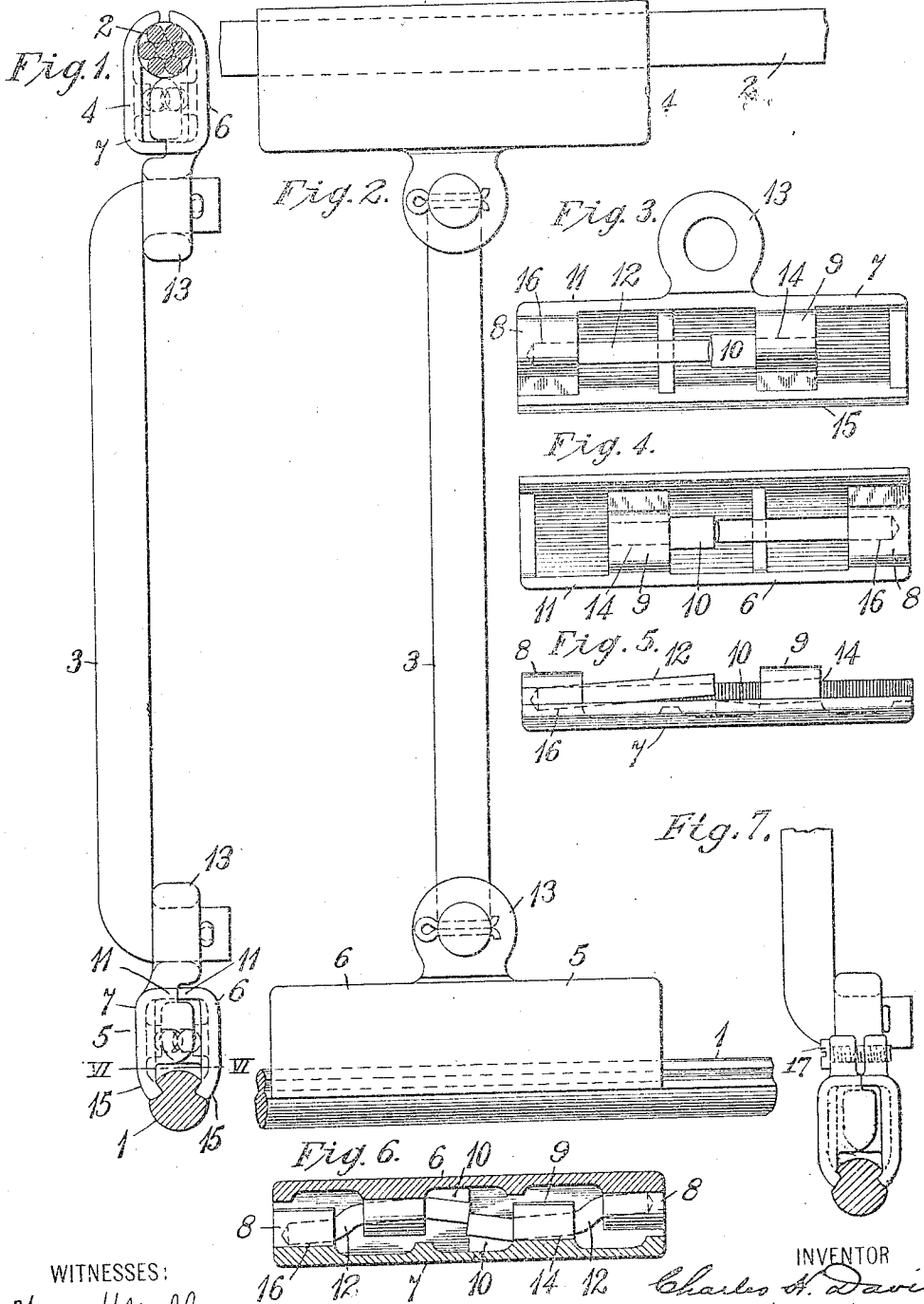


C. H. DAVIS.
TROLLEY CLAMP.
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949,885.

Patented Feb. 22, 1910.



WITNESSES:

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CHARLES H. DAVIS, OF PITTSBURG, PENNSYLVANIA.

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949,885.

Specification of Letters Patent.

Patented Feb. 22, 1910.

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To all whom it may concern:

Be it known that I, CHARLES H. DAVIS, a citizen of the United States, and a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Trolley-Clamps, of which the following is a specification.

My invention relates to means for suspending electric line conductors, and it has for its object to provide an improved clamping device which shall be simple in construction and effective and durable in service.

Various types of trolley clamps have been suggested in the prior art and many of them have been extensively employed in service, but nearly all have comprised parts on which more or less machine work was necessary. It has been my aim to construct a device of the character indicated composed of a small number of parts which require substantially no machine work and which may be readily secured to and as readily detached from a trolley conductor.

My improved device comprises, in general, two interchangeable parts or jaw members which may be readily locked together by a few well directed blows of a hammer so that there is no danger of their loosening or separating if the device is subjected to ordinary service conditions for an indefinite length of time. The two parts of the clamp may be separated, however, with equal facility, and the arrangement of parts is such that the passage of the trolley along the wire has no tendency whatever to perform the act necessary for separation.

