April 5, 1938. C. W. MÜLLER 2,113,277

BOX FOR PACKAGING CIGARETTES

Filed Aug. 19, 1936 2 Sheets-Sheet 1

Fig. 1

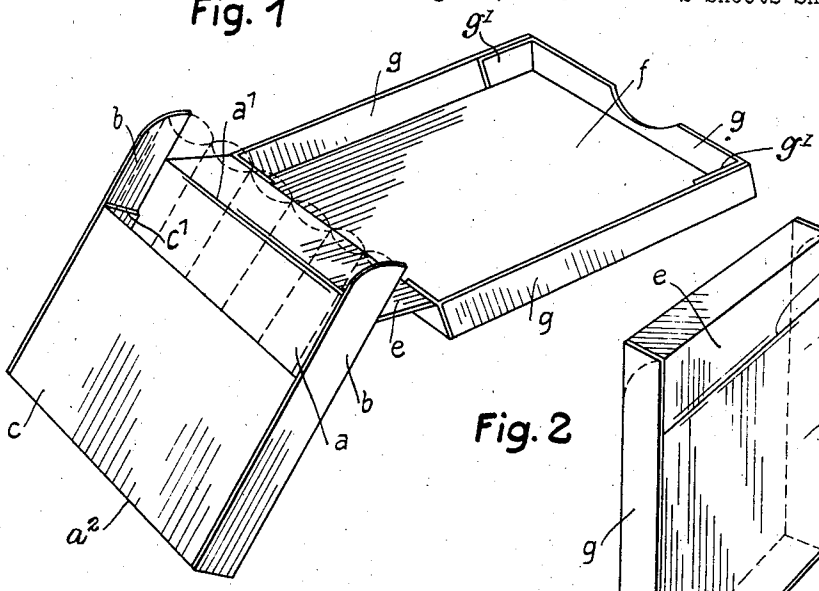


Fig. 2

Fig. 3

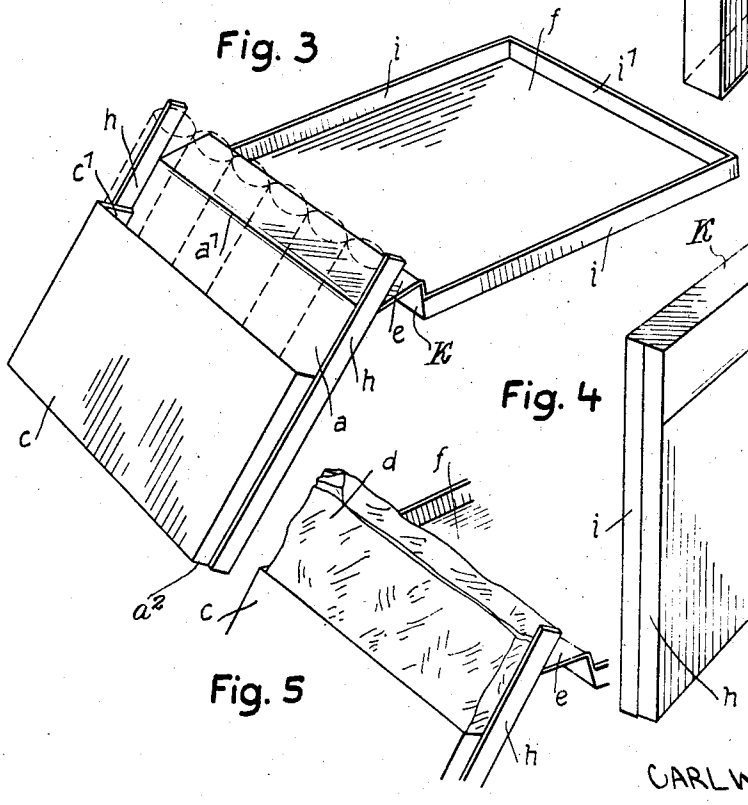


Fig. 4

Fig. 5

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Fig. 6.

