June 16, 1959 R. F. HOHMAN 2,890,798

DEVICES FOR SORTING OF MEDIA

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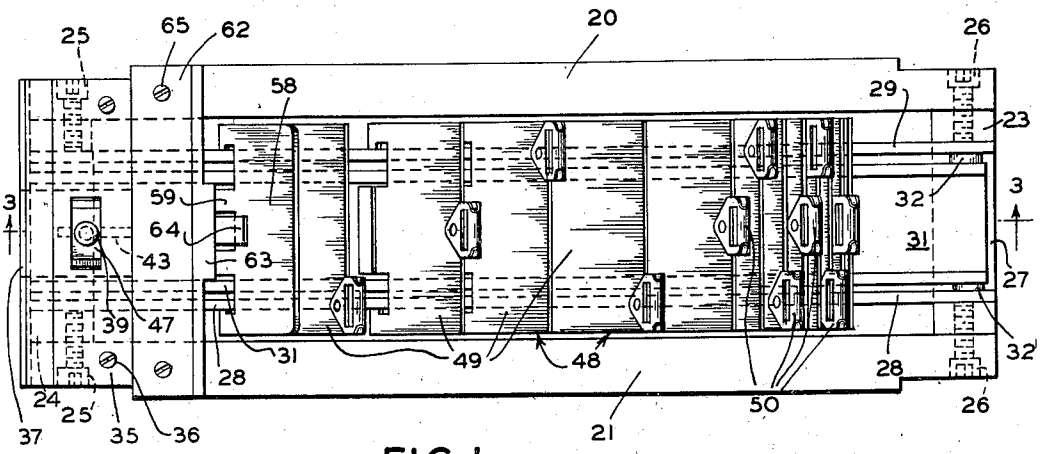



