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(54) Cabinet for containing and displaying glasses.

(57) The vertical drawers (6) of the cabinet according to the invention possess many compartments (A) aligned in horizontal rows located equidistantly above each other, the compartments being open in an upward direction on alternate opposite sides of the same drawer. The floors of the compartments are formed into a bookrest shape so that the glasses and/or frames (Q) which they contain are fully visible. The rows of containing compartments are formed by double-sided modules (12) that fit together one on top of the other when alternately rotated through 180° about a vertical axis.

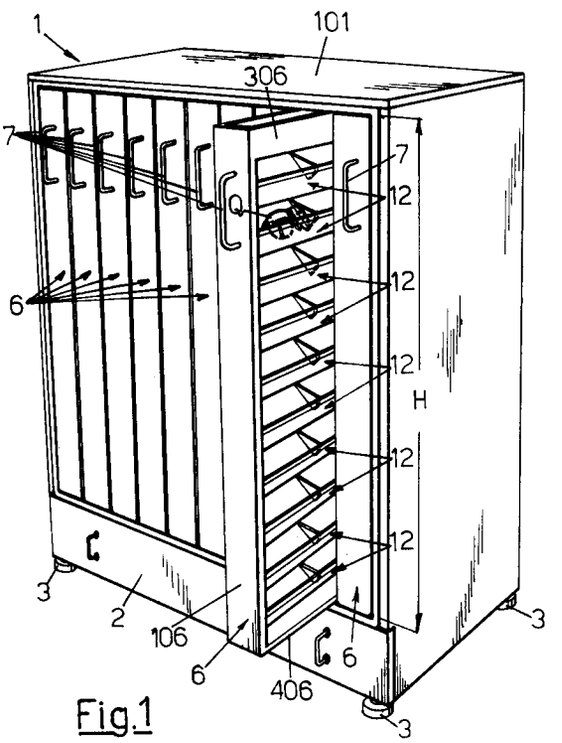

Fig.1

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At present, glasses and their frames, especially if valuable, are kept in the compartments of horizontal drawers which normally have to be pulled out of their housing space to enable the customer to view the contents and choose from them.

The means used at present to hold and display valuable glasses and/or frames are not very practical and do not make rational use of space.

The present invention seeks to solve these and other drawbacks by means of a cabinet with vertical drawers, in which each drawer possesses many horizontal rows, located above each other, of compartments inclined in the manner of a bookrest in order the better to display the product placed in these, the compartments being open on alternate sides of the same drawer. The rows of glasses-containing compartments are formed by double-sided modules which are placed one on top of the other after a cyclical rotation through 180° about a vertical axis.

Along with the practical value of being able to display glasses and frames by simply and quickly opening a vertical drawer, without having to detach it from the containing cabinet, there is also the advantage of the large containing capacity of the drawers, which is due to the particular cross section of their opposing offset compartments.

Further features and the advantages procured thereby, will be made clear in the following description which refers to the figures of the two accompanying plates of drawings, in which:

- Fig. 1 shows the cabinet in a perspective view with one drawer partly open;
- Figs 2 and 3 show the sliding connection of the drawers to the cabinet frame, Fig. 2 showing the top part and Fig. 3 the bottom part of a vertical drawer as fully open;
- Fig. 4 is a vertical cross section taken at an intermediate point showing the profile of a portion of the containing structure associated with each drawer;
- Fig. 5 shows in diagrammatic perspective one of the modules that fit together to form the containing structure of each drawer.

In Figures 1, 2 and 3 it can be seen that the cabinet 1 comprises a parallelepipedal structure closed by panels on the lateral faces except for one of the large faces, and also closed optionally at the bottom and closed at the top by a board 101 which may be fixed or movable, for example hinged at the back to said structure to allow access from the outside to the horizontal parallel guides by which the vertical drawers are mounted in the cabinet in question (see below).

The bottom part of the cabinet may optionally have one or more horizontal drawers 2 designed to open to the front in the same direction as the upper vertical drawers of the cabinet.

The base of the cabinet 1 may optionally have adjustable feet 3.

The cabinet 1 comprises an internal frame formed by members which define the perimeter of the various walls of this cabinet. In Figures 2 and 3, the numerals 4 and 104 indicate the upper longitudinal members and 5 the front longitudinal member of the frame which defines the space containing the vertical drawers 6 of the cabinet.

The vertical drawers 6 are flattened parallelepipeds and may have the following dimensions by way of example: Thickness T approximately 100 mm; Depth D approximately 500-550 mm; Height H approximately 1000-1100 mm.

