Nov. 17, 1931. R. R. WEBB 1,831,938

TRAY BINDER

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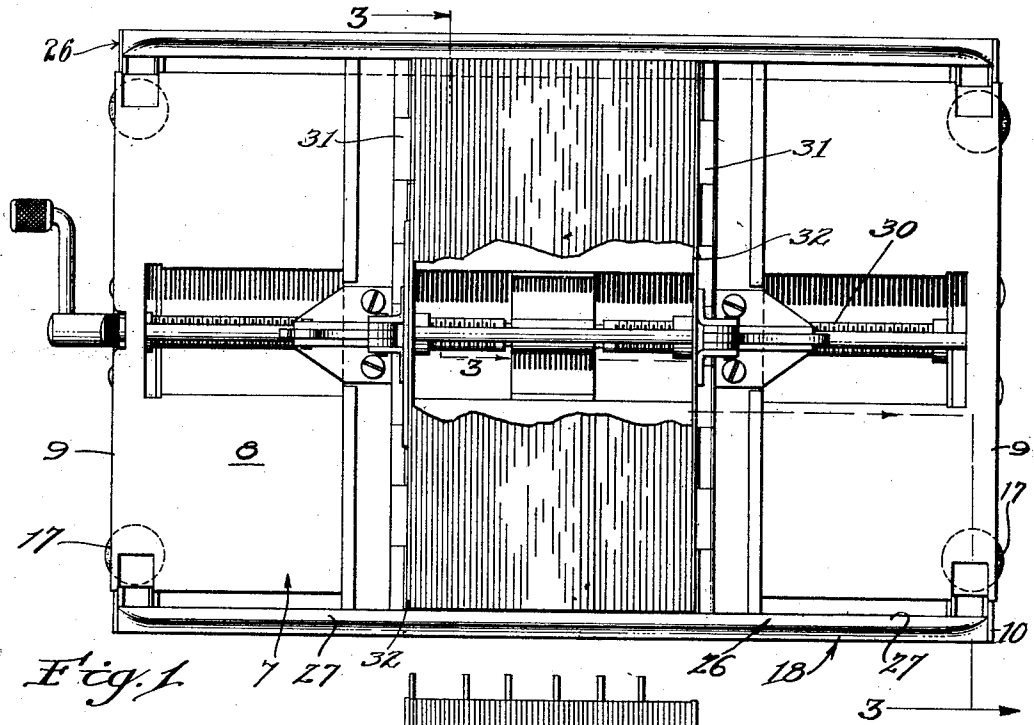


Fig. 1.

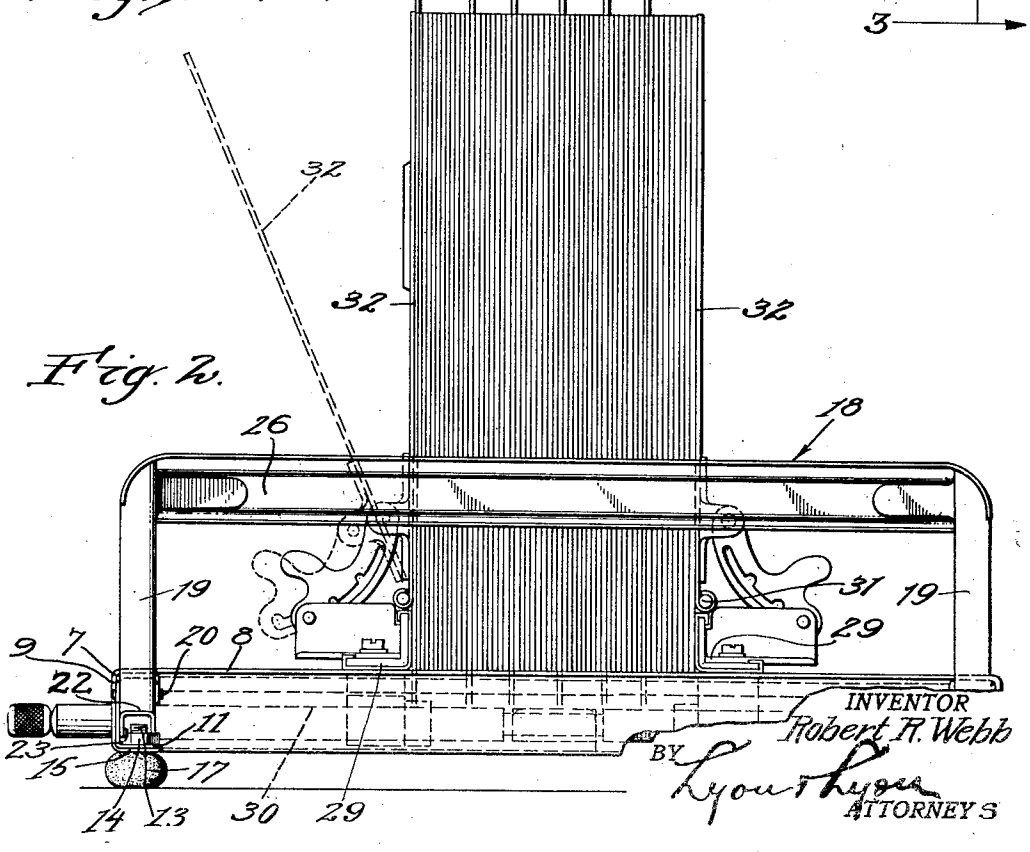


Fig. 2.