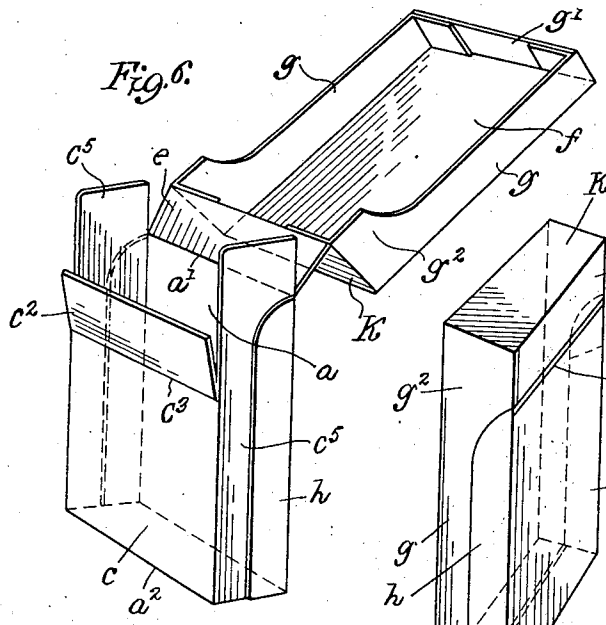
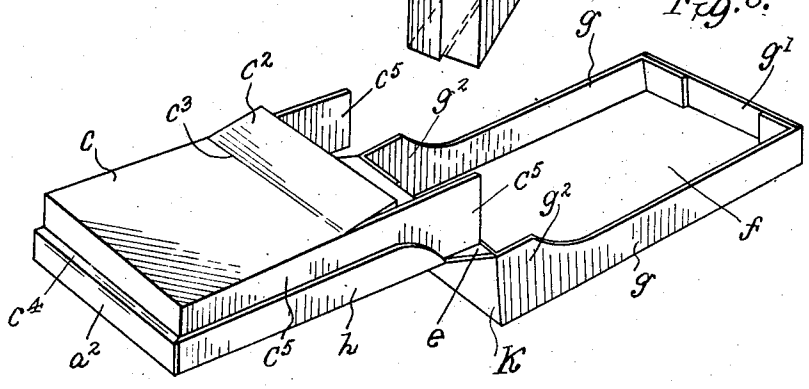


Fig. 7.

Fig. 8.



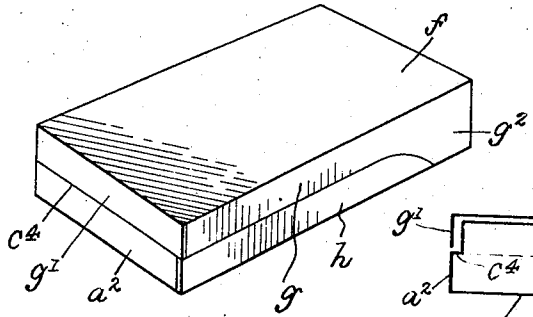
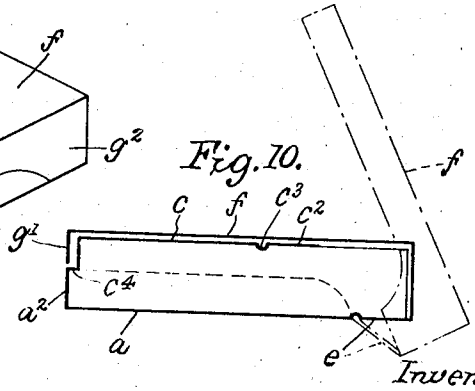


Fig. 9.

Fig. 10.



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BOX FOR PACKAGING CIGARETTES

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In Germany October 1, 1935

11 Claims. (Cl. 206—41)

The present invention relates to boxes adaptable particularly for use in the packaging of cigarettes and the like articles.

For the packing of cigarettes or similar articles there are employed, in the main, two kinds of boxes or wrappings, namely either the so-called cap boxes, i. e. boxes which consist of a box body and a cover which is usually connected with the box body in hinged fashion and which can be placed over the box body, or boxes which are open only on one end and which are closed with a closure flap.

Upon the opening of a cap box the cigarettes are at once exposed to their full extent; they are then still covered only by the wrapping paper which is generally placed around them. The cigarettes are therefore substantially freely accessible. When the box has been opened, however, they are no longer sufficiently protected from the effects of the outer air. For this reason preference is frequently accorded to packages in which the cigarettes are accessible only from the end. These packages have, however, in turn the drawback that the flap covering the end surface, which flap is usually secured by a tongue engaging in a slit, gets out of order when a package which has already been opened is put into the pocket, and that in this way damage to the package or to the cigarettes may result.

