

June 17, 1958

O. A. BECKER
FILING SYSTEMS

2,839,203

Filed April 21, 1953

4 Sheets-Sheet 2

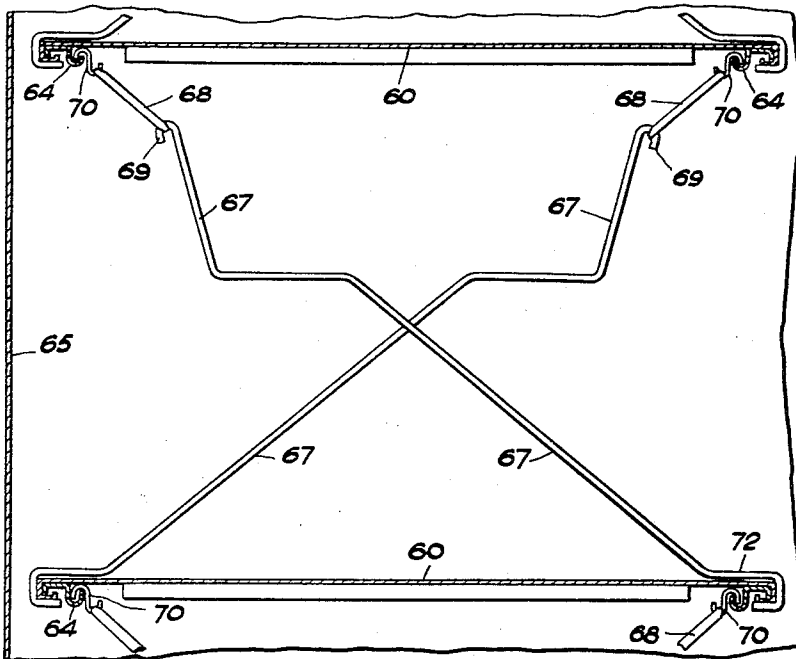


Fig. 3.

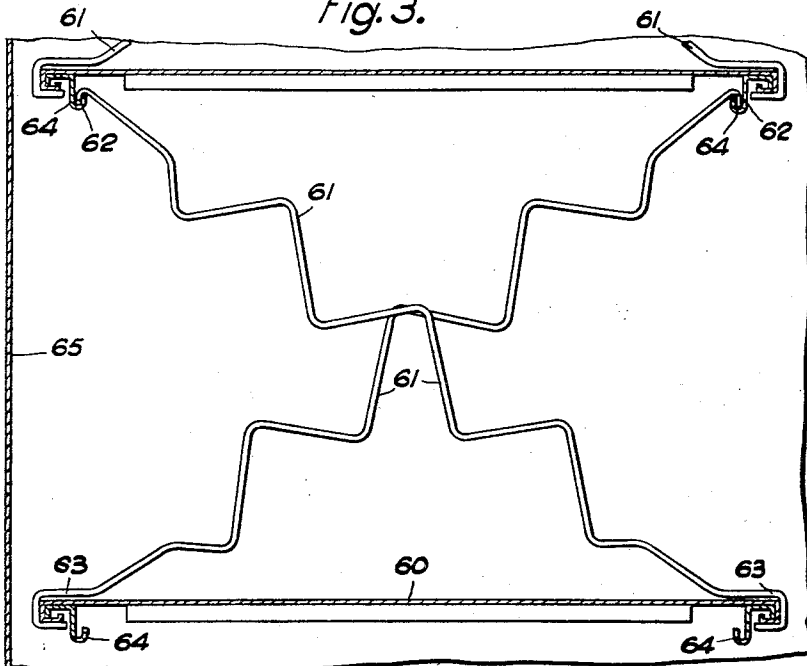


Fig. 5.

