July 16, 1929. R. R. WEST 1,721,240

RECORD TRAY

Filed Jan. 24, 1928 2 Sheets-Sheet 1

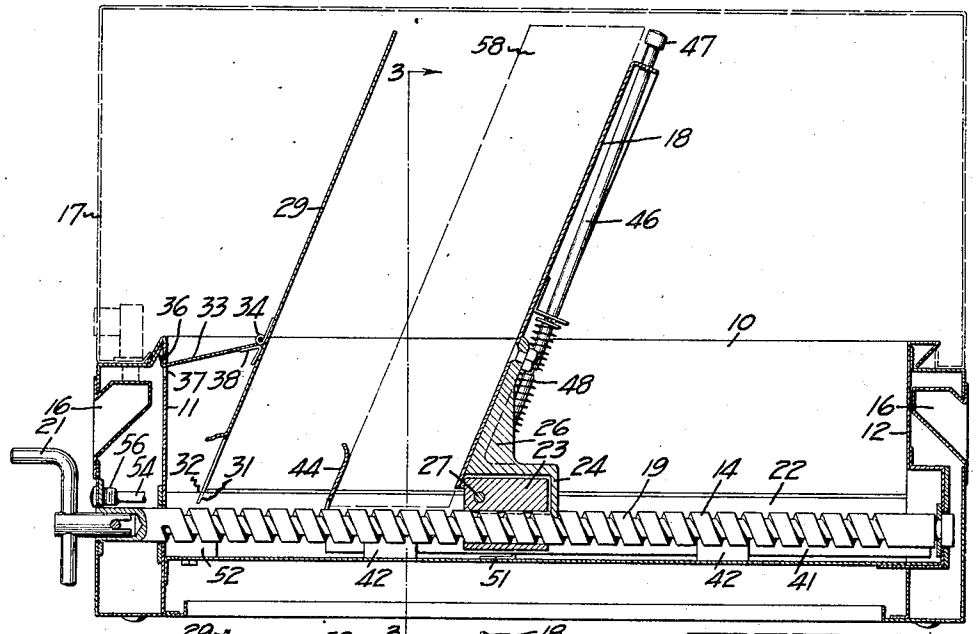


FIG_1_

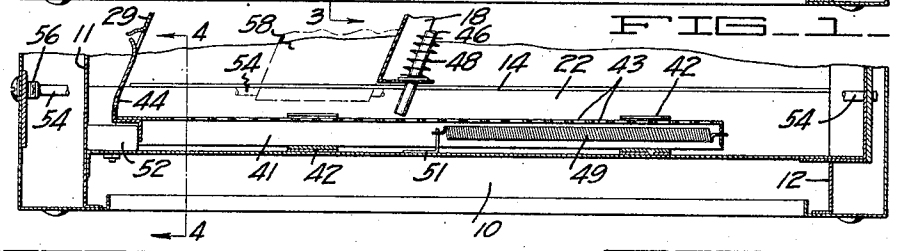


FIG_2_

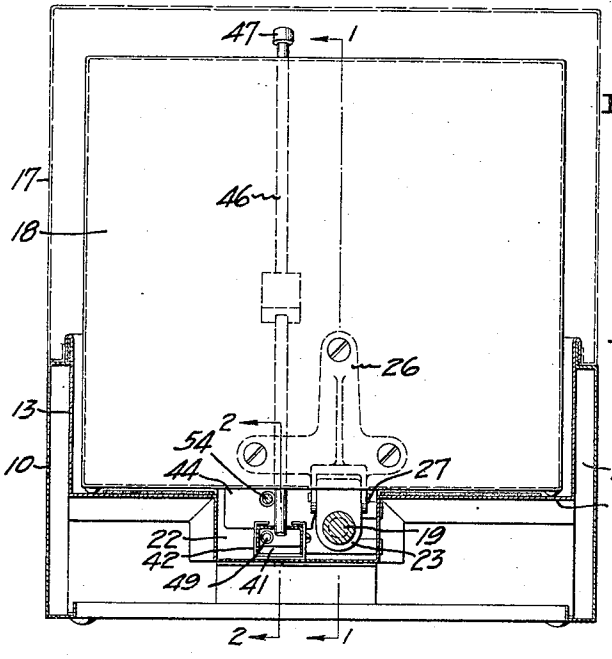


FIG_3_

