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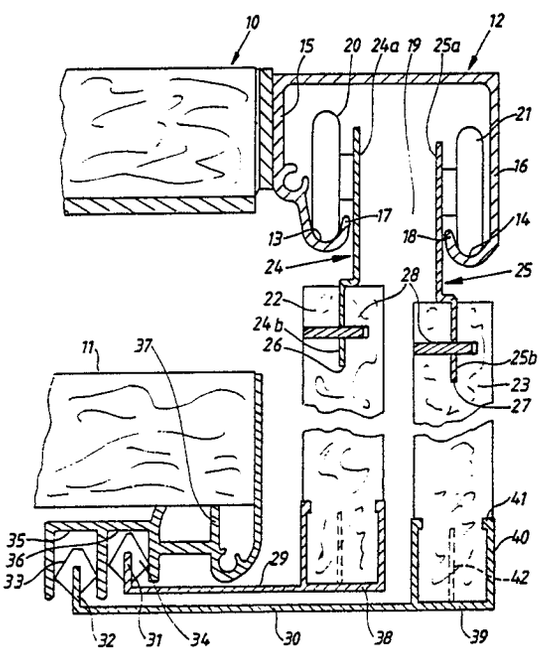
(54) Device for sliding doors for cabinets.

(57) This invention relates to a device for sliding doors for cabinets having two or several, each other partly overlapping, equally high doors (22, 23) which via hanging elements (24, 25) at the upper edge of the door are supported by rollers (20, 21) sliding elements or the like. The doors are movable in two parallel grooves (13, 14) of a common rail (12) the lower part of each door supporting a spacer (29, 30). The spacer is shaped as a horizontal plate overbridging the distance between the door and the cabinet and has an inner part (31, 32) which is guided by a metal or plastic strip (37) or the like below the cabinet and an outer part (38, 39) which is fastened at the door. The rail (12) has a mainly inverted U-shaped profile with inwardly bent tips (17,18) which forms the grooves (13, 14) and an opening (19) between said tips through which the hanging elements (24,25) can be inserted into the rail. The doors are turnable, the rollers (20, 21) or sliding elements when turning the doors being moved from one groove to the other. The spacers (29, 30) are removably fastened to the doors and when turning the doors the spacers are moved from the outer to the inner door and vice versa. The hanging elements (24, 25) comprise an upper part (24a, 25a) on which the rollers or sliding elements are fastened and a lower part (24b, 25b) being inserted and fixed into a centrally between the two sides of the door situated recess (26, 27) the upper and the lower part comprising a plate overbridging the distance between the upper edge of the door and the recess in which the door is supported.



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Device for sliding doors for cabinets

This invention relates to a device for sliding doors for cabinets having two or several, each other partly overlapping, and equally high doors which via hanging elements at the upper edge of the door are supported by rollers, sliding elements or the like which are movable in two parallel grooves of a common rail the lower part of each door supporting a spacer being shaped as a horizontal plate overbridging the distance between the door and the cabinet the plate having a inner part which is guided by a metal or plastic strip or the like between the cabinet and an outer part which is fastened to the door.

Doors of the above mentioned type are previously known for instance by French patent 2 005 911. These doors comprise a metal plate the edges of which are bent to a profile shape the profile projecting from the inner wall of the cabinet. The door is supported by a rail having parallel grooves and is at its lower part provided with locking washers or plates servering as spacers and being firmly fixed to the door. By this arrangement a cabinet construction is achieved where the shape of the door is fixed and predetermined and can not be changed unless the elements involved are demounted and exchanged.

The purpose of this invention is to achieve a flexible system, preferably for kitchen cabinets of the type described in Swedish patent application 8803165-3, where it is possible to quickly change the design of the doors at the same time as it is possible to rapidly mount and demount the doors.

This is according to the invention achieved by a device having the characteristics given in the claims.

An embodiment of the invention will now be described with reference to the accompanying drawing showing a vertical section through a cabinet with a sliding doors.

As appears from the Figure the kitchen cabinet comprises an upper part 10 which is a shelf or a bracket which is supported by a vertical supporting bar at the kitchen wall, not shown, and a lower part 11 in a corresponding way forming a bottom of the cabinet. Between the upper and lower part there are several brackets which are fastened to the supporting bars and on which shelf plates not shown are arranged.

On the upper part 10 a rail 12 is fixed by means of screws and this rail comprises a metal profile having a mainly inverted U-shape with an inner groove 1 3 and an outer groove 14 the outer groove being placed somewhat below the inner groove 13. The grooves 13 and 14 are limited by vertical legs 15 and 16 and tips 17 and 18 which are bent upwards. By this arrangement an opening 19 is created between the tips 17 and 18 of the legs. Several rollers 20, 21 are movable in the grooves 13 and 14 and support an inner and an outer door 22 and 23 respectively via hanging elements 24 and 25. These elements 24 and 25 comprise a metal or plastic plate which is so shaped that an upper part 24a, 25a is formed which overbridges and covers the slot between the upper edge and the rail 12. The lower part 24b, 25b of the hanging element 24, 25 is inserted into a central elongated recess 26, 27 at the upper edge of the door and is fixed at the door by means of dowels 28.

