April 21, 1925. 1,534,723

E. H. LEWIS

SECTIONAL SWITCH BOX

Filed Aug. 1, 1924

Fig. 1.

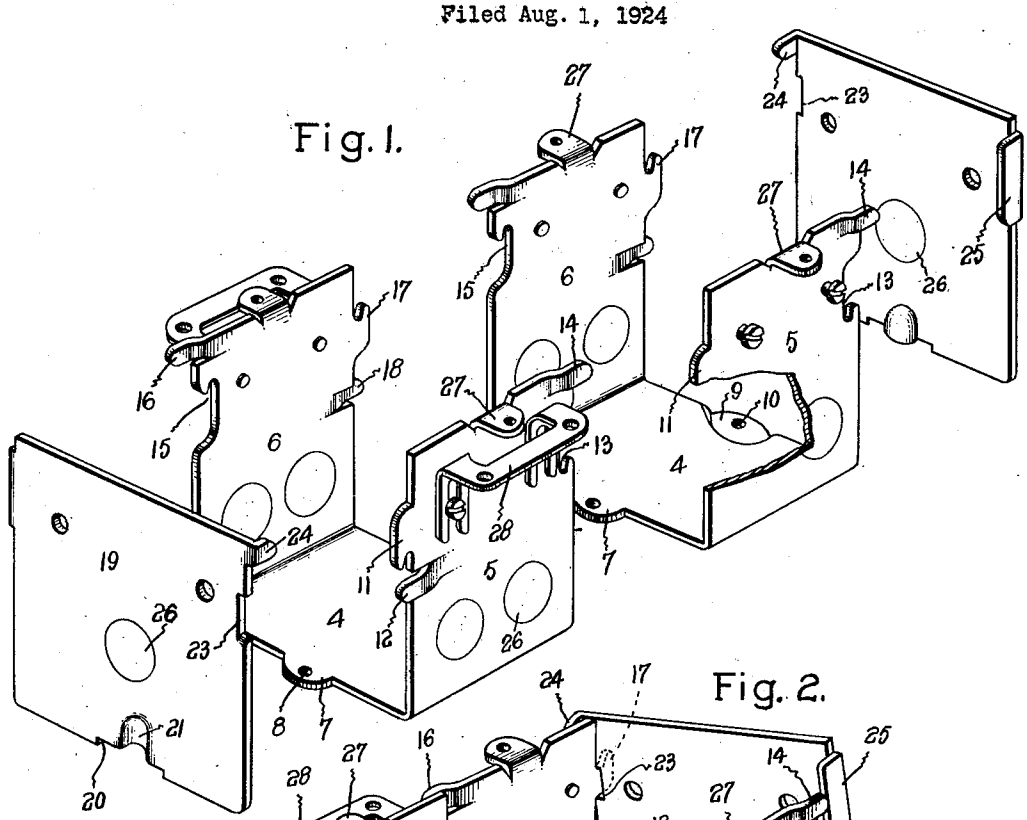


Fig. 2.

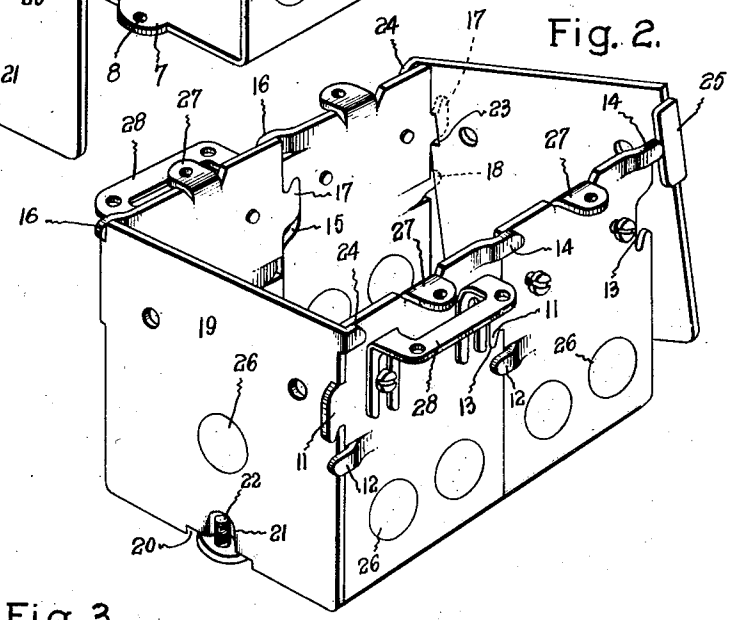
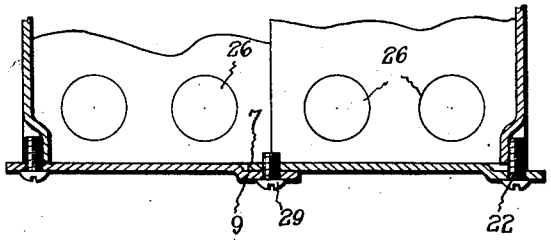


Fig. 3.



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UNITED STATES PATENT OFFICE.

EDWARD H. LEWIS, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

SECTIONAL SWITCH BOX.

Application filed August 1, 1924. Serial No. 729,632.

To all whom it may concern:

Be it known that I, EDWARD H. LEWIS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield, State of Connecticut, have invented certain new and useful Improvements in Sectional Switch Boxes, of which the following is a specification.

The present invention relates to sectional switch boxes or what are sometimes termed gang switch boxes, such boxes comprising, as is well known, a plurality of box elements which may be fastened together to form a box structure having any suitable number of sections for receiving switches or the like.

