May 26, 1931. C. E. HANNY 1,807,527

PANEL BOARD CABINET CLAMP

Filed Jan. 16, 1928 2 Sheets-Sheet 1

Fig. 2.

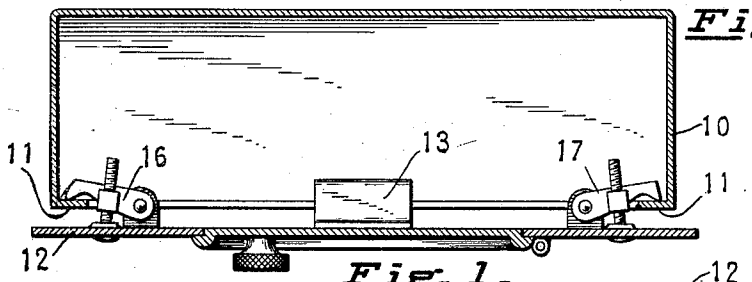


Fig. 1.

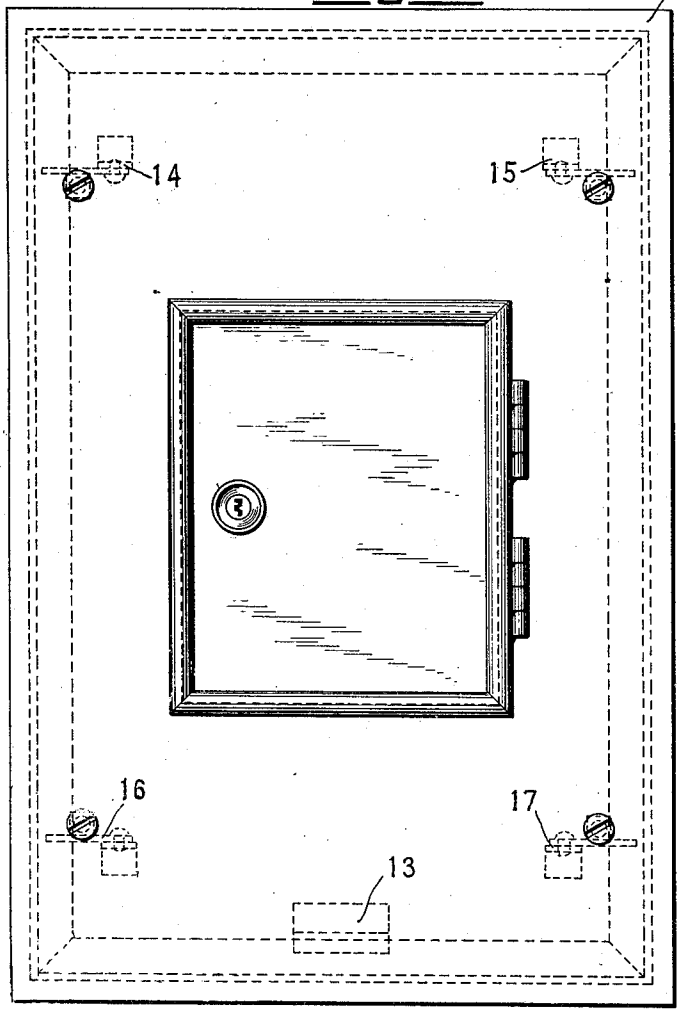
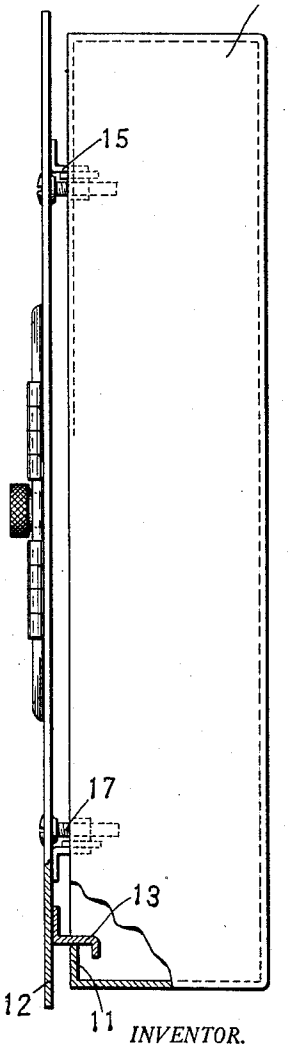


Fig. 3.



