

- [54] **COMBINATION LINER AND LID FOR WIREBOUND CONTAINER**
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- [22] Filed: **Mar. 23, 1971**
- [21] Appl. No.: **127,282**
- [52] U.S. Cl. **217/3 R, 217/3 BC, 217/47, 229/23 C, 229/47**
- [51] Int. Cl. **B65d 25/14**
- [58] Field of Search.....**217/3, 12 A, 68; 229/23 C, 47**

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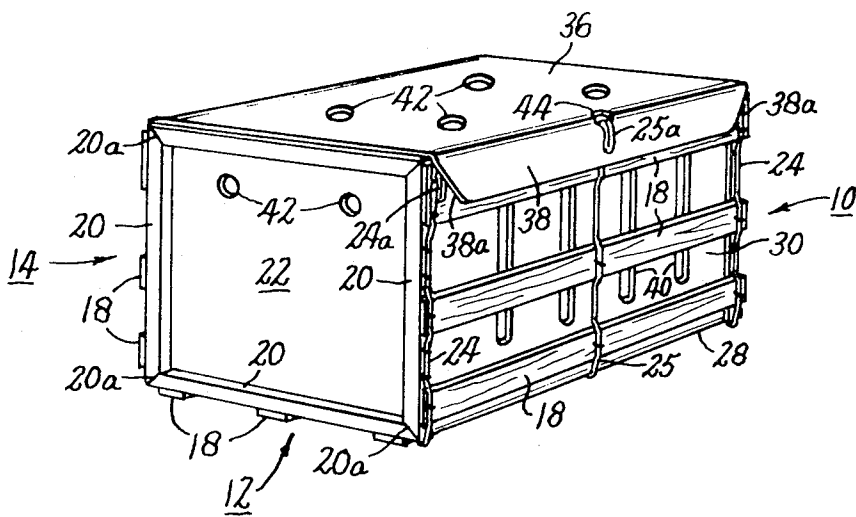
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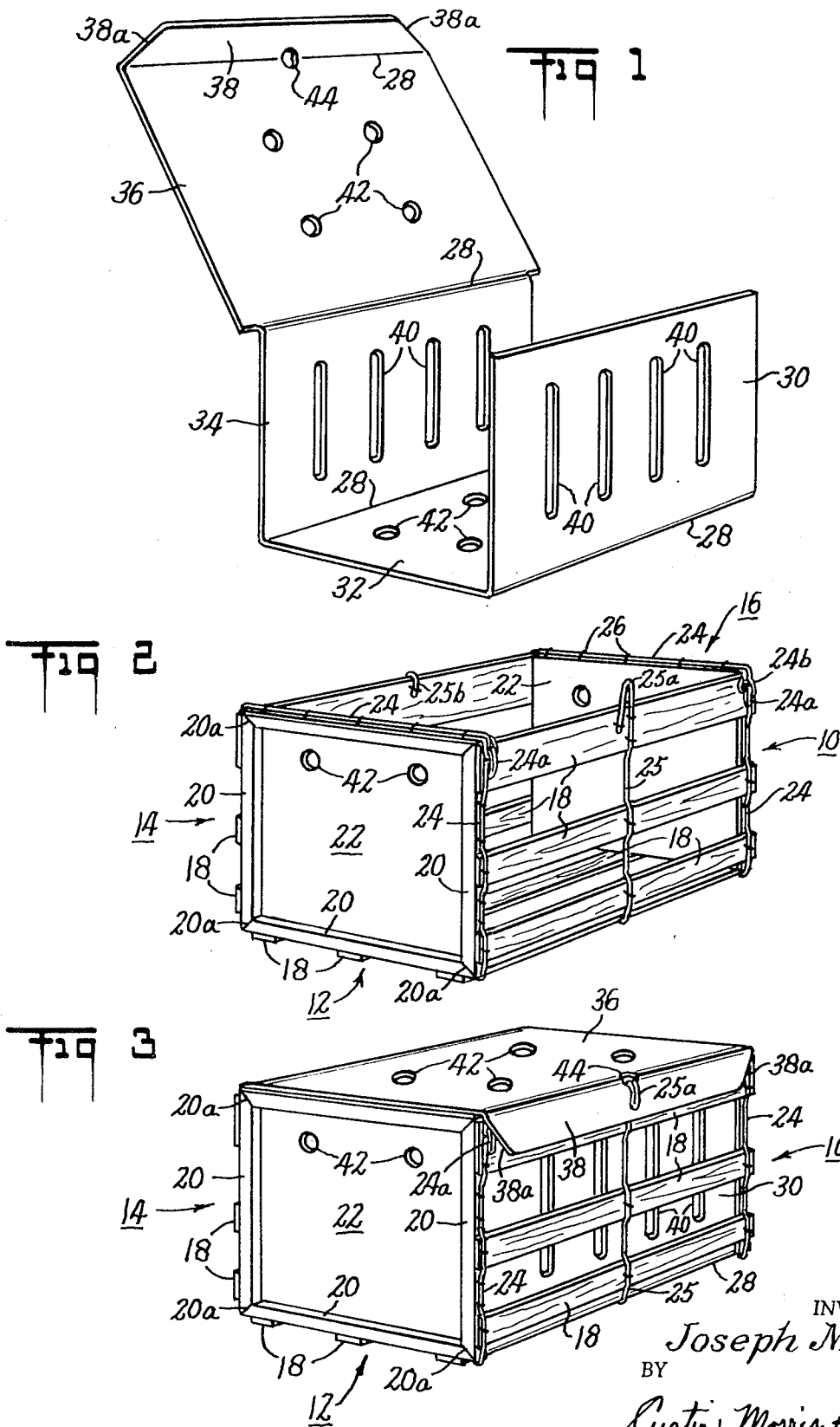
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[57] **ABSTRACT**

