Aug. 20, 1946. R. HAYNES 2,406,295

MOUNTING FOR SWITCHES AND THE LIKE

Filed Dec. 10, 1943 2 Sheets-Sheet 1

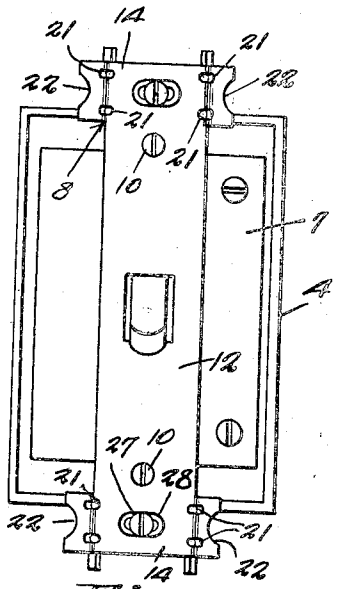


Fig. 1.

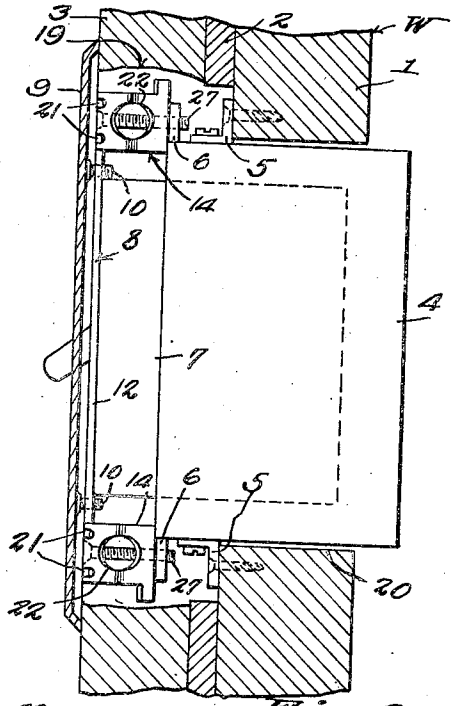


Fig. 2.

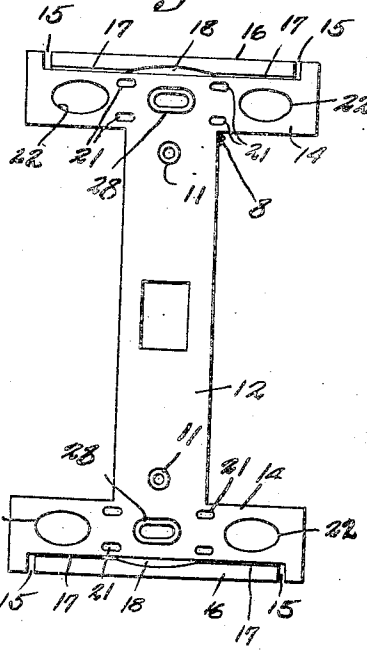


Fig. 3.

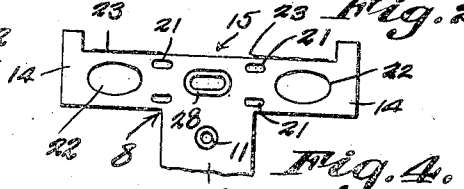


Fig. 4.

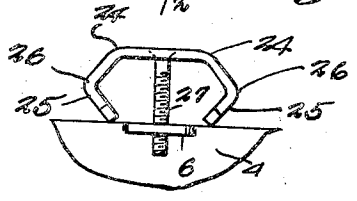


Fig. 5.

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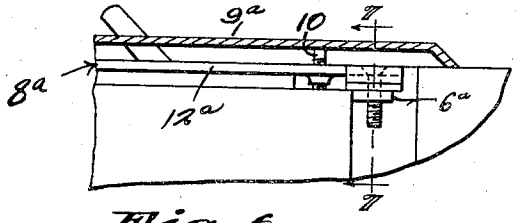


Fig. 6.

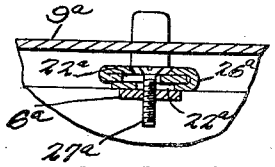


Fig. 7.

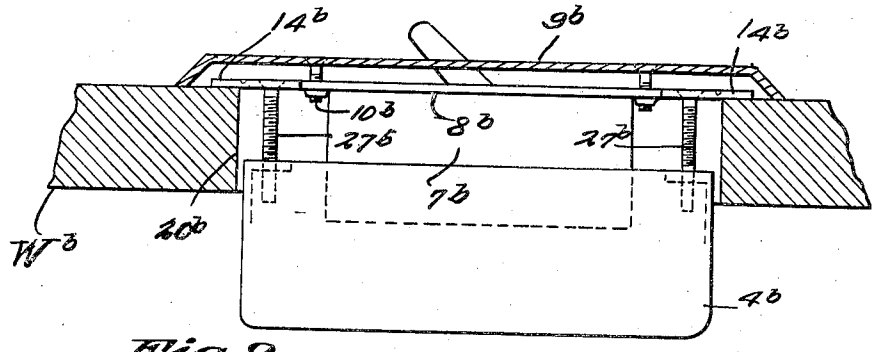


Fig. 8.

