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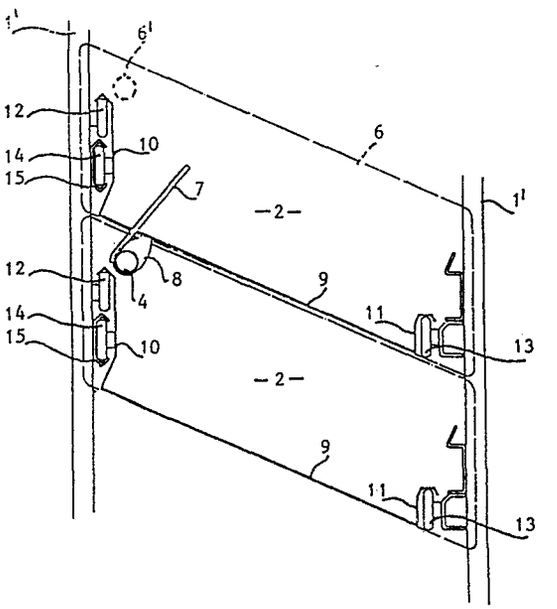
(54) Retaining device for drawers.

(57) A structure (1) has drawers (2) easily glidably mounted by means of rollers (12, 13, 14) and sloping inwardly-downwardly in the structure such that when they are released in a pulled-out position they glide under the action of gravity into their pushed-in or closed position. Each drawer is provided with a shaft (4) in the direction of movement of the drawer, said shaft being rotatably mounted and provided with a hand lever (7) and a radially projecting stop (8), the latter going into frictional engagement with the bottom (9) of a drawer (2) immediately above, when the lever (7) is swung upwards, for retaining the drawer in a pulled-out position, until the lever (7) is swung down for releasing the frictional engagement, whereafter the easily glidable drawer glides into the structure under the action of gravity.



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Retaining device for drawers

The present invention relates to a device for retaining drawers accommodated displaceably in nests of drawers or the like in an optional pulled-out position.

For pharmaceutical cabinets, nests of drawers or structures with a plurality of easily displaceable drawers, it is known to accommodate the drawers sloping, both inwardly-downwardly in the direction of movement, and in their lateral direction. It will thus be easy and convenient to provide the drawer with goods or remove goods along the lower long side of a pulled-out drawer. There is, however, a drawback in that the pulled-out drawer must be kept still by hand while it is being filled or emptied, since it will otherwise glide into the structure, due to its inwardly-downwardly sloping attitude.

The present invention has the object of proposing a simple and practical device for temporarily retaining a more or less pulled-out drawer, without it needing to be kept in place by hand.

This object is realized in accordance with the present invention by having the respective drawer, in a nest of drawers as described above, provided with a manually rotatable shaft placed in the direction of movement of the drawer, said shaft being provided at the inner end of the drawer with a radially projecting stop adapted for going into frictional engagement with the bottom of the drawer lying immediately above when the shaft is turned, or with an abutment plate replacing said bottom,

or with a contiguous part 1' of the supporting structure.

The invention is made clear by an embodiment illustrated by way of example on the appended drawings.

Figure 1 illustrates a structure seen from the front, having a plurality of displaceable drawers mounted one above the other in vertical rows, these drawers being provided with retaining means (not shown) in accordance with the invention.

Figure 2 is a planview of the drawers.

Figure 3 schematically illustrates a side view of a drawer, seen from the right in Figure 1.

Figures 4 and 5 illustrate to a larger scale a portion of the structure, with a pair of drawers in each Figure, seen in vertical section parallel to the front of the structure, and with the retention device of the invention in different attitudes.

The structure 1 illustrated in Figure 1 is of the type used in pharmacies, but could also be used in other applications as well. This state-of-the-art structure has withdrawable drawers 2 adjoining each other and in tight vertical columns, these drawers not only slope laterally, to the right in Figure 1, but also downwardly-inwardly in the structure 1, as illustrated in Figure 3. The drawers 2 are elongate in their displacement direction, e.g. their length is 1 meter and their width is approximately only a fifth thereof. There is a handle 3 on the front of each drawer.

