Jan. 1, 1929. 1,697,296

G. P. WIGGINTON

CARD OR SHEET HOLDER

Filed May 9, 1927 3 Sheets-Sheet 1

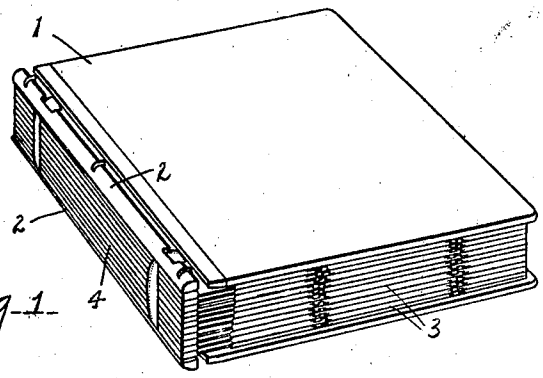


Fig. 1.

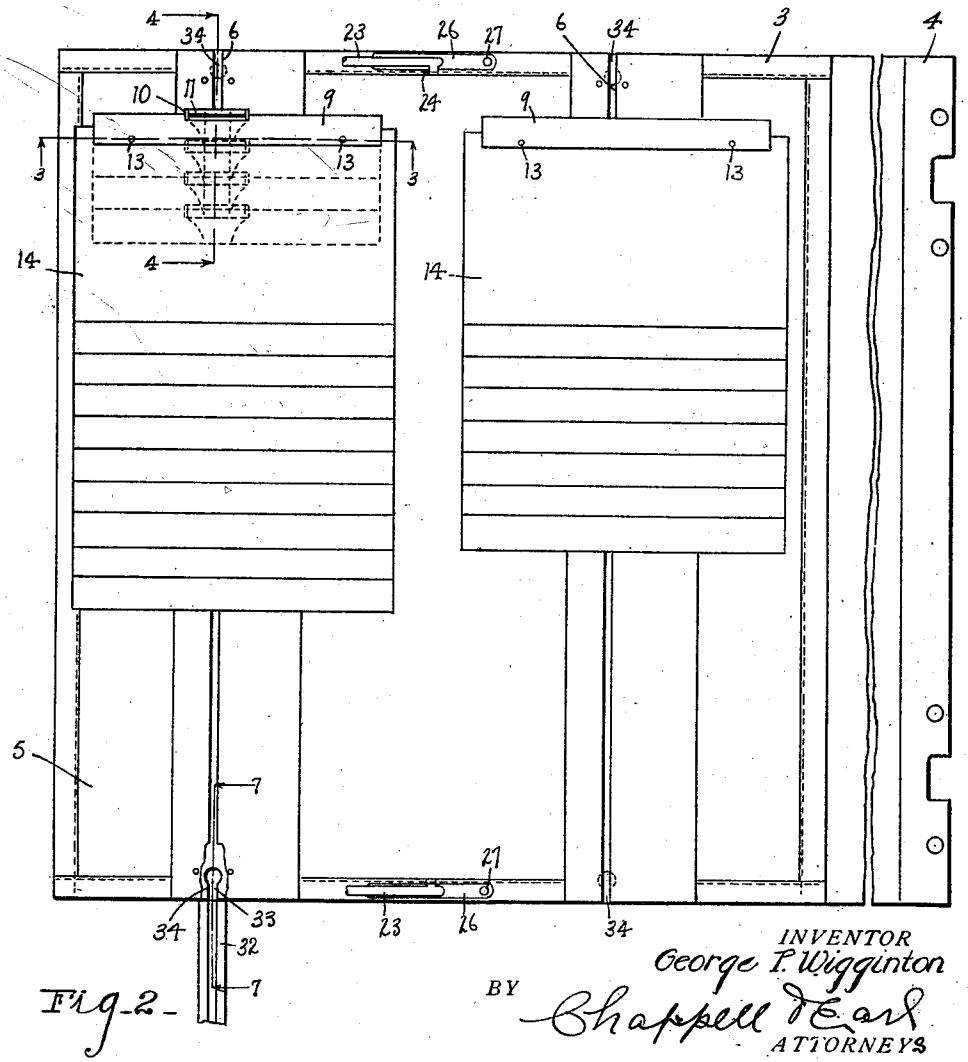


Fig. 2.