The present invention aims at the creation of a package, particularly for cigarettes, which comprises the advantages of the two aforesaid types of packages and nevertheless avoids their drawbacks.

The invention has for a further object to provide a box structure wherein, when the box is open, the articles are exposed and at the end of the box in position of easy access, and wherein the cover or cap is hinged to the box body so that the cap when closed may be fitted over the body like a cap and with the necessary tight fit.

Another object is to provide a box wherein the body and cap flanges do not overlap but abut in flush relation and wherein the articles are not exposed at the edges of the box, particularly at the openable end thereof, and the abutting flanges are supported at the inside to prevent injury to the articles within the box.

A further object of the invention is to provide a box which is firm and strong and wherein the articles are supported at the edges of the box, particularly at the openable end thereof, and which, when the box is closed, is completely closed along the edges and other points of contact of the cap with the body of the box.

Another object is to provide a box body and a cap hinged thereto constructed so that the entire rim or flange of the cap seats flush upon the entire edge or rim of the box body.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views:

Figure 1 is a perspective view of a box constructed according to this invention and in open position, cigarettes or the like articles being shown in dotted lines in the box.

Figure 2 is another perspective view of the same but in closed position.

Figure 3 is a perspective view of a modified form of the box in open position, wherein the marginal flanges of the cap and box body are adapted to abut.

Figure 4 is a perspective view of the modified form of box in closed position.

Figure 5 is a fragmentary perspective view of the upper end of the box open and showing a foil or other wrapper for the articles in the box.

Figure 6 is a perspective view of a box showing a further modification of the invention in open position.

Figure 7 is a perspective view of the modification of Figure 6 with the box in closed position.

Figure 8 is a perspective view of a box embodying a still further modification of the invention and in open position.

Figure 9 is a perspective view of the same in closed position, and

Figure 10 is a longitudinal section of Figure 9, through the box showing the cover in raised position in dotted lines.

Referring now to the drawings, and first to the form of the invention illustrated in Figures 1 and 2, the invention comprises a box or container having a back wall or bottom portion a provided with two side flaps or flanges b bent up thereon, and an additional flap c which extends upward from the lower edge of the back wall a to provide a closed end wall a^2 to cover the ends of articles to be packed, and then extends upwardly to a sufficient extent and substantially flush with the free edges of the flaps 3 and therebetween to provide a top or front wall to partially close in the articles in the box. The flap c has inwardly bent portions c^1 which are attached to the inner sides of the flaps b by an adhesive, or in any other suitable manner to com-

plete the box body. The parts *a*, *b*, and *c* with their supplemental portions a^2 and c^1 form the body of a box or container in which cigarettes, as indicated by the dotted lines in Figures 1 and 3, or other articles of like nature may be carried without unduly exposing them to the dampness or aridity of the surrounding atmosphere. The articles in the container may be either unwrapped or if wrapped preferably in a wrapping sheet of paper, metal foil, or the like. Figure 5 shows a metal foil *d* in which the cigarettes are wrapped. The upper portion *e* of the back wall *a* is cut off from the two lateral flaps *b* and is bent away to the rear around the bent edge a^1, as shown in Figure 1. The hinge leaf *e* not only hinges upon the score or hinge line a^1 to clear the inner sides of the cigarettes at the top of the box, but also serves as a connecting link between the bottom wall *a* and a cover or cap for closing the box. The box has a foldable cover which consists of a wall *f* with a marginal flange *g*, the end portion of which is hinged to the leaf *e* for holding the cover to the box body. The flange *g* may have its edge portions connected together in any desired manner, such as by tabs g^1 which are integral with the intermediate flange portions and secured to the adjacent portion by pasting or the like.

From Figure 1 it is evident that when the container is in the open position, the cigarettes, or other articles of like nature, are readily accessible and may be easily withdrawn for use. The bent back portion *e* makes it possible to grasp the cigarettes firmly and thus eliminate tedious fumbling in an endeavor to remove the article from the box.

