Jan. 1, 1929. 1,697,479

P. A. SCHILLING ET AL

CORRUGATED BOARD CONTAINER

Filed April 7, 1927 2 Sheets-Sheet 1

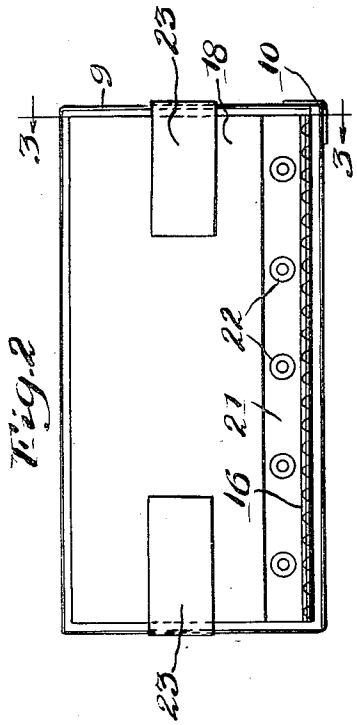


Fig. 2

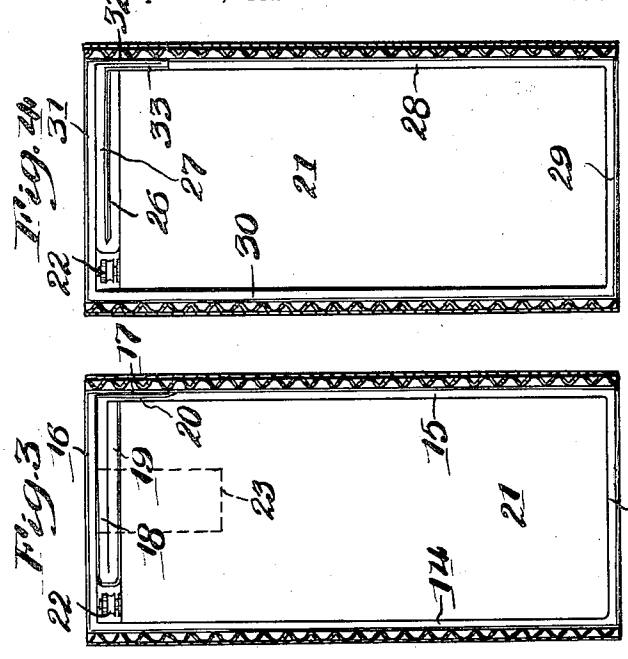


Fig. 4

Fig. 3

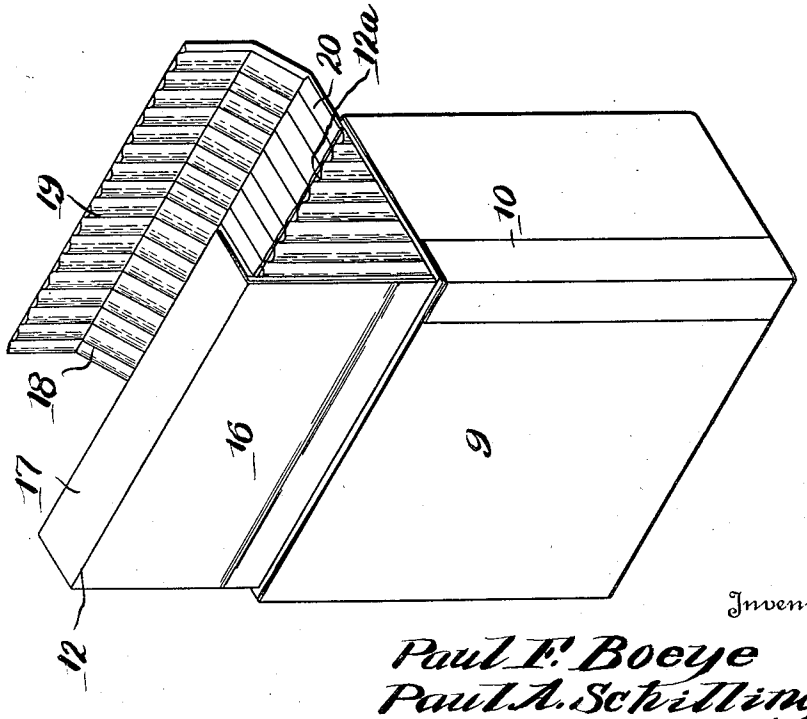


Fig. 1

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Fig. 8

