

Aug. 1, 1933.

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1,920,797

CABINET AND ANALOGOUS DEVICE

Filed March 31, 1931

2 Sheets-Sheet 1

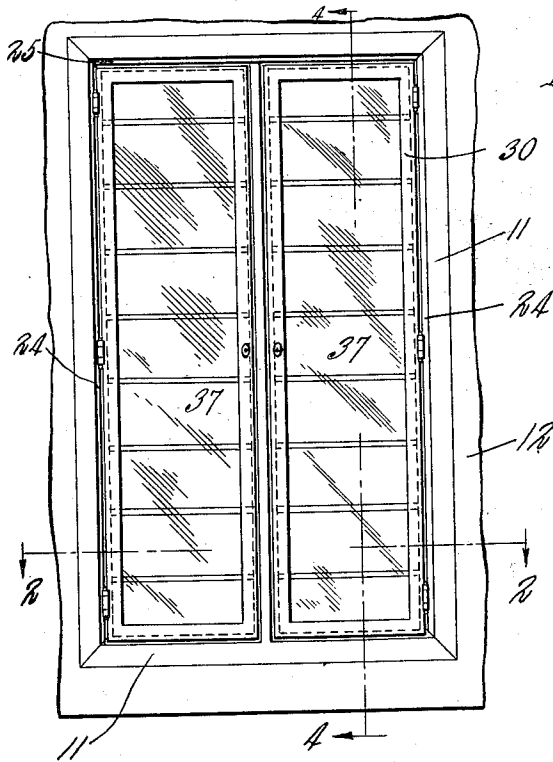


Fig. 1

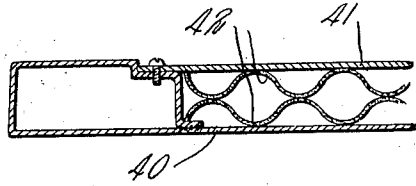


Fig. 3

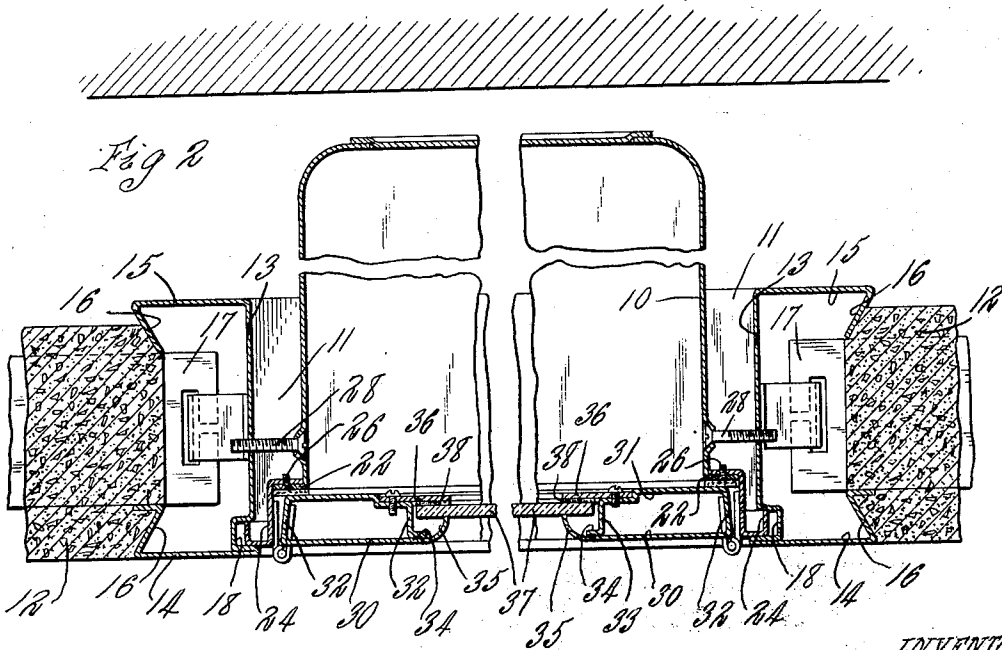


Fig. 2

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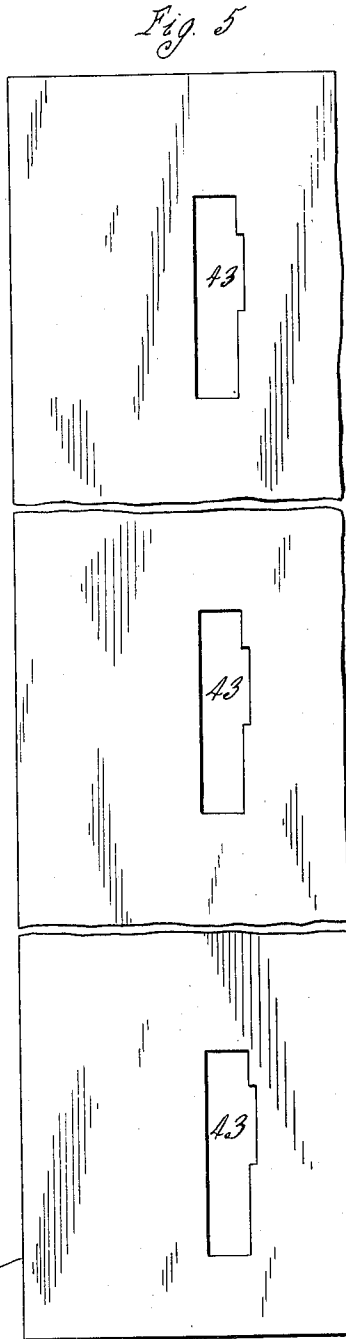
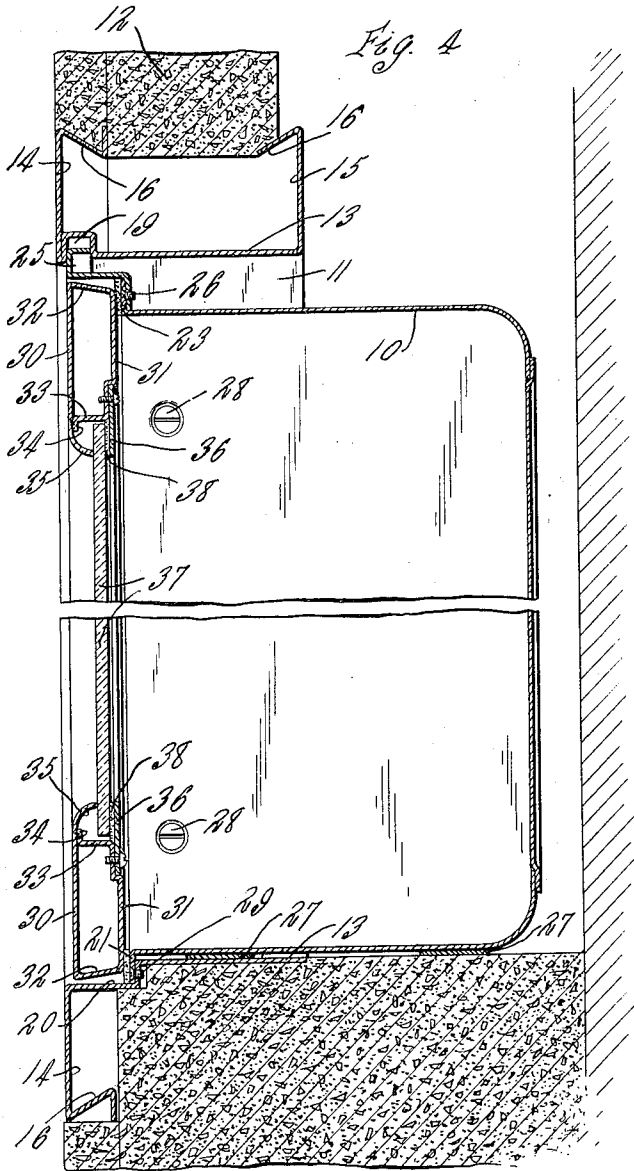
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CABINET AND ANALOGOUS DEVICE

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9 Claims. (Cl. 312—112)

This invention relates to cabinets, cases and the like, and more particularly to metallic wall cabinets, cases, or analogous devices of the sort which are built into or located in recesses in the walls of buildings. Cabinets or cases of this sort are used in hospitals and other buildings and it is desirable, particularly in the cases used in hospitals, to construct and mount them so as to eliminate as far as possible all crevices, ledges or the like in, or on which, dust or foreign matter can lodge or collect, and so that the cases and their doors or closure elements and the frames within which the cases are arranged can be closely fitted to one another, with cracks of minimum width between the parts.

