No. 790,831. PATENTED MAY 23, 1905.

A. J. HANSELL.

LEAF AND BINDING DEVICE.

APPLICATION FILED DEC. 19, 1903.

MODEL. 4 SHEETS—SHEET 1.

Fig. 1.

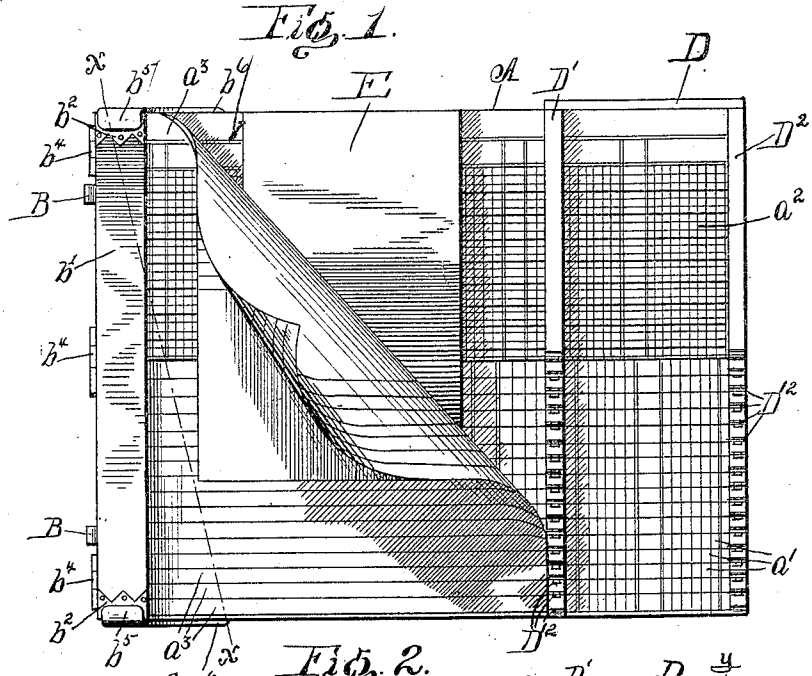
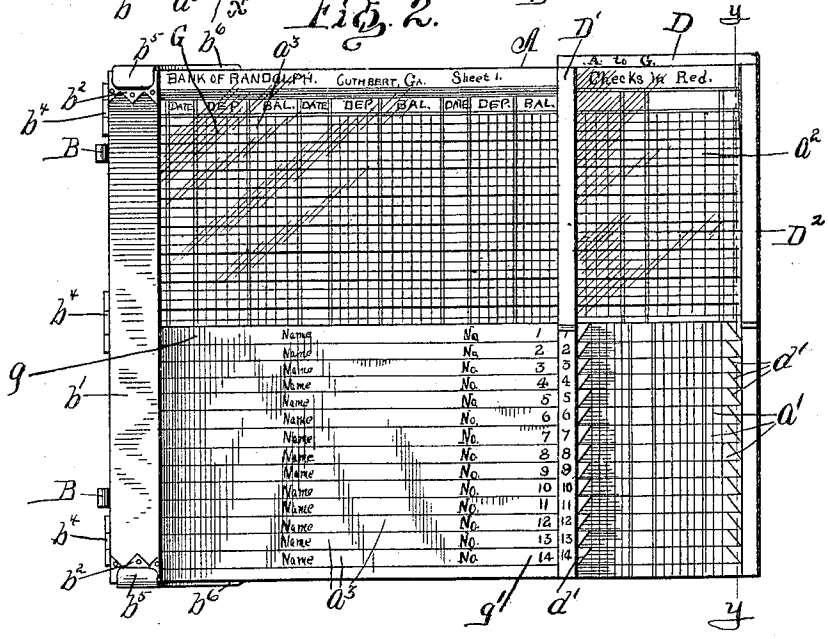


Fig. 2.



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his Attorney.

Witnesses

Eugene M. Sliney

Edmund H. Parry

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MODEL. 4 SHEETS—SHEET 2.

Fig. 3.