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Fig. 3.

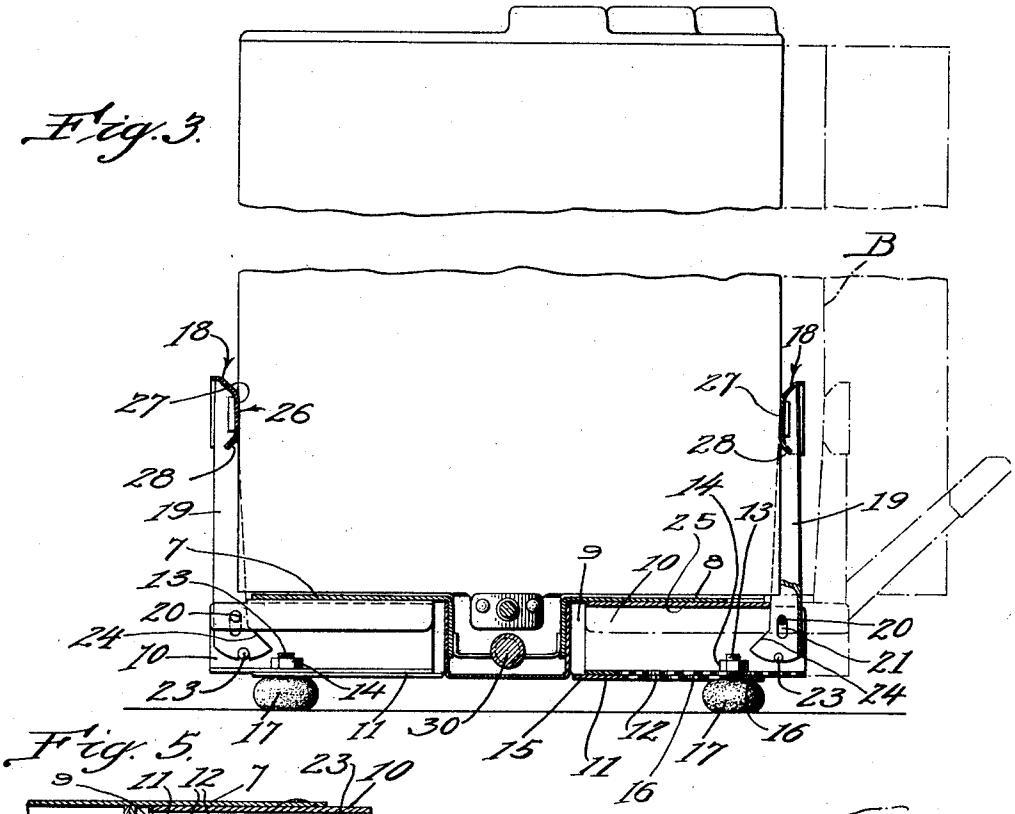


Fig. 5.

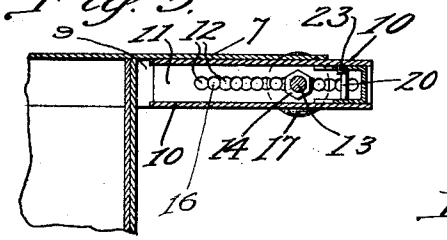


Fig. 4.

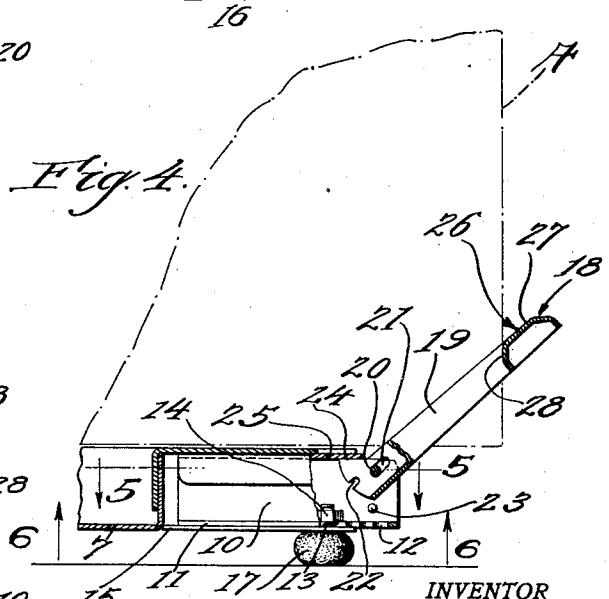
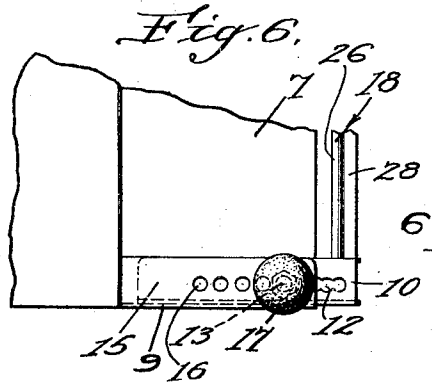