From Figure 2, illustrating the container in closed position, it is obvious that the articles are fully and completely protected from the surrounding air. The flaps *b*, best shown in Figure 1, which are contiguous the end articles in the container furnish, with the remaining parts, a rigid and substantial support which prevents the articles from being crushed when carried in the pocket or other repository in which pressure is inadvertently brought into play.

Figures 3 and 4 illustrate a modification of the box or container of Figures 1 and 2. The cover wall *f* is provided with upwardly extending lateral flanges or rims *i* at its marginal edges. The rims or flanges *i* are of less height than the full height of the box and are proportional in conformity with the height of the body flaps *h* which are also of less height than the full height of the box so that when the box is in closed position the rims *i* are flush with the flaps *h* and the sum of the heights of any rim *i* and its corresponding flap *h* is equivalent to the desired or total height of the box. The outer portion i^1 of the rim is in height equal to the height of the lateral portion of the rim *i* and when the box is in closed position overlaps the end portion a^2 of the box body which covers the lower ends of the cigarettes. The rim or flange *k*, adjoining the flap portion *e* extends to the full height of the box and furnishes one end of the box when the cap is in closed position.

When closed the rims *i* and flaps *h* are flush and furnish a smooth outer wall and permit the sealing of the box prior to its initial use.

The entire box or container may be manufactured from a single cut piece, as is of course apparent from Figures 1 and 3.

In Figure 6 the box is shown as having an additional flap portion c^2 which is integral with flap *c* and can be bent forwardly about the creased or scored line c^3 so that a greater area of the enclosed articles is exposed if such is desirable. The plate portion *f* has marginal rims or flanges *g*. The flange portions *g* are secured to the flange portions g^1 and *k* in any suitable manner, and the inner end flange portion *k* is of the full depth of the complete box and the adjacent ends g^2 of the lateral flanges *g* are increased in depth and merge into the portion *k* to provide rigid and strong corner portions to the cover; thus increasing the protecting strength of the openable end of the box when closed. The free edges of the lateral flanges *g* of the cap are curved into the free edges of the corner portions g^2 on lines symmetrical with the upper ends of the body flaps *h*, the latter being foreshortened relatively to the inner flaps c^5 over which the inner corner portions of the cap fit. Thus the curved edges of the flanges or flaps *g* and *h* abut at the outer sides of the inner flaps c^5 to close the joint between the box body and cap.

The major portion of the flanges *g* extend to a height less than the height of the box. Such height of the flanges *g* is proportioned so that the combined heights of the flanges *g* and their corresponding flaps *h* equal the total and desired height of the box when the same is closed.

Figure 7 shows the box in closed position with the rim *g* flush with its corresponding flap *h* and the section or portion g^2 of the rim *g* flush with the upper sloped portion of flap *h* so that smooth lateral walls are formed. The rim portion g^1, when the box is in closed position, partially overlaps the portion a_2 of the box furnishing a protruding ledge which serves as a means to pry open the box when it is sealed prior to its initial opening.

The modification of the invention as illustrated in Figure 8 has a shoulder c^4 which faces upwardly or outwardly of the box, which is disposed across the outer end of the box, and which may be formed by crimping or offsetting the lower end wall a^2 inwardly in the plane of the upper edges of the half depth flanges *h* to receive the half depth cap thereover and provide a smooth and flush bottom wall to the closed box.

It will thus be seen that in all forms of the invention the box, when open, exposes the upper ends of the cigarettes at both the inner and outer sides, but for the most part keeps the cigarettes covered against ready access of the air. The cigarettes may be individually withdrawn from the box by grasping the cigarettes at opposite sides at their upper ends and the inner flaps c^5 and *b*, which are coextensive with the box body, protect the end cigarettes and prevent them from accidental displacement from the box during removal of other cigarettes from the box.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:—

1. A box for cigarettes and the like comprising a box body open at one end and provided at its opposite edges with inner protecting flaps, said flaps extending the entire length of the box and adapted to protect the end cigarettes of a row of cigarettes placed in the box, the front and bottom walls of said box body ter-

minating at a distance less than the length of said flaps to expose the cigarettes when the cover is open, a hinge flap the length of which is equal to the distance from the end of the shortened rear wall to the end of the protecting flaps, and of a width equal to the width of the box body, and a cap having flanges forming an open box, one of the end flanges being of the same width as the box body hinged to the free side of said hinge flap, said cap being adapted to be swung over the front of the box into overlapping engagement with said inner flaps to close the box.