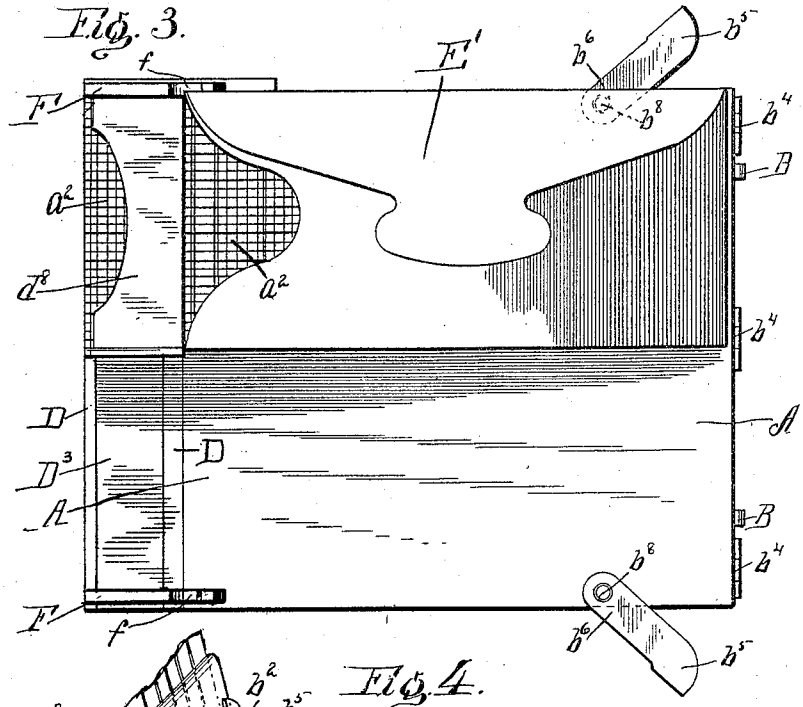
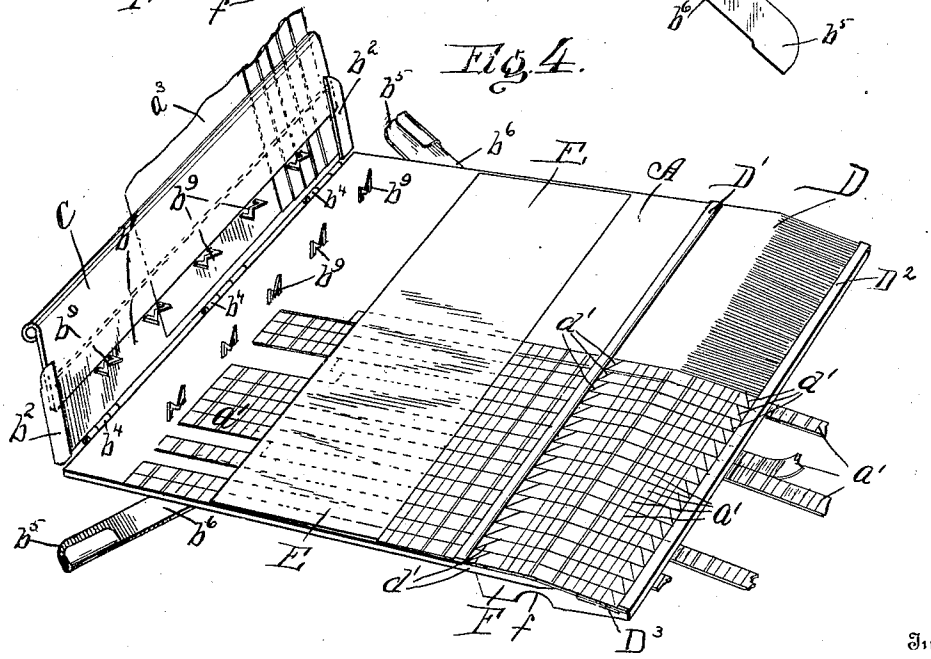


Fig. 4.



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MODEL. 4 SHEETS—SHEET 3.

Fig. 5.

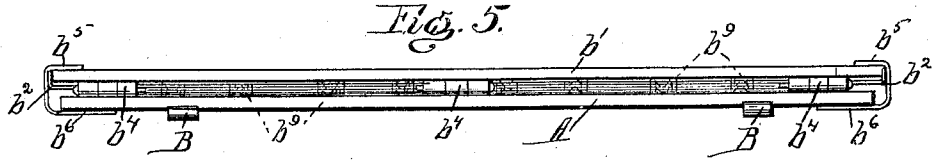


Fig. 6.

