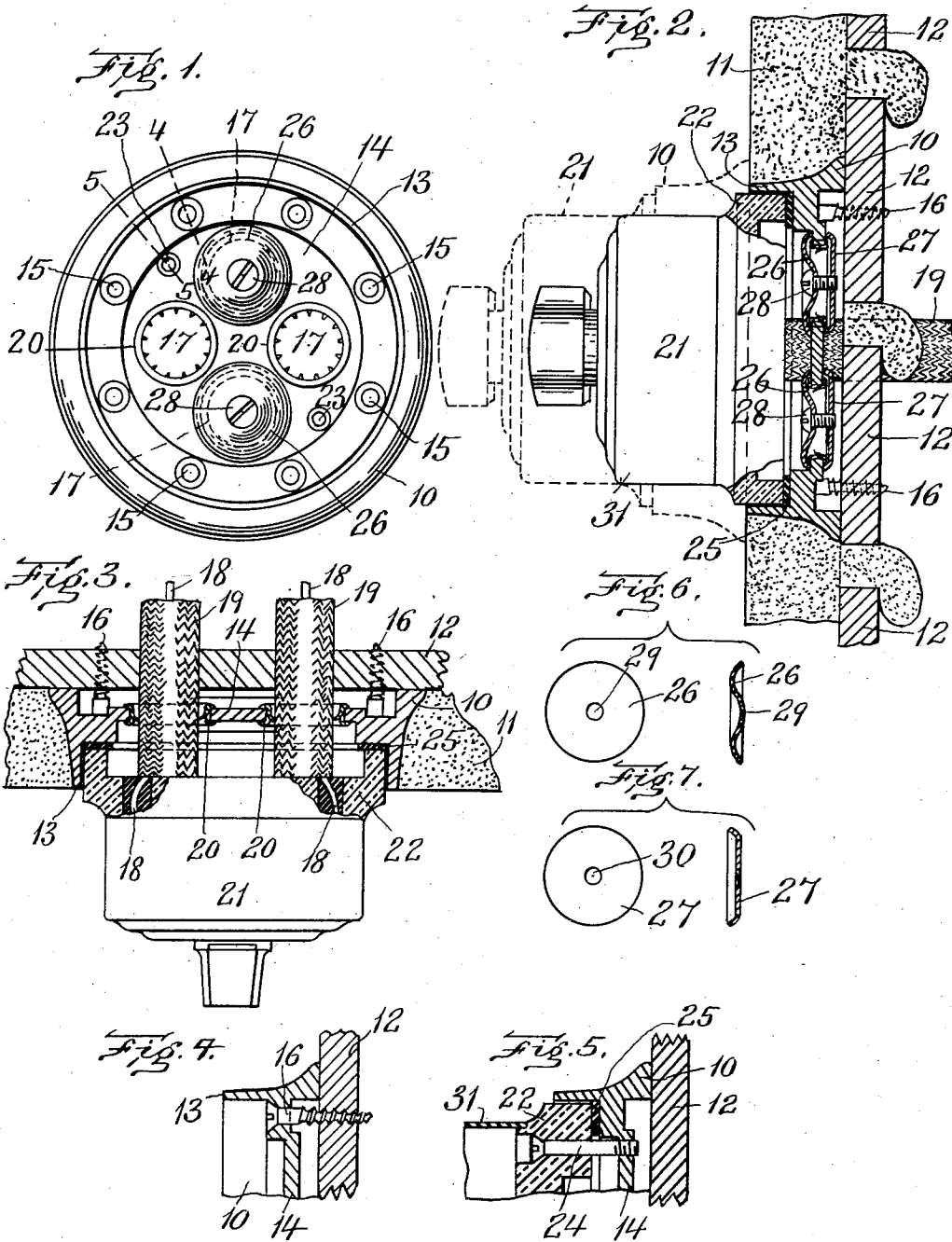


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WALL BASE FOR ELECTRICAL SWITCHES.
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WALL-BASE FOR ELECTRICAL SWITCHES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM H. COLGAN, of Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Wall-Bases for Electrical Switches, of which the following is a specification.

This invention relates to electrical appliances for mounting switches and devices of similar form.

One object of the invention is to provide a base adapted to be embedded in the plaster of a wall or ceiling and adapted to receive and support an electrical device of the character mentioned.

The base is preferably formed so as to lie flush with the exterior surface of the plaster in which it is embedded and to lie against and be connected to the laths or other plaster-supporting structure. The base is of cup-shaped formation and has a flat end wall against which the attached device may be fastened, while the rim or flange thereof serves as a guard for surrounding and protecting the attached device. Devices of this character are usually formed of porcelain and when they are attached directly to the plaster-supporting structure by means of screws passing through the plaster, they are subject to breakage especially when the attaching screws are screwed in too tightly or are set at an inclination relatively to the supporting structure. By providing a base in accordance with the present invention, not only is the porcelain surrounded and protected but the receiving base is provided with screw-threaded holes adapted to register with holes formed in the porcelain for the attaching screws, whereby correct alinement of the screws for connecting the two members is insured.

