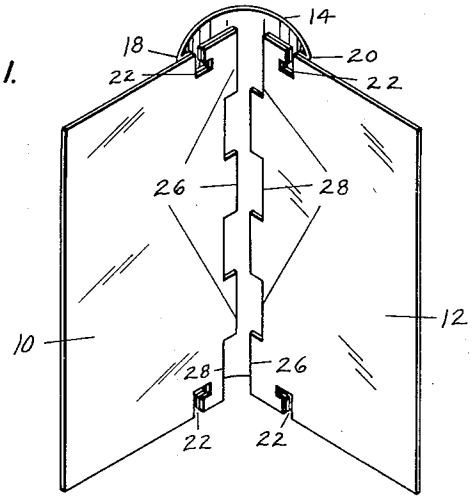
Jan. 24, 1956 C. F. ALLISON 2,731,967

NOTE BOOKS

Filed July 16, 1952

FIG. 1.



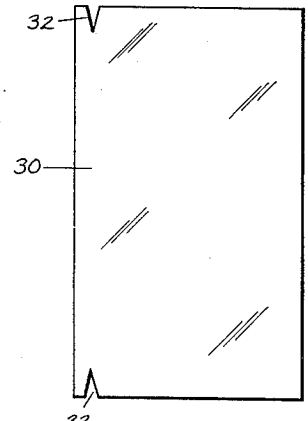
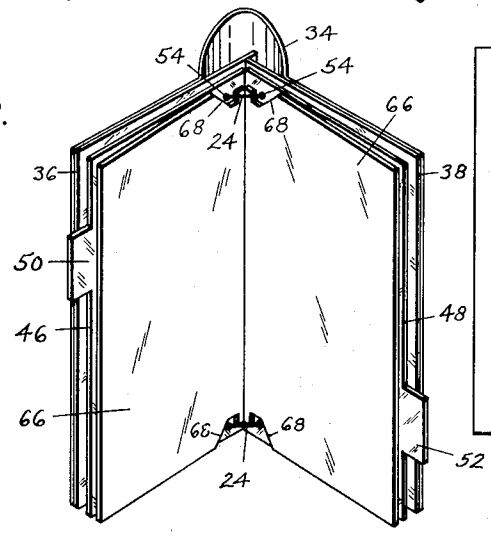


FIG. 2.

FIG. 3.



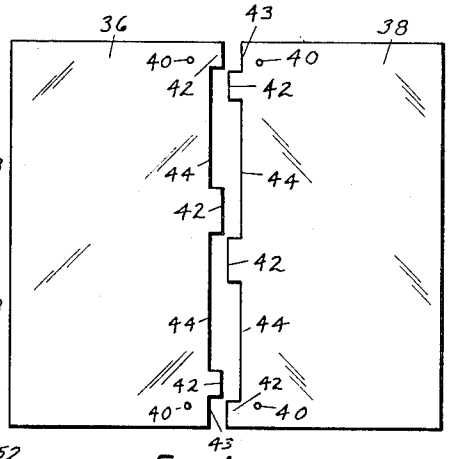


FIG. 4.

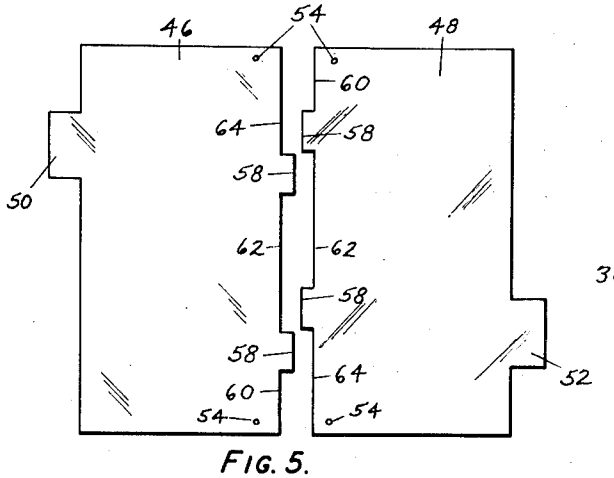


FIG. 5.

