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Cabinet for household electric appliances, particularly for washing machine.

Present invention refers to a cabinet for household appliances, particularly for washing machines; the main characteristics of the invention consists in that the main part of the cabinet is obtained putting together two substantially equal vertical L shaped elements (1, 2).

A second important characteristic of the cabinet according to the invention consists in that it comprises a basement made out of plastic material, which has structural and aesthetical functions.

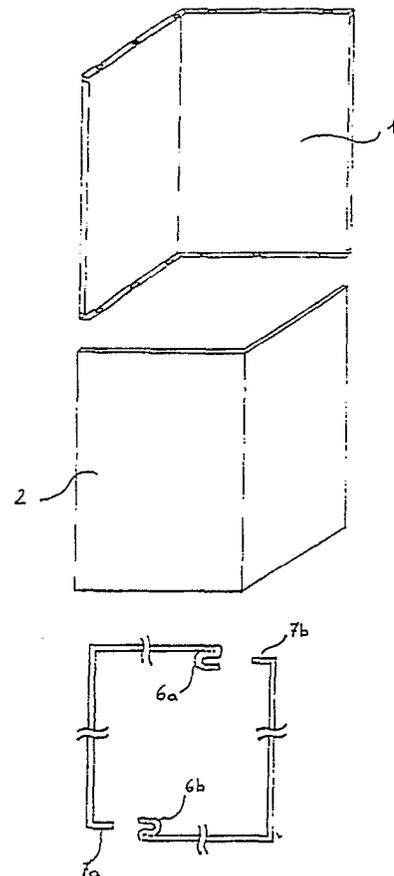


Fig. 1

EP 0 380 991 A1

Cabinet for household electric appliances, particularly for washing machine

Present invention refers to a cabinet for household appliances, particularly for washing machines.

Known household appliances, particularly washing machines, have an usually box-shaped cabinet, made out of enamelled metal sheet; for instance it may be obtained bending the sheet like an U, so to realize three vertical walls (one at the front and two on the sides); the rear wall may be made out of metal sheet too, or out of a different material, and fastened later to the other walls by means of screws; the cabinet has also a top platform, acting as a support base, which, in the case of top loading washing machines, opens as a lid in order to allow the access to the inside of the machine.

The designer of household appliance cabinets, particularly of washing machines, has many problems to face, in order to conciliate functional and aesthetical needs as well as the manufacturing cost, which of course shall be the lowest possible.

Among functional problems there is the necessity to allow the appliance to be installed in different positions, still allowing to get out supply and drain pipes at the most convenient side, which may change from case to case, due to different environment particularities; in any case the rear side of the machine must leave a gap towards the room wall in order to allow the pipes to pass; among aesthetical problems there is the necessity to match the heights of the machine and adjoining cabinets (or other appliances), as well as the heights of relevant basements, and the problem to avoid assembly screws to be seen; among cost problems there is the necessity to reduce the cost of tools, sharing it on the highest possible number of pieces; and to reduce the storage cost of the components to be assembled later.

It is an object of the present invention to indicate a cabinet for household appliances, particularly for washing machines, which permits to optimize the above said often conflicting necessities, functional, aesthetical, and of cost.

To obtain the said object, the subject of present invention is a cabinet for household appliances, particularly for washing machines, characterized in that the main part of the cabinet is obtained putting together two substantially equal vertical L shaped elements.

In a preferred embodiment of the invention, the cabinet according to the invention is characterized in that it comprises a basement made out of plastic material, which has both structural and aesthetical functions.

Other objects and advantages of the present invention will be clear from the detailed description

which follows and from the attached drawings, which are supplied only as an explanatory and not limiting example, wherein:

figure 1 shows a view of the two equal L shaped elements for the cabinet according to the invention;

figure 2 shows a view of the assembled cabinet according to the invention;

figure 3 shows a view of the basement of the cabinet according to the invention.

