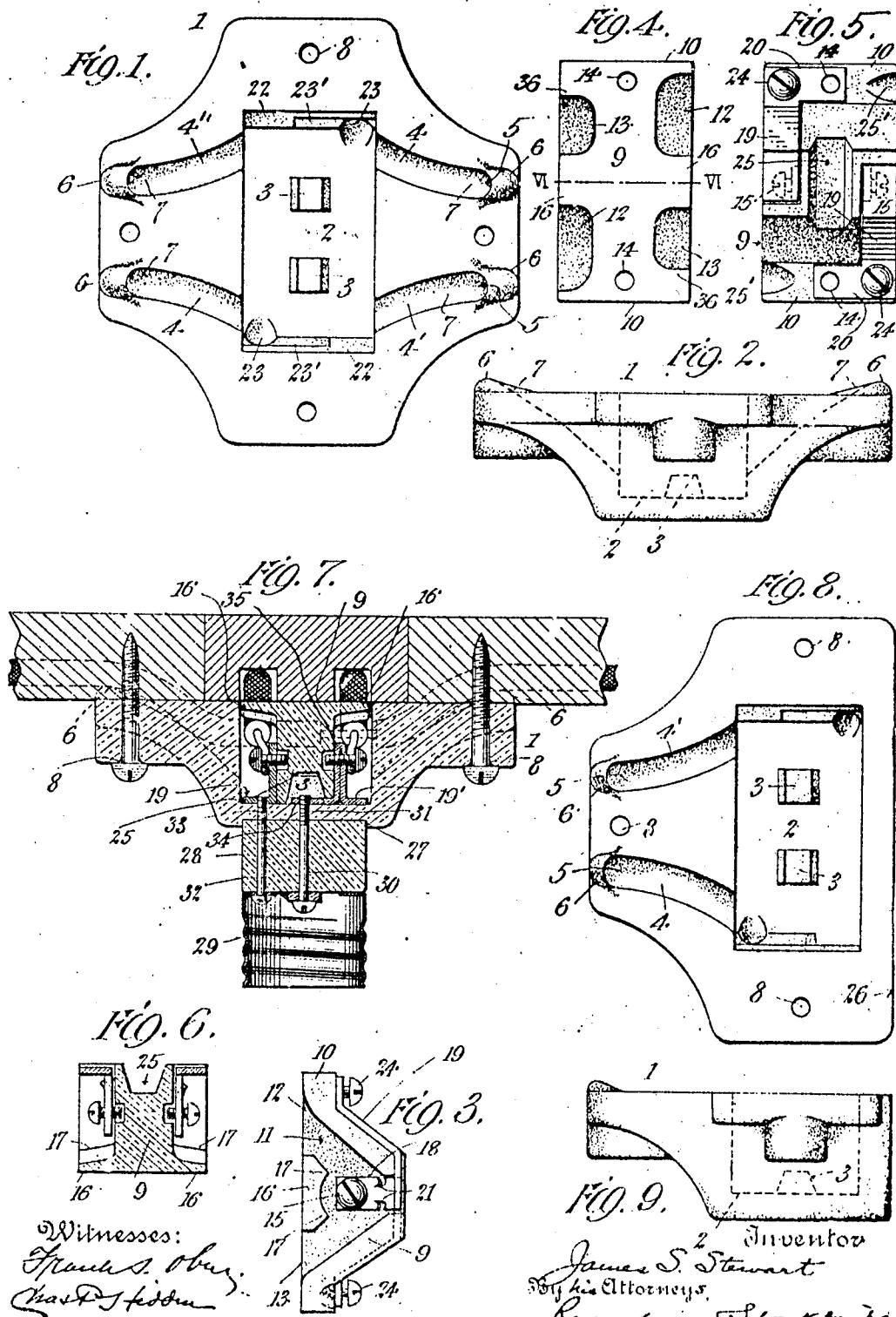


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COMBINED TAPLET OR CROSSOVER AND RECEPTACLE.
APPLICATION FILED MAR. 23, 1910.

998,810.

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UNITED STATES PATENT OFFICE.