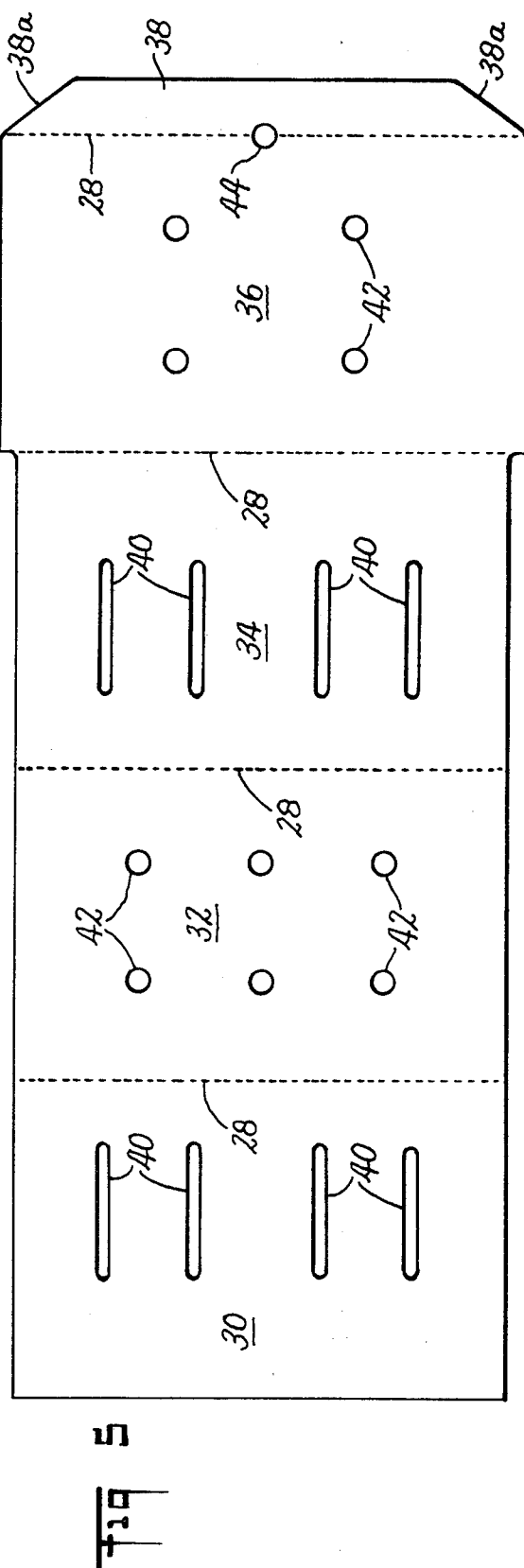
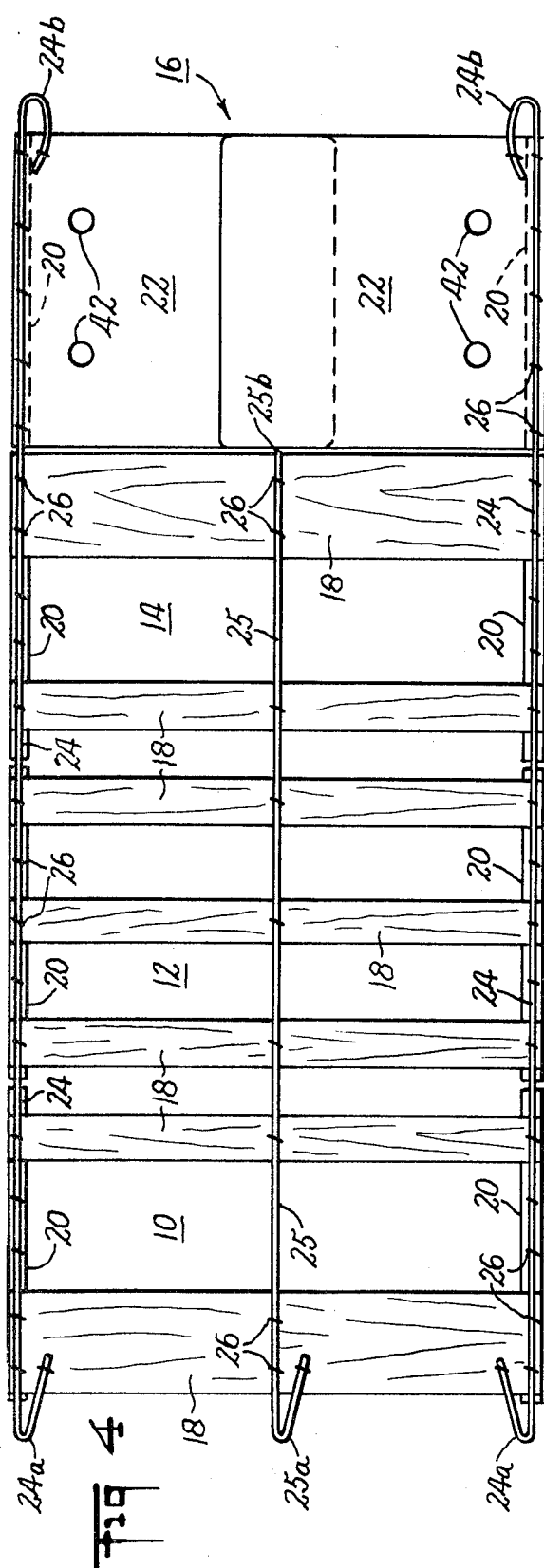
For an open-topped wirebound container of the type having integral end panels of foldable sheet material, a drop-in insert of foldable sheet material divided by score lines into three sections which line the front, bottom and rear sides of the container, a hinged lid which covers the top of the container and a closure flap which extends over the upper portion of the front side. The lid may be secured by a loop fastener on the end of an intermediate binding wire which is extended through a central opening at the dividing line between the lid and closure flap and is bent down against the outer surface of the flap.

