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G. C. BAUGHMAN & E. C. MEAD.

LOOSE LEAF BINDER.

APPLICATION FILED SEPT. 8, 1906.

Fig. 1.

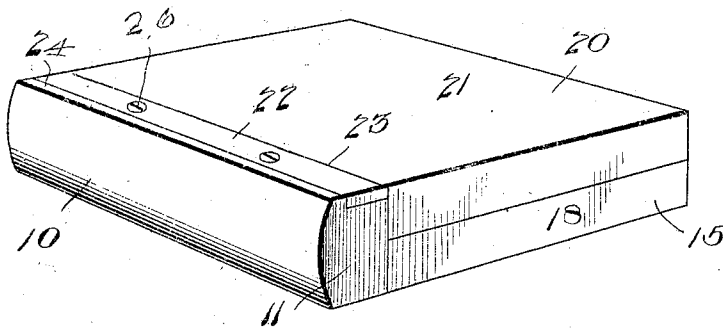


Fig. 2.

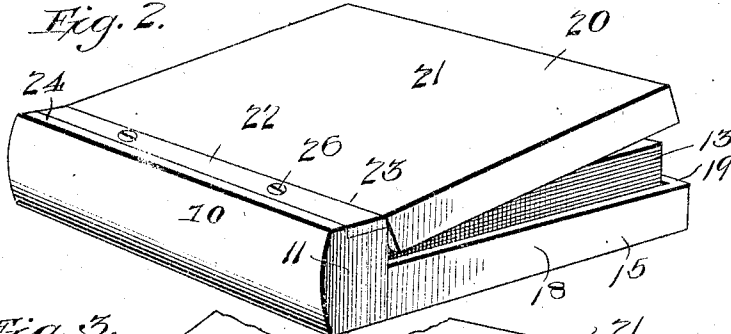


Fig. 3.

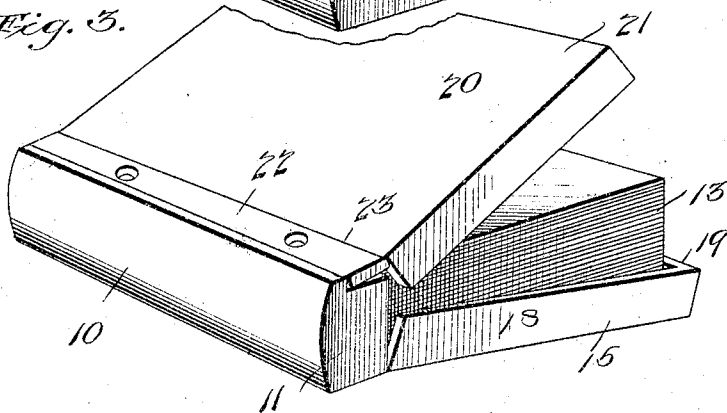


Fig. 4.

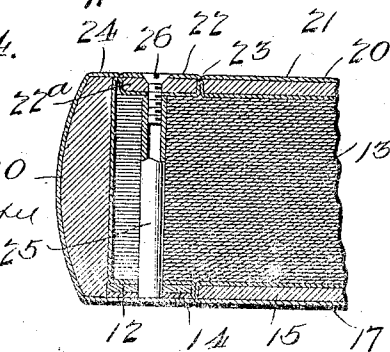
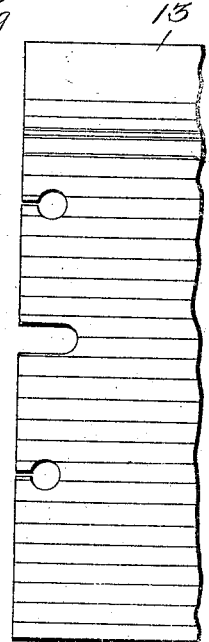


Fig. 5.



Witnesses: 10
T. L. Mochales
Wm. S. Hodges 25

Inventors
C. C. Baughman
E. C. Mead
by H. J. Dwyer
Attorney.

UNITED STATES PATENT OFFICE.

CHARLES C. BAUGHMAN AND ERNEST C. MEAD, OF RICHMOND, VIRGINIA.

LOOSE-LEAF BINDER.

No. 845,390

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed September 8, 1906. Serial No. 333,770.

To all whom it may concern:

Be it known that we, CHARLES C. BAUGHMAN and ERNEST C. MEAD, citizens of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

This invention relates to improvements in loose-leaf binders, and has particular reference to devices of this character in which a series of unbound leaves are secured within a binding-case from which the leaves can be removed separately or in bulk.

