

Feb. 28, 1967

H. M. THOMAS

3,306,326

CONTAINER FOR DEFECT CARDS

Filed April 23, 1965

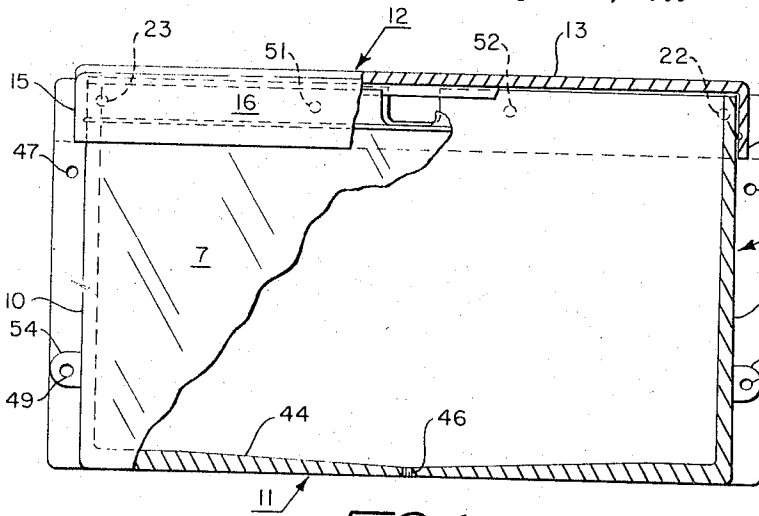


FIG-1-

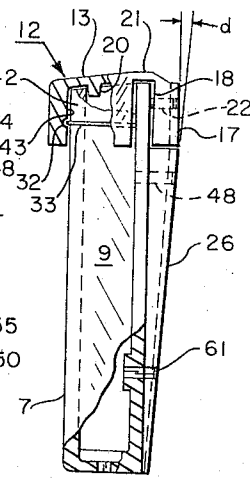


FIG-2-

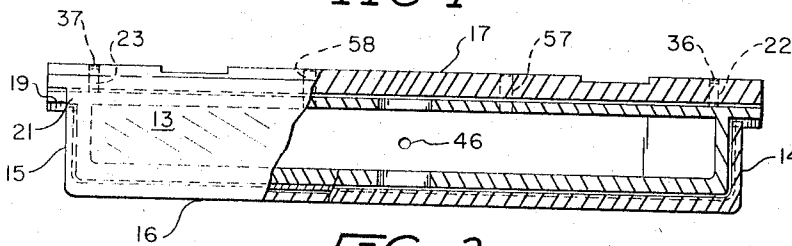


FIG-3-

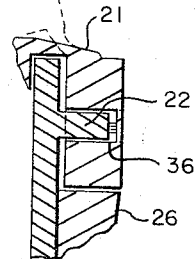


FIG 4-

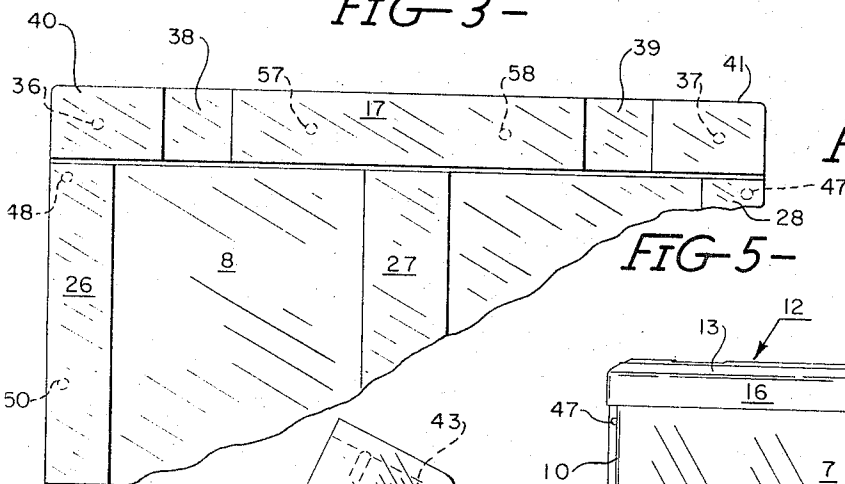


FIG-5-

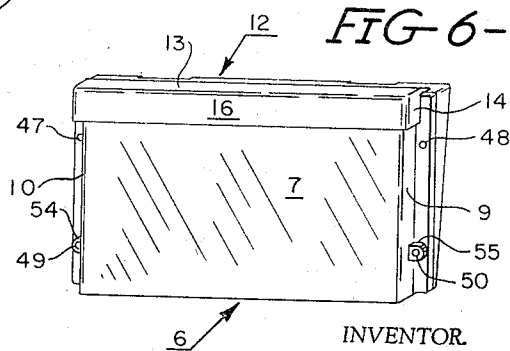


FIG 6-

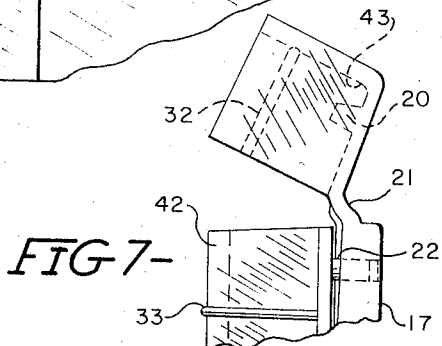


FIG 7-

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3,306,326
CONTAINER FOR DEFECT CARDS
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 Filed Apr. 23, 1965, Ser. No. 450,378
 5 Claims. (Cl. 150—5)

The invention relates to containers which are affixed to railroad cars, highway trailers and the like for holding defect cards or other written instruments. The present invention embodies the major features of my card holder covered by Patent No. 2,713,368 as well as new and useful improvements set forth in this application.

An object of the present invention is to provide a container which when affixed to a railroad car or highway trailer reduces the possibility of discoloration or rusting of the wall surface at the point of contact of the container therewith.

Another object of the present invention is to provide a container having a cover adapted for improved snap action closing and improved water sealing characteristics.

A further object of the present invention is to provide a container having a cover equipped with a more durable hinge permitting easier opening and closing of the cover.

The invention possesses other objects and features of advantage, some of which of the foregoing will be set forth in the following description of the preferred form of the invention which is illustrated in the drawings accompanying and forming part of this specification. It is to be understood, however, that variations in the showing made by the said drawings and description may be adapted within the scope of the invention as set forth in the claims.

Referring to said drawings (one sheet):

FIGURE 1 is a front elevation of a container constructed in accordance with the present invention and shown with portions broken away and in section.