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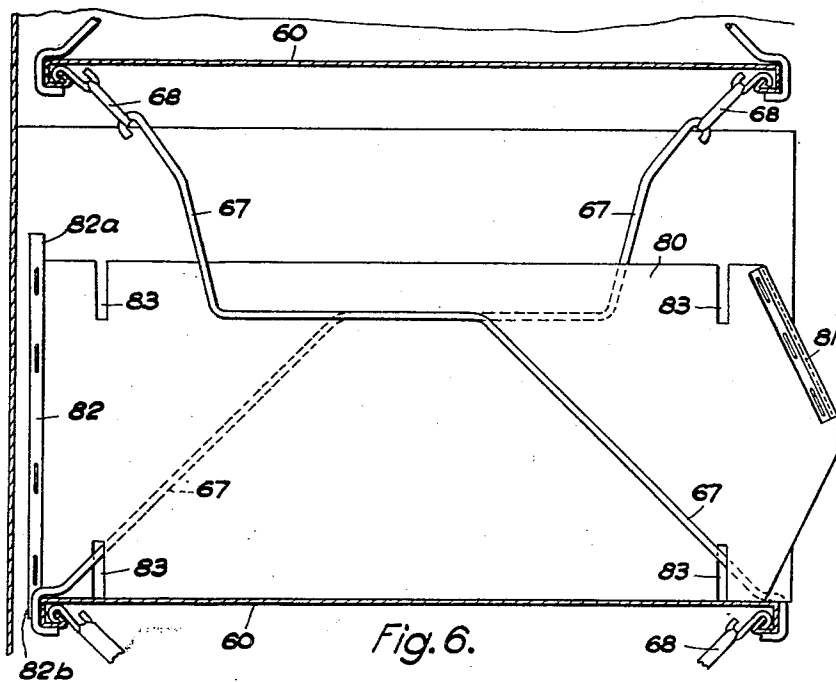


Fig. 6.

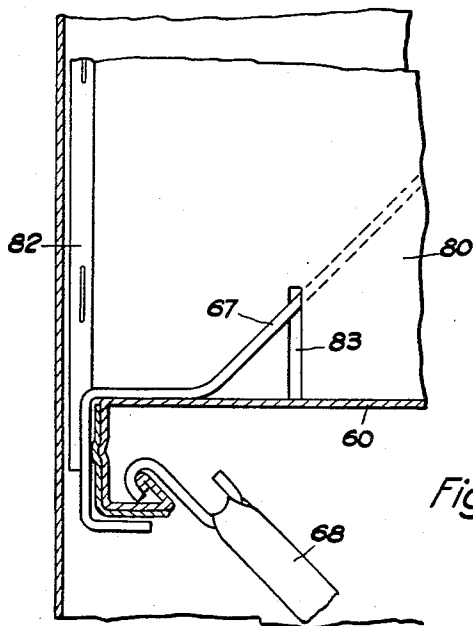


Fig. 7.

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Fig. 8.

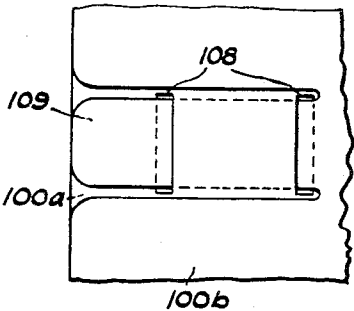
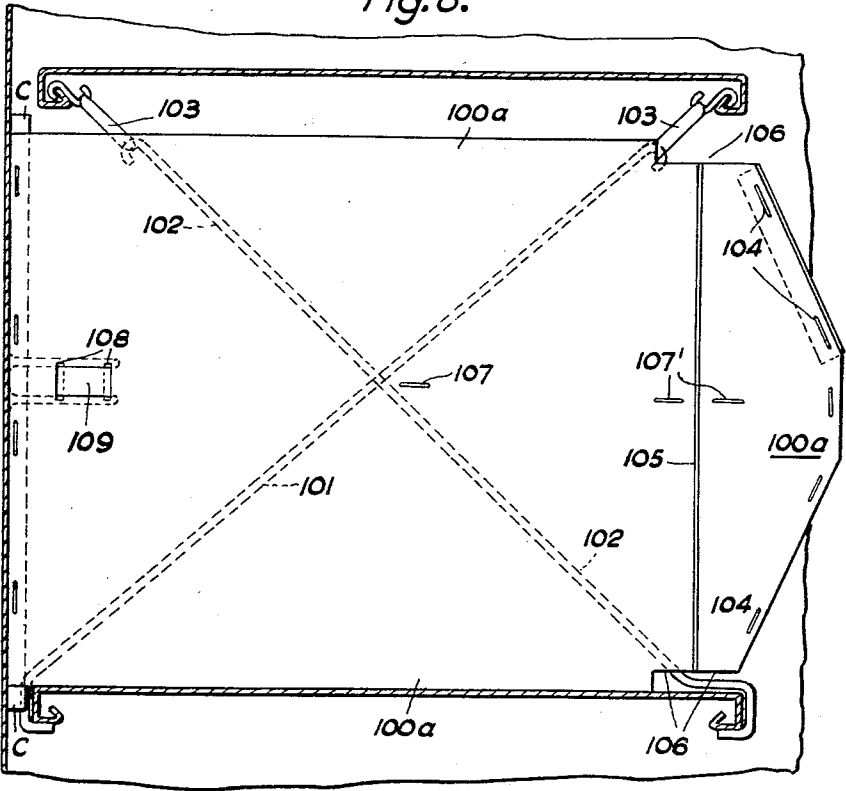


