March 14, 1933. J. H. FIELD 1,901,365

FILING DEVICE

Filed Aug. 7, 1926

Fig. 1

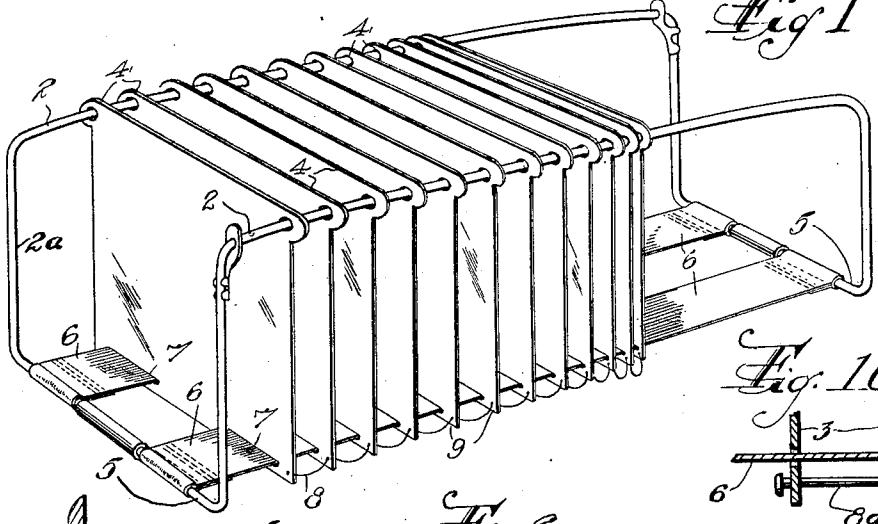


Fig. 10

Fig. 2

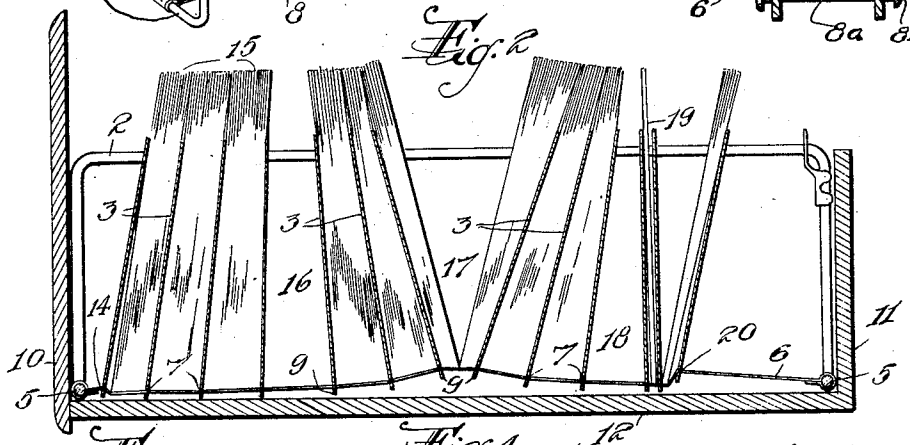


Fig. 3

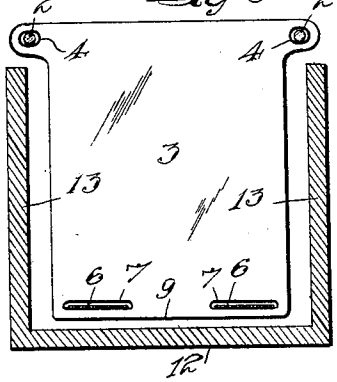


Fig. 4

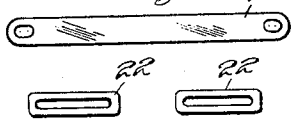


Fig. 5

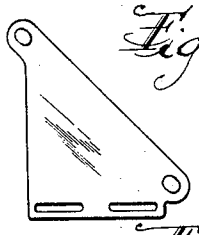


Fig. 6

Fig. 7

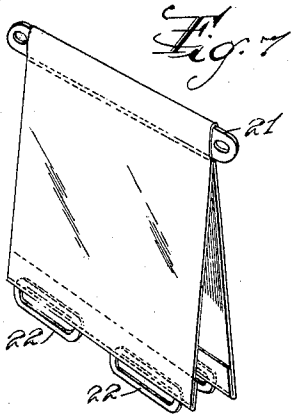


Fig. 8



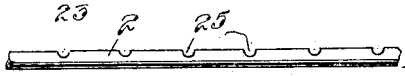


Fig. 9

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UNITED STATES PATENT OFFICE

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FILING DEVICE

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This invention relates to filing devices and has reference more particularly to filing devices in which a plurality of separator members are supported in a substantially vertical position to form pockets for the reception of reference data, phonograph records, sheet music, etc.

In certain types of filing devices now on the market, a series of support bars are arranged in a horizontal plane and a series of pockets for the reception of reference data is suspended from the bars. These pockets usually form round bottoms and when a considerable quantity of reference data of one size is inserted in a pocket, the sheets adjacent each separator wall extend upwardly a greater distance than the sheets near the center of the pocket. The result of this condition is that tops of the data sheets in a series of pockets present a rough, uneven appearance and often the sheets extend abnormally high and rub against the upper wall of the cabinet making it difficult to insert the drawer in the cabinet and injuring the edges of the sheets. Attempts to correct this by having the bottoms of the pockets rest somewhat on a horizontal surface, such as a drawer bottom, have been only partly successful, and it often happens that when a pocket contains only a small quantity of reference data, the bottom of the pocket is unstable and bulges, allowing the bottoms of the sheets to slide down into semi-cylindrical form in no condition for convenient reference.

An object of this invention, therefore, is to provide a filing device of the class described in which the bottoms of the pockets are perfectly flat and corners sharp so that the tops of the reference sheets present a smooth and even appearance.

Another object of the invention is to provide a device in which the width of the pockets may be readily varied within certain limits.

A further object of the invention is to improve the action of devices employing partitions or separators as well as those employing pockets.