As illustrated in Figure 2, there is a shaft in the longitudinal direction of each drawer 2, and on one side thereof, said shaft being rotatably mounted in the front 5 and rear 6 end walls of the drawer 2, and inward of the front end wall 5 it is provided with a hand lever 7. Inward of the rear end wall 6 the shaft is provided with a stop 8, of rubber or other material providing friction. This implementation is explained further in the description of Figures 4 and 5.

Figures 4 and 5 each illustrate a pair of drawers 2, formed by a sloping bottom 9, a higher long side 10 and a low long side 11, together with front and rear end walls, of which the rear end wall 6 is denoted by chain-dotted lines. The long sides 10, 11 are suspended on rollers, of which a pair, 12, 13, is shown. The rollers are carried by vertical portions 1' of the structure 1. The long sides 10 furthermore have rollers 14 guided in guide rails 15 on the structure portions 1'.

The drawers 2 are thus so easily movable that due to their inwardly-downwardly sloping attitude, as shown in Figure 3, they will glide back by the action of gravity to a completely retracted position in the structure 1, after being released when in a more or less fully extended position. In Figures 4 and 5, the lower drawer 2 is illustrated as being provided with the rotatable shaft 4 with its hand lever 7 and stop 8, the upper drawer 2 only being illustrated as provided with a mounting hole 6' in the rear end wall 6 for the shaft 4, this hole being situated quite close to the upper edge of said wall 6.

The hand lever 7 is shown in its downward position in Figure 4, the stop then assuming its inactive position.

The hand lever 7 is shown in its upward position in Figure 5, the stop 8 having now gone into frictional engagement with the bottom 9 on the drawer 2 immediately above, so that the details 4, 7, 8 serve as temporary retention means for the lower drawer 2.

The function of the inventive device 4, 7, 8 is as follows. It is assumed that at least contiguous drawers in a vertical row are pushed home, and that subsequently one of these drawers 2 is pulled out. As soon as it is released, it will glide into the structure under the action of gravity, since it slopes inwardly-downwardly.

When this drawer 2 has been pulled out to a greater or less extent, it may be restrained by swinging up the hand lever 7, thus causing the stop 8 to go into frictional

engagement with the bottom of the drawer immediately above, as illustrated in Figure 5, the pulled-out drawer thus being retained in its pulled-out position so that goods can be conveniently put into it or taken from it over the long side 11. The hand lever 7 may be subsequently swung downwards, moving the stop 8 out of engagement with the bottom of the drawer above, the drawer then gliding automatically into the structure.

Since the uppermost row of drawers in the structure lacks drawers above it, a means such as a strip of plate can be attached to the structure above each uppermost drawer for coaction with the stops. Such a substitute plate for a drawer bottom may also be arranged for engaging the stop, in the case where there is a considerable distance between the upper portion of a drawer and the bottom of the nearest drawer above. An adjacent portion of the structure such as a wall, can similarly serve for coaction with the stops.

The device formed by the shaft, hand lever and stop may of course be varied in its implementation and mounting within the scope of the invention. For example, the drawers do not need to be sloping in their lateral direction and can lie horizontally, but sloping downwardly-inwardly in the structure just the same, while said structure can be of whatever dimensions and for whatever purpose at all.

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CLAIMS

1. Device for temporarily retaining drawers (2) displaceably mounted in a structure (1) in an optional pulled-out position, the drawers (2) being carried for easy movement and sloping inwardly-downwardly in the structure (1) in their direction of movement, such that they glide under the action of gravity to their inner end position in the structure, c h a r a c t e r i z e d in that the respective drawer (2) is provided with a shaft (4) in the displacement direction mounted for manual rotation and provided with a stop (8) projecting radially outwards at the inner end of the drawer (2), said stop being adapted such that when the shaft (4) is turned, said stop goes into frictional engagement with the bottom of the drawer immediately above, or with an abutment plate replacing said bottom, or against an adjacent portion (1') of the structure.