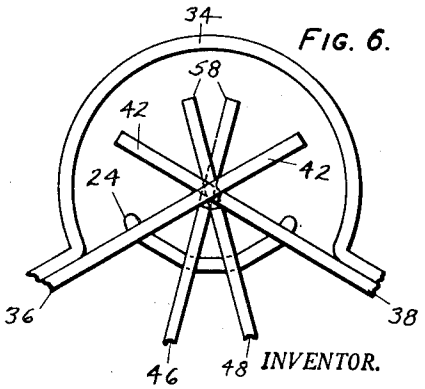


FIG. 6.

INVENTOR.
Charles F. Allison
BY
Ray Eilers
ATTORNEY.

United States Patent Office

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NOTE BOOKS

Charles F. Allison, Chicago, Ill.

Application July 16, 1952, Serial No. 299,170

6 Claims. (Cl. 129—18)

This invention relates to improvements in note books. More particularly this invention relates to improvements in note books wherein the leaves are readily inserted and removed.

It is therefore an object of the present invention to provide an improved note book wherein the leaves are readily inserted and removed.

This application is a continuation-in-part of my copending application Serial No. 768,385 which was filed August 13, 1947, for Note Books, and which issued August 19, 1952, as Letters Patent No. 2,607,351.

The present invention provides a note book wherein the covers press against the leaves and resist shifting of those leaves, but wherein each leaf is held individually and can be inserted or removed without disturbing any of the other leaves of the note book. It is therefore an object of the present invention to provide a loose leaf note book wherein the covers press against the leaves, but wherein each leaf can be inserted or removed from the note book without disturbing the other leaves of that note book.

In the note book provided by the present invention, a resilient element is provided that performs the dual function of supporting each of the leaves against accidental dislodgment, and also presses the covers toward each other so they can hold the leaves against shifting. By doing so, this one element makes it possible to remove and insert one or more leaves without disturbing the rest of the leaves. Moreover, this element always keeps the notebook as compact as it can be kept. It is therefore an object of the present invention to provide a note book with a resilient element that holds the covers together and provides individual support for the leaves.

The resilient element of the present invention is preferably positioned forwardly of the hinge of the note book. Where this is done, the resilient element will always exert a closing force on the covers that will tend to keep the note book closed. This action is further insurance that the leaves will be held against accidental loss or displacement.

Other and further objects and advantages of the present invention should become apparent from an examination of the drawing and accompanying description.

In the drawing and accompanying description two preferred embodiments of the present invention are shown and described but it is to be understood that the drawing and accompanying description are for the purpose of illustration only and do not limit the invention and that the invention will be defined by the appended claims.

In the drawing, Fig. 1 is a perspective view of the covers and back for a note book that is made in accordance with the principles and teachings of the present invention,

Fig. 2 is a side elevational view of one of the leaves that is usable in note books made in accordance with the principles and teachings of the present invention,

Fig. 3 is a perspective view of another note book that is made in accordance with the principles and teachings of the present invention,

Fig. 4 is a side elevational view of the covers of the note book shown in Fig. 3, and it shows those covers in juxtaposition to each other,

Fig. 5 is a side elevational view of the tabbed separators of the note book shown in Fig. 3, and it shows those separators in juxtaposition to each other, and

Fig. 6 is a partially broken plan view of the back, covers and separators of the note book of Fig. 3.

Referring to the drawing in detail, the numeral **10** denotes the front cover of a note book that is made in accordance with the principles and teachings of the present invention; and that note book has a rear cover **12** and a back **14**. Covers **10** and **12** and back **14** are made of a material that is relatively inexpensive, readily obtainable and relatively stiff. Several materials can be used; among which are paper, cardboard, metal, cellulose esters, polyvinyl esters and the like. The front and rear covers **10** and **12** are made separate from the back **14**, and the back **14** has a reentrant portion **18** and a second reentrant portion **20**. The reentrant portions **18** and **20** of back **14** are parallel to the front and rear covers **10** and **12**, and those portions of back **14** overlie the rear portions of the covers **10** and **12**. The front and rear covers **10** and **12** and the reentrant portions **18** and **20** of the back **14** have undercut slots **22** therein which are in register with each other. The slots **22** are L-shaped in configuration. While the L-shaped configuration is preferred, the slots **22** may be given any suitable configuration. The slots **22** extend inwardly from the upper and lower edges of the covers **10** and **12** and reentrant portions **18** and **20** of back **14** as shown in Fig. 1. The covers **10** and **12** can be permanently secured to the back **14** by cement, adhesive, stitching or the like, or they can be releasably held in assembled relation by means of a resilient binding element, not shown, which would span the spaces between the slots **22** and would extend downwardly along the outer faces of the reentrant portions **18** and **20** of the back **14**.

