Dec. 12, 1944. A. M. MARTIN 2,364,640

RECORD VISUALIZING DEVICE

Filed May 25, 1942 2 Sheets-Sheet 1

Fig. 1

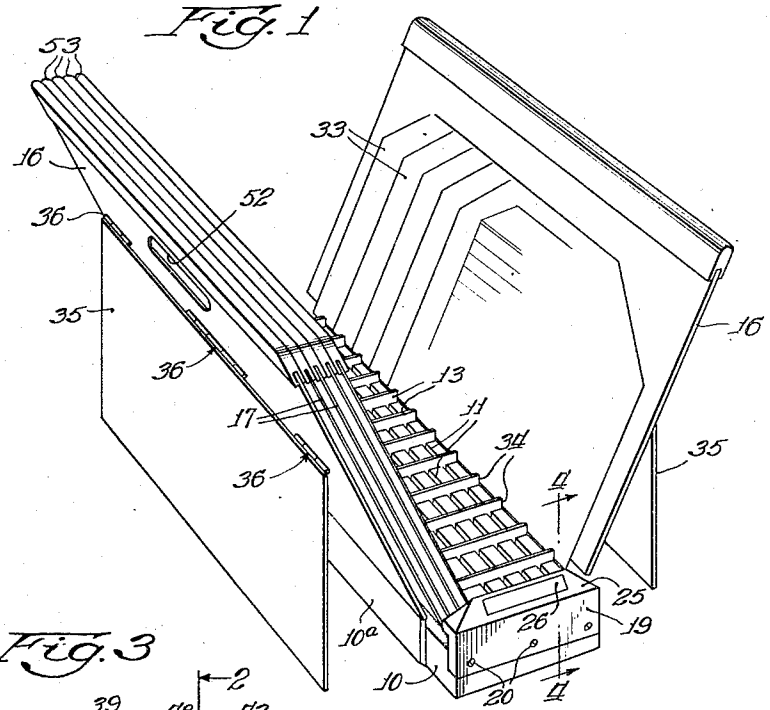


Fig. 3

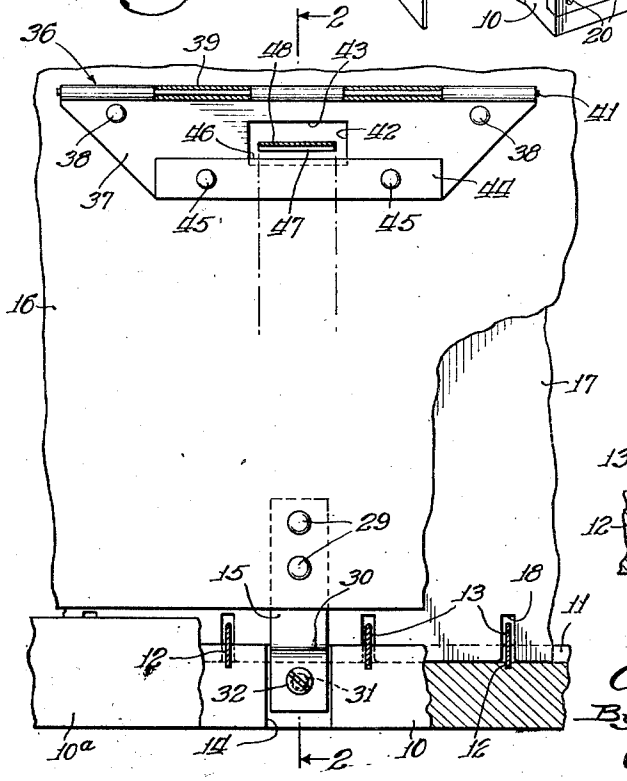
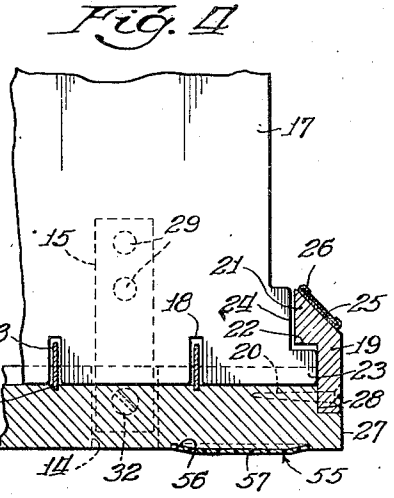