In figure 1, which shows a view of the two equal L shaped elements for the cabinet according to the invention, reference number 1 indicates one of the two L shaped elements, made out of metal sheet (for instance 0.7 mm thick), by profiling or forming it; reference number 2 indicates the second L shaped element, equal to the first one; the two elements are then assembled together thanks to the bending of their vertical edges, which is clearly shown in the particulars indicated by reference numbers 6a, 7a, 6b, 7b.

As it can be seen bendings 6a and 6b are equal one to the other, and are of female type; while bendings 7a and 7b, which are each other equal too, are of the male type; bending 6a hooks to bending 7b, which enters in it; in the same way bending 6b hooks to bending 7a, which enters in it.

In this way an easy and screwless assembly is obtained, and the same tool can make both elements, which are equal one to the other; with only one tool, if suitably made, it is possible to manufacture also elements having different heights and/or widths, to be used for machines of different sizes.

In figure 2, which shows a view of the assembled cabinet according to the invention, reference number 2 indicates the same L shaped element, which bears the same reference number in figure 1. The other element, namely element 1, is not shown.

Reference number 4 indicates a supporting basement made out of plastic material (for instance fiberglass weighted polypropylene), having both structural and aesthetical functions.

L shaped elements are screwed to basement 4 (two screws can be seen in fig. 3, having reference number 5).

In fig. 2 reference number 3 indicates the lid, in open position; indeed the described washing machine is of the top loading type.

As it can be seen basement 4 is recessed in respect of the vertical sides of the cabinet, represented by elements 1 and 2; in this way the machine may aesthetically match other household appliances in the room. Moreover between the machine and the wall there is a gap for the passage of

the pipes; and frontally there is the so called skirting board.

Basement 4 may be made to have different heights, so to allow an easy matching between the machine and other adjoining cabinets; moreover it is possible, thanks to the recessed shape of said basement 4, to direct the machine in the best way and let the loading and draining pipes to pass in the gaps between the basement 4 of the machine and the wall and/or the adjoining cabinets.

To basement 4 are fastened the known interior elements of the machine (tank, drain pump, etc.); basement 4 nevertheless does not only fulfil a supporting function, but also a well defined functional and aesthetical function, as already said.

Element 2 may be taken down for test or repair, so to allow an easy access to the inside of the machine.

In figure 3, which shows a view of the basement of the cabinet according to the invention, reference number 4 indicates the already described basement made out of plastic material, as said; reference number 5 indicates two of the fastening screws between element 2 and basement 4.

From the figure it can be seen that the basement is internally hollow and shows on the bottom lightening holes; inside the basement other holes may be made for loading and draining pipes, in order to allow a choice depending from the environment situation; such holes if not used, may be closed in a known way by means of suitable plugs; one of such holes is shown at 6.

Moreover basement 4 may provide for one or more inspection doors, for testing or cleaning of the drain pump and/or of a possible filter and additionally incorporates bearings for supporting feet or wheels, which may be fix or pivoting and capable of being raised.

Characteristics of the described system are clear from the description given and from the attached drawings.

Also clear are the advantages of the appliance cabinet according to the invention.

Particularly they are represented by:

- easy assembly;
- reduced manufacturing cost, as the same tooling may be used for different models;
- reduced number of components to be stored;
- no visible screws on the vertical sides of the cabinet;
- possibility to match kitchen cabinets basements;
- possibility to get the pipes out on three sides, so to easy the instalment;
- easy testing and repairment.

It is clear that many variations to the cabinet described as an example are possible to the skilled in the art, without departing from the novelty principles inherent to the invention.

Claims

1. Cabinet for household appliances, particularly for washing machines, characterized in that the main art of the cabinet is obtained putting together two substantially equal vertical L shaped elements (1, 2).

2. Cabinet for household appliances, particularly for washing machines, according to claim 1, characterized in that the two L shaped elements (1, 2) are perfectly identical one to the other.

3. Cabinet for household appliances, particularly for washing machines, according to claim 1, characterized in that the two L shaped elements (1, 2) are made out of metal sheet and may be obtained by profiling or forming.