Fig. 9.

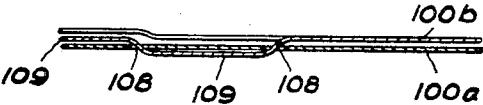


Fig. 10.

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2,839,203

FILING SYSTEMS

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Claims priority, application France April 24, 1952

15 Claims. (Cl. 211—184)

This invention relates to a filing system for storing papers or folders containing papers or the like. The system is of the type in which the storage space is divided by vertical partition means laterally adjustable to suit any compartment bounded by neighbouring partition means to the bulk of matter to be stored in it.

A principal object of the invention is a filing system of this kind wherein the partition means or partitions are stiffened by tension to withstand the pressure of the contents of the compartment whose side walls they are. Tension will not only impart stiffness against bending to a partition which is not inherently stiff, but also will stiffen the resistance of the partition to bodily lateral displacement.

A more specific object of the invention is a filing unit comprising a shelf on which papers and folders can rest, and vertical elastically extensible partition means or partitions for dividing the shelf into compartments of adjustable width, the partition means having suspenders at the top and anchors at the bottom, together with carrier rails and guide rails with which the suspenders and anchors can respectively engage and along which they can slide; the carrier rails are so spaced from the guide rails that a partition means must be stretched to engage its suspenders and anchors with the carrier rails and guide rails, and the tension so increases the friction of the suspenders and anchors upon their respective rails that they are not readily displaced by the pressure of the contents of a compartment. Yet by stretching the partition means by hand its suspenders and its anchors can be relieved of tension in turn and so made freely movable along the carrier rails and guide rails. Thus, the vertical dimension of the partition means prior to its assembling in the unit is less than the vertical spacing of said carrier rails and guide rails.

As a rule a complete filing system will include several such shelves each equipped with carrier rails, guide rails and partition means, the shelves being commonly mounted in a cabinet having fixed back, top and sides, and either an open front or sliding or hinged doors or other closure at the front.

Yet another object of the invention is a filing system of this kind in which the shelves are themselves formed as guide rails for the anchors of the partition means; and upper shelves may also have carrier rails secured beneath them to support the partition means of the shelf below.

Other objects and features of the invention will appear from the following description of embodiments of the invention illustrated by the accompanying drawings.

In these drawings:

Figure 1 shows part of the back and one side of a filing cabinet with part of two built-in filing units;

Fig. 2 shows details of the partition fastenings on a larger scale;

Figure 3 illustrates a system in which the partition means are made of crossed wires; and

Figure 4 shows a detail of the suspension of a partition means on a larger scale;

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Figure 5 shows another construction of partition means made of wire;

Figure 6 shows a fourth construction of partition means mainly of wire but also including a partition sheet and a label carrier attached to it, and

Figure 7 illustrates on a larger scale the suspension and anchoring of this partition means;

Figure 8 shows another partition means built of crossed wires and a double partition sheet, and

Figures 9 and 10 are a detail elevation and sectional plan respectively of a form of fastening of the double sheet.

