

[54] **LOOSE LEAF RING BINDER EASEL STRUCTURE**

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[51] Int. Cl. **A47b 23/00**

[58] Field of Search.....281/33; 402/74-77, 402/80 R, 80 L

[56] **References Cited**

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[57] **ABSTRACT**

Loose leaf ring binder easel structure having outer cover panels, an intermediate back cover panel pivotally hinged therebetween and ring wire sheet holding mechanism mounted on the back panel, one of the outer covers having an easel support secured thereto and extending from the inside cover surface for engaging the ring wires and holding the cover to an outer limit of pivotal movement at an oblique angular relation to the back panel, the second outer cover panel being free to swing into a back to back relation with the back cover panel. When the second cover panel rests on a platform surface the back panel is horizontal and the easel support holds the first cover panel at the upright angle for turning sheets on the ring wires to and from an inclined easel position against the cover.

9 Claims, 8 Drawing Figures

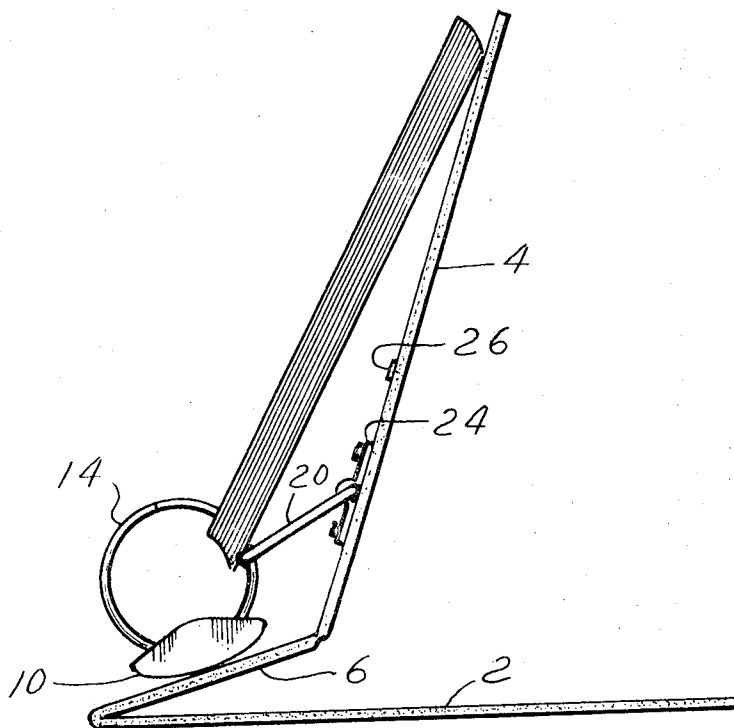


Fig. 1.

