

Aug. 4, 1942.

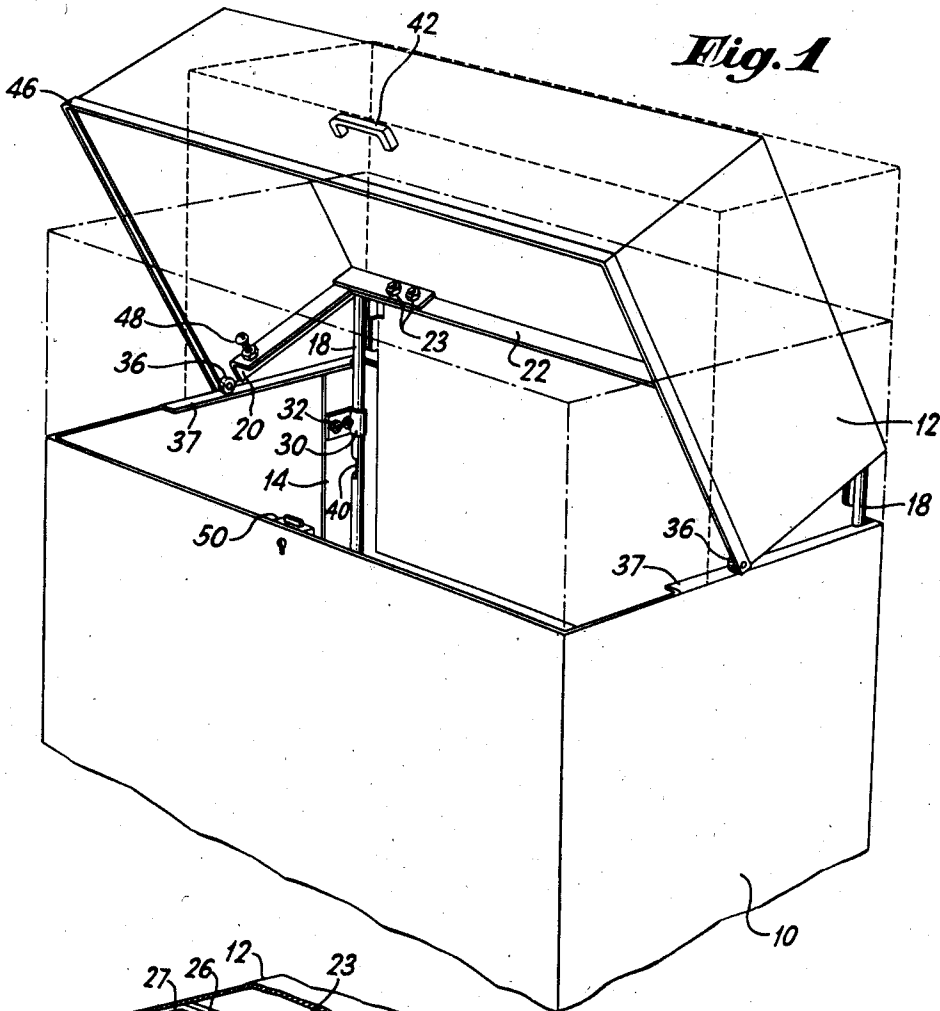
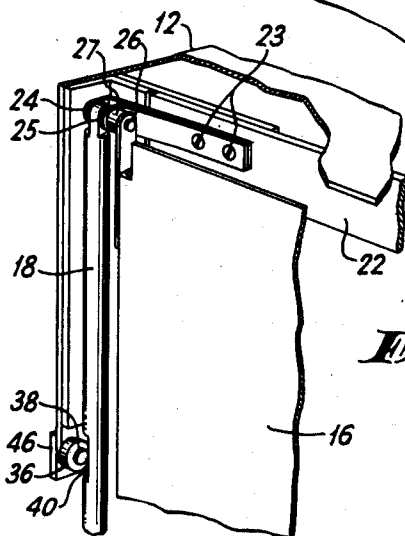
R. G. SHANKWEILER

2,292,092

CABINET COVER

Filed July 23, 1938

2 Sheets-Sheet 1



BY

INVENTOR.  
R. G. SHANKWEILER

*H. S. S. S. S.*  
ATTORNEY.

Aug. 4, 1942.

