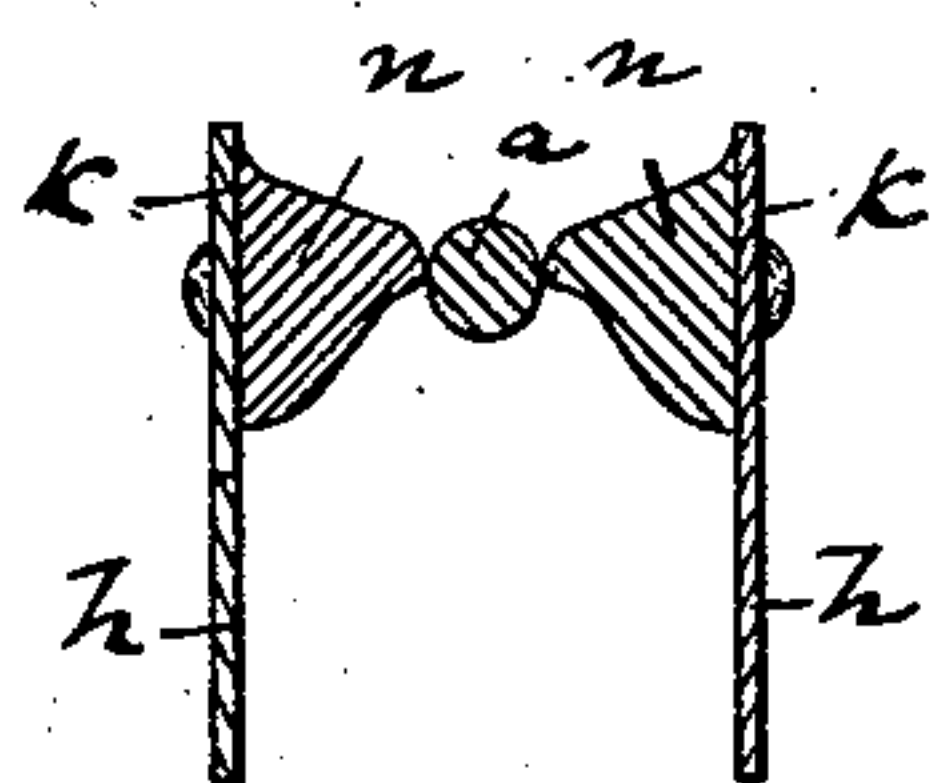


Fig. 4.

WITNESSES:

Wm. D. Zell.  
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ATTORNEYS

# UNITED STATES PATENT OFFICE.

FREDRICK F. POOLE, OF NEWARK, NEW JERSEY.

## TROLLEY.

SPECIFICATION forming part of Letters Patent No. 479,608, dated July 26, 1892.

Application filed May 11, 1892. Serial No. 432,593. (No model.)

*To all whom it may concern:*

Be it known that I, FREDRICK F. POOLE, a citizen of the United States, residing in Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Trolleys; and I do hereby 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.

The object of this invention is to provide a trolley for electric street or railway cars to be used in connection with the so-called "overhead-wire system," simple and durable in construction, not liable to slip or run off the wire, and which will prevent the breaking of the circuit at the terminals of the wire.

The invention consists in the improved trolley-wheel with its spring clasp and guard, and the combination and arrangements of the various parts thereof, substantially as will be hereinafter more fully described, and finally embodied in the claims.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 is a side elevation of my improved trolley, the trolley-pole of the car being shown broken away. Fig. 2 is a top plan view of Fig. 1. Fig. 3 is a sectional view on line  $x x$ , Fig. 1; and Fig. 4 is a view similar to Fig. 3, illustrating the contact and guard block opened.

In said drawings,  $a$  represents an overhead wire secured in the usual manner to the hanger  $b$ . The trolley connecting and supporting rod  $c$  is provided at its upper end with a forked portion  $d$ , preferably of segmental shape, as shown at  $e$ , Fig. 1. Within said fork is arranged the axle  $f$ , carrying trolley-wheel  $g$ . At each side of the fork and fulcrumed at  $f$  is arranged a metal spring  $h$ , provided at one end with a segmental extension  $i$  and at the other end with an extension  $k$ . A curved slot  $l$  is arranged in  $i$ , and a set or binding screw  $m$  (passing through said slot) is arranged in  $l$ . By means of said slot and screw the position of the springs  $h$  can easily

be changed and altered. To each of the free extensions  $k$  is secured in any desired manner a contact or guide block  $n$ , which, when in normal position, are held together by the action of their respective springs. The upper surfaces of said blocks form a channel  $o$  and the lower ones a channel  $p$ .

In operation the wheel  $g$  rests on or against the wire  $a$ . The springs  $h$  are so adjusted and secured to the forked portion  $d$  that the guide and contact blocks  $n$  when the wheel is in motion do not touch the wire  $a$ , but when passing a hanger will spring open and slide on the sides of the said hanger, as shown in dotted lines in Fig. 1. As the wires are generally jointed at or near the hangers, the wheel when passing said hangers will jump, and thus break the circuit to the motor.

By my improved arrangement the breaking of the circuits is almost impossible, as either the wheel or the guide-blocks will always be in contact with the wire or its hanger. The jumping of the trolley-wheel off the wire is also avoided by said blocks, as the latter are always kept together by their respective springs, although when necessary (by pulling on the trolley-rope) they can easily be separated and the wire allowed to pass between them, as will be manifest.

I do not intend to limit myself to the construction shown and described, as various changes can be made without changing the scope of my invention.

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

1. In a trolley, the combination, with the wheel, the axle, and its support, of spring-plates adjustably secured to the sides of said support and fulcrumed on the axle, and metal blocks arranged on said springs and adapted to touch beyond but in the center line of the wheel, substantially as described, and for the purposes set forth.

2. In a trolley, the combination, with the wheel, the axle, and its support, of spring-plates fulcrumed at the said axle and provided with an elongated curved slot, a set or binding screw passing through said slot and adapted to secure said spring-plates to the said support, and metal blocks arranged on



and adapted to be held together by said spring-plates, substantially as described, and for the purposes set forth.

3. In a trolley system, the combination, with  
5 the wire, of a wheel adapted to roll on the under side of said wire, an axle, a forked support for said axle, said support being provided with a segmental portion, metal blocks arranged beyond the wheel and above the  
10 wire and adapted to form a channel for said

wire, and means for adjustably securing said metal blocks to the support, substantially as described and set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of 15 May, 1892.

FREDRICK F. POOLE.

Witnesses:

ALFRED GARTNER,  
WM. D. BELL.