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A. HILADO

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ELECTRICAL BINDING POST

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Fig. 1.

Fig. 2.

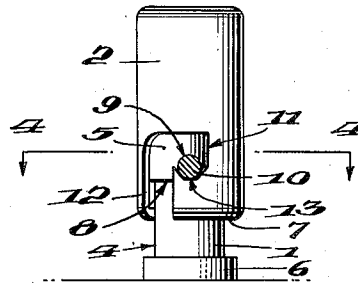
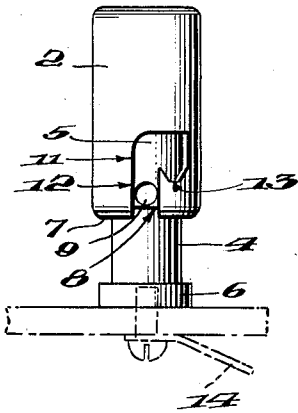
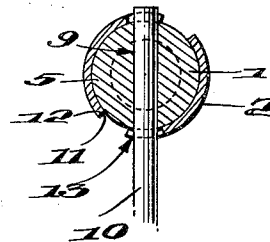
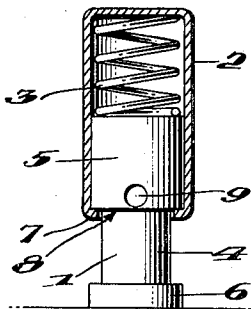


Fig. 3.

Fig. 4.



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ELECTRICAL BINDING POST

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3 Claims. (Cl. 173—259)

The invention relates to electrical binding posts of the type in which a spring is operatively interposed between the cooperating parts.

The primary object of the invention is to provide a spring actuated binding post of simple construction which may be conveniently manipulated and which effectively performs its intended function when in use.

Spring actuated binding posts known to the art are generally of such a character as to require the use of two hands to operate them, one for manipulating the parts of the binding post while the other manipulates and inserts the conductor into the post. It is, however, often inconvenient to operate the binding post with two hands, either because the post may be located in an inconvenient place or because one of the hands may not be available at the time the post is to be operated. In such cases, it is of great advantage if the binding post can be operated with one hand only.

The principal feature of the invention, generally stated, consists in providing the binding post with a post member upon which a sleeve is slidably and rotatably mounted and operatively interposing between the post member and the sleeve member a spring which normally tends to separate said members, the post member being formed with an opening for receiving an electrical conductor, and the sleeve member being provided with a bayonet slot adapted to receive and form a shoulder for engaging said conductor when the latter is positioned in the said opening of the post member.

There are other features of the invention residing in particularly advantageous forms and constructions as will hereinafter appear and be pointed out in the claims.

In the drawing illustrating the preferred embodiment of the invention,

Figure 1 is a side elevation of my improved binding post in its open or unused position.

Figure 2 is a view similar to Figure 1 but illustrating the position assumed by the parts when a conductor is firmly clamped thereto.

Figure 3 is a view, partly in section and partly in elevation.

Figure 4 is a sectional view on line 4—4 of Figure 2.

The binding post comprises a post member 1, a sleeve or cap member 2 and a compression spring 3 interposed between the post member and the cap. The post member, which may be of brass or any suitable conducting material, is preferably formed as a round stud having an an-

nular reduced portion 4 of suitable width and depth cut completely around the member 1 intermediate of its length. By this means, the stud 1 is caused to be provided with a head 5 and a basal flange 6. The cap or sleeve member 2 is of such size as to slip snugly over both the spring 3 and the outer end portion or head 5 of the stud. After it has been placed on the stud in such position as to compress the spring 3 very slightly, its lower edge or rim is flanged or bent inwardly all around, as indicated at 7, so as to catch against the shoulder 8 at the junction of the reduced portion 4 and head portion 5 of the stud, thereby holding the parts in assembled relation.

Extending inwardly from the periphery of the head portion of the post member 1 is a hole or opening 9 wherein the conductor 10 is to be inserted. This hole is preferably drilled horizontally completely through the post member 1 along a diameter of its circular head portion 5 and a convenient distance above the inner end of said head.

