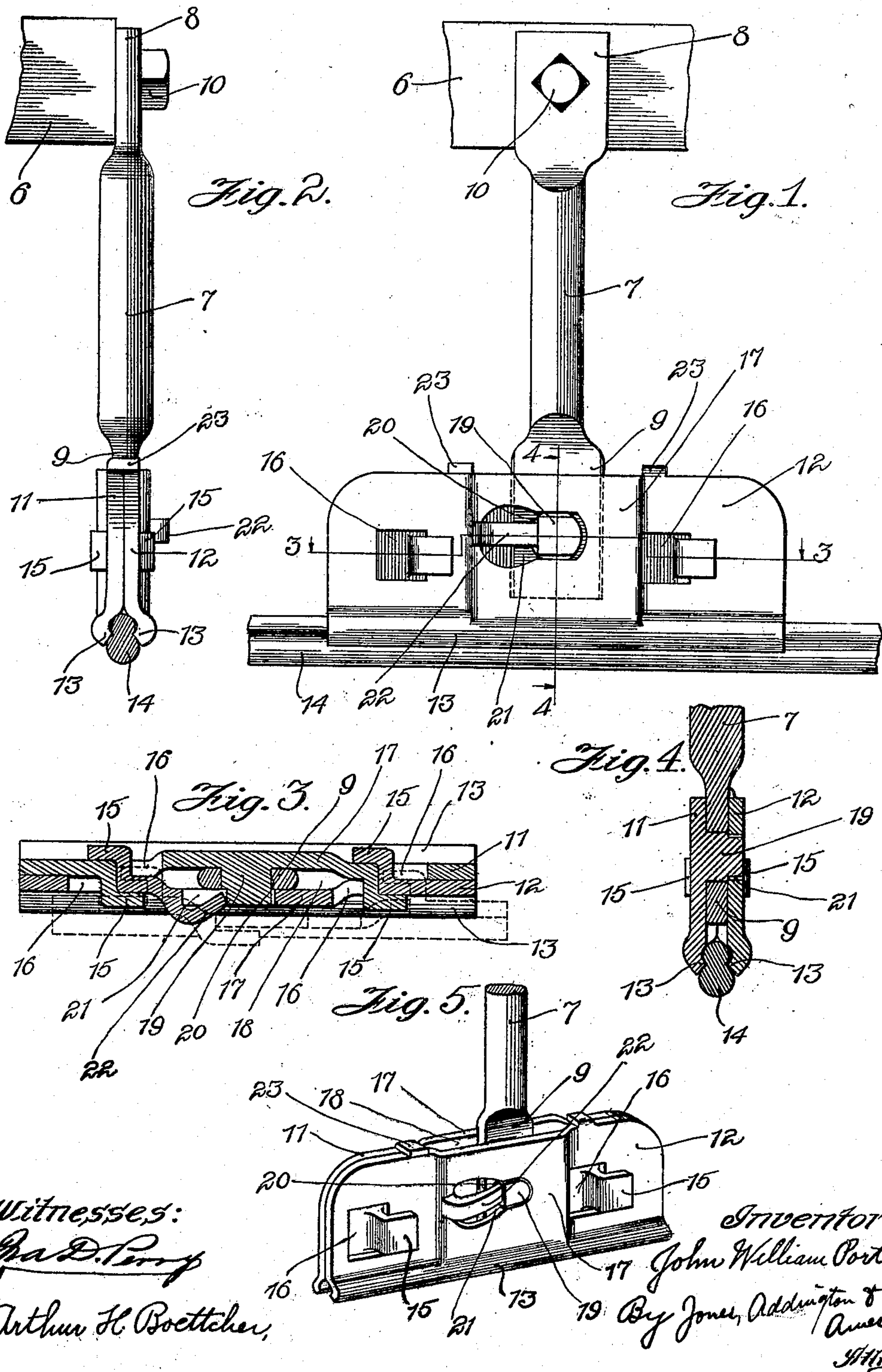


J. W. PORTER.
TROLLEY WIRE SUPPORT.
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919,763.

Patented Apr. 27, 1909.



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UNITED STATES PATENT OFFICE.

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TROLLEY-WIRE SUPPORT.

No. 919,763.

Specification of Letters Patent.

Patented April 27, 1909.

