United States Patent [19]

Flammini

[11] **3,806,860**

[45] **Apr. 23, 1974**

[54] **ELECTRICAL BINDING POST**

[76] Inventor: **Dominick J. Flammini,** 1117 Bush St., San Diego, Calif. 92103

[22] Filed: **Dec. 7, 1972**

[21] Appl. No.: **312,976**

[52] **U.S. Cl.** ..... **339/254 R**

[51] **Int. Cl.** **H01r 11/22**

[58] **Field of Search** ..... 339/254 R, 255 R, 255 A

[56] **References Cited**

UNITED STATES PATENTS

1,204,457	11/1916	Kreeft	339/254 R
781,091	1/1905	Phillips	339/254 R
1,694,239	12/1928	Thonsen	339/254 R

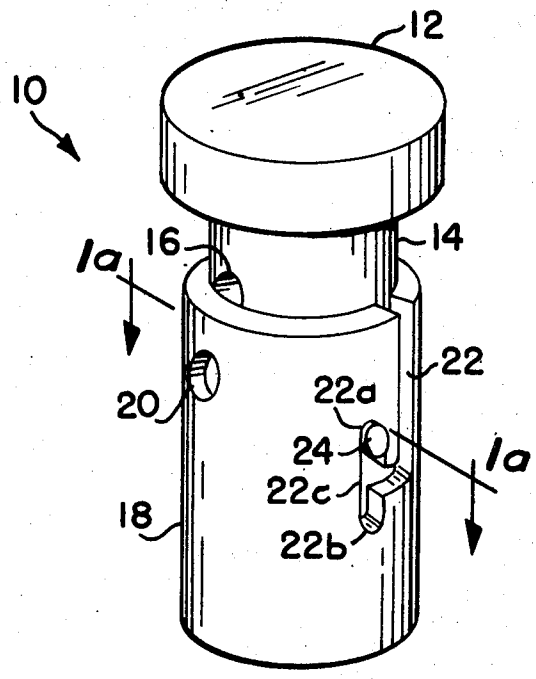
Primary Examiner—George H. Krizmanich

Attorney, Agent, or Firm—Tom Sherrard

[57] **ABSTRACT**

A post or terminal for electrical circuits provided with a spring for retaining engagement of wire with post.

1 Claim, 6 Drawing Figures



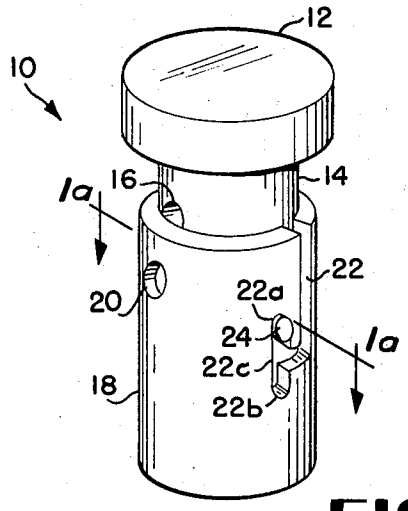


FIG. 1

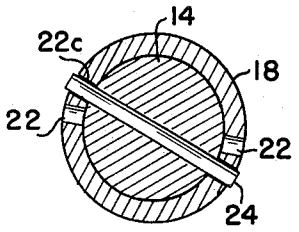


FIG. 1a

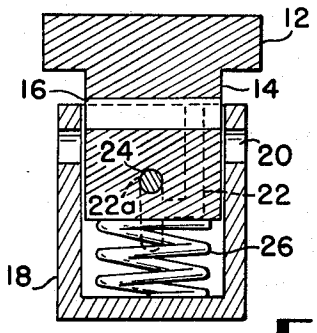


FIG. 2

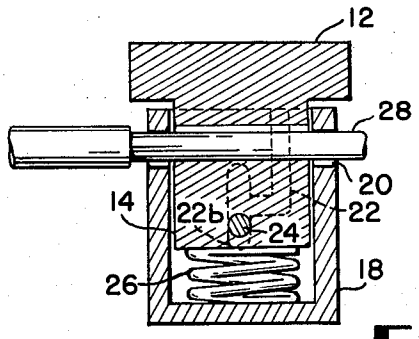


FIG. 3

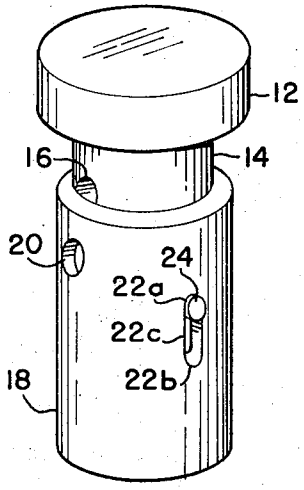


FIG. 4

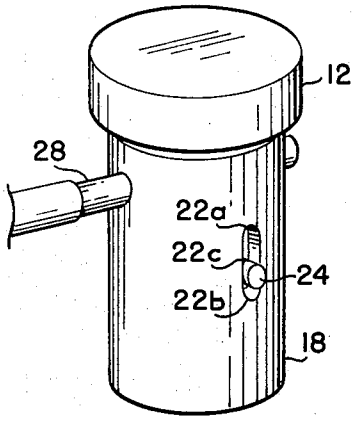


FIG. 5

ELECTRICAL BINDING POST

BACKGROUND OF INVENTION:

Of all the conventional forms of spring-clamping posts none permit wires to be inserted into positive and automatically aligned orifices. Post of this class have usually required visual alignment by the operator to permit the wire conductor to be inserted through both the stationary and movable parts of the post. For example, Kreeft U.S. Pat. No. 1,204,457 has attempted to secure automatic alignment by use of a protrusion on the stationary outside casing which fits into a groove in the plunger. This form is relatively expensive to manufacture and assemble.

