S. W. BOWMAN.

LOOSE LEAF TRAY.

APPLICATION FILED JULY 31, 1918.

1,314,944.

Patented Sept. 2, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

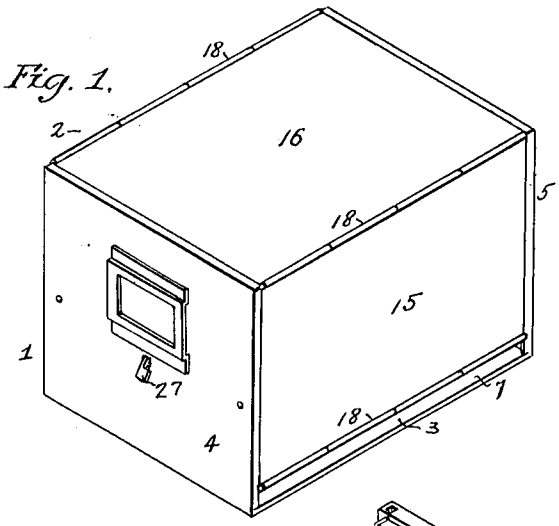


Fig. 2.

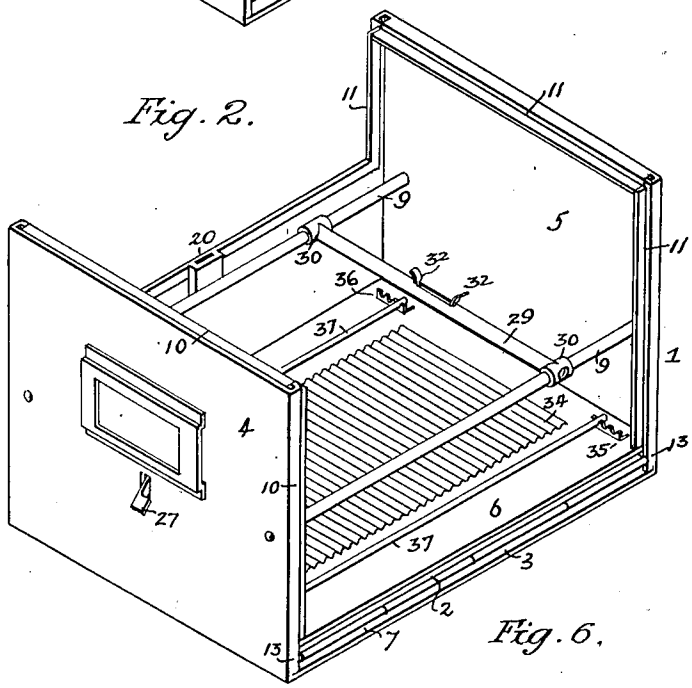


Fig. 6.

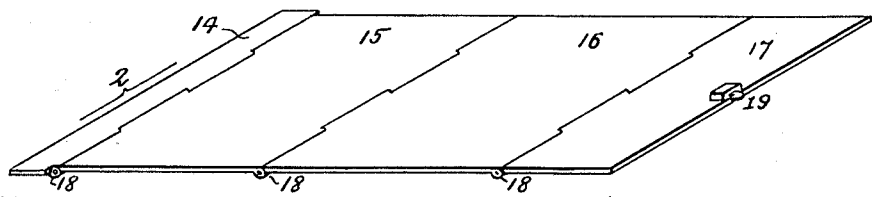
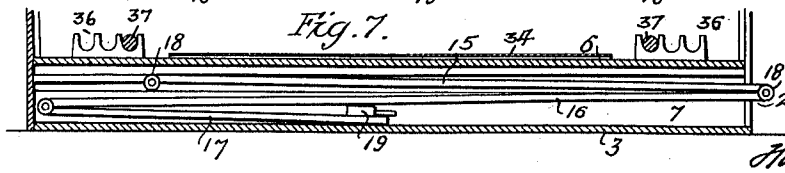


Fig. 7.



