

March 3, 1931.

W. F. WARNER, JR

1,794,473

LOOSE LEAF BINDER

Filed Sept. 29, 1927 2 Sheets-Sheet 1

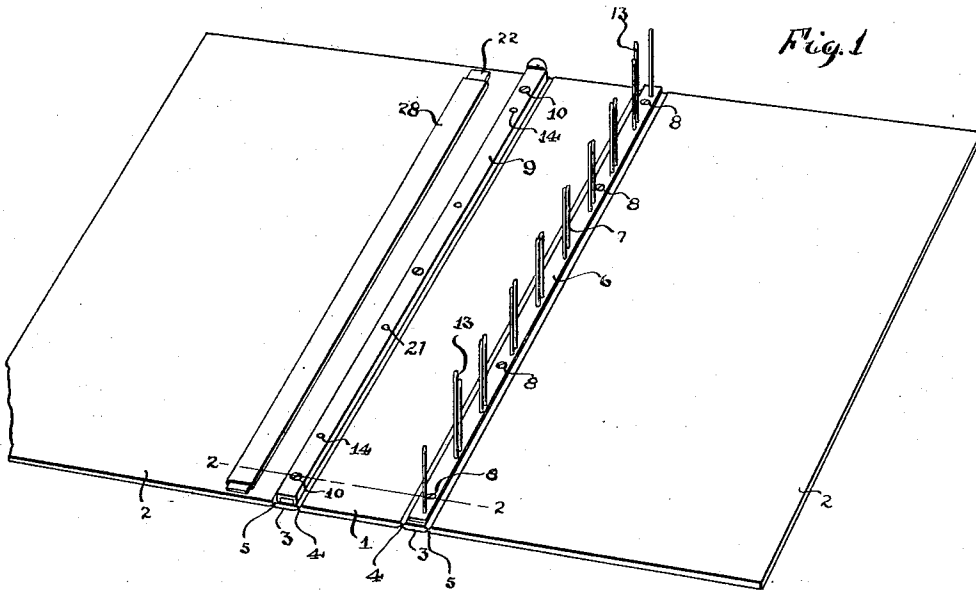


Fig. 1

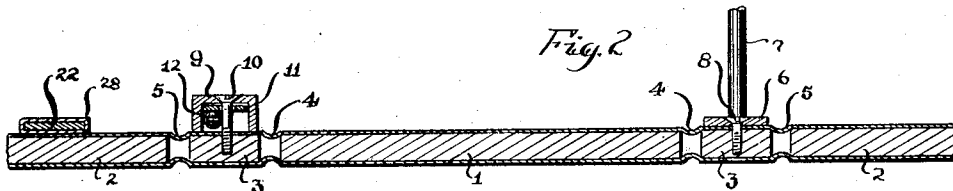


Fig. 2

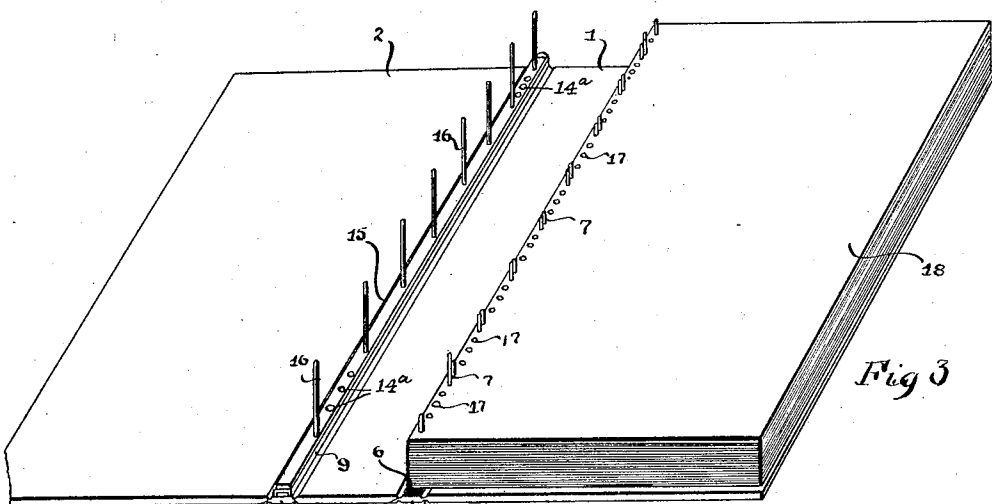


Fig. 3

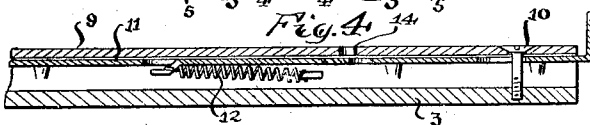


Fig. 4

INVENTOR
William F. Warner, Jr.
BY
H. H. Simons
his ATTORNEY

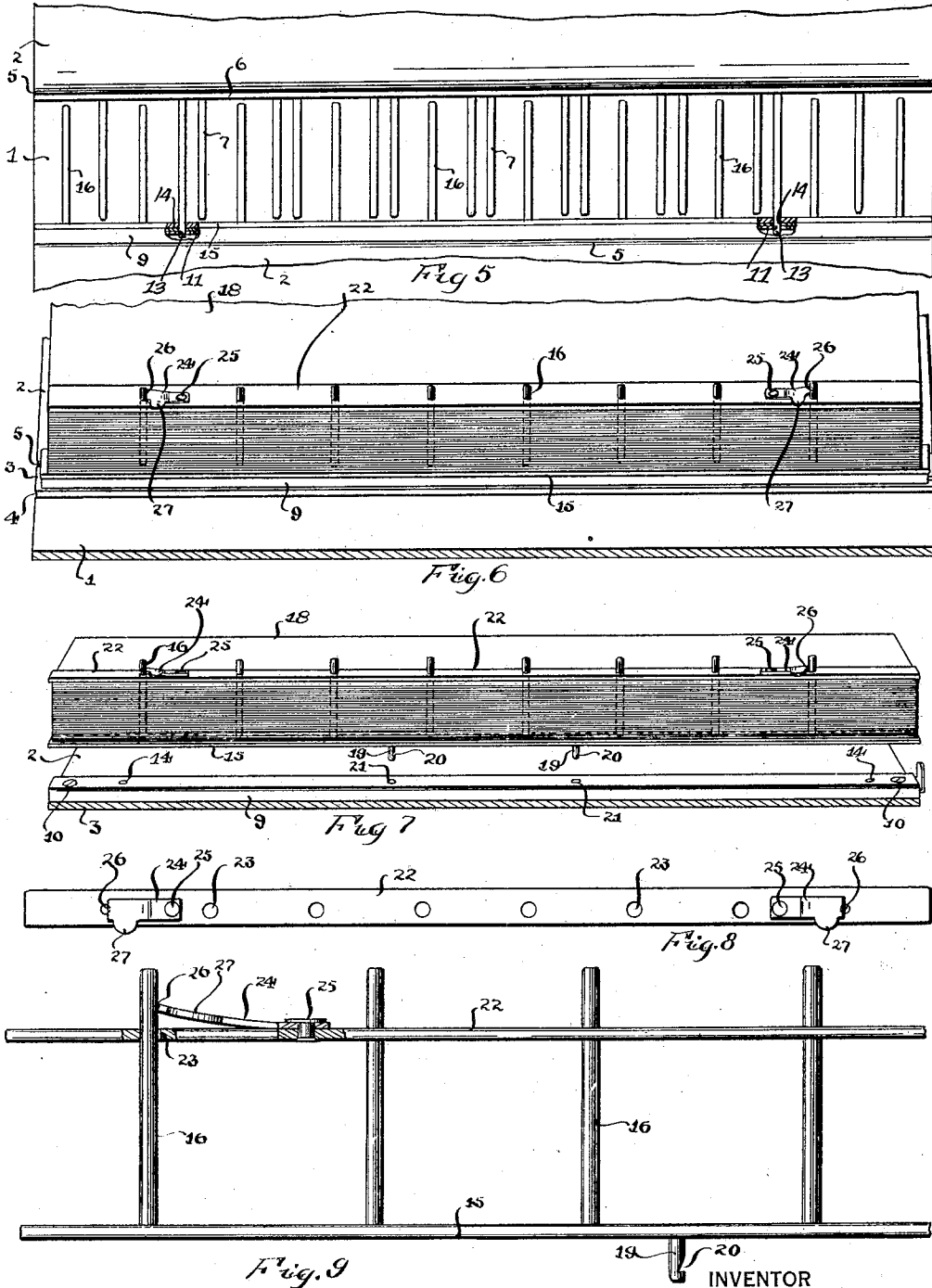
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LOOSE LEAF BINDER

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INVENTOR
William F. Warner Jr.
BY *H. T. Simms*
his ATTORNEY

UNITED STATES PATENT OFFICE

WILLIAM F. WARNER, JR., OF ROCHESTER, NEW YORK, ASSIGNOR TO HENRY CONOLLY COMPANY, INC., OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK

LOOSE-LEAF BINDER

Application filed September 29, 1927. Serial No. 222,692.

The present invention relates to loose leaf binders and more particularly to the type in which the binder comprises two binding members, one of which has impaling projections thereon and the other of which has locking means for interlocking with the impaling projections on the first-mentioned member. An object of this invention is to so connect the binding members to the covers that the binding members may be readily removed for the purpose of repair or the substitution of others. Another object of the invention is to provide a leaf-retaining bar which may cooperate with a transfer member having impaling projections and associated with a loose leaf binder so that the transfer member may be used as a temporary binder as well as for transferring leaves in the binder.

To these and other ends, the invention consists of certain parts and combinations of parts all of which will be hereinafter described: the novel features being pointed out in the appended claim.

