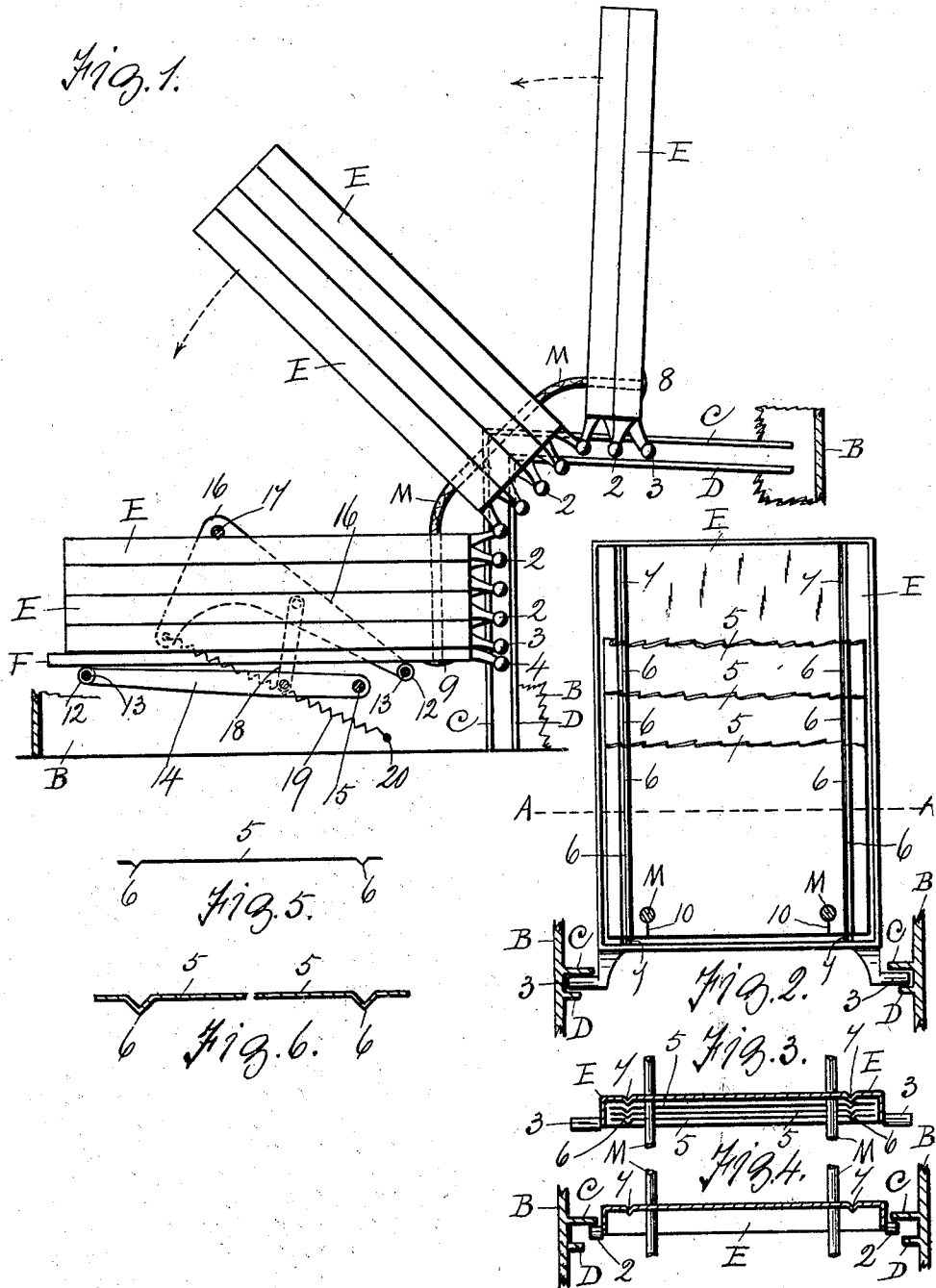


985,102.

Patented Feb. 21, 1911.



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UNITED STATES PATENT OFFICE

WILSON BARR, OF HAMILTON, ONTARIO, CANADA.

