United States Patent [19]

Moriarty

[11] **3,907,390**

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[54] **VISIBLE RECORD STORAGE SYSTEM**

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[52] **U.S. Cl.** **312/303;** 312/185; 312/9

[51] **Int. Cl.**[2] **A47B 88/00**

[58] **Field of Search** 312/9, 185, 188, 276, 298, 312/301–303, 333–336

[56] **References Cited**

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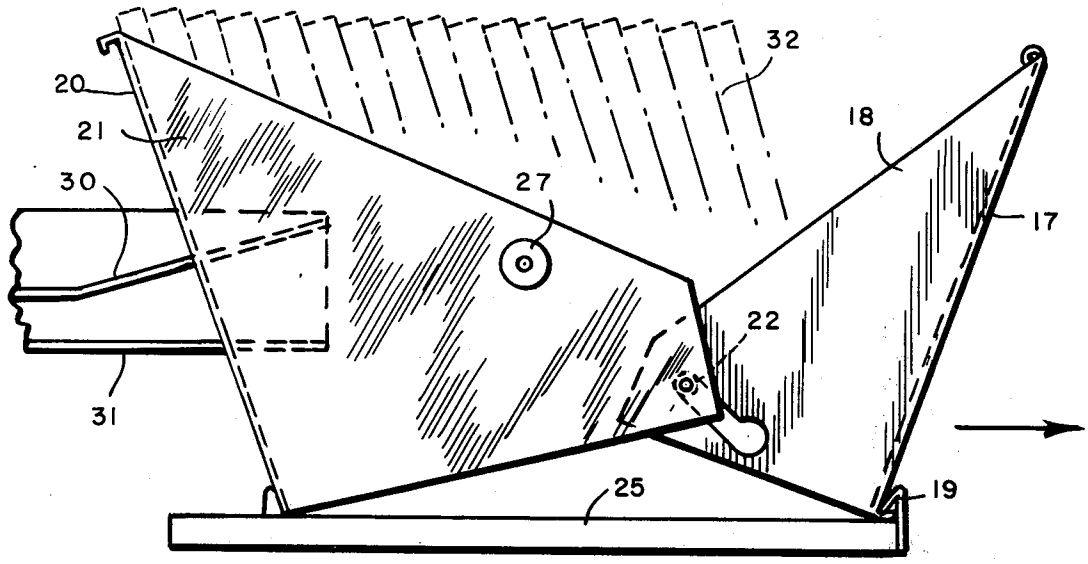
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Primary Examiner—Casmir A. Nunberg

[57] **ABSTRACT**

A record storage system which may be supported in the drawer of a cabinet, said system includes a tray having front and back panels which are rotatable away from each other to present records for view when the drawer and tray are withdrawn from the cabinet and rotatable towards each other to store the records registered to the back panel when the tray and drawer are returned into the cabinet.