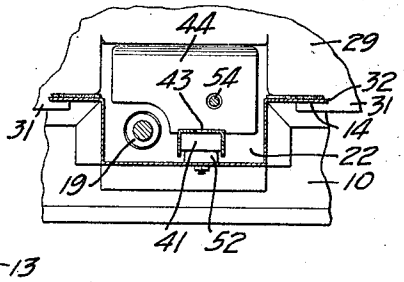


FIG_4_

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RECORD TRAY

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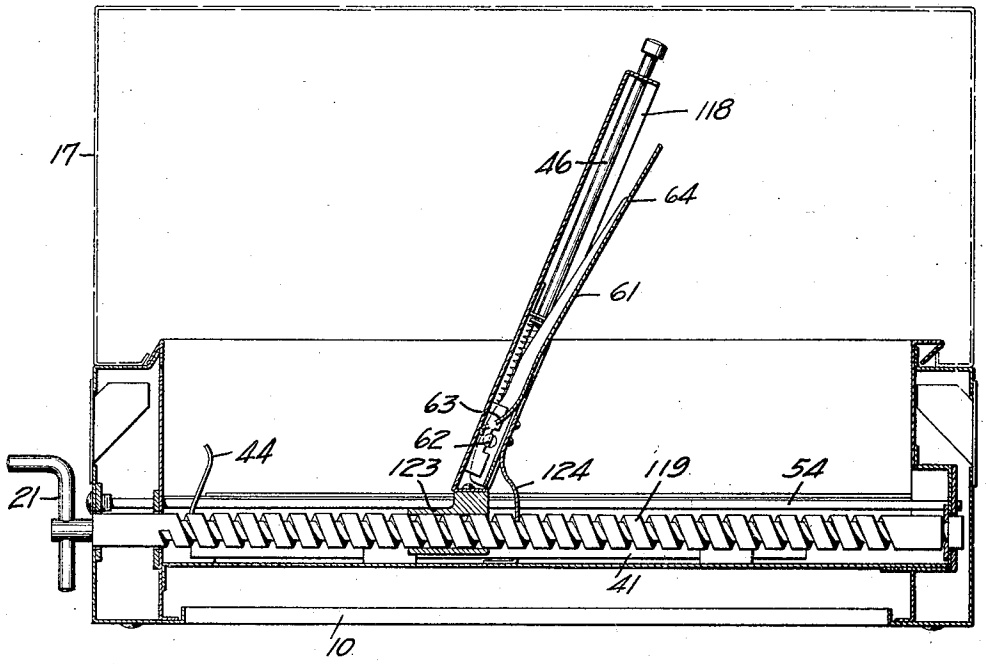


FIG. 5.

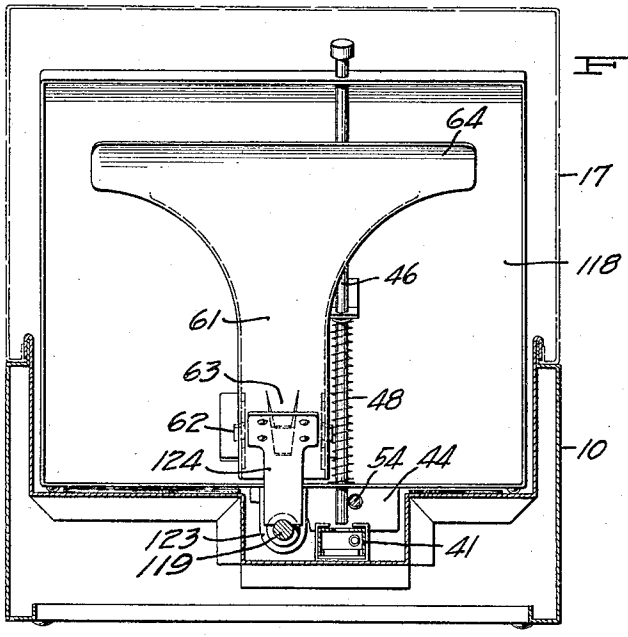


FIG. 6.

