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EASEL FORMING BINDER

Filed Oct. 1, 1959

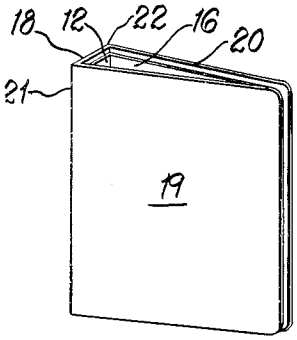

Fig. 1.

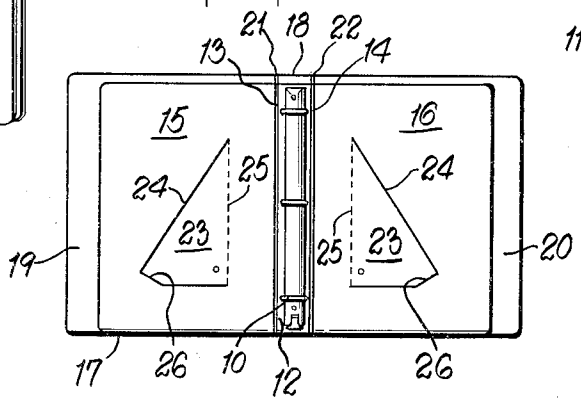

Fig. 2.

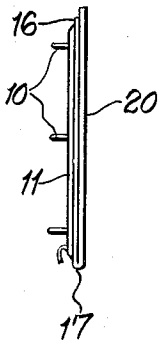

Fig. 3.

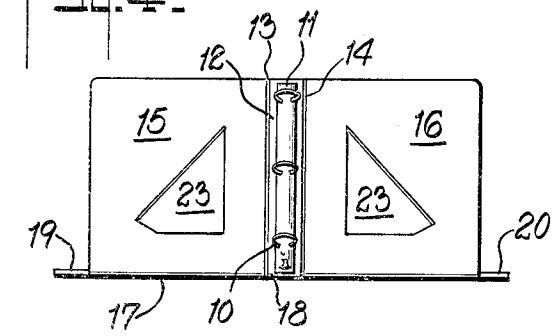

Fig. 4.

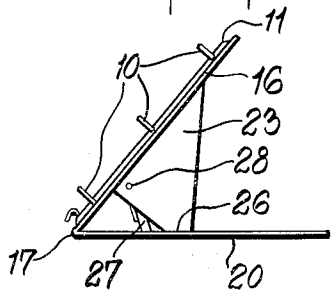

Fig. 5.

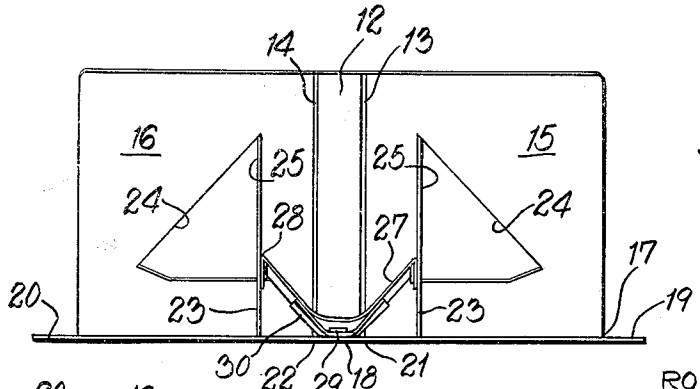

Fig. 6.

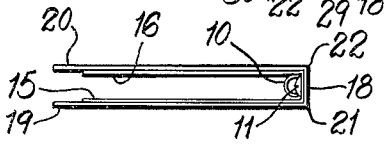

Fig. 7.

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EASEL FORMING BINDER

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1 Claim. (Cl. 281—33)

The invention herein disclosed relates to mechanical binders and the general object of the invention is to provide a binder which can be set up as an easel for advertising, display or convenient reading purposes.

Special objects of the invention are to provide such a binder which will automatically assume and hold the position of an easel when the binder is opened up for that purpose.

Further special objects of the invention are to provide a binder having an automatic easel forming structure incorporated therein in such a manner as not to add objectionably to the size, weight or bulk of the article and which may be closed to assume the appearance, size and characteristics of an ordinary binder.

Further important objects of the invention are to provide a combined binder and easel having the desirable characteristics mentioned which while of durable and lasting form will be of simple, inexpensive construction.

The foregoing and other desirable objects are accomplished by the novel features of construction, combination and relation of parts hereinafter set forth and illustrated by way of example in the accompanying drawing.

The drawing referred to illustrates a present practical embodiment of the invention but it will be appreciated that structure may be modified and changed in regard thereto, all within the true intent and scope of the invention as hereinafter defined and claimed.