In Figures 1 and 2 the parts 59 indicate a portion of the back and one side wall of a cabinet housing a filing system comprising several filing units. For each filing unit there is an elongated support or shelf extending from side to side of the cabinet and suitably supported therein. In Figure 1 this shelf is divided lengthwise into three parts 56, 57, 57a between which are slots 58. Carrier rails 43 running from side to side of the cabinet are supported in the cabinet at a convenient height above the shelf to suit the matter to be filed. The shelf is divided into compartments by partitions 44 which are here shown as consisting of cardboard or the like. The upper edge of the sheet 44 is doubled over to the extent indicated by 47 and secured by two rows of stitching 48, and the lower edge is similarly doubled at 51 and secured by stitching 52. Between the rows of stitching 48 there is inserted in the upper fold 47 a wire 50 around which are passed rubber bands 46 the lower part of which is concealed within the fold 47 while the upper part projects through an opening 49a in the upper edge of the fold. With each rubber band 46 there is engaged a suspender in the form of a hook 45 which can be engaged over and slide along one of the carrier rails 43. Another wire 53 is secured in the fold 51. Its ends project through notches 54 in the lower edge of the fold and are bent to form hooks 55 which serve as anchors for the partition. These anchors are engaged with guide rails which, in the construction shown in Figures 1 and 2, are formed by the bent over edges of the shelf segments 56, 57 respectively. Beneath the shelf segment 57 are attached further carrier rails 43 which serve to receive the suspenders 45 of the partitions dividing the shelf below. The carrier rails 43 and guide rails associated with any shelf are so spaced that the anchors 55 and suspenders 45 can only be engaged with their respective rails by stretching the partition. In the construction shown the rubber bands form the extensible part of the partition; it will be clear that when they are stretched the partition sheet 44 is tensioned between the wire 50 on the one hand and the wire 53 on the other hand.

Notches 44b are cut in the front edges of the partition sheets 44 so that the contents of a compartment can be gripped between thumb and finger for pulling out. Alternatively, or in addition, the portion of the partition sheet in front of the front anchor 55 is hinged upon the main body of the partition sheet, for example by lines of weakening 44a, thus permitting of the front ends of neighbouring partitions being splayed apart to give access to the folders between them.

Compartments may be labelled with an indication of their contents by means of label holders 42 secured by stitches 40 to the front edge of the partition sheet. These label holders should be of wedge section, the base 41 to which the label is attached being square with the partition wall, while the rear face is slanted so that papers will not catch upon it when being drawn out.

The lower edges of the partition sheets 44 need not rest upon the shelf. By pulling upon them the rubber bands 46 can be further extended and the anchors 55 freed from their guide rails so that they can be readily displaced

laterally to alter the size of a compartment. In the same way the rubber bands may be further stretched by lifting the hooks 45 slightly to shift them along the carrier rails 43. At all times the tension of the rubber bands keeps the partition sheet 44 stretched substantially flat notwithstanding the pressure of the contents of the compartment whose wall it forms. Also the tension keeps the suspenders 45 and the anchors 55 in firm contact with their respective carrier rails and guide rails and so prevents bodily shifting of the partition under the pressure of the contents of the adjacent compartment. Any risk of a folder within a compartment bending horizontally and sliding beneath a partition sheet is prevented by the downwardly extending anchors 55.

Figures 3 and 4 show a partition means of which the principal members are crossed wires 67. In a part of their length at about two thirds the height of the folder the wires run horizontally outward and their upper ends turn upward at a slant. The extreme ends are hooked as seen at 69 to engage rubber bands 68 which in turn are engaged with suspenders 70 of S form which are hooked over and can slide along carrier rails 64 attached to the under-side of an upper shelf 60. The edges of the shelves 60 are bent three times at right angles to serve as guide rails, and the lower ends 72 of the wire 67 run outwardly in contact with the shelf 60 and then downwardly and inwardly in contact with its folded edge. This extended engagement of parallel portions of the end 72 of the wire 67 with the upper surface of the shelf 60 and the under surface of its folded edge prevents the wire 67 twisting about a line approximately joining its ends.

To permit of the wire 67 thus being carried around the rear edge of the shelf 60 the shelf must be spaced as shown from the back 65 of the cabinet. Alternatively guide rails and suspension rails could be attached to the back of the cabinet.