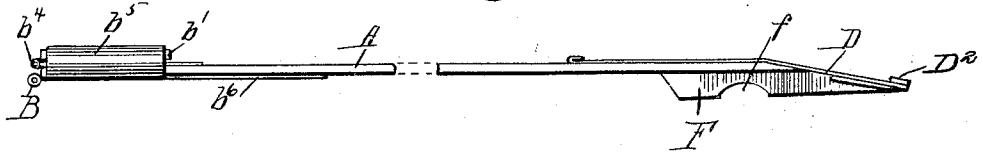


Fig. 7.

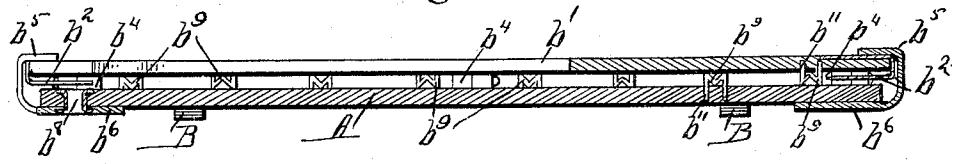


Fig. 8.

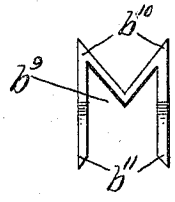
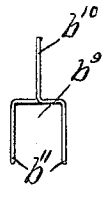


Fig. 9.



Witnesses

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MODEL. 4 SHEETS—SHEET 4.

Fig. 10.

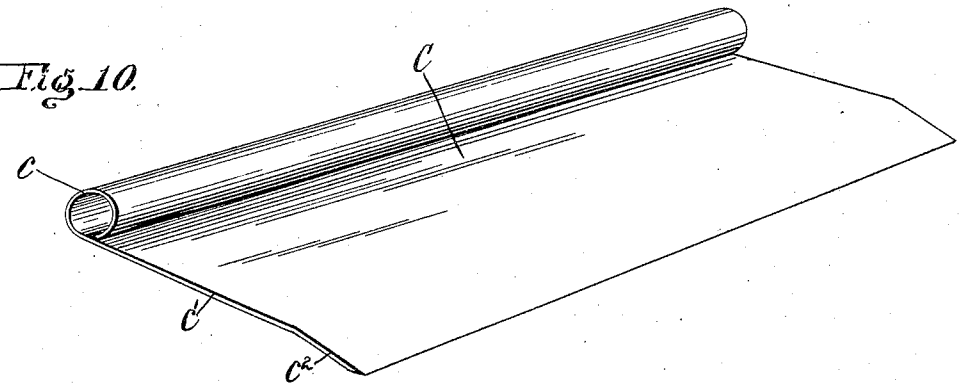


Fig. 11.

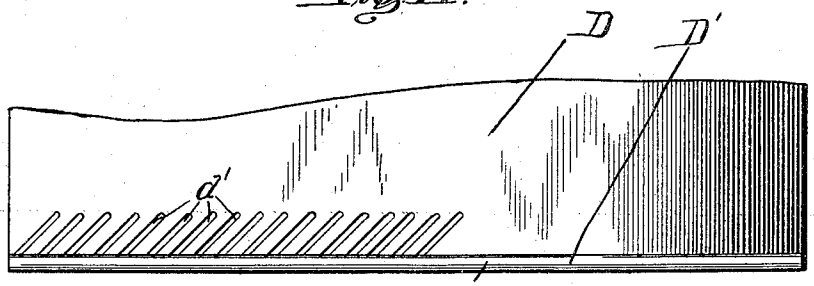


Fig. 12.

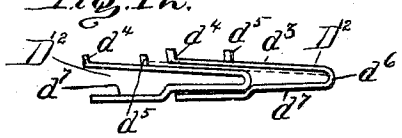
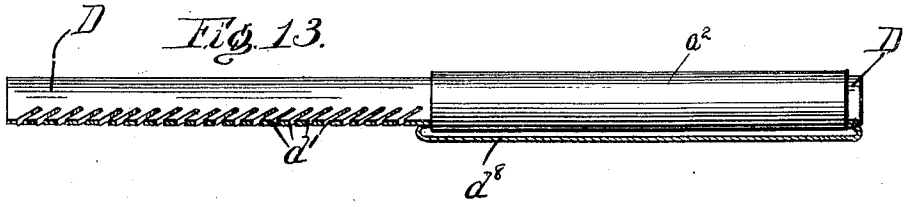


Fig. 13.