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To all whom it may concern:

Be it known that I, JOHN WILLIAM PORTER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Trolley-Wire Supports, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

My invention relates to trolley wire supports, contemplating improvements whereby a substantial and reliable structure is obtained and embracing other novel features to facilitate the application thereof to a trolley wire.

My invention pertains particularly to that class of devices which consist of separable clamping members secured together to clutch the trolley wire and it is the object thereof to provide a structure which will successfully resist the jars and jolts to which it is constantly subjected. With this object in mind I provide the clamping members with securing and locking means which will not be affected by these jars and jolts and constant rattling, thus eliminating the disadvantages of the prior art devices wherein the clamping members were often caused to become unloosened and separated because of the frequent passing engagement of a trolley. I have, furthermore, provided a device of this kind which may be applied to a trolley wire in a simple manner and without the employment of numerous tools, this being particularly desirable since such application must frequently be made in very inconvenient and sometimes dangerous positions.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a front elevational view thereof, showing the same suspended from a main supporting structure and clutching a trolley wire; Fig. 2 is a side elevational view thereof; Fig. 3 is a longitudinal sectional view on the line 3—3 of Fig. 1, looking in the direction of the arrows; Fig. 4 is a cross sectional view on the line 4—4 of Fig. 1, looking in the direction of the arrows; and Fig. 5 is a perspective view thereof.

The device consists, broadly, of a pair of clamping members adapted to engage the opposite sides of a trolley wire and to be securely united to clutch the wire after the

same has been properly placed therebetween. These clamping members are adapted to be mounted upon or suspended from a main supporting structure in such a manner that it may have free movement whereby it may recede or otherwise respond to the strains caused by the passing engagement of a trolley.

I have illustrated at 6 a main supporting structure, pivotally suspended from which is a link 7. This link has the flattened ends 8 and 9, and the end 8 is provided with an opening through which the pivot bolt 10 may pass. Upon the lower end 9 of this link are mounted the clamping members of the supporting device, as will be hereinafter described.

The clamping members, which are adapted to be brought together and to coact to clutch and support the trolley wire, are shown, respectively, at 11 and 12. Each of these clamping members is provided at the bottom thereof with the longitudinally extending flange rail 13, hook-shaped in cross section, as clearly indicated in the drawings. These hook-shaped rails are adapted to engage opposite sides of the trolley wire 14, the wire herein shown being of that type having the longitudinally extending grooves wherein the rails 13 may engage. For the purpose of securing these clamping members firmly together, each of said members is provided with the laterally extending angle hooks 15, these angle hooks being so disposed that the hooks on each member extend toward the other member when the members are placed in the proper juxtaposition for the reception therebetween of the trolley wire. Each of the members 13 are provided with openings which I have indicated at 16, 16 and the angle hooks 15, 15 on each of the clamping members pass through these openings in the opposing member and engage the exterior surface thereof to hold the two members firmly together. The relative disposition of the hooks and openings is such that when the members are placed in lateral proximity and are slightly off-set, as indicated in dotted lines in Fig. 3, the hooks 15 on each of the members will register laterally with the corresponding openings 16 in the opposite member. These openings are of such size that the longitudinally extending parts of the angle hooks 15 may pass therethrough and it is apparent that when relatively disposed in proper lateral register, as has just

been described, the clamping members may be brought into close proximity, the angle hooks on each member passing through the opening in the opposing member. Before being thus brought together a trolley wire 14 is disposed between the hooked rails, and when the clamping members are locked together, the wire is held securely in place, as shown in the drawings. The laterally extending parts of the angle hooks 15 are of approximately the same length as the thickness of the clamping members, so that, when the members are brought together, and are given a slight longitudinal movement in opposite directions, the longitudinally extending parts of the angle hooks 15 of each of the members will engage the exterior of the opposing member, thus holding the clamping members against lateral displacement.