Inventor:
Samuel W. Bowman
by his Attorneys.
Howson & Howson

S. W. BOWMAN.

LOOSE LEAF TRAY.

APPLICATION FILED JULY 31, 1918.

1,314,944.

Patented Sept. 2, 1919.

2 SHEETS—SHEET 2.

Fig. 4.

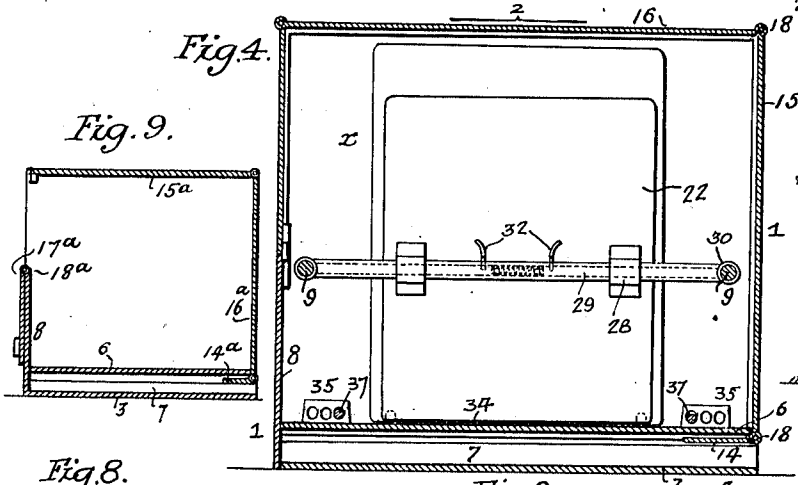


Fig. 9.

Fig. 10.

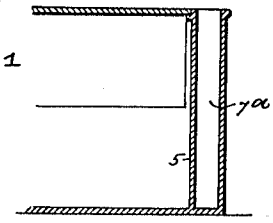


Fig. 8.

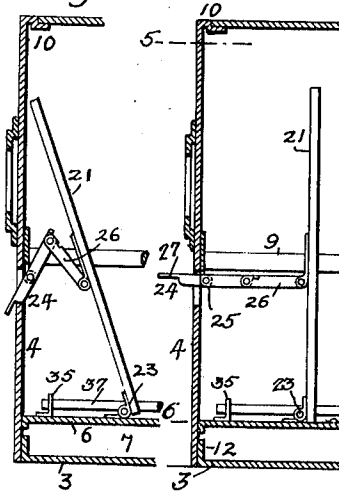


Fig. 3.

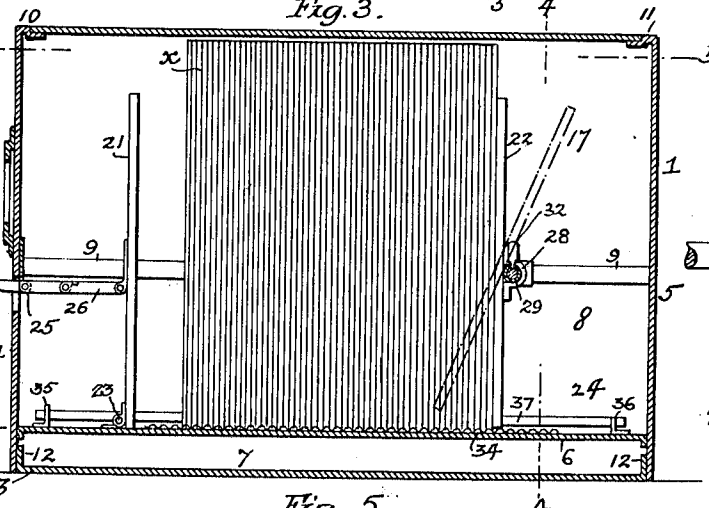


Fig. 5a.