Fig. 6.



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UNITED STATES PATENT OFFICE

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TRAY BINDER

Application filed May 13, 1930. Serial No. 451,947.

This invention relates to tray binders, or, in other words, to loose-leaf binders involving the use of hingedly mounted cover members, clamping bars to securely hold the loose leaves, and a tray on which the clamping bars are slidably mounted.

An important object of the invention is a reduction in the number of different sizes of tray binders necessary to be carried in stock to meet the demand occasioned by the necessity of different users employing loose leaves of different widths.

In this type of tray binder, it is customary to employ side rails that constitute stops or guides against which the edges of the leaves are placed when offsetting said leaves so as to hold the offset edges of the leaves in alinement. These guide rails are often adjusted to and from the offset positions but, heretofore, the guide rails have not been bodily adjustable relative to the base so that the tray binder can be employed to good advantage for holding loose leaves of different widths. Accordingly, one of the important objects of this invention is to provide for bodily movement of the guide rails for the purpose indicated.

Another important object is to improve the construction for effecting holding of the guide rails in the two positions, the retracted position and the extended or offset position.

Other objects and advantages will appear in the subjoined detailed description.

The accompanying drawings illustrate the invention:

Figure 1 is a plan view of a tray binder constructed in accordance with the provisions of this invention. Loose leaves are shown in the binder.

Fig. 2 is a front elevation of Fig. 1, a portion being broken away to contract the view. One of the cover members is shown in two different positions in solid lines and in broken lines.

Fig. 3 is an elevation, partly in section, from the irregular line indicated by 3—3, Fig. 1. One of the guide rails is shown in one position in solid lines and in two other positions in broken lines; portions of the loose leaves being broken away.

Fig. 4 is a detail, mainly in section, of one of the guide rails and its mounting.

Fig. 5 is a horizontal section on the line indicated by 5—5, Fig. 4.

Fig. 6 is an inverted plan view from the line indicated by 6—6, Fig. 4.

Referring to the drawings, there is provided a base 7 which, in this instance, is constructed of sheet metal. The base 7 has an upper flat face 8 and the base is provided at its opposite ends with channels 9 in which are shiftably mounted slides 10 which may also be constructed of sheet metal. The channels extend transversely of the base and, accordingly, the slides 10 move toward and from the side edges of the base when they are adjusted in and out.

Means are provided for securing the slides 10 in various positions of adjustment and, in this instance, said means are constructed as follows:

The bottom flanges 11 of the guides 10 are provided with a series of slightly spaced holes 12 and selectively positioned in the holes 12 are screws 13 provided with nuts 14 which may be tightened down on the upper faces of the flanges 11. The screws 13 project from the lower flanges 15 of the channels 9 and, in this instance, each of said screws 13 projects through one of a series of holes 16 with which the flanges 15 are provided. The spacing of the holes 16 may be different than the spacing of the holes 12 so that a number of adjustments is possible by locating the screws 13 in different ones of the holes 12, 16.

The screws 13 are provided with heads 17 which, in this instance, function as supports for the base. Accordingly, the screw heads 17 are preferably constructed of rubber or other suitable soft material that will not tend to scratch the desk or table on which the tray binder is placed.

Movably mounted on the outer end portions of the slides 10 are guide- or stop-forming rails 18 which are of U-shaped construction. The guide rails 18 have their legs 19 pivotally connected by pins 20 to the slides 10. The pins 20 pass through slots 21 in the legs 19 so that said legs can be shifted

endwise. Each of the legs 19 is provided at its lower end with a notch 22 adapted, when the leg is approximately in vertical position, to register with a shoulder or stud 23 that projects from the inner face of the slide. The spacing between the pin 20 and the stud 23 is such that the pin 20 is in the upper end of the slot 21 when the stud 23 is in the notch 22. Thus, by raising the leg 19 so as to bring the pin 20 into the lower end of the slot 21, the notch 22 may be disengaged from the stud 23 so as to permit the leg to turn on the pin 20 until it is in the extended or offset position shown in Fig. 4. Outward and downward swinging of the legs 19 is limited by reason of a shoulder 24 on each leg 19 coming into engagement with the underface of the top wall 25 of the slide with which it is associated. The shoulder 24 extends at an obtuse angle from the leg, as clearly shown in Fig. 4. The horizontal member 26 of each of the guide rails has faces 27, 28 that are angularly related so that, when the guide rail is in the position shown in solid lines in Fig. 3, the face 27 is vertical and, when the guide rail is in the position shown in Fig. 4, the face 28 will be vertical. Thus in either position of the guide rail, the edges of the loose leaves, indicated at A, will contact with flat faces of the rails.