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Filed Jan. 16, 1928 2 Sheets-Sheet 2

Fig. 4.

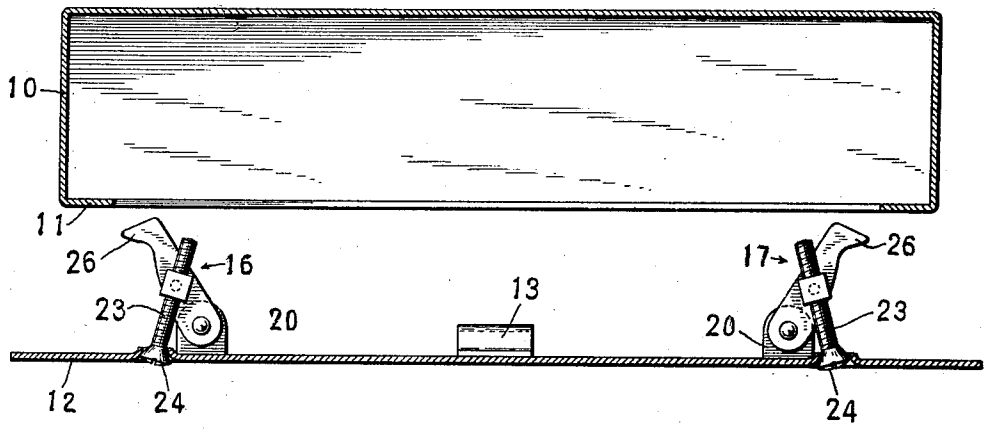


Fig. 5.

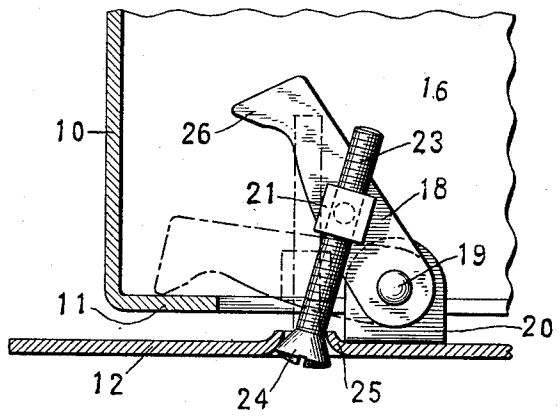


Fig. 6.

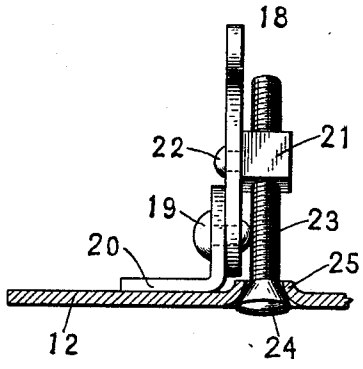
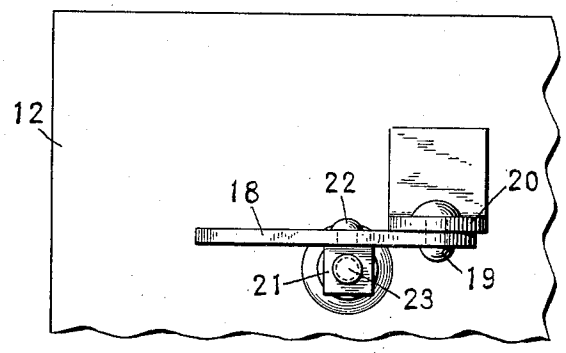


Fig. 7.



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UNITED STATES PATENT OFFICE

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PANEL BOARD CABINET CLAMP

Application filed January 16, 1928. Serial No. 247,102.

The main object of my invention is to provide a simple but reliable means for securing the front of a panel board cabinet to the box or receptacle portion of the cabinet. Various forms of clamps have been heretofore used, but they are usually insecure, or unreliable, or require considerable time and care to apply them.

One object is to provide a construction which can be more easily and quickly installed and adjusted.

Another object is to provide a construction which has a considerable effective range of adjustment.

Another object is to provide a construction in which the cover member of a panel board cabinet may be applied by operations entirely controlled from outside the cabinet.

Another object is to provide a simple and inexpensive construction which will have a maximum strength and reliability.

In its preferred form the invention contemplates the use of special clamping devices hinged to the back of the front or face plate of the cabinet and provided with adjusting screws, the heads of which are exposed.

Fig. 1 is a front view of a cabinet with the novel clamp construction shown dotted behind the face plate.