FIG. 1

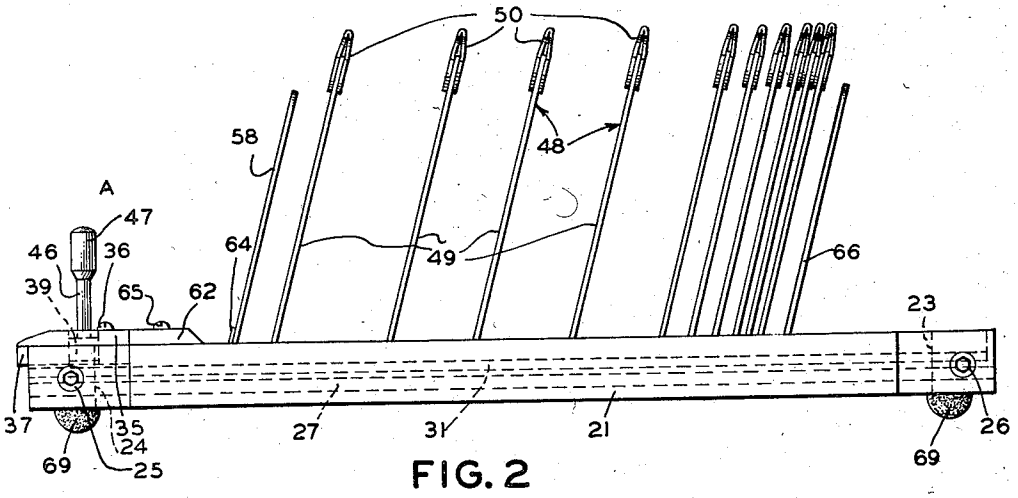



FIG. 2

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FIG. 3

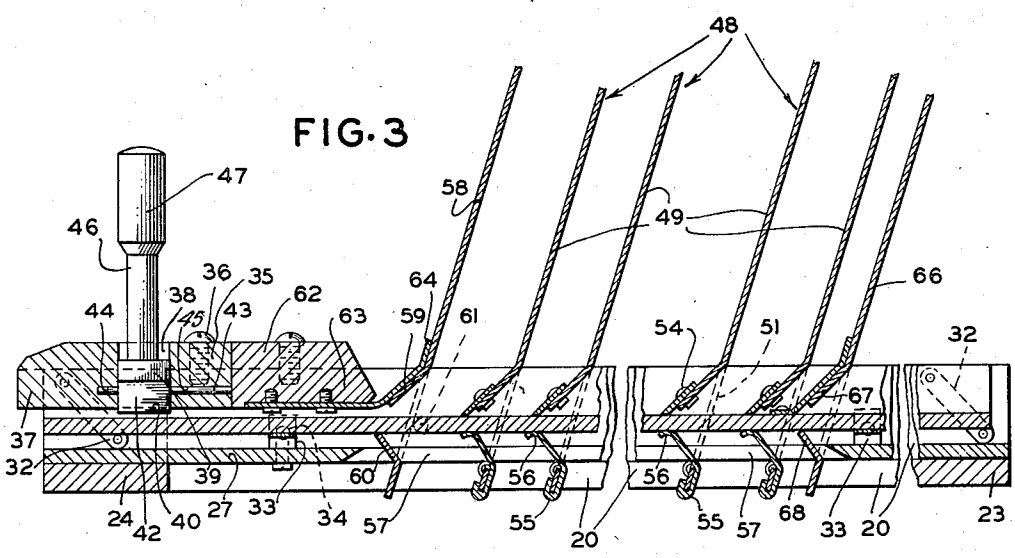
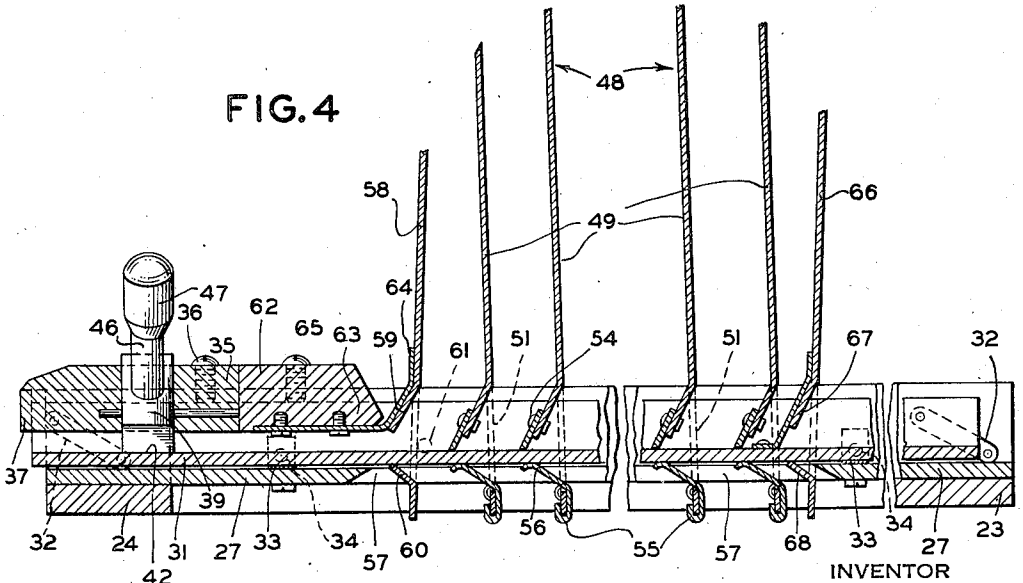



FIG. 4




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FIG.10

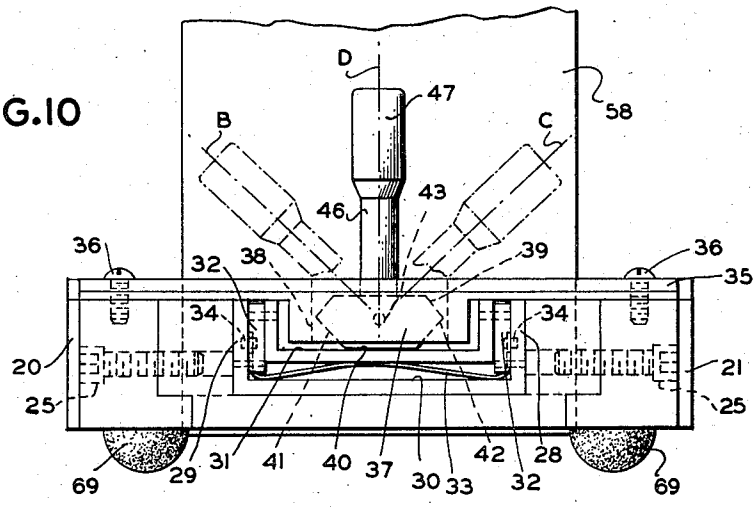



FIG.5

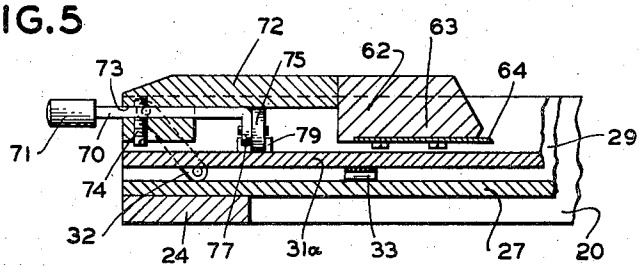
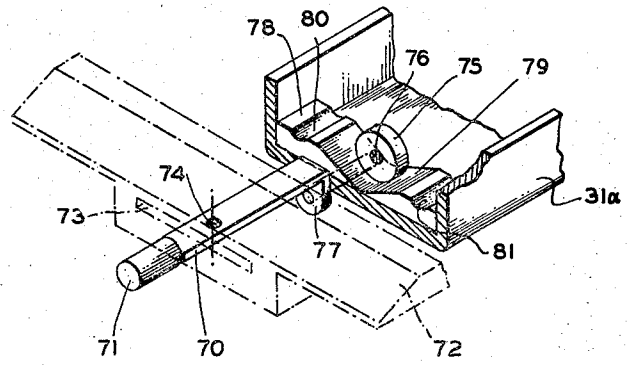