15 Claims, 9 Drawing Figures



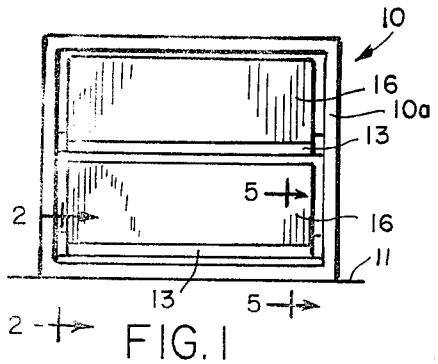


FIG. 1

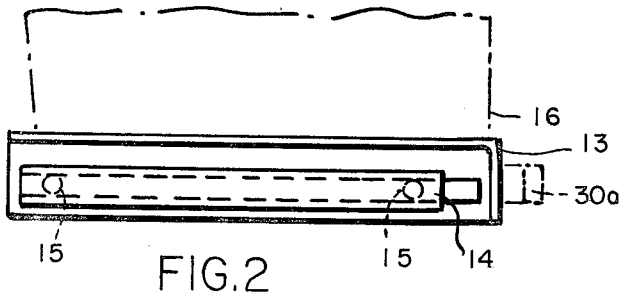


FIG. 2

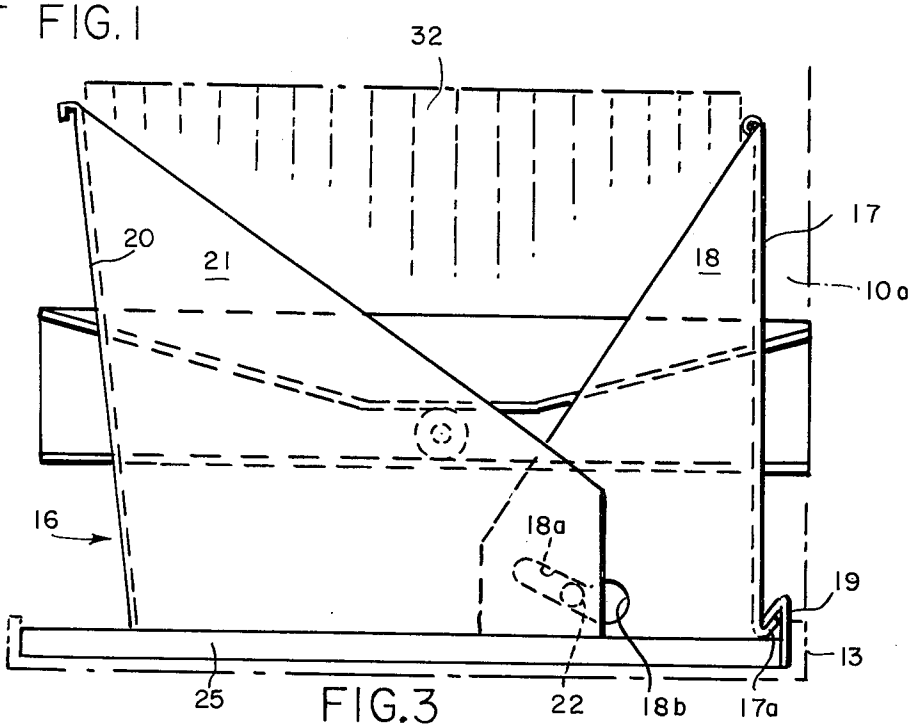


FIG. 3

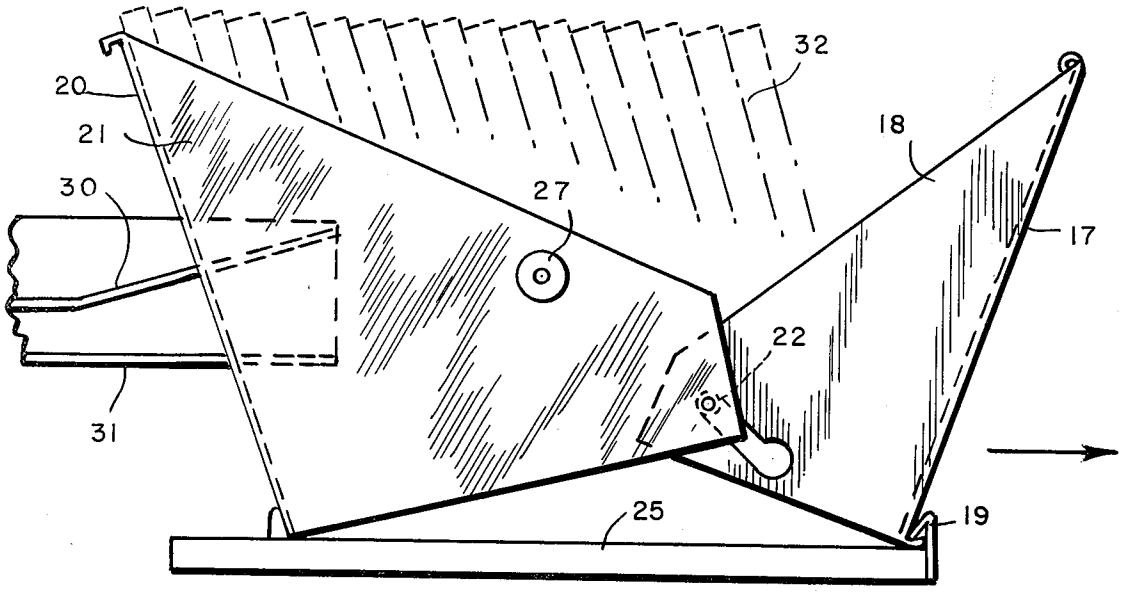


FIG. 4

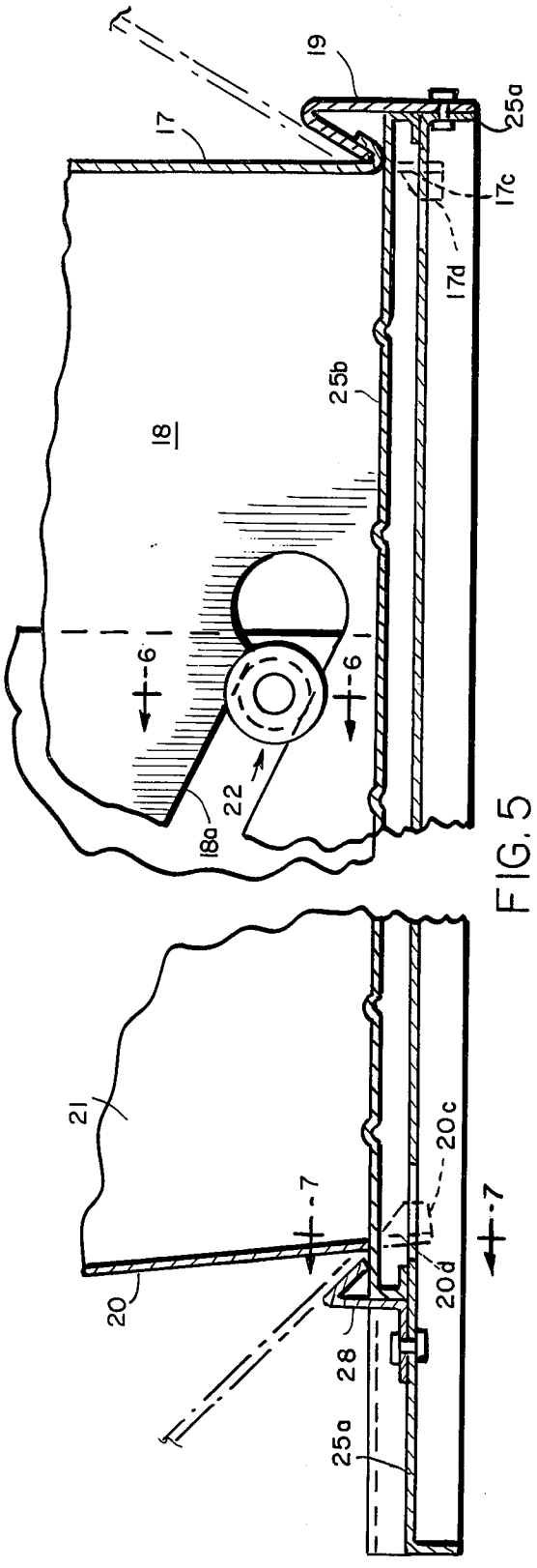


FIG. 5

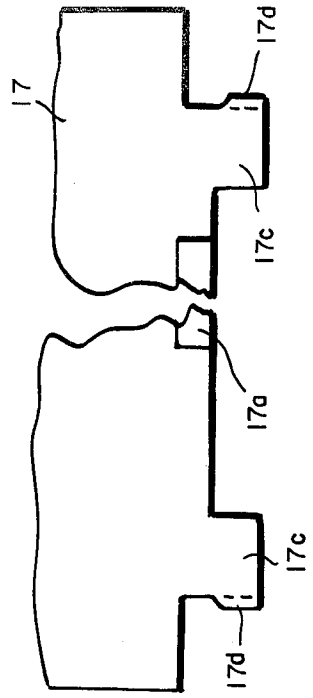


FIG. 9

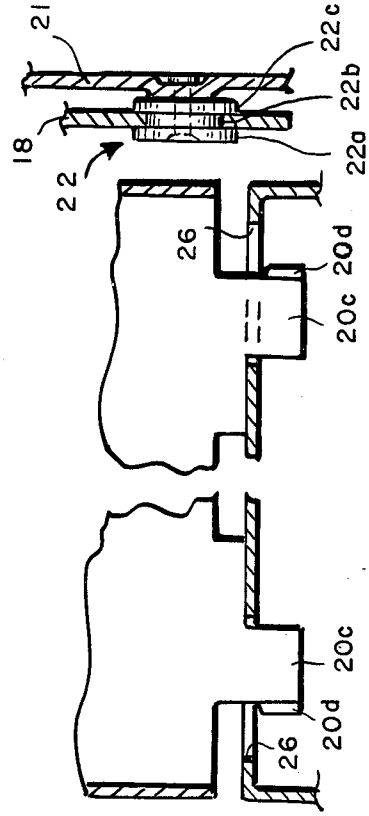


FIG. 6

FIG. 7

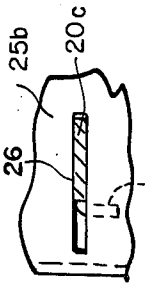


FIG. 8

VISIBLE RECORD STORAGE SYSTEM

BACKGROUND OF THE DISCLOSURE

This invention is directed to the storage of visible records and more particularly is directed to a new and improved visible record storage system that combines the economics of media storage space usage and the economics and ease of record keeping.

Normally, visible records have been housed in a fixed capacity tub or cabinet. Generally such tubs or cabinets did not lend themselves to incorporation into other types of storage systems, i.e., where paper, etc., could be stored in the same cabinet.

