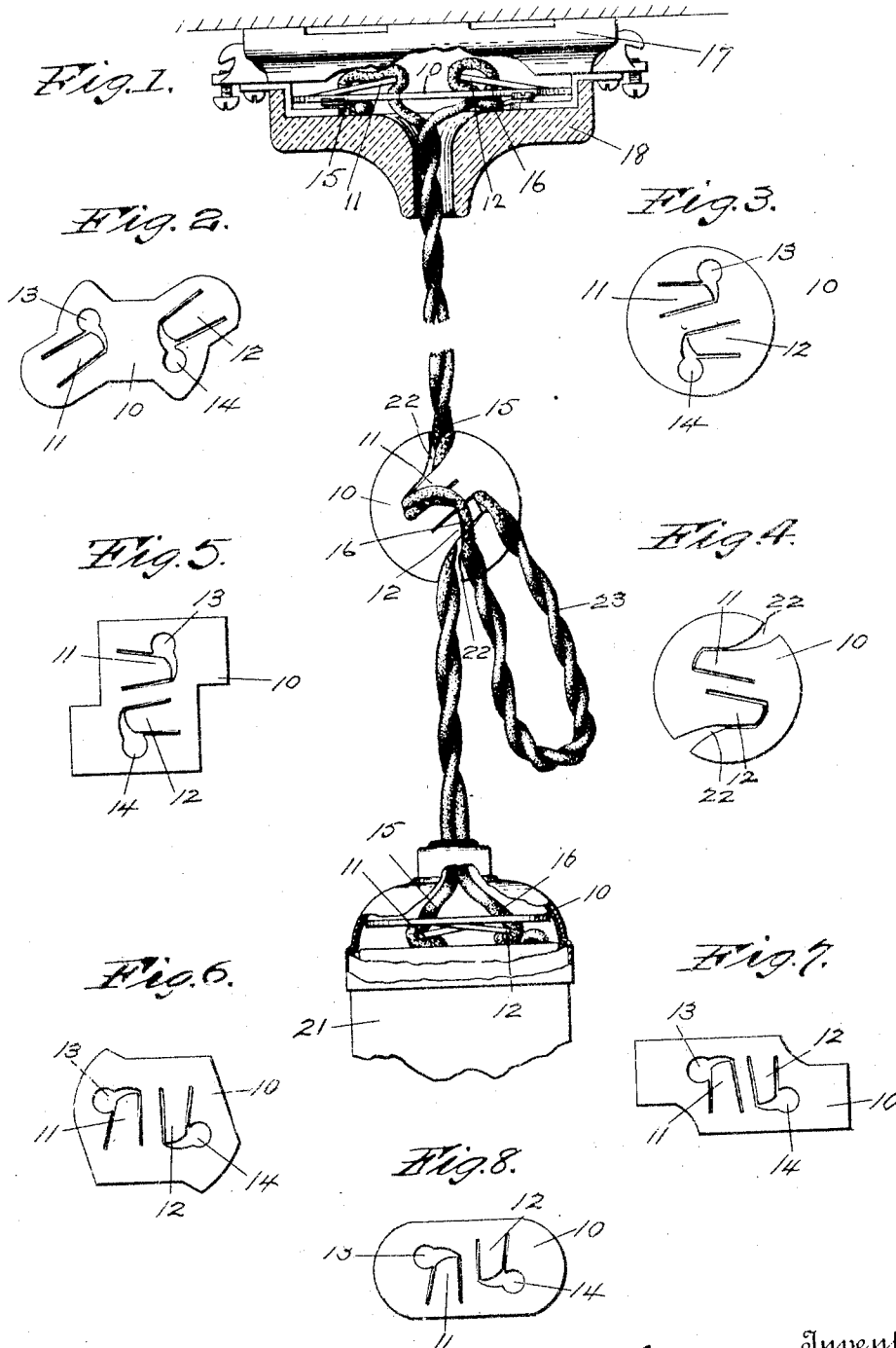


T. J. TOBIN.
STRAIN RELIEF DEVICE.
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Patented June 17, 1913.

1,065,190.



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UNITED STATES PATENT OFFICE.

THOMAS J. TOBIN, OF ALBANY, NEW YORK, ASSIGNOR TO THE BRYANT ELECTRIC COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

STRAIN-RELIEF DEVICE.

1,065,190.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS J. TOBIN, a citizen of the United States of America, and residing at Albany, in the county of Albany and State of New York, have invented a certain new and Improved Strain-Relief Device, of which the following is a specification.

My invention refers to that class of devices related to electric fittings commonly called strain relievers, and the object of my invention is to provide an efficient device of this character, which is both cheaply made and readily adjusted in use. The present device in some forms may also be employed as a take-up device or adjuster for a suspension cord.