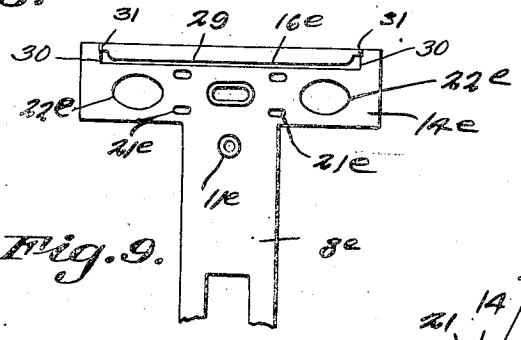


Fig. 9.

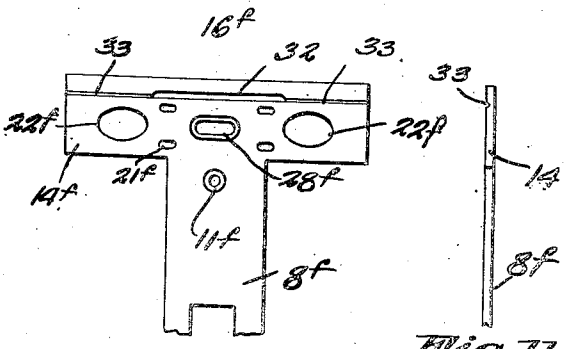


Fig. 10.

Fig. 11.

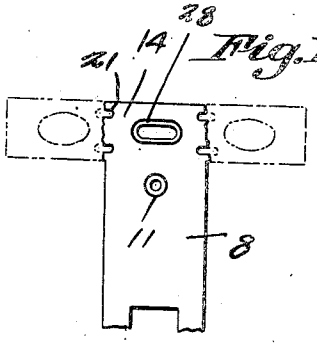


Fig. 12.

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MOUNTING FOR SWITCHES AND THE LIKE

Robert Haynes, San Francisco, Calif.

Application December 10, 1943, Serial No. 513,795

1 Claim. (Cl. 174—52)

1

This invention aims to provide novel means for supporting and mounting an electrical appliance, such as a switch box, especially if a wall opening is larger than is necessary to accommodate the appliance.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:

Fig. 1 shows in front elevation, a structure wherein the present invention is embodied;

Fig. 2 is a vertical section taken at right angles to the elevational plane in Fig. 1, parts remaining in elevation;

Fig. 3 is an elevation of the yoke, as it will appear before it has been altered for use as in Fig. 2;

Fig. 4 is a fragmental elevation of the yoke, the tongue having been broken away;

Fig. 5 is an elevation showing how the head of the yoke is manipulated, to form a spacing means, as depicted in Fig. 2;

Fig. 6 is a sectional view wherein many parts appear in elevation, the view showing the head of the yoke after it has been flattened down to a greater extent than is disclosed in Fig. 5;

Fig. 7 is a section on the line 7—7 of Fig. 6;

Fig. 8 is a sectional view disclosing how the yoke of Fig. 3, and other yokes, may be used when all of its parts are disposed in a common plane;

Fig. 9 is an elevation wherein a portion is broken away, the view showing a modified form of yoke;

Fig. 10 is a view similar to Fig. 9, but showing a modification, in elevation;

Fig. 11 is an elevation wherein the device of Fig. 10 is viewed edgewise;

Fig. 12 is an elevation which shows that the ends of the head of the yoke may be broken off, if desired.

Referring to Figs. 1 to 5, the letter W marks a wall or similar support for a switch, an outlet box or the like. The timber or body of the wall W appears at 1, the lath at 2, and the finishing or other material, such as plaster, being shown at 3.

The numeral 4 designates a box, extended into

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or through an opening 20 in the wall body 1. The box 4 is secured, in the usual way, as shown at 5, to the body 1 of the wall. The box 4 is supplied with oppositely disposed extensions 6.

A switch casing 7 extends into the box 4. It is to be understood that the switch box or casing is typical of any desired electrical appliance which is to be assembled with the box.

A yoke 8, preferably made of metal, is secured across the front of the switch casing 7. The usual face plate 9 is attached by securing elements 10 to the yoke 8. The securing elements 10 are adapted to be engaged in holes 11 formed in the yoke 8.

The yoke 8 is shown in Fig. 3, all portions of it being in the same plane, the yoke there appearing as it will look before portions of it have been fashioned into shapes to be described hereinafter, and shown in Figs. 2 and 5.

The yoke 8 comprises an elongated intermediate portion 12, provided at its ends with transverse heads 14, the yoke, in substance, being I-shaped. In their opposite edges the heads 14 of the yoke 8 have recesses 15. Stiffening tongues 16 are secured to the heads 14, at the bases of the recesses 15, and the tongues are supplied with transversely spaced scores or grooves 17, disposed along the line where the tongues are joined to the heads 14. Each tongue 16 has an elongated opening 18, extended between the grooves 17. The tongues 16 are strong enough to hold the arms flat, but, owing to the presence of the grooves 17 and the openings 18, the tongues may be bent back and forth, and be broken off, their stiffening function then being terminated. The reason for breaking off the tongues 16 will be brought out hereinafter.