FIGURE 2 is a side elevation of the container with portions broken away and in section.

FIGURE 3 is a plan view of the container with portions broken away and in section.

FIGURE 4 is a fragmentary cross sectional view on an enlarged scale of part of the hinge of the container with the lid in the closed position.

FIGURE 5 is a partial rear elevation of the container.

FIGURE 6 is a perspective view of the defect card container on a reduced scale.

FIGURE 7 is a fragmentary side elevational view on a somewhat enlarged scale of part of the container hinge with the lid in the open position.

The card container of the present invention consists briefly of an elongated body 6 having a front panel 7, a back panel 8 and side panels 9 and 10 joined at their respective edges and defining an open top chamber 11; an elongated cover 12 formed and dimensioned to provide a weather tight seal for the aforesaid body and having a top panel 13, side panels 14 and 15, front panel 16 and back panel 17 extending partially down the sides of the container 6; the side panels 14 and 15 of cover 12 having slots 18 and 19 and the back edge of top panel 13 having a hinge 21 permitting flexing of cover 12 to open and closed positions, an elongated flange 20 extending substantially the length of the underside of the top panel 13, means 22 and 23 restricting movement of cover 12 parallel to hinge 21 while permitting rotary displacement

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of back panel 17 and a plurality of wedge shaped portions 26, 27 and 28 mounted on the back side of the container.

One of the problems associated with attaching large size containers made from flexible rubber or other plastic materials to the outside surfaces of railroad cars and highway trailers is the formation of moisture between the container and the car which results in discoloration and rusting of the car around and beneath the container. A feature of the present invention is the substantial reduction of the formation of this moisture by mounting a plurality of wedge shaped ribs 26, 27 and 28 on the back wall 8 of the container, for permitting air circulation therebehind.

