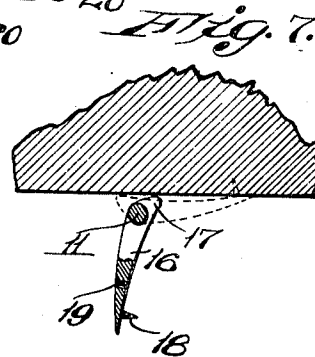
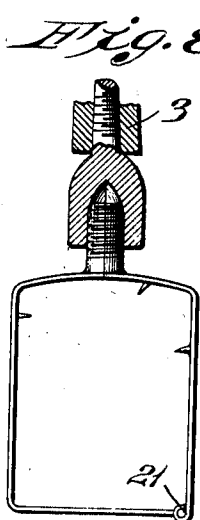
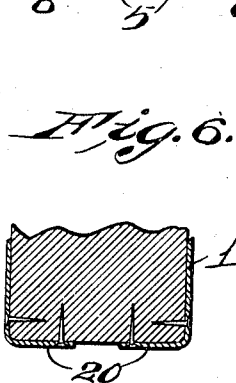
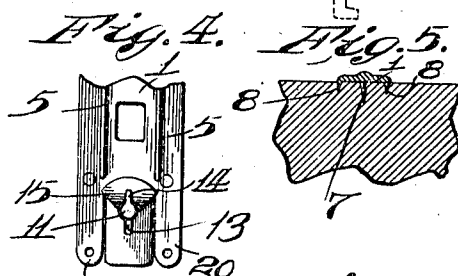
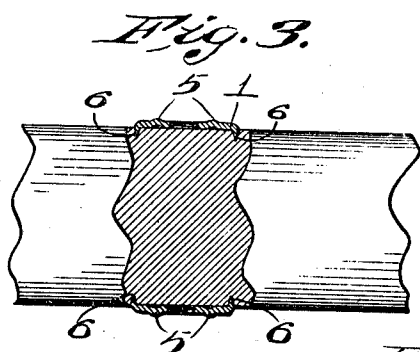
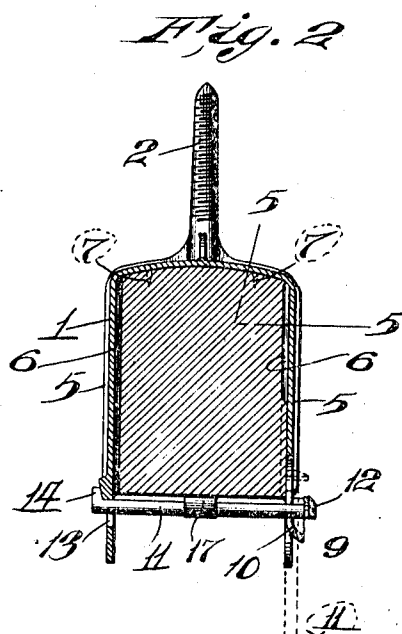
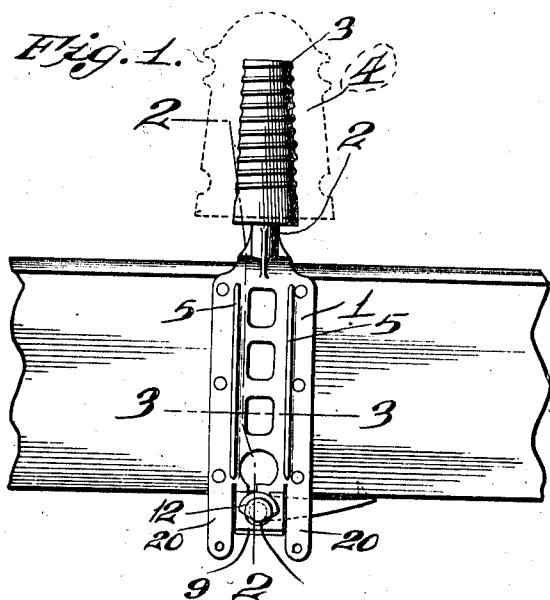


J. BLACKBURN.
INSULATOR CLAMP.
APPLICATION FILED DEC. 2, 1908.

945,212.