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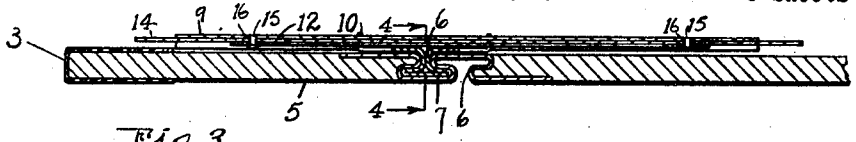


Fig. 3.

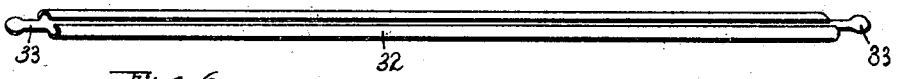


Fig. 6.

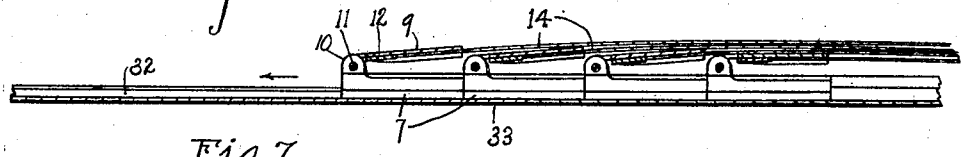


Fig. 7.

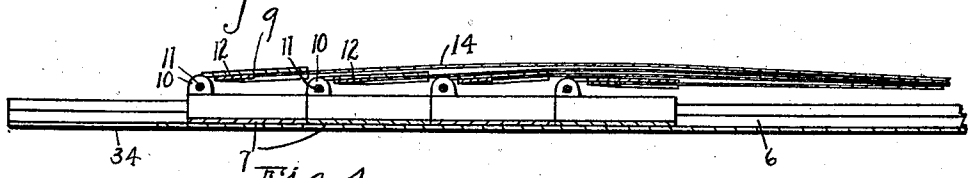


Fig. 4.

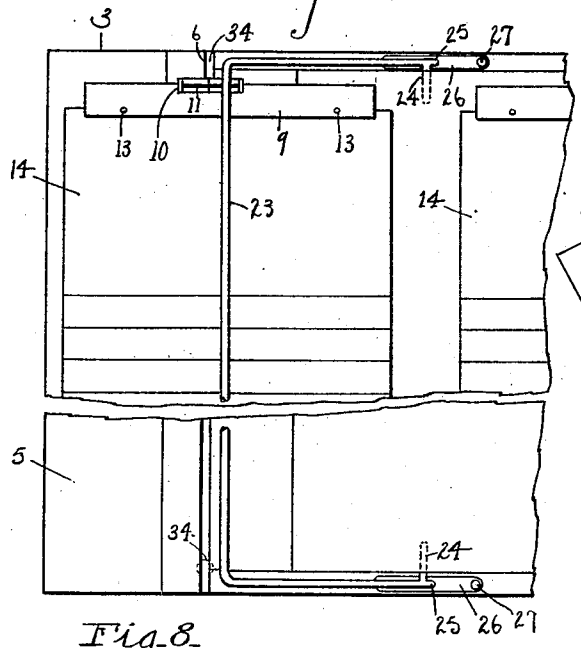


Fig. 8.

