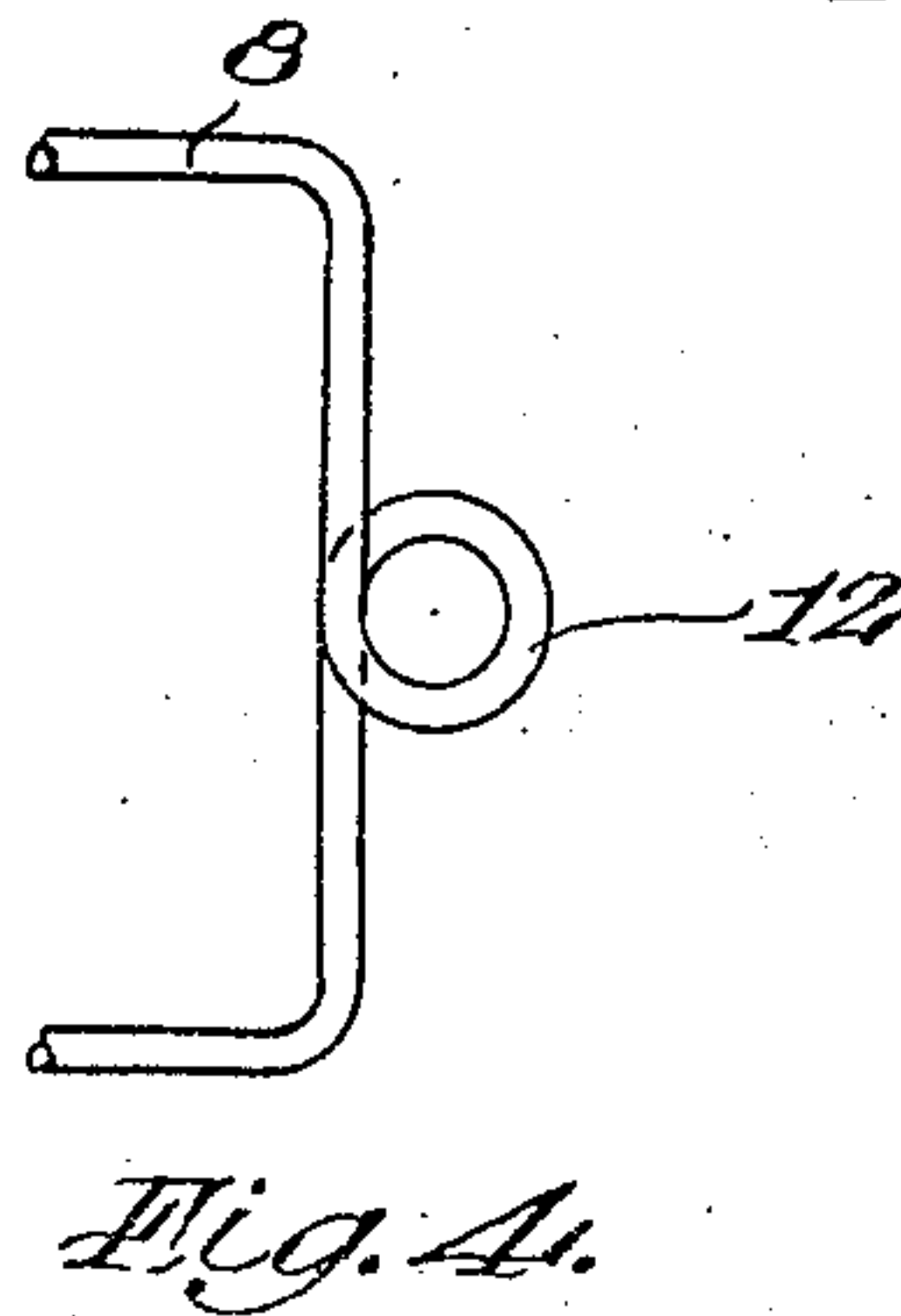