Patented Jan. 4, 1910.



attest.
A. G. Fletcher.
M. P. Smith

Inventor.
Jasper Blackburn
By Nigdan J. Langau.
Attys.

UNITED STATES PATENT OFFICE.

JASPER BLACKBURN, OF KIRKWOOD, MISSOURI.

INSULATOR-CLAMP.

945,212.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed December 2, 1908. Serial No. 465,712.

To all whom it may concern:

Be it known that I, JASPER BLACKBURN, a citizen of the United States, and resident of Kirkwood, St. Louis county, Missouri, have invented certain new and useful Improvements in Insulator-Clamps, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an insulator clamp particularly intended for use in clamping and maintaining glass or porcelain insulators on cross arms utilized for supporting wires and cables, the object of my invention being to provide a simple, inexpensive clamp which is easily and quickly applied to the cross arm without the necessity of boring a hole or holes through said cross arm, which action naturally results in weakening the cross arm, and which clamp may be readily loosened when desired and adjusted in either direction upon the cross arm.

To the above purposes, my invention consists in certain novel features of construction and arrangement of parts which will be hereinafter more fully set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of a clamp of my improved construction in position upon a cross arm; Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1; Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 1; Fig. 4 is an elevation of the lower end of one of the vertical arms of the clamp; Fig. 5 is a detail section taken on the line 5—5 of Fig. 2; Fig. 6 is a detail section showing the lower ends of the vertical arms of the clamp bent beneath the cross arm and permanently attached thereto; Fig. 7 is a detail section illustrating the locking lever used in connection with the clamp; and Fig. 8 is a side elevation, partly in section, of a modified form of the clamp.

Referring by numerals to the accompanying drawings: 1 designates the main body of the clamp, which is of inverted U-shape and provided on top with a vertically disposed screw-threaded shank 2, which receives the wooden pin 3 carrying the glass or porcelain insulator 4.

Formed integral with the vertically disposed sides of the body 1 are vertically disposed ribs 5, and formed integral with the side edges of these vertically disposed arms

are inwardly projecting ribs 6, which are knife-edged in order that they will embed themselves in the side faces of the cross arm when the clamp is positioned thereon, thus assisting in maintaining said clamp in a rigid position. These ribs also prevent water from passing beneath the side portions of the clamp, which action results in early decay of the cross arm beneath the clamp.

Formed integral with the under side of the upper portion or top of the clamp are prongs 7, which engage in the top of the cross arm, and formed integral with the side edges of this top portion of the clamp are ribs 8, which embed themselves in the top of the cross arm and perform the same functions as do the ribs 6, previously described.

The lower end of one of the vertical arms of the body of the clamp 1 is bent outward, as designated by 9, and formed through this outwardly bent lower end is an opening 10, through which passes a locking bolt 11 provided on one end with a head 12, and formed through the lower end of the opposite vertical portion of the body of the clamp is an aperture 13, which is adapted to receive the corresponding end of the bolt 11, and which end is provided with a lug 14, which when the bolt is rotated so as to be moved into a locked position bears against the beveled outer face 15 of a lug formed on the corresponding vertical portion immediately above the opening 13.

Formed on or fixed to the center of the bolt 11 is a lever 16, which performs the function of a handle for rotating the bolt 11, and formed integral with the end of said lever at the point where the same joins the bolt 11 is an eccentric lug 17. Formed integral with the opposite end of this lever is a prong 18, which is adapted to engage in the under side of the cross arm when the lever is thrown into a locked position, and formed through this end of the lever is an aperture 19, through which a nail or similar fastening device may be driven to permanently secure the lever in a locked position upon the cross arm.

The side portions of the vertical arms of the clamp project below the central portions of said vertical arms to form ears 20, which are perforated, and this construction permits the clamp to be permanently attached to the cross arm by bending said ears into horizontal planes against the under side of the cross arm, and driving nails or like fastening de-

vices through perforations in said ears 20 (see Fig. 6).