In addition, visible records were normally stored in cabinets at fixed angles so that if a drawer containing same were closed with the records separated and inclined ("vee'd") to a certain position they would remain so positioned when the drawer was re-opened. This meant that the user (operator) after opening the drawer again has a good view of the record labels at the back portion of the drawer but a relatively poor view of the record labels in the forward position of the drawer.

In some cases the drawer systems previously used for visible record storage included panels which had to be positioned by hand in order to store the records when the drawer carrying same was pushed back into the cabinet therefore. Thus with this latter drawer system records could not be quickly moved into and out of a cabinet to take a quick spot-check of the records without having to hand position at least one of the panels.

In view of the above a new and improved record storage system was needed which (1) may be used in various height cabinets serving other functions, (2) is fully open faced to the front, (3) saves filing inches by automatically compressing the panels and records in closed storage and, (4) which automatically places the records in register, to the back, upon storage thereof in a cabinet so that when the records are exposed again for viewing all record labels are in good position for viewing.

The present invention provides a record storage system meeting these needs in a manner which allows users to make a minimum investment to comply with their current needs of compact visible record keeping while allowing for expansion capacity at a minimal additional expense.

Meanwhile unused cabinet space can be utilized to temporarily store other papers, supplies and equipment indigenous to the users business.

BRIEF DESCRIPTION OF THE DISCLOSURE

The visible record storage system according to the disclosure may be housed in a multipurpose cabinet having a rollout drawer or the like. Space not currently used in the cabinet can be converted to other uses.

In order to provide for storage of records there is disclosed a tray positionable in the drawer of the cabinet for movement therewith and which includes front and back panels coupled together at their sides for rotary motion with respect to a pan. Means is also provided for effecting rotation of the panels from an open position to a closed position upon entry of the drawer carrying the tray into the cabinet to register the records to the back or rear.