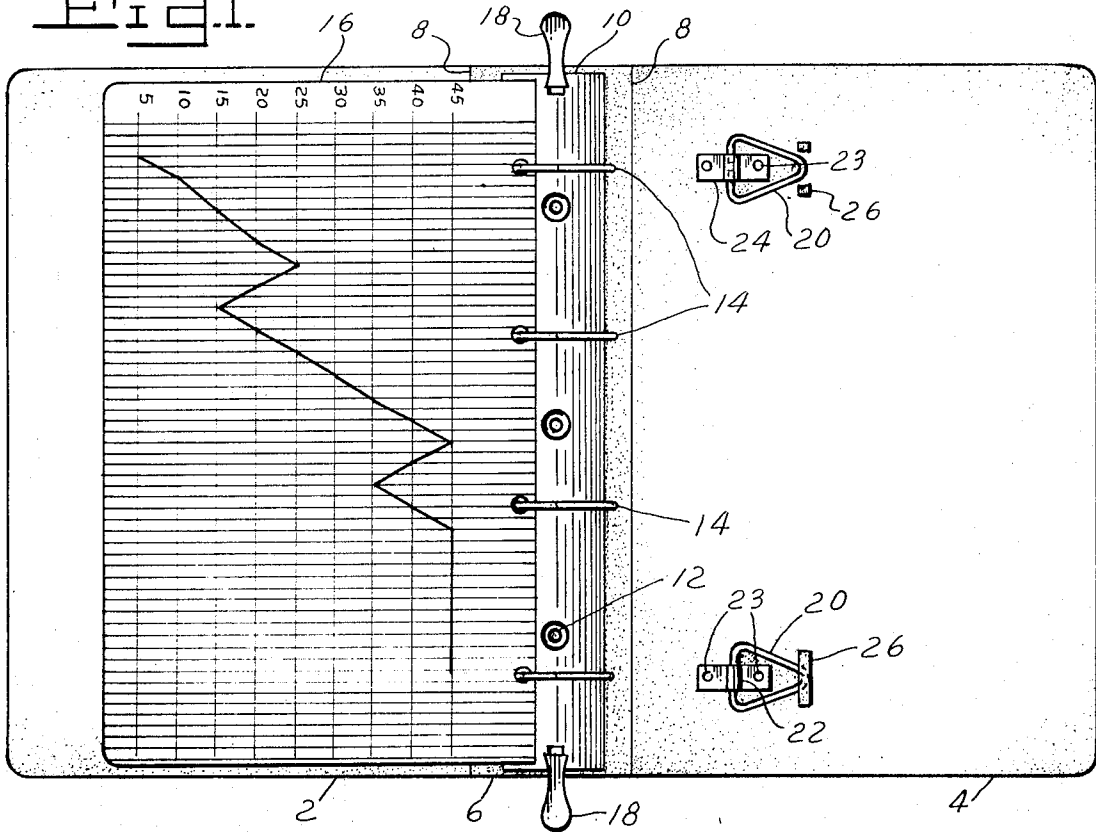


Fig. 2.

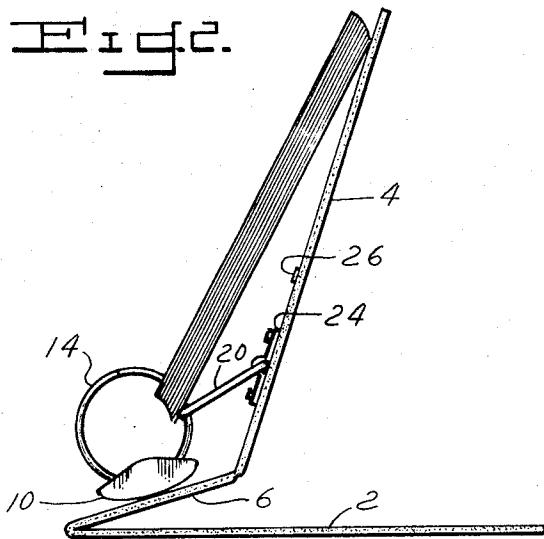
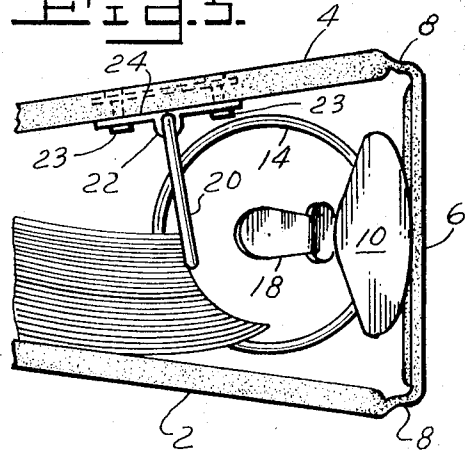


Fig. 3.



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Fig. 4.

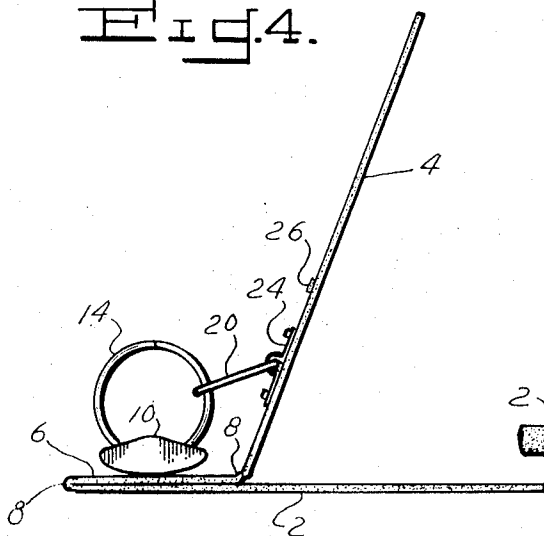


Fig. 5.

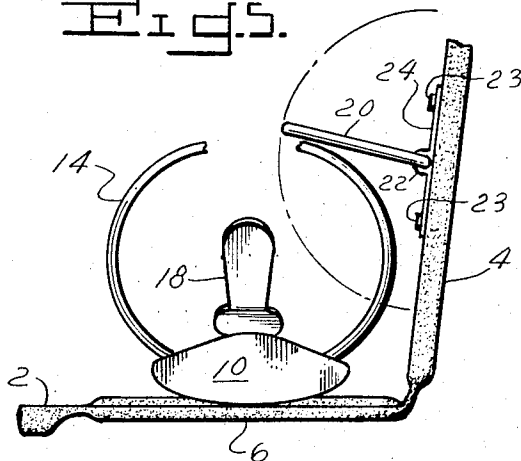


Fig. 6.