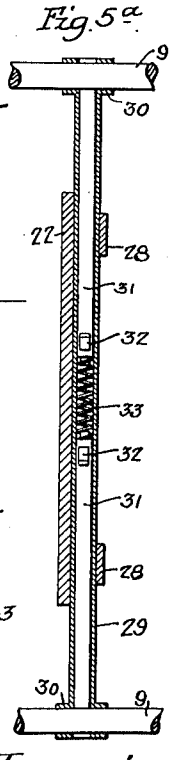
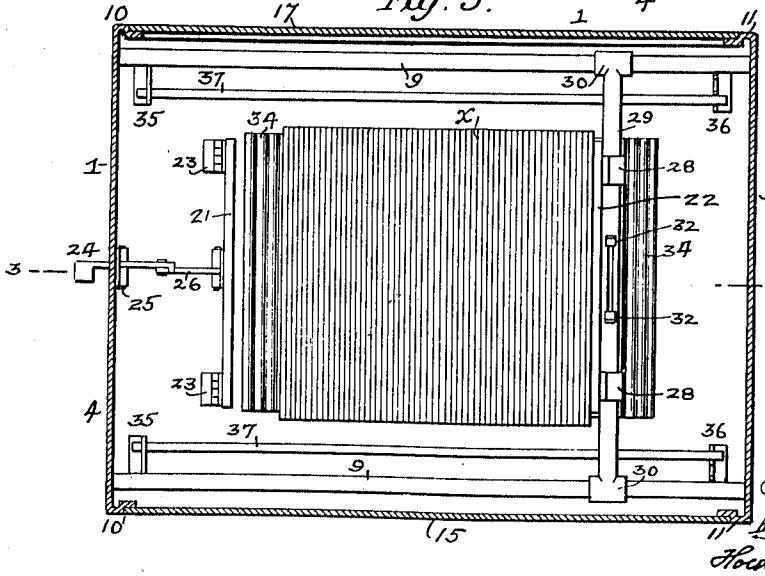


Fig. 5.



Inventor,
Samuel W. Bowman,
by his Attorneys,
Howson & Howson

UNITED STATES PATENT OFFICE.

SAMUEL W. BOWMAN, OF NEW YORK, N. Y.

LOOSE-LEAF TRAY.

1,314,944. Specification of Letters Patent. Patented Sept. 2, 1919.

Application filed July 31, 1918. Serial No. 247,503.

To all whom it may concern:

Be it known that I, SAMUEL W. BOWMAN, a citizen of the United States, and a resident of New York city, county and State of New York, have invented certain Improvements in Loose-Leaf Trays, of which the following is a specification.

My invention relates to certain improvements in loose leaf trays, which are used for containing the loose sheets used in accounting. These leaves form a complete ledger, or other book.

One object of the invention is to provide a tray which is readily accessible for the examination and posting of accounts.

A further object of the invention is to provide a collapsible cover for the tray which will completely inclose the tray and which can be locked in the closed position and, when opened, can be folded in a chamber under the tray.

A still further object of the invention is to provide adjustable means for retaining the sheets in position.

These objects and other advantageous ends I secure in the following manner, reference being had to the accompanying drawings, in which:—

Figure 1 is a perspective view of my improved tray, showing it in the closed position;

Fig. 2 is a perspective view, showing the tray in the open position with the loose leaves detached from the tray;

Fig. 3 is a longitudinal sectional view on the line 3—3, Fig. 5, showing the leaves in position;

Fig. 4 is a transverse sectional view on the line 4—4, Fig. 3;

Fig. 5 is a sectional plan view on the line 5—5, Fig. 3;

Fig. 5^a is a sectional view of the cross bar carrying one of the clamp plates;

Fig. 6 is a detached perspective view of the cover spread out;

Fig. 7 is an enlarged transverse sectional view showing the folded cover located in the chamber;

Fig. 8 is a sectional view of a portion of the tray on the same line as Fig. 3, showing the front clamp plate tilted, and

Figs. 9 and 10 are views of modifications of the invention.

