Feb. 13, 1940. O. W. JOLLY 2,190,625

NOTEBOOK

Filed Jan. 23, 1939

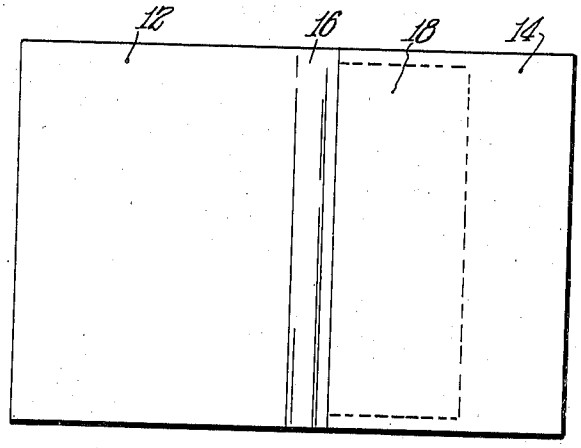


Fig. 1.

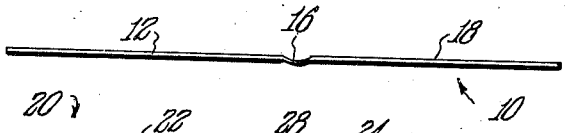


Fig. 2.

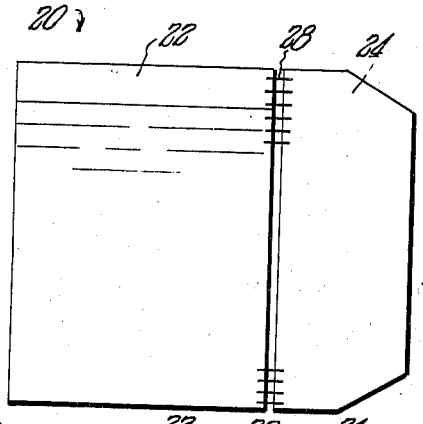


Fig. 3.

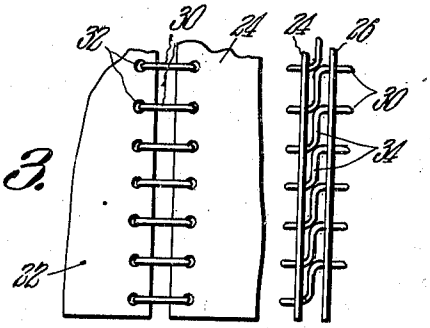


Fig. 6. Fig. 7.

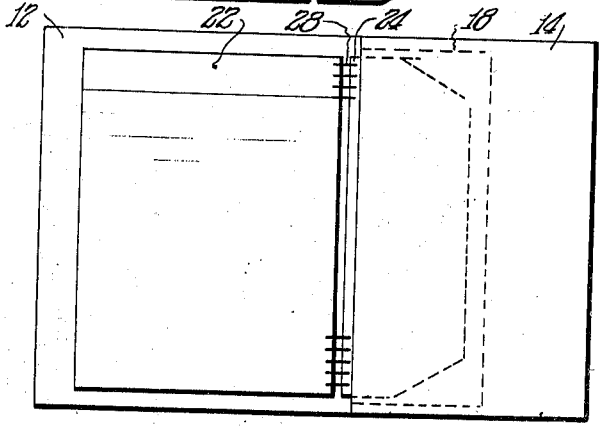


Fig. 5.

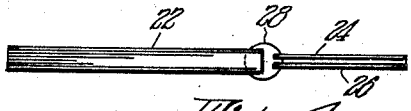


Fig. 4.

INVENTOR.

BY Oscar W. Jolly.
Walter C. Ross.

ATTORNEY.

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UNITED STATES PATENT OFFICE

2,190,625

NOTEBOOK

Oscar W. Jolly, West Springfield, Mass., assignor to Springfield Photo Mount Co., Holyoke, Mass., a corporation of Massachusetts

Application January 23, 1939, Serial No. 252,357

2 Claims. (Cl. 281—19)

My invention relates to improvements in a composition note book and is directed more particularly to the provision of a note book of the refill type.