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COMBINED TAPLET OR CROSSOVER AND RECEPTACLE.

998,810.

Specification of Letters Patent. Patented July 25, 1911.

Application filed March 23, 1910. Serial No. 551,193.

To all whom it may concern:

Be it known that I, JAMES S. STEWART, a citizen of the United States, residing at the city of New York, in the borough of Manhattan and State of New York, have invented certain new and useful Improvements in Combined Taplets or Crossovers and Receptacles, of which the following is a full, clear, and exact description.

10 This invention relates to that class of devices known as taplets and cross-overs, such devices being used for tapping off from electric light wires or the like, or for cross-connecting the wires of different circuits; 15 the use of devices of this character being in many localities obligatory by statutory enactment and further being necessitated by the rules of the underwriters.

My invention has for its object the simplification of devices of this character, and the provision of inexpensive appliances by the use of which certainty against short-circuiting at such points is assured.

20 My invention also contemplates the combination of a taplet or cross-over with a receptacle or rosette.

Other novel features of my invention will be hereinafter set forth and particularly pointed out in the appended claims.

25 Referring to the drawings which form a part hereof and in which like characters of reference designate like parts throughout the several views: Figure 1 is a plan of cross over cap embodying features of my invention. Fig. 2 is a side elevation of said cap. Fig. 3 is a side elevation of the cross-over base-block to which the several leads are respectively connected. Fig. 4 is a plan of the said base-block. Fig. 5 is a bottom 30 view of the same. Fig. 6 is a transverse section taken on line VI—VI of Fig. 4. Fig. 7 is a transverse section of the assembled parts, illustrating the application of a lamp receptacle to, for example, my cross-over cap; and Fig. 8 is a plan of a taplet cap very similar in general construction to the cross-over cap above referred to. Fig. 9 is a side elevation of said taplet cap.

40 Considering now the simple cross-over, the cap whereof has been designated 1. This cap is provided with a recess 2, preferably rectangular in cross-section; said recess extending nearly through the said cap as indicated in Fig. 2. Upon the bottom 45 of this recess are provided lugs 3 which,

if the device in question be merely a simple cross-over, may be formed as a single lug, if so desired. Grooves 4 and 4', the bottom walls of which slope gradually upward from a point adjacent the bottom of recess 2, extend upwardly and outwardly from said recess and gradually approach each other in the manner shown in Fig. 1, for the purpose of bringing the circuit wires which may be inserted thereinto out into proper spaced relationship with respect to each other; the spacing between the extremities 5 of said grooves being substantially that of the grooves in standard molding. I prefer to provide also small protuberances or lugs 6 at the extremities of each of the said grooves and substantially in alinement therewith, the ends of the grooves in fact sloping upward over the inner sides of said protuberances, as shown at 7. These lugs serve to force the insulated circuit wires well up into the molding grooves. The cap is provided with a plurality of screw holes 8, by means of which it may be properly secured to the abutting sections of molding. This 50 cap is preferably made of porcelain or some other insulating material, and a base 9 of similar material is adapted for insertion into the said recess 2, so as to substantially fill the same. This base has the form, more or less, in longitudinal cross-section, of a trapezoid with flanges 10 outwardly extending from the ends thereof. Each of the sides of the trapezoidally shaped mass is recessed or grooved as at 11 to a sufficient depth to afford free entrance thereinto of an insulated conductor or circuit wire. One of the entrances to the grooves so formed is indicated at 12, and the corresponding exit at 13 in Fig. 4. And it will be observed that the mouth of the groove at 12 is somewhat larger than the corresponding orifice 13. Suitable screw holes 14 afford means for supporting said base from a molding, and the conducting wires may be led downwardly from the grooves of said molding through the respective apertures 12 around the groove 11, and up again at 13 into the molding groove. Each of the wires so bent or led has the insulation removed therefrom at a point substantially half-way of the length of the bent portion, so that the bared portion of the wire may be clamped under or around the screw 15, one of which is disposed upon each side of the base 9, 100