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No. 790,831. Patented May 23, 1905.

UNITED STATES PATENT OFFICE.

ANDREW J. HANSELL, OF CUTHBERT, GEORGIA.

LEAF AND BINDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 790,831, dated May 23, 1905.

Application filed December 19, 1903. Serial No. 185,820.

To all whom it may concern:

Be it known that I, ANDREW J. HANSELL, a citizen of the United States, residing at Cuthbert, in the county of Randolph and State of Georgia, have invented certain new and useful Improvements in Leaf and Binding Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to books, and more particularly to composite leaf-sections for use with loose-leaf binders, such as illustrated in an application for patent filed by me on December 19, 1904, Serial No. 185,819.

The constructions shown herein are particularly adapted for use in banks; but it will be obvious that they may be employed with advantage in other forms of bookkeeping and for the keeping of records generally.

In banks the greatest portion of the bookkeeping relates, of course, to the accounts of depositors. For the purposes of keeping these accounts accurately and of preserving a record of the condition of the bank, as well as for checking up error, it has been customary to keep several kinds of accounts, all connected with this branch of the bank's business. In the first place there must be a series of individual depositors' accounts, in which are entered from day to day the amounts deposited and checked out. The balances struck daily from these are transferred to a record that is kept solely for entry of such balances. In this record a list is made every day of the balances of all the depositors, and from them a grand balance is struck each day. Inasmuch as only twenty per cent. of the accounts of national banks change daily, it is evident that the making up of the daily list of balances entails considerable labor in the copying of balances of inactive accounts, which it would be very desirable to avoid. In addition to these two forms of accounts a third is kept, which contains a record, made daily, of all sums deposited or withdrawn. These three classes of accounts have heretofore been kept in separate books or binders, thus entailing much work through the necessity of referring to a number of books.

It is the object of this invention to provide means whereby the burdensome labor connected with making up the daily grand balance of accounts and using a number of separate books is reduced by eliminating the necessity of rewriting the balances of inactive accounts and by combining the three styles of records in one or more composite leaf-sections.

Broadly, my invention consists in a leaf-section containing a plurality of individual depositors' accounts and adjustable leaves adapted to receive balances therefrom and to be shifted as these balances change, so that the new balances are placed in juxtaposition with the old balances, which have not changed. In the same leaf-section there preferably is an adjustable leaf adapted to receive the daily record of all amounts deposited or checked out.

Considered more structurally, my invention consists in a back and an entry portion mounted on the back and consisting of a record-receiving section and a transfer-section, the latter comprising a plurality of leaves having exposed portions arranged in vertical series, each leaf being movable, so as to be removed entirely out of such vertical series. The record-section, more specifically, consists of superposed sheets, and the leaves of the transfer-section, by preference, are made adjustable by being laterally slidable. Hereinafter, and particularly in the claims, I shall refer to these adjustable leaves as "strips;" but by the use of this term I have no intention of limiting myself to any particular dimensions, nor even to the feature of the members being slidable, unless such feature is specifically included in the claims.

In another aspect the invention may be regarded as consisting in a record-section comprising superposed sheets having exposed portions arranged in vertical series, the sheets being preferably vertically overlapped, and a transfer-section, including a plurality of adjustable leaves also with their exposed portions in vertical series, the members of these two series being in transverse alinement.

Regarded in still another light, the invention embraces a record-section formed of superposed sheets each provided with an individual designation and the designation being in vertical series, a transfer-section comprising a plurality of adjustable leaves with their exposed portions in vertical series, and a vertical series of designations borne by the back, preferably between the two sections, these designations corresponding to the designations on the record-sheets and being adjacent to the several exposed portions of the transfer-leaves.

While for the sake of clearness I have referred to my invention in connection with its use in banking business, it is to be understood that with little or no modification the constructions illustrated in the accompanying drawings may be adapted for use in other connections.

In the drawings forming part of this application I have illustrated one form of embodiment of my invention; but I am aware that others might be employed.