FIG.6




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FIG. 11

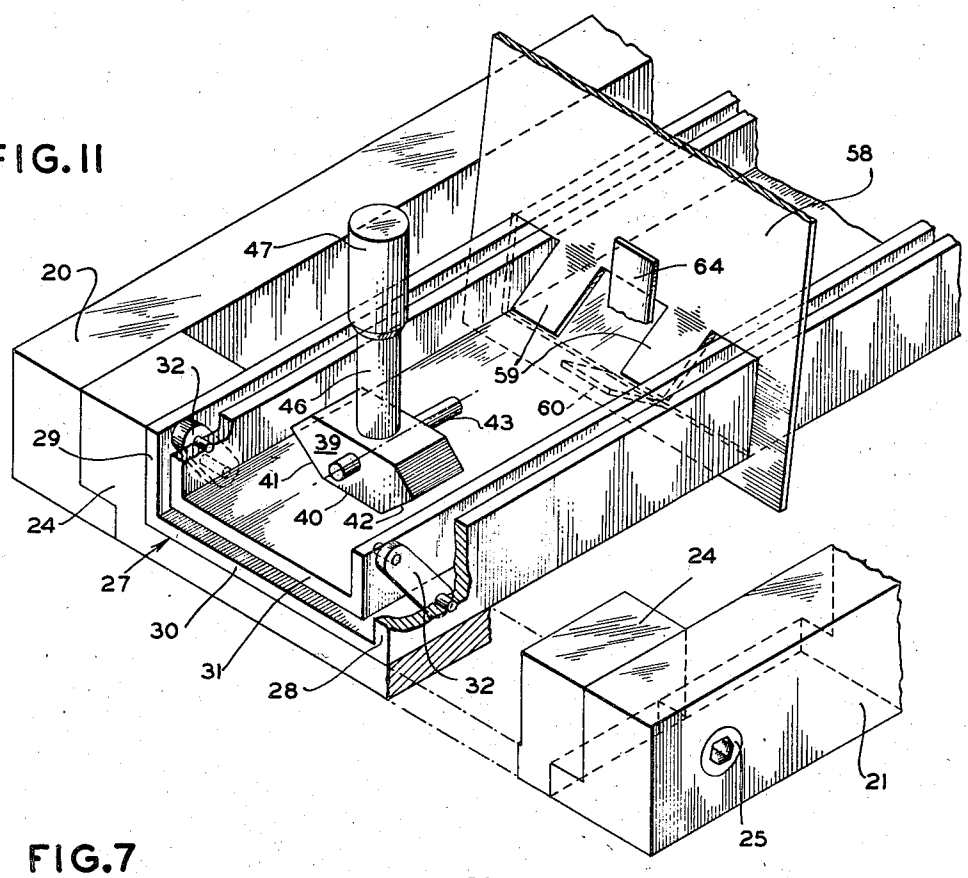



FIG. 7

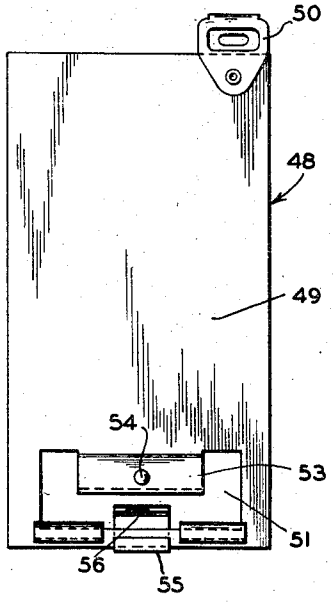



FIG. 8

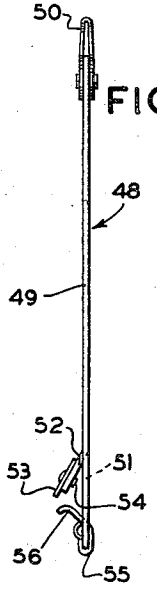
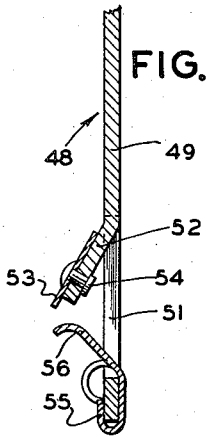



FIG. 9




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United States Patent Office

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# DEVICES FOR SORTING OF MEDIA

Robert F. Hohman, Beverly, Mass.

Application March 21, 1957, Serial No. 647,664

11 Claims. (Cl. 211—11)

The present invention relates generally to the art of filing and sorting of media.

In modern business transacting, it is necessary to sort, or accumulate or store documents of a great variety of thicknesses, sizes and purposes. In order to logically classify such documents and present them in a form for ready access, a number of devices have been proposed among which are leaf-type or horizontal sorters and upright or vertical sorters.

The present invention is concerned with improvements in or relating to such devices of the general type known as vertical sorters.

In the art, such vertical sorters have become recognized as a desired means for use for classifying, sorting, and filing of media, such as smaller area documents, for example, sales slips, receipts, bank checks, and the like. The general characteristics of such devices as are specific to the present invention are a plurality of substantially upright leaves or dividers, each being capable of bearing identifying indicia, between the leaves of which are placed the media to be stored. Thus, the leaves must be movable to accommodate the media and to permit ready sorting, examination and/or removal of a selected item. Not only individual sorters, particularly for smaller area media, are contemplated by the present invention but also means for classifying and permitting sorting of any media, of whatever size or area since the major characteristic of substantially upright leaves spaced apart for the accommodation of media is the only criterion.