The container of the present invention is preferably mounted on the outside of a railroad car or trailer for easy access to crew and maintenance personnel. The container, therefore, is subject to all types of weather conditions and must have a good weather-tight seal. This weather-tight seal must be maintained under vibrational conditions and most importantly, the seal must be easily broken for loading of the container and easily sealed upon closing of the lid. In opening elongated flexible covers, there is the tendency of the cover to flex at the hand hold area while remaining in partially sealed engagement at the outer ends. This problem is aggravated by the interlocking of the groove 32 and ridge 33 which is common on card folders and which prevents easy release of the lid from the body of the container. The card holder of the present invention is provided with a flange 20 formed integrally with the underside of the top panel 13 which tends to unitize the cover so that by grasping the lid at approximately its mid point and lifting the entire lid breaks loose from the body of the container without undue stress on hinge 21.

Another principal feature of the present invention is the durable and easy opening and closing hinged movement of the lid. As previously mentioned, the hinge here consists mainly of a weakened portion 21 of the lid. The container of the present invention receives rough treatment in use and very little care is normally used in opening or closing the container. The car or trailer may even be moving when the container is to be loaded, and there may be little time to open the container, take out the informational card, replace it with another card and then close the lid. Without some provision for strengthening the hinge, the weakened portion 21 would soon become torn and useless as a water seal and a hinge. Increasing the thickness of the portion 21 would decrease the hinge action and is therefore not feasible. The present invention here provides means restricting the movement of the cover parallel to the hinge and mounting wall surface while permitting rotary movement of the cover about hinge 21. The means here consists of a plurality of studs 22 and 23 which extend rearwardly from and are located near the top of back panel 8 and are positioned for registration with and formed and dimensioned for slidable engagement in apertures 36 and 37 formed in the back panel 17 of the cover. The stud and aperture construction thus prevents the sideways relative movement of the cover and container parallel to the hinge 21 but permits rearward movement of the back panel 17. Referring to FIGURE 7, when the cover 12 is pulled to the opened position, the rotational force is transmitted to back panel 17 through hinge 21 which tends to move back panel 17 away from container 6. It is this sliding movement of back panel 17 which relieves some of the critical stress placed upon

hinge 21 and prevents the weakening and ultimate failure of the hinge at the ends of the hinges. Adequate space for the movement of back panel 17 is conveniently provided by mounting a plurality of wedge shaped portions 26, 27 and 28 on the back panel of the container. These wedge shaped portions extend up to the back panel 17 of the cover. Since the thickness of back panel 17 has a dimension no greater than the thickness of the top of the wedge shaped portion and because of the resultant tipping forward of the container, a wedge shaped space will be created between the back panel 17 and the face of the mounting wall. This wedge shaped area as seen in reference to FIGURE 2 provides the space in which back cover panel 17 may move into upon opening of the cover.

It should be noted that the length of the studs 22 and 23 are dimensioned so that back panel 17 is always in engagement with the studs in the open and closed positions.

In order to permit free flow of air between the back of the container and the mounting wall, the rear panel 17 of the cover is provided with slotted openings 38 and 39. These openings are positioned to coincide with the openings formed between wedges 26, 27 and 28. Slots 38 and 39 also provide for greater flexibility to back cover panel 17 to provide easier rotation of the ends 40 and 41 when the cover is opened.

A still further feature of the present invention is its excellent water sealing characteristics. The importance of this characteristic is apparent from the fact that the container is mounted on the outside of cars and trailers which are exposed to the elements as well as pressurized streams of water used to wash down the sides of the vehicles. The water sealing characteristics of the cover have been improved by the strategic placement of the flange 20 so that when cover 12 is closed, flange 20 crowds the top edge 42 of the front panel 16 against the inside edge 43 of front cover panel 7.

Because the container of the present invention is exposed to the elements, as discussed above, and carries written documents which smudge or can be defaced upon wetting, extraordinary water sealing preventative measures have been taken as discussed above. In spite of these efforts to prevent water from entering the container, there is necessarily a small amount which will enter when the lids are opened or not sealed properly and there is at times some water present from condensation of vapors on the inside walls. These waters are removed in the present invention by sloping the bottom wall 44 of the container to a weep hole 46 formed therethrough.

Container 6 is fastened to the sides of a railroad car or highway trailer by means of rivets, bolts or the like inserted through openings formed in the body of a container as shown by numbers 47, 48, 49, 50, 51 and 52. Because the thickness of the back wall of the body of the container is thicker at the top than at the bottom, bosses 54 and 55 are formed at holes 49 and 50. This permits the use of substantially identical length rivets in affixing the container to a mounting wall.

