

Aug. 19, 1952

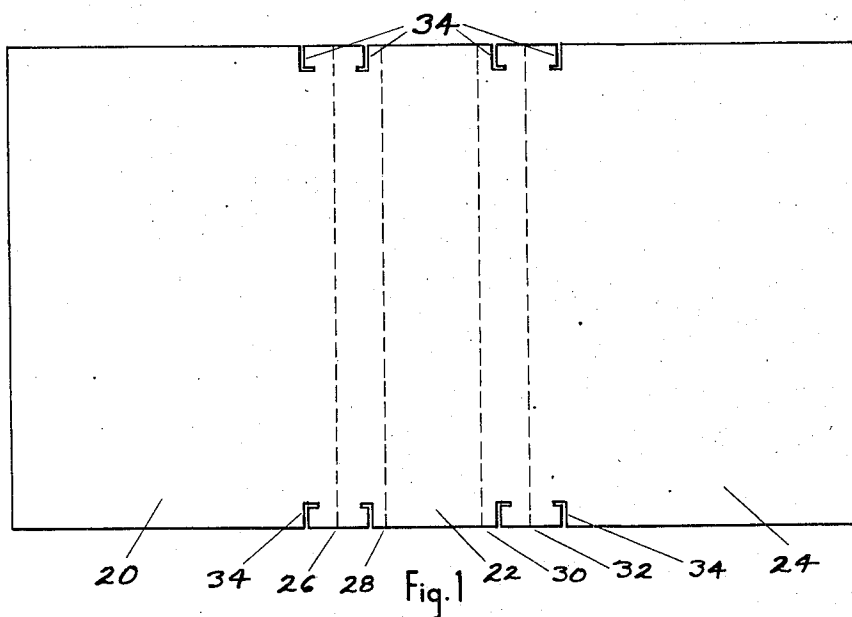
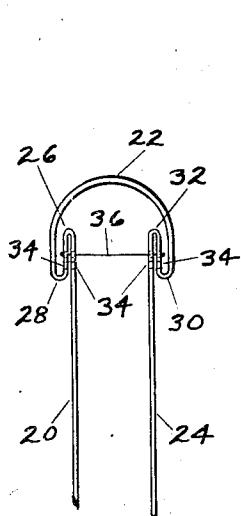
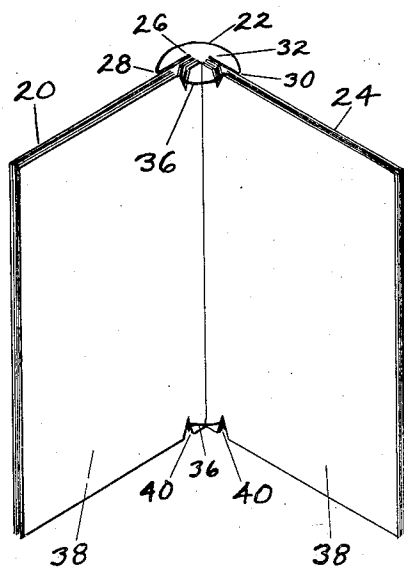
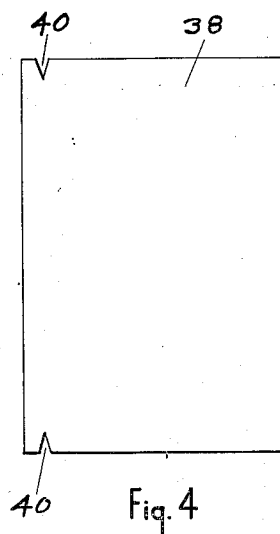
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2,607,351