4. Cabinet for household appliances, particularly for washing machines, according to claim 1, characterized in that the two L shaped elements (1, 2) are assembled thanks to suitably made bendings (6a, 6b, 7a, 7b) on the vertical edges, without the need of visible screws on the four sides.

5. Cabinet for household appliances, particularly for washing machines, according to claim 3, characterized in that said L shaped elements (1, 2) obtained by profiling or forming are manufactured with a modular system, permitting to obtain with the same tooling different heights and/or widths.

6. Cabinet for household appliances, particularly for washing machines, characterized in that it comprises a basement (4) made out of plastic material, which has structural and aesthetical functions.

7. Cabinet for household appliances, particularly for washing machines, according to claim 6, characterized in that said basement (4) provides for the possibility to match basements of kitchen cabinets.

8. Cabinet for household appliances, particularly for washing machines, according to claim 6, characterized in that said basement (4) shows a rear recess or the passage of loading and draining pipes.

9. Cabinet for household appliances, particularly for washing machines, according to claim 6, characterized in that said basement (4) is recessed in respect of the vertical sides of the cabinet made of the elements (1, 2) in order to allow the passage of pipes between the appliance and the wall and/or the adjoining cabinets.

10. Cabinet for household appliances, particularly for washing machines, according to claim 6, characterized in that said basement (4) provides for getting out loading and draining pipes on three sides in order to easy the instalment thereof.

11. Cabinet for household appliances, particularly for washing machines, according to claim 6, characterized in that said basement (4) shows at

least an inspection door, for instance for controlling the drain pump and/or the relevant possible filter.

12. Cabinet for household appliances, particularly for washing machines, according to claim 1, characterized in that it allows the testing and/or the repairment of the appliance taking out one of the two L shaped elements (1, 2) so as to easy checking and adjusting operations.