In the accompanying drawings, Figure 1 is an elevation partly in section of a pendant installation in which my invention is employed both in the suspending and in the suspended fitting and also illustrating its use in modified form as a cord adjuster; Fig. 2 is a plan of my strain relief device in the form used in the rosette shown in Fig. 1; Fig. 3 is a plan of the device in the form used in the suspended socket; Fig. 4 is a plan of the device as modified for use as a cord adjuster; Figs. 5, 6, 7 and 8 show by way of example various forms which may be given the device to adapt the same for use in various types of fittings.

The present strain relief device, in its preferred form, comprises a plate 10 of slightly flexible insulating material such as heavy paper or fiber, of any suitable shape, slotted to form a pair of oppositely faced tongues 11, 12, within the body thereof, the ends of the tongues communicating with apertures 13, 14, which facilitate the adjustment of the device upon the wires 15, 16. For use in a rosette 17 of the type shown, the device is shaped as illustrated in Fig. 2 to conform substantially to the inner outline of the cap 18 of the rosette. Before attaching the wires to the terminals 19, 20, of the rosette, they are passed up through the holes 13 and 14 of the strain relief device, and pulled laterally so as to displace upwardly the tongues 11 and 12, as shown in Fig. 1. Sufficient wire is allowed above the plate 10 not only to permit the attachment of the wire ends to the terminals on the base of the rosette but

also to insure sufficient wire play to permit the plate 10 to rest against the inner face of the cap 18 without strain on the terminals.

The downward drag of the wires against the ends of the tongues 11 and 12 tends to force these ends downward and thus to grip the wires between the ends of the tongues and the edges of the cuts in the body of the plate 10 which form the tongues. The heavier the pull upon the wires the tighter they are clamped by the tongues. This condition is reversed at the pendant fitting, here shown as a socket 21. The wires are passed downward through the holes in the plate 10, here disk shaped to correspond to the interior of the cap of the socket. The tongues are displaced downwardly and the weight of the fitting or accidental pull thereon, as in the case of a pendant switch, tends to clamp the wires tightly between the ends of the tongues and the edges of cuts which form the tongues, as above described.

While the wire apertures when used are preferably formed as perforations adjacent the free ends of the tongues, they may be formed as slots 22, 22, opening from the edges of the plate 10 to the free ends of the tongues, as shown in Fig. 4. In this case, the plate may be used as a cord adjuster, the wires being passed together into one slot and engaged by one tongue, looped at 23 and then passed together into the other slot, as shown in Fig. 1. In this construction the slots should be so formed as to detract as little as possible from the rigidity of those portions of the plate 10 which are adjacent the ends of the clamping tongues, since otherwise strain upon the cords is apt to warp the piece and decrease its efficiency.

The various forms shown in Figs. 5 to 8 illustrate the adaptation of the piece to some of its various utilities. Thus in Fig. 5 it is shaped to the inner face of certain generally used conduit outlet fittings. In Figs. 6 and 7 the piece is shaped to well known rosettes of other types than that shown in Fig. 1, while Fig. 8 shows its adaptation to a flush receptacle of known type. Various other forms will readily suggest themselves. In all the forms it will be understood that the threading apertures may be omitted, since the essential point is the tongue grip, and while it might be difficult it would still

be possible to adjust the wires without the threading apertures adjacent the free ends of the tongues.

I claim as my invention:—

5 1. A device of the character described comprising a substantially flat plate of slightly flexible insulating material such as fiber, adapted to loosely fit within the cap of an electrical fitting, said plate being cut
10 to form independent wire passages, the opposed edges of each cut so closely approaching each other as to effect a gripping action upon the wire in adjusted position under strain conditions.

25 2. A device of the character described comprising a plate of slightly flexible insulating material and a pair of gripping tongues formed in the body thereof, said body having independent apertures formed
30 therein adjacent the free end of each tongue, for the purpose described.

35 A device of the character described, comprising a plate of slightly flexible insulating material and a pair of oppositely
40 faced gripping tongues formed in the body thereof, said body having independent apertures formed therein adjacent the free end
45 of each tongue, for the purpose described.

4. A device of the character described,

comprising a plate of insulating material 30 and an insulating tongue formed therein and abutting at its free end a relatively rigid portion of the body of the plate, the latter being apertured to one side of the free
35 end of said tongue to permit the insertion of a wire and the lateral movement of the latter to engaged position between the end of the tongue and said rigid portion of the plate, substantially as described.

5. A device of the character described, 40 comprising a plate of slightly flexible insulating material and a tongue formed therein and abutting at its free end a relatively rigid portion of the plate, to form a clamp
45 for an electric conductor, said tongue in the adjusted position of the device, being flexed from the plane of the plate and gripping said conductor between the free end of the tongue and the abutting rigid portion of the
50 plate, substantially as described.

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

THOMAS J. TOBIN.

Witnesses:

GEORGE A. CAMPION,
JOHN EBEL CAMPION.