No. 835,821. PATENTED NOV. 13, 1906.

H. W. FELLOWS & I. A. CAMMETT.

TROLLEY POLE CLAMP.

APPLICATION FILED SEPT. 15, 1905.

Fig. 1.

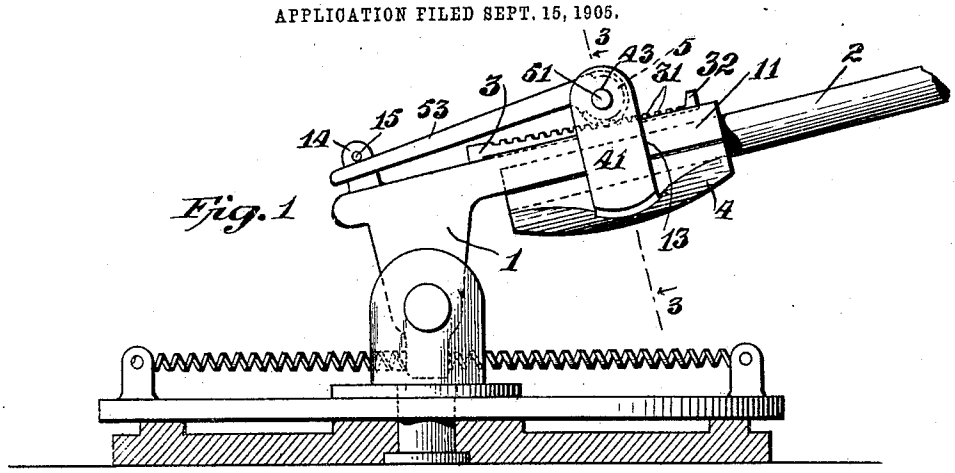


Fig. 4.

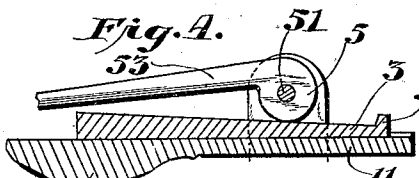


Fig. 2.

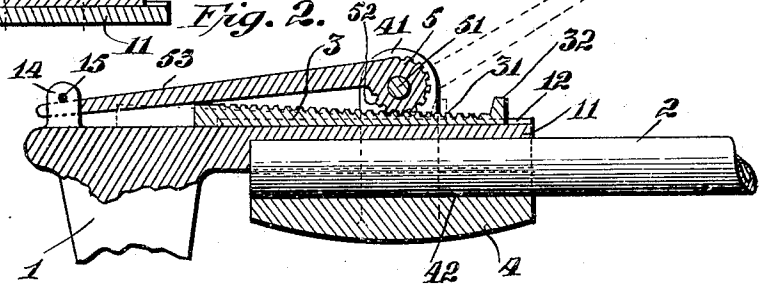
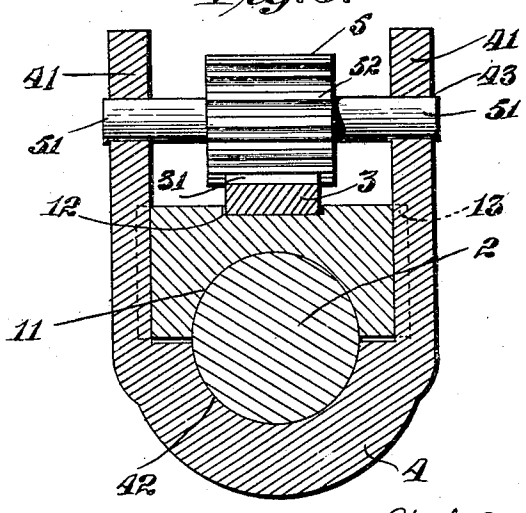


Fig. 3.



Attest:

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HUGH W. FELLOWS AND IRA A. CAMMETT, OF LOS ANGELES, CALIFORNIA.

TROLLEY-POLE CLAMP.

No. 835,821. Specification of Letters Patent. Patented Nov. 13, 1906.

Application filed September 15, 1905. Serial No. 278,591.

To all whom it may concern:

Be it known that we, HUGH W. FELLOWS and IRA A. CAMMETT, citizens of the United States, and residents of Los Angeles, county of Los Angeles, and State of California, have invented certain new and useful Improvements in Trolley-Pole Clamps, of which the following is a specification.

Our invention relates to trolley-pole clamps such as are used in overhead trolleys for electric cars. It provides means for detachably but securely holding the end of the pole in the bracket. It also consists of certain combinations of elements, which will be pointed out in the claims.