Vertical sorting devices of conventional type comprise a series of guides, leaves, dividers or index cards, usually with tabs, projecting frames, or like indicia bearing means in staggered position across the width of the guides and arranged at the upper edges, for the basic purpose of identifying in a desired sequence a plurality of inter-related subject indicia. Conventionally, the guides or dividers have a suitably shaped hole at the lower center through which a rod passes and to allow each guide to be swung forward or backward to accommodate media between the guides and to permit ready access to such media between the guides, the holes are of greater cross-sectional area than the rod. Also, with devices of the conventional type disclosed, it is not possible to easily move the dividers from front to back, which is the logical direction. That is, the only bodily movement which any divider can take with any ease is from back to front, which is the reverse movement to that most desired by the operator.

In all such devices of the prior art other disadvantages have existed. For example, when two parallel dividers are parted at the top to form a large V-opening for receiving media, the dividers have to be manually returned to parallel position. Also, it is necessary to have a depending tab on each divider to receive the rod and these become entangled with the proximate tabs when the media is bulky causing one divider to follow another, and preventing easy formation of a receiving V-opening.



It is the principal object of the present invention to provide an improved vertical sorter of the general type described which overcomes each and every one of the objections, disadvantages and problems identified above with respect to existing vertical sorting devices.

It is a further object of the invention to provide a vertical sorting or like filing device having front to back searching facilities, without binding or like drawbacks, which is fast in operation, whether sorting, classifying, examining, filing or searching, which is simple to operate and which requires a minimum of manual actions.

Other objects of the invention will be made clear in the accompanying description or will be obvious therefrom.

In its most important aspect, the present invention herein described is an improvement over the existing types of sorters in that it eliminates the difficulties and requirements for a conscious effort on the part of the operator or searcher to make the necessary adjustments. It furthermore provides a means for releasing the pressure on the dividers at the completion of a sort thus simplifying the removal of the sorted media from the sorting device. This invention as a preferred modification provides a vertical sorter having the following characteristics and advantages:

(1) It always will return the dividers to their approximate correct angle for best visibility and easiest reading without any conscious effort on the part of the operator.

(2) It will space any distance between any two or more dividers and this spacing will be sufficient only to compensate for the displacement required by the actual media being placed in the device; this is accomplished without any conscious effort on the part of the operator as a by-product of the normal sorting function.

(3) The dividers thereof will not "follow up," one on the other nor "run away," as is usual in conventional devices.

(4) It eliminates the need for a follower block such as is customarily used on all filing equipment of this general type.

(5) It has a release mechanism which facilitates removal of sorted media.

While the invention will be generally illustrated and described with respect to a sorter as defined above particularly designed for small area media, for example, bank checks or sales slips, it is obvious that the same principles can be utilized for any size, area or type of media and that the device specifically described and illustrated as a sorter can be incorporated into any conventional card tray, file cabinet, ledger tray or similar existing vertical sorting equipment, giving said equipment all the advantages described and specifically enumerated hereinbefore and hereinafter.

Reference will now be made to the accompanying drawings which illustrate certain modes of carrying out the present invention and specifically define the basic method of operation of the device of the present invention.

Of the drawings:

Figure 1 is a plan view of a sorter of the type herein referred to, having the improvements in accordance with the present invention;

Figure 2 is an elevation view of the unit of Fig. 1;

Figure 3 is a cross-sectional view of the unit of Fig. 1, taken on the line 3—3 of Fig. 1, with the parts shown in a first or locked position;

Figure 4 is a cross-sectional view similar to Fig. 3 and copied therefrom, but showing the parts in another or unlocked position, to illustrate the operation of the device according to the invention;

Figure 5 is a fragmentary detail of an operating means

for locking and unlocking the unit of the present invention;

Figure 6 is a fragmentary detail in isometric projection of the modified locking and unlocking means of Fig. 5;

Figure 7 is a front view of one of the novel dividers of the present invention as used in the unit of Fig. 1;

Figure 8 is a side elevational view of the divider of Fig. 7;

Figure 9 is a fragmentary enlarged detail of part of the divider shown in Fig. 7;

Figure 10 is an elevational view of the unit of Fig. 1 taken at the front or operating end; and

Figure 11 is an isometric detail view of the operating parts of the unit of the present invention, taken at a point from the front end of the unit, particularly showing a locking and unlocking mechanism.

Referring now specifically to the drawings, particularly Figures 1 to 5, the vertical type sorter in accordance with the present invention has first and second main brace bars 20 and 21, each being elongated and rectangular. Bars 20 and 21 are joined at the respective ends by U-shaped cross-bars 23 and 24, the bars 20 to 24 comprising a generally rectangular frame. The U-shaped portion of cross-bars 23 and 24 depends downwardly as shown in the drawings. The bars 20 to 24 constituting the main frame of the unit are bolted together by suitable screw means such as the illustrated screw attachments 25 and 26 shown particularly in Figures 2 and 5, the screw attachments being conventional.

Seated within the depending U-shaped cross-bars 23 and 24 and co-extensive in length with the brace bars 20 and 21, there is provided a main channel member 27, having its base embraced by the U-shaped member and its leaves extending upwardly, said leaves being identified at 28 and 29 in Figures 1 and 5. The base of the channel member 27 is shown at 30. Channel 27 is suitably firmly attached to the U-shaped cross-bars 23 and 24 by conventional means (not shown) whereby the unit thus described comprises a rigid structure.