Referring to the drawings, 1 is the tray and 2 is the cover. The tray has a main bottom 3, a front end 4, and a rear end 5, which extend the full height of the tray, and a second bottom 6, which is a sufficient distance above the bottom 3 to form a chamber 7 for the reception of the cover 2, when folded, Fig. 7. In the present instance, the left hand side of the tray extends a little less than one-half the height and at each side of the tray is a rod 9, which is substantially on a level with the upper edge of the side 8. The rods act to limit the lateral movement of the sheets of paper and also carry an adjustable sheet-holding device described later.

The front section and the rear section have internal flanges 10 and 11, respectively, and the flanges are offset to receive the cover 2 so that the cover will be flush with the body of the tray to enable a series of trays to be assembled close together. Furthermore, this arrangement stiffens the front and rear members and gives rigidity to the entire structure.

In the present instance, the cover section is made in four parts 14, 15, 16 and 17 connected, as shown in Fig. 6, by ordinary hinge joints 18. The section 14 acts merely as a retaining section and is located at all times within the chamber 7, while the section 15 forms the closure for the right hand side of the tray, and the section 16 forms the top of the tray and the short section 17 forms, with the permanent portion 8 of the tray, the closure for the left hand side. This section has a keeper 19 which is engaged by a lock 20, of any suitable type, on the side of the tray, although, in some instances, the lock may be on the part 17 of the cover instead of on the permanent part of the tray. While I have shown this method of locking the cover onto the tray, other means may be resorted to without departing from the essential features of the invention.

The section 14 is wider than the other sections, as shown in Fig. 6, and slides on a flange 12 formed, in the present instance, on the bottom 3 and is held from being drawn entirely out of the recess 7 by the portion 13 of the end members.

The sheets of paper x are held in the tray by clamp plates 21 and 22. The clamp plate 21 is preferably hinged in a fixed position at 23 and a lever 24 is pivoted at 25 to the case and is connected by a link 26 to the clamp plate 21, as shown. The handle portion 27 of the lever extends through a slot in

the front wall 4 of the tray so that on moving the lever 24 the clamp plate can be tilted to the position shown in Fig. 8, or can be moved to a vertical position, as in Fig. 3, and held by the lever 24 and link 26 so as to form an abutment for the leaves when they are clamped in position by the clamp plate 22.

The clamp plate 22 is pivoted at 28 to a cross bar 29 having bearings 30 at each end adapted to slide on the rods 9, and located in the bar 29 are bolts 31 having finger holds 32 and located between the bolts is a coiled spring 33. The outer ends of these bolts 31 bear upon the rods 9 and frictionally hold the cross bar 29 in position. In some instances, the rods 9 may be toothed and the bolts may engage the teeth so as to hold the bar 29 more firmly to the rods. By this construction, the clamp plate 22 can be moved toward and from the clamp plate 21 and can be tilted, as shown by dotted lines in Fig. 3, when it is desired to examine the sheets.

I preferably locate a detachable corrugated plate 34 in the bottom of the tray. This plate may be of any width desired and is for the purpose of preventing the lower ends of the sheets of paper, or cardboard, from slipping when the sheets are handled. The plate may be made of metal or stiff cardboard or may be a ribbed fabric, if desired. At each corner of the bottom tray are plates 35 and 36. The plates 35 are perforated and the plates 36 are notched, as shown, for the reception of bars 37 which may be used in posting when the sheets are notched at the corners so as to insure the holding of certain sheets out of line with other sheets. The permanent line of the sheets can be either on the right hand or the left hand side of the tray, or can be located in the center of the tray so that the separated sheets can be moved either to the right or to the left, or some of the sheets may be moved to the right and others to the left.

By the above construction, it will be seen that I can make a tray which is substantial and rigid, and the cover of which can be folded into a small compass. The cover of the tray is so arranged that it can be located in a chamber under the tray, which is a convenient disposition of the cover when not in use and eliminates the possibility of its being mislaid. The tray is of sufficient width so that the leaves, which are much narrower than the tray, can be offset either to the right or to the left, or both ways, when the user of the tray is posting.

