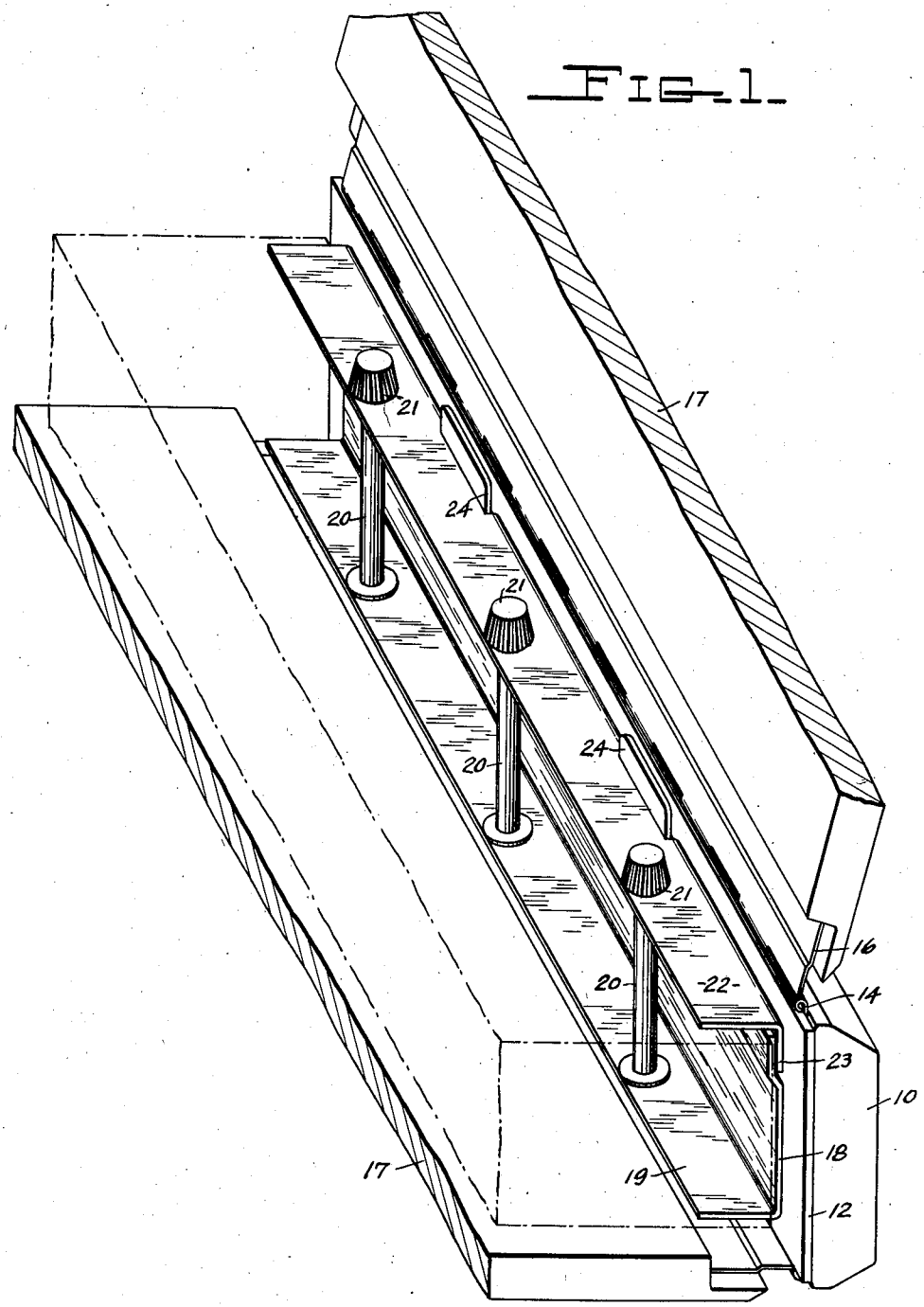
Feb. 27, 1940. J. COOPER ET AL 2,191,707

LOOSE-LEAF BINDER

Filed July 12, 1938 3 Sheets-Sheet 1

Fig. 1.



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LOOSE-LEAF BINDER

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FIG. 2.