In accordance with the present invention means are provided for establishing a moving track within the embrace of the main channel 27, which track is suitably supported to assume various positions within said main channel and relative thereto. To this end a further channel is provided shown at 31 with its base of lesser width than the main channel 27 and its leaves of lesser height than those of the main channel 27, whereby the channel 31 may freely nest within the channel 27 and move relative thereto. Channel track 31 is suitably supported with respect to channel 27 as by hangers 32, said hangers occupying the space between the leaves of main channel 27 and the leaves of the channel track 31 and being attached at one end to channel 27 and at the other end to channel track 31, the hangers 32 being angularly related as illustrated whereby channel track 31 may move within main channel 27 and be depressed relative thereto by downward pressure upon the base of channel track 31.

It is desired that channel track 31 shall be normally spring-urged away from main channel 27 to which end a suitably shaped leaf spring 33 supported by screws 34 (see Figure 10) is arranged between the two channels at one extreme end of the unit, specifically at the end which may be designated at the front or operating end A shown in Figure 2 for example. Thus, normally the channel track 31 will be held in its uppermost position relative to main channel 27 by the spring pressure exerted on its base by spring 33, as shown in Figures 1, 2 and 3 of the drawings. This is designated for illustration as a locked position.

In accordance with one feature of the present invention it is desirable to provide means whereby the channel track 31 may be depressed with respect to the main channel 27 against said spring 33 and held in that position, namely, in the lowermost position that the channel track 31 can occupy with respect to main channel 27. This is



designated for illustration as an unlocked position. To this end there is provided at the operating end A a cross-bar or cross-arm 35 extending over the ends of the main brace bars 20 and 21 and attached thereto by screws 36. The cross-arm 35 is comprised of a flat main plate with a depending portion 37 of generally rectangular formation which is adapted to lay within the embrace of the leaves of the channel track 31. A portion of the cross-arm 35 is cut away in a rectangular aperture 38, this aperture passing through the depending portion 37. Seated therewithin and extending to a position below the depending portion 37, there is arranged a cam member generally shown at 39, having a main flat face 40 which is parallel to the upper face of the base of channel track 31 and two angular side faces 41 and 42 (see Figure 10). In order to permit limited rotational movement of the cam member 39 within the rectangular aperture 38 a pin 43 passes through the body of the cam member 39 and into contact with suitable bores or apertures 44 and 45 bored through the depending portion 37, the bores being in the longitudinal axis of the device, namely, parallel with main brace bars 20 and 21. The pin 43 is a tight fit in its receiving bores through the body of cam member 39 and is adapted to move therewith. The receiving apertures 44 and 45 within the body of the depending portion 37 are of such dimension as to permit rotation of the pin 43 within the bores 44 and 45 whereby the cam member 39 can be rotated within the receiving rectangular aperture 38.

In order to permit such limited rotation there is provided attached to the cam member 39 an upstanding handle 46 having a portion 47 which is suitably enlarged for ready grasping whereby upon movement of the handle 46 to the left or right of Figure 10, as will be shown in the dotted positions B and C, the cam member will be swung to place either face 41 or 42 into contact with the base of the channel track 31. The handle 46 is suitably connected in any desired manner to the cam member 39 to move therewith and thus provide said movements from the three positions shown in Figure 10 wherein at position D the handle 46 is upright with the flat face 40 in contact with the base of the channel track 31 when the channel track 31 will be raised relative to the main channel 27 by means of spring 33. By swinging the handle 46 to either position B or C the faces 41 or 42 will make contact with the base of the channel track 31 and force this down relative to the main channel 27 against the action of the spring into the lowered position at the extremity of the movement provided by the hangers 32. These two positions are shown clearly in Figures 3 and 4 where in Figure 3 handle 46 is shown upright and in the position of the handle at D in Figure 10 and where in Figure 4 the handle is angular and in position B of Figure 10.

It will of course be readily recognized that the shape of the cam faces 40, 41 and 42 are such relative to the distance between the center of rotation at 43 that when the arm or handle 46 is moved from the position D to the position B, or from D to the position C in Figure 10, a direct cam action to force the channel track 31 downward would take place.

In accordance with the present invention a plurality of dividers 48 are suitably mounted to be associated with the movements of channel track 31 and the main channel 27. To this end, the dividers 48 of the present invention are specifically as shown in the details comprising Figures 7, 8 and 9. Dividers 48 are provided with a body 49 comprising a rectangular card as is conventional, this being formed of metal, cellulosic material or of transparent plastic, as examples. As is usual, there is provided an index 50 at the top of the dividers, the position of the index 50 varying laterally across the card to permit of ready identification of the index shown therein. This is a conventional arrangement with devices of the type with which the invention is concerned and there-