Each drawer comprises a surrounding frame formed by:

- two uprights 106 and 206 having a "U" or "C" cross section with their concave sides towards each other, the visible upright having an external handle 7 of any design;
- an upper cross member 306 having a "U" cross section with its concave side uppermost, closed at the front by the visible upright 106 and open at its other end. The cross member 306 is immovably attached, for example by welding, to the uprights 106, 206. Attached to the internal flanks of the cross member 306 are the smaller-sectioned internal segments 108 of telescopic guides 8 whose external segments 208 are attached by means of supports 9 to the members 4, 104 of the cabinet frame. The guides 8 are of the type normally used in metal cabinets and enable the drawer 6 to be withdrawn fully from its housing space; and
- a lower cross member 406, of any design, possessing at least one longitudinal slot 10 which is open at least towards the bottom and cooperates as a slide with a guide block 11 attached to the cabinet frame member 5. These means prevent the drawer from swinging on the upper telescopic guides 8 and provide an end-stop when the drawer is open to its maximum extent. It will be understood that the slot 10 may alternatively be closed at the top and may rest on the block 11 or alternatively on a roller, which in this way would also act as a slide support point underneath the drawer.

The cross member 406 may be attached to the lower ends of the uprights 106 and 206, by welding or by means of screws, rivets or other means which will preferably not appear on the outside of the visible upright 106.

The modules 12 that fit together one above the other as shown in Figures 4 and 5 to form the rows of glasses-containing compartments are inserted into the drawer 6 while the lower cross member

406 is not present.

The modules 12 may be made by, for example, injecting a suitable plastic into a mould, and comprise:

- two rectangular end walls 112 whose width is such as to fit with sufficient closeness into the uprights 106, 206 of the drawer. Alternatively the walls 112 may remain outside the uprights 106, 206 and may be attached to them with lugs formed preferably integrally with these end walls, in other words to avoid said uprights having metal edges in the extreme compartments of the modules 12;
- a trough 212 open in an upward direction, integral at its ends with said end walls and formed, more particularly, by: a first wall 312 inclined at 45°, in contact with the end walls over their full height and with its upper and lower edges equidistant from the vertical edges of these end walls; a second wall 412 joined to the lower edge of said first wall, forming with it an internal angle of 90° and continuing as far as the neighbouring vertical edge of the end walls 112; and a third wall 512 joined to the upper edge of said second wall 412, placed vertically and of limited height; and
- one or more dividing walls 612 arranged parallel and equidistant with respect both to each other and to the end walls 112 and transversely integral with the trough 212 in such a way as to divide it into two or more compartments A, each of a suitable length for accommodating a pair of glasses or a set of glasses frames Q in a closed position, as illustrated in Figure 1. The particular bookrest-like construction of the wall 312 makes the glasses or frames Q fully visible from outside the compartment A.

The resulting modules 12 may be covered with a velvet-like material, which may be sprayed on or applied by any other suitable method.

The modules 12 are inserted into the uprights of the drawers 6 as illustrated in Figure 4, with the compartments A open in an upward direction and the modules rotated alternately through 180° about a vertical axis. The end walls 112 of the modules lie on top of each other and the topmost part of the trough 212 of one module is in contact with the bottommost part of the trough of the module immediately above it.

This particular arrangement and combination of modules 12 means that a very large capacity drawer 6 can be made.

The cabinet as thus designed may be fitted with a light source, not shown, consisting for example of neon tubes: this will be vertical, placed in the front part of the cabinet and optionally mounted so as to allow translational movement along the top of the cabinet itself to whichever drawer is being opened, in order to illuminate the contents on one or other side of the drawer.

Claims

1. Large capacity cabinet with vertical drawers, particularly for containing and displaying valuable glasses and/or their frames, characterised in that each drawer (6) possesses many compartments (A) arranged in horizontal rows located equidistantly above each other and open in an upward direction on alternate sides of the same drawer.

2. Cabinet according to Claim 1, in which the floors of the containing compartments (A) of each vertical drawer are inclined in the manner of a bookrest, so that the glasses and/or frames accommodated in these compartments are fully visible.

3. Cabinet according to Claim 1, in which the containing compartments of the drawers are formed by double-sided modules (12) that fit together one on top of the other in different orientations, these modules being made preferably by injecting a plastic into a mould and being optionally covered with some velvet-like material or any other material that will prevent any damage to the glasses.