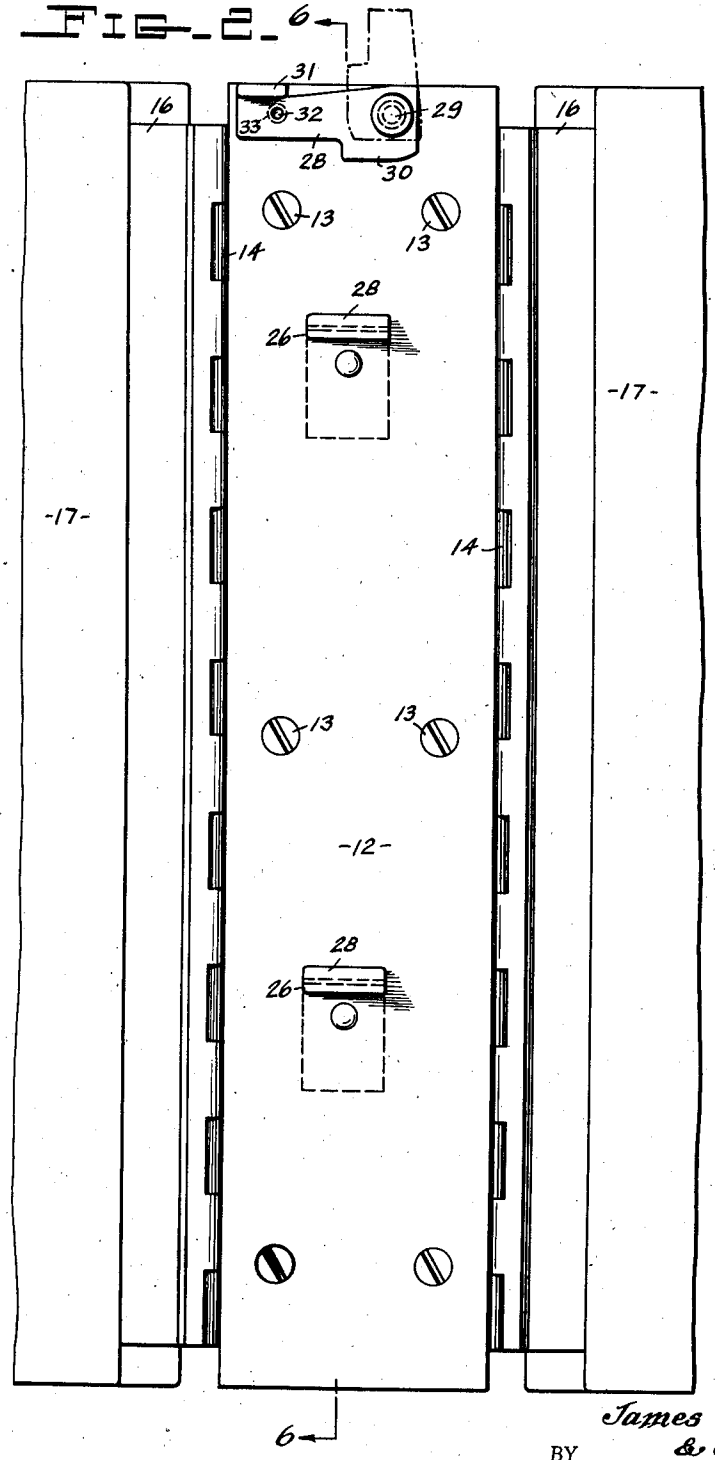
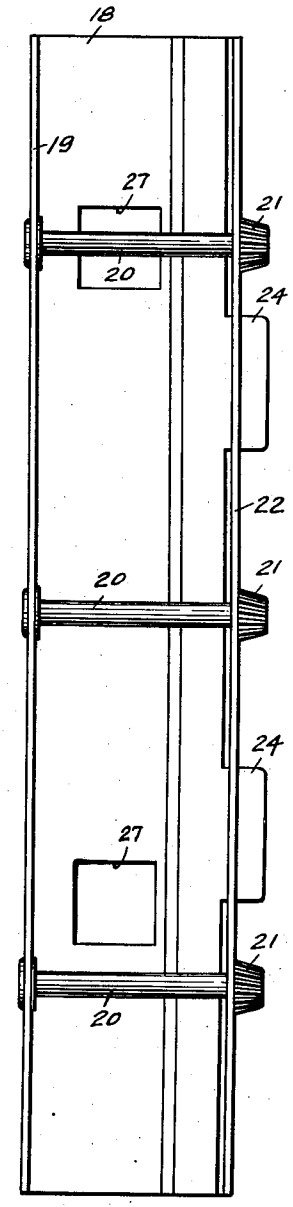


FIG. 3.



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FIG. 4.

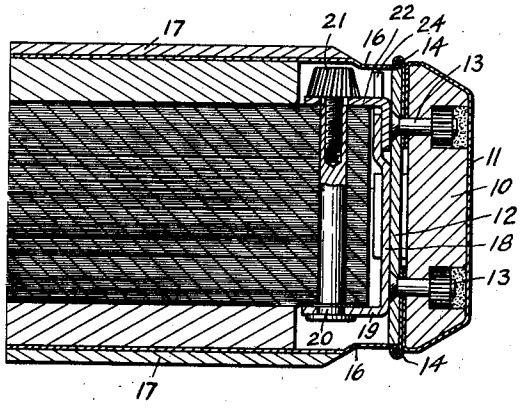


FIG. 5.