The remaining features of the tray binder need only be briefly referred to as they constitute no portion of the present invention, but are merely described so that the operation of the tray binder will be understood. Clamping bars 29 are shiftably mounted on the base 7, being operated toward and from each other by a screw 30, which is provided at one end with right-hand threads and at the other end with left-hand threads. Hinged at 31 to the clamping bars 29 are cover members 32.

The above described tray binder operates as follows: Assuming, for example, that the loose leaves in the binder are of the width shown in solid lines in Fig. 3, the slides 10 will be adjusted to a position that will entail engagement of the rail faces 27 with the end edges of the loose leaves when the rails are in the vertical positions shown in solid lines in said Fig. 3. When it is desired to offset any of the loose leaves, the guide rail, on that side where the offsetting is to be done, will be raised by the operator to disengage the notches 22 from the studs 23 and the operator will then swing said guide rail outwardly to the position shown in solid lines in Fig. 4. If offsetting is desired on the left, as well as on the right, the same operations will be accomplished by the operator.

If wider leaves, such as indicated at B in Fig. 3, are to be used in the binder, the nuts 14 will be removed from the screws 13 at one side of the base, the slides at that side will then be moved outwardly until the face 27 of the rail engages one edge of the leaves, when said guide rail is in the vertical position shown in broken lines in Fig. 3. Then the screws 13, associated with that particular slide, will be passed through the registering holes 12, 16, and the nuts will be applied to the screws, thus to hold the guides against endwise movement.

Offsetting is now secured in the same manner as described above, and the new offsetting position of the guide rail is also indicated in broken lines in Fig. 3.

If it be desirable that the wider leaves be maintained approximately centrally of the base, adjustment of all four slides may be effected, and the slides on opposite sides will be drawn out equal distances. It will be readily seen that by moving both slides into their extreme outer positions, a very much greater width of loose leaf may be accommodated in the binder than when the slides are in their innermost positions. Accordingly, it can be readily comprehended that with this invention it will only be necessary to carry in stock a single size of binder constructed in accordance with this invention to supply the trade that formerly required binders of many different widths.

I claim:

1. A tray binder comprising a base, slides mounted to move laterally from the base, a guide rail, means pivotally connecting the guide rail to the slides, and means on the base to clamp loose leaves.

2. A tray binder comprising a base, a guide rail, means pivotally and slidably connecting the guide rail to the base, and means on the base to clamp loose leaves.

3. A tray binder comprising a base, slides mounted to move laterally from the base, a guide rail, means connecting the guide rail to the slides for pivotal and bodily movement relative to the slides, a means releasable by bodily movement of the guide rail in one direction relative to the slides to hold the guide rail against pivotal movement, and means on the base to clamp loose leaves.

4. A tray binder comprising a base, a guide rail, and means providing for bodily and angular adjustment of the guide rail relative to the base in a path normal to the plane of the guide rail.

5. A tray binder comprising two members, one member constituting a base and the other constituting a guide rail movable into at least two positions with respect to said base member, a pin connected with one of said members and a slot in the other member to accommodate the pin, and a stud connected with one of said members and a notch in the other member to receive the stud when the guide rail is in one position with the pin in one end portion of the slot, the end of said rail member abutting against said base mem-

ber and acting as a stop when the rail is in said second position.

6. A tray binder comprising a base, a pair of members constituting slides bodily adjustable on the base, a guide rail including a pair of members adjustably connected with the first-mentioned members, the connection including pins in the members of one pair and slots in the members of the other pair, one of the pairs of members provided with studs and the other pair with notches to receive the studs when the guide rail is in one position with the pins in end portions of the slots, and means to releasably secure the slides against movement relative to the base.

7. A tray binder comprising a base, a slide shiftably connected with the base, means to releasably secure the slide against movement, a guide rail pivoted to the slide, and means to hold the guide rail in different angular positions relative to the slide.

8. A tray binder comprising a base, slides shiftably connected with the base, means including supports for the base for releasably securing the slides against movement, a guide rail, and means to hold the guide rail in different angular positions relative to the slides.

Signed at Los Angeles, California, this 7th day of May, 1930.

ROBERT R. WEBB.