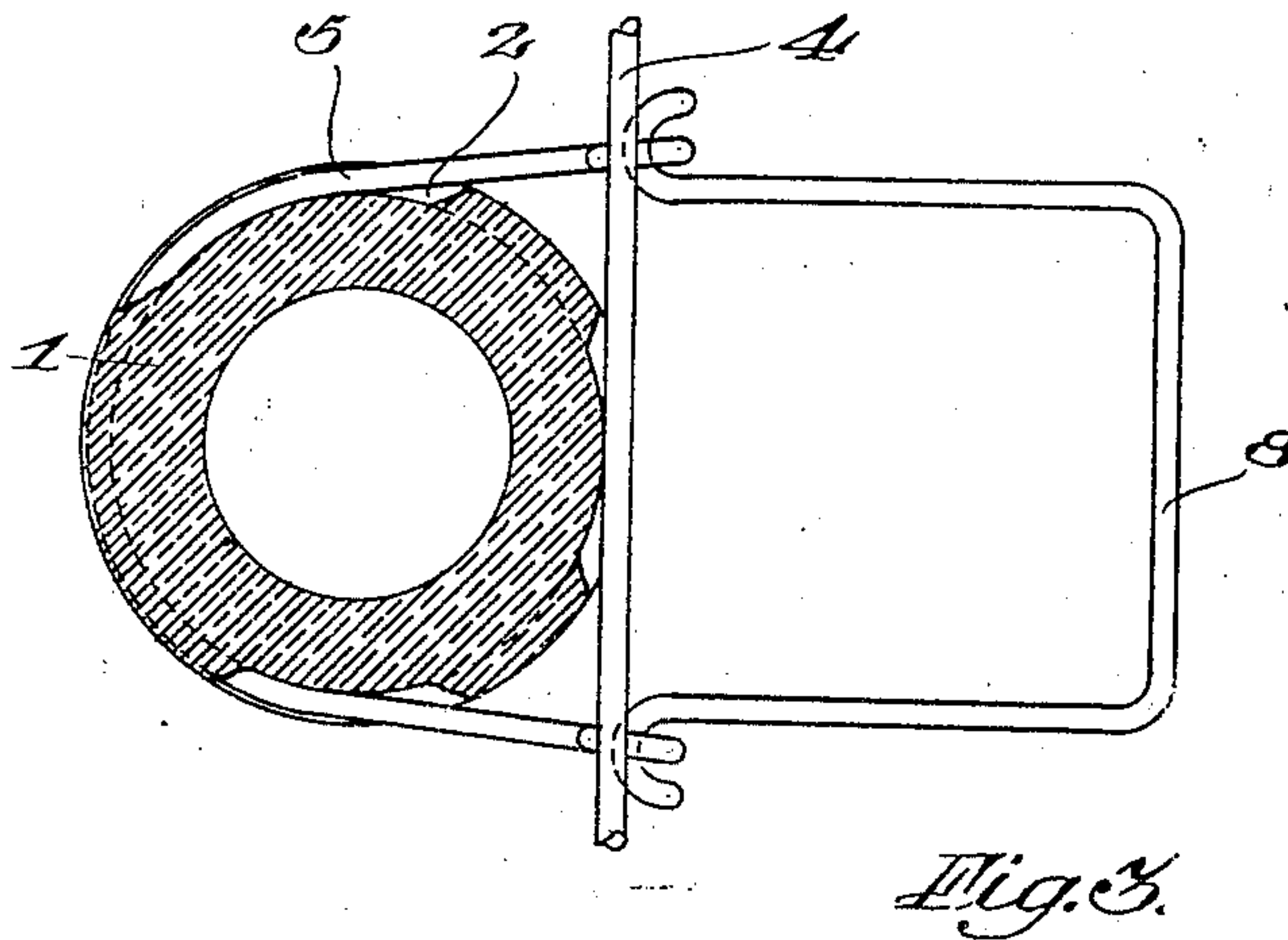
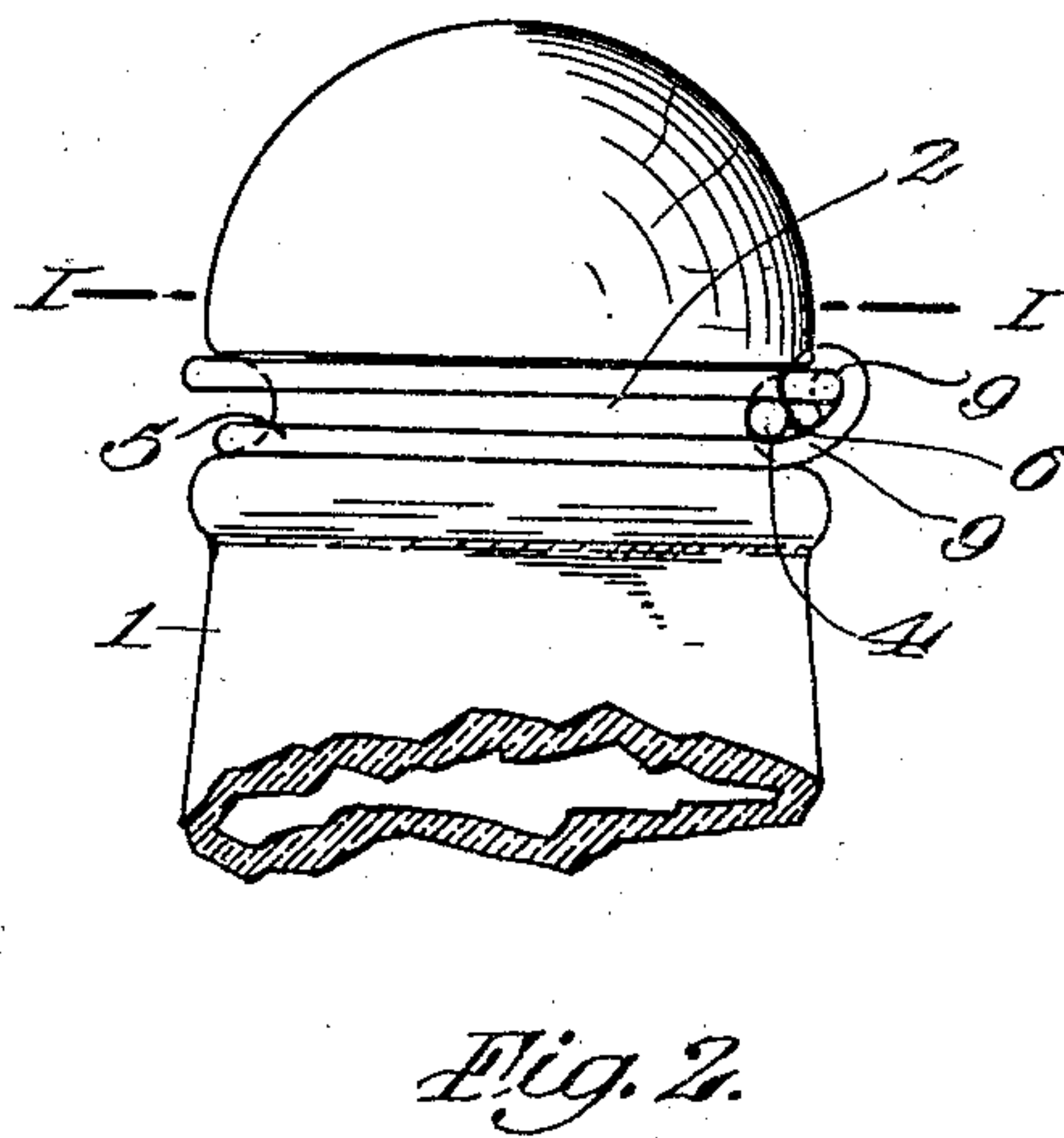
