C. L. PEIRCE, JR.

INSULATOR SUPPORTING STRUCTURE.

APPLICATION FILED AUG. 8, 1914.

1,157,037. Patented Oct. 19, 1915.

Fig. 1.

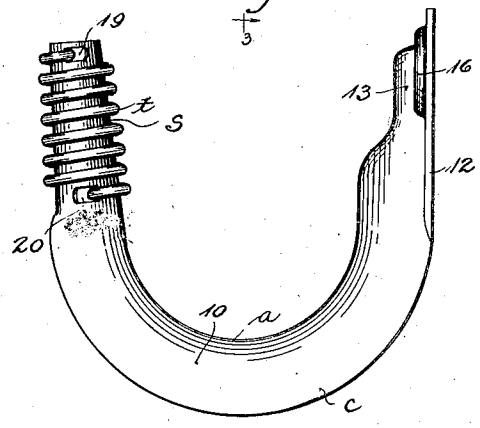
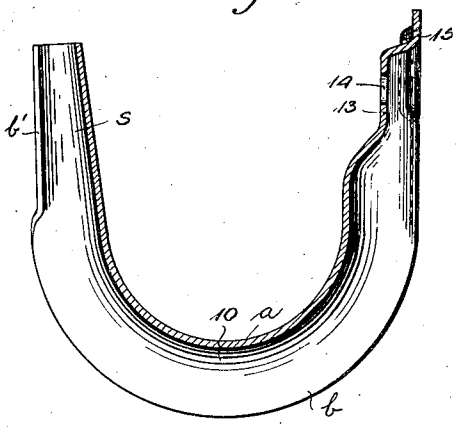


Fig. 4.



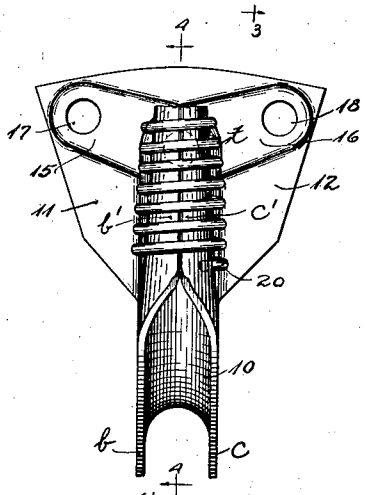


Fig. 2.

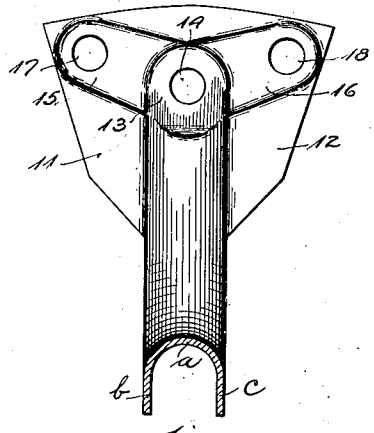


Fig. 3.

WITNESSES:

C. J. Schmidt.

S. M. Ryan

INVENTOR.

Charles L. Peirce Jr.

BY James R. Offield.

ATTORNEY.

UNITED STATES PATENT OFFICE.

CHARLES L. PEIRCE, JR., OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO HUBBARD & CO., OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

INSULATOR-SUPPORTING STRUCTURE.

1,157,037. Specification of Letters Patent. Patented Oct. 19, 1915.

Application filed August 3, 1914. Serial No. 855,780.

To all whom it may concern:

Be it known that I, CHARLES L. PEIRCE, Jr., a citizen of the United States, and a resident of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Insulator-Supporting Structures, of which the following is a specification.

My invention relates to improvements in insulator supporting structures, particularly insulator supporting brackets.

Insulator supports such as brackets have been formed by casting, but this requires considerable metal and weight in order to get the necessary strength. In order to overcome the defects of cast structures, the structures have been built up from commercial shapes of iron or steel, as for example, channel bar or angle bar. Supports built up of such commercial shapes are, of course, much lighter and at the same time stronger than cast supports, but even when built up of commercial shapes it is not possible at all times to get just the desired distribution of metal at desired places. Take for example the U-shaped bracket bent from channel bar. If channel bar is used which has the necessary width of web, the flanges would in some cases be too short to give the required stiffness and rigidity against bending in the plane of the flanges. If a channel bar is chosen in which the flanges are of sufficient length the webs would be wider than required and there would be a waste of metal. In other words, where commercial shapes of iron or steel are used, the structure is tied down more or less to fixed commercial dimensions of the stock and the desired distribution of metal and the desired shape can not always be produced.