In addition, upon opening of the drawer the weight of the records against the rear panel is utilized to cause rotation of the panels away from each other to permit easy viewing of the records.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front view of a record storage cabinet according to the disclosure;

FIG. 2 is a view taken along line 2—2 showing a drawer supported by the cabinet;

FIG. 3 is a side view of the record storing tray supported by the drawer of FIG. 2 when positioned within the cabinet;

FIG. 4 is a side view of the record storing tray supported by the drawer of FIG. 2 when the drawer is pulled out of the cabinet to inspect the records;

FIG. 5 is a sectional view taken along line 5—5 in FIG. 1 and in which the tray is solely illustrated;

FIG. 6 is a sectional view taken along line 6—6 in FIG. 5;

FIG. 7 is a sectional view taken along line 7—7 in FIG. 5;

FIG. 8 is a top view taken at line 8—8 in FIG. 5; and

FIG. 9 is a front view of the front panel shown in FIGS. 3, 4 and 5.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Reference should now be had to FIGS. 1–9 which illustrate the preferred embodiment of the record storage system according to the disclosure.

At 10 there is shown a cabinet positioned on the floor 11 and which may be of the general purpose type. The cabinet 11 supports two drawers 13 by way of a conventional file roller system which includes guides 14 in which rollers 15 are supported.

Each of the drawers 13 may be pulled outward from the cabinet by a handle 30*a* (shown dotted) and returned by pushing in on the handle.

Supported by each of the drawers is a record storage tray 16 which comprises a front panel 17 having side flanges 18. The flanges 18 are provided with a guide or cam slot 18*a* having an enlarged opening 18*b* for entry of the bearing to be described.

The front panel 17 also includes a bent back flange portion 17*a* which is held in place by a hold-down member or comb 19 riveted to a pan to be described.

The flange portion 17*a* and hold member 19 cooperate together to prevent bending of the front panel 17 by the operator. At 20 there is shown a rear panel which includes side flanges 21 which overlap with flanges 18 of the front panel.

Each of the rear or back panel side flanges 21 as shown in FIGS. 3, 4, 5 and 6 support bearing means or member 22. As may be seen in FIG. 6 the bearing may comprise three discs 22*a*, 22*b* and 22*c* coupled to the flange 21 by a screw. The disc 22*b* fits within the slot portion 18*a* for slideable motion and is held in place by the larger guide discs 22*a* and 22*c*.

The panels 17 and 20 are supported on a pan assembly 25 which includes a lower pan portion 25*a* and an upper pan portion 25*b* which supports the records to be stored between the panels. The pan portion 25*b* is preferably ribbed as shown laterally to prevent slipping of records e.g., cards, and front to back for card indexing.

At the rear of the back panel there is shown a rear hold down or comb 28 riveted to pan portion 25*a* and

engaging pan portion 25*b*. The panels 17 and 20 include tabs 17*c* and 20*c* respectively with bent portions 17*d* and 20*d*. The tabs 17c and 20c are positioned through cutouts 26 in pan 25*a* and are held in place by the bent portions 17*d* and 20*d* positioned below the top surface of the pan, (see FIG. 7 which shows in detail the mounting of the rear panel). The front panel is similarily supported by the pan. These tabs 17*c* and 20*c* cooperate with pan 25*a* to form a hinge for rotary motion of the front panel 17 and the rear panel 20 respectively.

The rear panel 20 flanges 21 supports stud mounted ball bearings 27 which are guided by cams 30 and 31 mounted on each interior side or uprights 10*a* of the cabinet by rivets or screws.

When the drawer 13 is opened as shown in FIG. 4 carrying the tray 16 therewith, the weight of records 32 on the rear panel 20 causes the rear panel 20 to rotate away from the front panel 17 and at the same time causes the front panel to rotate as shown in FIG. 4 as the bearing 22 slides within the slot 18*a*. The slot 18*a* not only acts as a camming surface but limits the rotation of said panels when the top of the slot is reached. Preferably the front and rear panels "V" open to an included angle of about 40° to make for easy viewing of the records.

Upon return of the drawer and tray 16 into the cabinet 10, the front and rear panels rotate toward each other as the roller 27 engages the upper cam 30. Preferably the front panel 17 returns to a position vertical to the pan as shown in FIG. 6 and the rear panel returns to a position of about 7° from the vertical so that the records are registered to the back when stored.