Fig. 1 in the drawing is a perspective view of one of the easel binders closed in book form, to be handled and used as an ordinary binder.

Fig. 2 is a plan view of the binder opened up in flat condition.

Fig. 3 is an edge view of the same.

Fig. 4 is a front elevation of the binder opened up into the easel formation.

Fig. 5 is an edge or end view of the binder in the upstanding easel formation.

Fig. 6 is a back view of the binder in the upstanding easel formation.

Fig. 7 is an end view of the closed binder structure.

Figs. 1 and 7 show how the binder appears in the closed, folded condition, looking like and adapted to be handled and used as an ordinary binder.

Figs. 2 and 3 show how the device may be opened up flat like any ordinary binder to afford full access to the leaves held in the rings **10** of the binder metal **11**.

This binder metal is attached to and carried by a back portion **12** to which are hingedly connected at **13** and **14**, the side panels **15** and **16**.

This whole binder base or foundation, the narrow center panel and attached side panels are hingedly connected along the lower edge on a common axis **17** to an outer cover and base forming structure made up of a back forming panel **18** and front and back cover forming panels **19, 20**, hingedly connected to the back panel along lines **21, 22**, parallel with and slightly wider spaced than the hinge lines **13, 14**, for the inner side panels.

Props for holding the inner binder metal carrying

section up in inclined relation on the base forming panels are provided in the form of triangular shaped doors **23** cut out of or set into the correspondingly shaped triangular openings **24** in the side panels and hinged to said panels along the lines **25** substantially parallel to each other and to the central axis of the binder.

These hinged doors have lower inclined edge portions **26** which when the doors are swung open to the back will rest on the base cover panels to support the binder structure at a desired angle of inclination in respect to the base.

Automatic means for opening the prop doors to the easel forming position are provided in the illustration in the form of a flexible tape or tapes **27** connected at **28** to the back of the door at points relatively close to the hinge lines and close to the lower edge of the doors.

This flexible connection between the lower edges of the props is shown connected at an intermediate point at **29** with the back panel **18**.

While a tape connection is at present preferred because of its flexibility and flat character so as to lie flat between the front and back panels in the flat folded position of the parts, it is contemplated that other forms of connections may be used for drawing back the prop doors when the inner or upper section is lifted to the easel position.

An elastic tape may be connected with the doors, under tension when the binder is closed or lying flat so that as the easel forming board is raised this tape will draw the doors back into the supporting position.

The door opening tapes may be connected in various ways, as by adhesive, stitching, riveting, snap fasteners or the like and these prop setting connections may be just connected with the doors at the ends or additionally have a center connection with the back panel of the base.

Another form of connection which may be used is the tape known in the trade as "Velcro," a tape having a hooked surface adapted to mechanically interlock when two pieces of such tape are pressed together.

In the illustration this pressure interlocking type of tape is shown, a short section of such tape being indicated at **30** on the back engaged and interlocked with the corresponding tape attached to the doors.

The prop forming doors being foldable into door openings provided in the inner, side panels, add no thickness to the complete structure and hence aid in keeping overall size to the minimum practical limits.

To set up the binder in an easel forming relation it is only necessary to open the binder into the flat Fig. 2 position and raise the inner or upper supporting board or section, whereupon the props will be automatically extended. The easel then may be collapsed at any time by simply folding the prop forming doors back into the door openings in which such elements are mounted. After this the structure may be closed into book form as first shown or used in any manner in which ring binders are ordinarily employed.

The construction is entirely practical, durable, of simple and few parts and can be produced at relatively low cost.

What is claimed is:

A book form of folding easel comprising a base made up of a back and hingedly connected front and back covers which can be opened into the form of a flat base or folded into closed book formation, an easel board made up of an intermediate back and hingedly connected side panels, said easel board overlying said base with the hinge lines of said side panels substantially in register with the hinge lines of said front and back covers and whereby said intermediate back and side panels will conform to the folded book formation, a flexible hinge connecting the lower edges of said base and easel board enabling said easel board to be hinged upwardly over the

base into inclined position thereon, props for supporting said easel board in raised inclined relation on said base, said props including members hinged to said side panels on lines substantially parallel with the hinging lines of said side panels enabling said members to be hinged rearwardly of the side panels into extended position over the front and back covers and having supporting portions at the lower edges thereof inclined in respect to the hinge axes of the props engageable with the front and back covers in the rearwardly hinged position of the props to support the easel board at a selected angle of inclination, and means for automatically hinging said props from the panels as said easel board is hinged upwardly into inclined position over the base, including a flexible tape-like connection connected with said props at points adjoining the hinge lines of the props and connected with said back so that lifting of the easel board will tension said tape connection to automatically pull the props back into extended position as the easel board is raised.

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