Feb. 6, 1934. S. B. FREIBERG 1,945,970

LOOSE LEAF BINDER

Filed March 1, 1930

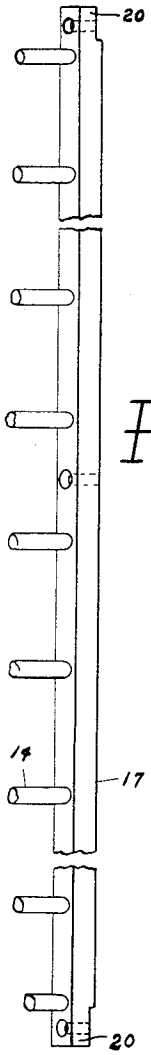


Fig. 3.

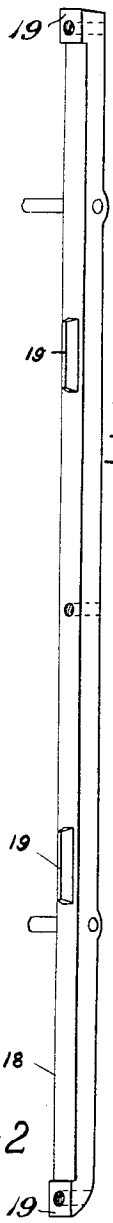


Fig. 4.

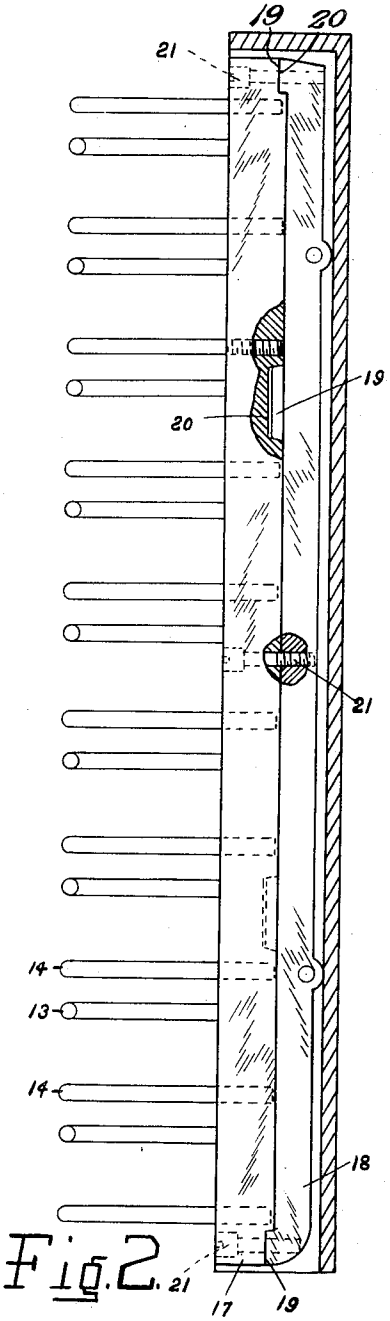


Fig. 2.

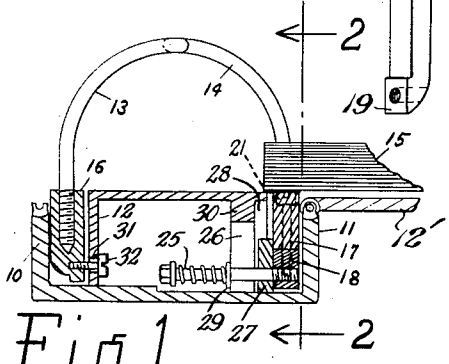


Fig. 1.

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LOOSE LEAF BINDER

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5 Claims. (Cl. 129—9)

This invention relates to loose leaf filing devices of the character shown in Freiberg Patent No. 1,919,784, dated July 25, 1933, and filed August 14, 1929.

An object of the invention is to provide simple means whereby all or a substantial part of the record or loose leaf sheets may be handled as a unit in removing and inserting such sheets in relation to the binder.

Another object is to facilitate proper registry of sheets when inserted as a unit in such binder.

These and other objects are attained by the means described herein and disclosed in the accompanying drawing, in which:

Fig. 1 is a cross sectional view showing a binder embodying the invention.

Fig. 2 is a sectional view on line 2—2 of Fig. 1.

Fig. 3 is a fragmental perspective view of a detachable prong bar forming a detail of the invention.

Fig. 4 is a perspective view of a support bar or carrier bar forming a detail of the invention.

The binder shown herein comprises a U-shaped main back member to the arms 10 and 11 of which are hinged back members such as 12'. Between the arms 10 and 11 are disposed opposed sets of prongs 13 and 14. The prongs receive record sheets 15 that are shiftable upon the prongs. The set of prongs 13 is carried by a support or prong bar 16. The prong bar 16 may be shiftable as shown in said Freiberg application. The set of prongs 14 is carried by a prong bar 17. The prong bar 17 is detachably secured to support bar 18. In order to facilitate proper positioning of the prong bar 17 on support bar 18, said bars are provided with registering and cooperating lugs and recesses 19 and 20, respectively. Suitable securing means such as screws 21 are used for securing the bars upon one another. The sockets provided in the support bar 18 for the threaded ends of screws 21 are preferably screw-threaded, thereby obviating the use of nuts for securing the screws or bolts.