The partition means of Figure 5 is also formed principally of crossed wires 61. But here the wires themselves are of a form and material which makes them extensible, so rendering unnecessary the bands 68 of Figure 3. As shown in Figure 5 the wires are bent in zig-zag fashion, all the bends however being in the same plane. At the top the wires end in hooks 62 which engage carrier rails 64 on the under side of a shelf 60; and at the bottom the ends 63 of the wires run horizontally outward then downward and then horizontally inward resiliently embracing the edges of the shelf 60 which serve as guide rails; thus they serve like the ends 72 of the wires 67 in Figure 3 to prevent twisting of the wire. The engagement of the suspenders 62 and anchors 63 with their respective carrier rails 64 and guide rails maintains the wire 61 tensioned and they are thereby enabled to resist any pressure of the contents of the compartment which might tend to displace them from the vertical plane. Their zig-zag form besides affording elasticity affords support to the stored material not merely along two intersecting straight lines but over a substantial surface.

Figures 6 and 7 show a construction of a partition means in which crossed wires 67 are tensioned by rubber bands 68 attached by suspenders to carrier rails on an upper shelf and are anchored at their lower ends to guide rails formed by the folded edges of the shelf to which the partition means belongs, and are supplemented by a partition sheet 80 which is lodged between the two wires. The sheet 80 may consist of stiff cardboard or the like. Vertical slots 83 are cut in its upper and lower edges and the wires 67 are passed through the lower slots so that each wire lies partly on the one side and partly on the other side of the partition sheet. This sheet serves also as a label carrier. Its front edge is cut at a slant and there is attached to it a transparent envelope 81 in which a label can be inserted. Figure 6 shows the partition sheet and label holder in the position in which they would be used upon a shelf at or below eye level. For a shelf

above eye level it would be desirable to invert the partition sheet 80 and it is to permit of this that the slots 83 are provided at both its upper and lower edges. In this inverted position the label contained in the envelope 81 will face downward. To prevent the partition sheet being drawn out when folders are withdrawn from the adjacent compartment there is secured to it by stitching a vertical marginal strip 82 the ends 82a and 82b of which project above and below the sheet. The lower projecting end engages behind the shelf 60 and so retains the sheet. The upper projecting end 82a would serve the same purpose if the sheet were inverted.

Figures 8 and 9 and 10 illustrate another construction of a partition means built in part of crossed wires and in part of a partition sheet. The crossed wires 101 and 102 are here shown as straight. They are connected by elastic loops 103 to suspenders engaging carrier rails on the under-side of an upper shelf, and are anchored at their lower ends by engagement with guide rails formed by the folded over edges of the shelf to which the partition means belongs. The partition sheet in this case is doubled, being made, as appears from Figure 10, of two sheets 100a and 100b between which the wires 101 and 102 are enclosed. This construction eliminates any risk of folders catching upon the crossed wires when being inserted or withdrawn. The two sheets 100a and 100b are secured together by a wire stitch 107 and if desired by further stitches such as 107'. This construction permits of the double sheet 100a, 100b being withdrawn if desired and replaced without disturbing the wires 101 and 102. It is provided with a projecting border strip as explained with reference to Figures 6 and 7 to prevent unintentional withdrawal. If desired the two sheets 100a and 100b may be held together at their rear ends by readily detachable means; and then they cannot be withdrawn from the wires unless this detachable means is released. In the construction illustrated the sheet 100a has in it two short vertical slots 108 and there is cut from the sheet 100b a tongue 109 which can be passed in succession through the two slots 108 as clearly appears in Figures 9 and 10.

As already explained with reference to Figure 1 the double partition sheet may be formed with a line of weakening 105 which will permit of its front part being turned aside. The sheet is cut away at top and bottom as indicated at 106 in order that the wires 101, 102 may not interfere with the turning aside of the front portion. The front edge of this part is slanted to receive a label holder secured by stitches 104 which also secure the two sheets together along their front border.

I claim:

1. A filing system comprising a cabinet, vertically spaced shelves extending across the cabinet, guide rails attached to each shelf adjacent thereto and extending lengthwise thereof, substantially vertical partition means comprising anchors at their bottoms and slidably engaging said guide rails, suspenders at the tops of said partition means and elastic portions between said anchors and said suspenders, carrier rails in said cabinet above said partition means and engaged by said suspenders, the vertical dimension of said partition means prior to their assembling in said cabinet being less than the vertical spacing of said carrier rails and said guide rails.

