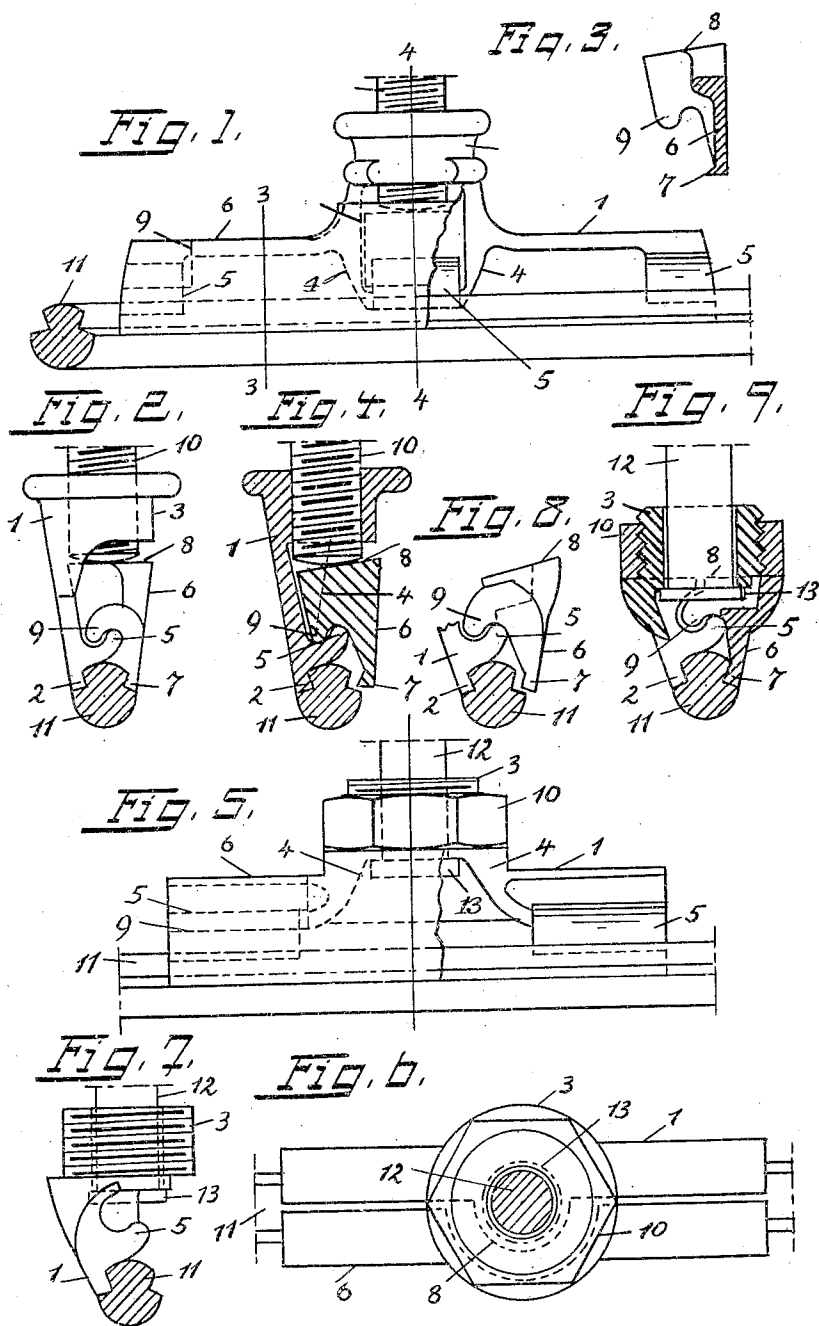


Oct. 18, 1938.

K. ECKL ET AL
OVERHEAD WIRE CLAMP
Filed Dec. 1, 1936

2,133,660



Inventors:
Karl Eckl and
Oskar Melcher
by J. H. M. H. H.
their attorneys

UNITED STATES PATENT OFFICE

2,133,660

OVERHEAD WIRE CLAMP

Karl Eckl and Otto Malterer, Munich, Germany;
said Malterer assignor to said Eckl

Application December 1, 1936, Serial No. 113,676
In Germany December 4, 1935

3 Claims. (Cl. 191—43)

This invention relates to a clamp for suspending the overhead section wire for electric railways.

The object of the invention is, to make the overhead wire clamp of a construction which is as simple as possible, and can be easily and quickly manipulated, while having a very firm holding capacity and maximum adaptability to the curvature of the wire in bends.

For this purpose the overhead wire clamp comprises substantially two clamping jaws hooked the one on the others without hinge pins, one of these jaws being rigid whereas the other is oscillatable and this rigid clamping jaw carrying a suspension boss and a screw threaded element mounted thereon which when being tightened swings the oscillatable clamping jaw into the clamping position.

Two embodiments of the invention are illustrated by way of example in the accompanying drawing, in which

Fig. 1 shows an overhead wire clamp in side elevation with the oscillatable clamping jaw broken away on the right,

Fig. 2 is a side elevation of Fig. 1,

Fig. 3 is a section through the oscillatable jaw taken on line 3—3 of Fig. 1.

Fig. 4 is a section through the open clamp taken on line 4—4 of Fig. 1,

Fig. 5 shows in a similar view to Fig. 1 a clamp of modified construction.