The structure disclosed herein is similar to that disclosed in the said Freiberg application, in that the support bar 18 and prong bar 17 are movable as a unit for effecting vertical shifting of prongs 14 relative to the prongs 13.

Preferably, though not necessarily, the bars 17, 18, and 27 together with bolt 25 are movable vertically as a unit, the bar 27 sliding in a passageway 28 which is provided between arm member 11 and a wall 30 which is disposed in spaced parallelism with said arm. Said wall 30 is provided with one or more substantially vertical slots 26 through which extends the bolt 25, the slot 26 being no wider than the diameter of bolt 25 so that the washer 29 may not pass therethrough. The bolt 25 screw threadedly engages the bar 18, as shown, after passing through the member 27. The bar 27 moves bodily with screw 25 and bar 18.

The bar 16 may be slidably mounted for movement lengthwise of the member 10 within a way or channel formed by the vertical wall 12 which is disposed in spaced parallelism with the arm 10. The bar 16 may be maintained within the space between members 10 and 12 by means of a screw 32 which passes through an elongated slot 31 in part 12 and threadedly engages the bar 16, as shown. The elongated opening 31 extends longitudinally of the wall 12. The bar 16 may be shifted manually or otherwise. The interior member 12—30 may be fixed relative to the binder back member 10—11 in any suitable manner, such as by the use of screws, rivets, and adhesive, or the like, not shown.

When it is desired to transfer all or a substantial part of the sheets 15 from one binder to another, such transfer may be expeditiously accomplished by withdrawing the screws or bolts 21 and then detaching the prong bar 17 and its associated prongs 14, together with the sheets impaled on prongs 14. After transfer of the sheets 15 from prongs 14 to similar prongs in another binder, the prong bar is remounted on support bar 18. By providing a system of binders having interchangeable prong bars such as 17, it is possible to readily transfer records, as a group, from one binder to another.

The prong bar and its cooperating support bar are preferably molded of celluloid, condensation products from formaldehyde and phenol, including fabric impregnated therewith, resinous and similar compositions, including laminations of fabric, and fibrous materials, etc.

What is claimed is:

1. In a binder the combination with a rigid unitary back member and a cover leaf extending from the back, of a pair of overlapping opposed sheet supporting arched prongs cooperatively related for together substantially spanning the back to provide a means whereby sheets may be regularly shifted relative the cover leaf from one of the prongs to the other, a bar supported by the binder back and having secured thereto one prong of the pair of cooperative opposed prongs, the associated prong and bar of themselves providing a transferring means for binder sheets, and means for mounting the bar upon a part of

the binder back for detachment of the bar in a direction perpendicularly of the binder back.

2. In a binder the combination with a rigid unitary back member and a cover leaf extending from the back, of a pair of opposed curved sheet supporting prongs cooperatively related for together substantialy spanning the back to provide a means whereby sheets may be regularly shifted relative the cover leaf from one of the prongs to the other, a bar normally stationarily supported by the binder back and having secured thereto one prong of the pair of cooperative opposed prongs, the associated prong and bar of themselves providing a transferring means for binder sheets, and means mounting the bar upon a part of the binder back for detachment of the bar in a direction perpendicularly of the binder back.

3. In a binder the combination with a rigid unitary back member and a cover leaf extending from the back, the cover leaf being attached to the back by means of a single hinge, of a pair of opposed arched sheet supporting prongs cooperatively related for together substantially spanning the back to provide a means whereby sheets may be regularly shifted relative the cover leaf from one of the prongs to the other, a bar normally stationarily supported by the binder back and having secured thereto one prong of the pair of cooperative opposed prongs, the associated prong and bar of themselves providing a transferring means for binder sheets, means mounting the bar upon a part of the binder back for detachment of the bar in a direction perpendicularly of the binder back, and cooperative means on the bar and back for aligning the bar upon the binder back.

4. In a binder for sheets the combination with a rigid unitary back member, of a pair of opposed sheet supporting prongs at least one of which is arched over to substantially meet the other, whereby to substantially span the back member to provide means whereby sheets may be regularly shifted from one of the prongs to the other, a prong bar normally stationarily supported relative to the back member and having secured thereto one prong of the pair of cooperative opposed prongs, the associated prong and bar of themselves providing a transfer means for binder sheets, a support bar for the prong bar and means for mounting the support bar for limited movement relative to the back member, and means for removably securing the prong bar to the support bar for detachment of the prong bar in a direction substantially perpendicularly of the back member.

5. In a binder for sheets the combination with a rigid unitary back member, of a pair of opposed sheet supporting prongs at least one of which is arched over to substantially meet the other, whereby to substantially span the back member to provide means whereby sheets may be regularly shifted from one of the prongs to the other, a prong bar normally stationarily supported relative to the back member and having secured thereto one prong of the pair of cooperative opposed prongs, the associated prong and bar of themselves providing a transfer means for binder sheets, a support bar for the prong bar and means for mounting the support bar upon the back member, and means for removably securing the prong bar to the support bar for detachment of the prong bar in a direction substantially perpendicularly of the back member.

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