Fig. 4



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Fig. 2

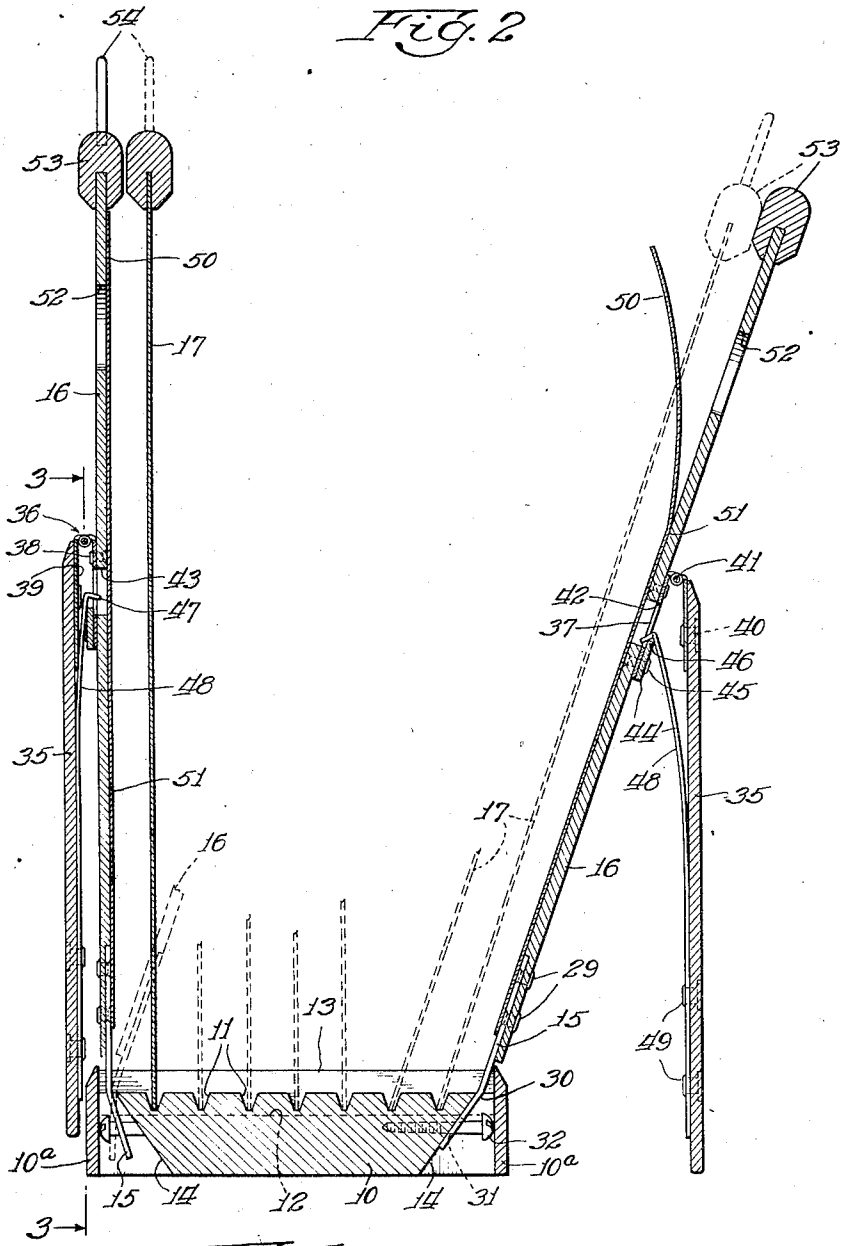
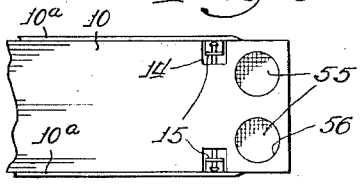


Fig. 5



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RECORD VISUALIZING DEVICE

Alfred M. Martin, Park Ridge, Ill.