R. G. SHANKWEILER

2,292,092

CABINET COVER

Filed July 23, 1938

2 Sheets-Sheet 2

*Fig. 3*

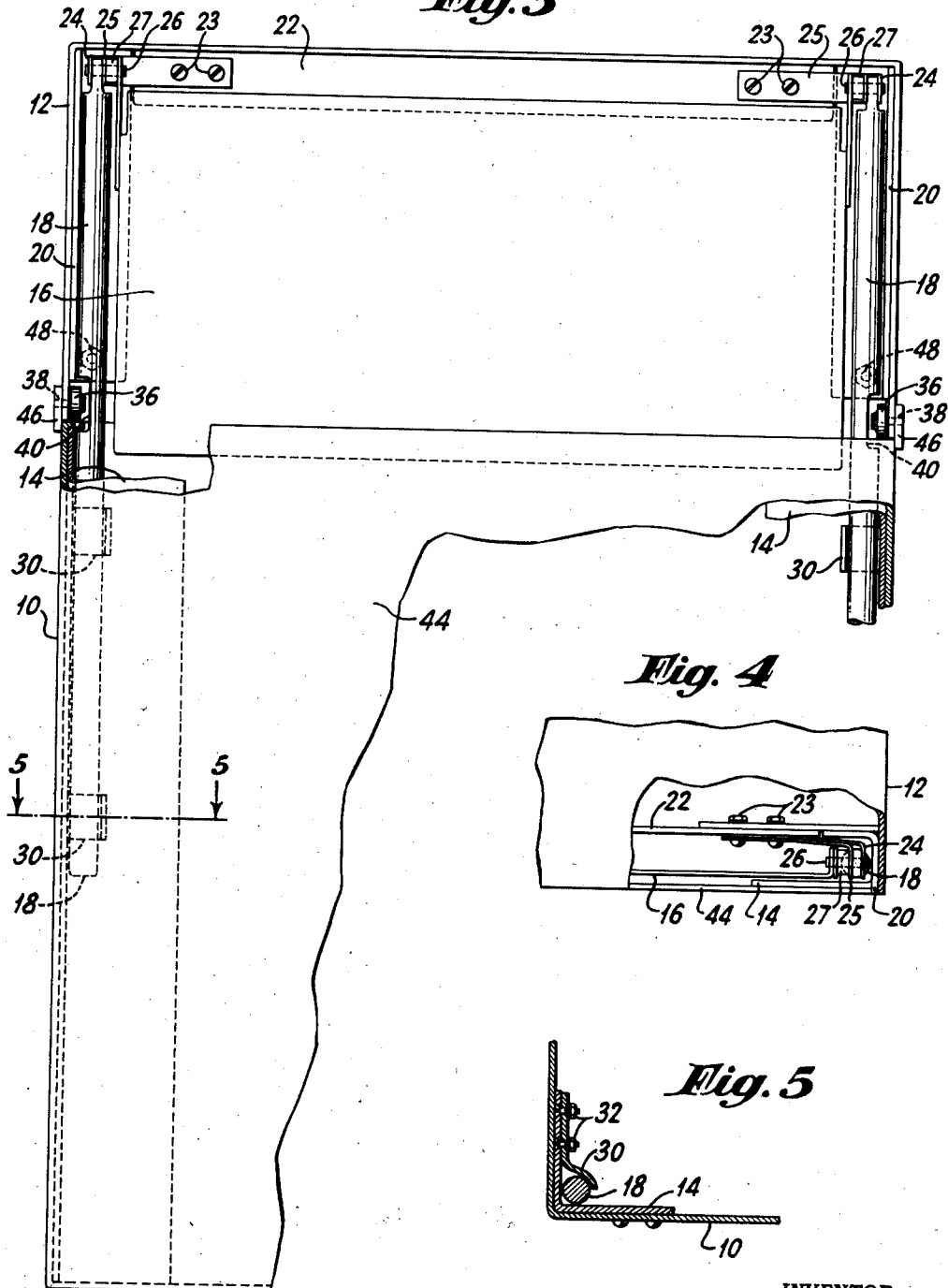


*Fig. 4*

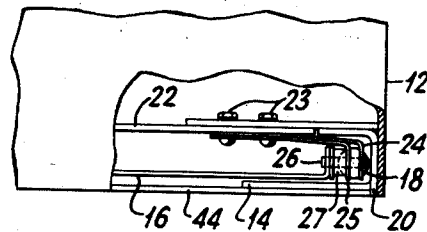
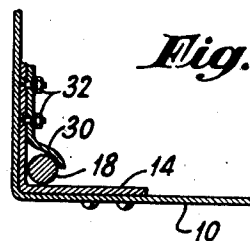


*Fig. 5*



BY

INVENTOR.  
R. G. SHANKWEILER

*H. S. Brown*  
ATTORNEY.