I have provided a new improved post that can be used in the most inaccessible places. Visual alignment of orifices is not necessary so that device can be used in wall plugs, which are flush with the wall and are closely surrounded by construction material. My novel post can be used wherever it is inconvenient to use conventional terminals.

Furthermore, a modification of my post permits the plunger to be easily and quickly inserted and removed from its casing during manufacture or at any time after installation.

SUMMARY

My invention consists of a fixed hollow post which serves as an electrical conductor with a plunger operatively mounted within it. By suitable orifices through the post and plunger together with my novel alignment means, a wire conductor may be inserted into the assembly and a circuit formed in places which would otherwise be inaccessible to those persons using conventional posts.

BRIEF DESCRIPTION OF THE DRAWING:

In the accompanying drawings forming a part hereof:

FIG. **1** is a perspective view of my improved binding post without a wire inserted therein.

FIG. **1***a* is a top plan view of a cross section thereof.

FIG. **2** is a longitudinal cross section of a side elevation thereof.

FIG. **3** is a longitudinal cross section thereof with plunger depressed and wire conductor inserted therein.

FIG. **4** is a perspective view of a modification of my device.

FIG. **5** is a perspective view of such modification showing it in use with a wire conductor inserted therein.

DESCRIPTION OF PREFERRED EMBODIMENT

Referring to the drawings wherein like numerals represent like parts throughout, the numeral **10** of FIG. **1** designates the complete unit ready for use. It features an outer casing **18** made of metal conductor, preferably having a hollow cylindrical configuration with the top end open and the base closed. This casing is suitable for connection to any usual electrical conductor (not illustrated) to complete a circuit when in use. The casing and other parts may be of such size and shape for use in wall outlet boses and other non-protruding places.

Dual orifices **20** are provided transversally through the casing in the upper portion therof. They may be of various sizes to accommodate usual bare electrical wire **28.** Vertical slot **22** is provided from the top of the casing down a substantial distance on the side as can best be seen in FIG. **1.** It may, at the option of the manufacture be a single slot, or dual oppositely disposed slots, as shown in FIG. **1***a*. This form of the casing permits plunger **14** to be taken in or out of the casing at any time.

As an extension of each slot **22,** I have provided vertical slot **22***c* in the body of the casing. It is limited at top at point **22**a and at base at point **22**b. This serves as a guide for automatic registering orifices for use. It is an important feature of my invention as an operator may insert wires into the post without visually aligning the orifices.

Turning now to a modification of the casing, attention is directed to FIGS. **4** and **5.** The modification deletes slot **22.** This modified form does not permit the plunger to be removed after manufacture.

Slidably mounted in the casing is plunger **14.** It is of solid construction, preferably of the same material as the casing. The upper portion **12** may be enlarged to serve as a head or button for manual operation. A transverse orifice **16** is barreled out entirely through the plunger slightly below the shoulder of the head. It is of the same diameter as casing orifice **20.** When the two orifices align, a wire may be inserted.

Novel guide pin **24** is integral with plunger **14.** It is mounted transversally on a wall of the plunger and is positioned to slide within slot **22***c*, which slot serves as a guide to insure proper alignment and register of orifices **20** and **16.** The pin may extend all the way through the plunger for dual guidance, as shown in FIG. **1***a*.

Spiral spring **26** completes the invention. It is positioned within the casing and rests at the base thereof. Its upper coil is in contact with one end of the plunger. Manual depression of the plunger compresses the spring, aligns the orifices and permits the operator to insert the wire. Release of the plunger causes tension in the spring to hold the wire by a clamping action of the orifice walls.

I claim:

1. An electrical binding post comprising:

a. a casing closed at one end and opened at the other,

b. dual transverse orifices aligned with each other through the casing,

c. a guide slot portion also provided in the casing having a substantially J-shaped configuration with one vertical segment closed at each end, another vertical segment closed at one end with an open channel extending through the end of the casing and a transverse section connecting the vertical segments,

d. a plunger slidably mounted in the casing,

e. a pin transversally integral with the plunger operatively mounted in the guide slot,

f. a channel portion transversally journaled through the plunger located to automatically align with the orifices when the plunger is manually depressed as far as possible, and,

g. spring means positioned between the inner base of the casing and one end of the plunger biasing the pin in the upper end of the vertical segment, said

plunger being moveable against the bias of the spring means to place the pin in the lower end of said one vertical segment aligning the channel and orificies said plunger being moveable out of said casing through said transverse section and said another vertical segment, whereby a straight wire extending through the orifices and channel portion will be held in place by spring tension.

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