Application May 25, 1942, Serial No. 444,378

17 Claims. (Cl. 129—16)

This invention relates to record visualizing devices used in offices and the like for accounting, billing, and other informative data to be kept on looseleaves or cards, all which I have referred to generally as leaves, and in which the leaves may have an individual place in echelon for visibility and are at the same time readily removable and replaceable for purposes, for example, of machine posting.

In my Patent No. 1,469,798, I disclosed a filing device of this class in which a plurality of series of loose leaves might be so arranged in echelon on transversely running guides or rails, the leaves being notched along the bottom for engagement with the rails, and also plate-like partitions against which the respective series of leaves might lean, the partitions having thickened side edges providing spacing means between the partitions to insure room for the leaves, and the partitions and leaves being swingable from lateral tilting positions across the device so as to permit opening the device somewhat like a book but with the leaves upstanding at all times and resting on the rails by gravity.

In the device of my said patent a base therefor was employed which extended permanently as wide as the upper part of the device when the partitions were swung in opposite directions to open the device to display a given series of leaves, so that the device would not capsize at such times. In my Patent No. 2,326,241 dated August 10, 1943, I have disclosed a device of this class in which the covers carry an extensible auxiliary support or prop which, when the cover is inclined outwardly, extends itself by the action of gravity to prevent such capsizing, the prop being retractable at other times so that the device may be closed like a book with the base extending no wider than the device at its upper part when closed and so that a plurality of such devices or files may be housed together in a group on a rack or other standard in closely adjacent parallel positions to conserve space when not in use.

In the devices of both my said patents the partitions were free to move transversely of the base except as limited by contact one with the other and in the device of my Patent No. 2,326,241 the auxiliary support or prop is manipulatable to place it in retracted position.

In the present invention, I have disclosed an improved and simplified device of this type in which means are provided for yieldingly urging the auxiliary support to an extended position at all times while also limiting positively the degree of extension, said means thus insuring that the auxiliary support shall be in effective position without dependence on the force of gravity when one of the devices or files is withdrawn from a group in contact say on a table or rack and thus insuring the individual stability of the device. Also when the device is returned to the rack the auxiliary supports may merely be pressed inwardly without other manipulation to bring them substantially into close proximity with the vertical projection of the base so as to minimize space.

In the present invention, moreover, the partitions may engage means such as grooves in the base so as to positively limit the movement of their lower edges transversely of the base and thus make possible the use of a lighter material for the partitions while guarding against warping thereof and consequent accidental displacement of the leaves, which is particularly important when the device is relatively long in proportion to its width as is common in practice.

A further object of the present invention is to provide a base member which may be constructed of wood to conserve metal and in which the partition members do not hook under the rails upon which the leaves are mounted, thus permitting the rails to be sunk into the wood of the base and to be themselves constructed of light non-metallic material while being maintained rigid by said countersinking and forming with the grooves and transverse rails somewhat of a grid-like structure.

These and other objects and advantages will be apparent from the following description, taken together with the accompanying drawings, in which—

Figure 1 is a perspective view showing my improved device in open position displaying a series of leaves in working arrangement, some of the partitions being here omitted for clearness of description;

Figure 2 is an enlarged cross-sectional view of the device and being a section taken on the line 2—2 of Fig. 3, one of the auxiliary cover supports being shown retracted and the other extended;

Figure 3 is a fragmentary elevational view partly in section, taken on the plane 3—3 of Fig. 2;

Figure 4 is a fragmentary enlarged longitudinal section taken on the plane 4—4 of Fig. 1; and

Figure 5 is a reduced partial bottom view of the base.