The object of the invention is to provide an improved switch box structure which can be built up to any desired length from but two different parts or elements, viz: a body member and an end plate, and wherein such parts are simple in structure, economical of material, and capable of being manufactured at a low cost.

For a consideration of what I believe to be novel and my invention, attention is directed to the accompanying description and the claims appended thereto.

In the drawing, Fig. 1 is an exploded perspective view of an outlet box embodying my invention, two body members and two end plates being shown; Fig. 2 is a perspective view showing the parts illustrated in Fig. 1 assembled into a box, except for one end plate which is partially in position, and Fig. 3 is a detail sectional view through the lower portion of the box shown in Fig. 2.

Each body member comprises a bottom wall 4 and side walls 5 and 6. Bottom wall 4 is provided at what for convenience of description may be termed its forward edge with a projecting tongue 7 which lies in the plane of wall 4 and is provided with a tapped opening 8, and at its rear edge with a projecting tongue 9 located below the plane of the bottom of the box so as to form a depression adapted to receive a tongue on another box section similar to tongue 7. In tongue 9 is a tapped opening 10.

Side wall 5 is provided on its forward edge with a forwardly projecting downwardly facing hook 11 which lies in the plane of wall 5, and just beneath hook 11 is a forwardly projecting finger 12 which is offset so as to lie just outside of the plane of wall 5. On the rear edge of wall 5 is an undercut recess 13 adapted to receive a hook corresponding to hook 11 and above this is a projecting finger 14 which is offset so as to lie just outside the plane of wall 5.

On the forward edge of wall 6 is an undercut recess 15 and projecting finger 16 corresponding to recess 13 and finger 14 on the rear of wall 5, and on the rear of wall 6 is a hook 17 and finger 18 corresponding to hook 11 and finger 12 on the forward edge of wall 5. Recess 15 and hook 17 differ from recess 13 and hook 11 in that they face in the opposite direction.

Each end plate 19 has a notch 20 in its bottom edge adapted to fit over tongue 7 or tongue 9 and a recess 21 adapted to receive the end of a screw 22 as shown in Figs. 2 and 3. In its one side edge is a notch 23 adapted to engage with a hook 11 or 17 and projecting forwardly from this edge is an ear 24 adapted to engage a side wall of the body member as shown in Fig. 2. On the other side edge is a forwardly projecting flange 25 adapted to lie under a finger 14 or 16.

The box is provided with the usual knockouts 26, mounting ears 27, and supporting brackets 28.

In assembling a box, any desired number of body members may be attached together in a manner which is obvious from the drawing, hooks 11 and 17 of two adjacent members being engaged with recesses 13 and 15 respectively. This brings tongues 7 and 9 into overlapping engagement, and they are then fastened together by a screw 29, see Fig. 3. Fingers 12, 14, 16 and 18 engage the outer surfaces of the walls, the fingers on the edge of one wall overlapping the edge of the adjacent wall. The body members are thus positively locked together by the hooks and the screw 22, and are held from lateral movement by the projecting fingers.

In assembling an end plate, the notch 23 is placed over the shank of a hook 11 or 17, with ear 24 on the outside of the side wall of the body member, the end plate being held at an angle to the body member as is shown in Fig. 2. The end plate is then moved downwardly and inwardly to bring flange 25 under a finger 14 or 16. The parts are dimensioned so that flange 25 moves under finger 14 or 16 with a sort of wedging action, ear 14 being pulled up tight

against the side wall of the body member. Screw 22 is then put into position to positively hold the end plate in place. The flanges 25 are of sufficient depth to cover the recesses 13 and 15.

By the above described arrangement I provide a box which is easily and quickly assembled, and in which, when assembled, the sections are firmly attached to each other and are held rigidly in alignment and against lateral movement. At the same time, the box is economical of material being capable of manufacture with but little waste.

In accordance with the provisions of the patent statutes, I have described the principle of operation of my invention, together with the apparatus which I now consider to represent the best embodiment thereof, but I desire to have it understood that the apparatus shown is only illustrative and that the invention may be carried out by other means.

What I claim as new and desire to secure by Letters Patent of the United States, is:—

1. A sectional switch box comprising body members and end plates, said body members having side walls provided with engaging hooks and recesses in their edges which lie in the planes of the side walls, and bottom walls provided with overlapping projections having openings for fastening means, and said end plates having notches for engagement with the hooks of the body members and recesses adapted to receive fastening means inserted in the openings in said projections.

2. In a sectional switch box, body members having bottom and side walls, said side walls being provided at their edges with engaging hooks and recesses which lie in the planes of the side walls and with projecting fingers which lie outside the planes of the side walls and engage outer surfaces of the side walls, projections on the edges of the bottom walls, one of said projections lying in the plane of the bottom wall, and the other being outside the plane of the bottom wall whereby projections on adjacent edges over lap, and end plates having notches in their edges for engagement with the hooks of the body members and inturned fingers for engagement with the side walls of the body members.

3. In a sectional switch box, a body member having a forwardly projecting hook on the edge of one side wall which lies in the plane of the wall, and a forwardly projecting finger on the edge of the other side wall, and an end plate provided with a notch in one edge adapted to engage said hook and an inturned flange adapted to engage the outer surface of a side wall of the body member, said flange lying directly under and in engagement with said forwardly projecting finger.

4. In a sectional switch box, a body member having a forwardly projecting hook on the edge of one side wall, which lies in the plane of the wall, a forwardly projecting finger on the edge of the other side wall and a projection on the bottom wall provided with an opening, an end plate provided with a notch in one edge which engages said hook and an inturned flange which is wedged under said projecting finger, and a member fastened in the opening in said projection and engaging the outer surfaces of said end plate.

In witness whereof, I have hereunto set my hand this 29th day of July, 1924.

EDWARD H. LEWIS.