One object of my invention is to produce a cabinet, case or analogous device arranged within a receiving opening or frame, which may be a permanent part of a wall or building, and to construct the device so as to accomplish the above mentioned results. It is also an object to so construct the device that the case and its door or closure element can be accurately fitted to each other at the factory, and the case mounted within the receiving frame or opening so as to insure a neat, finished appearance and avoid any open cracks or crevices between the case and the frame or walls of the receiving opening.

Other objects of the invention are to provide a cabinet or the like comprising a case arranged within a frame and furnished with parts which bridge and close the spaces between the frame and the case and provide a neat front finish for the device; also to provide a case, arranged within a stationary frame, which is adjustable relatively to the frame in a manner to enable cabinets having cases and doors of uniform size to be properly fitted within frames, which may vary somewhat in dimensions, so that the front or exposed face of the case will properly fit and fill the frame opening; also to provide a case or the like, a stationary frame within which the same is arranged, and means which bridge and close the space between the case and the frame; also to provide a structure comprising a frame which is built into, or constitutes a part of a wall, and a case which is arranged within said frame and is provided with parts which are adapted to enter and adjustably fit within internal recesses in the walls of the frame; also to provide a case or the like furnished with marginal portions which are adapted to enter recesses in a frame within which the case is located, and means for adjusting and centering the case within the frame, whereby the case is adapted to be

properly fitted and mounted within the frame, notwithstanding variations in the dimensions of the frame and case; also to provide a door of improved construction for cabinets and the like; and also to improve the construction of cabinets, cases and analogous devices in the respects hereinafter described and set forth in the claims.

In the accompanying drawings:

Fig. 1 is a front elevation of a wall cabinet embodying my invention.

Fig. 2 is a sectional plan view thereof on an enlarged scale, line 2—2, Fig. 1.

Fig. 3 is a fragmentary section illustrating a modified construction of the cabinet door.

Fig. 4 is a sectional elevation on an enlarged scale on line 4—4, Fig. 1.

Fig. 5 is a broken plan view of one end of the blank from which the door or door stile is made.

10 represents a case, such as the casing of a closure element or hollow body of a cabinet or analogous device, and 11 represents a frame within which the case 10 is received or mounted. The frame 11 may be, and is illustrated as being, a metallic buck, which is built into a wall 12 so as to provide a framed opening in the wall for the reception of the case 10. The frame 11, as shown, is rectangular and made of sheet metal bent to form a web 13 which bounds or forms the receiving opening for the case 10, and front and rear flanges 14 and 15 which extend outwardly from the opposite ends of the web 13 and are provided with in-bent, outer edges 16, which may be embedded in the concrete, plaster, or other material of the wall 10, the front flanges 14, preferably being flush with the front face of the wall 12. The buck or frame 11, except as will be presently described, may be of ordinary construction, and it may be anchored or secured in place by the usual anchoring devices 17 connected to the frame and embedded within the wall 12.

The web or wall 13 of the frame 11 is formed at the vertical sides of the frame near their front edges with vertical channels or recesses 18, and at the top of the frame with a similar channel or recess 19. The recesses 18 and 19 are in the same vertical plane and join each other, thereby forming a recess in the web 13 extending continuously around the opposite vertical sides and top of the frame opening. These recesses are preferably formed by bending the plate which forms the frame to provide an outwardly extending part bent back against the rear face of the front flange 14, thereby giving the front flange 14 a folded or double inner edge, then a rear-

wardly extending part, then an inwardly and finally a rearwardly extending main web part.

At its bottom or lower end, the web 13 of the frame 11 is preferably formed with a rabbet 20, having a horizontal bottom face extending inwardly from the front face of the frame and an upwardly extending shoulder or inner end.