When a clamp of my improved construction is to be applied to a cross arm, the end 5 of the bolt 11 bearing the lug 14 is disengaged from the aperture 13, and said bolt hangs in a vertical position from the outwardly bent lower end 9, as shown by dotted lines in Fig. 2, and said clamp is now seated 10 on the cross arm with the prongs 7 and the sharpened ribs 6 and 8 engaging in said cross arm, and the bolt 11 is now shifted into a horizontal position and the end bearing the lug 14 is inserted through the aperture 13.

15 With the parts so arranged, the lever 16 occupies a vertical position, as seen in Fig. 7, and as said lever is engaged and swung upward into position against the under side of the cross arm, the lug 14 will ride against the 20 beveled face 15 of the lug immediately above the aperture 13, thus drawing the lower ends of the vertical portions of the clamp into close engagement with the sides of the cross arm, and at the same time the lug 17 will 25 bear against the under side of the cross arm in such a manner as to clamp the bolt in its locked position, and the lever is caused to maintain its locked position by driving the prong 18 into the cross arm, or by driving a 30 nail through the aperture 19.

The glass or porcelain insulator 9 may be located directly upon the shank 2 or upon a wooden pin 3 carried by said shank, and thus the insulator is held in a firm and substantial position upon the cross arm, and 35 when desired the clamp may be readily detached from the cross arm by engaging the lever 16 and rocking the bolt 11 into position where the lug 14 may be drawn through the 40 aperture 13.

In Fig. 8 I have shown a modified construction of the clamp wherein the body of said clamp is made in two parts, hinged together at one of the lower corners, as designated by 21, and the joint between the two 45 parts being through the center of the threaded shank which carries the wooden pin or glass insulator.

An insulator clamp of my improved construction may be easily and quickly placed 50 in position upon or removed from a cross arm, can be permanently attached to the cross arm by utilizing nails or like fastening devices, and by the use of my improved 55 clamp the necessity of boring holes in the cross arm is done away with, which action necessarily weakens said cross arm.

I claim:

1. An insulator clamp, comprising an inverted U-shaped body, a shank carried thereby and adapted to receive the insulator, and means engaging the lower ends of the 60 body of the clamp for locking said clamp to a cross arm, and drawing the lower ends

of the vertical portions of the clamp into 65 close engagement with the sides of said arm.

2. An insulator clamp, comprising a body adapted to engage over a cross arm, a shank carried by said body for receiving an insulator, the lower ends of which clamp extend 70 below the under side of the cross arm, and means passing through the extended lower ends of the body of the clamp for locking the same to the cross arm, and drawing the lower ends of the vertical portions of 75 the clamp into close engagement with the sides of said arm.

3. An insulator clamp, comprising a body adapted to engage over a cross arm, a shank carried by said body for receiving an insulator, the lower ends of which clamp extend 80 below the under side of the cross arm, and a locking bolt passing through the extended lower ends of the body of the clamp for locking the same to the cross arm, and 85 drawing the lower ends of the vertical portions of the clamp into close engagement with the sides of said arm.

4. An insulator clamp, comprising a body adapted to engage over a cross arm, a shank 90 carried by said body, for receiving an insulator, the lower ends of which clamp extend below the under side of the cross arm, a locking bolt passing through the extended 95 lower ends of the body of the clamp for locking the same to the cross arm, and an operating lever carried by the locking bolt.

5. An insulator clamp, comprising an inverted U-shaped body adapted to engage over a cross arm, the lower ends of which 100 body project below the under side of the cross arm, a shank carried by the body for receiving an insulator, knife-edged ribs integral with the body of the clamp for engaging the cross arm, and means passing 105 through the lower ends of the body of the clamp for locking the same on the cross arm.

6. An insulator clamp, comprising an inverted U-shaped body adapted to engage over a cross arm, the lower ends of which 110 body project below the under side of the cross arm, a shank carried by the body for receiving an insulator, knife-edged ribs integral with the body of the clamp for engaging the cross arm, a locking bolt passing 115 through the lower ends of the body of the clamp, and a lever carried by said locking bolt and adapted to bear against the under side of the cross arm to hold said bolt in a locked position. 120

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

JASPER BLACKBURN.

Witnesses:

M. P. SMITH,
E. L. WALLACE.