

[54] **SUPPORT DEVICE FOR FILES**

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[58] **Field of Search** 211/11, 42, 43, 52, 51,
211/184; 108/61

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[57] **ABSTRACT**

Support device for files comprising one or a pair of support members adapted to support files in a vertical position and having engagement means for slidably engaging the support member in any of a plurality of positions.

6 Claims, 5 Drawing Figures

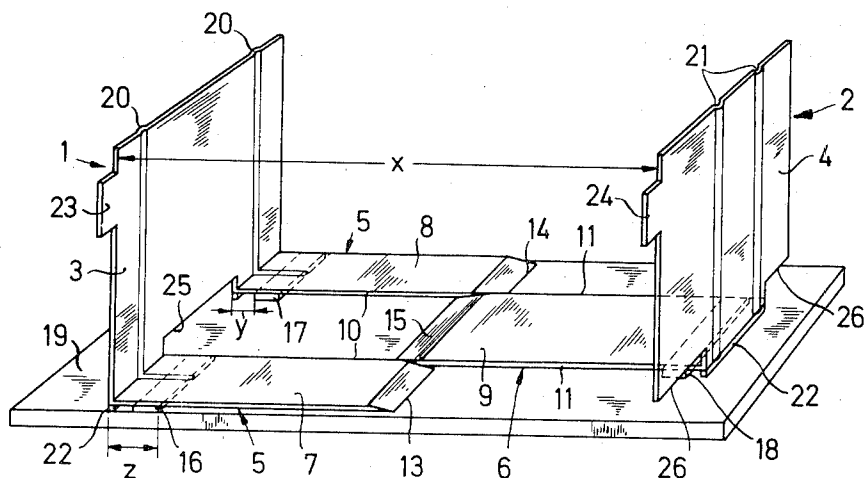


Fig.1

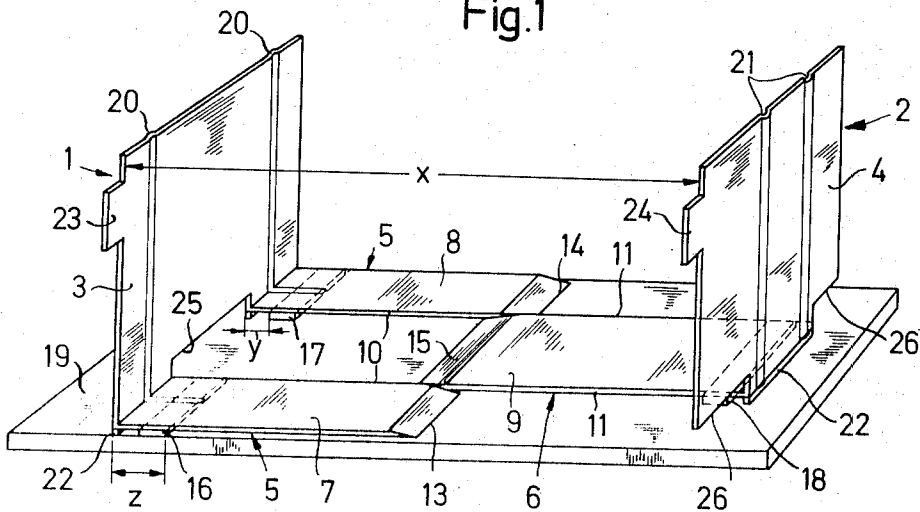


Fig.2

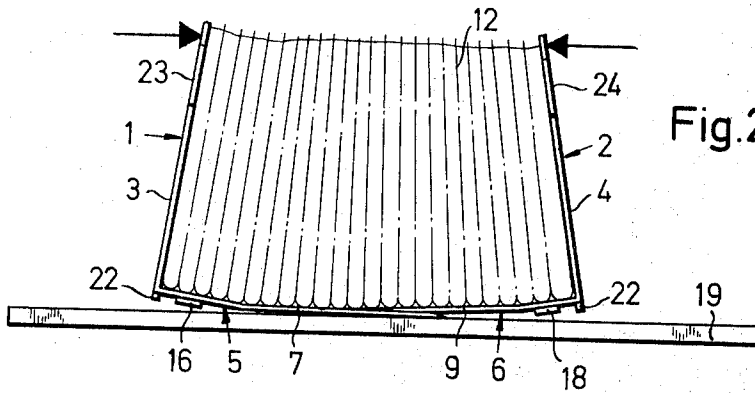


Fig.3

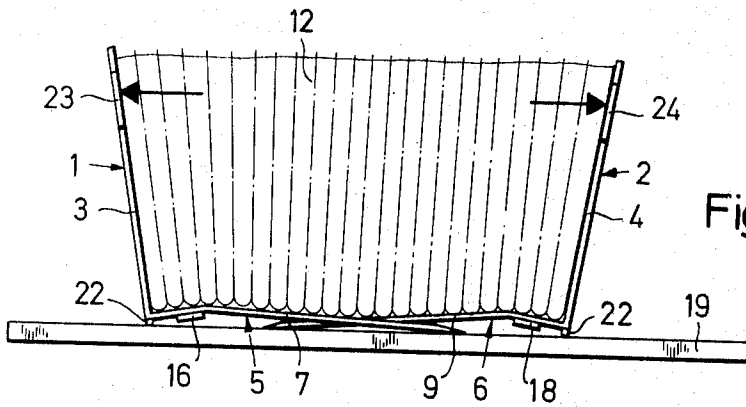


Fig.4

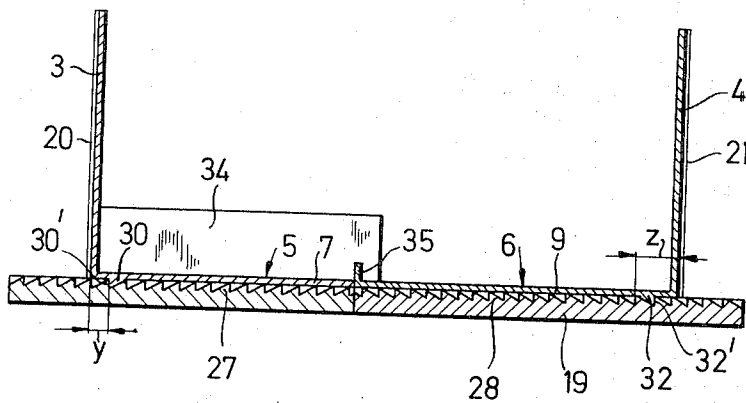
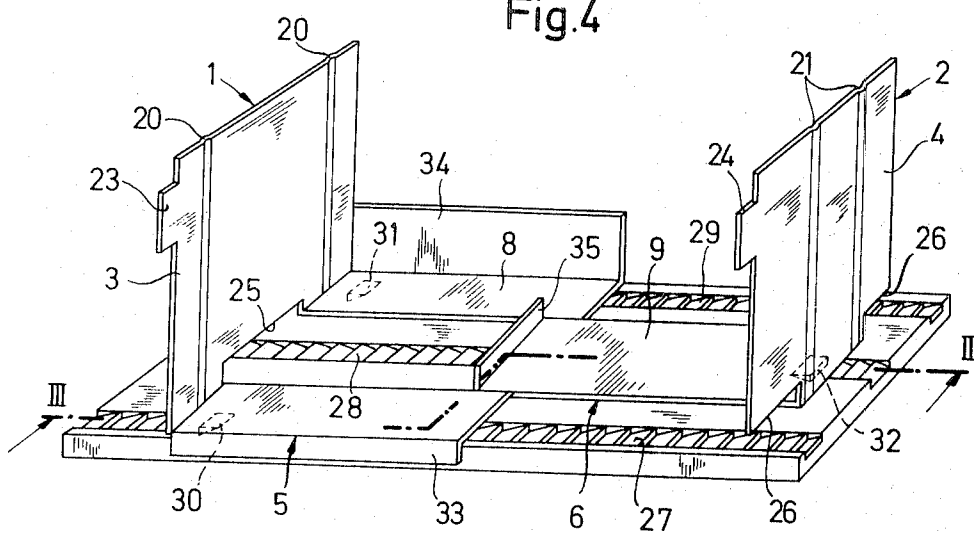


Fig.5

SUPPORT DEVICE FOR FILES

SUMMARY

The present invention relates to a support device for files, folders, card filing systems, catalogues, loose sheets, newspapers, journals or the like all hereinafter referred to as files.