## UNITED STATES PATENT OFFICE

2,292,092

## CABINET COVER

Ray G. Shankweiler, Philadelphia, Pa., assignor  
to Radio Corporation of America, a corporation  
of Delaware

Application July 23, 1938, Serial No. 220,949

## 4 Claims. (Cl. 220—38)

This invention relates to a cover for a cabinet and more particularly to the manner in which the cover is supported and moved with respect to the cabinet proper.

In the usual cabinet where the cover therefor occupies some material vertical height, the cover is ordinarily hinged at the lower rear edge so that when the front of the cover is lifted, it pivots about the hinge member and rotates with respect to the cabinet proper. When a cover member is so hinged or so attached to the cabinet proper, the upper rear edge of the cover member during the opening of the cover necessarily moves rearwardly with respect to the cabinet and when the cover has been rotated through 90 degrees to completely open the cabinet, the top member or surface of the cover is parallel with the back of the cabinet proper, but is spaced therefrom a distance equal to the height of the cover. This construction is not entirely desirable where a cabinet member with a removable or rotatable cover is to be placed against a wall, particularly if the cover is of any appreciable height, since the cover will strike the wall when being moved relative to the cabinet.

It is therefore one purpose of the present invention to provide a cover member for a cabinet, the cover being so positioned and supported with respect to the cabinet proper that the cover may be rotated through 90 degrees while at the same time no part of the cover extends beyond the plane of the back wall of the cabinet during movement of the cover.

A further purpose of the present invention resides in the provision of means whereby the cover member may be used as a light shield when in its open position to facilitate the reading of instruments which may be located within the cabinet proper, when the cover is open.

A still further purpose of the present invention resides in the provision of means whereby the cover may be entirely removed from the cabinet proper without the necessity of removing any mechanical parts or unfastening any securing means.

A further purpose of the present invention resides in the provision of means whereby the rear wall of the cover member is caused to move in a plane parallel to the plane of the rear wall of the cabinet when the cover member is open, in order that the rear wall will not interfere with any instruments or other objects which may be positioned in the cabinet proper.

Still another advantage of the present invention resides in the fact that a minimum space

is required for the cabinet and lid, or cover, and further, the cover, in being opened or closed, obstructs or interferes with a very minimum of space within the confines of the cover.

Still another advantage of the present invention resides in the fact that the cover in its open position rests on its back peripheral surface and no latches, springs, or counterweights are necessary in order to maintain the cover in its open position.

Still other advantages of the present invention will become more apparent to those skilled in the art from a reading of the following specification and claims, particularly when considered in connection with the drawings, wherein reference characters represent like parts and wherein:

Figure 1 shows a perspective view of the cabinet and cover member therefor,

Figure 2 shows in detail the manner in which the guide rods are attached to the cover,

Figure 3 is a rear view of the cabinet and cover member,

Figure 4 shows a further detail of the cabinet, and

Figure 5 shows a section taken at 5—5 on Figure 3.

Referring now to Figure 1, a cabinet member is shown at 10, having a lid or cover 12 therefor. The cabinet proper includes four sides, which may be constructed of any material such as wood or sheet metal, and may be reinforced by angle members 14 positioned at the corners thereof. The cabinet may also include shelves or partitions and various openings may be included in the side walls thereof. No specific details of the cabinet proper other than those necessary to properly show and describe the invention are herein shown.

The lid or cover 12 comprises front and side members of any desirable height and a top member, all of which are attached together by appropriate material. The rear wall 16 of the cover is not attached to the adjacent walls for a reason which will become more apparent later.

