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EUROPEAN PATENT APPLICATION

21 Application number: 86109497.7

51 Int. Cl.4: D06F 39/12

22 Date of filing: 11.07.86

30 Priority: 11.07.85 IT 3404585 U

43 Date of publication of application:
14.01.87 Bulletin 87/03

84 Designated Contracting States:
AT BE CH DE FR GB IT LI LU NL SE

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54 **Housing for a laundry washing machine.**

57 The invention relates to a housing for a laundry washing machine particularly of the domestic top-loading type, comprising a carrying structure for supporting the laundering assembly with its operating components, and closed by substantially planar panels. According to the invention, the carrying structure is formed by a box element made of a sheet material cut to measure and bent to an L configuration so as to comprise in a single piece the bottom and a vertical wall of the housing, the carrying structure being completed by a panel disposed opposite said vertical wall and connected thereto by two upper rails. Dismounting the enclosing planar panels gives ready access to the laundering assembly and its operating components while continuing to be supported by the carrying structure.

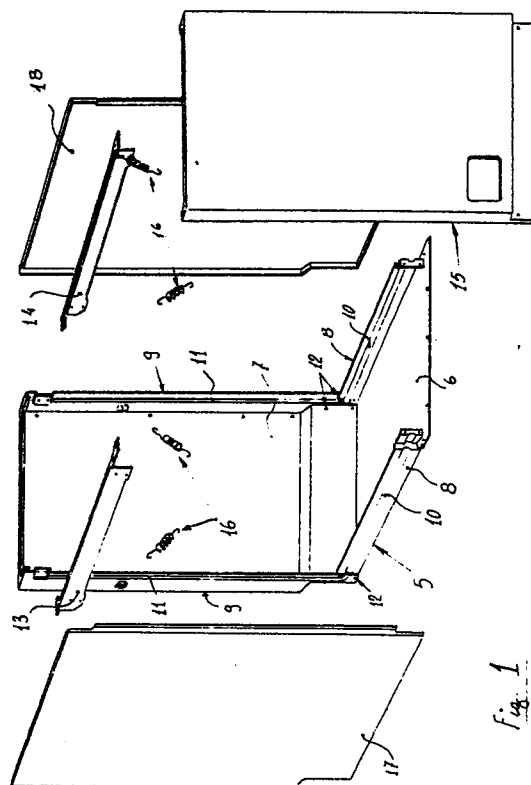


Fig. 1

Housing for a Laundry Washing Machine

The present invention relates to a housing for a laundry washing machine particularly of the domestic top-loading type. There are known laundry washing machines having a housing including a carrying structure assembly adapted to be disassembled for giving access to the various operating components of the machine.

French Patent No. 2,082,075 for instance describes a laundry washing machine with a housing comprising a base frame and a pair of rear corner posts secured thereto for carrying a cantilevered top panel corresponding to the base frame; the laundering assembly is mounted on the base frame and is enclosed between a front panel and two side panels secured respectively to the top panel, to the base frame and to the corner posts.

A structure of this type does not offer sufficient rigidity and requires complicated, time-consuming and thus expensive assembly operations, in particular, it appears rather impractical and inconvenient that the laundering assembly is only supported on the base frame during assembly and maintenance operations.

The Italian utility model application No. 34037/84, filed in the name of the present applicant, describes a laundry washing machine having a housing composed of two mutually connectable and exchangeable half-shells and a pair of cross members adapted to be secured to top portions of the half-shells and to support the laundering assembly; the housing is completed by a base frame and a top panel.

This solution reduces the number of components and assembly operations, but does not yet provide for a desirable production flexibility in that the assembly of different model versions of the housing requires the substitution of the half-shells by others of different shapes and dimensions.

It is thus an object of the present invention to provide a housing for a laundry washing machine having an extremely simplified structure formed of a minimum number of components to thereby facilitate the operations of mounting and assembly as well as modifications of the housing, and the storage of its components.

In addition, the proposed solution considerably facilitates the eventually necessary operations for the maintenance of the laundering assembly.