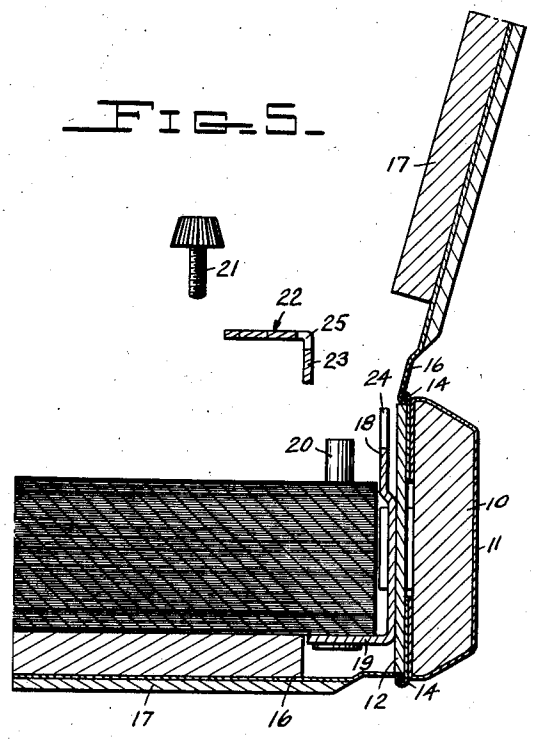
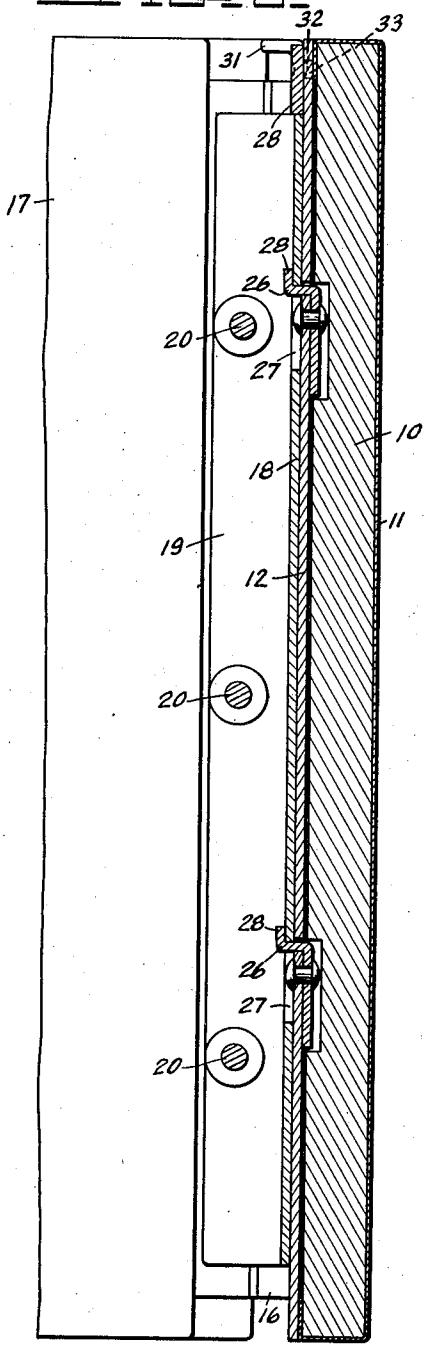


FIG. 6.



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Patented Feb. 27, 1940 2,191,707

UNITED STATES PATENT OFFICE

2,191,707

LOOSE-LEAF BINDER

James Cooper, Solvay, and Gerhard H. J. Baule, Syracuse, N. Y., assignors to Hall & McChesney, Inc., Syracuse, N. Y., a corporation of New York

Application July 12, 1938, Serial No. 218,864

1 Claim. (Cl. 129—23)

This invention relates in general to loose-leaf binders, and more particularly to a binder embodying a structure whereby the leaves and leaf impaling unit may be conveniently detached from the binder proper for the purpose of trimming the edges of the leaves.

At the present time, most records are recorded by a photostat process and after the photostatic prints are perforated to be received on the leaf impaling posts of the binder, it is desirable to trim the edges of the leaves to improve the appearance of the record book. Preferably, this trimming operation is performed after the binder has been filled rather than to trim the individual sheets or leaves as they are placed in the binder.