2. A box for cigarettes and the like comprising, a box body open at one end and provided at its opposite edges with inner protecting flaps, said flaps extending the entire length of the box and adapted to protect the end cigarettes of a row of cigarettes placed in the box, the front and bottom walls of said box body terminating at a distance less than the length of said flaps to expose the cigarettes when the cover is open, a hinge flap the length of which is equal to the distance from the end of the shortened rear wall to the end of the protecting flaps, and of a width equal to the width of the box body, and a cap having flanges forming an open box, one of the end flanges being of the same width as the box body hinged to the free side of said hinge flap, whereby said cap may be swung to open position and said hinge flap may be swung therewith away from the cigarettes in the box to admit access to the opposite sides of the cigarettes exposed at the open end of the box, and may be swung over the front of the box into overlapping engagement with said inner flaps to close the box.

3. A box for cigarettes and the like comprising, a box body having a front and rear wall and side flaps extending the full length of the box and forming side flanges, a flap of less height than that of the box hinged to said rear wall transversely thereto, a cap hinged to the free end of the last-named flap, and a marginal flange adapted to overlap the ends of said side flaps of the box body and being of a depth complemental to that of the box side flanges for admitting edgewise abutment of the side and cap flanges when the box is closed.

4. A box for cigarettes and the like comprising, a box body having inner flaps the full length of the box and outer flanges half the depth of the box and terminating short of the open end of the box, the rear wall of the box having its upper portion creased to provide a hinge flap at the open end of the box, a cap hingedly connected to said hinge flap, said cap having a marginal half depth flange to abut the box flange and having full depth corner flange portions for enclosing the open end of the box and overlapping the free ends of the inner flaps.

5. A box for cigarettes and the like, comprising a box body having a rear wall of less length than the length of the box body and having lateral flanges extending outwardly from the lateral edges of the wall and being of the full length of the box body, the lower end of said rear wall being bent forwardly to provide a bottom wall and extending therefrom upwardly flush with the outer edges of the flanges to provide a front wall, the front wall terminating short of the upper end of the box to provide an open end therefor, a flap hinged to the rear wall along the width of the box body and free from the extending lateral flanges, and a flanged cap having the width of said body and of said hinged flap and hinged to the free end of said hinge flap and adapted to be overturned on the front of the box to close the same and house cigarettes in the box, said hinge flap being first moved to close the rear of the box, said hinge flap adapted when the cap is open to be swung rearwardly from the box to expose the rear of the upper ends of the cigarettes at the front and back of the box for easy access to withdraw the cigarettes for use.

6. A cigarette box comprising a box body having a rear wall with an upper hinge flap portion and lateral flanges turned outwardly from the edges of the wall and terminating at their upper ends at the hinge flap portion, said box body having a bottom wall extending outwardly from the lower end of the rear wall and having a front wall turned upwardly from the outer edge of the bottom wall and extending to substantially the height of the said hinge flap portion of the rear and having a transverse score line providing a front hinged flap, said front wall also having lateral flaps bent inwardly and lying against the inner sides of said flanges and extending therebeyond to the full height of the box body, and a cap hinged to the hinge flap and having complemental flanges to engage over said lateral flaps and abut said body flanges when the cap is closed, said cap having full depth inner flange corner portions adapted to enclose the upper end of the box body and overlap the upper ends of the body flaps for sealing the open end of the box.