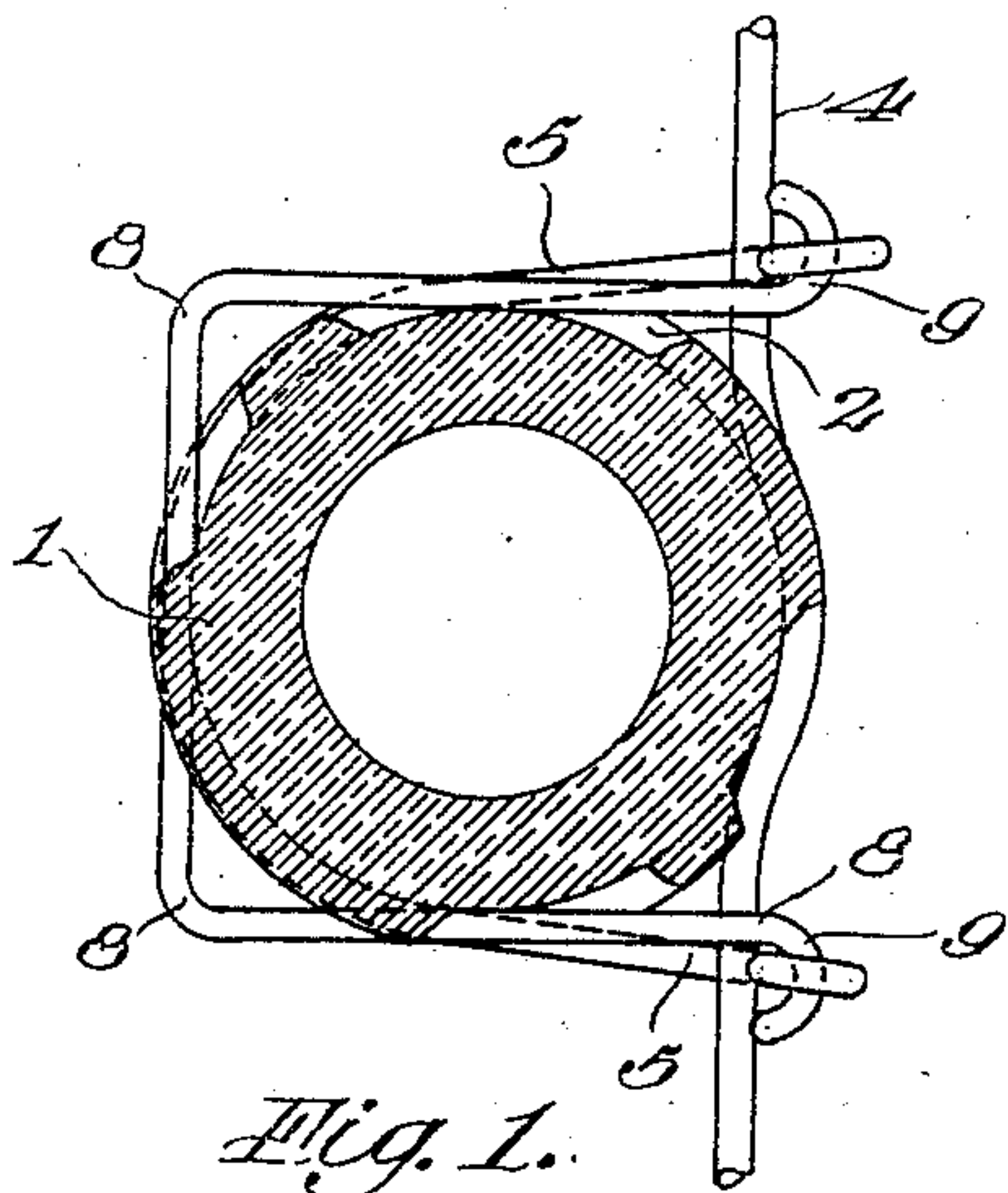