The rear edges of the front and rear covers **10** and **12** are provided with alternating projections **26** and notches **28**. The projections **26** on the front cover **10** are disposed opposite to and in register with notches **28** on the rear cover **12**; and the projections **26** on the rear cover **12** are disposed opposite to and in register with notches **28** on the front cover **10**. The projections **26** on the front cover **10** thus are able to interleave with the projections **26** on the rear cover **12** and act as a hinge for the covers **10** and **12**; and the projections **26** on the covers **10** and **12** interlock to prevent shifting of one cover vertically relative to the other cover.

The undercut slots **22** will receive a resilient binding element, not shown; and that element may be a band or a string which extends through and spans the space between the slots **22** at the top of the note book, then extends downwardly along the outer faces of the reentrant portions **18** and **20** of back **14**, and then extends through and spans the space between the slots **22** at the bottom of the note book. This element may be a band or string of elastic material, as for example rubber, synthetic rubber, or rubberized fabric, or it may have an elastic portion and a non-elastic portion. In the latter case, the elastic portion may include a band or string of elastic material or an extensible spring. The portions of the resilient binding element which extend horizontally between the inner faces of front and rear covers **10** and **12** will receive the notches **32** in the upper and lower edges of the leaves **30**.

In inserting a leaf **30**, the notch **32** in the bottom of the leaf **30** can be placed in register with the lower portion of the resilient binding element and can be pressed downwardly to force that portion of the resilient binding element downwardly until the upper edge of the leaf **30** is below the upper portion of the resilient binding element. At that time the leaf **30** can be tilted until the notch **32** in the top edge thereof is in register with the upper portion

of the resilient binding element, whereupon the leaf 30 can be moved upwardly into locking engagement with the resilient binding element. The upward and downward movement of the leaves 30 will not tend to dislodge the resilient binding element from the slots 22 in the back 14 and in the covers 10 and 12, because those slots 22 are undercut. In assembling the various component parts of the notebook the resilient binding element will be passed downwardly into the area bounded by the back 14, the upper portion of the resilient binding element will be raised upwardly and slipped into the upper slots 22, the lower portion of the resilient binding element will be moved downwardly and slipped into the lower slots 22, and then the resilient binding element will be moved rearwardly into the horizontally disposed portions of the slots 22. Once in this position, the resilient binding element will be held by frictional forces between itself and the covers 10 and 12.

The back 14 will bend to permit opening or closing movement of the covers 10 and 12; and it will be noted that the vertically extending portions of the resilient binding element are disposed within the space bounded by the back 14. As a result, the resilient binding element must stretch whenever the note book is opened, and the resilience of that resilient binding element will enable it to urge the front and rear covers 10 and 12 together and thus tend to keep the note book closed. The action of the resilient binding element in moving the front and rear covers 10 and 122 toward each other and in holding the note book closed serves to reduce the overall thickness of the note book and also serves to hold the leaves 30 against shifting. Such action minimizes the forces to be borne by those portions of leaves 30 adjacent the notches 32. The binding 14 also serves to cover and protect the resilient binding element so that the resilient binding element cannot engage foreign objects.

The note book can be opened to any particular page or place, and a leaf or leaves can be inserted or removed without disturbing the rest of the leaves 30. The stretching of the resilient binding element will cause that element to hold the rest of the leaves 30 even more tightly against the front and rear covers 10 and 12. The selected leaf or leaves can, however, be withdrawn easily.

In Fig. 3, the numeral 34 denotes the back of another note book that is made in accordance with the principles and teachings of the present invention; and that note book has a front cover 36, a rear cover 38, tabbed separators 46 and 48 and leaves 66. The back 34 overlies the front portions of the front and rear covers 36 and 38; and the back 34 is held in assembled relation with those portions of the front and rear covers 36 and 38 by cement, adhesive, stitching or the like. The rear edges of the front and rear covers 36 and 38 are provided with alternated projections 42 and notches 44 and notches 43. The notches 43 are shorter of length than are the notches 44; the notches 43 being only slightly longer than the length of the projections 42, while the notches 44 are several times the length of the projections 42. The notches 43 and 44 of the front and rear covers 36 and 38 are in register with and receive the projections 42 of those covers. As indicated in Fig. 4, the projections 42 of the cover 36 will be above and immediately adjacent the projections 42 of the cover 38, and there will be spaces between bottoms of the projections 42 on cover 38 and the tops of the projections 42 on cover 36. These spaces are large enough to receive the projections 58 on the tabbed separators 46 and 48; and those projections are in register with those spaces. In this way, the projections 42 of the front cover 36, the projections 42 of the rear cover 38, the projections 58 on the tabbed separator 46, and the projections 58 on the tabbed separator 48 interleave to prevent relative vertical shifting of those covers and those separators. The front and rear covers 36 and 38 are provided with eyelets 40. The tabbed separators are provided with openings 54 that are in register with the eyelets 40.