In the drawings, Figure 1 is a plan view of the upper side of one of my composite leaf-sections, showing the individual record-sheets bent back at one corner to show the portions of the long slidable leaves that underlie these sheets. Fig. 2 is a similar view, but showing the leaves all in their proper positions and provided with printed matter, adapting the section for use more particularly in a bank. Fig. 3 is a plan view of the reverse side of the section, showing in open position the locking devices used for securing the binding of the individual record-sheets. Fig. 4 is a perspective view of the upper side of the section, showing the large adjustable leaf removed and the locking devices and binding of the individual record-leaves open, the outer ends of these leaves being torn away. This view illustrates particularly the long slidable leaves and the manner of inserting the separating-blade in the binding of the individual record-sheets when it is desired to remove one of the latter. Fig. 5 is a view in elevation of the end of the section which is attached to the book or binding, this view showing such end of the section only, other parts being omitted for sake of clearness. Fig. 6 is a view in elevation of the lower end of the section, the central portion thereof being broken away and the entry-portion pockets being entirely removed. Fig. 7 is a vertical section on the line $x\,x$, Fig. 1. Fig. 8 is a side elevation of one of the binding-pins used to prevent the record-sheets from shifting. Fig. 9 is an end elevation of the pin. Fig. 10 is a perspective view of the separating-blade. Fig. 11 is a plan view of the upper side of the outer portion of the plate that bears the guides for the adjustable leaves. Fig. 12 is a side elevation of two guides of a modified form, the position of one of the slidable leaves being indicated in dotted lines. Fig. 13 is a transverse vertical section through the guide-plate on the line $y\,y$, Fig. 2, the large adjustable leaf being shown in elevation passing over the edge of the plate.

A designates the back or body of the composite leaf-section, which is provided at one end with means, such as hinges B, for attaching to a suitable binding device, which will preferably include several of these sections. Arranged adjacent the hinged end of the section is a series of vertically-overlapped individual record-sheets a^3, their lower ends g being preferably the portions exposed, and these ends forming, as is evident, a vertical series of exposed portions. These exposed ends are provided with suitable designations g', which may be in the nature of names, numbers, symbols, or any combinations of these which will afford ready means of identifying the sheets when their ends only are exposed. Occupying the remainder of the section, and located along the outer end thereof, are the exposed portions of a plurality of horizontal leaves or strips a' and a^2, which are independently adjustable, so that they may be slipped from the pocket E on the upper side of the back beneath record-sheets a^3 and carried around upon the back of the section and there suitably disposed of, a pocket E′ being shown for receiving the large adjustable leaf a^2. The exposed portions of the narrow slidable leaves a' form a vertical series the members whereof are in transverse alinement with the exposed ends of the record-sheets and are adapted to receive matter transferred therefrom. As the record on any one of the sheets a^3 changes the corresponding adjustable leaf a' is shifted until the matter thereon is removed from the column formed by similar matter on the other leaves a', and a new summary of the condition of the record-sheet is entered on the adjustable leaf in vertical alinement with the rest of the column of summaries. In this way it is not necessary to run through the sheets a^3 in order to ascertain the condition of the records thereon, since the summaries borne by leaves a' are all exposed and are in such close proximity that the several records may be compared at a glance. The large adjustable leaf a^2, which is of substantially the same depth from top to bottom as the topmost sheet a^3 and in substantially transverse alinement therewith immediately above the leaves a', is also adapted to receive matter transferred from the record-sheets, but, unlike the leaves a', is intended to accommodate entries from all of the record-sheets. However, it is obvious that this leaf a^2 may be used for any desirable purpose, though its adjustability makes it especially adapted to receive at certain intervals a general transcript or summary from all the sheets a^3. The portions of adjustable leaves a' a^2 that are contained in pocket E are of greater length than the exposed portions, so that the leaves will last for some time without renewal, and

