J. C. REGAN.

ELECTRIC CUT-OUT BOX.

APPLICATION FILED APR. 10, 1919.

1,406,683. Patented Feb. 14, 1922.

Fig. 1.

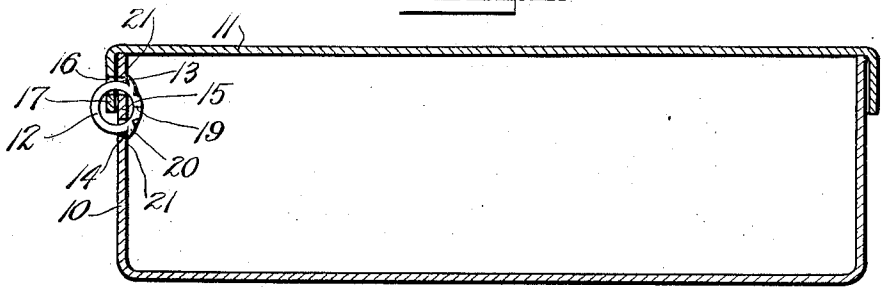


Fig. 3.

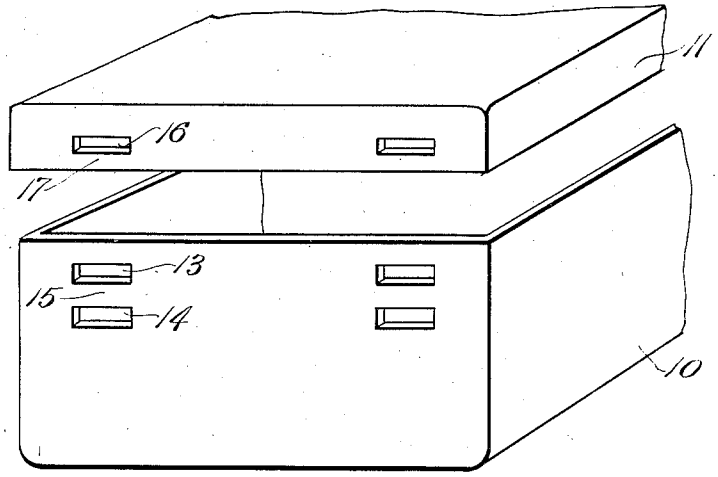


Fig. 4.

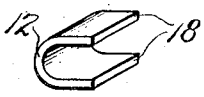


Fig. 4a.

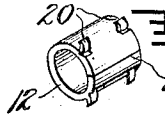


Fig. 2.

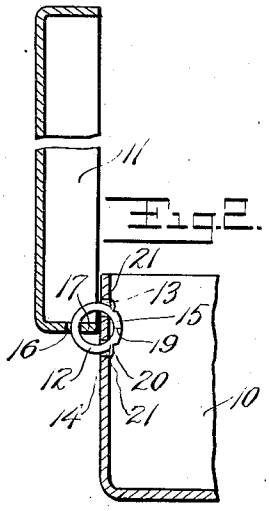


Fig. 5.

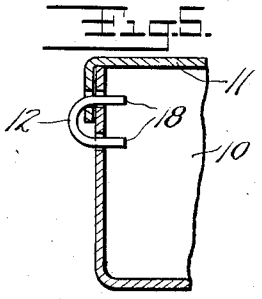


Fig. 6.

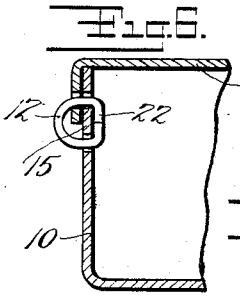


Fig. 8a.

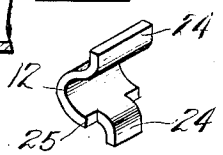


Fig. 7.

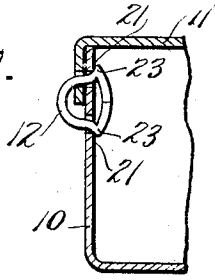
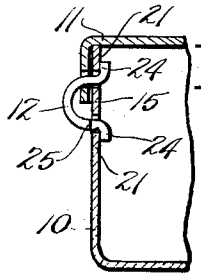


Fig. 8.



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UNITED STATES PATENT OFFICE.

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ELECTRIC CUT-OUT BOX.

1,406,683. Specification of Letters Patent. Patented Feb. 14, 1922.

Application filed April 10, 1919. Serial No. 288,963.