The outwardly and inwardly directed sides of the doors 22 and 23 have such a colour and shape that any side can be directed towards the kitchen. For example the sides of the two doors can vary by means of different decorations and colour choises. The two doors are also equally high.

The lower part of each doors supports a spacer 29, 30 this spacer being a plate preferably of plastic and extending along the complete edge. The plate overbridges the distance between the lower edge of the door and the lower part 11 of the cabinet the spacer 29 being somewhat shorter than the spacer 30. The inner part of the spacer 29, 30 has an upwardly extending edge 31, 32 on which a finger 33, 34 is fastened. These fingers are sliding in the grooves 35, 36 of a metal or plastic strip 37 which is fastened to the outer end of the lower part of the cabinet. The outer part of the spacers 29, 30 has a U-profile 38, 39 surrounding the lower edge of the door the legs 40 of the U-profile having a bead 41 which is inserted into a corresponding groove in the door. The spacer can easily be removed from the door by bending the two legs 40 of the U-shaped profile outwards so that the bead 41 comes free from the grooves in the door.

It is possible to replace the U-shaped outer part of the spacer with other arrangements for instance an upwardly directed flange 42 which appears from the dashed-lines in the Figure and which engages a corresponding recess which is centrally placed in the lower edge of the door and which is kept in position by means of clamp action.

In order to change the interior of the kitchen for instance by changing colour decoration on the doors the finger 33 is first removed from the groove 35 by pulling the spacer 30 downwards at the same time as the door 23 is moved outwards. Then the door with the hanging element 24 and its rollers 21 can be lifted out of the groove 14 and be moved out from the opening 19 after which the spacer 30 is removed from the door. The door 22

and the spacer 29 is removed in a corresponding way. Then the door 23 is turned so that the previous inside faces outwards after which the spacer 29 is fastened at the lower edge of the door. The door 23 is then lifted into the groove 13 and the finger 34 of the spacer is then again inserted into the groove 36. In a corresponding way the door 22 is then turned as fastened.