In some instances, the section 17^a may be hinged at 18^a to the side 8 and the top section 16^a and side section 15^a may be connected to the sliding section 14^a and located in the chamber under the tray, as illustrated in Fig. 9. In fact, in some instances, while I prefer to use the horizontal chamber, the entire cover section may be detached from the tray, folded and placed in a vertical chamber 7^a, Fig. 10, back of the tray, or may be placed at any suitable, convenient point.

I claim:

1. The combination of a cabinet for holding loose leaves, of a tray adapted to receive the leaves and having a chamber independent of the space for the leaves; and a sectional cover, the sections being hinged together and arranged to be folded and placed in the chamber.

2. The combination in a cabinet for holding loose leaves, of a tray having a chamber under the bottom thereof; and a sectional cover, the sections being hinged together and arranged to be folded and placed in the chamber under the tray.

3. The combination in a cabinet for holding loose leaves, of a tray; a bottom section provided with a chamber; front and back sections extending the full height; one side section extending half the height and the other side being open; a bar across the opening; and a sectional cover, the sections being hinged together and arranged to be folded and to be located in the chamber under the bottom of the tray.

4. The combination in a cabinet for loose leaves, of a bottom section having a chamber therein; end sections having depressed flanges at each side; a fixed side section extending a portion of the height of the tray, the other side of the tray being open; a sectional cover made in four sections, one section being located within the chamber, the other section forming the two sides of the cover and resting in the depressed flanges of the front and rear portions of the tray; and means for securing the cover in its closed position.

5. The combination in a cabinet for holding loose leaves, of a tray; clamp plates mounted in the tray for holding the leaves in position, one of said clamp plates being pivoted to the bottom of the tray; lever mechanism extending to the outside of the tray and arranged to adjust and hold the said clamp plate either in a vertical or in an inclined position; and means for adjusting the other clamp plate toward and from the first mentioned clamp plate.

6. The combination in a cabinet for holding loose leaves, of a tray; two clamp plates mounted in the tray between which the leaves are held, one of said plates being pivoted; means for adjusting said plate in an inclined position; two longitudinal rods, one at each side of the tray; a bar mounted on the rods to which the other clamp plate is attached; and means for holding the bar to the rods.

7. The combination in a cabinet for holding loose leaves, of a tray; two clamp plates mounted in the tray between which the

leaves are held, one of said plates being pivoted; means for adjusting said plate in an inclined position; two longitudinal rods, one at each side of the tray; a bar mounted on the rods to which the other clamp plate is attached, the other clamp plate being pivotally attached to the bar so that it can be moved to a vertical position, or inclined; and means for clamping the bar to the rods.

8. The combination in a cabinet for holding loose leaves, of a tray; two side rods; a cross bar mounted on said rods; means for holding the cross bar to the rods; a clamp plate pivotally mounted on the cross bar; plates at each corner of the bottom of the tray; and longitudinal rods mounted in the latter plates, which act as guides for leaves that are notched near the edge when said leaves are moved laterally from their normal position.

9. The combination in a cabinet for holding loose leaves, of a tray having a chamber in the bottom open at one side, the tray having a front and a back section and a half section at one side and open the full depth at the opposite side and on the same side as the opening of the chamber; a rod extending across said opening; a sectional cover, said cover being made in four sections hinged together inclosing the top and both sides, the fourth section being located in the chamber and acting as a guide for the other section, when folded; and means for locking the cover to the tray.

10. The combination in a cabinet for holding loose leaves, of a tray having a chamber at the bottom open at one side, said tray having a front and a back section; longitudinal rods extending from the front to the back section; means for clamping the loose leaves, said means being mounted on the rods; a cover made in sections, said sections being hinged together and arranged to inclose the space between the front and back sections of the tray; a sliding section of the cover located in the chamber at the bottom of the tray, said section being wider than the other sections; and means for preventing the withdrawal of said section from the chamber so that when the cover is locked it is impossible to remove the cover sections from the tray.

In witness whereof I affix my signature.

SAMUEL W. BOWMAN.