No. 673,176. Patented Apr. 30, 1901.

J. W. PERRY.

CLAMP FOR TROLLEY WIRES.

(Application filed Mar. 28, 1901.)

(No Model.)

Fig. 1.

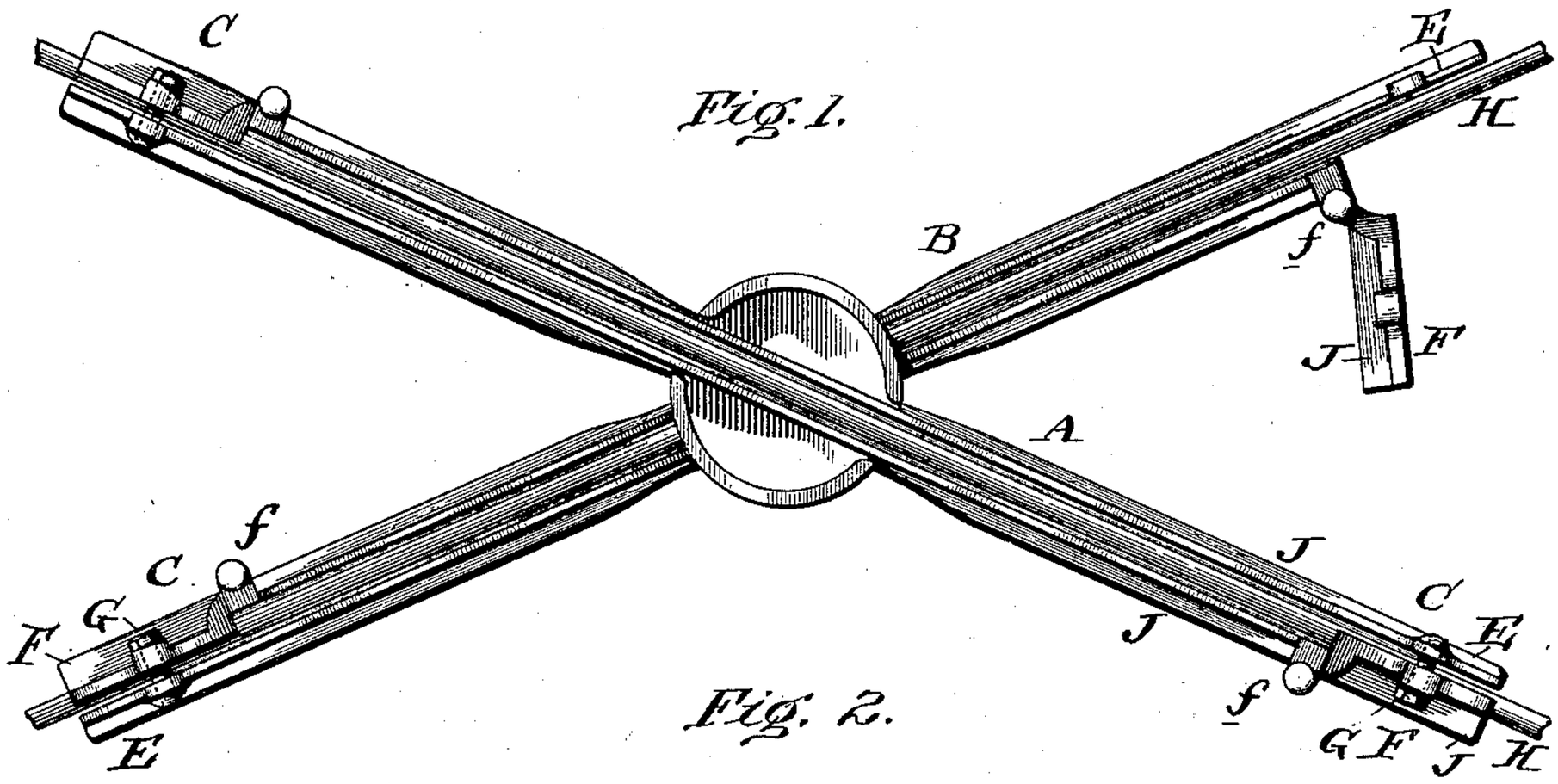


Fig. 2.

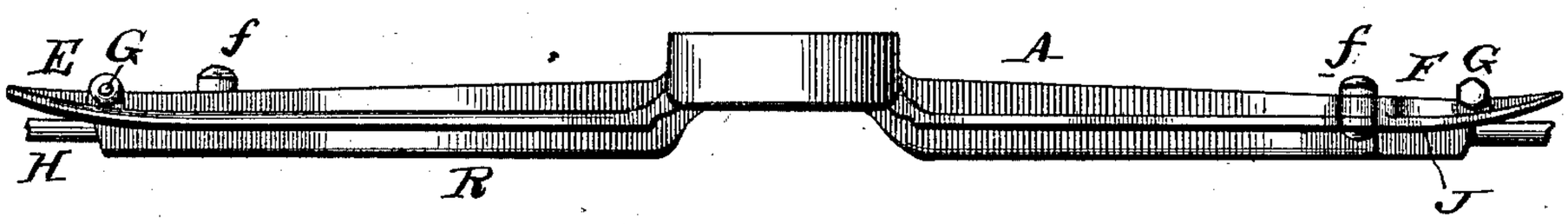


Fig. 3.