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INSULATOR CLIP.
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907,788.

Patented Dec. 29, 1908.



WITNESSES:
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INSULATOR-CLIP.

No. 907,788.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed October 21, 1908. Serial No. 458,766.

To all whom it may concern:

Be it known that I, ALPHONSO R. HALL, a citizen of the United States, residing at Leonardsville, in the county of Madison and State of New York, have invented certain new and useful Improvements in Insulator-Clips, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to an improved insulator clip, and I declare the following is a full, clear, concise and exact description thereof sufficient to enable one skilled in the art to make and use the same, reference being had to the accompanying drawings in which like reference characters refer to like parts throughout.

The device is particularly described as a means by which a line wire can be secured to a familiar glass insulator on a pole or arm.

In the drawings Figure 1 is a top view of the device on an insulator, the latter being shown in section on the line 1—1 of Fig. 2, with parts, however, broken away to show the clip; Fig. 2 is a side view of an insulator head with the clip in place holding the line wire, and Fig. 3 is a view similar to Fig. 1, but with the clip opened. Fig. 4 shows a modified form of latch.

Referring to the figures in detail, the insulator is shown by 1 and as will be understood is provided with an annular groove 2. The line wire is shown by 4. The clip comprises a U-shaped member or stirrup of wire or other suitable material shown in general as at 5, having each end formed with an eye, the tip of the wire being bent a trifle further than necessary to close the eye, as seen at 6 in Fig. 2, so as to form a reëntrant angle between the tip of the wire and the body of the portion or stirrup 5 wherein the line wire 4 will be retained even without the coöperation of the other portions of the clip.

