June 9, 1959 J. B. MILES 2,889,831

LOOSE LEAF BINDER

Filed March 11, 1957

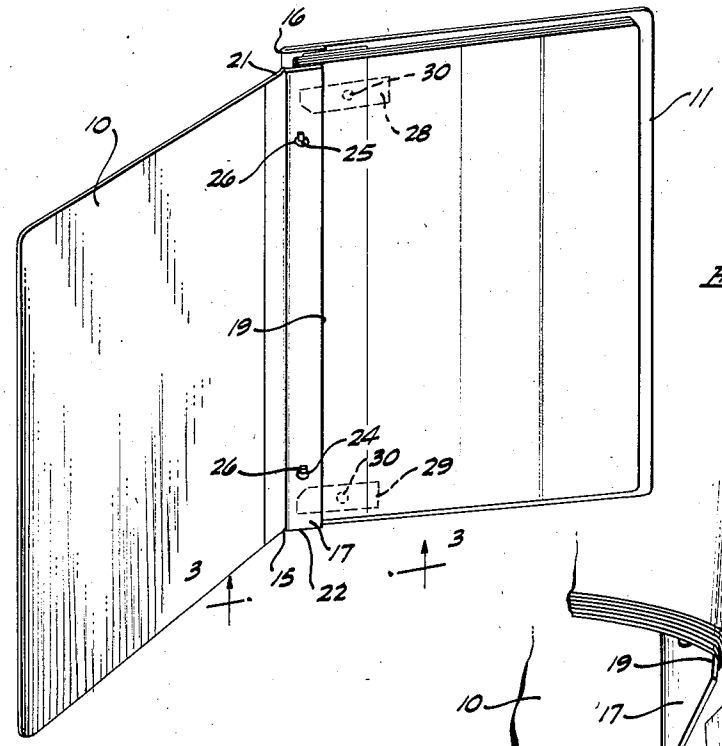

FIG. 1.

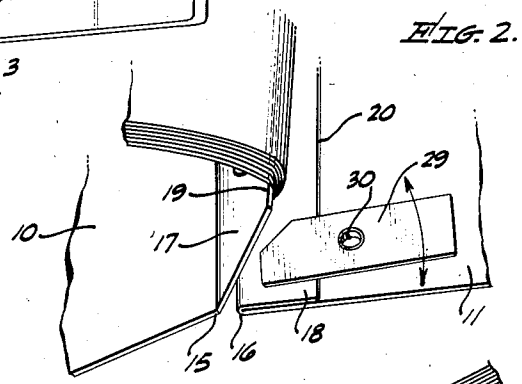

FIG. 2.

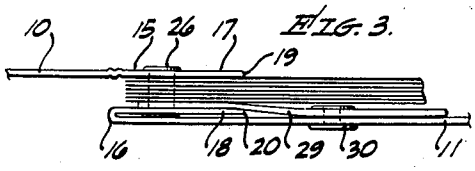

FIG. 3.

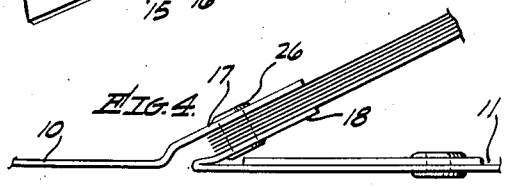

FIG. 4.

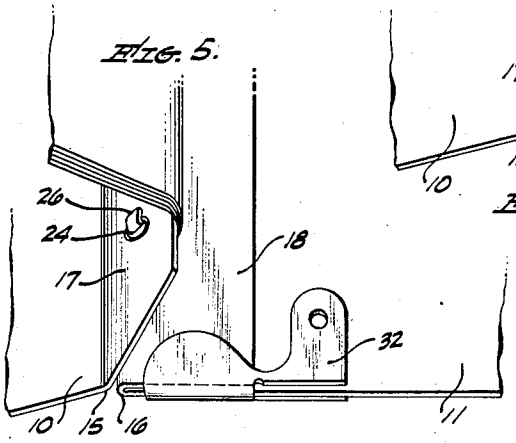

FIG. 5.