Refill note books have their leaves bound together in a separate filler which is removable from the cover and is replaceable by a fresh package commonly referred to as a refill or filler. These refill note books are to be distinguished from the ordinary loose leaf books in which the individual sheets are insertable or removable.

It is an object of this invention to provide a novel binder and filler which, when combined in co-operative relationship, produce a novel and unique result.

It is another object of this invention to provide an improved note book having a pair of cover members adapted to enclose and protect the refill. As will appear, the refill includes a plurality of leaves hinged together by a binding means and the whole is removably disposed within the cover members in such a way that the covers may be opened up and disposed flat upon a supporting surface such as a desk in such a way that the binding means is prevented from contacting the supporting surface.

A binding is provided which has cover members which can be swung relative to one another throughout 360°. The filler is likewise adapted to be swung throughout 360° and herein is provided a combination of both cover members and filler which when in association with each other can both be swung through an arc of 360°.

As a special feature, the binding means consists of a wire or wires which would ordinarily tend to mar the surface of a desk or the like and the construction is such that this objection is prevented.

Various other novel features and advantages of the invention will become more apparent after a reading of the following description, reference being had to the accompanying drawing, wherein:

Fig. 1 is a plan view of a refill note book casing of the invention in open position;

Fig. 2 is an end elevational view of the note book casing shown in Fig. 1;

Fig. 3 is a plan view of a refill of the invention in open position;

Fig. 4 is an end elevational view of the refill shown in Fig. 3;

Fig. 5 is a plan view of the note book casing shown in Fig. 1 and the refill shown in Fig. 3 in co-operation with each other;

Fig. 6 is a partial plan view on an enlarged scale of the binding of the refill shown in Fig. 3; and

Fig. 7 is an end elevational partial view of the binding showing the flaps of the invention in adjacent relation.

Similar reference figures refer to like parts throughout the several figures of the drawing. Referring now to the drawing more in detail, the invention will be more fully described.

A note book casing is generally designated by 10 and includes cover members 12 and 14, 12 being a front cover and 14 being a back cover.

The two covers are associated in hinged relationship by a member 16. In the back member 14, a pocket 18 is provided and this is indicated herein by scored lines. This pocket is adapted for receiving purposes as will hereinafter be more fully described.

In Fig. 3, a refill 20 is shown and it consists of a stack of note book paper 22 and two tabs 24 and 26, which are preferably formed from a stiffish material. One of the tabs is placed on the bottom of the stack 22 and one of the tabs is placed on the top of the stack.

The paper 22 and the tabs 24 and 26 are then joined together by a binding. I am concerned in this invention with a binding of the type wherein the continuous helical member 30 is screwed into the perforations 32 through the paper 22 and the tabs 24 and 26. In such a construction, what appear to be adjacent rings or loops as shown in Fig. 6 are thus formed by the continuous helical member. These rings must be held in position relative to one another. A backbone or longitudinal stiffener is adaptable for this purpose which will be described.

The binding consists of a helical member 30 which may be made of wire or of any other more or less rigid but yet bendable material. The member has its convolutions screwed into the perforations 32 of the stack of leaves 22 and the tabs 24 and 26 so as to allow the leaves to move freely so as to hinge or swing the same on said member. However, the leaves, where thus secured together, are offset when opened up. That is to say, the lines or columns of one leaf are offset relative to corresponding lines or columns of an adjacent leaf.

Furthermore, the helical member in this condition is more or less bendable and what is more, the helical member can be unscrewed from the stack. All of these features are objectionable so that provisions are made whereby these objections are overcome.

In the construction I have shown, after the

helical member has been screwed into the perforations of the book, it is offset or distorted to transform the convolutions thereof into substantially closed loops or rings which are joined together by longitudinal members.