Attention is now directed to the opening 19 of Fig. 2, formed in the plaster 3 and perhaps in the lath 2. If the opening approximates in size, the opening shown at 20, the heads 14 of the yoke 8 will overlap the outer surface of the plaster 3 and limit the inward movement of the switch casing 7: but as shown in Fig. 2, the opening 19 often is carelessly formed, and of larger area than the opening 20. Under such circumstances, the heads 14 will not overlap the outer surface of the plaster 3, and in the condition of Fig. 3 they will have no function in preventing the inward movement of the switch casing 7. Then recourse is had to a structure next to be described.

The heads 14 are supplied with holes 21, which are elongated in the direction of the length of the heads, the centers of the holes being in alinement with the longitudinal edges of the inter-

mediate portion 12 of the yoke 8. The heads 14 are provided with larger holes 22, preferably of approximately elliptical form, and elongated in the direction of the length of the heads. The holes 22 are disposed between the holes 21 on the one hand, and the outer end edges of the heads 14, on the other hand.

The tongues 16 are bent back and forth until they break off at the grooves 17. This operation weakens the heads 14, so that they can be bent transversely. In Fig. 4, the numeral 23 designates where and how the tongues 16 are broken off.

The heads 14 are bent backwardly in diverging relation, as indicated at 24 in Fig. 5, across the holes 21, those holes weakening the heads 14 enough that the aforesaid bending can be brought about readily. The heads 14 are bent backwardly in converging relation, as shown at 25 in Fig. 5, the bending taking place across the holes 22, which weaken the heads enough so that the last-mentioned bending can take place. Thus there are formed, laterally and outwardly bulged resilient arms 26, the free ends of which rest against the forward edge of the box 4, as Figs. 5 and 2 will make manifest.

Tightening devices 27, for example screws, are mounted in openings 28 formed in the heads 14 and elongated longitudinally of the heads, the tightening devices being threaded into the extensions 6 of the box 4.

It will now be evident that, by manipulating the tightening devices 27, the resilient arms 26 of Fig. 5 can be flattened as much as desired, thereby to locate the outer surface of the yoke 8 properly with respect to the outer surface of the plaster 3 and, consequently, to locate the switch casing 7 or equivalent device properly.

See Fig. 12. It has been stated hereinbefore that when all portions of the yoke 8 are in the same plane, and when the hole in the plaster 3 is of such size that the heads 14 overlap the outer surface of the plaster 3, inward movement of the casing 7, or its equivalent, will be limited. Under such circumstances, some operators may desire to break off the laterally projecting portions of the heads 14. This can be done by bending the heads back and forth, along lines represented by the longitudinal edges of the intermediate portion 12 of the yoke 8, the stiffening tongues 16 having been removed, and the holes 21 weakening the heads 14 so that they can be bent, as and for the purpose last-specified.

In Figs. 6 and 7, parts hereinbefore described have been designated by numerals already used, with the suffix "*a*."

The spacing required may not be such that the arms 26*a* have to be open, as shown in Fig. 5. The spacing required may be no more than that represented by two washers. The arms 26*a* may be folded until their parts are brought into contact, as shown best in Fig. 7, the tightening screw 27*a* passing through the holes 22 of the arms.

In Fig. 8, parts hereinbefore described have been designated by letters and numerals already used, with the suffix "*b*."

The wall may be a baseboard, the opening 20*b* being small enough so that the heads 14*b* of the yoke can overlap the outer surface of the wall. The yoke then may be used in the flat condition of Fig. 3, or the ends of the heads may be broken off, as shown in Fig. 12, as has been explained hereinbefore.

In Fig. 9, parts hereinbefore described have been designated by numerals already used, with the suffix "*e*."

In the form shown in Fig. 9, the tongues 16*e* are formed by slits 29, disposed longitudinally of the heads 14*e* and terminated short of the end edges of the heads, the slits having extensions 30, prolonged transversely of the heads and terminated in spaced relation to the outer longitudinal edges of the heads, the heads having transverse grooves or scores 31, leading from the extensions to the outer longitudinal edges of the heads.

In the form delineated in Figs. 10 and 11, parts hereinbefore described have been designated by numerals already used, with the suffix "*f*."

In Figs. 10 and 11, the tongues 16*f* are formed by an intermediate slit 32, corresponding to the opening 18 of Fig. 3, there being weakening grooves 33 formed in the head 14*f*, the grooves extending from the ends of the slit 32 to the end edges of the head.

In any of its forms, the invention herein disclosed will consummate the objects set forth in the opening portion of this specification.

Having thus described the invention, what is claimed is:

An approximately I-shaped yoke for mounting electrical appliances of the switch box type, comprising an elongated body and transverse heads at the ends of the body, the heads having longitudinal slots provided with extensions prolonged toward the outer edges of the heads, the heads having grooves reaching from the extensions to the outer edges of the heads, the slots, the extensions and the grooves, forming readily bendable and readily severable tongues which are prolonged beyond the longitudinal edges of the body.

ROBERT HAYNES.