The projections 58 on the tabbed separators 46 and 48 alternate with notches 60, 62 and 64. The notches 62 are the longest, and they each receive one projection 58 and two projections 42. The notches 64 are the next longest, and they also receive one projection 58 and two projections 42. The notches 60 are the shortest; receiving just two projections 42. This dimensioning of the notches provides sufficient space for the projections 42 and 58 to interleave readily and to rotate readily. The interleaved projections 42 and 58 coact with the resilient binding element 24 to hinge the covers 36 and 38 and the tabbed separators 46 and 48 together. The resilient element 24 will normally hold the covers and the separators, and any inserted leaves 66, in parallel relation; but it will yield to permit the elements of the note book to assume the positions of Figs. 3 and 6. The resilient element 24 will not only yield to permit relative rotating of the covers 36 and 38 and the separators 46 and 48, but it will also slide through the eyelets 40 and the openings 54 to permit such relative rotation. The combined yielding and sliding of the resilient element 24 enables the covers 36 and 38 to be rotated to a position one hundred and eighty degrees apart. Whenever the covers 36 and 38 are rotated to that position, the resilient element 24 will urge the projections 42 toward the notches 43 and 44; and the engagement of those projections with those notches will provide frictional forces that will releasably hold the note book flat.

The front edge of the separator 46 is provided with a tab 50 and the front edge of the separator 48 is provided with a tab 52. These tabs facilitate ready location of any desired leaves of the note book.

The eyelets 40 of the front and rear covers 36 and 38 and the openings 54 of the separators 46 and 48 loosely receive and loosely hold the resilient binding element 24 of the note book; and that element is shown as a band or a string which extends through and spans the spaces between the eyelets 40 and the openings 54 at the top of the note book, then extends downwardly along the outer surfaces of the covers 36 and 38, and then extends through and spans the spaces between the eyelets 40 and the openings 54 at the bottom of the notebook. The portions of resilient binding element 24 which extend horizontally between the inner faces of front and rear covers 36 and 38 receive the notches 68 in the upper and lower edges of the leaves 66. The portions of resilient binding element 24 which extend horizontally between the inner faces of front and rear covers 36 and 38 are separated a distance less than the height of any leaf 66 but greater than the distance between the apices of the notches 68 in those leaves. Thus the said portion of the resilient element 24 can confine the leaves 66 and yet not press upon those apices.

The note book construction shown in Fig. 3 makes it possible to hold a large number of leaves 66 in a note book, and to remove any one or more of those leaves without disassembling the front and rear covers 36 and 38 or the tabbed separators 46 and 48 from the assembled note book. In inserting a leaf 66, the notch 68 in the bottom of the leaf 66 can be placed in register with the lower portion of the resilient binding element 24 and can be pressed downwardly to force that portion of the resilient binding element 24 downwardly until the upper edge of the leaf 66 is below the upper portion of the resilient binding element 24. At that time the leaf 66 can be tilted until the notch 68 in the top edge thereof is in register with the upper portion of the resilient binding element 24, whereupon the leaf 66 can be moved upwardly into locking engagement with the resilient binding element. The leaf 66 can also be inserted or removed without applying any pressure on the resilient binding element 24. This can be done by bowing the leaf 66 so that the upper notch 68 of the leaf 66 is displaced beneath the upper portion of the resilient binding element 24 at the same time that the lower notch 68 of the leaf 66 is dis-

placed above the lower portion of the resilient binding element 24.

Whereas two embodiments of the present invention have been shown and described in the drawing and accompanying description it should be obvious to those skilled in the art that various changes can be made in the form of the invention without affecting the scope thereof.