Referring in detail to the illustrative construction shown in the drawings, the base 10 is conveniently constructed of wood and is an integral member running throughout the longitudinal dimension of the device, being grooved in this di-

rection as at 11. The grooves 11 are spaced apart in parallel relation and are desirably somewhat V-shape in cross-section as best shown in Fig. 2 for a purpose later more particularly pointed out. Transversely, the base 10 is kerfed as at 12 to receive the transverse rails 13. The kerfs 12 advantageously extend somewhat deeper than the grooves 11 so as to permit the rails 13 to be made in this instance of a light fibreboard material while still being maintained rigid by being countersunk into the base 10 as just referred to. Along its longitudinal outer margins the base 10 is here shown slotted as at 14, the slots 14 being arranged in pairs and there being in this instance three such pairs, one pair at each end and a pair in the middle of the device, for the reception of pivot tongue members 15 which carry the cover members 16.

Intermediate of the cover members 16 are the partition members 17, each of which may have its lower edge received in a groove 11, the partitions having cut-outs 18 in their lower edges to permit them to straddle the rails 13 while resting in the grooves. The cut-outs are desirably narrow as shown so as not materially to weaken the lower edges of the partitions. Since in this instance the rails 13 are not spaced above the base and the lower edges of the partitions do not interlock under the rails 13, I have provided retaining means for the partitions at each end of the base 10 in the form of a removable keeper block 19, which may also be of wood and may be secured to the base 10 as by screws 20. The keeper block 19 has an overhanging part 21 providing an overhanging shoulder 22 which overhangs all of the grooves 11 and the partitions 17 have longitudinally extended portions 23 which are disposed under the shoulder 22 to prevent accidental displacement of the partitions.

As best shown in Fig. 4 the longitudinally extending portions 23 of the partitions are desirably shorter in height than the distance between the bottoms of the grooves 11 and the shoulder 22 so as to prevent binding of the longitudinal extensions 23 under the shoulder 22. Also the longitudinal dimension of the keeper block shoulder portion 21 is slightly less than the longitudinal dimension of the partition extension 23, so as to provide a clearance at 24 which prevents wear on the partition at this point. Each partition is desirably stepped at each lower corner, as best shown in Fig. 4 to provide a plurality of shoulders thereat.

The keeper blocks may have their upper outer edges inclined as at 25 and one of these inclined faces 25 may conveniently carry a label holder 26 to provide for designating the contents of the device. The vertical end face 27 of the base is preferably cut back as at 28 to receive the retaining block 19 flush with the end of the base when in attached position as shown in Fig. 4. It will be understood that the partitions may be removed if desired by loosening the screws 20 and removing one or both of the keeper blocks 19. By making both keeper blocks removable, I have found it possible to narrow the cut-outs 18 in the lower edges of the partitions to a minimum, the partitions being then lifted out of the grooves 11 and off the rails 13 by a straight vertical movement without canting.

Reverting to the pivot members 15 for the covers, these are here shown in the form of short metal tongues, which are riveted as at 29 at one end to the covers 16 and depend therebelow in an angled direction as at 30 where they are perforated as at 31 to have loosely passed therethrough screws 32. A tongue 15 and with it its cover 16 may thus have play on the base limited in one direction by the head of the screw 32 as shown at the left hand side of Fig. 2 and in the other direction by the wall of the slot 14 as indicated at the righthand side of Fig. 2, this wall being desirably inclined as shown in the drawings to enhance the play referred to, the slots 14 being thus of somewhat triangular formation. Wood finishing strips 10a, running lengthwise along the base 10 at each side, close the lateral sides of the slots 14 and conceal the screws 32 as well as protecting the ends of the rails 13. These finishing strips also serve as additional stops for the covers 16 in their outermost positions and as stops for the auxiliary cover supports, later described, in their innermost position.