One form of such a backbone is shown in Fig. 7 wherein a portion of each convolution or turn of the helical binding member is offset by the action of a shoulder or bar during the process of manufacture. That is to say, a portion of each convolution is straightened out so that there is formed simultaneously a plurality of ring-like loops 30 which are connected by bars 34. The loops 30 have their end portions arranged in substantially closed relation with a certain end of one loop connected by a bar to the opposite end of an adjacent loop so that there is thus formed a binding consisting of rings or loops spaced apart by bars.

A book is thus produced efficiently and economically and not only are the leaves permanently bound and arranged to maintain the proper alignment when open or closed, but also the binding is such as to reinforce the book or to stiffen it to the desired extent.

Then, not only does the binding act as a stiffener for the back but also the leaves are permanently bound in such a way that as they swing relative to one another, they swing into alignment. This is because they swing on rings instead of the turns or angular convolutions of a helical member.

The various parts of the invention now having been described and it being observed that all of the various parts of the note book are integral with each other and that all of the various parts of the refill are integral with each other, the device can now be arranged into its assembled form.

More important still is the provision of a combination of a binder, the cover members of which can swing throughout an arc of 360° relative to one another, and a stack of leaves, the separate members of which are all adapted to be swung throughout an arc of 360°. In such a combination as is shown in Fig. 5, wherein the two tabs are swung around in arcs of 180° each so that one of the tabs overlies the other, the binder and the casing are secured together by the insertion of the tabs in the pocket 18.

The casing and the leaves in combination are now adapted to be swung together in an arc of 360°.

It is to be appreciated that the backbone is positioned between the tabs when they are in adjacent relation as shown in Fig. 7 so that the backbone is not only concealed but also held secure relative to the movements and rotation of the leaves when in combination with the casing. That is to say, that the tabs hold the backbone securely in position so that the leaves can take full advantage of the arc of 360°, without interference from the backbone which obviously acts as a barrier against complete rotation of the leaves around the loops.

While I have described the invention in great detail and with respect to the present preferred form thereof, it is not desired to be limited thereto since changes and modifications may be made therein without departing from the spirit and scope of the invention. The invention may be embodied in other specific forms without departing from the essential characteristics thereof. The present embodiments are therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What it is desired to claim and secure by Letters Patent of the United States is:

1. A notebook comprising in combination, a casing including a pair of cover members hingedly connected by a flexible connection, one of the cover members having a pocket part provided with an opening terminating at a distance from the opposite edges of the cover member and disposed adjacent the flexible connection, and a filler including a stack of sheets and tabs on opposite sides of the stack, the stack and tabs being provided with rows of aligned openings and a helical binding member including a plurality of rings disposed in the openings and connected by aligned portions forming a back-bone portion thereof, the backbone portion being locked between the tabs as the tabs are swung through their arcs upon the helical member so as to lie adjacent each other, said casing and said filler being arranged in co-operative relationship with the tabs of said filler inserted in the pocket part of said casing whereby the other cover of said casing and said filler may be moved throughout an angle of 360° relative to the back-bone of the helical member.

2. A notebook comprising in combination, a casing including a pair of cover members hingedly connected by a flexible connection, one of the cover members having a pocket part provided with an opening terminating at a distance from the opposite edges of the cover member and disposed adjacent the flexible connection, and a filler including a stack of sheets and tabs on opposite sides of the stack, the stack and tabs being provided with rows of aligned openings and being bound by a helical binding member including a plurality of convolutions screwed into the openings of the stack and tabs and the convolutions being connected by aligned portions forming a back-bone portion thereof, the back-bone portion being locked between the tabs as the tabs are swung through their arcs upon the helical member so as to lie adjacent each other, said casing and said filler being arranged in co-operative relationship with the tabs of said filler inserted in the pocket part of said casing whereby the other cover of said filler may be moved in a 360° angle with the back-bone of the helical member as the axis thereof.

OSCAR W. JOLLY