A still further object of the invention is to provide a filing device which is very stable so that the pockets can not bulge at the bottom; also to improve filing devices in other respects hereinafter specified and claimed.

Reference is to be had to the accompanying drawing forming a part of this specification in which;

Fig. 1 is a perspective view of my improved filing device,

Fig. 2 is a longitudinal, sectional, elevation of the filing device inserted in a drawer,

Fig. 3 is a transverse, sectional view through the filing device,

Fig. 4 is a modified form of support bar for a separator partition,

Fig. 5 is a modified reinforcing eye for a separator partition,

Fig. 6 is a still further form of partition,

Fig. 7 is a modified form of separator having a double wall,

Fig. 8 is a fragmentary view of a form of partition showing a modified form of suspension,

Fig. 9 is a fragmentary side elevation of a modified form of supporting rail,

Fig. 10 is a modified form of device for limiting the movement of the partitions.

Referring to the drawing by numerals, the main supporting frame has a pair of supporting rails 2 arranged substantially horizontally, from which are suspended a series of separator partitions 3 having side projections at their upper corners with slotted openings 4 therein which loosely engage the rails 2. The rails 2 may be supported in any convenient way but are preferably provided with downwardly extending arms 2*a* at each end, the pair of said arms at each end being joined together by bottom members 5. One or more flexible elements or strips 6 are connected at each end to the bottom member 5 in

such a way that the resiliency of the four spring corners where the rails are bent down to form legs, keeps the strips 6 under tension at all times. The portions 2^a and 5 form part of the main frame with the rails 2. Clips 2^b are mounted on the rails 2 at opposite ends to limit the sliding of partitions 3 thereon.

The bottom corners of the partitions 3 are provided with slots or openings 7 which loosely and slidingly engage the strips 6 so that the bottoms of the partitions 3 are free to move longitudinally of the strips 6, this movement or separation of the partitions, however, being limited by connecting cords or chains 8 secured between the partitions' adjacent bottom corners 9. If desired, links $8a$ having heads $8b$ may be provided (Fig. 10) instead of cords 8 for limiting the separation of the bottoms of the partitions 3. In this form of the device, the partitions 3 are preferably made of metal and the strips 6 are preferably made of a flexible material such as heavy cotton fabric but the strips 6 may be of a more rigid material if desired.