2. Device as claimed in claim 1, c h a r a c t e r i z e d in that the shaft (4) is rotatably mounted in the front and rear end walls (5,6) of a drawer (2) and is provided with a hand lever (7) immediately inward of the front end (5) and with the stop (8) immediately inward of the rear end wall (6).

Fig. 1.

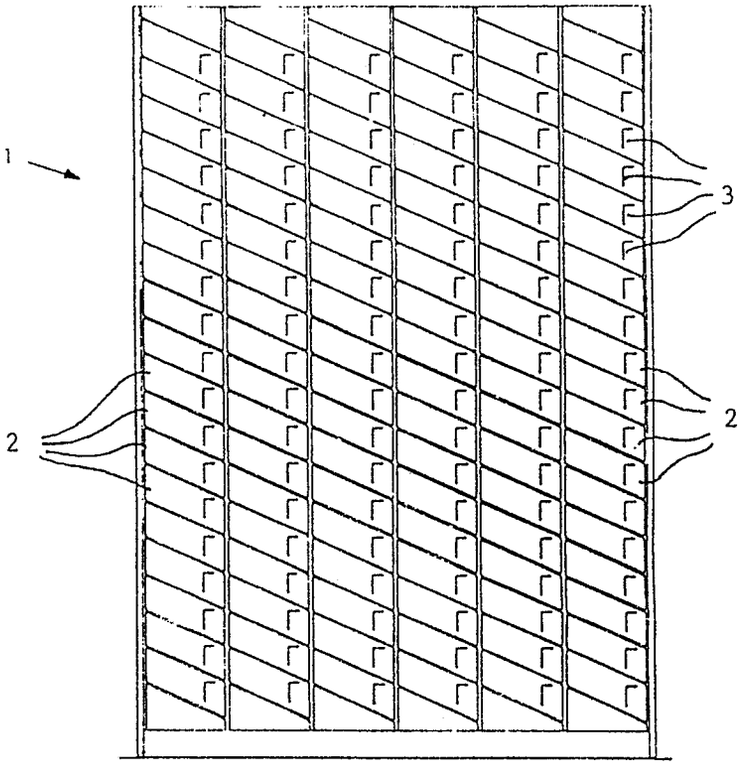

Fig.2.

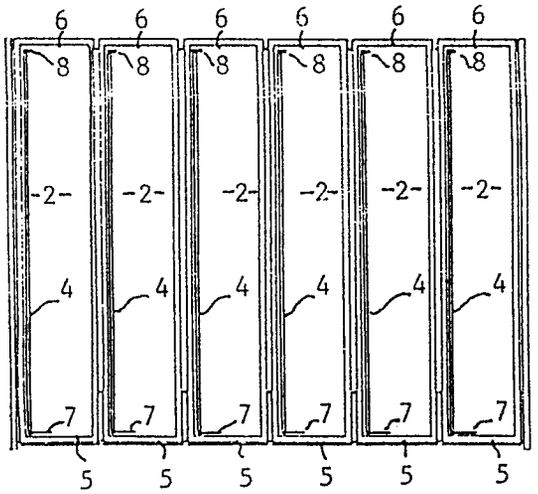

Fig.3.

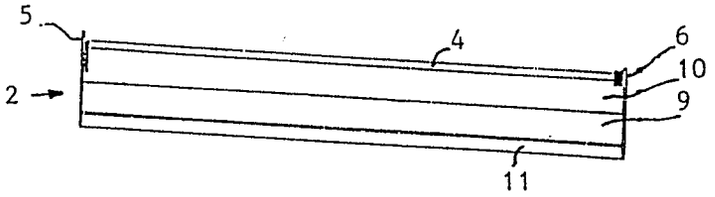

Fig. 4.