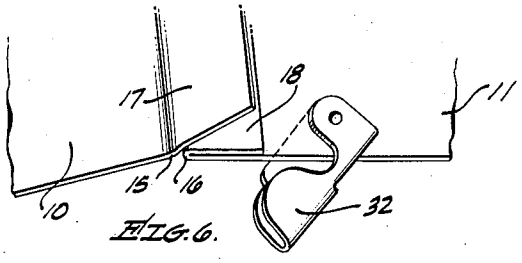

FIG. 6.

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LOOSE LEAF BINDER

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1 Claim. (Cl. 129—1)

This invention relates to paper binders, and more particularly to an improved loose-leaf binder for removably holding sheets of paper.

In various applications, and particularly in accounting practices, it is desirable to use a form of binder in which sheets of paper or prepared forms may be inserted which allows the forms to be written upon over their complete length and width. For example, in various accounting practices a number of forms are contained for the accounting period in a temporary binder and then removed and placed in a permanent file. While contained in the temporary binder entries are continuously made. Since some accounting forms are columnar with the columns extending very near to the inner edge of the form when bound, it is necessary to write legibly near the center or folding portion of the binders. The binders presently known to the art, such as ring type binders, present difficulties in writing near this portion of the binder since they present a raised or uneven surface. In addition, when writing upon the reverse side of a sheet the rings interfere with writing near the inner edge of a ring type binder and an uneven surface is presented at the inner edge of the reverse side in other binders presently known to the art.

Accordingly, it is an object of the present invention to provide an improved loose-leaf binder which presents an even writing surface over substantially the entire area of the paper mounted within the binder.

It is another object of the present invention to provide an improved loose-leaf binder which allows rapid insertion and removal of the paper mounted within the binder.

It is a further object of the present invention to provide an improved loose-leaf binder which provides an even unobstructed writing surface near the inner mounting edge of the paper for use with columnar sheets mounted within the binder.

The present invention is an improved loose-leaf binder having inwardly folded holding surfaces between which the paper to be mounted is held by bendable fasteners inserted through the holding surfaces and mating perforations in the paper. Flattening members are pivotally mounted upon the back cover of the binder to engage one of the holding surfaces and retain it in a fully folded position in contact with the inner surface of the back cover to provide a flat writing surface when the binder is in an open or partially open position.

The novel features which are believed to be characteristic of the invention, both as to its organization and method of operation, together with further objects and advantages thereof, will be better understood from the following description considered in connection with the accompanying drawing in which a presently preferred embodiment of the invention is illustrated by way of example. It is to be expressly understood, however, that the drawing is for the purpose of illustration and description only and is not intended as a definition of the limits of the invention.

Fig. 1 is a view in perspective of a presently preferred embodiment of the present invention showing the binder with sheets inserted;

Fig. 2 is an enlarged partial view in perspective of the fastening and flattening means of the present invention in non-assembled condition;

Fig. 3 is an enlarged partial view of the binder taken along line 3—3 of Fig. 1 with the binder fully assembled and opened;

Fig. 4 is a view corresponding to Fig. 3 with the binder in the partially assembled but unfastened condition;

Fig. 5 is a view corresponding to Fig. 2 of an alternative embodiment of the present invention; and

Fig. 6 is a view corresponding to Fig. 5 with the flattening member moved to the non-engaging position.

Referring to the drawing, and particularly to Figs. 1 and 2, the binder of the present invention comprises a front cover **10** and back cover **11** of rigid or semi-rigid material. In the presently preferred embodiment semi-rigid pressed cardboard of the type well known to the art is usual. The front and back covers **10, 11** are folded inward proximate the inner edge along folding lines **15** and **16** to form a front holding surface **17** and back holding surface **18**. In the preferred embodiment a flexible reenforcing surface is affixed to the front and back covers to allow repeated folding along the folding lines without damage to the semi-rigid material. In this embodiment adhesive cloth tape of the type well known to the art is used. Openings **24, 25** are provided through the front and back holding surfaces at opposed positions of the surfaces **17** and **18** respectively, proximate the inner edge **19, 20** of each surface. The openings **24, 25** are spaced apart longitudinally toward the upper and lower edge **21, 22** of the front and back holding surfaces at a predetermined distance therefrom.