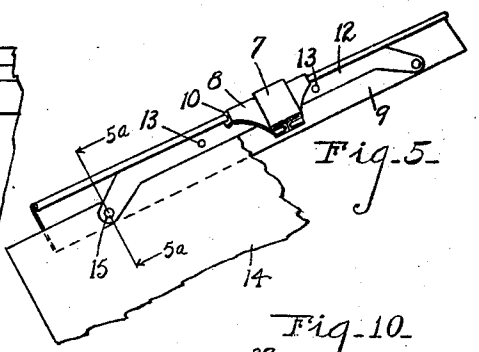


Fig. 5.

Fig. 10.

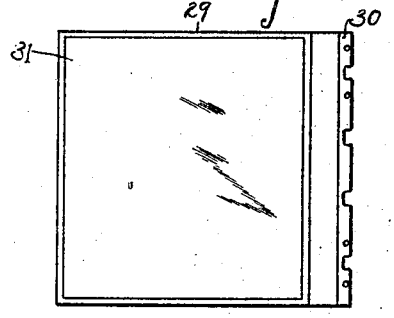
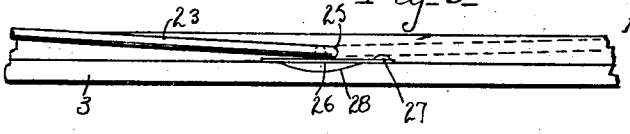


Fig. 9.



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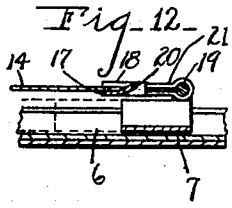


Fig. 12.

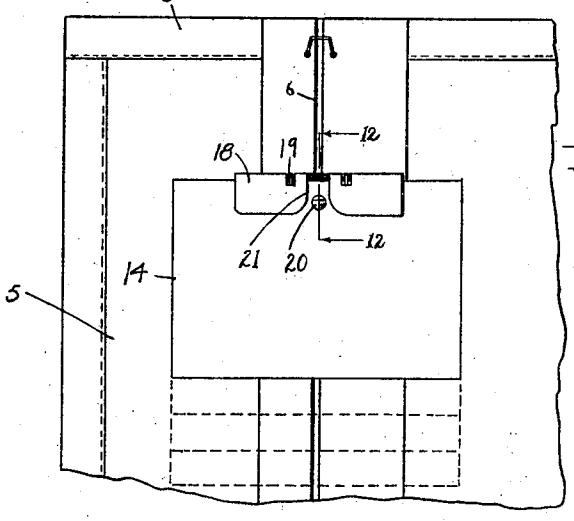


Fig. 11

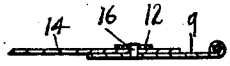


Fig. 5A.

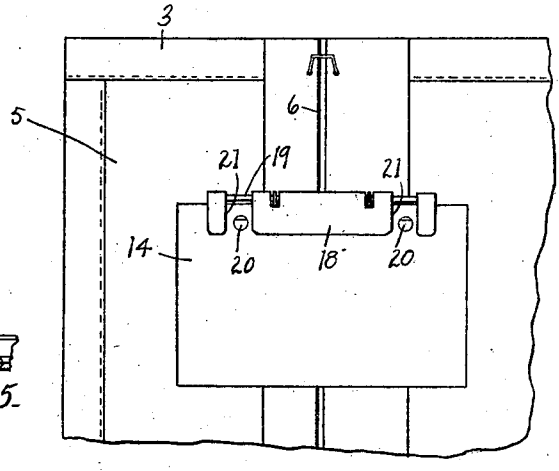


Fig. 13.

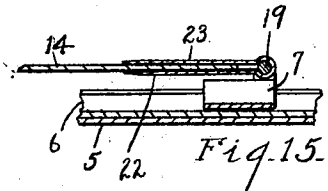


Fig. 15.