As may be observed in FIG. 3, the records 32 are stored so that they are resting and tilted against the rear panel so that when the drawer and tray are pulled out of the cabinet as shown in FIG. 4 the records will all be facing frontwards registered to the back.

It should also be understood that the tray itself can be directly supported on rollers and be mounted in a cabinet and in this situation a tray would take the place of a drawer and a drawer would not be needed.

It will thus be seen that a new and improved record storage system has been provided which makes record storage and access economical.

Since certain changes may be made in the disclosure contained herein without departing from the spirit and scope of the invention it is intended that all matter contained in the foregoing description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also understood that the following claims are intended to cover all the generic and specific features of the invention herein described and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

I claim:

1. In a record storage system, a tray comprising a pan, front and back panels supported by the pan and being coupled together at their sides for pivotal motion, means for limiting pivoting of said panels, including flanges which overlap each other and wherein bearing means is supported by the flanges of one of said panels and is supported in slots provided in flanges of the other of said panels.

2. In a system according to claim 1 wherein support means is provided for supporting the tray and wherein camming means is provided for pivoting said panels upon movement of said support means.

3. In a system according to claim 2 wherein said system includes a cabinet and wherein said camming means for pivoting said panels is supported by said cabinet.

4. In a system according to claim 2 wherein said means for said panels are hinged to said pan.

5. In a system according to claim 3 wherein said flanges of one of said panels supports cam follower means.

6. In a system according to claim 1 wherein said panels are coupled together so that the pivotal motion of one of said panels causes pivotal motion of the other of said panels.

7. A storage system comprising a cabinet, at least one drawer supported by the cabinet for pull-out therefrom, a record storage tray supported by the drawer and including a pan, front and rear panels supported by said pan for pivotal motion, means for pivoting said front and rear panels toward each other upon the closing of the drawer to return the tray into the cabinet, said panels including side flanges that overlap each other and which are slideably coupled to each other so that the pivotal motion of one panel pivots the other of said panels, each of said flanges of one of said panels including a slot and wherein each of the flanges of the other of said panels support bearing means which are slideable within said slot and wherein said means for pivoting said front and rear panels toward each other including camming means supported by said cabinet and cam follower means for engaging said camming means, said cam follower means supported by the flanges of one of said panels.

8. A storage system according to claim 7 including means for limiting the pivotal motion of said front and rear panels.

9. A system according to claim 8 including means for inclining said rear panel away from the front panel when said drawer supports the tray within the cabinet or outside the cabinet, and means for positioning said front panel substantially vertical with respect to said pan when said drawer supports the tray within the cabinet and at an incline when said tray is outside said cabinet.

10. A record storage system comprising a cabinet, a tray mounted in said cabinet for withdrawal therefrom, said tray including front and rear panels mounted for pivotal motion, means for pivoting said panels towards each other upon entry of said tray into said cabinet after withdrawal therefrom, and in which said panels are coupled together so that pivoting of one panel causes pivoting of the other panel.

11. A record storage system according to claim 10, in which there is provided means for limiting the pivoting of said panels.

12. A record storage system according to claim 11 in which inclined means is provided for supporting the panels at an angle to permit records stored therein to be visibly observed.

13. A record storage system according to claim 12 in which said means for pivoting the panels includes camming means supported by said cabinet and cam follower means supported by one of said panels.

14. A record storage system according to claim 10 wherein under the weight of records positioned be-

tween said panels, the panels pivot away from each other when the tray is withdrawn from the cabinet.

15. A record storage system according to claim **10** wherein said means for pivoting said panels include camming means supported by said cabinet and cam follower means supported by one of said panels, wherein said panels are coupled together so that pivoting of one causes pivoting of the other panel, and wherein upon withdrawal of the tray from said cabinet said cam follower disengages from said camming means and under the weight of records stored on said tray between the panels, said panels pivot away from each other.

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