Bendable fasteners **26**, mateable with the openings **24, 25** are inserted through the openings to engage the papers to be bound and to join the front and back holding surfaces **17, 18** to assemble the binder. The fasteners are of the separable type well known to the art, having two legs which are bent in opposite directions after being inserted through the openings to fasten the holding surfaces together with the paper to be bound held between the inner surfaces by the fasteners. Thus, the paper to be mounted in the binder has perforations proximate the inner edge and spaced apart by a distance equal to the distance between the openings **24, 25**. Thus, with the papers to be mounted inserted between the inner surfaces of the holding surfaces **17, 18**, the fasteners are inserted through the openings **24, 25** of the front holding surface **17**, through the perforations in the paper, and thence through the mateable openings **24, 25** of the back holding surface **18** as shown in Fig. 4. The legs of the fasteners are then bent flat against the surface to retain the front and back covers with the mounted paper in assembled position.

A first flattening member **28** and a second flattening member **29** are pivotally mounted on the back cover, as shown in Figs. 2 and 3, to present a flat writing surface on the mounted papers. That is, a rigid flattening member **28** is pivotally mounted proximate the inner edge of the back cover **11** on the inner surface thereof, but spaced from the inner edge **20** of the holding surface **18** and near the upper edge thereof. The flattening member is of sufficient length that when rotated it engages the back holding surface **18** to retain it in contact with the back cover as shown in Fig. 3. Thus, in the presently preferred embodiment shown in Figs. 1, 2 and 3, first and second rigid plastic members **28, 29** are mounted by means of a rivet **30** at a substantial distance from the inner edge **20** of the back holding surface when the holding surface is folded into contact with the back

cover. The length of the flattening members is greater than the distance, such that when rotated to the position of Figs. 2 and 3 they overlap the holding surface and retain it in contact with the back cover.

In use, therefore, the sheaf of papers is mounted between the holding surfaces as described hereinbefore and the flattening members are rotated to engage and flatten the holding surface **18** in the assembled position of Fig. 3. The fasteners **26** are positioned within the arc of the respective flattening members **28**, **29** to prevent their rotation past the assembled position. Thus, as shown in Fig. 3 when fully assembled a flat writing surface is provided for writing upon the front side of each mounted sheet. The sheet is then folded sharply over the inner edge **19** of the front holding surface **17** to allow writing upon the flat surface of the back side of each sheet. The writing surface is flat and usable to the extreme inner edge of both sides of the paper.

Referring now to Figs. 5 and 6, an alternative embodiment of the present invention is shown wherein the flattening members **32** are mounted upon the back cover **11**, as described hereinbefore, to engage the back holding surface **18**. In the alternative embodiment the flattening member comprises a rigid U-clamp pivotally mounted with legs of the U on both sides of the back cover. The U-shaped member is sufficiently spaced between legs to allow opposite surfaces to engage both the back cover and holding surface **18** to retain them in folded contact as shown in Fig. 5. That is, with the paper mounted as described hereinbefore the flattening members **32** are rotated such that one leg of the U engages the outer surface of the back cover **11**, while the other leg engages the holding surface **18**.

Thus, the present invention provides an improved loose-leaf binder which presents an unobstructed flat writing surface over substantially the entire writing area of both sides of the paper mounted within the binder. The loose-leaf binder in accordance with the present invention is particularly useful in connection with columnar ruled paper and allows rapid insertion and removal of the paper mounted in the binder.

What is claimed is:

An improved loose leaf binder comprising a front cover and a back cover, said front and back covers being folded inwardly along folding lines to form a front holding member and a back holding member between said covers, said folding lines being the inner edge of said covers, paper to be bound being positioned between the holding surface of said holding members away from said covers in the folded position, said covers outwardly of said folding lines being at least equal to the area and configuration of said paper to be bound, removable means for retaining said surfaces in mating engagement with said paper therebetween, and a pair of retaining members, each of said retaining members comprising a substantially rectangular planar member of rigid material, one of said retaining members being rotatably affixed to said back cover proximate said back holding member and proximate the lower edge of said back cover, the other of said retaining members being rotatably affixed to said back cover proximate said back holding member and proximate the upper edge of said back member, each of said members being rotatable to a retaining position whereby said retaining members overlap said back holding member to retain said holding member in substantially fully folded position.

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