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screwing into recesses in the material thereof so that the head of each of the said screws is substantially in the center of one of the grooves 11. The projection 16 formed by 5 the material of the base which is left above the said groove, aids in retaining the conductor in said groove; downwardly extending points 17 of said projection engaging the circuit wire and positioning the same for 10 contact with the head of screw 15. Screws 15 are each in mechanical and electrical contact with a metallic tongue 18, which forms an arm or offset from a conductive bar 19, one of which is disposed upon each of the 15 respective outer sides of the base. Bars 19 are somewhat Z-shaped as viewed laterally, the middle portion of each bar lying along a sloping edge of the trapezoidal base. As 20 viewed in Fig. 5, the said bars 19 appear L-shaped, the short arm 20 of the L, extending partially over one of the flanges 10. This member may be made of sheet metal and is bent into proper form by means of suitable dies; the tongue 18 being bent downwardly 25 so as to adapt the same for contact with a flattened portion of the groove 11, said tongue being further provided with the usual prongs 21 which aid in seating the conductor in proper position. The recess 30 in cap 1 may be formed with a shelf or ledge 22, at each end thereof, as shown in Fig. 1, and the cap may be further cut away as at 23 in order to clear the head of the screw 24 which is in engagement with the bar 19. 35 The cap should also be cut away or recessed at 23 to afford clearance for the short arms 20 of bars 19. It is obvious of course that the ledges 22 need not be provided, but said ledges serve to steady the cap in position 40 upon the base by their engagement with the lower surface of the respective flanges 10 of the base block. The bottom surface of the trapezoidal base is grooved at 25 for engagement with the lugs 3 which further serve to 45 steady the cap in place upon its base.

The leads which are adapted to pass through the grooves 4 are afforded space between the base and the cap by reason of the trapezoidal configuration of said base; such 50 leads passing over the respective flanges 10 and having the insulation removed from a portion of each of the same in order to make electrical contact with their respective screws 24. It will hence be seen that the 55 base may be placed in position upon one line of molding and properly secured thereto by means of screws, the wires emerging from the molding being bent downwardly around the projections 16 upon each side of 60 the base; and being respectively secured in electrical connection with the bars 19 upon either side of said base. The pair of circuit wires coming at right angles to those first mentioned pass downwardly through 65 grooves 4 and through between the spaces

provided between the sloping faces of the base and its cap, being in turn respectively secured in electrical connection by means of screws 24 with the short lateral arm 20 of each of the respective bars 19. Thus a lead 70 approaching through the upper right hand groove 4 shown in Fig. 1, will be in electrical connection with the bar 19 shown to the left of Fig. 5, and will hence be also in electrical connection with the right hand 75 member of a pair of wires disposed at right angles to those before mentioned. In corresponding fashion the wire entering through the lower right hand groove 4' will be in electrical connection with the left 80 hand member of the pair of circuit wires. Recesses 25' afford clearance for the respective leads or circuit wires which proceed through grooves 4' and it should be here noted that recesses 25' aid in disposing the 85 respective leads in their predetermined positions between the oblique walls of the base and the shorter walls of the cap recess, when the cap is placed in position on said base. It should also be observed that the cross- 90 over cap and base are both symmetrical.

Referring now to Fig. 8, it will be seen that I have provided a taplet which is of substantially the same general construction as the cross-over above described, the base 95 being identical with that used in connection with said cross-over and the only alteration in the cap being the formation of the latter with a straight side at 26, in lieu of the grooved extension; such extension upon the 100 other side of the taplet being, however, identical with the corresponding portion of the cross-over.

I may provide my cross-over or taplet cap with means for the application of a lamp 105 receptacle, rosette, or like appliance thereto, and Fig. 7 illustrates such a structure. The bottom of the cap, in this instance a cross-over, although the same obviously might have been the cap of the taplet equally as well, is recessed as at 27 for the reception of a receptacle base 28, which is adapted to support the usual threaded shell 29 into which the lamp or other appliance is socketed. The center pin or screw 30 of the lamp receptacle extends up through the receptacle base 28 into threaded engagement with an aperture in the bottom of the cross-over or taplet cap; the threaded end 31 of such screw 110 extending entirely through the insulating material of said cap. In corresponding fashion, the screw 32 extends upward from the shell 29 through base 28, and is in turn threaded into a second aperture 33 in the bottom of said cap. When the parts are 115 in assembled relationship as shown in Fig. 7, screw 32 is in electrical contact with the flat portion of bar 19; while screw 30 is correspondingly in electrical contact with an extension 34 of the bar 19' upon the other 120 125 130