To the cover or lid is attached a pair of rod members 18. These rod members are attached to the upper rear corners of the cover in a manner shown in detail in Figures 2 and 4, and provide a means whereby the cover or lid is guided during its movement from open to closed position. The cover member is provided at each of the rear corners with angle members 20 in order to strengthen the construction, and, joining the side walls of the cover is an additional member 22 which assists the top cover member in main-

taining sufficient rigidity of the cover as a whole. The angle members 20 as well as the member 22 may be attached to the cover by spot welding, riveting or any desirable and satisfactory means. Attached to the cross member 22 by means of rivets or bolts 23, are a pair of supporting brackets 24 and 25. The ends of these brackets are turned 90 degrees with respect to the plane of the cross member 22 and are spaced apart a distance sufficient to admit the flattened end of the guide rods 18. The rods are attached to the brackets 24 and 25 by means of pins 26, in order to form a bearing surface and in order that relative rotation is possible between the rod 18 and the brackets. The rear wall 16 of the cover 12 is also attached to the pin 26 and is accordingly supported by the brackets 24 and 25, a spacer 27 being used to prevent interference between the rear wall 16 and the guide rods 18.

The rods 18, by reason of their being attached to the rear corners of the lid, are spaced apart a distance corresponding to the distance between the corners of the cabinet proper. The rods are slidably maintained in position in the rear corners of the cabinet 10 by means of a plurality of guide lugs 30, the lugs being attached to the angle members 14 by rivets or screws 32. The spacing of the lugs 30 with respect to the rods 18 is such that a minimum of friction is produced, while at the same time any excessive movement of the rods (other than longitudinal) with respect to the lugs 30 is prevented. It may be seen, therefore, that the rods 18 may be slid vertically with respect to the cabinet proper and are guided in such movement by means of the lugs 30.

At the lower rear corners of the cover are positioned a pair of rollers 36 which are attached to the side walls of the cover by means of pins or bearing members 38. One of the rollers is best seen in Figure 2, and their relationship with respect to the cabinet proper and the rods 18 is clearly shown in Figure 3. In order that the rollers may have sufficient bearing surface on the cabinet proper, at least a portion of the upper edge of the side walls of the cabinet 10 are turned in as indicated at 37 in order to produce a widened surface, or any other means for providing a track or bearing surface for the rollers 36 may be utilized.

It may be seen that when the cover is in its closed position as indicated by the dot-and-dash lines in Figure 1, and as shown in Figures 2 and 3, the rollers 36 would normally interfere with the rod members 18. In order to prevent such interference the rod members are provided with a cut-out portion 40 so that when the cover is in its closed position, the rollers will not strike against the rod members 18.

It may be seen, therefore, that with the cover in its closed position as shown in Figures 2 and 3 and as indicated by the dot-and-dash lines in Figure 1, the weight of the lid is supported entirely by the top peripheral edge of the cabinet 10. If it is desired to open the lid the front wall thereof is lifted by means of the handle 42, and in so doing, the front portion of the cover or lid is raised, but, by reason of the fact that the top ends of the rods 18 are attached to the top rear corners of the lid, the top rear edge of the cover is prevented from moving in any direction other than vertically. As the cover is opened, the weight thereof is in great part carried by the rollers 36 which rest upon the bear-

ing surface 37 and which roll from the rear corners of the cabinet forward along the top edges of the side walls of the cabinet as the cover is moved from its closed to its opened position. The locus of movement of the top rear edge of the cover is in a vertical plane as determined by the rod members 18. When the cover is finally completely open as indicated by the dotted lines of Figure 1, the weight of the cover rests upon its rear peripheral edge, and the plane of the top of the cover substantially coincides with the plane of the rear wall of the cabinet proper. The rear wall 16 of the cover 12 moves in a vertical plane parallel to the rear wall 44 of the cabinet 10, and, when the cover is in its raised or open position, the rear wall 16 of the cover extends into the cabinet 10. The rear wall of the cover does not, however, interfere with any objects which may be positioned inside the cabinet 10 since it occupies a position parallel to and substantially in contact with the rear wall 44 of the cabinet as may be seen in Figure 4 and furthermore, when the cover is closed, the rear wall 16 prevents any tampering with whatever apparatus might be accessible if the wall were not provided.

In order to prevent the cover from being opened except by an authorized person a lock or latch 50 may be provided. This lock is located along the front edge of the cabinet and when locked the cover can not be removed without actually destroying the cabinet. The front part of the cover cannot be raised because of the lock and the rear part cannot be raised since the guide rods 18 can be moved only in a longitudinal direction and raising of the rear wall of the cover would require a rotary motion which cannot be imparted to the rods. However, when the cabinet cover is not locked, if it is desirable to completely remove the cover from the cabinet it is only necessary to lift the cover vertically so that the rods 18 may be slid completely out of their retaining lugs 30 and no movement, adjustment or unfastening of any mechanical securing means is necessary to permit the cover to be completely removed from the cabinet.

