No. 877,384. PATENTED JAN. 21, 1908.

F. A. SWAN.

ELECTRICAL FITTING.

APPLICATION FILED APR. 22, 1907.

Fig. 1.

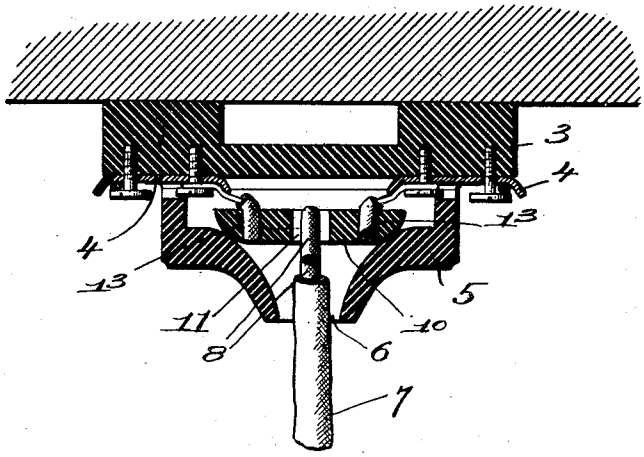


Fig. 4.

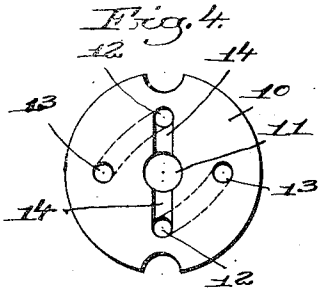


Fig. 3.

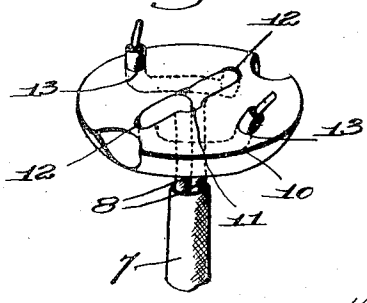


Fig. 5.

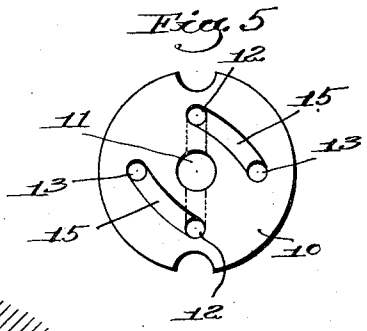
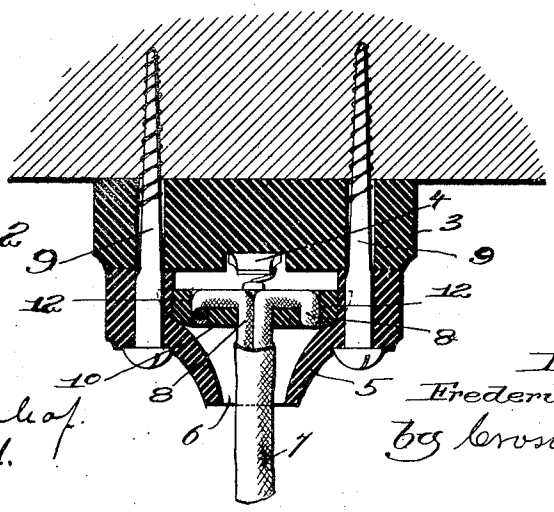


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERICK A. SWAN, OF CLIFTONDALE, MASSACHUSETTS.

ELECTRICAL FITTING.

No. 877,384. Specification of Letters Patent. Patented Jan. 21, 1908.

Application filed April 22, 1907. Serial No. 369,494.

To all whom it may concern:

Be it known that I, FREDERICK A. SWAN, a citizen of the United States, and a resident of Cliftondale, in the county of Essex and State of Massachusetts, have invented an Improvement in Electrical Fittings, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawings representing like parts.

This invention relates to electrical fittings in which conducting wires are connected to terminals or other wire connections, and the object of the invention is to provide a fitting of this character which will be provided with novel means for relieving the connections between the conducting wires and the terminals from any strain due to the weight of the conducting wires or which may be applied to said wires. As one familiar illustration of such fitting, I will refer to the ordinary electrical rosette, and to illustrate the invention I have chosen to show it as it may be embodied in such rosette, although I wish it to be understood that my invention is not limited to rosettes, but is adapted for use in other electrical fittings, such as outlet boxes, etc.