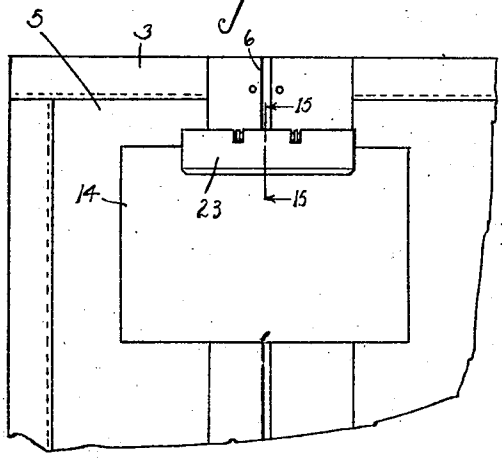


Fig. 14.

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Patented Jan. 1, 1929. 1,697,296

UNITED STATES PATENT OFFICE.

GEORGE P. WIGGINTON, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO OFFICE EQUIPMENT PATENTS CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

CARD OR SHEET HOLDER.

Application filed May 9, 1927. Serial No. 189,968.

My present improvements relate to the type of card or sheet holder illustrated in my application for Letters Patent filed June 19, 1926, Serial No. 117,072, the same being an improvement upon and in some respects an adaptation of the structure there illustrated.

The main objects of this invention are:

First, to provide an apparatus of this character in which a plurality of supports, each carrying a plurality of sheet holders, may be assembled or arranged in a binder of the loose leaf type.

Second, to provide an improved apparatus of the class described with sheet holders having sheet-attaching members which securely retain the sheets, and at the same time permits their quick removal or replacement.

Third, to provide an apparatus of the class described in which the supports are adapted to be handled as leaves of a binder with means for retaining the sheets or cards supported, permitting such handling or adjustment.

Objects relating to details and economies of construction and operation of my invention will appear from the detailed description to follow.

The invention is defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is illustrated in the accompanying drawing, forming a part of this specification, in which:

Fig. 1 is a perspective view of a binder of the loose leaf type having a plurality of units of leaf form embodying the features of my invention bound therein.

Fig. 2 is a fragmentary plan view of one of the supports having a plurality of sheets or cards mounted thereon.

Fig. 3 is an enlarged detail section on line 3—3 of Fig. 2.

Fig. 4 is an enlarged detail section on line 4—4 of Figs. 2 and 3.

Fig. 5 is an inverted perspective view of one of the sheet holders, as shown in Figs. 1, 3 and 4, a fragment of a sheet being shown engaged with the holder.

Fig. 5^A is a detail section on line 5^A—5^A of Fig. 5.

Fig. 6 is a perspective view of the transfer member.

Fig. 7 is a detail section on a line corresponding to line 7—7 of Fig. 2, illustrating the method of using the transfer member.

Fig. 8 is a fragmentary plan view showing the sheet-retaining member in sheet-retaining position.

Fig. 9 is a fragmentary edge view showing the sheet-retaining member in sheet-retaining position, its inoperative or sheet-releasing position being shown by dotted lines.

Fig. 10 is a plan view of another form of sheet-retaining means, it being in the form of a sheet having a celluloid panel therein adapted to overlie the support with the sheets thereon in substantially the same manner as the bail-like retainer shown in Figs. 2, 8 and 9.

Fig. 11 is a fragmentary plan view of a modified form of holder and sheet-attaching means.

Fig. 12 is a detail section on line 12—12 of Fig. 11.

Fig. 13 is a fragmentary plan view showing another modification in the sheet-attaching means.

Fig. 14 is a fragmentary plan view showing still another modification in the sheet-attaching means.

Fig. 15 is a detail section on line 15—15 of Fig. 14.

In the drawing similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawings, 1 represents a loose sheet binder provided with binding or clamping bars 2. As the structural details of this binder form no part of this invention, they are not illustrated herein. This binder, however, contains a plurality of units designated generally by the numeral 3, the units having hinged binding flaps 4 adapted to receive the binding means. Each of the units carries one or more sets or series of sheet or card holders, the unit shown in Fig. 2 carrying two sets on each face. As these sets are duplicates, a description of one will suffice.