ACCOUNT-LEDGER.

985,102.

Specification of Letters Patent.

Patented Feb. 21, 1911.

Application filed April 25, 1910. Serial No. 557,563.

To all whom it may concern:

Be it known that I, WILSON BARR, a subject of the King of Great Britain, and residing at Hamilton, in the county of Wentworth and Province of Ontario, Canada, have invented new and useful Improvements in Account-Ledgers, of which the following is a specification.

My invention relates to improvements in account ledgers, in which a plurality of trays, hinged together in a casing, and containing loose leaves, are adapted to be brought from vertical to horizontal position in order to write on the leaves.

The objects of my invention are, first, to provide a plurality of trays, each tray containing a number of paper leaves, nesting one in the other, therein, and adapted to be brought from and to vertical and horizontal position, second, to provide means in the paper leaves to give inherent rigidity to the same, thereby facilitating their movement from one position to another position, third, to maintain the leaves intact and in vertical position when the trays are in vertical position, fourth, to provide means extending through the trays, to form a connection between the end trays, and adapted to form a carrying connection for the leaves when the position of the same are being changed. I attain these objects by the mechanism illustrated in the accompanying drawing, in which:—

Figure 1 is a side elevation of the device showing the same in operative position, and as having ten trays, four of which are horizontal, two vertical or inclining rearward, and four in a bunch, shown at an angle between the horizontal and the vertical, only a portion of the frame, or casing, being shown. Fig. 2 is a face, or front elevation of one of the trays, all of which are similar, and showing three loosely connected paper leaves in the tray, the upper end part of said leaves being broken away, in order to show the tray, and avoid confusion in the drawing. Fig. 3 is a section of a tray through the broken horizontal line A, A, of Fig. 2, showing three leaves therein, each leaf in single line. Any desired number of leaves may be in one tray. Fig. 4 is a similar section as in Fig. 3, showing the lower end

pivots as used on the intermediate trays in order to escape the inner track-guides when operating the trays, that is, bringing the trays from vertical to horizontal position, the end trays have long pivots as in Fig. 3, and all the intermediate trays have shorter pivots as in Fig. 4. Fig. 5 is an end view of a paper leaf, showing corrugatedly im- pressed ribs or crimps at the margin thereof, and in a single line. Fig. 6 is an exaggerated section of a similar paper leaf, in double lines, and shown broken.

Similar letters refer to similar parts throughout the several views.

In the drawing B, is a part of a framework, or casing, of an account ledger. Said casing may be of any desired design and construction, but must of necessity be adapted to support side track guides C and D, which extend inwardly from the casing. Two guides C and D, are shown vertical, and two guides C and D are shown nearly horizontal or at an acute angle to the vertical guides. The guides C extend inwardly a greater distance than the guides D.

E, are a plurality of trays, preferably of light metallic construction, and are all hinged together by means of hinges having pivots 2, extending sidewise therefrom. The pivot 3, of the rear and last tray is not a hinge pivot, but is intended to support said tray when in vertical or inclining position, as shown in Fig. 1, and is longer than the intermediate pivots 2, of the intermediate trays. The pivot 3, of the first or lower horizontal tray is the same length as the supporting pivot 3, of the rear tray, which is vertical. The horizontal table F, has pivots 4, similar to the pivots 3, and said pivots 4 are adapted to slide between the vertical guides C and D. The vertical guides are similar to the horizontal guides C and D. The pivots 2 of the intermediate trays are of shorter length to enable said pivots to pass out and over the inner guides D, as shown in Fig. 1, when the trays are being brought from vertical to horizontal position, and when this change is taking place the end pivots 3, remain in the track, that is, between the guides C and D, which are rigid with the casing B.

The table F rests on rollers 12, on horizon-

tal rods 13. The levers 14 are pivoted at 15, and the levers 16 are pivoted at 17 to the sides of the casing. The ends of the rods 13 are secured to the ends of the levers 14 and to the bell cranks 16 respectively, and said levers and bell cranks are connected together by means of pivotal straps 18. The opposite ends of the bell cranks 16 have pull springs 19, connected therewith and to the sides of the casing at 20. The levers and bell cranks support the table by means of the pull springs.