In some fittings, such as rosettes, it is more or less common practice to tie the two conducting wires together to form a knot which is located within the rosette so that any strain on the conducting wires will come on the knot instead of on the connection between said wires and the terminals. This practice of tying the conducting wires into a knot, however, is objectionable, because the forming of the knot is apt to break the insulation. To avoid this objection it has been proposed to make specially formed rosettes which have as an integral part thereof means to frictionally engage the conducting wires thereby to relieve the terminals from strain. Such specially constructed rosettes are apt to be more or less expensive, and it is the object of my invention to provide a novel means of relieving the terminals of the fitting from strain which can be applied to or used in connection with any ordinary fitting or rosette and which will not necessitate the use of a special rosette.

In order to illustrate my invention I have shown it in the accompanying drawing as embodied in a rosette, and Figure 1 is a vertical section through a rosette embodying my invention; Fig. 2 is a section taken at right angles to Fig. 1; Fig. 3 is a perspective view of the strain-relieving device with the cords threaded therethrough; Fig. 4 is a top plan view of said device; and Fig. 5 is a bottom plan view thereof.

The rosette herein shown may have any suitable or usual construction, and is illustrated as comprising the base portion 3 which supports the usual terminal plates 4, and the cap portion 5 having the central aperture 6 through which extends the cord 7 comprising the two wires 8.

The two parts of the rosette are shown as secured together and as secured to the ceiling or wall by means of usual screws 9.

The parts thus far described are or may be of any suitable construction.

In my invention the terminals of the fitting are relieved from strain by means of a one-piece strain-receiving device which is located within the fitting and which is arranged to have frictional engagement with the wires. In the embodiment of the invention herein illustrated this strain-receiving device is provided with wire-receiving passages or openings through which the wire can be threaded in such a way that there will be sufficient frictional engagement between the wire and the strain-receiving device to entirely relieve the terminals from strain. While it is possible to make the button in various ways and yet accomplish this result, I have found from practice that the construction shown in the drawing is satisfactory, and have therefore selected such embodiment as illustrating the invention. In this embodiment the wire-receiving passages or openings are in the nature of apertures formed in the button, but this is not absolutely essential. The button herein shown which is designated 10 has a central aperture 11 and two pairs of wire-receiving passages in the form of apertures 12 and 13. The button 10 is of a size to be received within the cap of the rosette, as shown, and when in use the two wires 8 are passed up through the central aperture 11 and are then separated, one wire being carried down through one hole 12 and the other down through the other hole 12 and said wires are then passed up through the holes 13 and led to the terminal plates 4.

The button 10 may be provided with grooves 14 connecting the holes 12 with the central aperture 11, and on its lower face with other grooves 15 connecting the holes

12 and 13 of each pair so that the cords or wires 8 will be received in said grooves, as shown in the drawings.

When the wires 8 are threaded through the button, as thus described, all the strain to which the cord pendant 7 is subjected comes directly on the button 10, and the connection between the wires 8 and the terminal plates 4 is entirely relieved from all this strain.

It is not essential to the invention that the wire-receiving passages in the strain-receiving device be in the form of apertures as the essential feature is to form such passages so as to permit the wire to be threaded through or around portions of the device in a circuitous way so as to cause sufficient frictional engagement between the device and the wire to relieve the terminals from strain.

It will be obvious that my improved strain-receiving device may be used with a variety of electrical fittings, but I have not attempted to show herein any fitting except a rosette.

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

1. The combination with an electrical fitting having a terminal, of conducting wire connected to said terminal and a one-piece strain-receiving means separate from the fitting and located therewithin and having frictional engagement with the wire thereby to relieve the terminal from any strain.

2. The combination with an electrical fitting having terminals, of conducting wires connected thereto, and a strain-receiving device separate from and located within the fitting, said device having a central aperture through which both wires are passed, and a separate pair of apertures through which each wire is subsequently passed, whereby said device takes any strain to which the wires are subjected and relieves the terminals therefrom.

3. The combination with an electrical fitting having terminals of conducting wires connected thereto and a strain-receiving device separate from the fitting and located therewithin, said device having a plurality of wire-receiving openings or passageways through which the wires are passed in a circuitous manner to provide frictional engagement between the wires and the device sufficient to relieve the terminals from strain.

4. The combination with an electrical fitting having terminals and an aperture to receive conducting wires, of conducting wires extending through the apertures and connected to said terminals, and a one-piece device separate from but situated within the fitting and having two pairs of apertures through which the wires are threaded whereby said device relieves the terminals from strain to which the wires are subjected.

5. In an electrical fitting, the combination with terminals, of conducting wires connected thereto, and strain-receiving means separate from but situated within the fitting, said strain-receiving means having a central aperture through which the wires are threaded, and two pairs of apertures through each pair of which one of the wires is threaded.

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

FREDERICK A. SWAN.

Witnesses:

LOUIS C. SMITH,

EMILY C. HODGES.