fore needs no further description. Referring specifically to Figures 7, 8 and 9 it will be seen that the body of the divider 48 identified as 49 is cut away at its lowest portion with a large rectangular window 51. Furthermore, the window 51 has a leaf 52 of the body material of 49 which has been retained and which has been bent outwardly as shown particularly in Figure 9. This leaf has placed thereover a metallic supporting member 53 coextensive therewith, the unit 52—53 comprising an outwardly extending tongue, and the two members are riveted together as at 54 in order to make them unitary. The lower thin edge of the window is also reinforced with a metal strip comprising a metallic tube which is curled over the lower edge of the body 48 as at 55 forming a reinforcement thereof and having a tongue 56 extending outwardly in the same direction as tongue 53. The two tongues or tabs 53 and 56 are spaced apart as shown particularly in Figures 8 and 9 and actually the distance between these is selected to be a little wider than the distance between the upper and lower faces of the channel track 31. In like manner, the dimensions of the window 51 are such that the lower end of the divider 48 may completely embrace the two channels, channel track 31 and main channel 27, whether these are in the restricted position when the handle is in position B or C or whether they are in the unrestricted position when the handle is in position D as shown in Figure 10, whereby the channels may move relative to one another under urge of handle 46 as previously described without making any direct contact with the main area of the window. However, when in position over the two channels 31 and 27, as clearly shown in Figures 3 and 4, the tongue or tab 53 will be within the leaves of the channel track 31 and will be in contact therewith, whereas the tongue 56 will be in contact with the under face of the channel track 31 for the purpose hereinafter described, to which end the main channel 27 has a longitudinal slot 57 throughout the major portion of its length, the width thereof being equivalent in substance to the width of the tongue 53 and being slightly wider to guide this in its movements and to retain it in contact with the underside of channel 31.

It will be realized that the dimensions of the various apertures in the divider 48 are such as to permit complete guiding of the dividers on the two channels, and particularly on the inner channel, once the dividers have been assembled thereon as specifically shown in Figures 1, 2, 3 and 4. Assembly of the dividers upon the channel is easily undertaken by the removal of the rear U-shaped cross-bar 23 whereby the dividers can be slipped on and the cross-bar 23 replaced to retain them from being taken away from the unit. Thus as clearly shown in Figures 3 and 4 the dividers can move along the channel 31 as desired, depending upon the relative position of channel 27 and track 31. As hereinbefore explained the position of Figure 3 is the locked position, namely, with the channel 27 and track 31 widest apart. In this position as clearly seen the channel 31 is spaced from the main channel 27 and the spring 33 maintains this upward pressure which causes the two channels to be so spaced apart. The tongues 56 are in contact with the lower face of the channel track 31 and particularly the tongues 53 are all in firm contact with the upper face of the channel track 31 and are prevented from being pulled forward at any time by the contact of the tongue 53 with the face of the channel track. Thus in the position of Figure 3 it may be stated that all of the dividers are in upstanding and locked position with the various media to be held between the dividers firmly secured.

The functioning of the device thus described may be in various ways.

When the unit is to be used as a sorter there is no necessity to use handle 46 and its associated parts at all and actually these can be dispensed with except that a positive unlocking of this nature may periodically be of some benefit.

An operator now wishes to insert media between selected dividers 48 as determined by the indicia carried thereby. To this end, pulling the selected divider 48 forward through an arc toward front end A will first cause a V-shaped slot to be made between this divider and the next rearward divider. By this movement also the tab 53 of this pulled divider will press down into track 31 and depress this against spring 33 toward and into main channel 27, thus unlocking all the dividers 48 and leaving these free to swing and move bodily, all except the one divider pulled forward which is being manually held and operatively used to unlock the device. Thus all the dividers will move from the position of Figure 3 to the position of Figure 4. It will be noted that the extremes of arcuate movement from Figure 3 to Figure 4 for each divider 48 goes over and through its center line, the tabs 53 and 56 being deliberately chosen as to angle to permit this. Thus, all of the dividers 48 will first swing forwardly from the angle of Figure 3 through their centers to the slight angle shown in Figure 4 and in this movement the fulcrum or pivot area will change from the tip of tab 53 to the end of tab 56.

As the manual pull on the held divider is now released, after putting media therebehind, the pressure of the media, by its weight, bulk or the act of insertion, or all three, will act against all the dividers to shove these back or "walk" them as they change from the position of Figure 4 back to the locked position of Figure 3. An examination of Figures 3 and 4 clearly shows this change of fulcrum which upon exertion of the smallest pressure must result in a bodily shift which is proportional to that pressure. This unit illustrated automatically compensates for the bulk of the added media as it is placed into position, this being a feature of the present invention providing great advantages over prior art procedures.

When sorting, namely, adding material to the device, this unique use of the divider 48 for operating the locking and unlocking of the channel 27 and track 31 is all that is needed. When unloading the unit, the same procedure may be adopted, it being realized that operation of the front divider 48 will unlock all the others. Thus, a special front plate 58, hereinafter described, may be utilized for unlocking the device and means may be suitably provided to positively retain this, or any divider, in the forward position, to cause a permanent unlocking or unloading position. On the other hand, when unloading the sorter, means such as the handle 46 and cam 39 may be used when such unlocking is desired in a positive fashion.

When using the device of the present invention as an accumulative file, storage file or searching file, the handle 46 with its cam release mechanism will be of greater utility, as is obvious.