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UNITED STATES PATENT OFFICE.

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RECORD TRAY.

Application filed January 24, 1928. Serial No. 249,020.

This invention relates generally to devices for retaining office records.

Record filing trays or filing cabinets generally employ a movable follower for supporting the records in upright or slightly inclined position. To facilitate the posting or removal of papers or other records the follower is frequently made movable by suitable means manipulated by an operator from the front of the tray or cabinet. An improved record tray of this general type is shown in the application of Cecil B. Harrison, Ser. No. 149,816, filed November 22nd, 1926 and entitled Record tray. The device disclosed in that application utilizes a threaded rod for moving the follower back and forth along a record tray, in combination with means which will permit quick shifting of the follower independently of rotation of the rod.

When a record tray or cabinet of the type referred to above contains a substantial number of records, it is general practice to keep the records in compressed condition over night or during periods when the tray is not in use, and then to release the records either by rotation of the threaded rod or other suitable mechanisms or by quickly shifting the follower with trays such as described in the above mentioned application No. 149,816, when it is desired to post records. In any event however the pressure upon the records is released by moving the follower backwardly from the rear of the compressed stack. Since the lower edges of the records rest upon a relatively fixed surface, a superfluous amount of space is thereby provided near the follower for the posting of new records, and for posting of records near the front of the stack, it is necessary to bodily shift the records rearwardly to provide the necessary space. Furthermore with this mode of operation the records adjacent the follower are loosened to the extent that they may rest at an inclination to the follower and may require straightening before the records are again compressed. To overcome this difficulty and in order to facilitate the posting and removal of records from a record tray, I conceived the idea of providing means for bodily shifting the records together with the followers to the rear of the tray before releasing the same for posting new records.

It is therefore an object of this invention to devise a record tray having means for bodily shifting the records together with the follower before releasing the same for posting or removing records.

It is a further object of this invention to generally improve upon a record tray such as disclosed in the above mentioned application No. 149,816.

Further objects of this invention will appear from the following description in which I have set forth the preferred embodiment of my invention. It is to be understood that the appended claims are to be accorded a range of equivalents consistent with the state of the prior art.

Referring to the drawing:

Figure 1 is a side elevational view in cross section illustrating a record tray embodying my invention.

Fig. 2 is a cross sectional view taken along the line 2—2 of Fig. 3.

Fig. 3 is a cross sectional view taken along the line 3—3 of Fig. 1.

Fig. 4 is a detail cross sectional view taken along the line 4—4 of Fig. 2.

Fig. 5 is a cross sectional view similar to Fig. 1 but illustrating a modification of the invention.

Fig. 6 is a cross sectional view taken along the line 6—6 of Fig. 5.

The invention may be outlined briefly as comprising a follower disposed within a record tray or cabinet and movable back and forth within the tray by means of a rotatable threaded bar or other suitable mechanism. Engageable with the forward end of the records, there is a member which may be cooperatively associated with the follower so as to cause the records to be moved bodily together with the follower upon rotation of the threaded rod. When the records have been moved to a desired position, this member may be released with respect to the follower so as to release the records and thus permit making the necessary entries or removals. Means is also provided for permitting quick shifting of the follower independently of rotation of the rod, and in this connection I have shown a construction which is an improvement over that described in application No. 149,816 to which reference has previously been made.

Referring to the drawing for a complete description, I have shown a tray 10 suitable for receiving records of a given size. This tray may either be employed by itself or may be incorporated as a part of a filing cabinet. It

is preferably formed of pressed sheet metal and is formed to provide front and rear walls 11 and 12, side walls 13 and bottom wall 14. The ends of the tray may be provided with suitable hand holds 16, and when not in use may be enclosed by a suitable cover 17.