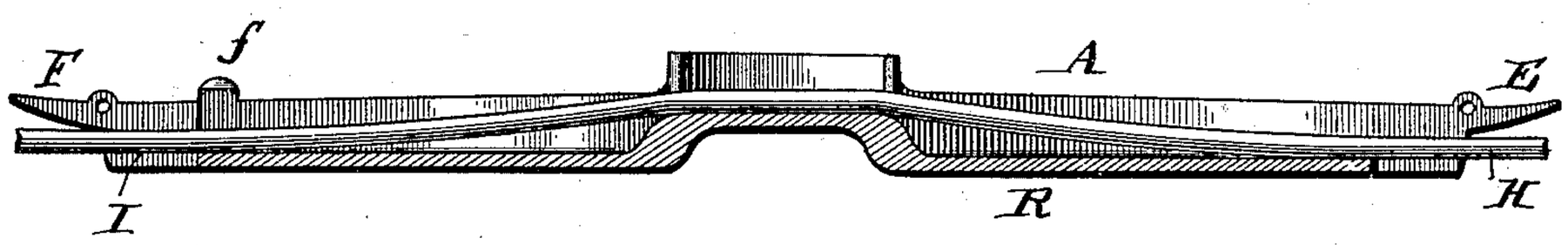
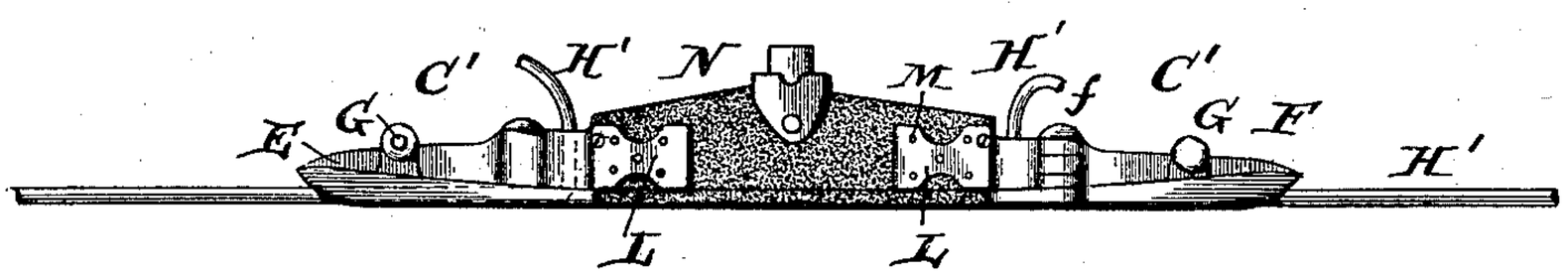
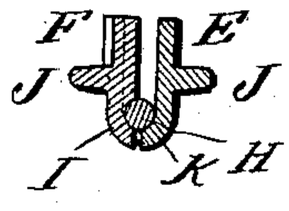


Fig. 4.



Witnesses.
Robt. M. Hunter.
W. H. Flanders.

Fig. 5.



Inventor.
James W. Perry
By [signature]
Atty.

UNITED STATES PATENT OFFICE.

JAMES W. PERRY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO H. W. JOHNS MANUFACTURING COMPANY, OF NEW JERSEY.

CLAMP FOR TROLLEY-WIRES.

SPECIFICATION forming part of Letters Patent No. 673,176, dated April 30, 1901.

Application filed March 28, 1901. Serial No. 53,323. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. PERRY, of the city and county of Philadelphia, State of Pennsylvania, have invented an Improvement in Clamps for Trolley-Wires, of which the following is a specification.

My invention has reference to clamps for trolley-wires adapted to crossings, switches, &c.; and it consists of certain improvements, all of which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to provide a simple, cheap, and durable construction of clamp for use in connection with the crossings, switches, circuit-breaking or section switches, &c.

In carrying out my invention I provide the arm of the switch, &c., with a grooved wall adapted to receive the trolley-wire and into which groove it is clamped by a laterally-swinging clamping-jaw hinged to the arm on a vertical axis or joint and forced into position against the trolley-wire by a screw or equivalent means. The clamping-jaw is also preferably grooved on its side, so as to also fit upon the trolley-wire and aid the arm in sustaining it in position.

My invention also comprehends various details of construction, which will be better understood by reference to the drawings, in which—

Figure 1 is a plan view of a trolley-crossing embodying my improvements. Fig. 2 is a side elevation of one portion of the crossing, showing my invention. Fig. 3 is a cross-section of same, and Fig. 4 is a side elevation of my invention adapted to a circuit-breaking or section switch.