The table supporting mechanism is similar to the table supporting mechanism shown in my application for U. S. Letters Patent, Serial No. 512,843, filed Aug. 14th, 1909, account registering machine.

The track guides are of sufficient length to allow the trays to be brought to vertical, or to horizontal position, as may be desired.

Each tray is to contain a number of separate removable paper leaves, or sheets of paper 5, having corrugatedly impressed ribs, or crimps 6, to correspond with the ribs or crimps 7, at or near to the margin of the trays and adapted to nest one into the other, that a large number of leaves may be employed in each tray. The crimps in the paper assist very materially in sustaining and strengthening the leaves, and keeping the same on one plane, especially so, when the trays are in vertical position, the crimps 6 prevent the leaves from the possibility of folding or buckling, and leaving the trays when in vertical position and also when bringing the leaves from one position to another.

M are flexible rods of suitable material and form, which pass loosely through the trays and the leaves. One end of the rod is attached to the rear side of the upper and rear tray at 8, and the opposite and lower end of the rod is conveniently connected to the table F, as at 9. The rod M, has an inherent nature to bend and thereby to form a quadrant at any point where the trays are brought apart from one another, as shown in Fig. 1.

When all the trays are brought to a vertical position, the table alone is in horizontal position, and when the trays are brought to horizontal position, the rear tray, alone, remains vertical. When lowering the trays the pivots 3, of the first tray engage with the pivots 4 of the table and thereby press the table downward.

The leaves may be brought downward one, or more, at a time, from the vertical forward tray, and on the rods M, and placed on the table, or from another tray and placed on the back of the lower adjoining tray when horizontal that the leaf may be written upon, and for other purposes, for in-

stance for reference, or finding an account, the writing being then uppermost. The leaves are slotted on the lines 10, which extend from the holes through which the rods M pass, to the lower end of the leaves, in order that the leaves may be removed from the tray.

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

1. In an account ledger, a casing, tracks in the inner sides thereof, a plurality of trays hinged together and pivots extending from the hinges adapted to slide in said tracks, flexible rods passing through the trays and connected to the last tray, a number of removable paper leaves having crimps or ribs to stiffen the same in the tray, and supported on said rods.

2. In an account ledger, a casing, a plurality of trays hinged together and adapted to be guided from a vertical to a horizontal position in the casing, a number of paper leaves having corrugatedly impressed margins, loosely placed therein, rods passing through the trays and through the leaves therein to retain the leaves in the tray and means on the leaves to allow their removal from the rods.

3. In an account ledger, a casing, a plurality of trays hinged together, means in the casing and on the trays to allow the latter to travel from vertical to horizontal position and one or a plurality at a time, a number of paper leaves having marginal impressed ribs, to stiffen the same loosely placed in the tray, means in proximity to the hinged parts thereof loosely extending through the trays and the leaves, to retain said leaves, and to allow the same to assume a position from vertical to horizontal, independently of the trays.

4. In an account ledger, a frame, or casing, a plurality of trays hinged together, and having corrugatedly impressed marginal ribs, and adapted to travel and to be brought from vertical to horizontal position, one or a number at once, in the casing, a number of paper leaves having ribs to conform with the ribs in the trays, and to fit thereon, and one said leaf on the adjoining one, and loosely in the trays, means loosely extending through the trays and through said leaves to retain the leaves, and to allow one or more at a time to assume a position from the vertical to horizontal, independently of the trays, and means in the leaves to allow the removal of the same from the leaf retaining means.

5. In a machine of the class described, a plurality of trays hinged together and adapted to be brought one or more at a time from vertical to horizontal position, leaves having marginal corrugatedly impressed

ribs or crimps, to stiffen the same, and placed one into the other and loosely in the trays.

6. In a machine of the class described, a plurality of trays hinged together and adapted to be brought one or more at a time, from vertical to horizontal position, leaves having marginal corrugatedly impressed

ribs, or crimps, fitting one into the other, and loosely in the tray, and flexible rods passing loosely through the trays and the leaves, in the hinged portions of the trays. 10

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Witnesses:

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