NOTEBOOK

Filed Aug. 13, 1947

2 SHEETS—SHEET 1



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2,607,351

NOTEBOOK

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2 SHEETS—SHEET 2

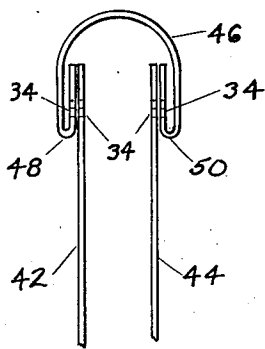


Fig. 5

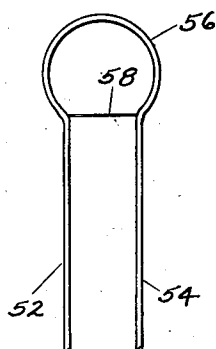


Fig. 6

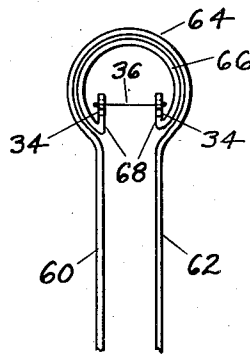


Fig. 7

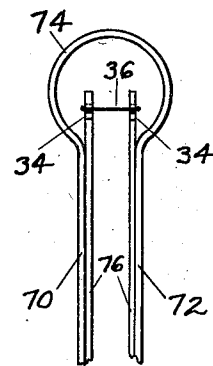


Fig. 8

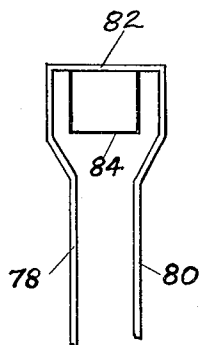


Fig. 9

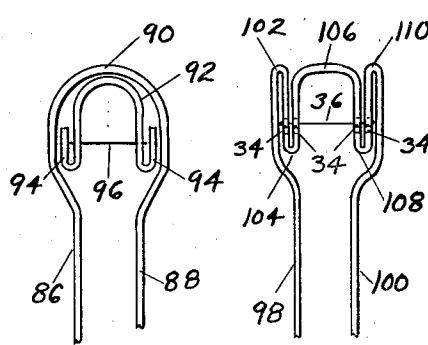


Fig. 10

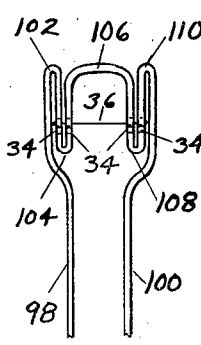


Fig. 11

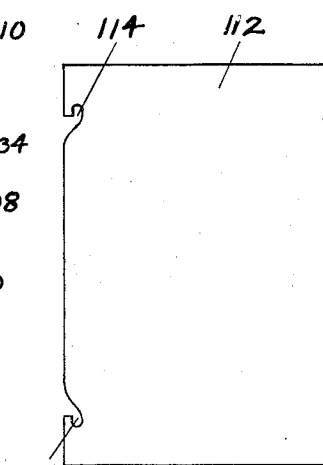


Fig. 12

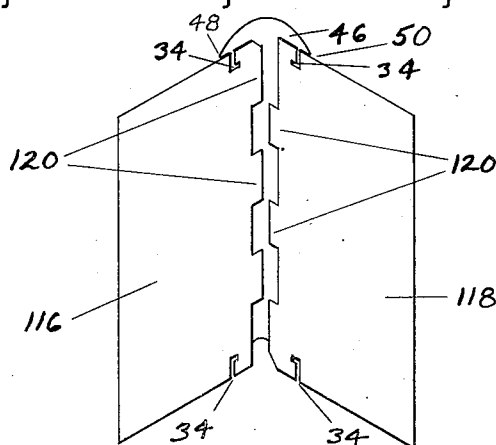


Fig. 13

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2,607,351

NOTEBOOK

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Application August 13, 1947, Serial No. 768,385

1 Claim. (Cl. 129—18)

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

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

Certain types of books are particularly useful for the purpose of receiving notes and memoranda, and such books are customarily referred to as note books. In some instances the leaves or pages of the note books are secured to the binding or cover by means of paste, glue or stitching; and in those instances the leaves or pages cannot easily be removed and replaced. In other instances, the leaves or pages are secured to the cover or binding by means of hinged rings, threaded retaining members, spiral springs, resilient bands, and the like; and in such instances the leaves or pages can be removed and replaced. Note books of the latter type are more desirable than are the note books wherein the leaves or pages are permanently held against removal, because the leaves or pages in the latter type of note book can be inserted or removed at will. However, many of the note books of the latter type are subject to objectionable disadvantages.

In the case of note books which have hinged rings that releasably support the leaves or pages, the covers or binders of those note books do not press against the leaves or pages; and as a result the leaves or pages receive but little support, from the covers or binders, against shifting. The principal support that the leaves or pages receive against shifting is provided by the hinged rings; and thus the portions of the pages or leaves adjacent the ring-receiving openings of those pages or leaves will be subjected to considerable stress and may tear. In the case of note books which have spiral springs to support the leaves or pages, the same difficulty is experienced and the pages or leaves in such note books are subject to tearing. The pages or leaves of note books, that use threaded retaining members to releasably hold the leaves or pages, can be held against shifting by the pressure of the covers or binders; but at least one of the covers of such note books and many of the pages or leaves thereof must be removed and replaced when one or more selected pages or leaves are to be removed and replaced. In addition, the threaded retaining members are easily lost or misplaced during the act of separating the covers or binders of the note book. In the case of note books which have resilient