2. A filing unit comprising an elongated support for folders and papers; a substantially vertical partition means comprising anchors at the bottom, suspenders at the top, and an elastic portion therebetween; carrier rails running lengthwise of said support and carried thereby above said partition means along which said suspenders engageably slide; and guide rails on said support and also running lengthwise thereof below said partition means and engaged by said anchors, the vertical dimension of said partition means prior to its assembling in said unit being less than the vertical spacing of said carrier rails and said guide rails.

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3. A filing unit according to claim 2, said guide rails being integral with said support.

4. A filing system comprising a cabinet with shelves supported thereby, guides on the shelves extending lengthwise thereof, carrier rails supported by the cabinet above each shelf and extending lengthwise thereof, vertical partitions of flexible material, elastic loops attached to the upper parts of each partition, suspenders interconnecting the loops of each partition and the carrier rail above it, anchors secured to the lower part of each partition and engaging the guides on said shelves.

5. Filing system according to claim 4, wherein the loops are rubber bands.

6. Filing system according to claim 4, wherein each partition is folded at the top and the loops are attached to each partition within the fold and partly concealed therein.

7. Filing system according to claim 6, wherein a wire is held within the fold of each partition and the loops surround said wire.

8. Filing system according to claim 4, wherein each partition is folded at its bottom and the anchors are wires held in and by the folds and having hooked ends to engage said guides.

9. Filing system according to claim 4, wherein the front portion of each partition is hinged about a substantially vertical line on the main portion of each partition.

10. Filing system according to claim 4, wherein said shelves are slotted lengthwise and said guides are formed underneath said shelves along said slots, and wherein said anchors are passed through said slots engaging said guides.

11. A filing system comprising a cabinet, vertically spaced sheet metal shelves extending from side to side of the cabinet having side edges folded to form guide rails running lengthwise of said cabinet, carrier rails also running lengthwise of said cabinet and being secured beneath said shelves, vertical partition means having anchors at their bottoms engaging the guide rails on the shelf beneath said partition means, said partition means having suspenders engaging the carrier rails beneath the shelf above the partition means and resilient means between said suspenders and said partition means, the vertical dimensions of said partition means prior to their assembling in said cabinet being less than the vertical spacing of said carrier rails and said guide rails.

12. A filing unit comprising an elongated support for folders and papers, having guide rails formed thereon and running lengthwise thereof, vertical partitions each comprising two superimposed sheets and crossed wires between said two sheets of each partition, said two sheets being secured together at least in the part in front of said wires, suspenders at the upper ends of said wires and carrier rails attached to said support above said par-

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titions running lengthwise of said support and engaged by said suspenders, and resilient means between said wires and said suspenders, the vertical dimensions of said partitions prior to their assembling in the unit being less than the vertical spacing of said carrier rails and said guide rails.

13. A filing unit comprising an elongated support for folders and papers, vertical partition means consisting at least in part of crossed wires and including elastic wire portions, anchors at the bottom of said partition means and suspenders at the top, guide rails attached to said support below said partition means running lengthwise to said support and engaged by said anchors and carrier rails attached to said support above said partition means and also running lengthwise to said support and engaged by said suspenders, the vertical dimensions of said partition means prior to their assembling in the unit being less than the vertical spacing of said carrier rails and said guide rails.

14. A filing unit according to claim 13, wherein said elastic wire portions comprise wires of plane zig-zag form.

15. A filing unit comprising an elongated support for folders and papers; vertical partition means comprising crossed wires, anchors at the bottom of each of said wires, hooks at the top of each of said wires; guide rails attached to said support below said partition means running lengthwise to said support, and engaged by said anchors; carrier rails attached to said support above said partition means, and also running lengthwise to said support; suspenders engaging said carrier rails and elastic loops attached to said suspenders and engaged in said hooks, interconnecting said suspenders and said wires, whereby the vertical dimensions of said partition means prior to their assembling in the unit are less than the vertical spacing of said carrier rails and said guide rails.

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