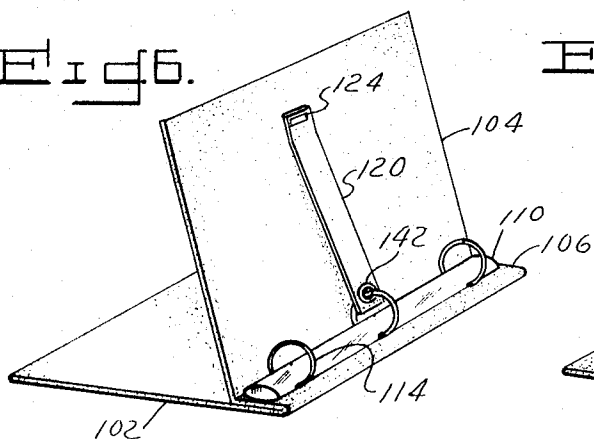


Fig. 7.

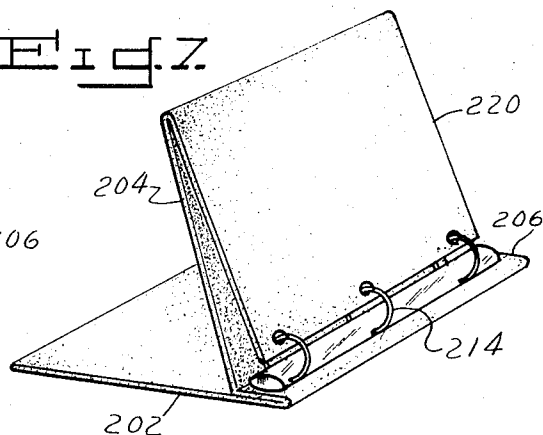
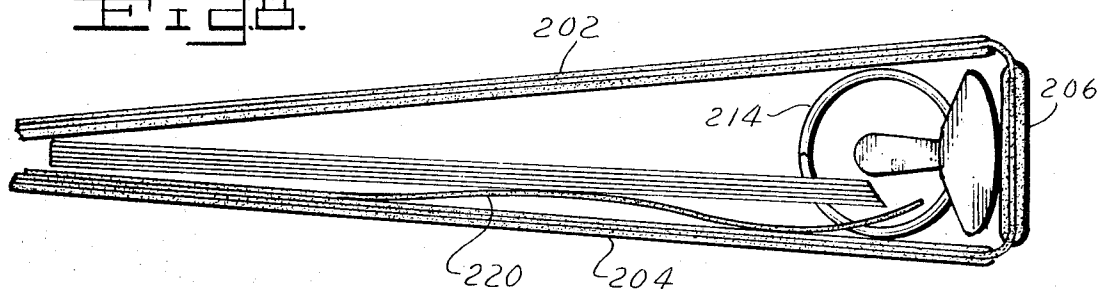


Fig. 8.



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LOOSE LEAF RING BINDER EASEL STRUCTURE

BACKGROUND

This invention relates to loose leaf binder assemblies convertible to easel form and particularly to a standard type of ring binder cover construction incorporating simplified means for such convertibility.

Insofar as is known various binders having devices for erecting into easel stand form have heretofore provided in one way or another for a supporting member to extend as a prop between the outer side of a cover panel or panels and the supporting platform surface itself on which the binder is placed. The present invention contemplates an extremely simple means for positioning one of the pair of pivotally hinged outer covers of a ring binder in an oblique upright easel-type position by providing support means anchored at one end to one cover and extending from the inner face thereof to be releasably linked to one or more of the binder rings carried on the back cover panel. Relative pivotal movement between the one cover panel and back panel on which the ring mechanism is mounted may thus be held to a desired outer limit of movement. In erected condition the other outer cover is preferably pivoted to lie underneath the back panel and the inner face of this cover rests on the support surface so as to insure against an overbalanced condition. In such an easel assembly the inner bound margins constitute the top or bottom edges of the sheets. Printed or written material on the sheets may be brought to view for inspection from a forward horizontal face down position to a rearwardly oblique upright viewing position or the sheets may be reversely turned for such reference or presentation display purposes.