side of the taplet or cross-over base. Bar 19' is substantially the same as bars 19 hereinafore referred to, except that the tongue 18 does not terminate like that shown in Fig. 3; but is bent back upon itself as at 35, and is finally angularly offset as at 34 to provide for electrical connection with the centrally disposed pin 30 in the manner above described.

10 I particularly wish to direct attention to a feature, not previously referred to at length, namely, that the configuration of the cap and base is such that the outgoing wire which emerges through the upper right hand groove 4 of the cap shown in Fig. 1, can by no possibility contact with the corresponding outgoing wire which is emerging from the adjacent orifice 13 in the base; since by reason of the relatively small size of said 20 aperture; the wire disposed in groove 11, will be sharply bent and held out of contact with the wire in groove 4, by the posterior wall 36 of said orifice 13.

It will thus be seen that my taplet and 25 cross-over construction, while extremely simple and inexpensive of manufacture, affords every facility for making connections thereto from the respective circuit wires, and further provides means whereby a rosette or lamp receptacle may be secured thereto; drawing current from the respective wires with which the base conductor bars are in electrical contact.

It is obvious, that when the taplet is used, 35 the incoming lateral wires do not extend therethrough; the ends thereof being merely connected to the respective screws or binding posts 24.

Having described my invention, what I 40 claim, is:

1. In an electrical appliance adapted to be positioned on a molding having longitudinal grooves, an insulating base of substantially trapezoidal cross-section having recesses in the respective sides thereof adapted for the reception of circuit wires, conductive bars secured to the said base, having lateral tongues upwardly extending into said grooves, said tongues carrying binding posts 50 and a portion of each of the bars proper also carrying a binding post, and a recessed cap having grooves outwardly extending from the recess therein adapted for the reception of circuit wires co-operating with said base 55 to the end that the respective sets of wires may be directed toward their respective binding posts.

2. In an electrical appliance adapted to be positioned at the junction of two diver-

gent lines of circuit-wire moldings, an insulating base having overhanging ends and recessed sides, the latter being adapted for the reception of circuit wires from one of the moldings, an insulating cap having a base-receiving-recess therein and grooves opening 65 into said recess, the overhanging ends of the base co-acting with the walls of the recess, when the parts are in assembled relationship, to form conduits for the wires extending from a second molding through the grooves 70 of the cap, and the recessed sides of the base co-acting with walls of the recess in the cap to hold the first mentioned wires in place and to insulatingly space the same from the second mentioned wires. 75

3. In an electrical apparatus adapted to be positioned on a molding having circuit wires, an insulating base, conductive elements carried by said base for affording operative electrical cross connection between 80 two angularly disposed and distinct sets of circuit wires, a cap for said base, spaced from the respective angularly disposed walls thereof at predetermined points to accommodate said wires, and a contact making device 85 carried by said cap, parts of which are in electrical connection respectively with the conductive elements aforesaid and the terminals of an electrical appliance.

4. In an electrical apparatus adapted to 90 be positioned on a molding having circuit wires, an insulating base, conductive elements carried by said base for affording operative electrical cross connection between 95 two angularly disposed and distinct sets of circuit wires, and a receptacle base having means for rigidly supporting the same contiguous to said insulating base, the respective terminals of said base being in electrical communication with said conductive elements. 100

5. In an electrical appliance adapted to be positioned on a grooved molding having circuit wires, an insulating block having projections thereon insertible into and engageable with the grooves of said molding proximate the points where the circuit wires emerge therefrom, the bottom faces of said projections bearing against the groove held portions of the wires to hold said portions 110 down firmly in the bottom of the molding grooves. 105

In witness whereof, I subscribe my signature, in the presence of two witnesses.

JAMES S. STEWART.

Witnesses:

WALDO M. CHAPIN,
JAMES DE ANTONIO.