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bands to releasably support the pages or leaves, the resilient bands must either be removed and the covers or binders separated to permit the removal or replacement of leaves or pages, or each of the leaves or pages above the selected page or leaf must be individually removed until the selected leaf or page can be reached. For these various reasons, prior note books are objectionable. The present invention obviates these objections by providing a note book wherein the covers press against the leaves or pages and resist shifting of those leaves and pages, but wherein each leaf or page is held individually and can be inserted or removed without disturbing any of the other leaves or pages 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 pages and leaves, but wherein each page or 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 pages or leaves against accidental dislodgment, and also presses the covers toward each other so they can hold the leaves or pages against shifting. By doing so, this one element makes it possible to remove and insert one or more leaves or pages without disturbing the rest of the leaves or pages. 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 pages or 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 or pages 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 several 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 purposes of illustration only and do not limit the invention and that

the invention will be defined by the appended claim.

In the drawing, Fig. 1 is a front elevational view of a unitary binding and cover for a note book that is made in accordance with the principles and teachings of the present invention,

Fig. 2 is a partial plan view of the unitary binding and cover of Fig. 1, and it shows that binding and cover as it is bent into the form it assumes to receive pages or leaves,

Fig. 3 is a perspective view of the unitary binding and cover of Figs. 1 and 2, as that binding and cover is provided with a resilient element and inserted pages or leaves,

Fig. 4 is a side elevational view of one of the pages or leaves shown in Fig. 3,

Fig. 5 is a partial plan view of the covers and binding of another note book that is made in accordance with the principles and teachings of the present invention,

Fig. 6 is a partial plan view of another unitary binding and cover for a note book that is made in accordance with the principles and teachings of the present invention,

Fig. 7 is a partial plan view of a unitary binding and cover and an inserted support for another note book that is made in accordance with the principles and teachings of the present invention,

Fig. 8 is a partial plan view of a unitary binding and cover and the reinforcing sheets for another note book that is made in accordance with the principles and teachings of the present invention,

Fig. 9 is a partial plan view of a unitary binding and cover for another notebook that is made in accordance with the principles and teachings of the present invention,

Fig. 10 is a partial plan view of a unitary binding and cover and inserted support for another notebook that is made in accordance with the principles and teachings of the present invention,

Fig. 11 is a partial plan view of a unitary binding and cover for another note book that is made in accordance with the principles and teachings of the present invention,

Fig. 12 is a side elevational view of a modified form of leaf or page that is usable in note books made in accordance with the principles and teachings of the present invention, and

Fig. 13 is a perspective view of the covers and binding of another note book that is made in accordance with the principles and teachings of the present invention.

Referring to the drawing in detail, the numeral 20 denotes the front cover of a unitary binding and cover for a note book, 22 is the central portion of that binding and cover, and 24 is the rear cover of that binding and cover. The binding and cover of Figs. 1 and 2 is formed from a single sheet of material; and that material should be relatively inexpensive, readily obtainable, relatively stiff, and yet bendable. Several materials can be used; among which are paper, treated paper, cardboard, metal, cellulose esters, polyvinyl esters and the like. The unitary binding and cover of Fig. 1 has a number of fold lines 26, 28, 30 and 32; and those lines may be formed by creasing the unitary binding and cover or by bending the binding and cover in a bending machine. The unitary binding and cover is also provided with a number of undercut slots 34 which are L-shaped in configuration. While the L-shaped configuration is preferred, the slots 34 may be given any suitable configuration as long as they are undercut to have a cut-away portion

beneath a solid section. The slots 34 extend inwardly from the upper and lower edges of the unitary binding and cover, and those slots are spaced apart as shown in Fig. 1. In bending the unitary binding and cover of Fig. 1 to give it the form and configuration shown in Fig. 2, the front cover 20 is left plane, the center portion 22 is bent sharply along the fold lines 26 and 28 to form two spaced revers, the center portion 22 is bent gently to form a semi-cylinder, and the the binding is bent sharply along the fold lines 30 and 32 to form two additional, spaced revers while leaving the rear cover 24 plane. It will be noted that the semi-cylindrical portion of the center section 22 extends outwardly beyond the slots 34 in the front and rear covers 20 and 24 and in the center section 22. As a result, the slots 34 are masked and hidden from view.