4. Cabinet according to Claim 3, in which each module (12) comprises:
   - two rectangular end walls (112) accommodated or otherwise fixed in the vertical "U" or "C" members (106, 206) that form the uprights of the drawer frame;
   - a trough (212) connected at its ends to said end walls, this trough (212) being open in an upward direction and formed by: a first wall (312) inclined at 45°, in contact with the end walls over their full height and with its upper and lower edges equidistant from the neighbouring vertical edges of said end walls; a second wall (412) inclined at 45°, following and joined to the lower extremity of the previous first wall (312) and continuing as far as the neighbouring vertical edge of said end walls; and a third wall (512) following the previous inclined wall (412), of little height and arranged vertically or approximately vertically; and
   - one or more dividing walls (612) arranged parallel and equidistant with respect both to each other and to said end

walls (112), which divide said trough (212) into two or more compartments (A), each of a suitable length for holding a pair of glasses or frames in a closed position;

the resulting modules being placed one on top of the other with alternate rotation through 180° about the vertical axis.

5. Cabinet according to Claim 1, in which the frame of each vertical drawer (6) is formed at the top by a cross member (306) of "U" cross section closed at one end by the front upright (106) of said frame, open at the back and connected by its internal flanks to a pair of parallel telescopic guides (8), of which the segment of greater cross section (208) is attached via supports (9) to the upper members (4, 104) of the frame of the space containing the vertical drawers.

6. Cabinet according to Claim 1, in which the frame of each vertical drawer (6) is formed at the bottom by a cross member (406) of any design and possessing at least one longitudinal slot (10) which is open towards the bottom and cooperates with a guide block or roller (11) positioned on the front lower member (5) of the space containing the vertical drawers in order to prevent the drawers from swinging on the upper supporting telescopic guides (8) and optionally to provide a bottom slide support point for the drawers.

7. Cabinet according to Claim 1, in which each vertical drawer (6) has the following approximate dimensions: Thickness (T) approximately 9-10 cm; Height (H) approximately 100-110 cm; Depth (D) approximately 50-55 cm.