Fig. 2 is a horizontal sectional view.

Fig. 3 is a side view, one corner being broken away to show a supporting shelf.

Fig. 4 is a horizontal sectional view and plan showing the front plate about to be applied or removed.

Fig. 5 is an enlarged fragmentary section and plan showing one of the clamps in the disengaged position in full lines and in its clamping position in a dot and dash line.

Fig. 6 is an edge view and cross section showing a clamp and its attachment to the face plate.

Fig. 7 is a rear view of a fragment of the face plate showing one of the clamps.

The box or receptacle portion 10 of the cabinet may be of any suitable character and provided with an interior flange 11 extending around the front opening. The cover or face plate 12 may be of any suitable character. The shelf or lug 13 is secured to the lower edge of the plate in position to engage the bottom flange 11 of the cabinet and position and support the face plate.

The clamps are preferably arranged in pairs, 14 and 15 being arranged near the top and 16 and 17 near the bottom. Each clamp has an arm or lever 18 pivoted on a rivet 19 which is secured to a bracket 20 welded or riveted to the back of the face plate. The threaded nut 21 is pivoted at 22 to the arm 18. The screw 23 extends through the face plate 12 and has a slotted conical head 24 seated in a funnel-like seat 25 in the face plate. The shank of this screw extends through the nut 21 so that the rotation of the screw will move the nut in or out as the case may be and thus swing arm 18 about the pivot 19. The tip 26 of the arm 18 is adapted to engage the back of the flange 11.

The shelf or bracket 13 serves a very useful purpose in that it enables a workman to attach and adjust a very heavy cover with perfect ease. The inner end of the shelf is preferably bent over as shown in Fig. 3 so that the workman may set the hooked end over the flange of the box in which position the shelf takes up all the weight of the cover and the hooked end prevents it from slipping out of place. The shelf is so located that, when it rests upon the flange of the box, the cover is correctly positioned with respect to height and the shelf functions as a pivot and allows the cover to be freely tilted in any direction.

To apply the face plate the clamps are first adjusted into the positions shown in Fig. 4, the distance from the point of tip 26 to the point of the opposite tip 26 being slightly less than the width of the opening in the cabinet. The shelf or lug 13 is then hooked over or rested on the bottom flange 11 of the cabinet. The face plate is then tilted back against the wall and the screws tightened until the clamping arms are drawn up snug.

It will be seen that this construction permits of a very considerable variation in the spacing of the face plate away from the box or receptacle of the cabinet.

Also the construction permits the use of

the same cover in connection with boxes having flanges of different thicknesses, for instance, the box might be of wood in which case the flange would be of much greater thickness than the metal box as shown. The clamps on the opposite edges being entirely independent of each other, the face plate can be drawn up flat against the wall even though the box part of the cabinet is not parallel to the face of the wall. The independence of the various clamps also insures a tight fit even though the flanges of the cabinet may be bent or irregular.

By this construction it is a very easy matter for one man to attach and adjust the cover or face plate to the box in a very few moments. This construction is not only easy to set up but it permits of considerable vertical as well as horizontal adjustment. As the screws are permanently connected to the clamps and cannot be removed, no time will be lost in trying to locate screw holes. As each clamp is mounted on a fixed pivot, there is never any danger of its being displaced or working loose and releasing the face plate, also it is designed to move only in one direction when the screws are being tightened up, therefore it can engage the flange of the box only in the predetermined manner.

I claim:

1. A cover plate having clamps arranged at the rear, each clamp comprising a lever pivotally mounted on the plate to swing in a plane substantially at right angles to the plane of said plate, a screw extending through said plate and a nut pivoted to said lever and providing a seat for said screw.

2. A switch box cover clamping means, a cover for a box, a bracket non-rotatably secured to said cover, a clamping lever pivotally mounted on said bracket, a threaded nut rotatably mounted on one side of said clamping lever and a screw projecting thru said cover from the opposite side of the cover and having adjustable engagement with said nut alongside of said lever.

3. A panel construction comprising a plate having a passage for a clamp screw near one edge, a lug secured to the plate and projecting rearwardly therefrom adjacent said passage, a lever arm hinged to said lug on an axis parallel to the adjacent edge of the plate, a nut pivotally connected to said arm and a screw extending through and rotatable in said passage and in said nut for swinging said arm from a position approximately parallel with the plate to a position where its swinging end is substantially in line with the screw passage.

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