One of the objects of the invention is to provide a structure of this character which when closed will be neat and attractive in appearance and which will prevent damage to the contents either by the entrance of dust, &c., or the tearing of the leaves through contact with the edges thereof.

A further object is to provide a structure in which the loose leaves will be held permanently within the case in such manner and in such position that access thereto may be had from either side of the binder and yet permit of a removal or addition of any desired leaf or leaves.

Other and further objects will appear as the invention is hereinafter described.

To these and other ends this invention consists in a loose-leaf binder comprising a back, covers hingedly connected thereto, one of said covers being jointed intermediate its ends, the joint corresponding in position to the hinge of the other cover, and means for removably securing the intermediate or binding section of the cover in fixed position relatively to the back.

The invention consists, further, in the improved construction and combination of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the accompanying drawings, in which similar reference characters indicate similar parts in all of the views, Figure 1 is a perspective view showing the binder closed. Fig. 2 is a similar view with one of the covers open to afford access to the contents. Fig. 3 is a similar view showing the jointed cover open to permit the addition or removal of loose leaves. Fig. 4 is a sectional view taken through the back and one of the binding-posts. Fig. 5 is a view showing the preferred form of leaf used with the binder.

Among the essential features which are required in a practical binder or filing-case for loose leaves used in place of the account and memorandum books heretofore used to provide a loose-leaf system are, first, the leaves must be removable from the binder to permit the ready addition or removal therefrom; second, the leaves when in position in the binder must be retained firmly in position to prevent the exposure of edges of such leaves, thereby preventing liability of a tearing of such exposed leaves; third, the leaves must be positioned within the binder or filing-case in such manner that access to the salient parts of each sheet may be readily had for the purpose of reference or change in the memoranda thereon; fourth, the binder or filing-case should be so arranged as to permit a minimum entry of dust, &c. To provide these features, it is essential that the binder or filing-case be arranged in such manner that when closed no portion of the contents will be exposed, and that the parts be so fitted as to make practically a complete closure for the contents it should also be so arranged that the covers thereof may be opened—that is, each cover should be hingedly connected to the back and each capable of movement relatively to the back on its hinge—to permit access from either the front or the back of the case, and the case should also be arranged so as to permit one of the covers to be moved to a position where it will not prevent the insertion or removal of the leaves to and from the case or binder. In the binder now to be described these features are presented, the structure being such as to provide a device that is not only neat and attractive in appearance, but which can be readily manipulated, which is durable in construction, and which is simple in operation.

The binder comprises a back 10, of suitable material, and to which are secured end pieces 11. The end pieces extend forward to a point coincident with the hinge portion of the cover and form, with a side piece 12 and the binding-section hereinafter described, a receptacle for the inner ends of the loose leaves 13, the back 10 forming the remaining closed portion of such receptacle. The side piece 12 is preferably reinforced with a metallic strip 14, which is of a length to extend over the edges of the end pieces 11, which support said piece, to prevent collapsing of the receptacle when the parts are firmly secured together.

15 designates a cover which is hingedly connected, as at 16, to the side piece 12, said cover comprising a flat portion 17, having sides 18 and an end 19, the sides and end being of a height substantially equal to one-half the thickness of the binder, this construction being such as to provide a shallow receptacle having one of its sides (the rear) closed.

20 designates the opposing cover, herein termed the "jointed cover," and which comprises the two sections 21 22, the former corresponding in size and shape to the cover 15, the latter, herein termed the "binder-section," corresponding in size and shape with the side piece 12. The two sections of the cover 20 are hinged together or jointed, as at 23, while the opposite edge of the binder-section is hinged to the back, as at 24.

It will now be understood that the cover 15 is hinged at a point distant from the back, while the jointed cover 20 is hinged directly to the back, thereby permitting the jointed cover to open to an extent which will permit of free access to all parts of the interior of the binder, while the cover 20 will permit of such free access to a restricted portion of the binder. Obviously a loose leaf of a size to approximately fit the interior of the binder can be readily placed in position when the jointed cover is open on its hinge 24; but such insertion could not readily be made when the cover 15 is moved on its hinge 16, where it is desired to mount the leaf on suitable retaining pins or posts. When, however, the binder-section is secured in place with its ends resting on the edges of the end pieces, the outer section 21 of the cover 20 can be manipulated in the same manner as the cover 15, both covers in this position operating in the same manner and forming when closed a substantially dust-proof case for the leaves.