What I claim is:

1. A loose leaf note book that comprises a front cover, a rear cover, a resilient binding element, confining surfaces on said front and rear covers in the form of passages extending through said covers that loosely surround and receive said resilient binding element, notched leaves, and alternated notches and projections on the rear edges of said front and rear covers, said front cover and the projections thereon being substantially flat, said rear cover and the projections thereon being substantially flat, the notches and projections on said rear cover registering with the projections and notches on said front cover, said projections and said covers being stiff whereby separating movement of the front edges of said front and rear covers will cause said projections on the rear edge of said front cover to move into the notches in the rear edge of said rear cover and will cause said projections on the rear edge of said rear cover to move into the notches in the rear edge of said front cover to enable said projections to act as a hinge, said confining surfaces being intermediate said projections and the front edges of said front and rear covers, said resilient binding element extending between said confining surfaces and spanning the space between said front and rear covers and biasing said front and rear covers together at said confining surfaces, said notched leaves normally being held in assembled relation with said front and rear covers by the lodging of said resilient binding element in the notches of said notched leaves, said resilient binding element being extensible and said resilient binding element being movable relative to said confining surfaces to permit said covers to be rotated to a position one hundred and eighty degrees apart, said portions of said resilient element being held in assembled relation with said front and rear covers by said surfaces during rotation of said covers and during the insertion and removal of leaves.

2. A loose leaf note book that comprises a front cover, a rear cover, a resilient binding element, confining surfaces on said front and rear covers in the form of passages extending through said covers that loosely surround and receive said resilient binding element, notched leaves, and alternated notches and projections on the rear edges of said front and rear covers, said front cover and the projections thereon being substantially flat, said rear cover and the projections thereon being substantially flat, the notches and projections on said rear cover registering with the projections and notches on said front cover, said projections and said covers being stiff whereby separating movement of the front edges of said front and rear covers will cause said projections on the rear edge of said front cover to move into the notches in the rear edge of said rear cover and will cause said projections on the rear edge of said rear cover to move into the notches in the rear edge of said front cover to enable said projections to act as a hinge, said confining surfaces being intermediate said projections and the front edges of said front and rear covers, portions of said resilient binding element extending between said confining surfaces and spanning the space between said front and rear covers, said resilient binding element biasing said front and rear covers together at said confining surfaces, said notched leaves normally being held in assembled relation with said front and rear covers by the lodging of said resilient binding element in the notches of said notched leaves, said resilient binding element being extensible and said resilient binding element being movable relative to said confining surfaces to permit said covers to be rotated to a position one hundred and eighty degrees apart, said portions of said resilient

binding element being spaced apart a distance slightly less than the height of said leaves, said resilient element being held in assembled relation with said front and rear covers by said surfaces during rotation of said covers and during the insertion and removal of leaves.

3. A loose leaf note book that comprises a front cover, a rear cover, a resilient binding element, confining surfaces on said front and rear covers in the form of passages extending through said covers that loosely surround and receive said resilient binding element, notched leaves, and alternated notches and projections on the rear edges of said front and rear covers, said front cover and the projections thereon being substantially flat, said rear cover and the projections thereon being substantially flat, the notches and projections on said rear cover registering with the projections and notches on said front cover, said projections and said covers being stiff whereby separating movement of the front edges of said front and rear covers will cause said projections on the rear edges of said front cover to move into the notches in the rear edge of said rear cover and will cause said projections on the rear edge of said rear cover to move into the notches in the rear edge of said front cover to enable said projections to act as a hinge, said confining surfaces being intermediate said projections and the front edges of said front and rear covers, portions of said resilient binding element extending between said confining surfaces and spanning the space between said front and rear covers, said resilient binding element biasing said front and rear covers together at said confining surfaces, said notched leaves normally being held in assembled relation with said front and rear covers by the lodging of said resilient binding element in the notches of said notched leaves, said resilient binding element being extensible and said resilient binding element being movable relative to said confining surfaces to permit said covers to be rotated to a position one hundred and eighty degrees apart, said portions of said resilient binding element being spaced apart a distance slightly less than the height of said leaves and being spaced apart a distance slightly greater than the distance between the notches of a leaf, said resilient element being held in assembled relation with said front and rear covers by said surfaces during rotation of said covers and during the insertion and removal of leaves.