To all whom it may concern:

Be it known that I, JOSEPH C. REGAN, a citizen of the United States of America, residing at New Britain, Connecticut, have invented a new and useful Electric Cut-Out Box, of which the following is a specification.

My invention relates particularly to a hinge construction for such a box.

The main object is to provide a simple and strong construction which can be economically made and which will allow free opening of the box cover.

Briefly described, the invention comprises the providing of slots in the body and in the cover of the box and associating therewith a tubular member which holds the parts together and yet permits the cover to be opened.

Fig. 1 is a sectional view of a switch box taken through the hinge joint and showing the cover closed.

Fig. 2 is a fragmentary view showing the cover raised and the box open.

Fig. 3 is a fragmentary perspective view showing the body and the cover separated.

Fig. 4 is a perspective view of one of the hinge members partially formed, and Fig. 4ª is a similar view of the same as completely formed.

Fig. 5 is a fragmentary view showing the hinge member in process of assembling.

Figs. 6, 7 and 8 are fragmentary sectional views showing modified forms of hinge members, and Fig. 8ª is a detail of the hinge shown in Fig. 8.

The body 10 and cover 11 are usually formed of sheet steel and the cover usually fits over the upper edge of the body. The hinge member or strip 12 is formed into a sort of half round tube or channel before assembling.

The body of the box is provided with slots 13 and 14 adjacent one another with a strip or bar 15 left between them. The cover is provided with a slot 16 so located as to be opposite or in line with the slot 13 in the body of the box when the parts are assembled, as shown in Fig. 1. This leaves a bar or strip 17 at the edge of the cover which lies along side of the bar 15 of the body.

The ends 18—18 of the hinge member 12 are inserted as shown in Fig. 5 and then bent over or formed on the inside of the box so as to prevent withdrawal. This may be done in a number of ways.

In the form shown in Figs. 1 and 2, the ends are pressed toward each other as at 19 to form a cylindrical tube. To prevent rotation, lugs or tongues such as 20 preferably narrower than the body of the hinge may be formed which engage walls 21—21 inside the body of the box, thus preventing the turning of the hinge member and also preventing the hinge member from being opened out if subjected to extraordinary stress. This also distributes the strain of the hinge so that it is borne partly by the bar 15 and partly by the portions 21—21 of the body.

In the form shown in Fig. 6 the inner ends are flattened down so as to provide a tube flattened on one side which is thus prevented from rotating.

In the form shown in Fig. 7, the inside ends are somewhat flattened and are also bulged up and down at 23—23 so as to engage the walls 21—21 of the body of the box and reinforce the hinge even more strongly than in the form shown in Fig. 1.

In the form shown in Fig. 8, the inner ends are bent up and down, 24—24 to engage the walls 21—21. In this form even more of a strain is brought to bear on the walls 21—21 than on the bar 15. Any one of these forms of hinges may be provided with a narrow end or tongue and shoulders such as 25 in Fig. 8 to limit the inward movement of the hinge member at the bottom or at the top, if desired, also so that one of the ends may be bent before being attached to the box, as indicated in Fig. 8ª. The slots in the box and in the cover should of course be only slightly wider than the parts of the hinges which are to pass through them so as to permit the hinges to be readily inserted but so as to leave no unnecessary openings.

It will be obvious that the cover and body of the box may be united by any number of these hinge elements. In the form shown in Fig. 3, two sets of slots are provided so that the box will have two hinges.

The main advantages of this construction are that it is simple and yet reliable and can

be made at slight cost and by the use of simple tools can be assembled readily without the use of expensive jigs or skilled labor.

I claim:—

1. In a construction of the character described, a rectangular box body member and a flanged cover therefor, one of said members having a pair of slots adjacent the edge of one of its sides and the other member having an integral pintle near one edge and adjacent the slots in the member aforesaid, a substantially U-shaped hinge member having one end narrower than the main body of the U-shaped member and providing abrupt shoulders at the juncture of the main body and narrow end, the ends of said hinge member being passed through the pair of slots in one of the members and bent over to secure the hinge member in place with the abrupt shoulders abutting the side adjacent one of the slots.

2. In a construction of the character described, a rectangular box body member and a flanged cover therefor, one of said members having a pair of slots adjacent the edge of one of its sides and the other member having an integral pintle near one edge and adjacent the slots in the member aforesaid, a substantially U-shaped hinge member having a tongue relatively narrower than the hinge member, the ends of said hinge member being passed through the slots and around the pintle and said tongue being bent over and engaging the body of one of said two first mentioned members for preventing said hinge member from rotating.

JOS. C. REGAN.