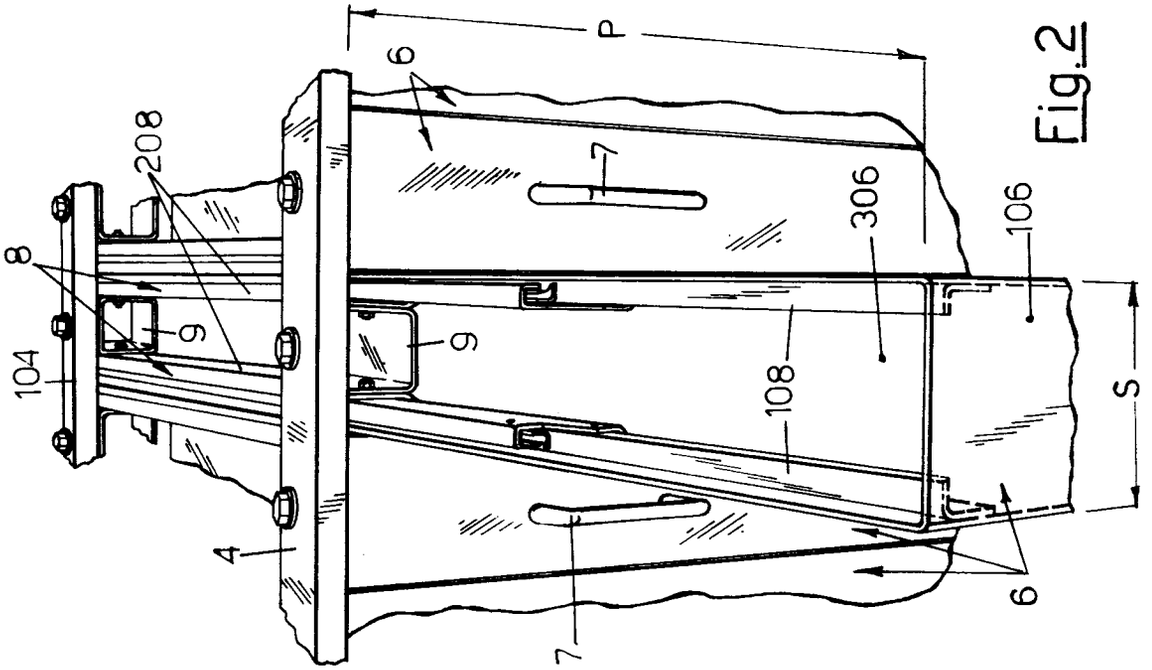

Fig.2

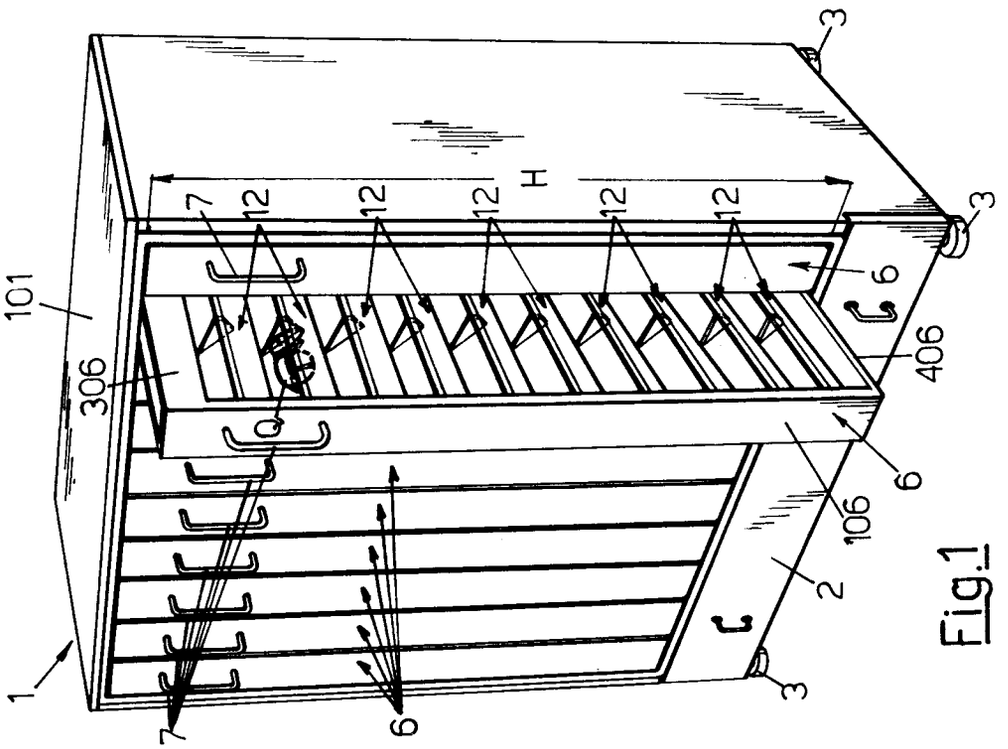

Fig.1

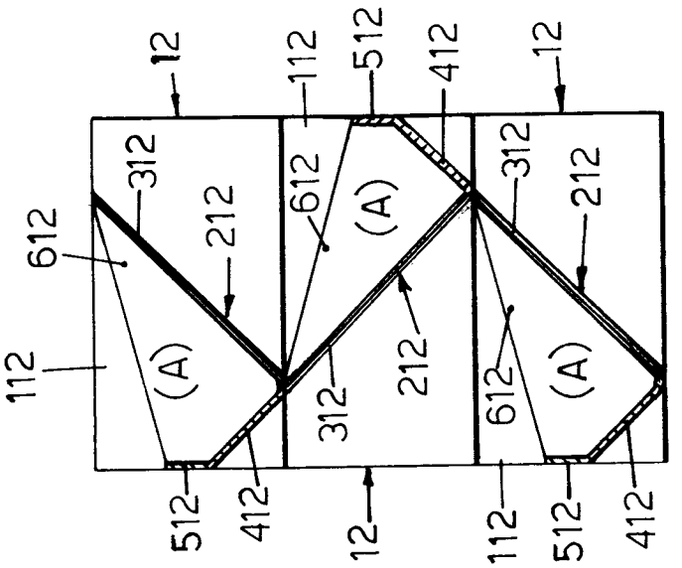

Fig.4

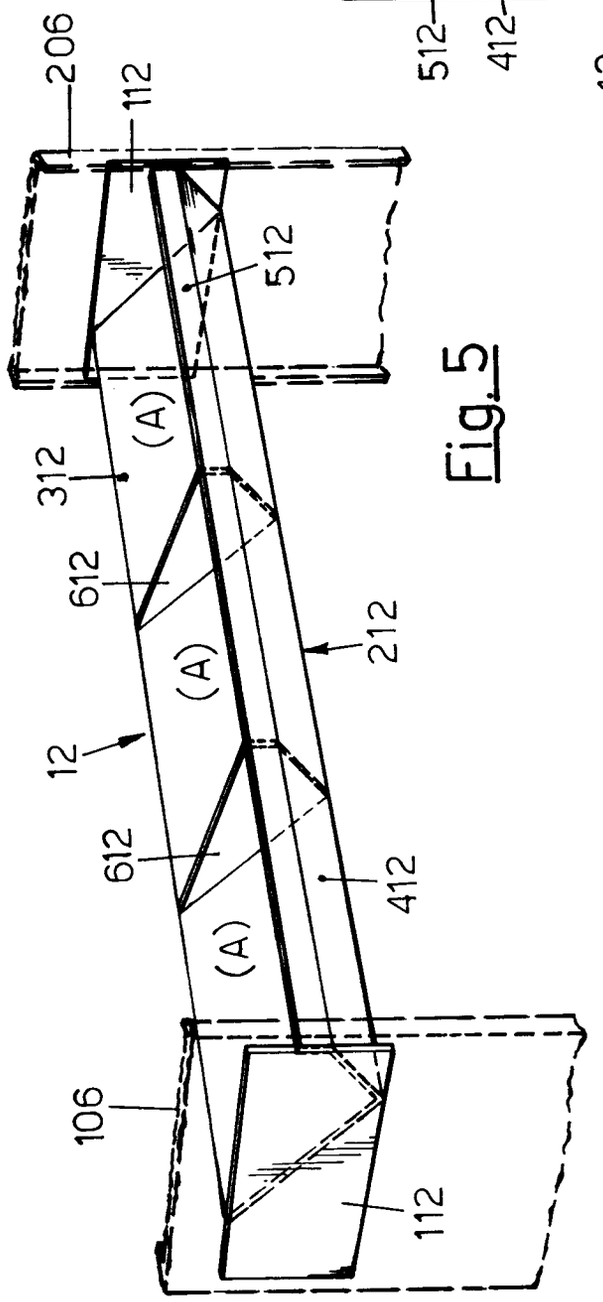

Fig.5

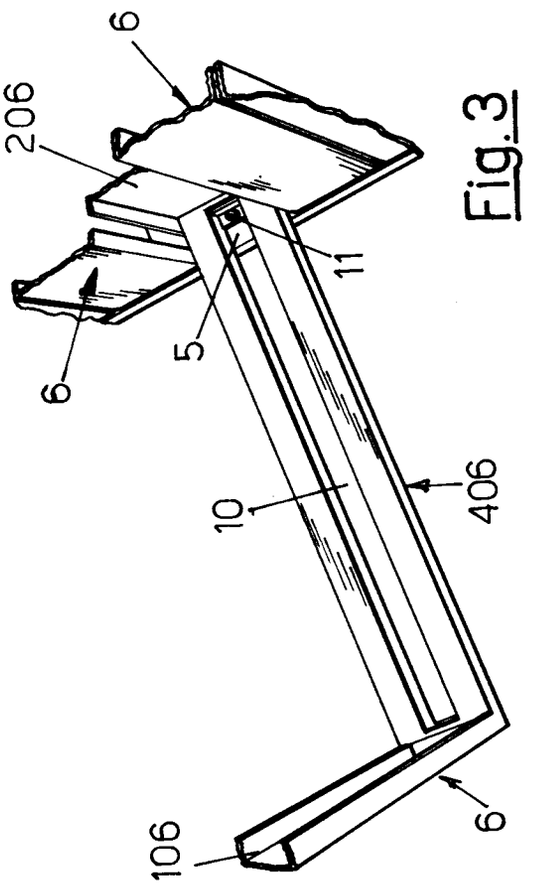

Fig.3

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EUROPEAN SEARCH REPORT

Application Number
EP 93 10 5627

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
A	US-A-4 715 669 (RUSS BASSETT COMPANY) * figure 1 * ---	1,4	A47B88/04 A47F7/02
A	DE-B-12 21 087 (SPOHR) * column 1, line 1 - column 1, line 27; figure 5 * ---	1,2	
A	US-A-3 955 681 (PLASTIC GRAPHIX CORPORATION) * figures 1-9 * -----	1	

TECHNICAL FIELDS SEARCHED (Int.Cl.5)

A47B
A47F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	25 October 1993	NOESEN, R

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
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