may bear records of considerable periods. The length of leaves a' a^2 is clearly shown in Figs. 1 and 4. Sheets a^3 and leaves a' and a^2 may be considered as forming the entry portion of the complete leaf-section, sheets a^3 constituting a record-section and leaves a' a^2 a transfer-section. The inner ends of the record-leaves are clamped against the body A by a binding-strip b', which is hinged to the back by hinges b^4 and is adapted to be held in closed position by locking devices b^6, located at top and bottom of the leaf-section. In this way sheets a^3 are removably bound together and removably secured to the back along their edges remote from leaves a' a^2, and the term "bound" is used, as usually accepted in bookbinding, to indicate an arrangement wherein several superposed leaves or leaf-like members are secured along one edge, so as to be bent back for individual inspection. Each locking device b^6 is pivoted to the back to one side of strip b' and is provided with a hooked end b^5, which takes over one end of the binding-strip and holds the latter firmly against the back of the section or against any matter placed between. As clearly shown in Fig. 7, the ends of the binding-strip have attached thereto recurved lips b^2, which are secured to the upper side of the strip and bent around beneath the latter, so as to leave transverse open spaces between the lips and the under side of the strip. The pins b^9 (illustrated in Figs. 8 and 9) are secured by their legs b^{11} to the opposing faces of the back and binding-strip, so that their penetrating prongs b^{10} will puncture sheets a^3 and hold them against twisting when the binding of these sheets is closed. When it is desired to remove one of sheets a^3 without disturbing the others, the locking devices are opened and the opening-blade C (illustrated in Fig. 10) is grasped by its cylindrical handle portion c and inserted between the sheets, with its flat portion c' resting upon the sheet to be removed and its thin edge c^2 forced into the transverse openings between lips b^2 and the lower side of the binding-strip b'. In this manner, as clearly shown in Fig. 4, all the sheets above the one to be taken out are firmly clamped between the separating-blade and the binding-strip. The latter may now be swung back without disarranging those sheets that are secured to it, and the uppermost of the remaining sheets, which is the one desired, may be slipped up over pins b^9 without disturbing the sheets beneath.

I shall now describe more particularly the means for guiding and adjusting leaves a^2 and a^3.

The letter D designates a guide-plate, preferably of metal, which is secured transversely to the upper side of back A, projecting over the outer end thereof. Referring to the form illustrated in Figs. 2, 4, 11, and 13, the opposite edges of this plate are provided with two vertical series of guide-slits d', the slits of each series being overlapped and out of alinement, and, as shown, being preferably parallel and oblique. These guide-slits being intended for leaves a' occur in the lower half of plate D only. As illustrated clearly in Fig. 4, leaves a' are led from pocket E under the inner edge of plate D, through the adjacent series of slits d' over the surface of plate D, which affords a smooth writing-support, through the outer series of slits, and, if desired, may be bent back upon the lower face of the leaf-section. In order to permit leaves a' after emerging from the second series of oblique slits to be bent squarely backward, a covering-plate D^3 is secured to the lower side of back A, hiding the slits, and so disposed that the leaves may pass between it and plate D to be bent over its straight outer edge. In Figs. 1 and 12 I have shown another form of guide for leaves a'. In these views a series of clips D^{12} are shown nested within each other and suitably secured to plate D along its inner and outer edges. Each clip or guide comprises a lower horizontal member d^7 for attachment to the plate and an upper horizontal member d^3, connected to the first member by bend d^6, and having a projection d^5 to be engaged by the finger and terminating in an upturned flange d^4. The leaves are slipped between the contacting upper members of the guides and are held at each point of adjustment by spring-pressure. The position of one of the leaves is indicated in dotted lines in Fig. 12, each leaf being confined against vertical movement by the bend d^6 of one clip and the projection d^5 of the inner adjacent clip.

In order to prevent error in making transfers from record-sheets a^3 to adjustable leaves a', I may provide on or adjacent the inner guides, as illustrated in Fig. 2, designations corresponding and exactly opposite to the designations on the exposed ends of the record-sheets.

On the upper surface of plate D, along the inner and outer edges thereof, are strips D' D^2. These are for guiding the large adjustable leaf a^2 and, as shown in Figs. 1 and 2, may extend from the upper edge of the plate D only to the guides for the leaves a', but, as indicated in Figs. 4 and 11, may extend the full length of the plate. Leaf a^2 lies upon the top of plate D and in being transferred from pocket E to pocket E' passes beneath strips D' D^2, over the outer edge of the plate, and under retaining member d^8 on the under side of plate D and clearly shown in Fig. 3 as constituting a strip of metal secured along the edge of the back.

That portion of plate D that projects over the end of back A is bent downward at a slight angle, so that when a number of the leaf-sections are raised slightly on their pivots to make them lie parallel their outer ends,

where much of the writing occurs, may lie in a substantially horizontal plane. Below the angled portion of the section are secured blocks F, having recesses *f* in their lower edges to fit over strip D′ on the section beneath.