It is seen in Fig. 1 that the filing device forms a self-contained unit which may be inserted in a file drawer such as that shown in Fig. 2 in which 10 is the front wall of the drawer which has rear wall 11 and bottom 12. The dimensions of the various parts of the device are such that as the partitions 3 are suspended from the rails 2, the bottoms of said partitions 3 preferably clear the bottom 12 of the drawer when the pockets are empty. This condition is also provided by a slight upward arching of the rails 2 which normally slightly lifts the middle partitions when the pockets are empty or partially filled, thus causing the bottoms of partitions 3 to engage the bottom of strip 6 so as to provide a definite friction between the said strips 6 and partitions 3 to prevent accidental spreading of said partitions. When the pockets are filled with reference data, the rails 2 straighten out somewhat as shown in Figure 2 and strips 6 sag in the middle until the bottoms of the partitions 3 rest on the drawer bottom 12 which then aids in carrying the load. For preventing injury to fragile material such as talking machine records, it is preferable that the flexible strip 6 be supported at sufficient height so as not to come in contact with the hard drawer bottom or platform on which the file may be resting, when said flexible bottom may act as a cushion upon which the fragile material may be dropped. In Fig. 2 is shown the results obtained by various loadings and conditions of the file. The three front pockets are full of material causing a slight distortion of strip 6 at 14. Pocket 16 is empty while pocket 17 is open for inspection by separating the tops of adjacent partitions to form a V-shape opening which causes an upward lifting of strips 6 at g. Pocket 18 is empty and the next pocket has only a small quantity of material 19 so that the material in the end pocket causes a distortion of the strip 6 at 20 adjacent the bottom of the end partition. It should be noted that the tops of the reference sheets would be smooth and even in appearance when the file is in normal position due to the fact that the bottom of all sheets make full contact with the bottom strips 6.

The distortions 14 and 20 prevent partitions 3 from spreading due to the vibration of moving the drawer in and out of its cabinet. In other filing devices of this character it has been necessary to use a follower block at the rear of the pockets to prevent accidental spreading of the pockets when only partly filled.

Thus the weight of the contents resting on the flexible bottom 6 enables that bottom to resist distortion when the lower edges of the partitions are lifted by changes in their angles of inclination as when opening the file. This also causes the filed contents to return to their position after the disturbing pressure is removed. Assisting in this is the elasticity of the flexible element 6 which provides a natural resistance to the inclination of the separators and this elasticity alone provides sufficient resistance when the file is lightly filled.

In some cases it is preferable to make the partitions 3 of less rigid materials than metal, such as cardboard, cloth, etc., in which case a metal supporting strip 21 (Fig. 4) is secured across the top of each partition and is provided with apertured end portions extending beyond the opposite sides of the partition. In this case the slots 7 are substituted for by providing rigid eyelets 22 (Fig. 5) which are secured to the partition to form projections beyond the lower edge of the same. In Fig. 7 is shown the application of the members 21 and 22 to a two-leaved partition made of a material such as cloth. It is not essential that the two rails or other supports be on the same horizontal plane since in Fig. 6 is shown a triangular shaped partition for suspension on rails of unequal height. Slots 4 in partitions 3 may be replaced by hooks 23 or projections 24 (Fig. 8) which permit the removal of the partitions from the rails. One side of the partition may have a hook 23 and the other side, a projection 24 as shown in Fig. 8, or hooks or projections may be used at both ends if desired. Rails 2 may have notches 25 as in Fig. 9 to locate the partitions 3 in spaced relation. The partitions 3 may have a special means as shown in Fig. 10 for limiting relative separation of the bottom portions including pins 8^a extending through openings in adjacent partitions and having heads 8^b thereon. The heads engage the partitions when separated and prevent further separation but do not interfere with the separation

of the upper ends for providing access to the contents of the file.