The case 10 may be made of sheet metal and of any suitable construction adapted for the purpose for which it is intended, but preferably is provided at the outer or front end of its bottom with a downwardly projecting flange 21, and with similar outwardly projecting flanges 22 and 23, formed respectively at the opposite sides and top of the front end of the case. The bottom flange 21 is adapted to seat in the rabbet 20 of the frame 11 against the vertical inner end of the rabbet. Arranged at the front portions of the sides of the case are removable members 24, and arranged at the top of the case is a similar removable member 25. These members are preferably of the cross-sectional Z-shape shown in the drawings, each having a forwardly and rearwardly extending web, a rear flange projecting inwardly from the inner end of the web and adapted to be secured by screws 26 against the rear face of one of the outwardly projecting flanges 22 or 23 of the casing, and an outwardly projecting front flange with a back-turned outer edge which is adapted to enter and slidably fit within one of the recesses 18 or 19 of the frame 11.

In mounting the case within the frame 11, the members 24 and 25 are first detached from the case and inserted within the recesses 18 and 19 of the frame. The case 10 is then shoved into the opening of the frame 11 with its front flanges 22 and 23 against the rear flanges of the members 24 and 25, and the latter are secured by the screws 26 to the case flanges 22 and 23. The case is then levelled up within the receiving opening or frame, by suitable shims or plates 27, if necessary, between the bottom of the case and the bottom of the frame 11 or case-receiving opening and the case is centered laterally in the opening of the frame 11 by suitable means, such as screws 28, of which any suitable number may be provided, which pass through holes in the opposite side walls of the case and are screwed into threaded holes in the opposite upright sides of the web 13 of the frame 11.

The members 24 and 25 are adapted to slide in or out in the recesses 18 and 19 of the frame to the extent necessary to permit the required adjustment of the case within the receiving opening or frame 11 and the flanged front ends of the members 24 and 25 preferably fit snugly between the front and rear walls of the recesses 18 and 19, thereby closing these recesses against the entrance of dirt or foreign matter. In this way, the case may be centered and fitted within the frame or opening notwithstanding variations in the dimensions of the opening or case. Nevertheless, the filler, or bridging members 24 and 25, bridge and close the spaces or the cracks between the walls of the frame and case at the front end of the case, and provide a neat, attractive front finish for the case. The bottom flange 21 of the case is also preferably secured, as by screws 29 to the inner end or shoulder of the rabbet 20 of the frame 11.

By the construction described, the front flanges or faces of the receiving frame or walls of the receiving opening overlap and hide the outer edges of the filler or bridging members and no

gaps are left between the walls of the opening and the front end of the case. The case body and door, or doors, can be finished at the factory and therefore can be accurately and closely fitted to each other, but if the case does not accurately fit and fill the receiving frame or opening because of the construction of the frame and case at different times or places, because of distortion of the frame, or for any other reasons, the described adjustability of the case in the frame affords an opportunity to shift the case slightly in the frame either to the right, left or vertically, as may be necessary, and the bridging members extending across the cracks between the case and frame and secured to one of these parts and entering the recesses in the other part will close any gaps between the case and frame. It is thus possible to more readily assemble and erect the case in the field without resorting to the expensive and slow fitting that otherwise might be necessary, or in some instances, actual cutting down of parts in the field, or returning the case to the factory for alteration.

The cabinet shown is provided with double doors but a single door or front closure member for the cabinet could be provided if preferred, and the door or doors may be of plain or paneled construction. The paneled door shown in Figs. 1, 2 and 4 comprises side and top rails or stiles and an inset panel which may be of glass, metal or other material. Each rail or stile of the door is preferably constructed of a single sheet metal plate bent into hollow tubular form having a front wall 30, a back wall 31, an outer edge wall 32 and an inner edge wall 33, the end of the inner edge wall 33 being formed with a flange 34 parallel with the front wall 30, to the rear face of which it is permanently secured as, for instance by spot welding. The inner edge of the front wall 30 preferably extends inwardly beyond the edge wall 33 of the rail and is bent inwardly forming a panel-retaining flange 35 between which and a removable strip 36 the panel 37 is secured. Preferably the strip 36 is secured as by screws within a rabbet in the back wall 31 of the rail, a suitable cushioning strip 38 being interposed between the securing strip 36 and the panel to form a yielding bearing for the panel and insure of the panel being tightly clamped between the flange 35 and the securing strip 36. The tubular side, top and bottom rails or stiles of the door may be welded or otherwise joined to each other at the corners of the door. Each rail or stile of the door is thus formed of a single sheet metal plate bent into tubular form with its edges welded or rigidly secured together in any suitable way so that except for the removable panel strip, each stile or rail of the door is formed by a single integral piece thereby making a strong, rigid and durable construction.