In the drawings, Figure 1 represents a portion of a roof of a trolley-car, showing in elevation a pole-bracket embodying our invention. Fig. 2 is a longitudinal section of the clamp portion of the bracket. Fig. 3 is a transverse section through the line 3 3, Fig. 1. Fig. 4 is a partial transverse section similar to that of Fig. 2, but showing a modification.

As the swinging and spring-supporting portions of the bracket form no part of our invention, we have not carefully illustrated and will not describe the same.

1 designates a bracket-arm the free end of which is provided with a longitudinal jaw 11, formed as a semicircular recess for receiving the butt-end of a trolley-pole 2. On the opposite face of the arm 1 is a longitudinal groove 12, in which slides a wedge 3, shown in Figs. 1, 2, and 3 as having ratchet-teeth 31. As shown, the wedge may have an upwardly-extending tip 32 at its thin end to prevent its disengagement. The opposite sides of the bracket-arm 1 are grooved at 13 to receive the arms 41 of a clamp member 4. The clamp member 4 is provided with a jaw or recess 42, shown as of semicircular form, which coöperates with the recess 11 in the arm 1 for holding the pole 2. Each of the arms 41 is pierced at 43 to receive the shaft 51 of a cam-pinion 5, which has teeth 52 for engaging with the teeth 31 in the wedge 3. The cam-pinion 5 has a lever-handle 53, the free end of which is slotted at 54 to take over a lug 14 on the bracket-arm 1. The lug 14 is pierced to receive and to frictionally engage the pin 15, as clearly shown in Figs. 1 and 2. The operation of this form of the device is as follows: The butt-end of the pole 2, which may be of wood or metal, as desired, is inserted between the jaws 11 and 42. The wedge 3 is then slid forward to the desired extent by the hand of the operator, its teeth 31 clearing the teeth of the cam-pinion 5. When these teeth engage with each other, the cam-pinion is turned by its lever-arm 53 from the position shown in dotted lines, Fig. 2, to that shown in solid lines, whereby the wedge 3 is forwardly adjusted to its locking position, in which it securely holds the jaws on both the clamping members in operative engagement with the pole 2. When the cam 5 is in its locking position, the insertion of the pin 15 into the lug 14 serves to retain it as against accidental displacement.

In the form of our device shown in Fig. 4 the teeth 31 on the wedge 3 and the corresponding teeth 52 on the cam 5 are omitted, the friction between the two surfaces being sufficient to adjust the wedge 3 and to retain it in its operative position.

It is evident that certain mechanical changes other than those shown may be made in our device without departing from our invention.

What we claim is—

1. A trolley-pole clamp comprising jaws together forming a socket for the pole, and means for forcing said jaws toward each other including a wedge and a cam for adjusting said wedge.

2. A trolley-pole clamp comprising jaws together forming a socket for the pole, and means for forcing said jaws toward each other including a wedge having ratchet-teeth and a cam-pinion for adjusting said wedge.

3. A trolley-pole clamp comprising jaws together forming a socket for the pole, means for forcing said jaws toward each other including a wedge having ratchet-teeth and a cam-pinion for adjusting said wedge and having a lever-arm, and means for holding said pinion in its locking position.

4. A trolley-pole clamp comprising a bracket member having a pole-receiving jaw at its free end, a clamp member mounted at the free end of said arm and guided to move toward and from the same and having a pole-receiving jaw, a wedge guided to move longitudinally of one of said members, and a cam pivotally connected with the other of said members for adjusting said wedge and having a lever-arm.

5. A trolley-pole clamp comprising a bracket member having a pole-receiving jaw and a longitudinal groove at opposite faces of its free end, a clamp member having a pole-receiving jaw and having arms embracing said bracket member, a wedge in said groove and having ratchet-teeth, and a cam-pinion pivoted to said arms for adjusting said wedge and having a lever-arm.

6. A trolley-pole clamp comprising a bracket member having a pole-receiving jaw and a longitudinal groove at opposite faces of its free end, a clamp member having a pole-receiving jaw and having arms embracing said bracket member, a wedge movable in said groove, a cam pivoted to said arms for adjusting said wedge and having a lever-arm, and means on said bracket member for engaging said lever-arm when said pinion is in its locking position.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

HUGH W. FELLOWS.
IRA A. CAMMETT.

Witnesses:
J. W. LAWRENCE, Jr.,
MARVIN R. KING.