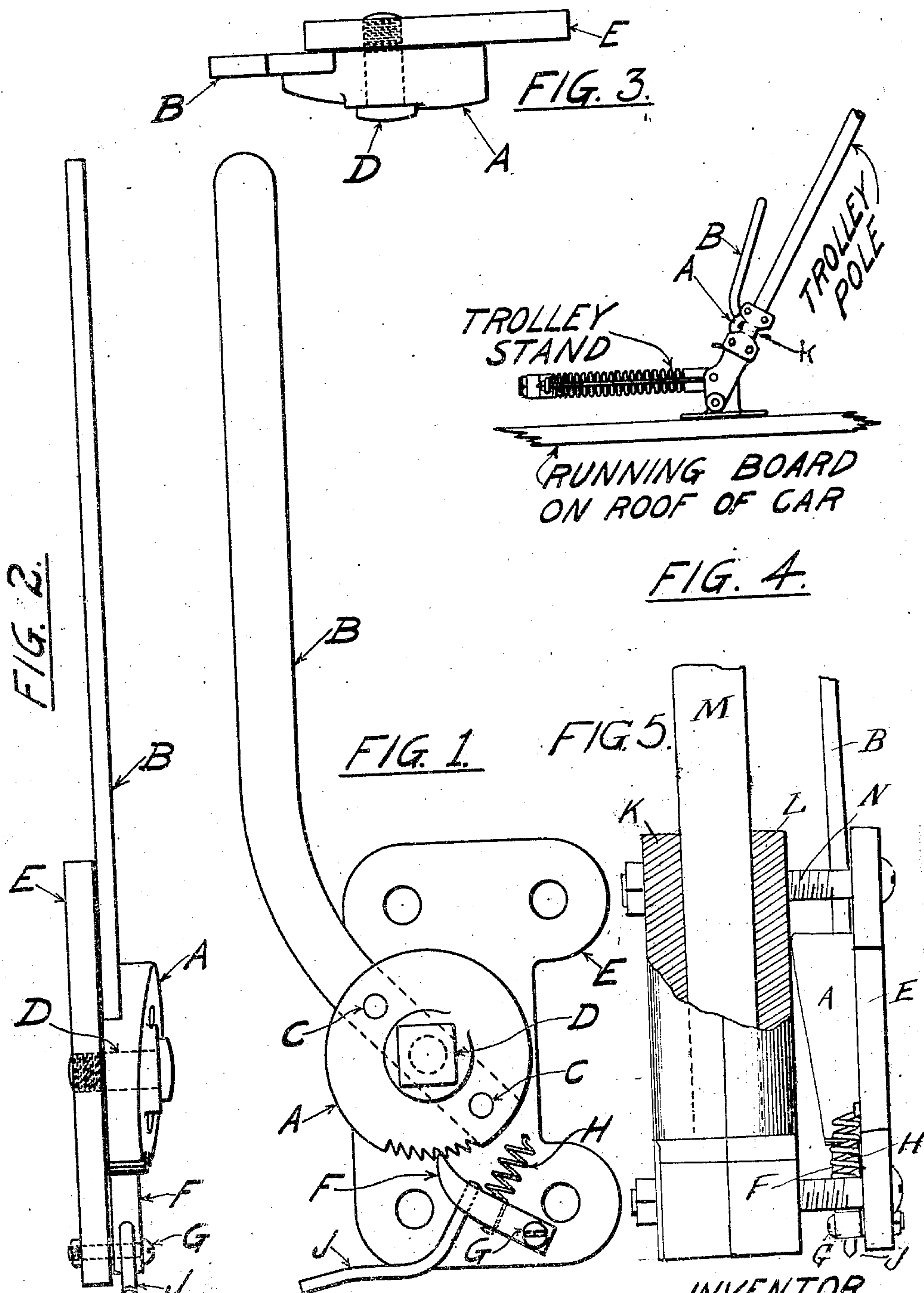


No. 884,074.

PATENTED APR. 7, 1908.

C. W. CLARK & C. E. YINGLING.  
ATTACHMENT FOR TROLLEY POLE CLAMPS.  
APPLICATION FILED JAN. 13, 1906.



WITNESSES

B. S. Webb

INVENTOR  
Curtis W. Clark,  
Charles E. Yingling



# UNITED STATES PATENT OFFICE.

CURTIS W. CLARK AND CHARLES E. YINGLING, OF EATON, INDIANA.

## ATTACHMENT FOR TROLLEY-POLE CLAMPS.

No. 884,074.

Specification of Letters Patent.

Patented April 7, 1908.

Application filed January 13, 1906. Serial No. 295,986.

*To all whom it may concern:*

Be it known that we, CURTIS W. CLARK and CHARLES E. YINGLING, residents of Eaton, in the county of Delaware and State of Indiana, have invented a new and useful Attachment for a Trolley-Pole Clamp, of which the following is a specification.