Figure 1 of the accompanying drawings is an end elevation of a hanger structure embodying my invention. Fig. 2 is a side view of the structure shown in Fig. 1, and Figs. 3, 4 and 5 are detail views of my improved clamping device. Fig. 6 is a bottom plan view of the trolley clamp shown in Fig. 2, with the trolley conductor broken away to disclose the clamping members of the device. Fig. 7 is an end elevation of a trolley wire clamp provided with an adjusting means to adapt it to different sizes of wire.

While my improvement is specially well adapted for use as a trolley clamp, it may, of course, be utilized in other connections, the arrangement shown in the drawings being intended for purposes of illustration rather than limitation.

Referring to the drawings, the structure

illustrated comprises a trolley conductor 1, which is suspended from a messenger wire or cable 2 by means of a hanger rod 3, a cable clamp 4 and a trolley clamp 5. The cable clamp 4 and the trolley clamp 5 are similar to each other, with the exception of the claws which are adapted in the usual manner to accommodate the form of a conductor to which the clamp is secured. Each of the clamps 4 and 5 comprises a pair of similar side blocks or jaw members 6 and 7 having lateral end projections 8 and intermediate projections 9, lugs 10, flanges 11, and pins 12 which are secured to the lateral end projections 8 and extend inwardly therefrom in a line substantially parallel to the plane of the side member but diverging slightly therefrom. One or each of the side pieces or jaw members may be provided with a loop or ring 13 by which the assembled device may be suspended from, or connected to, the rod 3, the ends of which are bent at right angles and project through the loops 13 on the clamps 4 and 5. An internally threaded boss may be substituted for the loops 13 and a straight hanger rod having screw-threaded ends used in place of the rod 3, in accordance with ordinary practice, if desired. The fact that a longitudinal motion of the trolley conductor 1 relative to the messenger cable 2 or a rocking movement of the clamp is permitted by the structure illustrated while the arrangement of parts is such that a lateral movement of the trolley conductor is prevented, is of special advantage.

In assembling the two jaw members of the clamp, the pin 12, which is rigidly secured to one of the members, is driven into a hole 14 with which the intermediate projection 9 of the other member is provided. When each of the pins is properly started into the hole 14 of the other member, the two members are driven together longitudinally until they are directly opposite each other, the claw projections 15 being first brought into engagement with the conductor to which the clamp is to be secured. The length of the pins 12 may be such that they will serve as stops to prevent the two jaw members being driven past the desired position indicated above, the ends of the pins abutting when this point is reached. The lugs 10 are so formed and disposed as to bend the ends of the pins which project through the holes 14 laterally to a degree to

prevent the accidental separation of the two parts of the clamp. Furthermore, the center line of the holes 14 may make such angles with the plane of the engaging faces of the jaw members as to assist the lugs 10 in forcing the jaw members together. Since the flanges 11 make engagement with each other, it is obvious that the claws 15 will be drawn toward each other and thus securely clamp the trolley wire. The pins 12 may be either secured to the projections 8 by driving or screwing them into suitable holes 16 or they may be cast or brazed in position.

It may be found desirable, in some cases, to adapt the same clamp to different sizes of conductor, and, if so, the result may be accomplished by providing set screws 17 (see Fig. 7) for separating the flanges 11 of the jaw members instead of relying directly upon said flanges, which, of course, constitute a nonadjustable fulcrum for the clamp.

I claim as my invention:

1. The combination with two side members having apertured lateral projections, of a pin extending from a corresponding projection on each member in a line approximately parallel to its sides, the pin of one member extending through the aperture in a lateral projection pertaining to the other member.

2. The combination with two side pieces severally provided with an end projection and an apertured intermediate projection, of a pin secured to the end projection of each side piece and extending through the aperture in the intermediate projection of the other side piece.

3. The combination with a pair of similar side pieces having end projections, apertured intermediate projections and deflecting lugs adjacent to the intermediate projections, of a pin secured to each end projection and adapted to be forced through the aperture in the intermediate projection of the other side piece and over the adjacent deflecting lug.

4. A trolley clamp comprising a pair of similar jaw members each of which has a

claw projection at one edge, a flange at its other edge, an end projection and an apertured intermediate projection, a pin secured to the end projection of each member and adapted to be forced through the aperture in the intermediate projection of the other member, and means for bending or deflecting the ends of the pins to prevent accidental separation of said members.

5. A trolley wire clamp comprising a pair of jaw members severally provided with longitudinal pins and apertured lugs which make locking engagement with each other, said lugs being laterally displaced with reference to the bases of said pins in order to draw the jaw members toward each other.

6. A trolley wire clamp comprising two jaw members having laterally projecting apertured lugs and locking pins projecting inwardly from seats which are offset laterally with reference to said lugs in order to cooperate with said lugs as the sole clamping means for said jaw members.

7. A trolley wire clamp comprising a pair of jaw members provided with inwardly projecting apertured lugs and locking pins rigidly seated in the opposite ends of the respective jaw members and projecting inwardly in substantially parallel relation, to cooperate with said lugs as the sole clamping means for said jaw members.

8. A trolley wire clamp comprising a pair of jaw members severally provided with an end lug and an apertured intermediate lug, the lugs of each member being laterally offset with reference to those of the other, and pins which are severally seated in the end lugs and project through the offset apertured lugs to lock said jaw members together.

In testimony whereof, I have hereunto subscribed my name this 24th day of October, 1908.

CHARLES H. DAVIS.

Witnesses:

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