Within the tray there is disposed a suitable follower plate 18 and this plate is movable back and forth within the tray by suitable mechanism such as a longitudinal rotatable threaded rod 19. The front and rear ends of rod 19 are suitably journaled in the front and rear walls 11 and 12 respectively and is preferably disposed below the plane of bottom wall 14 but substantially parallel thereto. The forward end is preferably adapted to receive a suitable manual crank 21. The bottom wall 14 is formed to provide a longitudinal trough 22, and this trough is preferably offset from the center of the tray for a purpose which will presently be obvious.

For cooperatively associating the rods 19 and the follower 18, there is provided a collar 23 which slidably engages rod 19 and which is connected to follower 18. Associated with this follower there is provided means which is engageable or which may be disengaged at will from the threads of rod 19 thereby permitting optional shifting of the follower independently of rotation of the rod. The particular means which I have shown is operable upon tilting of the follower and comprises a member 24 engageable with the threads of rod 19 and carried by a bracket 26 which in turn is mounted upon follower plate 18. Bracket 26 is pivotally secured to collar 23 as by means of pin 27. By tilting follower 18 forwardly member 24 is disengaged from rod 19, while when the follower is swung rearwardly member 24 engages rod 19 so that follower 18 is carried backwardly or forwardly by rotation of rod 19. Near the forward end of the tray I provide a relatively stationary follower plate 29 and this plate is preferably made removable from the tray. For example one suitable construction which I prefer to employ utilizes a pair of projecting lugs or tabs 31 upon the lower edge of plate 29 and which project through slots 32 provided in the forward portion of bottom wall 14. For retaining plate 29 in a definite angular relationship with respect to follower plate 18, there is provided a brace member 33 having a hinge connection 34 with plate 29, and having tabs 36 which may be inserted through slots 37 to interlock with the front wall 11 of the tray. Member 33 is resiliently urged toward locked position by means of spring 38.

With a record tray such as explained above, it is obvious that if a stack of records are compressed between followers 18 and 29, and an operator turns crank 21 to move follower 18 backwardly, the rearmost records will be loosened and will fall against the follower 18. In posting additional records it is then necessary to manually move the records bodily against the follower 18 after which they are separated at the point where an entry is to be made. In this invention I provide means which will permit bodily shifting of all of the records rearwardly together with the follower 18 upon operation of crank 21. One suitable mechanism for effecting this result consists of a member 41 which is carried within the trough 22 and which is arranged substantially parallel thereto but to one side of the threaded rod 19. Member 41 is slidably mounted within trough 22 as by means of brackets 42. It is preferably formed of sheet metal pressed U shaped and has its upper wall provided with a series of apertures 43. The forward end of member 41 is provided with a member 44 in the form of a plate which is adapted to engage records and retain the same in compressed condition between member 44 and the follower 18.

In conjunction with the follower 18, I have provided means engageable with the perforations 43 of member 41, so as to carry this member together with plate 44 with the follower 18. One specific embodiment of this means is in the form of a rod 46 which is slidably mounted upon the rear side of follower 18 and which has its lower end projecting downwardly from the lower edge of follower plate 18 in cooperative relationship with the apertures 43. The upper end 47 of rod 46 projects beyond the upper edge of plate 18 so that it may be manually forced downwardly to force the rod into engagement with one of the apertures 43 of member 41. Normally however rod 46 is urged upwardly to disengaged position as by means of a compression spring 48. Member 41 is preferably urged toward the front end of the record tray by suitable means such as a tensioning spring 49, one end of this spring being secured to member 41, while the other end is fixed with respect to the record tray as by means of bracket 51. Forward movement of member 41 may be arrested as by means of a suitable stop 52 which may be engaged by the forward end of member 41.

Since this record tray is adapted for the filing of records classified by index cards, I preferably provide a longitudinal rod 54 which is disposed within the trough 22 but offset from the center of the tray. This rod may have threaded engagement 56 with the front wall of the tray so as to be readily removable, and forms a convenient means for interlocking with depending tabs of the index cards. Because of its offset condition, the locking tabs on the cards must also be offset.