An object of the present invention is to provide simplified support means for enabling the convertibility and optional use of a standard type of ring binder assembly as a table-top easel stand unit. The invention in a preferred form may be practiced by the mere addition of a cover support member or members anchored at one end against the inner face of a cover panel and being swingable to slip its other end over one or more of the ring wires, such engagement on the rings providing the outer limit of pivotal movement of the cover relative to the back panel carrying the rings. The binder construction per se is of a widely known standard type in which upper and lower or outer cover panels are pivotally hinged at each side of a back cover panel on which ring wire mechanism, such as a split ring toggle plate unit, is mounted. The outer panels are hinged for swinging into a full or substantially full back to back relationship of cover and back panel. Thus, when the cover panel carrying the easel support is linked to the ring wire the other free outer cover panel may be swung into a back to back position against the back panel and cover then seated on a platform surface. The outer faces of the cover panels then lie in acute angular relation, the inner face of the upright cover panel being supported at an inclined angle for use as an easel.

DRAWINGS

FIG. 1 is a plan view of a loose leaf ring binder assembly embodying the invention and lying in open condition with easel panel support members anchored on the inner face of an outer cover panel;

FIG. 2 is a side elevation of the binder of FIG. 1 with the support members engaged on the rings and the panels in an easel position;

FIG. 3 is a partial end view of the binder as seen in FIG. 2 in closed condition;

FIG. 4 is a view similar to FIG. 2 showing an alternative easel position resulting from a variation in the specific cover panel hinge connection;

FIG. 5 is a partial end edge view showing the binder rings opened and illustrating the manner in which the easel supports of FIGS. 1-5 are swung on and off the rings;

FIG. 6 is a perspective view of an assembly embodying the invention and showing an alternative form of easel cover support means engaging a central ring;

FIG. 7 is a view similar to FIG. 6 showing a further modification of the cover support means; and

FIG. 8 is an end edge view of a binder assembly in closed condition showing the disposition of the cover support of FIG. 7.

DESCRIPTION

In the drawings the hinged panel cover construction of the binders embodying the invention is generally shown as including stiffened front and back panels as the matching outer cover panels 2 and 4, and a stiff intermediate panel as the back cover panel 6, the latter being hingedly joined therebetween for pivotally swinging the outer panels on flexible connecting portions herein schematically indicated by the hinge lines at 8. Such hinge portions may be suitably provided in a wide variety of ways as will be readily recognized in the art. As one example, portions of a plastic or fabric sheet material overlying panel stiffener means (not shown) and serving in part as a sturdy decorative facing for the same, may extend between adjacent back panel and outer panel margins for desired pivotal hinge action. Marginal cloth binding strips of such material may also be used to join spaced edges of opposed rigid panel members. As shown the hinge portions are formed to permit swinging into a contiguous back to back relation of outer cover and back cover panels or a position of substantially that character in which the back panel may be horizontally disposed when the cover panel is folded underneath. Such hinge constructions are common in the art and so well known as not to need further detailed description. As will be apparent metal hinge constructions may also be suitable.

On the back cover panel 6 a standard type of toggle plate loose leaf ring wire mechanism is indicated at 10, being conventionally attached to panel 6 as by rivets 12. A plurality of longitudinally spaced split ring wires 14 extend in arched overlying relation to the back panel for mounting a filler pack of sheets 16 in the usual manner. The toggle plate mechanism preferably may further include a means for opening or for locking the ring halves in closed condition by actuating levers 18 at its outer ends. As is also well-known in the art the rings are opened by depressing the levers outwardly and locked together by pressing the levers upwardly and inwardly. The ring mechanism shown is a standard type of sheet holding means in such binders and need not be further described in detail. Other similarly operated ring mechanisms are equally adaptable for use with the cover panel structure and easel supporting

members of the present invention as will now be described.

In the embodiment of the invention illustrated by FIGS. 1-5 inclusive, the easel support means is shown as a pair of wire loops, as the bails 20 releasably engageable on the ring wires 14. As shown by FIG. 1 bails 20 lie in opposed relation to the outer rings at the ends of the toggle mechanism. Bails 20 are preferably triangularly formed by bending from a single length of wire rod. The opposed ends forming the base of the loop are secured for free pivotal action in an upwardly arched central bearing section 22 of an anchor strap 24 riveted as at 23 to the face of cover panel 4. The bails 20 as seen in FIG. 1 are held in an inoperative "stored" position flat against the panel wall by keeper straps 26. The straps may be short pieces of elastic webbing sealed at their extreme ends to the panel wall and holding the bails by snapping the straps over the tip ends. The bails may thus be unobtrusively "stored" if desired, and the binder used in the ordinary fashion.