5 Claims, 5 Drawing Figures





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COMBINATION LINER AND LID FOR WIREBOUND CONTAINER

This invention relates to a drop-in insert for a wirebound container which lines the sides thereof and provides a hinged lid. The invention is particularly useful with wirebound containers of the type having integral fiberboard end panels, providing therewith a fully lined container with an integral lid.

The conventional wirebound containers in use heretofore have been formed from blanks having four sections or sides, each formed of face material (e.g., slats) with reinforcing cleats stapled thereto adjacent the lateral edges of the blank, with the several sections foldably secured together by binding wires extending longitudinally of the blank adjacent its lateral edges and being secured to the several side sections by staples driven astride the binding wires, through the face material and into the cleats. The opposite end portions of each of the binding wires are formed into loop fasteners which are interengaged at the closing corner of the container when the container blank is folded around to assemble the container. The container ends are similarly formed of face material with reinforcing battens or liners stapled thereto and are secured to the container by loop fasteners formed at the ends of binding wires, stapled thereto, these loops being inserted through notches in the cleats on the front and rear sections of the containers and bent around the binding wires thereon.

The container blanks are customarily formed in a stapling machine in which properly assembled parts are conveyed beneath a transverse bank of stapling units. The container ends are separately formed in the same manner. Thus, the making of parts for a complete container blank requires roughly double the stapling machine usage which is involved in making the four-section main container blank or "mat." Moreover, the end sections must be attached to the "mat" by inserting and bending the loop fasteners, which either involves substantial manual labor or complicated and expensive automatic machinery.