By reason of the fact that the brackets 24 and 25 have a certain resiliency any slight misalignment due to abnormal stresses is compensated for and proper registry of the cover with the cabinet proper may be assured. In order to more positively determine the position of the cover with respect to the cabinet as it approaches closed position, a pair of adjustable set screws or stops 48 are provided, these being threadably attached to the angle members 20 and cooperating with the guide rods 18. These stops 48 are so set that they strike the guide rods as the cover reaches its final closed position and accurately position the cover on the cabinet. This resiliency also acts to absorb shocks and prevent possible warping of the guide rods 18.

It will also be seen that, as stated above, considerable of the weight of the cover is carried by the rollers 36 and when the cover is in its open position, the weight of the cover is sufficient to maintain the same open and to prevent any possibility of its accidentally falling or becoming displaced.

In order to produce a neat appearance, a small trim or beading 46 may be placed about the lower edge of the cover member so that when the cover is closed, as indicated in Figure 3, the beading or trim 46 overlaps the lower edge of the cover and the top edge of the cabinet.

From the above it may, therefore, be seen that a cabinet constructed in accordance with the present invention may be placed with its back against a wall and the cover member therefor may be readily and freely opened even in view of the position and proximity of the wall, since no part of the cover at any time extends beyond the plane of the rear wall of the cabinet during the time that the cabinet cover or lid is being opened or closed.

Furthermore, it may be seen that in view of the present invention and the afore-described manner of attaching the cover to the cabinet, the cover, upon being opened, does not interfere with any of the space normally contained under the cover, and objects which may protrude upwardly from the cabinet proper into the space normally underlying the cover are not interfered with during the opening movement of the cover.

Although more or less specific details are shown in connection with the present invention, it is to be understood that it is not necessary to use these specific details insofar as the spirit of the present invention is concerned, and it is to be understood that any and all modifications be considered within the purview of the present invention, except as limited by the hereinafter appended claims.

I claim:

1. A cabinet, a cover therefor, means including a pair of guide rods attached to the top rear corners of the cover, said rods extending vertically in the corners of the cabinet, means including guide members permitting longitudinal and vertical movement only of said rods in the rear corners of the cabinet, and a pair of rollers at the lower rear corners of the cover for controlling the movement of the cover whereby when the cover is rotated through substantially 90 degrees to move the same from a closed to an open position, the center of rotation of the cover shifts from the point of attachment of the guide rods to the location of the rollers, said guide rods providing the sole guiding means.

2. A cabinet, a cover therefor including a front wall and two side walls, a pair of guide rods, means for pivotally and elastically attaching said guide rods to the top rear corner of each of the

side walls, means whereby longitudinal movement of the rods within the cabinet is permitted, a roller attached to each lower corner of the side walls for cooperation with the edges of the cabinet, a pair of adjusting screws attached to each lower corner of the side walls and adapted to cooperate with the guide rods when the cover is in a closed position, a rear wall pivotally attached to each top rear corner of the side walls whereby when the cover is rotated through approximately 90 degrees to move the same from a closed to an open position the rods and the rear wall of the cover move in a plane parallel to the back of the cabinet and extend into the cabinet, and means for securing the front wall of the cover to the cabinet.

3. A cabinet, a cover therefor including a front wall and two side walls, a guide rod pivotally attached to the top rear corner of each of the side walls, means whereby longitudinal movement of the rods within the cabinet is permitted, a pair of adjustable members attached to the lower corner of each of the side walls adapted to contact said guide rods when the cover is closed to position the same with respect to the cabinet, and a roller attached to each lower corner of each of the side walls for cooperation with the edges of the cabinet whereby when the cover is rotated through approximately 90 degrees the rods move longitudinally within the cabinet and the top rear corners of the side walls move substantially in the plane of the back of the cabinet.

4. A cabinet, a cover therefor including a front wall and two side walls, a guide rod pivotally attached to the top rear corner of each of the side walls, means whereby longitudinal movement of the rods within the cabinet is permitted, a roller attached to each lower corner of the side walls for cooperation with the edges of the cabinet, a rear wall pivotally attached to each top rear corner of the side walls whereby when the cover is rotated through approximately 90 degrees to move the same from a closed to an open position the rods and the rear wall of the cover move in a plane parallel to the back of the cabinet and extend into the cabinet.

RAY G. SHANKWEILER.