Claims

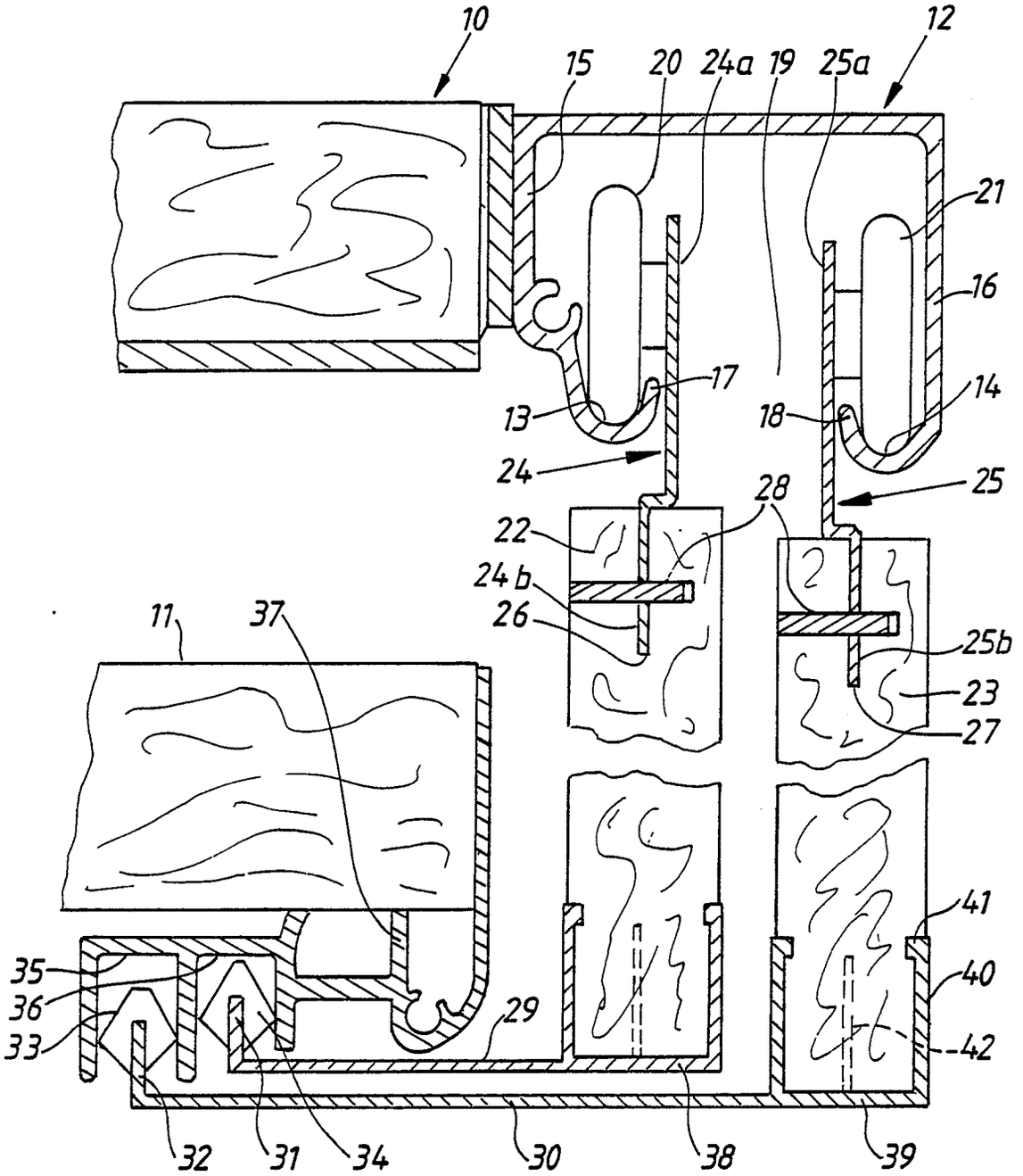
1. Device for sliding doors for cabinets having two or several, each other partly overlapping, equally high doors (22, 23) which via hanging elements (24, 25), fastened at the upper edge of the door, are supported by rollers (20, 21) sliding elements or the like which are movable in two parallel grooves (13, 14) of a common rail (12) the lower part of each door supporting a spacer (29, 30) being shaped as a horizontal plate overbridging the distance between the door and the cabinet, the plate having a inner part which is guided by a metal or plastic strip (37) or the like below the cabinet and an outer part which is fastened at the door, **characterized** in that the rail (12) has a mainly inverted U-shaped profile with inwardly bent tips (17) which form the grooves (13, 14) and an opening (19) between said tips through which the hanging elements (24, 25) can be inserted into the rail, that the doors (22, 23) are turnable, the rollers or sliding elements when turning the door being moved from one groove to the other (13, 14 respectively) and that the spacers (29, 30) are removably fastened to the doors and when turning the doors (22, 23) are moved from the outer to the inner door and vice versa and that the hanging elements (24, 25) comprise an upper part (24a, 25a) on which the rollers or sliding elements are fastened and a lower part (24b, 25b) being inserted and fixed into a centrally between the two sides of the door situated recess (26, 27) the upper and the lower part comprising a plate overbrigding the distance between the upper edge of the door and the recess in which the door is supported.

2. Device according to any of the preceding claim 1, **characterized** in that one groove (13) is placed higher than the other groove (14).

3. Device according to any of the preceding claims, **characterized** in that the outer part of the spacer (29, 30) comprises a vetical flange (42) which is inserted into a recess at the lower edge of the door.

4. Device according to any of claims 1 - 2, **characterized** in that the outer part of the spacer (29, 30) has a U-shaped profile (38, 39) which removably surrounds the lower part of the door.

5. Device according to any of the preceding claims, **characterized** in that the spacer (29, 30) is made of plastic.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EUROPEAN SEARCH REPORT

Application Number

EP 90 85 0176

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)
D,Y	FR-A-2005911 (BRIGFON) * page 1, lines 18 - 29 * * page 2, line 20 - page 3, line 23; figures 1-3 * ---	1, 3	E05D15/08 E06B3/46
Y	GB-A-2001120 (HUNTER DOUGLAS) * page 1, lines 91 - 100 * * page 1, lines 116 - 123 * * page 2, lines 5 - 31; figures 1, 2, 3, 4 * ---	1, 3 4	
A	DE-A-3508536 (GUDDAS) * page 5, lines 3 - 21; figures 1-3 * ---	1	
A	FR-A-2258150 (TEAM FORM) * page 2, lines 20 - 22; figure 1 * ---	2	
A	US-A-4769949 (GLENDOWNE) * column 2, lines 25 - 34 * * column 2, lines 58 - 67 * * column 3, lines 46 - 51; figures 1-7 * ---	4, 5	
A	US-A-3457677 (ZIEGLER) * column 1, lines 34 - 51 * * column 2, lines 23 - 43; figure 1 * -----	4, 5	TECHNICAL FIELDS SEARCHED (Int. Cl.5) E05D E06B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	03 SEPTEMBER 1990	GUILLAUME G.E.P.

CATEGORY OF CITED DOCUMENTS

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