In recent years there has gone into fairly widespread use a wirebound container which eliminates the aforementioned disadvantages by incorporating end-forming panels as an integral part of the box blank or mat. These panels are formed of foldable sheet material, such as corrugated fiberboard, and are stapled to the upper faces of the cleats on the top side section of the container and are folded downwardly against the inner face of the rectangular framework of cleats at each end of the container to close the ends. A separate lid of foldable sheet material, such as corrugated fiberboard, was provided where it was desired to close the top.

The present invention constitutes a further improvement of such containers in that it eliminates the necessity of a separate lid while at the same time providing a fully-lined container, without requiring any change in the wirebound mat itself.

In the drawings:

FIG. 1 is a perspective view of an insert embodying features of the present invention, the insert being shown folded and ready to be dropped into an open-topped wirebound container.

FIG. 2 is a perspective view of an illustrative type of open-topped wirebound container having integral fi-

berboard ends, with which the insert of FIG. 1 may be used.

FIG. 3 is a perspective view of the container of FIG. 2 with the insert of FIG. 1 installed therein and with the lid closed and secured.

FIG. 4 is a plan view of the flattened blank or mat from which the container of FIG. 2 is formed.

FIG. 5 is a plan view of the insert of FIG. 1 prior to folding.

The container blank shown in FIG. 4 includes four sections — a front section 10, bottom section 12, rear section 14 and top section 16 — the first three of said sections being formed by transversely extending slats 18 with longitudinally extending reinforcing cleats 20 secured thereto adjacent the lateral edges of the blank. The top section 16 is formed of similarly arranged cleats 20 with end panels 22 of foldable sheet material, such as corrugated fiberboard, secured to the upper faces of the cleats 20.

The four sections are foldably secured together by two outside binding wires 24 extending longitudinally of the blank near its lateral edges and secured to the sections by staples 26 driven astride the binding wires 24, through the slats 18 and the end panels 22 where present, and into the cleats 20. A third, intermediate binding wire 25 extends along the longitudinal centerline of the front, bottom and rear sections of the blank and is secured to these sections by staples 26 driven astride the binding wire 25 and through the slats 18, and clinched over against the under surface of the slats.

The two ends of each of the outside binding wires 24 are formed into interengageable loop fasteners 24a and 24b. The end of the intermediate binding wire 25 which projects beyond the outer edge of the front section 10 is formed into a similar loop fastener 25a, while its opposite end is bent around the outer edge of the rear section 12 and clinched over against its under surface, as shown at 25b in FIG. 2.

The ends 20a of the cleats 20 are mitered so that when the container blank is folded around to set up the container, as shown in FIG. 2, the mitered ends 20a of the cleats on adjacent sides of the container come into snug abutment to form at each end of the container a rigid, rectangular framework of cleats. The loop fasteners 24a and 24b at the opposite ends of the outside binding wires 24 come into opposition at the closing corner of the container and the loops 24a on the front section 10, being somewhat narrower than the loops 24b on the top section 16, are inserted through the latter and bent around them and downwardly against the front face of the container to secure it in assembled relation.

The end panels 22 are scored along the upper inside corners of the cleats 20 to facilitate folding of the panels downwardly and outwardly against the inner faces of all four cleats 20 of the rectangular framework at each end of the container. The panels 22 are preferably of such size that their edges lie against the inner faces of the slats 18 on the front, bottom and rear sides of the container so that the end panels serve to reinforce the container against racking out of rectangular cross sectional shape, and so that the frictional engagement between the edges of the end panels and the inner faces of the slats will prevent springback of the panels and hold them in proper position against the inner faces of the cleats.

As may be seen in FIG. 5, the insert of the present invention is formed of a single piece of foldable sheet material, such as corrugated fiberboard, which is divided by transverse lines of scoring 28 into a front section 30, bottom section 32, rear section 34, lid 36 and closure flap 38. The first three of said sections, 30, 32 and 34, are sized to conform respectively to the inside dimensions of the front, bottom and rear sides of the container while the lid section 36 is sized to conform to the outside dimensions of the top of the container. These four sections may be provided with perforations 40 and 42 for ventilation of the contents of the container, if desired.

As shown in FIG. 1, the insert is folded along the score lines 28 so that the front section 30 and rear section 34 are parallel to each other and perpendicular to the bottom section 32. Then the folded insert is pushed down into the open top of a wirebound container, such as is shown in FIG. 2, so that these three sections line the front, bottom and rear sides of the container. The insert may be held in place by friction alone.