In the drawings:

Fig. 1 is a perspective view of the loose leaf binder showing the binder members separated;

Fig. 2 is a section on the line 2-2, Fig. 1;

Fig. 3 is a view similar to Fig. 1 showing the transfer member interlocked with one of the binding members and leaves positioned on the other binding member;

Fig. 4 is a fragmentary longitudinal section through the left hand binder member of Fig. 2;

Fig. 5 is a plan view showing the binder with the covers open and the two binding members interlocked and the transfer member in position;

Fig. 6 is a fragmentary sectional view showing the transfer member held to one of the binding members with the leaves held on said transfer member by the retaining bar;

Fig. 7 is a similar view showing the transfer member disconnected from the binding member;

Fig. 8 is a plan view of the retaining bar; and

Fig. 9 is a fragmentary side view with the parts in section showing the transfer mem-

ber with the retaining bar arranged thereon.

In the illustrated embodiment of this invention 1 indicates the back piece, 2 the cover leaves and 3 supporting bars for the binding members; the supporting bars being hinged at 4 to the back piece 1 and hinged at 5 to the cover members 2.

Prior to this invention, it has been customary, in this type of binder, to mount the bars of the binding members in the positions occupied by the supporting bars 3. The result is that when the binder becomes broken, in either of its binding members, the binder must be thrown away or an expensive repair bill is involved. According to this invention the binding members may be readily repaired or replaced by others, due to the fact that the binding members are detachably arranged on the inner faces of the supporting bars 3. To this end, the binding member 6 which is in the form of a bar or strip with spaced impaling projections 7 extending laterally from one side thereof is, by screws 8 passed through the bar 6, anchored to a supporting bar 3 and held to such supporting bar. The other binding member or bar 9 is in the form of a channel member, the open side of which lies on the inner side of the bar 3 and is held thereto by screws 10. This binding member 8 has the locking means arranged therein in the form of a usual sliding locking bar 11 having a finger piece at one end through which it is moved in one direction against the action of a helical spring 12 also contained within the binding member 9. This locking bar has shoulders thereon as usual for engagement with shoulders 13 formed on some of the impaling projections 7, as shown on two of the same such shouldered projections being longer than the other projections and extending through openings 14 in the channel bar or housing 9 to be engaged by the locking bar 11. With this arrangement either or both of the binding members may be readily disconnected from the supporting bars 3 for the purpose of repair or for replacement by others.

As it is customary in this type of binder, there may be employed a transfer member comprising, in this instance, a bar 15 with im-

5 paling posts or projections 16 extending therefrom, these impaling posts being adapted to pass into any one of the openings 17 in the leaves 18 between the openings through which the impaling projections 7 pass. This transfer member also has projecting from the opposite side of the bar 15 short posts 19 with shoulders 20 thereon. These short posts are adapted to pass through the openings 21 in the housing 9 to be engaged by locking shoulders on the locking bar 11, as is well-known in this art. Openings 14^a are provided in the transfer member 15 which aline with the openings 14 so that the shouldered posts 7 may pass through to engage the clutching means.

15 Another feature of this invention is to associate with the transfer member of a binder of this type, a means for retaining the leaves on the transfer member so that the transfer member may act as a temporary binder. This means, in this instance, consists of a retaining bar 22 having openings 23 through which the posts 16 of the transfer member may pass. Adjacent the ends of the retaining bar are spring clutches 24 each in the form of a leaf spring riveted at one end at 25 to the retaining bar 22 and having its free end 26 extending slightly over one of the openings 23 so that when a post 16 is passed through the opening, the spring clutch will be displaced and will enter into clutching engagement with a portion of the post projecting through the opening. A lip 27 projects from one side of the clutch beyond a side of the retaining bar and may be manipulated to break the engagement between the clutch and the post in order to permit the withdrawal of the retaining bar from the transfer member. With this arrangement the transfer member with the retaining bar may be used as a temporary binding means for those leaves which have been removed from the binding projections 7. The retaining member 22 may be arranged in a pocket 28 formed on the inner face of one of the covers 2.

25 From the foregoing it will be seen that there has been provided, in a loose leaf binder of the type having the binding member provided with impaling projections and the binding member having locking means for interlocking with impaling projections on the first-mentioned member, means for securing the binding members to the cover so that the members may be readily removed or replaced by others. There has also been provided in connection with a transfer member in a binder of the class described, a retaining member which permits the transfer member to act as a temporary binder.

30 What I claim as my invention and desire to secure by Letters Patent is:

35 In a loose leaf binder, the combination with a binding member having impaling projections extending therefrom, a binding member having locking means for interlocking with

the impaling projections on the first-named binding member, and a transfer member having impaling projections, and having openings through which the impaling projections on the first-named binding member may pass in order to interlock with the second-named binding member, of a retaining bar for holding leaves on the transfer member having openings to receive the impaling projections of the transfer member, and clutching means carried by said retaining bar for entering into clutching relation with impaling projections on the transfer member.

WILLIAM F. WARNER, JR.

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