Fig. 6 is a top plan view of Fig. 5.

Fig. 7 is an end view of Fig. 5 with the oscillatable clamp removed.

Fig. 8 shows a part end view of Fig. 5, the clamp being in open position.

Fig. 9 is a section on line 9—9 of Fig. 5.

1 designates the rigid clamping jaw and 6 the oscillatable clamping jaw. The clamping jaw 1 has on its inner side upwardly directed hook-shaped projections 5 situated above the engaging edge 2 of the clamping jaw 1.

There are any desired number of projections arranged at distances apart over the length of the clamp. The clamping jaw 1 as shown in Fig. 1 has three and as shown in Fig. 5 two internal hook-shaped projections 5. Corresponding to these projections 5 the oscillatable jaw 6 has on its inner side downwardly directed hook-shaped projections 9 by means of which the oscillating clamping jaw can be hingedly engaged in the projections 5 of the rigid jaw 1. The oscillatable jaw 6 also has at its mouth end a gripping edge 7 which when the clamp is tightened causes the correspondingly sectioned overhead wire 11

to be firmly gripped by the clamping jaws, see Figs. 2 and 9. The rigid jaw 1 has a boss 3 which extends over the oscillatable jaw 6. In the construction shown in Figs. 1 to 4 a screw bolt 10 moves in this boss 3 and forms at the same time the suspension bolt for the clamp. When this screw bolt 10 is tightened it acts on a counter pressure surface 2 of the oscillatable jaw 6 and thereby swings this jaw out of the open position shown in Fig. 4 into the clamping position illustrated in Fig. 2. The clamping jaw 6 then swings about the upper rounded portions of the inner projections 5.

In the modified form of construction illustrated in Figs. 5 to 9, the oscillatable clamping jaw 6 is moved from its open position shown in Fig. 8 into the clamping position shown in Fig. 9 by a screw nut 10 mounted on an external screw thread on boss 3 and acts on a counter pressure surface 8 of the oscillatable clamping jaw 6. In this instance a suspension bolt 12 loosely extending through the hub 3 and provided with a flange 13 is employed for suspending the clamp, the clamp remaining pivotable about this bolt even after the tightening of the nut. On the inner side of the rigid jaw 1 rib-shaped lateral abutments 4 are provided which prevent mutual axial displacement of the jaws 1 and 6. In the form of construction shown in Figs. 1 to 4 these abutments 4 are arranged on both sides of the middle hook projections 5, whereas in the modification shown in Figs. 5 to 9 they are provided on the inner side of the two projections 5.

Owing to the fact that the hook-shaped projections 5 and 9 are distributed in pairs at intervals along the length of the clamp, the clamp can be bent into the necessary curved shape, to correspond with the curvature of the wire at the place of erection, provided the clamp is made of a suitable workable material.

We claim:—

1. Clamp for the suspension of profiled overhead wires for electric railways, comprising in combination a rigid jaw, a wire guide at the lower end of said rigid jaw, upwardly extending hook-shaped projections arranged one behind the other in the longitudinal clamping axis on the inner side of said rigid jaw, leaving intervening clear portions to permit subsequent bending of said wire in curves, a movable jaw, an oppositely directed wire guide at the lower end of said movable jaw, downwardly extending hook-shaped projections corresponding to the downwardly extending projections of said rigid jaw and forming therewith a hinge joint, a boss at the upper

- end of said rigid jaw, and a tightening element vertically adjustable relatively to said boss and bearing against the upper side of said movable jaw to cause said movable jaw to turn on said hinge joint and press the wire guide of said movable jaw towards the wire guide of said rigid jaw.
2. Clamp for the suspension of profiled overhead wires for electric railways, comprising in combination a rigid jaw, a wire guide at the lower end of said rigid jaw, upwardly extending hook-shaped projections arranged one behind the other in the longitudinal clamping axis on the inner side of said rigid jaw, leaving intervening clear portions to permit subsequent bending of said wire in curves, a movable jaw, an oppositely directed wire guide at the lower end of said movable jaw, downwardly extending hook-shaped projections corresponding to the downwardly extending projections of said rigid jaw and forming therewith a hinge joint, a boss formed at the upper end of said rigid jaw and provided with an internal screw thread, and a screw bolt vertically adjustable in the screw thread of said boss and bearing against the upper side of said movable jaw to cause said movable jaw to turn on said hinge joint and press the wire guide of

said movable jaw towards the wire guide of said rigid jaw.

3. Clamp for the suspension of profiled overhead wires for electric railways, comprising in combination a rigid jaw, a wire guide at the lower end of said rigid jaw, upwardly extending hook-shaped projections arranged one behind the other in the longitudinal clamping axis on the inner side of said rigid jaw, leaving intervening clear portions to permit subsequent bending of said wire in curves, a movable jaw, an oppositely directed wire guide at the lower end of said movable jaw, downwardly extending hook-shaped projections corresponding to the downwardly extending projections of said rigid jaw and forming therewith a hinge joint, a boss formed on the upper end of said rigid jaw and provided with an external screw thread, and a nut vertically adjustable on the screw thread of said boss and bearing against the upper side of said movable jaw to cause said movable jaw to turn on said hinge joint and press the wire guide of said movable jaw towards the wire guide of said rigid jaw.

KARL ECKL.
OTTO MALTERER.