It is known to support books between sheet angle iron supports known as book ends to prevent the books from falling out. The base of the supports are often provided with a smooth surface or a covering, for example of felt, to prevent the supports scratching the supporting surface on which they are resting. However, the supports slip on the base if there is a lateral pressure on them from a stack of books being supported between them.

A solution to this problem is to provide slip-proof coverings on the base of the supports but this is only effective when there is a deliberate outward movement of the supports e.g., to insert further books between them.

The disadvantages are particularly evident if the material to be inserted are unstable files, brochures or other sheets or when the files are often consulted so that it is necessary for the device to provide easy lateral displacability of the supports together with maximum support. When a file is to be inserted it is necessary for their to be some play between the two supports acting on the two sides of the already inserted files whereas any play between the supports after they have been closed to support the files is damaging because of the tendency for other files to curl up or fall out.

A further disadvantage of the known support means is that the supports have a minimum approach distance determined by the length of the base of the two supports. Shortened bases reduces this minimum approach distance but simultaneously it reduces the stability of the supports.

It has therefore been proposed to provide supports with securing catches adapted to engage slots provided in the support surface supporting the supports and must stand perpendicular only a small amount of play is provided between the securing catches and the slots. However, it is difficult to replace the supports if the stack of files contained between them exerts a large pressure. Furthermore the adjustment of the supports can only be effected at predetermined positions spaced at relatively large distances from each other and this is disadvantageous especially when thin files are to be stored. Furthermore a slotted support surface is necessary.

There is a need for a simple device which provides reliable lateral support of a file without free play and at the same time can be easily laterally displaced to any position in a range or at least to any of a large number of predetermined positions.

The invention includes a support device for files including at least one support member adapted to support one side of a file and engagement means for slidably engaging this support member in any of a plurality of positions.

The invention also includes a support device for files including a support member adapted to support files in a vertical position between it and another support member or other support, this first said support member being movable and having a surface adapted to engage another surface to stop motion of the said support member.

The slip barriers enable not only stable support of the file material but also simple and easy adjustability of the supports.

BRIEF DESCRIPTION OF DRAWINGS

In the accompanying drawings:

FIG. 1 is a perspective view of the support device designed according to the invention;

FIG. 2 is a front view towards the support device with documentary material or files placed therein, pressure being exerted from the outside on to the upper part of the support panels;

FIG. 3 is a view as in FIG. 2, but in this case an outwardly-directed pressure is being exerted on the support panels;

FIG. 4 is a perspective view of a further form of embodiment of the subject of the invention;

FIG. 5 is a section along line III—III in FIG. 4.

The support device comprises the two parts 1 & 2. Part 1 is formed by a perpendicular support panel 3 and a horizontal base panel 5 and part 2 is formed by a perpendicular support panel 4 and a horizontal base panel 6.

Base panel 5 is in the form of two tongues 7 & 8 and base panel 6 is in the form of a single tongue 9 which interleaves with the tongues 7 & 8. The contact faces of the two tongues 8 are 10 and the cooperating contact faces of the tongue 9 are 11.

The underface of the tongues is smooth so that the base panels 5 & 6 glide easily over the support surface 19.

The panels 3 & 4 can be displaced to change the width x and can be moved towards each other until they meet. In this way a large amount of documentary material in a number of filing folders 12 can be held adjacent each other without the documentary material rolling together.

In theory the largest effective width x is achieved when the panels 3 & 4 have been moved away from each other to the position where the tongues 7 & 8 are still just in contact with the tongue 11. It is however possible practice to extend the effective width x further although the reciprocal guiding action of tongue 9 with the tongues 7 & 8 is lost.