To explain the operation of the device it will be presumed that a number of records indicated at 58 have been retained between follower 18 and the plate 29. Now if it is desired

to post papers in the file or remove papers previously posted, the operator forces rod 46 downwardly to cause the same to engage one of the apertures 43 of member 41, and then rotates crank 21 in such a direction as to move follower 18 rearwardly. By virtue of engagement between rod 46 and member 41, member 41 is likewise moved rearwardly and the records are kept compressed between member 44 and follower 18, and all of the records are bodily shifted rearwardly of the tray. After the follower 18 has been moved rearwardly a distance sufficient to make the records readily accessible when released, rod 46 is released from member 41, either by manually lifting the same or by tilting the follower 18 forwardly. It is to be noted here that after rod 46 has been engaged in an aperture 43, it will be frictionally retained in this engagement against the pressure of spring 48, due to the force of the compressed records pressing upon the member 44. It is also to be noted that when rod 46 is released by tilting follower 18 forwardly, it is possible to perform two operations simultaneously, namely to both release the rod 46 and to release member 24 from engagement with the threads of rod 19. After member 41 has been released, it immediately returns to its normal forward position because of the tension of spring 49, and the records are released. The records are then in convenient condition to be separated for the insertion or removal of records or other papers and may be retained in this position while the tray is in use. When the tray is not to be used for a considerable time, the records may again be compressed merely by rotation of crank 21.

In that embodiment of the invention shown in Figs. 5 and 6 I have shown means for releasing the follower from the threaded rod 19 without tilting the same. In this instance a member 61 is provided upon the rear side of follower plate 118 and is pivotally secured thereto as by means of pin 62. The lower edge of follower 118 is directly mounted upon a sleeve 123 slidably disposed upon the threaded rod 119. Engageable with the threads of rod 119 there is a member 124 which is secured to member 61 so that when the upper end of member 61 is forced toward the follower 118, member 124 is moved to disengaged position. Member 124 is normally biased toward engaged position as by means of the spring 63. The upper end of member 61 is preferably provided with an extended finger hold portion 64 to facilitate engagement by the fingers of an operator.

I claim:

1. In a device of the class described, a tray for receiving records, a follower movable with the tray, and releasable means for moving filed records bodily with said follower.

2. In a device of the class described, a tray for receiving records, a follower plate movable within the tray, means for retaining the filed records in compressed condition against the follower during movement of the same, and means for effecting release of the records without further movement of the follower plate.

3. In a device of the class described, a tray for receiving records, a pair of plates between which said records may be compressed, means for moving one of said plates relative to the other plate, means for bodily shifting the records along with the movable plate when said movable plate is moved away from the other plate.

4. In a device of the class described, a tray for receiving records, a pair of plates between which said records may be compressed, means for moving one of said plates relative to the other plate, means for bodily shifting the records along with the movable plate and for retaining the records compressed when said movable plate is moved away from the other plate, and means for releasing said last mentioned means whereby said records are rendered accessible.

5. In a device of the class described, a tray for receiving records, a follower movable within said tray, a member cooperably associated with the follower and adapted to retain records between said member and the follower, means for effecting unison movement of said member and said follower along the tray, and means for effecting independent movement of said member relative to the follower.

6. In a device of the class described, a tray for receiving records, a follower movable within said tray, a member cooperably associated with the follower and adapted to retain records between said member and the follower, and manually releasable means for effecting unison movement of said member and follower along the tray.

7. In a device of the class described, a tray for receiving records, a follower plate, means operable from the front of the tray for moving said plate back and forth within the tray, means for releasing the follower plate from said first named means for effecting quick shifting movement of the follower plate, a member cooperably associated with the follower and adapted to retain records between said member and the follower, and manually releasable means for effecting unison movement of said member and said follower plate along the tray.

8. In combination with a record tray having an end portion and a horizontal bottom portion, an abutment plate, means for detachably engaging the lower edge of said plate with said bottom portion, a member hinged to a medial portion of said plate, the axis of said hinge being substantially horizontal,

and means for detachably engaging said member with said end portion.

9. In combination with a record tray having an end portion and a bottom portion, an abutment plate, means for detachably engaging the lower edge of said plate with said bottom portion, a member hinged to a medial portion of said plate, means for detachably engaging said member with said end portion, and spring means for normally urging said member toward engaged position.

In testimony whereof, I have hereunto set my hand.

ROSS R. WEST.