When so using the device, if it is desired to make it possible to search through the papers, or to re-sort them, or to add further papers thereto, it is only necessary to swing the handle 46 to either position B or C of Figure 10 and then the parts will assume the position clearly shown in Figure 4, this being the unlocked, loosened or free position for sorting or like searching purposes. As clearly shown in Figure 4 the various dividers 48 still have some contact of the tongue 56 with the lower edge of the channel track 31 but the tongue 53 is substantially free of contact with the upper face of the channel track 31 and in this position they can be pulled forward as will be readily seen by comparing Figures 3 and 4. Thus ready searching can take place in the position of Figure 4 and the dividers can be moved as desired both to examine the contents between the dividers and add or subtract therefrom.

In order to provide a front operator unit against which all of the respective dividers may be pulled, plate 58 may be used. Plate 58 has similar tongues to those provided

on the other dividers except that the upper tongue is provided by a dual fork **59** and a lower tongue **60**. In order to prevent the front plate **58** from going too far forward, a pin **61** is provided extending from the outside of the main channel **27**, and to clearly prevent the front plate from sharing with the full movement of the dividers rearwardly since this is undesirable, a cover plate **62** is arranged transverse of the main brace bars **20** and **21** having a depending block **63** which presses against dual fork **59** together with a spring **64** and passing between the two tongues and into contact with the front plate **58**. Cover plate **62** is secured to the main brace bars **20** and **21** by suitable screws **65**. In like manner, a backing plate **66** may be used being provided with a tongue **67** acting as the upper tongue and a tongue **68** acting as the lower tongue.

From plate **58** and the back plate **66** may be dispensed with if desired and similar dividers to those identified as **48** may be used in the foremost and rearmost positions in the device without departing from the spirit and scope of the present invention. The device hereinbefore described comprises a complete filing unit and can be used in the manner defined without any further encasement if desired. In this event it is preferable to mount the main frame upon suitable rubber bumpers **69** whereby the unit may be located at a desk or like position for use as a sorter. However, it is obvious that the unit may be completely encased as by being placed in a file drawer or in like enclosures, both for the preservation of the contents within the device and for convenience.

The vertical sorting unit of the present invention as hereinbefore described has been shown as being operated by means of a lever or handle **46** which is rotated or swung to the left or right of a central position to cause the unlocking or freeing of the dividers for use for sorting. It is a modification of the present invention to contemplate other means of operating the two channel members, namely channel track **31** and main channel **27**, whereby to obtain the locking and unlocking feature. To this end reference is made to Figures 5 and 6. The particular form of the invention disclosed in Figures 5 and 6 is particularly of use when contemplating a file cabinet drawer or like enclosure for a vertical storage device according to the invention. Referring to Figures 5 and 6 there is disclosed an operating device comprising a handle **70** having a knurled operating knob **71**, capable of being swung within a slot such as may be formed in a suitable casing, shown dotted at **72**. The slot is shown dotted at **73**. The lever **70** will be pivoted as at **74** and has at its extremity a circular cam **75**. Cam **75** is mounted on a pin **76** which is supported in an L-bracket **77** forming part of lever **70**, whereby as lever **70** is swung on its pivot **74** the circular cam **75** will go to the left or the right of Figure 6.

The mechanism of the vertical sorting unit will be identical to that heretofore described with respect to Figures 1 to 4 and 7 to 10, for example, except that the channel track **31** will be slightly modified as shown at **31A** in Figure 6. Mounted within the extremity of the channel track **31A** is a cam follower or groove **78** which has a low depression **79** wherein the circular cam **75** may seat in a relaxed position and raised sections **80** and **81**. As will readily be seen, as the lever **70** is swung to the left or right the circular cam **75** will cause depression of the channel **31A** and will ride on the cam follower **78** into contact with either groove **80** or **81**, in which position the channel **31A** will be lowered against the action of the spring **33** as previously described, for instance, with respect to Figure 10. Thus by pushing the lever **70** over to one side or the other the effect can be obtained as previously described of bringing the channel track **31** into closer contact with channel **27** to release the dividers as hereinbefore described, and by placing the cam follower **75** in its lowest position, namely in the depression or groove **79** when the lever **70** will be in its central position, the channel **31A** will be furthest away from the main channel **27** and the device will be in locked position. It is obvious that other means than those disclosed can be utilized for obtaining the operation of the respective channel track **31** and its associated main channel **27**.

The filing device of the present invention whether used as a sorter as hereinbefore defined or as a storage or accumulating device or for searching, essentially provides a unit whereby fast easy access to the media is obtained, wherein ready introduction of media can be made and where all the problems and disadvantages met with in prior and conventional devices of this nature are met and overcome. Modifications of the device which are obvious within the spirit and scope of the appended claims are specifically herein embodied.

What is claimed is:

1. A vertical sorting device of the type described for receiving media comprising in combination a plurality of dividers each having a rectangularly slotted portion at their lower ends, an elongated horizontally mounted channel with its leaves projecting upwardly and passing through said dividers at the slotted portions, a first angular downwardly and outwardly extending tab projecting from the upper edge of the slotted portion of each divider toward the inner face of the base of said channel, a second angular upwardly and outwardly extending tab projecting from the lower edge of the slotted portion of each divider toward the outer face of the base of the channel, the angles of said tabs permitting an arcuate movement of each divider from a forwardly inclined position through the center line to a rearwardly inclined position, an elongated horizontal support for said channel, a linkage between said channel and support permitting limited vertical movement of the channel relative to said support to an upper and a lower horizontal plane, said tabs acting on said channel to place same in one or the other horizontal plane to cause frictional binding of said upper tabs against said channel in the upper horizontal plane, to lock the dividers from movements along said channel, and to free said upper tabs from binding contact in the lower horizontal plane and allow said dividers to be moved along said channel, by entry of media between the dividers.