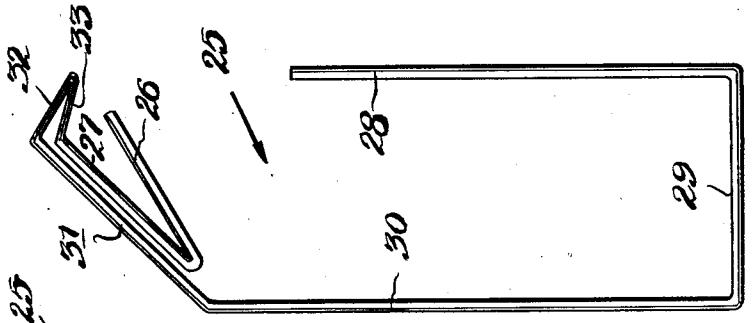


Fig. 7

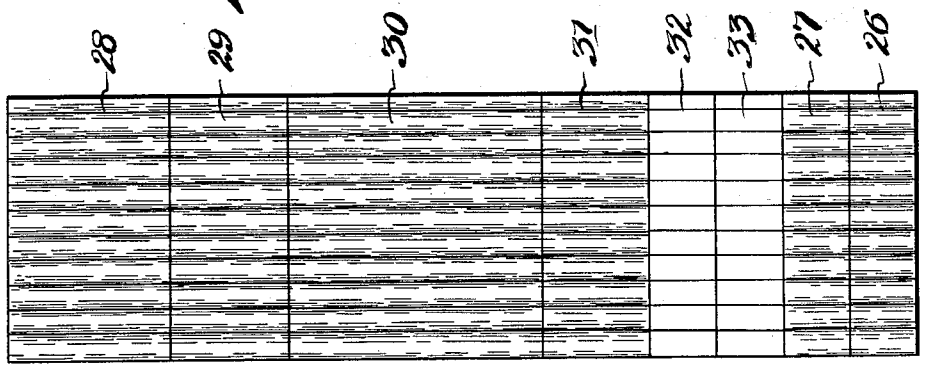


Fig. 6

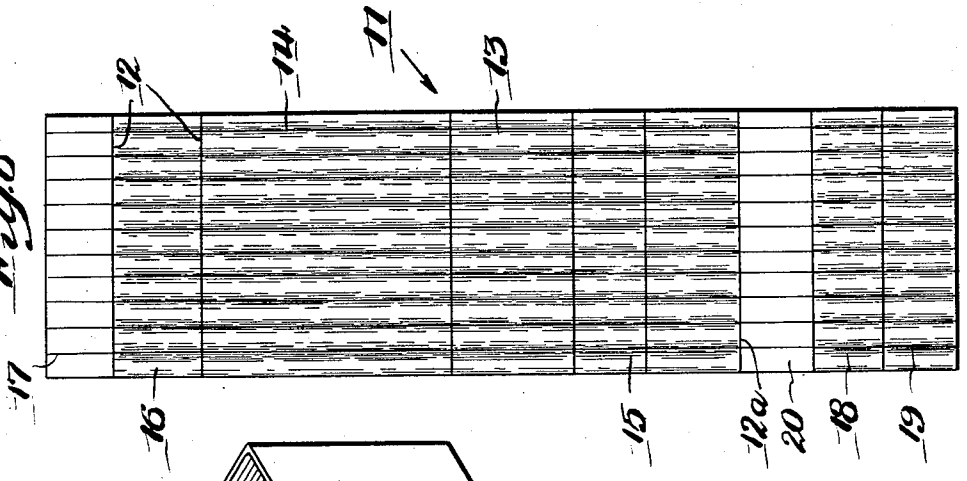
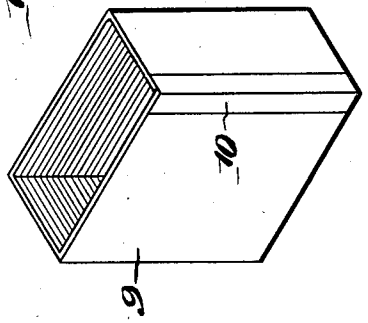


Fig. 5



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UNITED STATES PATENT OFFICE.