The undercut slots 34 can receive the leaf-holding element 36 of the note book; and that element is shown as a band or a string which extends through and spans the four slots 34 at the top of the note book, and then extends down along the sides of those parts of center portion 22 which are between fold lines 26 and 28 and fold lines 30 and 32. This element may be a continuous band 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 of elastic material or an extensible spring. The portions of element 36 which extend between the inner faces of front and rear covers 20 and 24 receive the notches 40 in the upper and lower edges of the leaves or pages 38. The portions of the element 36 which extend between the inner faces of front and rear covers 20 and 24 are separated by a distance which is less than the overall height of any page or leaf 38; and the distance between the portions of element 36 between the inner faces of front and rear covers 20 and 24 is preferably less than the shortest distance between the apexes of the notches 40 of each page 38. Where this is the case, the portions of element 36 between the front and rear covers 20 and 24 must be forced further apart to permit insertion of pages or leaves, and then those portions will move into the notches 40 of those pages or leaves and hold the pages or leaves against accidental dislodgment.

In inserting a page 38, the notch 40 in the bottom of a leaf 38 can be placed in register with the lower portion of element 36 and can be pressed downwardly to force that portion of element 36 downwardly until the upper edge of the leaf or page 38 is below the upper portion of element 36. At that time the leaf or page 38 can be tilted until the notch 40 in the top edge thereof is in register with the upper portion of element 36, whereupon the leaf or page 38 can be moved upwardly into locking engagement with the element 36. The upward and downward movement of the leaves or pages 38 will not tend to dislodge the element 36 from the notches 34 in the binding and cover, because those notches are undercut so the element 36 can be moved to the rear of those slots where there is no vertical opening through which the element 36 can escape. In assembling the various component parts of the note book the element 36 will be passed downwardly into the area bonded by the semi-cylinder of the center portion 22, the upper portion of element 36 will be raised upwardly and slipped into the four upper slots 34, the lower portion of element 36 will be moved downwardly and slipped

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into the four lower slots 34, and then the element 36 will be moved rearwardly into the horizontally disposed portions of the slots 34. Once in this position, the element 36 will be held there by frictional forces between the element 36 and the unitary binding and cover.

The center portion 22 of the note book of Figs. 1, 2 and 3 will bend to permit opening or closing of the covers 20 and 24; and it will be noted that the vertically extending portions of element 36 are disposed forwardly of the arcuate section of center portion 22. As a result, the element 36 must stretch whenever the note book is opened, and the resilience of element 36 will urge the front and rear covers 20 and 24 together and will also tend to keep the note book closed. The action of the element 36 in moving the front and rear covers 20 and 24 toward each other and in holding the note book closed serves to reduce the overall volume of the note book and also serves to hold the leaves or pages 38 against shifting. Such action minimizes the forces to be borne by those portions of leaves or pages 38 adjacent notches 40.

The note book can be opened to any particular page or place, and a page or pages can be inserted or removed without disturbing the rest of the pages or leaves. The stretching of the element 36 will cause that element to hold the rest of the leaves or pages even more tightly against the front and rear covers 20 and 24. The selected page or pages can, however, be withdrawn easily and without bending or bowing.

In Fig. 5, the numeral 42 denotes the front cover of another note book that is made in accordance with the principles and teachings of the present invention; and that notebook has a rear cover 44 and a binding 46. The front and rear covers 42 and 44 are made separate from the binding 46, and the binding 46 has a revers 48 and a second revers 50. The portions of binding 46 which are disposed inwardly and rearwardly of the revers 48 and 50 are parallel to the front and rear covers 42 and 44, and those portions of binding 46 overlie the rear portions of the covers 42 and 44. The front and rear covers 42 and 44 and the portions of the binding 46 adjacent to the covers 42 and 44 have undercut slots 34 therein which are in register with each other. The construction shown in Fig. 5 is quite similar to that shown in Fig. 2; but the binding 46 and the covers 42 and 44 of Fig. 5 are made as separate pieces and are then secured together. The covers 42 and 44 and the binding 46 can be held permanently in assembled relation by cement, adhesives, stitching or the like, or they can be releasably held in assembled relation by means of a resilient element. That resilient element can seat in the L-shaped slots 34 and can extend downwardly along the outer surfaces of the inner, rearwardly-directed portions of binding 46. Where this is done, the resilient element will not only hold the covers 42 and 44 in assembled relation with binding 46 but it will also serve to support pages or leaves 38 inserted in the note book. As in the case of the note book of Figs. 2 and 3, the arcuate portions of the binding will conceal and protect the resilient element. With this arrangement, the resilient element is protected against fraying or cutting through accidental contact with other objects; and at the same time, a smooth and attractive appearance is provided for the note book.