The exterior of the receiving base is so formed as to be interlocked with the plaster when it is embedded therein and provision is made whereby the base may be fastened in place by means of relatively short screws. The base however, is not limited to this arrangement for it may be readily attached to a previously constructed wall by placing it against the exterior surface of the plaster and attaching it by longer screws adapted to extend through the plaster and into the supporting structure. The base is provided with an abundance of holes arranged in a circle and adapted to receive screws for at-

taching it to the wall structure. The number of screw holes is in excess of the number of screws required, and as a result there is in every case a probability that at least four of the screw holes will register with the plaster-supporting structure and that the base may be securely held in case any of the screws inserted fail to strike the supporting structure. That portion of the base which receives the heads of the attaching screws is preferably made so thin as to permit inclination of the screws in case it should be desired to insert them at an angle in order to strike the supporting structure.

In order to render the base adapted for use with single pole switches or double pole switches, or other devices requiring four or more electrical conductors, the base may be provided with a number of holes for the reception of conductors adapted to meet the maximum requirement. In case, however, the base member is employed for a purpose requiring a less number of conductors than the number of holes provided for their reception, it is desirable to cover the unused holes or in other words to seal them so as to prevent possibility of sparks passing from the attached device through the unused holes and lodging against the wall or supporting structure.

Another object of the present invention is to provide a detachable seal for covering the unused holes in the base, which seal is comparatively inexpensive and which may be attached or detached in a moment's time.

The base member is so formed and the several holes for connecting and attaching screws and the electrical conductors are so disposed as to be entirely concealed when the attached device is in place.

Of the accompanying drawings which illustrate one form in which the invention may be embodied, Figure 1 is a front elevation of a base adapted to receive an electrical switch or other similar device. Fig. 2 is a vertical section of a fragment of a wall with the base and a switch attached. Fig. 3 is a horizontal section of the parts shown by Fig. 2. Fig. 4 is a section on line 4-4 of Fig. 1 including a fragment of the supporting structure and an attaching screw. Fig. 5 is a section on line 5-5 of Fig. 1, including a fragment of an attached device and a screw for connecting it with the base. Fig. 6 includes an elevation and section of

one of two seal members adapted to be connected by a screw. Fig. 7 includes an elevation and section of a complementary seal member.

5 The same reference characters indicate the same parts wherever they occur.

Referring first to Figs. 1, 2 and 3, 10 indicates a base adapted to be embedded in the plaster 11 of a wall and attached to the laths 12 or other supporting structure of the plaster. The base is of cup-shaped formation and has a surrounding flange or rim 13 and a flat end wall 14. The depth of the rim 13 is preferably equal to the usual thickness of wall or ceiling plaster and when attached directly to the plaster support, the outer edge thereof may be flush with the exterior surface of the plaster. The inner edge of the rim is preferably of greater diameter than the outer edge for the purpose of producing a flaring surface adapted to be interlocked with the plaster as shown.

The wall 14 is provided with a plurality of holes 15 adapted to receive the heads of screws for attaching the base to the support 12. The holes 15 are preferably arranged in a circle within and close to the rim 13. In this form eight such screw holes are shown for the purpose of insuring registration of at least four of them with the supporting structure whereby the base may be firmly attached. In Fig. 4 is shown an attaching screw 16 for this purpose. Within the circle of holes 15 is a plurality of holes 17 provided for the introduction of electrical conductors 18. The holes 17 are made sufficiently large to admit conductors incased in coverings 19 of insulating material. The holes 17 are preferably provided with bushings 20 having spring tongues of the character illustrated in U. S. Letters Patent No. 860,014, granted to me July 16, 1907. The spring tongues are arranged to engage the coverings 19 of the conductors and are adapted to permit the insertion of the coverings but to prevent the withdrawal thereof.

Figs. 2 and 3 illustrate in a general way a single pole switch 21 adapted to be inserted in the base and attached thereto. Switches of this type are usually mounted on porcelain members 22. The rim 13 of the base member is adapted to surround the porcelain member 22 and effectually protect it against liability of being knocked and broken. The porcelain members are provided with holes adapted to receive attaching screws and for this reason the wall 14 of the base member is provided with screw-threaded holes 23.

Fig. 5 illustrates an attaching screw 24 having its head embedded in the porcelain member 22, and extending into the screw-threaded aperture 23. If desired a gasket 25 may be interposed between the member 22 and its seat.