It will be understood that both the covers 16 and the partitions 17 are intended to be swung from lateral tilting positions across the base 10 in the slots 14 and grooves 11 respectively for the purpose of opening the device somewhat like a book to display a series of record leaves 33 as shown in Fig. 1, one of which such series may be inserted adjacent each partition, the leaves 33 having their lower edges notched as at 34 in a well known manner to rest on the rails 13 and to permit of disposing each series of leaves in echelon or imbricated relationship, rendering visible a margin of each leaf in the series for displaying a name or other individual data thereon. During such swinging of the covers and partitions to display various series of leaves as selectively desired, it will be understood that the leaves swing therewith and as here constructed and arranged the distance between the upper edges of the rails 13 upon which the leaves rest and the bottoms of the grooves 11 in which the partitions rotate is minimized so as to reduce the arc of movement of the partitions at this point and consequently reduce the travel of the lower edges of the leaves, thus preventing excessive wear thereon during such swinging, the lower edges of the leaves being free of the grooves 11.

To prevent capsizing of the device when opened as shown in Fig. 1, and to enhance its stability in this position, I have provided the auxiliary supports 35, one of which is carried by each of the covers 16, and which when extended as shown in Fig. 1 and at the right-hand side of Fig. 2, serve somewhat as self-acting props as broadly disclosed and claimed in my Patent No. 2,326,241. Each of the auxiliary supports 35 is here shown hinged to its cover as at 36, the cover having a hinge plate 37 riveted thereto as at 38, and the auxiliary support having a hinge plate 39 riveted thereto as at 40, a hinge rod 41 passing through aligned intercalated ears on these hinge parts respectively. In this instance the auxiliary supports 35 are substantially the same length longitudinally as the covers 16, thus enhancing their effectiveness. There may be several of the hinges 36 just described spaced longitudinally of the device, only the middle one being here shown in detail. As shown in the drawings (see Fig. 2, left-hand side) when the cover 16 is vertically upright, the auxiliary support terminates at its lower end above the bottom of the base 10 so that (see Fig. 2, right-hand side) the auxiliary support is substantially vertical when the cover is inclined outwardly.

The middle hinge 36 serves in this instance an additional function as next described. The plate 37 is apertured as at 42 as is also the cover 16

just back thereof at 43 and the lower margin of the aperture 42 is lapped by a metal bar 44 secured thereto as by rivets 45 to provide a locking lip 46 with which is engageable the bent end 47 of a leaf spring 48 secured to the auxiliary support 35 as by rivets 49 adjacent the lower end of the leaf spring and auxiliary support respectively. The leaf spring 48 is normally bowed so that it urges the cover 16 and auxiliary support 35 yieldingly apart as shown at the right-hand side of Fig. 2. At this time also the bent end 47 acts as a hook and by engaging the locking lip 46 limits the movement apart of the cover and auxiliary support. When desired the auxiliary support may be pressed toward the cover as shown at the left-hand side of Fig. 2, at which time the spring is flattened against its inherent resilience and the hook 47 rides in the aperture 42—43, but with the spring 48 under tension at all times so that immediately upon being released it moves the cover and auxiliary support again limitingly apart as shown. The hook 47 normally automatically engages the locking lip 46 when the auxiliary support is extended, but may be manually released therefrom when desired by manually holding hook 47 and locking lip 46 apart while at the same time extending the auxiliary support on its hinge 36. This may be done by inserting one's fingers under the auxiliary support and pressing the spring during this movement. It will be understood, however, that it would not normally be desired to release the spring.

Thus the auxiliary supports 35, so provided with yielding means constantly urging them outwardly but also limiting their movement, accommodate themselves in a markedly efficient manner to use of the devices either in a group in close contact one with the other as shown in Fig. 1, of my Patent No. 2,326,241 or singly as shown in Fig. 2 of that patent.