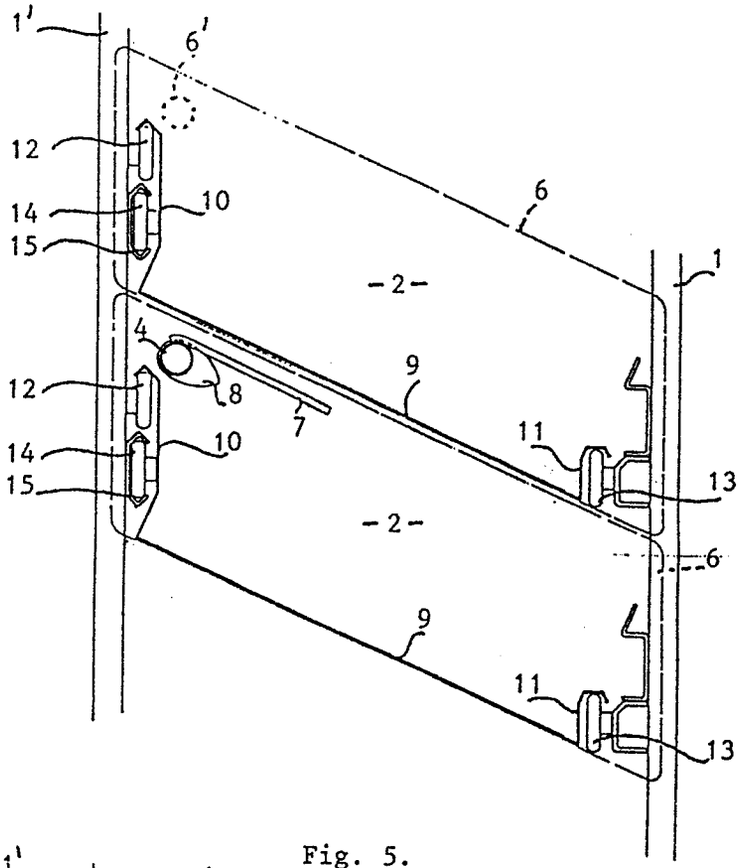
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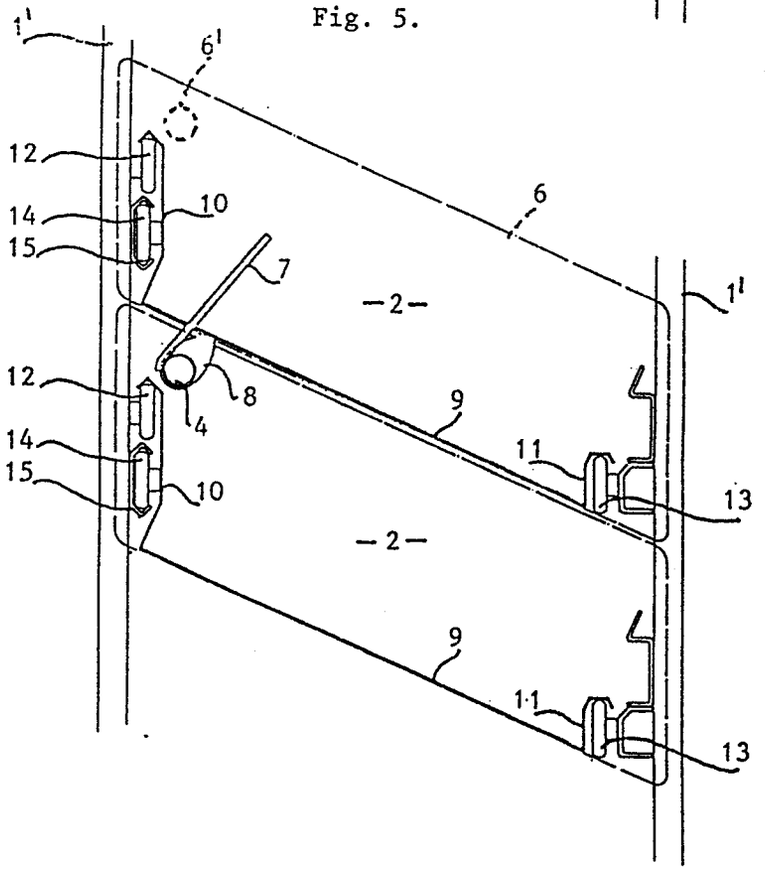
Fig. 5.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