The number of conductors 18 required for a single pole switch is two. The base member 10 is here shown as formed with four holes 17 for the reception of conductors and is therefore adapted to use in connection with a double pole switch which requires four conductors. When the number of holes 17 is in excess of the number of conductors required, it is desirable to cover the unused holes 17 and for this purpose the present invention provides seals each comprising a pair of disks 26 and 27 and a screw 28 for clamping them in place. The disks are formed as shown by Figs. 6 and 7 and arranged as shown by Figs. 1 and 2. As here shown the disks are slightly greater in diameter than the bushings 20, and their rims are bent so as to be seated on the wall 14 outside the bushings, thus preventing lateral displacement. They are preferably dished as shown, in order to receive a comparatively short connecting screw 28 which extends through a screw-threaded hole 29 in the disk 26 through the hole 17 in the base member and into a screw-threaded hole 30 in the disk 27.

In practice the covers for the holes 17 which are not going to be used are applied before the base is attached to the wall. In attaching the covers the screws 28 are first inserted in the holes 29 of disks 26 as far as the heads of the screws will permit, the disks and screws being firmly connected by engagement of the disks with the threads of the screws. The disks 27 are then held in position while the screws and the disks 26 are rotated to insert the ends of the screws in the holes 30. When the screws are inserted in the disks 27 so far as to effect a clamping tension of the disks against opposite faces of the base the disks are securely attached so that they cannot become accidentally dislodged. If, after a base has been attached to a wall, it is desired to remove one of the seals or covers to permit the introduction of an additional conduit in a new hole 17 the seal can readily be removed by unscrewing the screw 28 forming a part of the seal. When the screw is unscrewed the thread thereof maintains clamping tension of the disks 26 and 27 against the opposite sides of the base until the inner end of the screw becomes disengaged from the disk 27. The disk 27 thereupon is free to drop away from the hole 17 and the additional conduit may then be drawn in. The advantage of forming the front disks 26 so that they may have screw-threaded engagement with the screws 28 would not exist if the holes 29 in said disks were larger than the shanks of the screws. If the holes 29 were larger than the shanks of the screws the result when unscrewing the screw 28 would be that the heads of the screws due to the pressure of the screw driver would be held

against the disks 26 and the disks 27 after a partial rotation of the screws would become free to turn with the screws and would therefore be liable to rotate indefinitely without becoming disengaged from the screws so that they might drop.

The base member is not limited to the arrangement hereinbefore explained, but may be attached to the exterior of a wall as shown by dotted lines in Fig. 2. According to the latter arrangement, the only variation in attaching the base would be in providing screws 16 long enough to extend through the plaster and into the support 12. The method of attaching the switch to the base would not be changed by this arrangement of the base. It will be observed that the holes 15, 17 and 23 are so arranged as to be concealed by the attached device and that, when the base and attached device are once installed, no attaching means is visible. It may here be stated that a switch of this type is usually provided with a detachable cap or cover 31 which conceals the screws 24 connecting the porcelain member and the base member.

Although the base member is here shown and described as being attached to a side wall, it should be understood that it is equally adapted for attachment to a ceiling for the purpose of supporting an electric light fixture commonly termed a "cluster" or "rosette." Nor is the base limited to use in connection with switches and electric light fixtures, but it is adapted to receive any device of the same general formation such as a side wall attaching plug and receptacle therefor. Additional advantages of so constructing and arranging the base member are that the portion which receives the screws for attaching it to the wall is adapted to lie between the exterior and interior surfaces of the plaster, whereby comparatively short attaching screws are sufficient to reach into the supporting structure, and consequently the seat for the attached device also lies between the exterior and interior surfaces of the plaster thus enabling the attached device to be inserted part way in the plaster. The projecting portion of the at-

tached member is correspondingly lessened by reason of thus letting it into the plaster.

Having thus explained the nature of my said invention and described a way of constructing and using the same, although without attempting to set forth all of the forms in which it may be made or all of the modes of its use, I declare that what I claim is:—

1. As a new article of manufacture, a base for electrical switches and similar devices, provided with a plurality of holes for electrical conductors, and individual covers for the holes, each cover consisting of a pair of disks and a screw, each disk being provided with a screw hole, and the screw being of such diameter and threaded throughout such portion of its length as to engage both disks at the same time to draw them together against opposite sides of the base.

2. As a new article of manufacture, a base for the reception of an electric switch or similar device, having a plurality of holes for electric conductors, a device attached to the base around the rim of each of said holes for holding a conductor, and separate covers for said holes, each cover comprising two disks having holes and a screw for drawing the disks together against opposite sides of the base, one of said disks having a portion bent toward the other disk outside the holding device, whereby said disk is held against lateral displacement.

3. As a new article of manufacture, a base for the reception of an electric switch or similar device, having a plurality of holes for electric conductors, a device attached to the base around the rim of each of said holes for holding a conductor, and a cover for each of said holes, the cover comprising two disks having holes, and a screw for drawing the disks together against opposite sides of the base, the rims of said disks being bent toward each other and adapted to be seated against the base outside the holding device.

In testimony whereof I have affixed my signature, in presence of two witnesses.

WILLIAM H. COLGAN.

Witnesses:

W. P. ABELL,
P. W. PEZZETTI.