The cover members 16, the partitions 17, and the auxiliary supports 35 may be advantageously formed of a plate-like fibreboard material, the covers and auxiliary supports being desirably of somewhat heavier material than the partitions. On the inner faces of the cover members 16 I have shown a sub-cover 50 of still lighter paper-like material, which may be fastened as by being glued to the lower part of the cover as at 51 but may be free therefrom as at the upper part of the device. Adjacent this upper part, the covers may advantageously have hand-holes 52 into which the fingers of the user may be inserted for the purposes of lifting the device when desired, the sub-covers being readily displaced as shown at the right-hand side of Fig. 2 to permit entry of the fingers but by their inherent resiliency returning to position as shown at the left-hand side of Fig. 2, to close the holes 52 when the fingers are removed.

The upper edges of the covers and partitions may be advantageously widened as by wood cap strips 53 running throughout their length and which serve both to stiffen and reinforce the covers and partitions and also to space the latter apart to allow space for the leaves 33 without crowding. The cap strips 53 may also carry removable index tabs as indicated at 54 (Fig. 2) in the usual manner.

So constructed and arranged, the partition members 17 are retained at their lower edges in their respective positions as determined by the grooves 11, thus avoiding jamming or crowding of the partitions or of the leaves inserted therebetween, in addition to the fact that this construction guards against warping of the partitions. In this swinging movement of the partitions from side to side, with their lower edges retained by the grooves 11, the partitions are advantageously free of the transverse rails 13. The V-shape of the grooves accommodates the swinging movement of the partitions.

Since the base 10 is here shown constructed of wood, it will not scratch the ordinary desk when used thereon, but to further prevent any scratching the underface of the base may carry rest pads 55 which may be of a fabric material such as corduroy, velvet or the like cut in disc form and having their peripheries countersunk into annular recesses as at 56 (Figs. 4 and 5). Thus the central part of the pad as at 57 (Fig. 4) is offset downwardly below the lower surface of the base 10, preventing direct contact of the base with a table top or the like, and providing friction resisting slipping.

It is to be understood that the invention is not intended to be limited to details of construction here shown for illustrative purposes, as modifications may suggest themselves to those skilled in the art and having the benefit of the present disclosure. Furthermore, it is not intended that it be understood that all features of the present disclosure must be used conjointly, since it will be apparent to workers in the art that various combinations or subcombinations may at times be advantageously employed.

Having described my invention, I claim:

1. In a device of the class described, a base member therefor having parallel grooves cut therein running lengthwise thereof receiving the lower edges of partition members thereof and slots in the outer margin receiving cover member pivot tongues therein whereby the partition and covers may swing from lateral tilting positions to upright positions in said grooves and slots respectively, a pair of cover members carried by the pivot tongues, each of said cover members comprising a rigid outer cover part and a flexible sub-cover part, said parts being intimately secured together adjacent the lower portions thereof and being free adjacent their upper portions, and a hand-hole in the outer cover part adjacent the upper part thereof whereby the sub-cover normally closes the hand-hole but is readily displaced to permit entry of the fingers thereinto for purposes of lifting the device.

2. In a device of the class described, a base member therefor having slots in the outer margin receiving cover member pivot tongues therein whereby the covers may swing from lateral tilting positions to upright positions in said slots, and a pair of cover members carried by the pivot tongues, each said pivot tongue being rigidly secured to the cover at one end and having a depending lower end, one of the slots in the base receiving said depending lower end, a perforation in the said lower end, and a headed member passing loosely through the perforation and into the base whereby the cover may swing laterally of the base limited in one direction by the head of the headed member and in the other direction by the wall of the slot.