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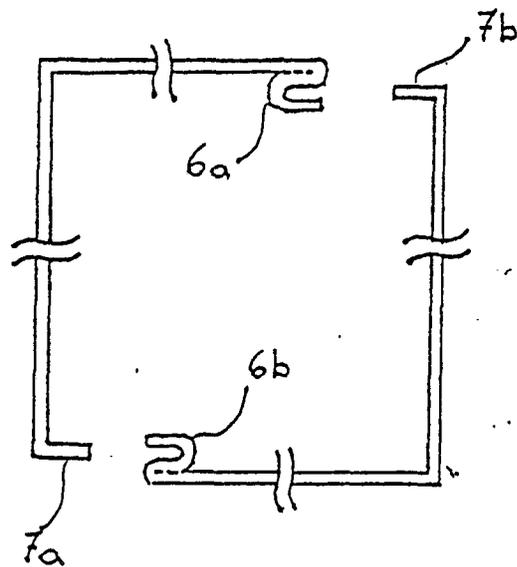
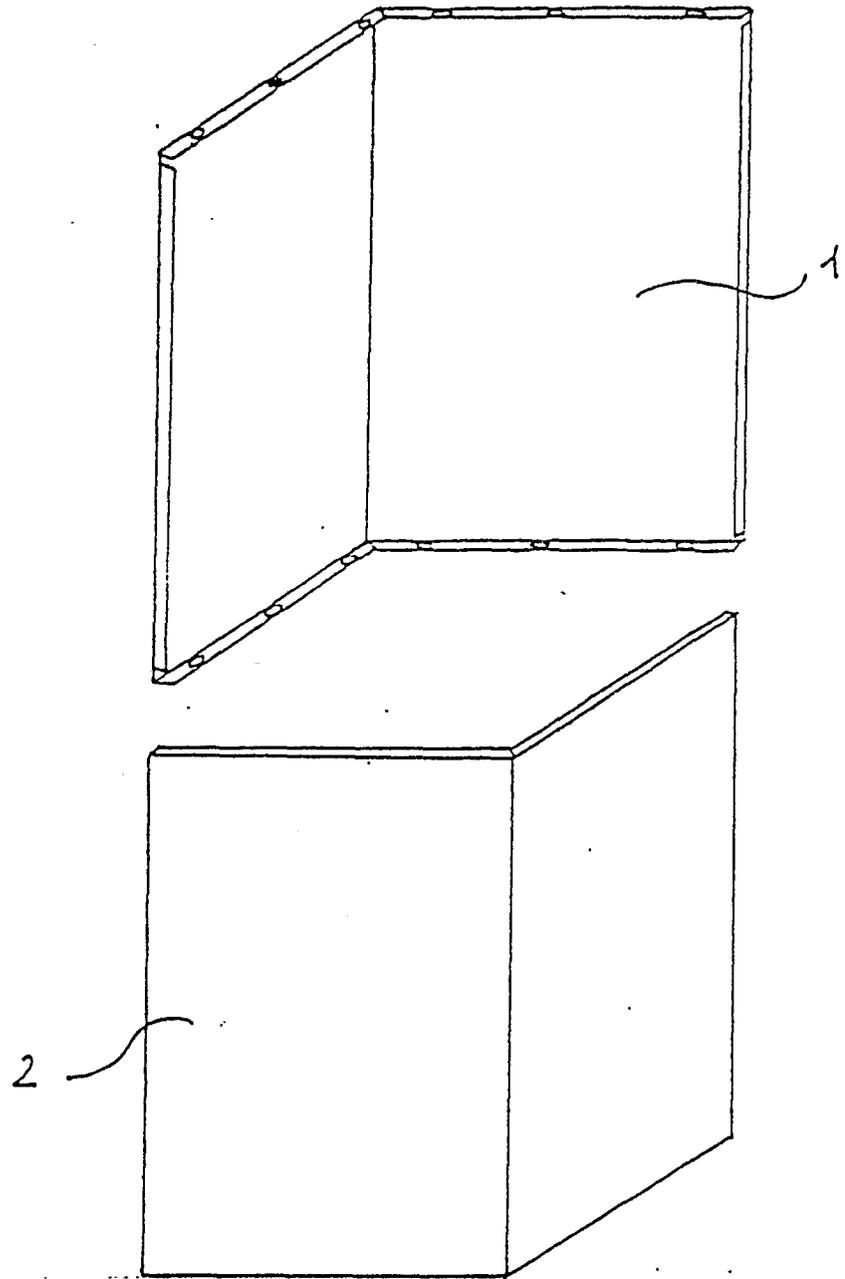