In Fig. 6 the numeral 52 denotes the front cover of still another notebook that is made in accordance with the principles and teachings of the present invention; and that notebook has a

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rear cover 54 and a binding 56. The front and rear covers 52 and 54 and the binding 56 are made in one piece, and the covers are plane while the binding is semi-cylindrical in form. The binding and covers are made of flexible material to permit opening and closing of the covers, and also to permit the covers to move and press against pages or leaves inserted therebetween. The rear edges of the front and rear covers 52 and 54 carry an elastic element 58 at the top and bottom thereof. These elements can be glued, sewn, or otherwise secured to the inner faces of the front and rear covers 52 and 54; and they will serve the same purpose as the elastic element 36 serves in the notebook of Figs. 1-3.

In Fig. 7, the numeral 60 denotes the front cover of another notebook that is made in accordance with the principles and teachings of the present invention; and that notebook has a rear cover 62 and a binding 64. The front cover 60, the rear cover 62, and the binding 64 are made unitary in form; the front and rear covers being plane and the binding 64 being semi-cylindrical in form. The binding 64 receives a cylindrical insert 66 that is provided with reentrant portions 68 which extend inwardly toward the interior of the cylindrical insert 66. The reentrant portions 68 are parallel to the front and rear covers 60 and 62, and they lie in the same planes with those covers. The reentrant portions 68 of the cylindrical insert 66 are provided with undercut slots 34, of the type shown in the note book of Figs. 1-3, and those slots receive a resilient element 36 of the type used in the notebook of Figs. 1-3. This element will pull the reentrant portions 68 of the insert 66 toward each other; and since the insert 66 is secured to the binding 64, as by glue, adhesives, stitching, or the like, the elastic element 36 will pull the covers 60 and 62 toward each other. With this arrangement, the covers 60 and 62 can be moved apart to permit insertion or removal of pages or leaves, and thereafter the resilient element 36 will pull the covers 60 and 62 into engagement with the leaves or pages therebetween.

In Fig. 8, the numeral 70 denotes the front cover of another notebook that is made in accordance with the principles and teachings of the present invention; and that notebook has a rear cover 72 and a semi-cylindrical binding 74. The front cover 70, the rear cover 72 and the binding 74 are unitary in construction, and are made of flexible material. Two reinforcing sheets 76 are cemented, glued, sewn, or otherwise secured to the inner surfaces of the front cover 70 and the rear cover 72, and those sheets stiffen the covers 70 and 72. The inner ends of the reinforcing sheets 76 extend inwardly beyond the rear edges of the front and rear covers 70 and 72, and they extend into the area confined and enclosed by the binding 74. The inner ends of the reinforcing sheets 76 are provided with undercut slots 34 which are in register with each other, and those slots carry and support a resilient element 36. It will be noted that in this note book, as is the case with the other note books provided by the present invention, the resilient element is concealed and protected. Thus an attractive note book of long life is provided.

In Fig. 9, the numeral 78 denotes the front cover of another note book made in accordance with the principles and teachings of the present invention; and that notebook has a rear cover 80 and a binding 82. The front cover 78, the rear cover 80, and the binding section 82 are made

unitary in form and they are made of material that is relatively stiff but is bendable. The front cover 78, the rear cover 80 and the binding 82 could of course be made separately and then cemented, stitched or otherwise secured together; but in any event the front and rear covers 78 and 80 must be capable of opening and closing. The numeral 84 denotes a loop of wire that extends inwardly into the space formed by the binding 82, and a wire loop of similar configuration is positioned below the loop 84. These two loops perform the function of holding the pages or leaves in the notebook. When leaves or pages are to be inserted or removed, the wire 84 at the top can be bent upwardly or the wire at the bottom can be bent downwardly as the pages or leaves are inserted or removed. Thereafter the loops 84 of wire will spring back to normal position and hold the leaves and pages in position. The loops 84 of wire will not be capable of urging the covers 78 and 80 against the leaves or pages in the notebook, but that action can be provided by the binding 82. The binding 82 has two converging portions at the front thereof and these can be made resilient enough to urge the covers 78 and 80 against the pages or leaves.

If desired, one of the wire loops 84 can be made stiff and unyielding; and in that case, the other loop 84 can be relied upon to bend and permit insertion and removal of pages or leaves. Similarly, in each of the other note books of the present invention, one or the other of the spans of the page-supporting element can be made unyielding while the other span permits insertion and removal of the pages or leaves.