It is advantageous in this case the chamfer the upper corner of the front edges of 13, 14 & 15 of the three tongues 7, 8 and 9 so that when the parts 1 and 2 are pushed together again any files positioned between the tongues 7 & 8 and the tongue 9 can be easily lifted on to the tongues without damage.

Slip barriers 16, 17 & 18 having an extremely slip-proof coating, e.g., self-adhesive Tesaband 563, are located under the tongues to stop the tongues from slipping along surface 19 when files are being held between the panels 3 & 4. The slip barriers 16 & 17 are arranged at a distance y from the outside edge of the support panel 3 and similarly the slip barrier 18 is arranged at a distance y from the support panel 4. Thus, when the parts 1 & 2 are pushed inwards (FIG. 2) and the barriers 16, 17 & 18 thereby lifted out of contact with the surface 19, the parts 1 & 2 can be moved as a result of their smooth surface. As soon as the top parts of 1 & 2 are no longer pushed inwards or outwards, the parts 1 & 2, their original position & the slip barrier 16, 17 & 18 contact the surface 19 thus preventing the parts 1 and 2 being forced outwards as the result of the pressure emanating from the stack of files 12.

The forward parts of the tongues 7, 8, & 9 are resiliently flexible and rear part z of the tongues 7, 8 & 9 are rigid. Panels 3 & 4 are maintained rigid e.g. by means of reinforcement ribs 20 and 21.

The slip barriers 16, 17 & 18 are also raised in a similar manner if a pressure is exerted from the inside outwards on to the upper half of the support panels 3 and 4. In this case parts 1 & 2 are pushed from within (see FIG. 3) and raise the slip barriers 16, 17, 18 from the support surface 19 with the result that the parts 1 and 2 slide outwards. If the coating of the slip barriers 16, 17 & 18 is quite thick it is advantageous to provide sliding edges 22 on the outside edges of the panels 3 & 4. It is possible in this way to raise the slip barriers 16, 17, 18 from the support surface 19 by pivoting the panels 3 & 4 about these sliding edges 22 without any difficult rotation of the support panels 3 and 4.

In order to facilitate movement of the support panels 3 & 4, handles 23 and 24 are provided. These handles 23 & 24 can also serve to indicate the files 12 which have been inserted into the device if they are provided with classification cards.

Cuts 25, 26 are provided in support panels 3 and 4 for the passage of the tongues 7, 8 and 9 which enables panels 3 & 4 to be pushed completely together. It is further advantageous to extend these cuts 25, 26 upwards sufficiently to allow tongues 7, 8 & 9 some upward play. In this way the tipping motion of either of the support panels 3 & 4 which raises the slip barriers 16, 17 and 18 from surface 19 is prevented from being transmitted to the other support panel 4 & 3.

In another embodiment shown in figure 4 the support parts have been drawn apart to their maximum effective width x. Sunk toothed tracks 27, 28, 29 are arranged on a stationary support surface with a view to guiding the parts 1 & 2. The slip barriers comprise rocking teeth 30, 31, 32 which lock into the toothed tracks 27, 28 & 29 respectively. The removal of the teeth 30, 31, 32 from the tooth tracks 27, 28, 29 is achieved by an inwardly directed lateral tipping motion on the panels 3 & 4.

The inclined faces 27'29' of the teeth of the tracks are directed inwardly in the opposite directions so that parts 1 & 2 will not be spaced out by lateral pressure from the files 12.

The length of the tongues 7, 8 & 9 is approximately the same as the height of the support panels 3 & 4 to obtain the best value for both the effective width x and stability.

A guide 33 is provided on the outer side edge of one tongue 7 for guiding the support part 1 along the front edge of the stationary support surface. This guide 33 can also be used to record the files filed in the device. A stop 34 is provided on the outer side edge of the other tongue 8 to stop files inserted into the device from falling out the back. The guide 33 and stop 34 are connected to tongues 7 or 8 only in the zone Z in order that the forward end of the tongues can remain resilient or at least flexible.