Fig. 1

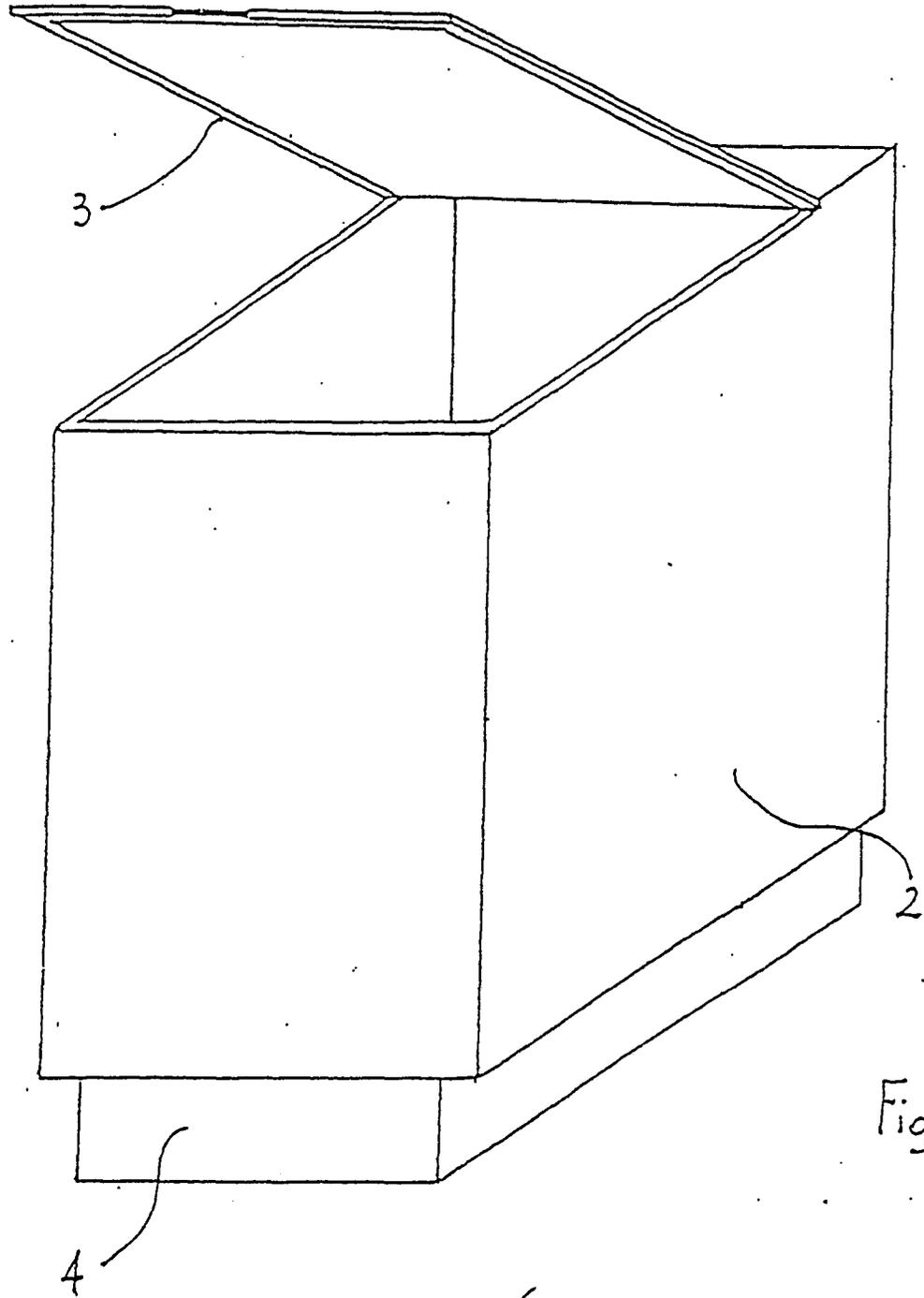


Fig. 2

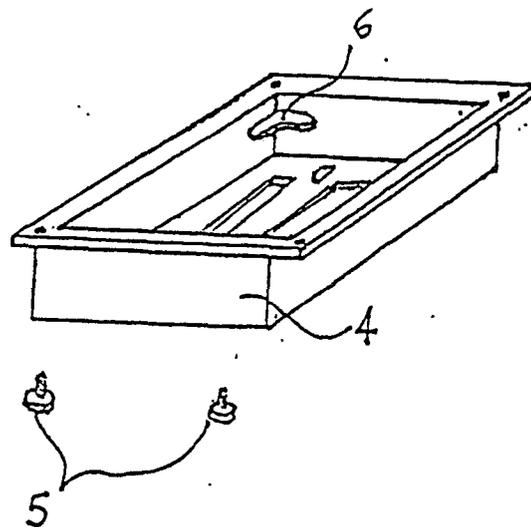


Fig. 3



| 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) |
| X | GB-A-1181917 (INDUSTRIE ZANUSSI S.P.A) * the whole document * | 1, 2 | D06F39/12 |
| A | --- | 3-6 | |
| A | GB-A-2109824 (TOKYO SHIBAURA DENKI KK) * page 2, lines 31 - 64; figures * | 1-6, 12 | |
| A | DE-U-8704404 (ZANUSSI ELETTRODOMESTICI S.P.A.) * ffigures * | 7-10 | |
| The present search report has been drawn up for all claims | | | TECHNICAL FIELDS SEARCHED (Int. Cl.5) |
| | | | D06F |
| Place of search | Date of completion of the search | Examiner | |
| THE HAGUE | 11 MAY 1990 | COURRIER G. L. A. | |
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