In Fig. 10, the numeral 86 denotes the front cover of another notebook that is made in accordance with the principles and teachings of the present invention; and that note book has a rear cover 88 and a binding 90. The front cover 86, the rear cover 88, and the binding 90 are made unitary in form; and they are of a resilient but relatively stiff material. A U-shaped insert 92 is positioned within the binding 90, and that insert has reentrant portions 94. The reentrant portions 94 are parallel to the parallel portions of the binding 90, and they can be glued, sewn, or otherwise secured to the inner surface of the binding 90. A resilient element 96 extends between the inner faces at the top of the reentrant portions 94 of the U-shaped member 92, and a similar element extends between the inner faces at the bottoms of those portions. Those elements serve the same purpose and function which the resilient element 36 serves in the note book of Figs. 1-3. By having the insert 92 secured to the interior of binding 90, the action of elements 96 in drawing the reentrant portions 94 together will tend to pull the front and rear covers 86 and 88 together.

In Fig. 11, the numeral 98 denotes the front cover of another note book that is made in accordance with the principles and teachings of the present invention; and the numeral 100 denotes the rear cover of that notebook. The front cover is spaced from the center section 106 by revers 102 and a second revers 104. The center section is spaced from the rear cover 100 by a revers 108 and a second revers 110. The folded portions between the center section 106 and the front and rear covers 98 and 100 are provided with undercut slots 34 which are in register with each other. Those slots carry a resilient element 36 which is similar to the resilient element 36 of the note book of Figs. 1-3.

In Fig. 12, the numeral 112 denotes another

form of page or leaf which can be used with the note books provided by the present invention. The page 112 has two slots or notches 114 in the rear edge thereof; and while those notches are different from the notches 40 of the page 38, they can engage and be held by elastic elements similar to element 36. The elements to be engaged by the notches 114 of pages 112 must be spaced inwardly from the upper and lower edges of the notebook so they will be in register with notches 114. Those elastic elements can be held in deep slots 34, they can be glued or sewn to the binding or covers, or they can be held in openings formed in the binding or covers. The elastic elements usable to support the pages 112 should be spaced apart a distance slightly greater than the distance between the notches 114, whereby those elements will hold the pages against accidental displacement. It is obvious that the notches 114 could be directed toward the centers of the pages 112 instead of being directed toward the upper and lower edges of those pages. In that event, the elastic elements should be spaced apart a distance less than the distance between the notches.

In Fig. 13, the numeral 116 denotes the front cover of another notebook that is made in accordance with the principles and teachings of the present invention; and that notebook has a rear cover 118 and a binding 46. This binding is similar to the binding of the notebook of Fig. 5, and it has the inwardly extending portions adjacent revers 48 and 50. These inwardly extending portions lie against and are secured to the front and rear covers 116 and 118 of the note book of Fig. 13. The inwardly extending portions of binding 46, and the front and rear covers 116 and 118 are provided with undercut slots 34 that can receive an elastic element 36. The inner edges of the front and rear covers 116 and 118 are provided with spaced projections 120 that interleave to act as a hinge for the covers 116 and 118; and these projections prevent shifting of one cover vertically relative to the other.

The note book constructions provided by the present invention make it possible to hold a large number of leaves or pages in a note book, and to remove any one or more of those pages without disassembling the front and rear covers from the binding and without bending or bowing any of the pages. All that need be done in removing a page is to open the front and rear covers of the notebook sufficiently to enable the fingers to reach in and grasp a particular page, to raise or lower the page relative to the covers and the elastic elements carried thereby, and to tilt the page outwardly until one of the notches 40 or 114 clears one of the resilient elements. Insertion of a page requires the reverse procedure, but that procedure is equally quick and simple.

Whereas several 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:

A note book comprising a front cover, a rear cover, said front and rear covers being spaced apart and a U-shaped back joining said covers, said covers having portions extending into said back and being provided at their upper and lower edges with slots extending inwardly from the edges thereof and terminating in substantially horizontal portions extend toward the rear edges of the covers, said slotted portions of the covers

lying within the back and spaced therefrom so as to be covered thereby, a resilient element spanning the space between the front and rear covers and lying in the horizontal portions of said slots and lying in the space between the covers and back whereby said element is concealed by said back and the covers are biased toward each other, and detachable leaves having notches therein extending inwardly from the edges thereof and engaging said resilient element when the leaves are assembled in said book.

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