The sleeve or cap member 2 is provided at opposite sides with angular openings 11 for receiving the conductor 10, said openings being of the type generally known as bayonet slots. Each bayonet slot has a portion or branch 12 which permits the conductor 10 to be inserted in holes 11 of the post member 1 without moving the cap to compress the spring; and each slot also has a branch or portion providing a shoulder or recess 13 for cooperating with said conductor to hold the spring 3 against expansion after it has been compressed by an inward movement of the sleeve or cap member 2 with respect to the stud or post member 1. When the conductor is inserted into the opening 9 of the stud, the cap 2 may be compressed downward a sufficient distance against the resistance of the spring 3, twisted in the right direction and then released in such a position that the conductor 10 is caught or clamped between the shoulders or jaws 13 of the cap and the walls of the hole 9 in the stud member. In this position of the parts, the conductor 10 is firmly held in place by the upward pressure of the compressed spring 3.

The operation of inserting the conductor 10 and manipulating the sleeve member or cap 2 may be performed with one hand only, the conductor being held between the palm of the hand and the little and ring fingers while the cap is manipulated by means of the thumb and the other two fingers.

The binding post may be affixed to the object

where it may be needed in the conventional way either by means of a screw and a threaded hole in the bottom of the stud member or by a threaded shank projecting from the bottom of the stud member and a nut fitting thereon. For purposes of illustration, the screw and threaded hole form of means for securing the binding post to the object to which it is to be attached and for electrically connecting a conductor 14 to the binding post have been illustrated in dotted lines in Figure 1. Both the bottom of the post or stud member 1 and the top of the sleeve member or cap 2 may be insulated as in many other binding posts common to the art.

15 What I claim is:

1. The improvement in binding posts of the type comprising a post member, a sleeve member mounted upon said post member and slidable and rotatable with respect thereto, and a spring operatively interposed between said post member and sleeve and compressible by the latter against the top of the post member; wherein said post member is provided at its periphery between its ends with a hole for receiving an electrical conductor, and wherein said sleeve is provided with a slot adapted to receive said conductor, said slot having a portion adjacent the inner end of said sleeve normally in register with said hole and extending in a direction enabling said spring to be compressed between the post member and sleeve while the conductor is positioned in said hole, said slot also having a portion spaced from the inner end of said sleeve adapted to be brought into register with said hole when said spring is compressed and said sleeve is rotated relatively to said post member, said last named portion of the slot providing a shoulder adapted to be maintained in engagement with the conductor by said spring to clamp the conductor to the post.

2. The improvement in binding posts of the type comprising a post member, a sleeve mem-

ber mounted upon said post member and slidable and rotatable with respect thereto, and a spring operatively interposed between said post member and sleeve and compressible by the latter against the top of the post member; wherein said post member is provided with a hole for receiving an electrical conductor and with an abutment, and wherein said sleeve is formed with a flange to engage said abutment and is provided with a slot adapted to receive said conductor, said slot having a portion adjacent the inner end of said sleeve normally in register with said hole and extending in a direction enabling said spring to be compressed between said post member and said sleeve while the conductor is positioned in said hole, said slot also having a portion spaced from the inner end of said sleeve adapted to be brought into register with said hole when said spring is compressed and said sleeve is rotated relatively to said post member, said last named portion of the slot providing a shoulder adapted to be maintained in engagement with the conductor by said spring to clamp the conductor to the post.

3. The improvement in binding posts of the type comprising a post member, a sleeve member mounted upon said post member and slidable and rotatable with respect thereto, and a spring operatively interposed between said post member and sleeve and compressible thereby; wherein said post member is provided between its ends with a hole for receiving an electrical conductor, and wherein said sleeve is provided with a plurality of bayonet slots adapted to receive said conductor while the latter is positioned in said hole, said slots being normally in register with said hole and being so located that said sleeve will maintain said conductor in position in said hole when said sleeve is pressed inwardly with respect to said post member and then twisted and released.

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