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CORRUGATED-BOARD CONTAINER.

Application filed April 7, 1927. Serial No. 181,746.

This invention relates to improvements in a corrugated container of the type known as a slide and primarily adapted for use in shipping electric batteries having binding posts or terminals for circuit wire connections, which must be protected in the shipping and handling of the goods.

It is our object to reduce the cost of such containers while affording increased protection for the contents and facilitating the assembling of the containers and inspection of the contents.

More particularly, it is our object to provide a container of the corrugated slide type, formed entirely from two blanks, one being an outer sleeve and the other the inner, bottom and top portions and also forming a protecting pad for the projecting terminals of the battery.

Other objects will appear and be more fully pointed out in the following specification and claims.

Referring to the drawings, Figure 1 is a perspective view of our improved container in open position, ready to receive the goods to be shipped; Fig. 2 is a plan view of the container with a battery in place therein and with the pad portion folded upon the top of the battery, the cover proper being in open position, as for inspection of the contents; Fig. 3 is a vertical section taken on the line 3—3 of Fig. 2 but showing the cover in closed position; Fig. 4 is a similar vertical section through an alternate form of container; Fig. 5 is a detail, perspective view of the exterior slide or sleeve; Fig. 6 is a plan view showing the inner blank of the preferred form shown in Figs. 1, 2 and 3; Fig. 7 is a similar plan view of the blank forming the inner member of the alternate form of container and Fig. 8 is a side elevation of the blank shown in Fig. 7, partially folded, as for insertion in the outer sleeve.

Our improved container is constructed entirely from corrugated sheet material of the common type formed from two sheets of paper or straw board, the exterior sheet being a plain, flat sheet and the interior sheet being corrugated. As best shown in Figs. 1, 2 and 5, we provide an external sleeve 9, formed from a rectangular blank, having its ends connected one to the other by suitable tape 10 and being open at its top and bottom. The corrugations are upon the inner surface of this sleeve 9 and extend around the same parallel to its upper and lower edges. This tubular member or sleeve 9 is arranged to receive an inner blank 11, having a corrugated inner surface and creased along lines 12 to form a bottom 13, rear and front sides 14 and 15 respectively, a cover flap 16, a pendant flange 17 and pad portions 18 and 19 formed integral with the normally upper end of the side 15. The corrugations upon the front and rear sides 14 and 15 extend at right angles to or transverse the corrugations upon the sleeve 9. The cover flange 17 and a portion 20 of the side 15 adjacent to said flange in the assembled and closed container have the corrugations flattened or crushed so that the combined thicknesses of the portions 17 and 20 are equal to the thickness of the side 15. The battery 21 to be packed in the container is of the rectangular type, having plain bottom, side and top surfaces and terminals or binding posts 22, which project from the top along one margin, as shown in Fig. 2. The combined thicknesses of the pads 18 and 19 are equal to the height of these terminals 22, so that when the blanks are folded and assembled, as shown in Fig. 3, the terminals 22 are protected by said pads.

To facilitate outward bending along a creased line 12^a, we prefer to cut the corrugated sheet along said line, as indicated in Figs. 1 and 6. This permits the flattened portion 20 to be folded outward, substantially at right angles to the sides 15, when it is desired to insert or remove the battery from the container without bodily removing the inner blank 11 from the sleeve.

To insert a battery 21 and assemble the container, the blank 11 may be folded, as indicated in Fig. 3 about the battery and the pads 18 and 19 secured in place upon the top of the battery by applying suitable tape or

paper strips 23 having a coat of moist adhesive. With the blank 11 covering the top, rear, bottom and front sides of the battery 21, said blank and battery are inserted in the sleeve 9, the cover flange 17 fitting snugly between the outer surface of the portion 20 and inner surface of the sleeve 9. The main cover flap 16 is held in closed position above the battery terminals 22 by the flange 17. Now to inspect the battery without removing the strips 23, the cover flap 16 may be opened by withdrawing the flange 17 and exposing the terminals 22, as shown in Fig. 2. Obviously, this gives access to the terminals 22 to facilitate testing the voltage while retaining the battery within the sleeve by means of the pad portions 18 and 19.