Each of the coupling members is fashioned at 17 into a depression and, when the respective members are brought together, an interstice 18 remains therebetween. One of the clamping members, here shown as the member 11, is provided with the pivot stud 19 extending laterally therefrom, into the interstice 18. The flattened end 9 of the link 7 takes into this interstice and is provided with an opening 20, through which the pivot stud 19 is adapted to pass, thus securing pivotal connection between the supporting device and the link when the clamping members are brought together. This stud 19 is made slightly longer than is necessary merely for the accommodation of the flattened end 9 of the link and, when the clamping members are brought together, extends into the registering opening 21 in the member 12, this opening being elongated to admit of the slight opposing longitudinal movement of the clamping members as hereinbefore described. The clamping member 12 is provided with the extending tongue 22, proximate to the opening 21 therein, this tongue, before the members are brought together, being in the position shown in dotted lines in Fig. 3. When, however, the members are clamped together about the trolley wire and about the end 9 of the link 7, as hereinbefore described, the tongue 22 is bent back by a sharp hammer blow or other convenient means, to engage the stud 19, as shown in the drawings, thus acting as a stop and securely locking the members against longitudinal displacement and consequent separation. Laterally extending lugs 23, 23 may be provided for the respective clamping members to furnish further assistance in preventing relative displacement of the members.

It is apparent that since the clamping members are pivotally secured to the link 7 and the link is pivotally secured to the main supporting structure 6, the supporting device may readily respond to any strains or

pressures applied to the trolley wire by the passing engagement of a trolley, and that the support may recede, tilt or move otherwise to follow the movement of the trolley wire as it is lifted from its sag by the passing trolley. Such action greatly reduces the liability of breaks at the point where the trolley wire is connected with the support. Furthermore, the frequent jars and jolts and constant rattling to which it is subjected will not in any way affect the locking means for the clamping members, thus insuring substantial and reliable support for the trolley wire. It is evident, also, that the device of my invention may be applied to the trolley wire and be mounted upon a primary structure without inconvenience and the use of numerous tools as in the prior art devices wherein bolts or screws or the like were employed to secure the clamping members together.

I claim as new and desire to secure by Letters Patent:

1. In a wire support, the combination with relatively laterally disposed clamping members, of a hook on each of said clamping members for gripping the other of said members, said hook being brought into operative position upon relative longitudinal movement of the clamping members in a certain direction, and a tongue integral with one of said members adapted to be fashioned into the path of a part of the other of said members to form a stop to prevent such movement in the opposite direction.

2. In a wire support, the combination with a pair of clamping members interlocking upon relative longitudinal movement, said members being fashioned to leave an interstice therebetween for the reception of a supporting piece, of a pivot stud extending from one of said members into said interstice and arranged to pass through an opening in said supporting piece, and a part on the other of said members arranged to be fashioned into the path of said pivot stud to lock said members together.

3. In a wire support, the combination with a pair of clamping members interlocking upon relative longitudinal movement in one direction, said members being fashioned to leave an interstice therebetween for the reception of a supporting piece, of a pivot stud for said supporting piece extending into said interstice from one of said members, and a part on the other of said members arranged to be permanently bent into the path of said stud to prevent relative longitudinal movement of said members in the opposite direction.

4. In a wire support, the combination with a pair of clamping members interlocking upon relative longitudinal movement in one direction, said members being fashioned to leave an interstice therebetween for the re-

ception of a supporting piece, of a pivot stud for said supporting piece extending into said interstice from one of said members, and a tongue on the other of said members arranged so that it may be bent into permanent engagement with said stud when said members are interlocked to prevent relative longitudinal movement of said members in the opposite direction.

10 5. In a wire support, the combination with a pair of clamping members interlocking upon relative longitudinal movement in one direction, said members being fashioned to leave an interstice therebetween for the reception of a supporting piece and one member 15 having a slot therein, a pivot stud for said supporting piece extending from the other of said members into said interstice and into said slot in said first-named member, and a tongue on said first-named member proximate to said slot and arranged to be permanently bent into the path of said stud to prevent relative longitudinal movement of said member in the opposite direction.

25 6. In a wire support, the combination with a pair of clamping members interlocking upon relative longitudinal movement in one,

direction, of means for preventing such movement in the opposite direction, and a lug on each of said members extending over 30 the top of the other member to prevent vertical movement of one member relative to the other.

7. In a wire support, the combination with a pair of relatively laterally disposed clamping members having openings therein, of 35 hooks extending in one direction from one of said clamping members and arranged to pass through the corresponding openings in and to engage the outside of the other member, 40 hooks extending in the opposite direction from said other member and arranged to pass through the corresponding openings in and to engage the outside of the first-named member, and means for locking said mem- 45 bers in such engaging position.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

JOHN WILLIAM PORTER.

Witnesses:

M. S. EARL,
C. D. WILLISON.