In the case of a plain, flush or solid door such as shown in Fig. 3, in which no glass or inset panel is used, the construction is the same except that the opposite side rails of the door and the connecting wall or plate 40 of the door are formed from a single sheet metal plate. In this door the plate 40 which forms the front wall of the door has its opposite side edges bent around and welded to the rear face of the plate, thus forming the hollow stiles or rails of the door, similar in form to the rails or stiles of the paneled door before described. This solid or flush door, if desired, can be made with a back plate 41 parallel with and spaced from the front plate 40 and having its edges secured in rabbets in the rear

faces of the stiles, as shown, and if desired, sound deadening or stiffening filler strips or plates 42 may be arranged and secured between the front and rear metal plates of the door, as illustrated in Fig. 3.

having an opening in which the case is arranged with spaces left between the case and the walls of said opening at a plurality of the sides of the case, permitting adjustment of the case to different positions within the opening, said structure and case having flanges along substantially the entire lengths of said sides of the case and projecting toward one another to bridge and close said spaces and overrun one another face to face so as to keep said spaces bridged and closed in all adjustments of said case in said structure.

5. The combination of a case, and a frame in which the case is arranged with spaces between the frame and the case at a plurality of the sides of the case permitting adjustment of the case to different positions within the frame, said case having front flanges which project outwardly therefrom into recesses in the inner perimeter of said frame, and in which recesses said flanges are movable in the adjustments of the case.

6. The combination of a case, a frame in which the case is arranged with space between the case and the frame permitting adjustment of the case within the frame, and a front flange removably secured to the front end of the case and projecting outwardly therefrom into a recess in the inner perimeter of said frame.

7. The combination of a case, a frame in which the case is arranged with spaces between the case and the frame permitting adjustment of the case within the frame, and a bridging-frame removably secured to the outer end of said case and bridging the spaces between the case and the frame, said frame having front portions overlapping the outer edges of said bridging-frame.

8. The combination of a case, a frame in which the case is arranged with spaces between the case and frame permitting adjustment of the case to different positions within the frame, and a bridging-frame removably secured to the front end of said case and projecting laterally outward from said case, said frame having recesses in its inner perimeter into which said bridging-frame extends, said recesses permitting adjustment of the case within the frame.

9. The combination of a frame having a web forming a case-receiving opening and a face flange at the front end of said web, and a case arranged in said opening with space between the frame and case permitting adjustment of the case in said opening, said case having a front flange extending from said case across said space and back of said face flange of the frame.

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An advantage of the described door construction having the single-piece tubular stiles or rails is that the same forming tools can be used for constructing glass or paneled doors and solid or flush doors. Furthermore, the same dies can be used for all sizes of doors for punching the openings 43, see Fig. 5, that are provided for the attachment of hinges or other hardware to the doors, the set-up always being gaged from the adjacent edge of the flat plate 44 Fig. 5, before it is bent into tubular form.

I claim:—

1. The combination of a frame having a case-receiving opening and a recess leading from said opening, a case arranged in said opening and adjustable to different positions therein, and a member arranged in said recess in said frame and extending from the frame to the case, said member being movable in said recess to allow adjustments of the case in the frame and bridging the space between adjacent sides of the case and frame in different adjustments of the case.

2. The combination of a structure forming a case-receiving opening, and a case arranged in said opening with space left between adjacent sides of the case and opening permitting adjustment of the case to different positions in the opening, said case having a member projecting from a side of the case toward the adjacent side of said opening, said structure having a portion overlapping said member for the full height of said space and relatively to which said member is laterally adjustable in the adjustments of said case in said opening, said overlapping portion and said member together bridging said space.

3. The combination of a case, a frame having an opening in which said case is arranged with a space left between adjacent sides of the case and frame permitting adjustment of the case in the frame, said case having a front portion projecting from a side thereof toward said frame, and said frame having a front portion fixed thereto in front of and slidably overlapping the outer edge of said case portion with said front portions of both case and frame extending for the full length of said space, and means for securing said case in different adjusted positions relatively to said frame.

4. The combination of a case, and a structure

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