4. A loose leaf note book that comprises a front cover, a rear cover, a resilient binding element, confining surfaces on said front and rear covers in the form of passages extending through said covers that loosely surround and receive said resilient binding element, notched leaves, and alternated notches and projections on the rear edges of said front and rear covers, said front cover and the projections thereon being substantially flat, said rear cover and the projections thereon being substantially flat, the notches and projections on said rear cover registering with the projections and notches on said front cover, said projections and said covers being stiff whereby separating movement of the front edges of said front and rear covers will cause said projections on the rear edge of said front cover to move into the notches in the rear edge of said rear cover and will cause said projections on the rear edge of said rear cover to move into the notches in the rear edge of said front cover to enable said projections to act as a hinge, said confining surfaces being intermediate said projections and the front edges of said front and rear covers, said resilient binding element extending between said confining surfaces and spanning the space between said front and rear covers and biasing said front and rear covers together at said confining surfaces, said notched leaves normally being held in assembled relation with said front and rear covers by the lodging of said resilient binding element in the notches of said notched leaves, said resilient binding element being extensible and said resilient binding element being movable relative to said confining surfaces to permit said covers to be rotated to a position one hundred and eighty degrees apart, said pro-

jections on said front and rear covers interleaving whenever said note book is open to prevent shifting of one cover vertically relative to the other cover, said resilient element being held in assembled relation with said front and rear covers by said surfaces during rotation of said covers and during the insertion and removal of leaves.

5. A loose leaf note book that comprises a front cover, a rear cover, a resilient binding element, confining surfaces on said front and rear covers in the form of passages extending through said covers that loosely surround and receive said resilient binding element, notched leaves, a plurality of tabbed separators, confining surfaces on said tabbed separators in the form of passages extending through said separators that loosely surround and receive said resilient binding element, and alternated notches and projections on the rear edges of said front and rear covers, said front cover and the projections thereon being substantially flat, said rear cover and the projections thereon being substantially flat, the notches and projections on said rear cover registering with the projections and notches on said front cover, said projections and said covers being stiff whereby separating movement of the front edges of said front and rear covers will cause said projections on the rear edge of said front cover to move into the notches in the rear edges of said rear cover and will cause said projections on the rear edge of said rear cover to move into the notches in the rear edge of said front cover to enable said projections to act as a hinge, said confining surfaces on said front and rear covers being intermediate said projections and the front edges of said front and rear covers, said resilient binding element extending between said confining surfaces on said front and rear covers and spanning the space between said front and rear covers and biasing said front and rear covers together at said confining surfaces on said front and rear covers, said notched leaves normally being held in assembled relation with said front and rear covers by the lodging of said resilient binding element in the notches of said notched leaves, said resilient binding element being extensible and said resilient binding element being movable relative to said confining surfaces on said front and rear covers to permit said covers to be rotated to a position one hundred and eighty degrees apart, said tabbed separators and the said confining surfaces thereon facilitating the normal maintenance of the spacing between the cover-spanning portions of said resilient binding element.

6. A loose leaf note book that comprises a front cover, a rear cover, a resilient binding element, confining surfaces on said front and rear covers in the form of passages extending through said covers that loosely surround and receive said resilient binding element, notched leaves, a plurality of tabbed separators, confining surfaces on said tabbed separators in the form of passages extending through said separators that loosely surround and receive said resilient binding element, and alternated notches and projections on the rear edges of said front and rear covers and on the rear edges of said tabbed separators, said front cover and the projections thereon being substantially flat, said rear cover and the projections thereon being substantially flat, each of said tabbed separators and the projections thereon being substantially flat, the notches and projections on said rear cover registering with the projections and notches on said front cover and on said tabbed separators, the notches and projections on one of said tabbed separators selectively registering with the projections and notches on another of said tabbed separators and on said front and rear covers, said projections on said front and rear covers and on said tabbed separators responding to separating movement of the front edges of said covers and tabbed separators to intermesh and act as a hinge, said confining surfaces being intermediate said projections and the front edges of said front and rear covers, said resilient binding element extending between said confining surfaces on said front and rear covers and spanning the space between said front and rear covers and biasing said front and rear covers together at said confining surfaces on said front and rear covers, said notched leaves normally being held in assembled relation with said front and rear covers by the lodging of said resilient binding element in the notches of said notched leaves, said resilient binding element being extensible and said resilient binding element being movable relative to said surfaces on said front and rear covers to permit said covers to be rotated to a position one hundred and eighty degrees apart, said tabbed separators and the said confining surfaces thereon facilitating the normal maintenance of the spacing between the cover-spanning portions of said resilient binding element.

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