The general construction of crossing or switch shown in Figs. 1, 2, and 3 is similar to that set out in Letters Patent No. 667,571, granted to me on February 5, 1901, and is shown simply as an example and not with any idea of limiting the use of my present invention to a switch of that character. In this crossing, A and B are the two crossing-rails, which may, if desired, be insulated from each other and attached to two crossing trolley-wires. The ends of these crossing-rails constitute arms E, which are located to one side of a vertical plane through the trolley-wire H. Combined with these arms E are pivoted clamping-jaws F, which, with the arms, constitute a series of end clamps C for properly holding the trolley-wire where it enters or leaves the switch, &c. The clamping-jaw F is made in general construction very similar to the arm E and is pivoted to the arm on a vertical hinge *f*, so as to be adapted to swing outward or away from the arm E. This jaw is drawn toward the arm E by a clamping-screw G, passing loosely through one member and screwed into the other. As shown, the upper portions of the crossing-rails A B are grooved to receive the trolley-wire H and constitute guide-rails R for the trolley-wheel on the bottom. The trolley-wire at the end of the arm is depressed, so as to come practically on a level with the bottom of the guide-rails, but are positively clamped between the fixed arm E and the pivoted jaw F and held in the lateral grooves K I therein, respectively. (More clearly shown in Fig. 3.) The sides of the jaw F and the arm E may be provided with laterally-extending guide-flanges J for receiving the trolley-wheel flanges, and the ends of said guide-flanges J may be curved upward to form an inclined guideway to depress the trolley, so as not to allow the wheel to strike the ends of the arm E and jaw F where the trolley-wire H leaves them. All of the ends of the crossing-rails are made alike, so that the above description suffices for all four ends.

This clamp both grips the wire to hold it against longitudinal movement within the switch and also to hold the wire in proper position close to the bottom of the switch, so as to be in practical alinement with the guide-rail R.

While the crossing shown is an adjustable crossing, my invention is not confined to any special structure, but is equally adapted to all types of crossings, switches, &c. For example, in Fig. 4 I have shown my invention applied to a circuit-breaking or section switch comprising an insulating body portion N, having metallic ends C′ of the construction above described and in which the arms E′ thereof are riveted or otherwise secured to the body portion at L M. In this case the trolley-wires

H′ are separate, and instead of a single continuous wire passing over the rails the ends are bent upward at the root ends of the clamps, the friction of the clamps being amply sufficient for holding the wire ends.

By my improved construction it is evident that the crossings, switches, &c., may be quickly applied, removed, or readily adjusted in position with the least amount of labor. The hinge *f* may be made in any suitable manner so long as the jaw may be moved away from the arm E to permit the insertion and removal of the trolley-wire, and the jaw may be moved to clamp the wire in any other convenient manner than by the screw shown. Hence while I prefer the construction shown as being excellently adapted to the purpose the details may be modified without departing from the spirit of the invention.

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

1. In a trolley crossing or switch structure, the free end of the arm, combined with a laterally-movable clamping-jaw jointed to the arm adapted to grasp the trolley-wire, and means for clamping the jaw upon the wire and moving it toward the arm.

2. In a trolley crossing or switch structure, the free end of the arm having a lateral groove in its side face, combined with a laterally-movable clamping-jaw jointed to the arm also having a lateral groove coinciding with that in the arm and adapted to grasp the trolley-wire, and means for clamping the jaw upon the wire and moving it toward the arm.

3. In a trolley crossing or switch structure, the free end of the arm having a lateral guide-flange, combined with a laterally-movable clamping-jaw jointed to the arm adapted to grasp the trolley-wire also having a lateral guide-flange, and means for clamping the jaw upon the wire and moving it toward the arm.

4. A crossing or switch having a clamping-arm for the trolley-wire consisting of a rigid arm, combined with a movable jaw grooved on its lateral face to receive the trolley-wire and pivoted to the arm on a vertical axis so as to move laterally, and connecting means between the arm and pivoted jaw for moving the latter toward the former to clamp the wire.

5. A crossing or switch having a clamping-arm for the trolley-wire consisting of a rigid arm having a groove into its lateral face, combined with a movable jaw grooved on its lateral face to receive the trolley-wire and pivoted to the arm on a vertical axis so as to move laterally, and connecting means between the arm and pivoted jaw consisting of a screw between the pivot of the jaw and its free end for moving the jaw toward the arm to clamp the wire.

6. The arm E having a suitable guide-groove for the trolley-wire, a jaw F pivoted to the arm on a vertical hinge *f* and having a groove in its lateral face, and a clamping-screw G for drawing the jaw toward the arm.

7. The arm E having a suitable guide-groove for the trolley-wire and a lateral flange J, a jaw F pivoted to the arm on a vertical hinge *f* and having a groove in its lateral face and a lateral flange J directed away from its groove, and a clamping-screw G for drawing the jaw toward the arm.

In testimony of which invention I have hereunto set my hand.

JAMES W. PERRY.

Witnesses:
J. W. KENWORTHY,
R. M. KELLY.