It will be seen that the ends of the member or stirrup 5, where they are formed into the eyes, are formed so that the reëntrant angle is slightly to the rear or toward the insulator of the line wire as it would be brought against the insulator and retain a straight form. In other words, the eyes are so positioned that the line wire will be slightly bent when it is in engagement with the clip and in the reëntrant angle referred to. The clip also comprises a latch member 8 having its ends 9 hooked through the eyes

of the member or stirrup 5. The general form of this clip is that of three sides of a square, the ends bearing against the eyes of member or stirrup 5 preferably from the inside out. The clip is of such dimension that it can be sprung over the head of the insulator from the position shown in Fig. 3 to that shown in Fig. 1. The corners of the latch allow a degree of elasticity or springiness in the latch while the normal tendency of the metal or wire of which it is made clamps the latch 8 closely against the opposite sides of the insulator in the groove and also in such groove on the side of the insulator opposite to the line wire. The tip of the latch 8 passes from the inside to the outside through the eyes in the member or stirrup 5, in preference to being mounted the other way, although the latter may be effective; but there is an advantage in having them pass from the inside out in that if the ends of the latch be not bent far enough to secure their attachment in the eyes of the member or stirrup 5 as seen at one end in Fig. 3, still the pressure of the latch when put in locking position would hold it in place. There is a further advantage in the construction shown in that the clutching or gripping strength of the latch is increased by the fact that the bearing of the latch at the ends is against the resistance of the ends of the clip or member or stirrup 5.

Before the latch is applied to secure the line wire the parts will be in somewhat the position shown in Fig. 3, the line wire being above and resting upon the eyes of the clip or stirrup 5, and the curved portion of the stirrup resting in the annular groove of the insulator. The line wire can be slightly bent by hand so as to bring it within the angle formed by the tip 6, as seen in Fig. 2, in which position it is found the resistance of the parts is sufficient to hold the wire in place, although it is not necessarily secured in position. Otherwise, the latch 8 may be swung up when it will bear against the line wire and while being turned completely into place will crowd the line wire down into the reëntrant angle and when securely seated the latch 8 engages in the groove of the insulator, as above stated. Should the latch for any reason or another become unseated from the groove the tension of the line wire resting in the reëntrant angle is sufficient normally to hold it in place. But the resiliency of the latch is such that

having been sprung to pass over the head of the insulator it lies tightly and snugly in the groove and prevents any unseating of the clip and release of the line wire.

5 In Fig. 4 I show a modified form of latch having a loop 12 which is convenient means of seating or unseating the loop, but has the further and prime advantage of allowing abundant resiliency in the latch, the coil of the
10 loop 12 allowing the sides to be spread with greater yield and ease.

It will also be apparent that other forms of latch may be devised without departing from the scope of the invention, the requisite being
15 that the latch shall be of such form as to allow the necessary spring from passing it over the head of the insulator.

Having described my invention, what I claim as new and desire to secure by Letters
20 Patent, is:

1. In a device of the character described comprising a stirrup member having its ends formed with eyes to provide an acute angle between the eye portion and the body portion of the stirrup, a latch pivotally mounted
25 in the stirrup and of a form to provide for the spring of the latch to be slipped over the head of the insulator, substantially as described.

2. A device of the character described comprising a stirrup of U-form having its ends formed to provide an angle to engage and retain the line wire in engagement with the insulator, and a latch pivotally mounted at the
30 ends of the stirrup and formed to allow yielding thereof for the pressing of the same over the insulator head whereby to inclose the line wire between the stirrup eyes and the latch, substantially as described.

3. A device of the character described comprising a stirrup of U-form having its ends terminating on a line parallel with the line wire and between the wire and the insulator, the said ends being formed to provide
40 an angle to engage and retain the line wire in

engagement with the insulator and a latch 45 pivotally mounted at the ends of the stirrup and formed to allow yielding thereof for the pressing of the same over the insulator head whereby to inclose the line wire between the stirrup eyes and the latch, substantially as
50 described.

4. A device of the character described comprising a U-shaped member formed to allow close engagement with the insulator and having each end formed to provide an
55 acute angle wherein to seat the line wire, and a latch pivotally mounted on the stirrup and adapted to be locked in close engagement with the insulator whereby to inclose the line wire in its bearing against the stirrup, sub-
60 stantially as described.

5. The combination with an insulator having an annular groove thereon, of a stirrup of a form to lie in said groove with its ends free and formed to engage and retain the line wire, 65 and a latch pivotally connected with the stirrup and of a form irregular as to the curve of said groove and being resilient whereby to yield to be passed into and out of engagement with the insulator in the said groove, 70 substantially as shown.

6. In combination with an insulator having an annular groove, a clip consisting of a stirrup formed in the curvature of said annular groove, but having its ends free and 75 formed with engaging angles wherein to receive the line wire, the latter being bent into the said groove and engaged by the said stirrup, and a latch pivotally connected to the stirrup at said ends and adapted to be swung
80 into and out of locking engagement with the said insulator, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALPHONSO R. HALL.

Witnesses:

ELEANOR T. DE GIORGI,
HENRY M. LOVE.