After the container is filled, the lid 36 may be lowered to close the top of the container, with the closing flap 38 overlying the upper portion of its front side 10. As the lid is lowered, the loop fastener 25a at the upper end of the intermediate binding wire 25 is inserted through a hole 44 in the center of the score line 28 which divides the lid 36 from the closing flap 38. The lid is locked in closed position by bending this loop fastener downwardly against the outer surface of the closing flap 38, as shown in FIG. 3.

If the wirebound box has no intermediate binding wire 25, the closing flap 38 may be tucked inside the slat 18 at the upper edge of the front side 30 of the container, and held in place by friction. The closing flap is preferably provided with oblique cutouts 38a at each end to permit it to clear the inner faces of the cleats 20 and thereby eliminate any obstruction to tucking it inside the top slat 18 on the front side 10, as well as allowing it to lie between the outside binding wires 24 against the outer face of the top slat 18 when it is positioned outside the slat, as shown in FIG. 3.

The invention thus provides a simple and inexpensive insert which may be easily installed in an open-topped wirebound container with integral ends to provide a fully lined container having a lid with a simple and practical locking means.

I claim:

1. A lined wirebound container having a rectangular framework of cleats at each end with faceboards stapled to the outer faces of said cleats and extending across the front, bottom and back sides of said container, and end panels stapled to the upper cleats at each end and folded downwardly to close the ends of said container, a drop-in liner member comprising a unitary piece of foldable sheet material divided by transverse lines of scoring into five sections including, in order, three liner sections, a lid section and a closure flap section, said lines of scoring being spaced to coincide with the four corners of said container and said three liner sections having a width (measured transversely of the liner member) approximately equal to the inside length of said container, said liner member being inserted into the open top of the assembled container with said three liner sections lying against the inner faces of the front, bottom and rear side sections, said lid section foldably projecting beyond the upper

rear corner of said container, said lid section having a width approximately equal to the outside length of the container and a length (measured lengthwise of the liner member) at least substantially equal to the width of the top of said container, said lid section being folded downwardly to close the top of said container, with the ends of said lid supported on the tops of the upper cleats at the container ends, and said closure flap section being folded down along the front side of said container to close said container.

2. A container as described in claim 1 in which the width of said flap section (measured transversely of said liner member) is less than the inside length of said container whereby said flap portion can be tucked down inside the front side section of said container.

3. A lined wirebound container having a rectangular framework of cleats at each end with faceboards stapled to the outer faces of said cleats and extending across the front, bottom and back sides of said container, and end panels stapled to the upper cleats at each end and folded downwardly to close the ends of said container, said container being encircled near each end by a binding wire secured to the several container sections by staples driven astride said binding wire, through the face material and into the cleats, with the two ends of each of said binding wire being formed into loop fasteners which are interengaged at the upper front corner of the container, with an intermediate binding wire extending around the front, bottom and rear side sections of the container and secured thereto by staples driven astride said intermediate binding wire and through said face material and clinched against the inner surface thereof, the free end of said intermediate binding wire at the upper edge of the front side section being formed into a loop fastener, a drop-in liner member comprising a unitary piece of foldable sheet material divided by transverse lines of scoring into at least four sections including, in order, three liner sections and a lid section, each of said liner sections having a width (measured transversely of the liner member) approximately equal to the inside length of said container and said lines of scoring being spaced to coincide with the two lower inside corners and the upper rear inside corner of said container, said liner member being inserted into the open top of the assembled container with said three liner sections lying against the inner faces of the front, bottom and rear side sections, said lid section foldably projecting beyond the upper rear corner of said container, said lid section having a width approximately equal to the outside length of the container and a length (measured lengthwise of the liner member) at least substantially equal to the width of the top of said container, whereby said lid section can be folded downwardly to close the top of said container, with the ends of said lid supported on the top of the upper cleats at the container ends, said closure flap being folded downwardly against the outer surface of the front side of the container and having a central hole through which said loop fastener on said intermediate binding wire may be extended and bent downwardly to secure said closure flap section.

4. A container as described in claim 3 in which said loop fastener on said intermediate binding wire normally projects upwardly beyond the upper edge of said front side and said hole is located substantially in alignment with the line of scoring at the upper front corner of said container.

5. A container as described in claim 3 in which the end portions of said closure flap section at each end of said container are cut away to expose the interengaged loop fasteners at the upper front corners of the container.

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