It is to be noted that openings 57 and 58 are provided in the back panel 17 of the cover in registration with openings 51 and 52 in the container body. Openings 51 and 52 are located near the center portion of the container so that rotary movement of the back panel 17 at the studs 22 and 23 is not prevented. Provision of rivets at openings 57, 58, 51 and 52 prevent any separation of the lid from the body of the container, and also prevents bowing of the back of the body which might tend to restrict the opening to the card container chamber.

Still another feature of the construction of applicant's container is the provision of a thin membrane web of material at every rivet hole so that when the hole is pierced by the rivet, a thin washer-like seal is provided when the rivet is drawn up tight to the mounting wall. The membrane is paper thin and is shown in the drawings as at 61 in FIGURE 2.

I claim:

1. In a defect card container having an elongated body defining an open top chamber, said body being rabbeted along the top edge of the back to provide a recess, an elongated flexible cover having top, back and side panels covering the top of said chamber and extending partially down the sides, front, and into said rabbit recess of said body, the side panels of said cover being slotted and the back edge of said top edge panel being hinged permitting flexing of said cover to open and closed positions, said body being formed with the back thereof thicker at the than at the bottom, the improvement comprising: an elongated flange extending substantially the length of the underside of said top panel and being integral therewith to reinforce said cover, means restricting movement of said cover parallel to said hinge while permitting rotary displacement of said back cover panel, and said rear cover panel having a thickness equal to or less than the front to rear depth of said recess to permit rotary movement thereof.

2. In a defect card container having an elongated body defining an open top chamber, an elongated flexible cover having top, back and side panels covering the top of said chamber and extending partially down the sides, front and back of said body, the side panels of said cover being slotted and said top back edge panel being hinged permitting flexing of said cover to open and closed position, the improvement comprising: an elongated flange extending substantially the length of the underside of said top panel and being integral therewith to reinforce said cover; means restricting movement of said lid parallel to said hinge while permitting rotary displacement of said back cover; a plurality of horizontally spaced vertically extending wedge shaped portions mounted on the back side of said container below said cover and projecting from said body for engagement with a mounting surface; said wedges being thicker at their upper ends and mounted for tipping said body forwardly at its upper edge, and said back cover panel having a thickness equal to or less than the depth of the upper end of said wedges for permitting rotary movement thereof.

3. In a defect card container having an elongated body defining an open top chamber, an elongated cover having top and side panels covering the top of said chamber and extending partially down the sides, front and back of said body, said cover being formed of a flexible material slotted in said side panels and hinged permitting flexing of said cover to open and closed positions, the improvement comprising: an elongated flange extending substantially the length of said top panel and being integral therewith to reinforce said cover; said rear side cover panel being formed with spaced apertures; a plurality of horizontally spaced vertically extending wedge shaped portions mounted on the back side of said container below said cover and projecting from said body for engagement with a mounting surface; said wedges being tapered so as to be thicker at their upper ends; said rear side cover panel having a thickness equal to or less than the thickness of the upper end of said wedges for permitting rotary movement thereof; and a plurality of studs extending rearwardly from said body positioned for registration with and formed and dimensioned for slidable engagement in said apertures to permit rotary displacement of said back cover.

4. A defect card container as characterized in claim 3 wherein the rear panel of said cover is formed with slots to permit air circulation behind said container.

5. In a defect card container having an elongated body defining an open top chamber, an elongated cover having top and side panels covering the top of said chamber and extending partially down the sides, front and back of said body, said cover being formed of a flexible material slotted in said side panels and hinged permitting flexing of said cover to open and closed positions, the improvement comprising: an elongated flange extending substantially the length of said top panel and being integral therewith to

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reinforce said cover; said flange being positioned for registration with the front top edge of said body to form a weather-tight seal; said rear side cover panel being formed with spaced apertures; a plurality of horizontally spaced vertically extending wedge shaped portions mounted on the back side of said container below said cover and projecting from said body for engagement with a mounting surface; said wedges being tapered so as to be thicker at their upper ends; said rear side cover panel having a thickness equal to or less than the thickness of the upper end of said wedges for permitting rotary movement thereof;

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a plurality of studs extending rearwardly from said body positioned for registration with and formed and dimensioned for slidable engagement in said apertures to permit rotary displacement of said back cover; and said container being formed with a bottom wall sloping toward a vent opening therein for automatically draining of any accumulated fluids in said chamber.

No references cited.

10 FRANKLIN T. GARRETT, *Primary Examiner*.