3. In a structure of the class described, the combination with a base for mounting record leaves thereon, of a pair of cover members carried by the base, each of said cover members comprising a rigid outer cover part and a flexible sub-cover part, said parts being secured together adjacent the lower portions thereof and being free adjacent their upper portions, and a hand-

hole in the outer cover part adjacent the upper part thereof whereby the sub-cover normally closes the hand-hole but is readily displaced to permit entry of the fingers thereinto for purposes of lifting the device.

4. In a device of the class described, a pair of cover members, partition members between the cover members, pivot tongues on the covers, a base member therefor having grooves each receiving the lower edge of a partition member thereof and slots in the longitudinal outer margin receiving the cover pivot tongues therein whereby the partitions and covers may swing from lateral tilting positions to upright positions in said grooves and slots respectively, wherein there is a removable keeper block at one end of the base having a shoulder portion overhanging all of the grooves, and the partitions having longitudinal projections received under said shoulder portion to retain the partitions in the grooves and wherein the keeper block carries a label holder, and means at the other end of the base for retaining the partitions in the grooves.

5. In a structure of the class described, the combination with a base for supporting record sheets in echelon thereon, of a pair of cover members carried by the base to swing from lateral tilting positions to upright positions, a prop support carried by each cover, and resilient means urging the supports outwardly whereby they are extended in normal position to prevent capsizing of the device but may be pressed inwardly when desired, wherein said means comprises a normally bowed leaf spring between the cover and support permanently fastened to one thereof and releasably hooked onto the other, wherein a locking lip is carried by the said part onto which the leaf spring hooks and the free end of the spring is bent to engage said locking lip.

6. In a device of the class described, a pair of cover members, a base member therefor having triangular slots in the outer margin for receiving cover pivot tongues therein, said tongues having their lower ends bent to conform to a diagonal wall of said slots, means pivotally retaining the tongues in said slots whereby the covers may swing from lateral tilting positions to upright positions in said slots, and a finishing strip along each longitudinal edge of the base, said finishing strips closing said slots and assisting to retain the cover members therein.

7. In a structure of the class described, a base, a pair of cover members carried by the base to swing from lateral tilting positions to upright position, an auxiliary support carried by each cover, a metal spring between each cover and its auxiliary support urging the auxiliary support outwardly whereby it is extended in normal position to prevent capsizing of the device but may be pressed inwardly when desired to conserve space, and interengaging means carried by the covers and the springs limiting the outward movements of the auxiliary supports with respect to the covers.

8. In a structure of the class described, a base, a pair of cover members carried by the base to swing from lateral tilting positions to upright position, an auxiliary support carried by each cover, a leaf spring between each cover and its auxiliary support urging the auxiliary support outwardly whereby it is extended in normal position to prevent capsizing of the device by may be pressed inwardly when desired to conserve space, and releasable interengaging means carried by the covers and the leaf springs limiting the outward movements of the auxiliary supports with respect to the covers.

9. In a device of the class described, the combination with a base for supporting record sheets in echelon thereon, of a cover member carried by the base to swing from lateral tilting positions to upright positions, a prop support carried by the cover, a leaf spring secured at its lower end to the prop support and normally bent inwardly at its upper end toward the cover, the spring being further bent at its top to form a hook, and a locking lip carried by the cover engaging the hook whereby the prop support is extended in normal position from the cover a limited distance to prevent capsizing of the device but may be pressed inwardly to lie against the cover when desired.

10. In a device of the class described, the combination with a base for supporting record sheets in echelon thereon, of a cover member carried by the base to swing from lateral tilting positions to upright positions, a prop support carried by the cover, a leaf spring riveted at its lower end to the prop support and normally bent inwardly at its upper end toward the cover, the spring being further bent at its top to form a hook, and a locking lip carried by the cover engaging the hook whereby the prop support is extended in normal position from the cover a limited distance to prevent capsizing of the device but may be pressed inwardly to lie against the cover when desired, wherein the locking lip is formed by securing a plate to the face of the cover and cutting the cover away behind said plate.