2. A vertical sorting device of the type defined for receiving media comprising in combination a plurality of vertical dividers each having a rectangular slotted portion at their lower ends, a pair of tabs each projecting toward the other arranged on the top and bottom of each slotted portion of a divider, an elongated horizontal guide member passing through said slotted portions of the dividers and between the gaps formed between each set of tabs on a divider, a horizontally arranged track embracing said guide member and cut away at its lower face to accommodate said lower tabs and permit them to contact the under face of said guide member when a divider is swung in an arcuate path from a position inclined rearwardly, through center, to a position inclined forwardly, hangers supporting said guide member within said track and permitting parallel vertical movement of said guide member relative to said track, to a plurality of horizontal planes in a first of which the upper tabs contact the upper face of said guide member with a binding frictional grip, and the dividers incline rearwardly, and a second of which the lower tabs contact the guide member with a sliding engagement, any one of said upper tabs on a divider acting to contact said guide member upon the divider being swung arcuately forward from its rearwardly inclined position, to position the guide member in the second horizontal plane, to free all said dividers, and permit said dividers rearward of the divider swung forward to be rearwardly displaced to accommodate the bulk of the inserted media.

3. The device of claim 2 in which said guide member is spring-urged to an upper position relative to said track.

4. The device of claim 2 in which the upper tab of each divider is resilient.

5. A vertical sorting device of the type defined comprising in combination a plurality of slotted dividers between which media may be inserted, an elongated flat guide bar passing through the dividers at the slotted portions thereof, a first outwardly projecting angular extending tab on each divider lying in proximity to one face of said bar, a mounting for said bar, a linkage between said mounting and said bar permitting upward vertical movement bodily of said bar to place said first tabs in binding contact with said one face of said bar, a second angularly extending tab on each divider projecting outwardly in the same direction as the first tab toward the reverse face of said bar, the angular extension of said first and second tabs in relationship to one another permitting an arcuate movement of each divider from a forwardly inclined position through a center line to a rearwardly inclined position, elevating means for moving said bar upwardly within said mounting and depressing means for moving said bar downwardly within said mounting, in which latter position said dividers are free to slide on said bar and can partake of said arcuate movement limited by the outward extension of said first and second tabs.

6. The device of claim 5 in which said bar is spring-urged into elevated position within said mounting.

7. The device of claim 5 in which said bar is spring-urged in its downward position within said mounting.

8. The device of claim 5 in which the elevating and depressing movements of said bar within said mounting are controlled by a cam and cam follower.

9. The device of claim 5 in which the elevating and depressing movements of said bar within said mounting are controlled by swinging any divider with an arcuate movement passing through its center line, with the upper tab depressing the bar on an initial forward arcuate movement of any one divider and allowing the bar to rise on a rearward return arcuate movement, the insertion of media behind said one divider causing all rearward dividers to automatically space back a distance to accommodate said media upon said return movement of said one divider rearwardly.

10. A vertical filing device of the type described comprising in combination a plurality of dividers each having a rectangularly slotted portion at their lower ends, an elongated horizontally mounted channel with its leaves projecting upwardly and passing through said dividers at the slotted portions, a first angular downwardly and outwardly extending tab projecting from the upper edge of the slotted portion of each divider toward the inner face of the base of said channel, a second angular upwardly and outwardly extending tab projecting from the lower edge of the slotted portion of each divider toward the outer face of the base of the channel, the angular relationship of said tabs being such that downward pressure on the upwardly extending tabs cause an arcuate move-to a frontward inclining position, with said upwardly extending tabs acting as a fulcrum, an elongated horizontal support formed as a channel track embracing said channel for said channel, a linkage between said channel and support permitting limited vertical movement of the channel relative to said support to an upper and a lower horizontal plane, and resilient means tending to place the channel in an upper horizontal plane, an operating means for placing said channel in its upper or a lower horizontal plane to cause frictional binding of said upper tabs against said channel in the upper horizontal plane, and lock the dividers from movements along said channel, and to free said upper tabs from binding contact in the lower horizontal plane and allow said dividers to slide along said channel.



11. A vertical sorting device of the type defined comprising in combination a plurality of dividers each slotted at their lower ends, a horizontally mounted elongated guide bar passing through the slotted ends to assemble said dividers in parallel substantially vertical position, a pair of tabs on the lower end of each divider on either side of the slot and angularly projecting outwardly on either side and toward said bar to form an upper and lower tab for each divider, said tabs having their angles of projection such that each divider can have an arc of movement from a forwardly inclined position through said vertical position to a rearwardly inclined position, using the lower tab as a fulcrum for each divider, supporting means for placing said bar in a first horizontal plane with said tabs loosely embracing said bar and said dividers angularly inclined forwardly from the vertical and slidable along said bar and in a second horizontal plane with said tabs in binding frictional engagement with said bar and said dividers angularly inclined rearwardly and prevented from sliding along said bar, and the selecting of either one of said two horizontal planes being under control of any one of said dividers by swinging a divider through said arc of movement.

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