The outer ends of the bails 20 as noted are in positions of registration opposite the end wires 14. When freed from the straps 26 the bails can swing and engage rings 14 by lifting panel 4 into right-angled relation to back panel 6, and, with the ring halves held open as best shown by FIG. 5, each loop can then swing over the end of the adjacent wire half. On closing the rings the outer cover panel 4 will accordingly be restricted by the bails to an outer limit of pivotal movement as seen in FIGS. 2 and 4. The panel 4 is thus held in upright oblique angular relationship to back panel 6 when the latter is supported in a substantially horizontal position. It will also be noted from FIGS. 2 and 4 that the pivotal axis of the bail 20 is spaced from the hinge line connection 8 a distance approximately equal to the ring diameter. Not only will the sheets bound on rings 14 be supported in a suitable easel position against panel 4 with the lower marginal edge portions being held by the bails, but also in the act of closing the binder from the easel condition the bails 20 will act as a sheet "lifter" in turning sheets resting on panel 4 upwardly on the rings and bringing the covers into closed position (FIG. 3) all as will be readily understood by those skilled in the art.

In the embodiment illustrated by FIG. 6 the outer cover panels 102, 104, and back panel 106 carrying the ring toggle mechanism 110 are arranged for erection in the easel stand position shown by employing a flexible strap 120 preferably of heat sealable plastic material and affixing one end to the face of panel 104 as at 124, the other end having a metal reinforced opening as the grommet 142 engaging central ring wire 114. The anchored end of the strap is inwardly spaced from the adjacent outer edge of the panel 104. Accordingly, the strap connection on the ring 114 when erected in easel form will be at a point upwardly on the ring in comparison with the attachment of bail 20 as seen in FIG. 4. It may be noted that the arrangement of FIG. 6 is intended as more suitable for the smaller ring capacity units where only a relatively small number of sheets are carried for "presentation" display purposes. More than one strap may, of course, be employed for added support of the easel position.

In FIG. 7 the easel support means comprises an extension 220 of the cover member 204 which is punched

at its outer marginal edge to slip over and engage the rings 214. Extension 220 may comprise an extension of the plastic sheet facing material overlying the stiffening members which impart rigidity to the cover panels 202, 204 and 206 as previously mentioned. The extension 220 is thus preferably of a readily flexible character, and as seen in FIG. 8 will lie loosely against the inner wall of the panel 204 when the binder is closed. As in the case of the strap 120 of FIG. 6, this modification is intended for holding a relatively small number of display sheets in a "presentation" binder and in similar fashion the point of engagement on the rings in easel position is nearer the top of the arched rings than is the case with the bails 20 in FIG. 4.

What is claimed is:

1. In a loose leaf binder having cover panels and pivotally hinged therebetween a connecting back cover panel with loose leaf sheet holding ring wire means mounted thereon,

easel support means anchored on one of the cover panels and extending to engage the ring wire means and restrict said one cover panel to an outer limit of pivotal movement on its hinged connection with said back panel, said cover panel at said limit being held by the easel support means in an upright oblique angular relationship with the back panel when the binder is supported with the back panel lying in a substantially horizontal position.

2. The structure of claim 1, in which, said ring wire means comprise a plurality of rings having mating separable ring halves extending in arched overlying relation to said back cover panel, and

said easel support means is fastened on and removed from the ring wire halves over the outer free end of at least one of the ring halves when said ring halves are separated.

3. The structure of claim 2, in which, said easel support means is anchored against the inner face of said one cover panel and fixed thereto in remotely spaced relation to the hinged connection with said back panel.

4. The structure of claim 2, in which, said easel support means is a flexible strap having its anchored end fixed on the inner face of said one cover panel in a central inwardly spaced relation to the edge thereof remote from the hinged connection with the back panel and said strap is provided with a reinforced opening at its outer end engageable with a ring half at the center of said back panel.

5. The structure of claim 2, in which, said easel support means comprises a panel extension at the outer edge of said one cover panel and openings are provided at the free end edge of said extension for releasable engagement with the adjacent ring halves of said plurality of rings.

6. The structure of claim 2, in which, said easel support means is anchored on the inner face of said one cover panel and at a location spaced from the hinged connection with the back panel a distance approximately equal to the diameter of said rings.

7. The structure of claim 6, in which,

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said easel support means is rigid and pivotally anchored to the cover panel for swinging the outer end over the end of a ring half.

8. The structure of claim 7, in which,

said easel support means comprises at least one wire 5
bail pivotally mounted in registering relation with a ring and having convergently directed sides forming an outer angularly looped tip for nesting a ring half therein.

9. The structure of claim 8, in which,

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said ring wire means is a loose leaf toggle plate ring mechanism for releasably locking the ring halves in closed condition,

wire bails are pivotally mounted on said cover panel for operative engagement with the rings at opposite ends of the back panel, and

means are provided on said cover panel adjacent the bails to keep the bails releasably held against the panel surface.

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