The plate-like body members 5 of these units are provided with dovetail ways 6, those on opposite sides being arranged in offset relation which permits the making of the body of the unit quite relatively thin. These ways are adapted to receive the dovetail heads 7 of the holders 8 and slidably support the same end-to-end and in non-overlapping relation as is clearly shown in Figs. 4 and 7.

Each holder is provided with a sheet-attaching means which, in the embodiment best shown in Figs. 2, 4 and 5, consists of a plate-

like clamping member 9 pivoted to the upwardly projecting ears 10 on the holders by means of the pintles 11.

The spring clamp 12 is riveted at 13 to the plate member providing a pair of spring sheet-engaging fingers, the sheets or cards 14 being arranged between the clamping member 9 and these spring clamping fingers. These clamping fingers are provided with pins 15 which are aligned with holes 16 in plate member 9 see Figs. 3, 5 and 5A, the pins coacting with the holes, forming punches which pierce the sheets, the spring of the fingers, however, coacting with the pins in retaining the sheets.

In the embodiment shown in Figs. 11 and 12, the clamping member 17 corresponds to the member 9 in the embodiment shown in Figs. 5 and 5A and the coacting spring member 18 is formed integrally of a sheet of spring metal formed around the pivot 19—see Fig. 12. A sheet-engaging projection 20 is formed upon the member 17 to engage the sheet, as shown in Figs. 11 and 12, an opening 21 being formed in the spring member 18 to permit the projection 20 to engage the sheet.

The embodiment shown in Fig. 13 is substantially the same as that shown in Figs. 11 and 12 with the exception that the member 17 is formed with a pair of projections 20 while the member 18 is formed with a pair of openings 21.

The embodiment shown in Figs. 14 and 15 is substantially that shown in Figs. 11, 12 and 13 with the exception that no projections or openings are formed in the spring clamping members 22 and 23, the sheet being retained merely by the frictional grip of the spring members thereon.

When the supports are used in a binder in the form of leaves, it is desirable to provide means for retaining the sheets so that they will not become displaced by swinging on their pivots as the supports are turned as leaves. I therefore provide a retaining means which in the embodiment shown in Figs. 1 to 9 is in the form of a bail 23 having pintles 24 at the ends of its arms pivotally mounted on the supports so that the bail may be swung to sheet-retaining position, as shown in Fig. 8, the cross portion of the bail lying centrally above the series of sheets.

To retain the holder in this position, I provide the holder with offsets 25 adjacent its pivots, these offsets engaging the springs 26 attached at one end by means of the rivets 27 and extending across the recesses 28 which allows the springs to swing downward as the retainers are swung on their pivots, the springs thus acting to hold the retainers in sheet-supporting position, as best shown in Figs. 8 and 9.

In Fig. 10, I illustrate a modified form of sheet retainer, the same consisting of a frame 29 having a hinged attaching flap 30, the frame containing a panel 31 of celluloid or other transparent material, these retainer members being interposed between the supports so that they may be swung with the supports, thus holding the sheets in collapsed position or preventing their swinging on their pivots.

To facilitate the manipulation of the holders, I preferably provide transfer members 32 which have headed tongues 33 adapted to engage in the key-hole-shaped slots 34, so as to properly align the transfer members with the ways of the supports, permitting the holders being slipped into the transfer member or from the transfer member when they are aligned as shown in Fig. 7. This feature, however, is made the subject matter of claims in my said application and is shown here merely to more fully illustrate the manipulation of the apparatus.