In this embodiment the device can only be widened to the distance x. The middle tongue 9 of the support 2 is bent upwards to form a lip 35 which can engage the support panel 3 to prevent excessive spacing outwards i.e., an extraction or inwards of the supports 1 & 2. The support device can be portable or stationary. In the latter case the toothed tracks 27, 28, 29 are provided in a stationary support surface. This device is particularly

suitable for light and very flexible documentary material such as e.g. newspaper sheets which have been folded together many times.

My device can be varied by moving the supports 1 & 2 for the necessary effective width of the file material to be inserted by using the handles. As a result of the cog-like intermeshing of the tongues the supports can be made to contact each other so as to support very thin file material.

The inclined faces of the teeth of the toothed tracks could be directed outwardly, and the teeth of the tongues correspondingly shaped to fit these tracks & then the removal of the teeth from the tooth tracks would be achieved by outwardly directed lateral tipping motion on the panels 3 & 4.

One of the parts 1 & 2 could be permanently fixed. The surface 19 could be flexible instead of the tongues 7, 8 & 9. The sliding edge 22 could be located on the other side of the slip barrier & the panels 3 & 4 tilted inwardly. The sliding edge could be fixed to the support surface 19. Instead of each tongue having only one tooth it could have a line of teeth & the toothed tracks replaced by a single recess adapted to receive any of these teeth. Instead of teeth 30, 31 & 32 these could be a recess & instead of the toothed track there could be a recess & instead of the toothed track there could be a line of projections.

The teeth 30, 31 & 32 could be on the support surface & the toothed tracks could be on the parts 1 & 2. One of the parts 1 and 2 could have a slip barrier whilst the other part has a tooth. The slip barrier could be secured to the support face & not the base of the parts 1 & 2.

The guide 33 could be a rim on the support surface 19. The stop 34 could be on the support surface 19.

What I claim is:

1. A support device for record files and the like objects, disposed on a horizontal support surface, said device comprising at least a support panel adapted to support files in a vertical position having a vertical support wall and a base panel extending from the lower edge of said support wall and adapted to underlie said files, a substantial portion of the underface of said base panel being smooth to glide easily over said horizontal support surface; a pivoting member disposed below the vertical support wall adjacent the lower edge thereof and adapted to engage said horizontal support surface, a slip barrier connected to said underface of the base panel and being engageable with said horizontal surface, said slip barrier being spaced from the lower edge of said support wall by a predetermined distance so that by a lateral pressure exerted from the inside outwards to the upper part of the support panel said slip barrier would be raised from and thus disengaged from said horizontal supporting surface, when said pivoting member engages said horizontal supporting surface, said slip barrier also being spaced from the (outer) edge of said base panel opposite said lower edge by a predetermined distance so that by a lateral pressure exerted from outside inward to the upper part of the supporting panel said slip barrier would be raised from and thus disengaged from said horizontal supporting surface.

2. A support device as defined in claim 1 additionally including a first support panel being associated with a second support panel and wherein the base panel of said first support panel is in the form of two spaced

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tongues and the base panel of said second support panel is in the form of a single central tongue which interleaves with said two spaced tongues of the first support panel and wherein both said support walls have at least one enlarged recess extending upwards into each said vertical support wall said recess being sufficient to allow the passage of said tongues as well as to allow said tongues an upward play so that said pressure exerted inside outwards is prevented from being transmitted to the support wall.

3. A support device as defined in claim 2, wherein said tongues of said base panels are at their outer portions (at a predetermined extend) resilient, whereas the portion of said tongues adjacent the lower edges of the

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support walls are rigid.

4. A support device as defined in claim 2, additionally including stop means directed upwards for stopping the files falling sideways out from the device, said stop means being connected to said spaced tongues.

5. A support device as defined in claim 2, wherein at least one tongue of one of said base panels has an upward directed portion which is adapted to engage the other support panel to prevent separation from each other beyond a predetermined distance.

6. A support device as defined in claim 1, wherein said slip barrier is a relatively thin strip of slip proof material.

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