I would state in conclusion that while the illustrated examples constitute a practical embodiment of my invention, I do not limit myself precisely to the details herein illustrated and described, since manifestly the same can be considerably varied without departing from the spirit of the invention as defined in the appended claims.

I claim:

1. A filing device comprising a frame member having rails, a plurality of sectionalizing elements mounted at their upper ends for free movement toward and from each other along said rails, and a flexible strip supported at the ends thereof in a plane substantially parallel to said rails, said sectionalizing elements loosely engaging said flexible element at their lower ends.

2. A filing device comprising a frame member having rails, a plurality of sectionalizing elements mounted at their upper ends for free movement toward and from each other along said rails, and a flexible strip supported at the ends thereof in a plane substantially parallel to said rails, said flexible strip being sufficiently spaced from said rails to exert a tension on the sectionalizing elements.

3. A filing device comprising a container open at its upper side, a frame member mounted in the container, a plurality of partitions mounted upon said frame member for free sliding movement toward and from each other, and a flexible element supported at the ends thereof by said frame member, said partitions loosely engaging said flexible element so that said flexible elements forms the bottom of the filing body.

4. A filing device comprising a container open at its upper side, supporting means mounted in the container, a plurality of partitions mounted for free movement towards and from each other upon said supporting means, for maintaining said partitions in place and substantially upright, said means including a flexible bottom strip fastened at its ends in a substantially horizontal plane, said strip being loosely and slidably supported at intervals in the lower ends of the partitions.

5. A filing device comprising a frame member having two substantially parallel and horizontal supporting members, a plurality of partitions, transversely and slidably suspended from said supporting members, a flexible bottom fastened at the ends thereof to said frame member and substantially parallel to the supporting members, said flexible bottom being loosely engaged by the lower edges of the partitions so that said lower edges are free for longitudinal movement along said flexible bottom, and means for limiting the separation of said lower edges.

6. A filing device comprising a frame member, a plurality of partitions loosely suspended at their upper ends from said frame member, and a bottom element yieldingly supported at the ends thereof by said frame member and loosely and slidably engaging the bottoms of said partitions to form a file bottom.

7. A filing device comprising a frame member having a plurality of substantially horizontal rails of resilient material slightly arched at the center thereof, a plurality of partitions suspended from said rails, and a flexible bottom strip fastened at its ends to said frame member and substantially parallel to the supporting rails, said strip being loosely and slidably supported intermediate the ends thereof by the bottom of said partitions.

8. A filing device comprising a frame member having a plurality of substantially horizontal rails of resilient material slightly arched at the center thereof, a plurality of partitions suspended from said rails, a flexible bottom supported at each end below said rails by said frame member, the bottoms of said partitions being adapted for movement longitudinally of said flexible bottom, and connecting means adjacent the point of contact of said partitions and flexible bottom for limiting the separation of said partitions along said bottom.

9. A filing device comprising a plurality of substantially horizontal rails, a plurality of downwardly extending end members associated with said rails having means cross-connecting the lower ends thereof in pairs, a bottom member connected at each end to said connecting means, and partitions loosely and slidably connected to said rails and bottom member.

10. A filing device, comprising a support, a plurality of substantially rectangular partition members having portions at their upper corners and lower portions formed with openings, and partition-supporting elements extending through said openings and supporting said partition members for relative sliding movement longitudinally of said support and permitting separation of the upper ends of adjacent partition members for providing access to a pocket therebetween.

11. A filing device, comprising a support, a plurality of substantially rectangular partition members having portions at their upper corners and lower portions formed with openings, and supporting and guiding elements extending longitudinally of said support, each element loosely engaging in each partition member, said elements permitting relative sliding movement of said partition members longitudinally of said support, the loose engagement of said partition members with said elements permitting the movement of adjacent partition members to relative in-

clined positions for providing access to a file section therebetween.

12. A filing device comprising a container open at its upper side, longitudinally extending supporting means at opposite sides of the container, a partition in said container slidably suspended on said supporting means transversely of said container, and means mounted in the container and resiliently engaging said partition for normally retaining said partition in said sliding engagement with the supporting means.

JAMES H. FIELD.