Having described the construction of the preferred embodiment of my invention and pointed out the use of the various parts for recording purposes generally, I shall now set forth more particularly the manner of using the leaf-section in banking-work.

Each of the sheets a^3 is intended to receive the account of one depositor, and the name of the depositor and the folio-number of the account are entered at the bottom of the leaves, as at *g*, such data constituting the designations by which the leaves are recognized. In Fig. 2 the folio-numbers are also shown as arranged in a vertical series on strip D′ adjacent, respectively, the exposed portions of leaves *a*′. By thus numbering or designating the transfer-leaves to correspond with the record-sheets error in transferring matter from the latter to the former is largely eliminated. From day to day the accounts are carried through the series of vertical columns G on the sheets a^3, deposits being entered in one color ink and checks in another. At the end of each day balances are obtained on those sheets whose accounts have changed since the day before. As a matter of fact, only about one-fifth of the individual accounts will have to be balanced at any one time. Leaves *a*′ are properly ruled to receive balances from sheets a^3, and it will be understood that all of these leaves are occupied by the balances left over from the day before, such balances being arranged in vertical column, so that a grand balance is readily obtained. The new balances having been obtained on certain of the sheets a^3, those of the leaves *a*′ that correspond to these sheets are slid the distance of one column to the right. This throws the old balances on these leaves out of the column of balances and moves blank places into the column. The new balances are now entered in these blank spaces and a fresh grand balance may be secured without the labor of rewriting all those individual balances that have not changed. Upon the large adjustable leaf are entered each day all the amounts deposited and checked out by the several depositors. This record may be used to check up the balance obtained from leaves *a*′ and for purposes of further reference may be preserved as the leaf is moved along in the pocket E′.

It will be apparent that my invention is of great value in the keeping of accounts and preservation of records generally. The transverse stepping of the individual record or account sheets across the leaf-section and the numbering or otherwise designating their exposed portions afford means whereby it will be apparent at a glance when sheets have been removed with fraudulent intent.

While I have described certain arrangements of parts as being most desirable for compactness and have illustrated numerous details of construction, I do not wish to be held to such arrangements and details to the exclusion of others.

What is claimed as new is—

1. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said record-section consisting of superposed sheets, and said transfer-section including a plurality of movable strips, each strip having an exposed portion and such exposed portions being arranged in vertical series at one side of the record-section.

2. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said record-section consisting of superposed sheets, and said transfer-section including a plurality of laterally-slidable strips, each strip having an exposed portion and such exposed portions being arranged in vertical series at one side of the record-section.

3. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said record-section consisting of superposed sheets, and said transfer-section including a plurality of strips independently slidable away from the record-section, each strip having an exposed portion and such exposed portions being arranged in vertical series at one side of the record-section.

4. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said record-section consisting of superposed sheets, and said transfer-section including a plurality of independently laterally slidable slips, each slip comprising an exposed portion and a remainder of greater length than such exposed portion, said exposed portions being arranged in vertical series at one side of the record-section.

5. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said record-section comprising superposed sheets, and said transfer-section including a plurality of independently laterally slidable strips, each strip comprising an exposed portion and a remainder of greater length than such exposed portion, said exposed portions being arranged in vertical series at one side of the record-section and said remainders being housed between the back and record-section.

6. In a composite leaf-section, the combination with a back, and a pocket thereon; of an entry portion on the back, comprising a record-section and a transfer-section, said record-sec-

tion comprising superposed sheets, and said transfer-section including a plurality of independently laterally slidable strips, each strip comprising an exposed portion and a remainder of greater length than said exposed portion, said exposed portions being arranged in vertical series at one side of the record-section and said remainders being contained in said pocket.

7. In a composite leaf-section, the combination with a back, and two vertical series of guides thereon; of an entry portion on the back, comprising a record-section and a transfer-section, said record-section consisting of superposed sheets, and said transfer-section including a plurality of independently laterally slidable strips mounted in said guides, the portion of each strip between said guides being exposed and such exposed portions being arranged in vertical series.

8. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said record-section consisting of superposed sheets, each sheet having an exposed portion and such exposed portions being arranged in vertical series, and said transfer-section including a plurality of independently laterally slidable strips, each strip having an exposed portion and such exposed portions being arranged in vertical series, the members of said two vertical series of exposed portions being substantially in transverse alinement.

9. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said record-section consisting of vertically-overlapped sheets, and said transfer-section including a plurality of independently laterally slidable strips, each strip having an exposed portion and such exposed portions being arranged in vertical series, the members of such series being substantially in transverse alinement with the exposed edges of said overlapped sheets.

10. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said transfer-section including a plurality of independently laterally slidable strips, each strip having an exposed portion and such exposed portions being arranged in vertical series, and said record-section consisting of vertically-overlapped sheets, the exposed edges of said overlapped sheets being substantially in transverse alinement with the members of said vertical series and said sheets being bound along their edges remote from the transfer-section.

11. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said record-section consisting of superposed sheets bound along one edge of such section, each sheet having an exposed portion, and said transfer-section including a plurality of independently laterally slidable strips, each strip having an exposed portion and such exposed portions being arranged in vertical series, the members of such series being in substantial transverse alinement with the exposed portions of said sheets.

12. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said record-section consisting of superposed sheets removably bound together along one edge of such section, each sheet having an exposed portion, and said transfer-section including a plurality of independently laterally slidable slips, each slip having an exposed portion and such exposed portions being arranged in vertical series, the members of such series being substantially in transverse alinement with the exposed portions of said sheets.

13. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said record-section consisting of superposed sheets combined with means for binding the sheets together and securing them to the back along one edge of such section, each sheet having an exposed portion, and said transfer-section including a plurality of independently laterally slidable strips, each strip having an exposed portion and such exposed portions being arranged in vertical series, the members of such series being substantially in transverse alinement with the exposed portions of said sheets.

14. In a composite leaf-section, the combination with a back; of an entry portion thereon, comprising a record-section and a transfer-section, said record-section comprising vertically-overlapped sheets, and said transfer-section including a plurality of independently-removable strips, each strip having an exposed portion and such exposed portions being arranged in vertical series with the members thereof substantially in transverse alinement with the exposed edges of said overlapped sheets, and said transfer-section comprising further a removable strip of substantially the same depth as the topmost of said sheets and having a removable exposed portion substantially in transverse alinement with the face of said sheet.

15. In a composite leaf-section, the combination with a back, and an entry portion thereon comprising a record-section and a transfer-section, said record-section consisting of superposed sheets, each sheet having an exposed portion bearing an exposed designation, and said transfer-section including a plurality of independently laterally slidable strips, each strip having an exposed portion and such exposed portions being arranged in vertical series at one side of the record-section; of a

vertical series of designations borne by the back corresponding with those on said sheets, the members of said series being adjacent the exposed portions of the strips.

16. In a composite leaf-section, the combination with a back, and an entry portion thereon comprising a record-section and a transfer-section, said record-section consisting of superposed sheets, each sheet having an exposed portion bearing a designation, and said transfer-section including a plurality of independently laterally slidable strips, each strip having an exposed portion and said exposed portions being arranged in vertical series at one side of said record-section; of guides mounted on the back for receiving said strips and bearing designations corresponding to the designation on said sheets.

17. In a composite leaf-section, the combination with a back; and an entry portion thereon comprising a record-section and a transfer-section, said record-section consisting of superposed sheets, each sheet having an exposed portion bearing a designation, and said transfer-section including a plurality of independently laterally slidable strips, each strip having an exposed portion and such exposed portions being arranged in vertical series at one side of the record-section; of a vertical series of designations borne by the back corresponding to the designations on said sheets, the members of said series of designations being adjacent the exposed portions of said strips.

18. In a composite leaf-section, the combination with a back, guides on the face thereof, and a pocket on the reverse side of the back; of a strip mounted slidably in said guides and of such length as to extend around the edge of the back into said pocket.

19. In a composite leaf-section, the combination with a back, a pocket on the face thereof, guides also on the face thereof at one side of the pocket, and a second pocket on the reverse side of the back; of a strip mounted slidably in said guides and of such length as to extend around the edge of the back between said pockets.

In testimony whereof I affix my signature in the presence of two subscribing witnesses.

ANDREW J. HANSELL.

Witnesses:
L. S. CHASTAIN,
C. TAYLOR.