My improved sheet or card holder illustrated is capable of very rapid manipulation. A plurality of sheets or cards are very compactly supported so that any individual sheet or card may be fully inspected. Further, the sheets may be quickly removed or detached from the holders. The apparatus is also, as stated, well adapted for embodiment in a binder.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In an apparatus of the class described, the combination of a support, a plurality of sheet holders slidably mounted on said support, sheet-attaching members pivotally mounted on said holders in non-overlapping relation with adjacent holders, and a bail-like sheet-retaining member having pintles at the ends of its arms engaging said support at one side of the sheets and adapted to be swung to one side of the sheets to permit the swinging of the sheets on their said holders or to be swung downwardly upon the sheets carried by said holders.

2. In an apparatus of the class described, the combination of a support, a plurality of sheet holders slidably mounted on said support, sheet-attaching members pivotally mounted on said holders, and a bail-like sheet-retaining member having pintles at the ends of its arms engaging said support at one side of the sheets and adapted to be swung to one side of the sheets to permit the swinging of the sheets on their said holders or to be swung downwardly upon the sheets carried by said holders.

3. In an apparatus of the class described, the combination of a support, a plurality of sheet holders slidably mounted on said support, sheet-attaching members pivotally mounted on said holders in non-overlapping relation with adjacent holders when the holders are adjusted edge to edge, and a sheet-retaining member pivotally supported

at one side of the sheets and adapted to be swung to one side of the sheets to permit the swinging of the sheets on their said holders or to be swung downwardly upon the sheets carried by said holders.

4. In an apparatus of the class described, the combination of a support, a plurality of sheet holders slidably mounted on said support, sheet-attaching members pivotally mounted on said holders, and a sheet-retaining member pivotally supported at one side of the sheets and adapted to be swung to one side of the sheets to permit the swinging of the sheets on their said holders or to be swung downwardly upon the sheets carried by said holders.

5. In an apparatus of the class described, the combination of a binder, a plurality of leaf-like supports assembled therein, each support being provided with a groove-like way, a plurality of sheet holders provided with heads slidably engaging in said way, sheet-attaching members pivotally mounted on said holders whereby the sheets carried by said holders are hingedly supported thereon in overlapping relation, and means operatively associated with said supports and sheet holders for preventing the swinging of the sheets on their holders, such means being adapted to be swung to one side of the sheets to permit free manipulation of the sheets and holders.

6. In an apparatus of the class described, the combination of a binder, a plurality of leaf-like supports assembled therein, a plurality of sheet holders adjustably mounted on said supports, sheet-attaching members pivotally mounted on said holders whereby the sheets carried by said holders are hingedly supported thereon, and means operatively associated with said supports and sheet holders for preventing the swinging of the sheets on the holders, such means being adapted to be swung to one side of the sheets permitting free manipulation of the sheets and holders.

7. In an apparatus of the class described, the combination of a support, a plurality of sheet holders slidably mounted on said support, sheet-attaching members comprising supporting plates pivoted on said holders and having spaced holes therein, and spring members mounted on said plates and provided with pins registering with said holes to engage sheets arranged between the spring member and plates, said pins coacting with the holes in the plates to provide sheet-punching means.

8. In an apparatus of the class described, the combination of a support, a plurality of sheet holders slidably mounted on said support, and sheet-attaching members each comprising a pair of coacting sheet-clamping members pivotally mounted on said holders, one of said clamping members being provided with a hole and the other with a pin registering with said hole to engage a sheet arranged between the clamping members.

9. In an apparatus of the class described, the combination of a support, a plurality of sheet holders slidably engageable with said support, and attaching members pivotally mounted on said holders and each comprising coacting sheet-clamping members, one of said clamping members being provided with a sheet-engaging projection and the other with an opening positioned to receive said projection.

10. In an apparatus of the class described, the combination of a support, a plurality of sheet holders slidably mounted on said support, and spring sheet clamp means pivotally mounted on said holders, said holders being adapted to lie in end-to-end abutting relation and said sheet-clamping members being adapted to collapse upon the same in non-overlapping relation with adjacent holders.

In witness whereof I have hereunto set my hand.

GEORGE P. WIGGINTON.