One of the important objects of my invention is therefore to form insulator supports, particularly brackets from sheet metal, this permitting any desired distribution of metal and uniformity of strength with the least amount of metal. In other words, certain parts will not have to be made unnecessarily heavy in order to obtain the required strength at other points.

Another object is to form the supports in the least expensive manner, the supports being preferably stamped from sheet metal and shaped by dies in the manner involving the least number of and least expensive operations.

Another advantage of so forming the supports is that the insulator receiving ends can be shaped exactly as desired for directly receiving insulators or for efficiently receiving any desired form of insulator supporting thimble.

The various features of the invention will be clearly understood by reference to the accompanying drawings in which—

Figure 1 is a side elevational view of a single bracket, Fig. 2 is a front view thereof, Fig. 3 is a view from plane 3—3, Fig. 1, and Fig. 4 is a sectional view on plane 4—4, Fig. 2.

Referring to Figs. 1 to 4, the bracket shown is formed from a flat piece of sheet metal and comprises a body section 10 of U-shape whose cross section is of inverted U-shape, the crown *a* being preferably semicircular and the limbs *b* and *c* being parallel and of a length at various points sufficient to give the desired strength. At the inner end of the body the vertical wings 11 and 12 extend laterally and upwardly from the edges of the limbs *b* and *c* and afford a base for securing the bracket to a support. The inner upper section of the body forms a strengthening ridge for this base and as shown the end 13 of this section is of reduced height and flattened and provided with a bolt hole 14. Extending from this end section 13 the transverse strengthening ridges 15 and 16 are formed in the wings 11 and 12 respectively and have bolt holes 17 and 18. At the outer end of the body part the sections *b'* and *c'* of the limbs *b* and *c* are curled inwardly and brought together so that this upper end forms a preferably slightly conical or tapered seat *s* for insulators or for an insulator supporting thimble, a thimble *t* in the form of a wire helix being shown, the ends of this helix extending into the holes 19 and 20 cut in the bracket material.

The above described bracket possesses great strength, particularly in the bend of the body where the bracket will be subjected to the greatest strain. The flat blank from which the bracket is stamped can be of such dimensions that the limbs *a* and *b* will be of desired length at various places to give the necessary strength without waste of metal. The base formed by the wings 11 and 12 and strengthened by the inner upper end of the body and the transverse ridge

sections 15 and 16, is very strong and will hold the insulator rigidly to a support against sag or against lateral swing. The bracket being formed from sheet metal, the outer upper end of the body can be made of true cylindrical or conical shape for accurately seating an insulator or insulator supporting thimble. The bracket has also a very neat and pleasing appearance and is entirely free from sharp corners.

I do not desire to be limited to the exact structures and arrangements herein shown and described as modifications are no doubt possible which would still come within the scope of the invention.

I claim as follows:

1. An insulator supporting bracket stamped entire from a flat piece of sheet metal and comprising a U-shaped body part of U-shaped cross section, wings extending laterally from the inner upper end of the body to form a mounting base for the bracket, and the outer upper end of the body part having the limbs brought together to form a cylindrical seat for insulator thimbles.

2. An insulator supporting bracket formed entire from a flat piece of sheet metal and comprising a U-shaped body part of U-shaped cross section, the inner upper end of the body being closed, wings extending from the inner upper end forming a supporting base for the bracket, and the outer upper end of the body being shaped to receive insulator thimbles.

3. An insulator supporting bracket formed from a single piece of sheet metal and comprising a flat base part, a U-shaped body part of U-shaped cross-section extending from said base and the outer end of said body being shaped to form a support for insulator thimbles.

4. An insulator supporting bracket comprising a U-shaped body part of U-shaped cross section formed integral of sheet metal, the outer end of said body being open but the inner end being closed, wings extending laterally and upwardly from said edges of said inner end to form a supporting base, and the outer end of said body part being bent into cylindrical form to form a support for insulators.

5. An insulator supporting bracket formed entire of sheet metal and comprising a U-shaped body part of U-shaped cross section, the outer end of said body part being bent into conical form to provide a seat for insulator supports, wings extending laterally and upwardly from the edges at the inner end of the body, and laterally extending ridges in said wings apertured at their ends for the reception of bolts.

6. An insulator supporting bracket formed integral of sheet metal and comprising a U-shaped body part of U-shaped cross section, wings extending laterally and upwardly from the edge at the inner end of said body part, the inner end of the body part being closed and depressed, and ridges formed in said wings and extending laterally from said depressed body end, said depressed body end and the ends of the wings being apertured for the reception of bolts.

In witness whereof, I have hereunto set my hand this 28th day of July, A. D. 1914.

CHARLES L. PEIRCE, JR.

Witnesses:
RICHARD M. KERSCHNER,
WALTER V. KIRKWOOD.