To secure the binder-section 22 in position, binding posts or pins 25 are provided, the lower ends of which are secured in the metallic strip 14, said posts being of a length to abut against the under surface of the binder-section 22 when in its closed position, said post serving to prevent inward movement of said section under pressure. The ends of the posts 25 are provided with screw-threaded openings to receive the threaded end of screws 26, which are passed through suitable openings formed in the binder-section 22, the screws having beveled heads to cooperate with beveled recesses formed in the metallic strip 22^a of said section 22. This construction permits of a firm binding of the binder-section to the posts, and therefore to the back and side piece 12.

While we have shown and described a preferred form of posts and means for removably securing the binder-section thereto, it is to be understood that we do not limit ourselves to such preferred form, but may use

other securing means as may be deemed advisable in so far as such construction will permit of a free movement of the binder-section without affecting the posts when such securing means is released.

As heretofore pointed out, the ends 11 extend forwardly to a point coincident with the hinge portion of the cover 15. In other words, the forward edges of the end pieces 11 and side piece 12 are coincident with each other. As the inner edges of the sides 18 are adapted to abut against the forward edge of the end pieces, liability of the entrance of extraneous matter is prevented at this point. The advantage of this structure lies in the fact that the binder can be opened from either side, and when so opened the portion of the contents above the edge of the sides 18 of the cover, which may happen to be below, is accessible for the passage of a finger or fingers between the sheets from the forward end of the sheet rearward until contact is made with the edge of the end piece, practically to a point within but slight distance in front of the posts. This is not only desirable when removal of an intermediate sheet is to take place, it enabling the superposed sheets to be lifted practically clear of the desired sheet, but also prevents liability of the bottom sheet being pulled out of its position when it is desired to simply raise a number of the sheets, the tendency to so displace the under sheets of the number if turned up as a body by grasping the entire number at the forward edges being clear, owing to the formation of a curve as the sheets are turned up. Both sides of the sheet being used, if necessary, those sheets below the plane of the top edge of the side 18 of the under cover may be reached by reversing the binder and turning up the required number of sheets to reach the one desired, the under side of the sheet so turned up being exposed for use.

Any suitable hinge connection may be used, the form shown in the drawings being one which is simple and inexpensive, as well as durable.

Any preferred form of loose leaf may be used, provided suitable provision be made at the binding end thereof for mounting it on the posts. One form is shown in Fig. 5 of the drawings, in which the binding end is provided with openings and slots leading therefrom to the edge of the leaf. This structure permits of the insertion of the leaf only when the ends of the posts are exposed by removing the screws 26 and raising the jointed cover. The removal of the leaf is preferably made in similar manner, although, if desired, a single leaf may be withdrawn by simply pulling on the free end thereof.

From the above description it will be understood that by the removal of the screws 26 the jointed cover may be raised to a position where the loose leaf can be readily

placed in position on the posts, after which the binder-section is secured in position by the insertion of the screws 26, leaving the binder in position to permit the opening of either the cover 15 or the section 21 of the jointed cover, and thereby permit access to either side of the loose leaf.

If desired, a suitable catch may be provided at the front of the binder to normally hold the cover locked.

While the binder is primarily intended as a filing-case in which the leaves may be retained for any length of time, it will be readily understood that the construction is such as to provide a temporary binder, in which case the leaves can be removed in bulk and transferred to any suitable filing-case.

We claim as our invention—

1. In a loose-leaf binder, the combination with a back, end pieces, and a side piece, the end pieces and side piece being secured to the back and extending forwardly to a point coinciding with each other, of a binder-section hingedly connected to said back and opposing said side piece, binding-posts secured to said side piece, said posts being of a length to abut against the inner face of said binder-section, said posts and the end pieces supporting the binder-section against collapsing under pressure, screws passing through said binder-section into said posts for removably securing said binder-section to said posts,

and covers hingedly connected to said side and said binder-section.

2. A substantially dust-proof loose-leaf binder comprising a back, end pieces, and a side piece, the end pieces and side piece being secured to the back and extending forwardly to a point coinciding with each other, a cover hingedly secured to said side piece, an opposing jointed cover secured to the back by hinged connection, said jointed cover comprising a binder-section and a section corresponding with the opposing cover, said sections being hingedly connected, binding-posts secured to said side piece and abutting against the inner face of the binder-section, said posts and the end pieces supporting said binder-section against collapsing under pressure, and means for removably securing said binder-sections to said posts, the free edges of said covers having portions extending inwardly at right angles to the covers and adapted to contact with each other and with the end pieces when the binder is closed.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CHARLES C. BAUGHMAN.
ERNEST C. MEAD.

Witnesses:

EUGENE JONES,
D. C. HANCOCK.