This invention relates to trolley pole clamps of the kind which are adapted to hold a trolley pole in desired position and relation to the top of a trolley car.

In devices of this kind heretofore used, there have generally been two clamping plates, having half-round registering grooves adapted to accommodate the trolley pole, and said plates were secured about the trolley pole by being drawn together through the agency of bolts connecting said plates.

It is one of the objects of this invention to eliminate the tedious and inconvenient operation of manipulating the clamping bolts whenever it is desired to secure or release the trolley pole.

A further object is to accomplish the first object mentioned by means of a device which may be applied to clamping devices such as were first herein described as being now generally used.

This invention comprises the elements, combinations, and arrangements of parts all as will hereinafter be fully set forth and defined in the annexed claims.

Referring to the accompanying drawings which are to be taken as a part of this specification, Figure 1. is an elevation of the auxiliary clamping plate, with its attached devices; Fig. 2 is an edge view of the same; Fig. 3 is a detail showing the cam member; Fig. 4 is a view partly broken away showing a trolley pole clamped as by means of this invention; Fig. 5 is a partially sectional view showing the clamping- and operating-parts in operative relation to each other and a trolley pole.

Referring to the reference letters on the drawing K and L indicate two clamping plates adapted to hold between them the trolley pole M. In practice these clamping plates, or at least one of them are attached to the top of the car in some such manner as indicated in Fig. 5. Through the outer ends of said plates are adapted to extend bolts N, by the drawing up of which the clamping of the trolley pole between the clamping plates has heretofore been accomplished.

In the present invention we provide an

additional clamping plate E provided with bolt apertures adapted to be registered with those of the plates K and L, so that the bolts N may be passed loosely through all three of the plates, as best shown in Fig. 5. Said plate E carries a lever-operated means for forcing the two plates K and L into clamping relations. As shown such means preferably comprise a cam-block A pivoted on the inner face of plate E as indicated at D and adapted to be rotated by means of a handle lever B. Said block A is provided with a slanting circumferential edge, and is positioned upon the plate E with relation to the plate L, so that the larger, or smaller vertical thickness of the block A may be turned into operative position between the plates E and L as desired. When the larger vertical thickness is turned between said plates, as shown in Fig. 5, the plates K and L will be forced into clamping relations. When the smaller thickness of the block is between plates E and L, the plate L will be loose upon its bolts N and the trolley pole may be withdrawn.

We provide means for positively locking the cam block A in its clamping position when desired, preferring to provide said block as shown with a series of ratchet teeth properly positioned on the vertical face of the block, and adapted to be engaged by a dog F pivoted on the plate E and actuated by a spring H to normally tend to engage said ratchet teeth. For withdrawing the dog F from its locking position, we provide a retracting finger J by means whereof the dog can be manipulated as desired.

In operation, the plates K, L and E being assembled upon the bolts N, with the small thickness of the cam block extending between plates L and E, so that the plate L is loose upon bolts N, the trolley pole M may be introduced, and then by movement of the lever B the cam block A will be brought to the position shown in Fig. 1 forcing the plates K and L into clamping relation about the pole M. When the said block has been brought to this position it will be automatically held by means of the dog F. When it is desired to unclamp a trolley pole, as when a change of poles becomes necessary, for instance, the finger J is pressed down by the foot of the operator and the member B is drawn back and the clamp is instantly released.

A great advantage of this device heretofore referred to is in the fact that our plate E with its attached device may be made



separately, and attached to two-part clamping devices such as are now in use. The only change which must be made when it is desired to apply our invention to such old clamping devices, is the provision of longer bolts N.

What we claim is:

1. In a device of the character described, in combination, a pair of clamping plates adapted to surround a trolley pole, and a supplemental plate operatively connected to said clamping plates and provided with means for producing a clamping movement between said two plates.

2. In a device of the character described, in combination, a pair of clamping plates adapted to surround a trolley pole, and a supplemental plate operatively connected to said clamping plates and provided with lever operated means for producing a clamping movement between said two plates.

3. In a device of the character described, in combination, a pair of clamping plates adapted to surround a trolley pole, and a supplemental plate operatively connected to said clamping plates and provided with a

lever operated cam for producing a clamping movement between said two plates.

4. In a device of the character described, in combination, a pair of clamping plates adapted to surround a trolley pole, and a supplemental plate operatively connected to said clamping plates, provided with means for producing a clamping movement between said two plates and means for locking said first-named means in clamping position.

5. In a device of the character described, in combination a pair of clamping plates adapted to surround a trolley pole, and a supplemental plate operatively connected to said clamping plates, provided with means for producing a clamping movement between said two plates, means for locking said first-named means in clamping position and means for releasing said lock.

CURTIS W. CLARK.  
CHARLES E. YINGLING.

Witnesses:

B. W. ARNOLD,  
M. S. WEBB.