In the alternate form of our device, shown in Figs. 4, 7 and 8, the outer sleeve 9 is identical with that described above, but the inner blank 25 has the pad portions 26 and 27 formed integral with the cover, instead of integral with the front side 15, as in the preferred form. The blank shown in Figs. 7 and 8 is creased to form a front side 28, a bottom 29, a rear side 30, a cover flap 31, an integral flange 32, an extension thereof 33, and the pad portions 27 and 26 are integral with the flange extension 33. The flange 32 and its extension 33 have the corrugations flattened so that their combined thickness is equal to that of the front side 28 or normal thickness of the sheet. As shown in Figs. 4 and 8, the extension 33 is arranged to be folded upon the flange 32, when it is inserted in the slide or sleeve 9. It will be evident that the pad portions 26 and 27 protect the battery terminals 22 in the same manner as the portions 18 and 19 of the preferred construction. To gain access to the terminals 22 of the battery 21, it is only necessary to withdraw the flange 32 and its extension 33 from the position shown in Fig. 4 between the battery and inner surface of the sleeve 9 and to swing the cover 31 to an open position like that shown in Fig. 8.

Obviously, the inner blanks 11 and 25 may be secured in closed position by placing strips of paper or tape across the top and bottom and securing the same by adhesive to the outer surface of the slide member 9. The advantages of our device include reducing the cost of the container and at the same time facilitating inspection of the contents without breaking the securing strips 23 or removing the battery from the container. Heretofore, it has been common practice to provide detached or separate strips of corrugated board in place of the pads 18, 19, 26 and 27. It will be evident that these loose pads are apt to become lost or are omitted when the battery container is open for inspection and later closed with consequent failure of the protection for said terminals in subsequent handling or shipping. Such separate pads also increase the cost of the containers and the work of assembling the same. Obviously, the flattened portions 17 and 20 of the preferred construction and the portions 32 and 33 in the alternate form permit insertion of these members for retaining the cover in closed position in the space available between the front of the battery and outer sleeve 9. Thus, the crushed or flattened portions afford a snug fitting retaining means, which abut against the unyielding outer surface of the battery.

Having described our invention what we claim as new and desire to protect by Letters Patent is:

1. In a two-piece slide for shipping batteries, a tubular outer member open at its ends, an inner member creased and folded to form front, rear, bottom and top panels and an integral pad arranged to lie between the inner surface of said top panel and the end of a battery in said container, said pad being arranged to afford a space for battery terminals and to support said cover panel in spaced relation to said terminals.

2. In a two blank container, formed from corrugated sheet material, a tubular outer member open at its top and bottom ends, an inner member creased and folded to form front, rear, bottom and top panels and a pad formed integral with said front panel, arranged to lie beneath the inner surface of said top panel and a pendant flange on the normally free edge of said top panel arranged to be inserted between said outer and inner members and to overlap said front panel, the overlapping portions of said flange and front panel having a combined thickness substantially equal to the thickness of the front panel.

3. In a container for batteries or the like, formed from two blanks of corrugated sheet material, a tubular outer blank and an inner blank creased and folded to form front, rear, bottom and top panels and an integral pad arranged to lie between the inner surface of said top panel and the top of a battery in said container, a pendant flange on the free edge of said cover panel having the corrugations flattened, said flange being arranged to be inserted in engagement with the inner surface of said outer blank, and a portion of said inner blank arranged to overlap said flange, said portion having its corrugations flattened whereby the combined thicknesses of said portion and flange is substantially equal to the normal thickness of the sheet material.

4. In a container for batteries or the like formed from two blanks of sheet material, a tubular outer blank, an inner blank of corrugated sheet material creased and folded to form front, rear, bottom and top panels and an integral pad arranged to lie between the inner surface of said top panel and the top of the battery in said container, a pendant flange on the free edge of said cover panel

having the corrugations flattened, said flange being arranged to be inserted in engagement with the inner surface of said outer blank and a portion of said inner blank arranged to overlap said flange, said portion having its corrugations flattened and the combined thicknesses of said portion and flange being substantially equal to the normal thickness of the corrugated sheet material.

In testimony whereof, we have hereunto signed our names to this specification.

PAUL A. SCHILLING.
PAUL F. BOEYE.