11. In a device of the class described for supporting, in echelon, a plurality of series of record leaves having notched lower edges, the combination, with a pair of cover members, of an elongate base member therefor of non-metallic material formed with transverse kerfs in parallel arrangement therealong, rail members having their entire lower edges snugly fitted into said kerfs and their upper edges upstanding from said base for receiving the notched edges of the leaves thereon, slots spaced along the outer longitudinal margins of the base, screws threaded into the said slots, pivot tongues for the covers loosely engaging said screws, and a finishing strip along each longitudinal edge of the base closing said kerfs and slots.

12. In a device of the class described for supporting in echelon a plurality of series of record leaves having notched lower edges, the combination, with a pair of cover members, of an elongate base member therefor formed with transverse kerfs in parallel arrangement therealong, rail members having their entire lower edges snugly fitted into said kerfs and their upper edges upstanding from said base for receiving the notched edges of the leaves thereon, slots spaced along the outer longitudinal margins of the base, fastener members secured in said slots, pivot tongues for the covers loosely engaging said fastener members and adapted to pivot thereon, and a finishing strip along each longitudinal edge of the base closing said kerfs and slots.

13. In a device of the class described, a pair of cover members, pivot tongues on the covers, a base member therefor having slots in its outer margins for receiving the cover pivot tongues therein, means carried by the base pivotally retaining the tongues in said slots whereby the covers may swing from lateral tilting positions to upright positions on the base, and a finishing strip secured along each longitudinal edge of the

base, said finishing strips closing said slots and assisting to retain the cover members therein.

14. In a device of the class described for supporting a plurality of series of record leaves, the combination of a base member therefor, an overhanging shoulder formation at each end of the base, and a plurality of partition members having longitudinally extended portions received under the overhanging shoulder formations, at least one of said overhanging shoulder formations being provided by a removable keeper block, a label holder carried by the keeper block, and means removably securing the block to the base.

15. In a device for supporting series of record leaves, the combination of an elongate base member therefor, a pair of covers pivoted on the said base to swing from lateral tilting positions to upright positions thereon, an auxiliary support of substantially rigid material for each cover, a metal spring between the cover and the auxiliary support urging the auxiliary support outwardly, whereby it is extended in normal positions but may be pressed inwardly when desired to conserve space, said spring being protected and normally concealed by said auxiliary support and having one end anchored to said cover and its other end anchored to the auxiliary support, and positive means limiting outward movement of the auxiliary supports with respect to the covers.

16. In a device of the class described for supporting in echelon a plurality of series of record leaves having notched lower edges, the combination of an elongate base member therefor formed with transverse kerfs in parallel longitudinally spaced apart arrangement therealong, rail members having their lower edges snugly fitted into said kerfs and their upper edges upstanding from said base for receiving the notched lower edges of the leaves thereon, a plurality of slots in the outer longitudinal margins of the base, a cover tongue pivoted in each slot, a cover secured to the tongues on a side of the base, and a finishing strip secured along each side of the base closing said slots on a side respectively and protecting the ends of said rail members, said finishing strip also providing a stop member for the cover when moved to tilting position.

17. In a device of the class described for supporting in echelon a plurality of series of record leaves having notched lower edges, the combination of an elongate base member therefor formed with transverse kerfs in parallel longitudinally spaced apart arrangement therealong, rail members having their lower edges snugly fitted into said kerfs and their upper edges upstanding from said base for receiving the notched lower edges of the leaves thereon, a plurality of slots in the outer longitudinal margins of the base, a cover tongue pivoted in each slot, a cover secured to the tongues on a side of the base, an auxiliary support for each cover, a spring between the cover and the support urging the support outwardly, and a finishing strip secured along each side of the base closing said slots on a side respectively and protecting the ends of said rail members, said finishing strip also providing a stop member for the auxiliary support when moved toward the cover and for the cover when moved to tilting position.

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