7. A cigarette box, comprising a box body having a rear wall with outturned lateral flanges terminating short of the upper end of the box and having a score line in the rear wall at the upper ends of said flanges to provide a back hinge flap for opening the back of the box at its upper end, said body having a bottom wall joining the lower end of the back wall and a front wall extending upwardly from the bottom wall and being of less height than that of the box body and having a transverse score line near its upper end providing a front hinged flap, said front wall having at opposite edges inwardly extending flaps of the full length of the box body and separated from the said front hinged flap and extending upwardly beyond the ends of the lateral flanges of the rear wall, said back hinge and front hinged flaps being adapted to be swung outwardly from the box body to expose at the top of the box the opposite sides of the upper ends only of cigarettes packed in the box, and a flanged cap connected at its inner end to said back hinge flap and adapted to be turned over thereon to close the box body, the flange of the cap adapted to overlap the lateral flaps of the front wall and abut in edgewise relation the lateral flanges of the back wall, said cap flange at the inner corners of the cap being of the full depth of the box body to close the upper open end thereof when the cap is closed and the adjacent edges of the cap flange inner corners and the upper ends of the back lateral flanges being complemental to each other for edgewise abutting engagement over the inner flaps of the front wall to seal the cover on the box body.

8. A cigarette box, comprising a box body having a rear wall with lateral flanges, a bottom wall with an inwardly stepped shoulder in the plane of the edges of the flanges to provide therewith a seating rim about the sides and bottom of the box and a front wall with full depth

lateral flaps engaging the inner sides of the flanges, and a flanged cap hinged to the upper end of the box and adapted to be turned over on the box body to close the same, the flange of the cap adapted to overlap the flaps and seat on the rim of the box body to seal the latter and provide a smooth flush exterior wall to the box when closed.

9. A cigarette box comprising a box member and a cover member formed of one piece, said cover member having a closed bottom wall, closed side walls extending the full length of the box member, a front and rear wall each of a length so as to expose the cigarettes in the box, said cover member having a wall the entire length and width of the box member and having depending flanges on the sides and ends thereof, a flap having a length equal to the width of the box member and having a height equal to the distance between the free edge of the rear wall of the box member and the free edges of the side walls of the box member, said flap being hingedly connected along its length to the free edge of the rear wall of the box member, and to the free edge of one of the end flanges of the cover member, whereby when the cover member is entirely open the ends of the cigarettes are exposed at the front and rear wall of the box member, and when the cover member is closed the flap closes the rear of the box member and the adjacent end flange of the cover member covers the open end of the box member between the side walls, the ends of the side walls abutting the cover member wall, and said wall contacting the front wall of the box member with the cover member flanges surrounding the same.

10. A cigarette box comprising a box member and a cover member formed of one piece, said cover member having a closed bottom wall, closed side walls extending the full length of the box member, a front and rear wall the length of which permits the cigarettes to be exposed, said cover member having a wall the length and width of the box member and depending flanges on the sides and ends thereof, the depth of said flanges being less than the depth of the box member, the side walls of said box member being adapted to abut against the edges of said flanges when the cover is closed, a flap the length of which is equal to the width of the box member, the height of which equals the distance between the free edge of the rear wall and the free edges of the side walls of the box member, said flap being hingedly connected at the length thereof to the free edge of said rear wall and the free edge of one of the end flanges, whereby when the cover member is entirely open the ends of the cigarettes are exposed at the front and rear walls of the box member and when said member is closed the flap closes the rear of the box member and the adjacent end flange of said cover member covers the open end of the box member between the side walls, the ends of the side walls abutting the cover member wall, and said wall contacting the front wall of the box member and the flanges surrounding the same.

11. A cigarette box comprising a box member and a cover member formed of one piece, said cover member having a closed bottom wall and closed side walls extending the length of the box member, front and rear walls the length of each of which permits the cigarettes to be exposed, said cover member having a wall the length and width of the box member and depending flanges on the sides and ends thereof, the depth of said flanges being less than the depth of the box member, the side walls of said box member being adapted to abut against the edges of said flanges when the cover is closed, the ends of the side walls being curved and the flanges of the cover having curved portions adapted to register with the curved ends of the side walls, a flap the length of which is equal to the width of the box member, the height of which equals the distance between the free edge of the rear wall and the free edges of the side walls of the box member, said flap being hingedly connected at its length to the free edges of said rear wall and the free edges of one of said end flanges, whereby when the cover member is entirely open the ends of the cigarettes are exposed at the front and rear walls of the box member and when said member is closed the flap closes the rear of the box member and the adjacent end flange of said cover member covers the open end of the box member between the side walls, the ends of the side walls abutting the cover member wall, and said wall contacting the front wall of the box member and the flanges surrounding the same.

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