The invention has as an object a loose-leaf binder structure by which the individual leaves can be quickly and conveniently inserted in the binder and the leaf supporting unit and leaves can be conveniently removed from the binder as a unit, the leaves trimmed and the unit replaced. In addition to these objects, the structure is particularly economical to manufacture. A binder of the type referred to is disclosed in our copending application, Sr. No. 183,874, filed January 7, 1938.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a perspective view of a binder embodying our invention illustrating the back member, leaf impaling unit and contiguous portions of the covers.

Figure 2 is a plan view of the back member and contiguous portions of the cover with the leaf impaling unit removed.

Figure 3 is a plan view of the leaf impaling unit.

Figure 4 is a cross sectional view of the binder with the leaves inserted therein.

Figure 5 is a view, similar to Figure 4, with one of the cover members in open position and the leaf clamping member detached from the posts.

Figure 6 is a lengthwise sectional view taken on substantially lines 6—6, Figure 2, and including the leaf impaling unit.

The binder consists of a back member 10 which may be formed of wood, or other suitable material, and which is provided with an outer finishing layer 11 of leather, fabric, or like material. A plate 12 is secured to the inner side of the back member 10 as by screws 13. The edges of the outer covering layer 11 are folded over the side edges of the back member and extend between the back member and the plate 12. Also one section 14 of a piano hinge is secured between the back member 10 and the plate 12, and the other section 16 secured to the covers 17.

The leaf impaling unit consists of a leaf supporting member 18 which is L shaped in cross section and which extends lengthwise of the back member or plate 12, and with the flange 19 thereof extending at right angles to the back member adjacent one side edge thereof. A plurality of leaf impaling posts 20 are rigidly secured at like ends to the flange 19 and are arranged in spaced apart relationship and extend transversely of the back member, see Figures 1 and 4. The upper ends of the posts 20 are formed with threaded apertures to receive the screws 21 which are employed to detachably secure a binder plate 22 to the upper ends of the posts. The binder plate 22 is also L shaped in cross section and the flange 23 thereof is arranged between the leaf supporting member 18 and plate 12, see Figure 4. The edge of the leaf supporting member 18 is formed with one or more projections 24, and the binder plate 22 is formed with complemental openings 25 to receive the projections 24. In this manner, relative endwise movement is prevented between the binder plate 22 and the leaf supporting member 18.

The leaf supporting member 18 is detachably secured to the plate 12. As here shown, the plate 12 is formed or provided with outwardly projecting lugs 26, and the plate 18 is formed with elongated apertures 27 through which the lugs 26 extend, and the lugs are formed with flanges 28 overlapping the plate 18. The plate 18 is placed on the plate 12 with the lugs 26 extending through the aperture 27. The member 18 is then moved endwise relative to the plate 12, as downwardly in Figure 6, until the edges of the apertures 27 engage the lugs 26. The leaf supporting member 18 is maintained in this position by a cam lock 28 pivoted at one end to the plate 12, as at 29, and formed with a laterally extending projection 30 to engage the end of the leaf supporting member 18. The cam lock 28 is provided with a manual 31 and with a depressed portion 32 which engages with an aperture 33 formed in the plate 12. The arrangement is such that when the cam lock 28 is moved from the dotted line position Figure 2, to the full line position extending transversely of the plate 12, the leaf impaling unit 18 is urged against the

lugs 26 with the flanges 28 overlapping the plate 18 and the parts are held in this position by engagement of the depressed portion 32 in aperture 33.

The leaves are individually placed in the binder by removing the screws 21 and binder plate 22. The entire leaf impaling unit is removed from the back of the binder by simply moving the cam lock 28 to the dotted line position Figure 2, and moving the leaf supporting member lengthwise toward the cam lock to effect disengagement from under the flanges 28.

It will be apparent that our invention embodies a particularly economical yet rigid structure by which the leaf impaling unit and leaves may be quickly and conveniently removed from the binder and subsequently replaced.

What we claim is:

A loose-leaf binder comprising a back member, a cover hinged to each side edge of the back member, an angle plate extending lengthwise of the back member and being formed with a flange extending in right angle relationship along one edge of said plate, a plurality of leaf impaling posts rigidly secured to said flange, a second angle plate provided with apertures to receive the opposite ends of the posts and having a flange overlapping said first plate, said plates having interlocking means to prevent relative endwise movement between the plates, and said first plate being formed with a plurality of apertures, said back member being provided with a plurality of lugs extending through the apertures in said first plate and being operable to interlock the first plate to the back member upon relative endwise movement between said plate and the back member, and cam means carried by the back member at one end thereof and operable to urge said first plate toward said lugs and maintain the same in engagement therewith.

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