The stated object is attained by a housing comprising a carrying structure for supporting the laundering assembly with the respective operating components, the housing being adapted to be closed by substantially planar panels and characterized in that the carrying structure is formed by a box element made of a sheet material cut to

measure and bent to an L configuration so as to comprise in a single piece the bottom and a vertical wall of the housing, the carrying structure being completed by a panel disposed opposite the vertical wall and connected thereto by two upper rails.

Further objects and characteristics of the invention will become more clearly evident from the following description, given by way of example with reference to the accompanying drawings, wherein:

fig. 1 shows an exploded perspective view of a housing according to the invention,

fig. 2 shows the housing of fig. 1 in a partially assembled state, and

fig. 3 shows a sectional view of a detail of the housing shown in fig. 2.

The housing shown in figs. 1-3 comprises a box element 5 forming a bottom 6 and a rear wall 7 in a single piece.

Alternatively element 5 may of course also form the bottom and any one of the vertical walls of the housing. Element 5 is formed of a planar sheet material which is cut to size and subsequently bent to an L configuration having upright edge portions 8 and 9, respectively, along the lateral borders of the bottom and rear wall panels.

At the same time upright edge portions 8 and 9 are preferably formed with reinforcing flutes 10 and 11, respectively. The rear end portions of edge portions 8 are then secured as by means of rivets 12 to the lower end portions of edge portions 9 so as to impart the necessary rigidity and structural stability to element 5.

The carrying structure of the housing is completed by two rails 13, 14 and a front panel 15. Rails 13 and 14 interconnect the lateral top portions of element 5 and front panel 15, the latter being additionally secured to bottom 6. All of these connections are preferably established by riveting.

The laundering assembly (not shown) is then mounted within the thus obtained carrying structure by suspending it by means of springs 16 from edge portions 9 of rear wall 7 and rails 13 and 14 as indicated in fig. 1, and by securing it to bottom 6 by conventional means (not shown).

The housing is finally closed by lateral panels 17, 18 secured to the above described structure by means of thread-cutting screws, and by a (not shown) top panel made and secured in any known manner.

For obtaining improved structural continuity of the housing assembly, the lateral borders of front panel 15 and the forward borders of lateral panels 17, 18 are profiled in a manner to form respective hinges 20 after being mounted (fig. 3).

In this manner, when the components of the housing and the carrying structure are assembled, lateral panels 17, 18 have their forward borders secured to the carrying structure by these hinges, so that thread-cutting screws are only required for securing them to rear wall 7. Lateral panels 17 and 18 thus assume also a structural function in this construction.

The housing according to the invention permits rapid and unobstructed access to the laundering assembly for any required maintenance operations after the lateral panels have been dismounted in a sufficiently simple manner, the laundering assembly remaining supported by the carrying structure formed of element 5, front panel 15 and rails 13 and 14 (fig. 2).

A further advantage offered by the proposed solution resides in the possibility of providing housings of different widths by simply varying the cutting and bending dimensions of the sheet material for forming element 5 in a manner solely resulting in different heights of upstanding edge portions 8 and 9. This modification obviously entails substitution of the front panel 15, which has to correspond to the required width and may be of varying appearance to conform to that of other components of a kitchen combination or the like.

The employ finally of riveted connections permits the employ of precoated sheet material and highly automatized assembly methods to thereby reduce the number of intervening production steps for obtaining the finished housing.

Claims

5 1. A housing for a laundry washing machine, particularly of the domestic top-loading type, comprising a carrying structure for supporting the laundering assembly with the respective operating components, said housing being adapted to be closed by substantially planar panels, and characterized in that said carrying structure is formed by a box element (5) made of a sheet material cut to measure and bent to an L configuration so as to comprise in a single piece the bottom (6) and a vertical wall (7) of said housing, said carrying structure being completed by a panel (15) disposed opposite said vertical wall and connected thereto by two upper rails (13, 14).

10 2. A housing for a laundry washing machine according to claim 1, characterized in that said box element is provided with angularly bent edge portions (8, 9) formed with reinforcing flutes (10, 11).

15 3. A housing for a laundry washing machine according to claim 1, characterized in that said box element comprises the bottom (6) and the rear wall (7) of the housing.

20 4. A housing for a laundry washing machine according to claim 1, characterized in that at least two of said closing panels (15, 17, 18) are provided with profiled edge portions adapted to form a hinge (20) after being mounted in position relative to one another.

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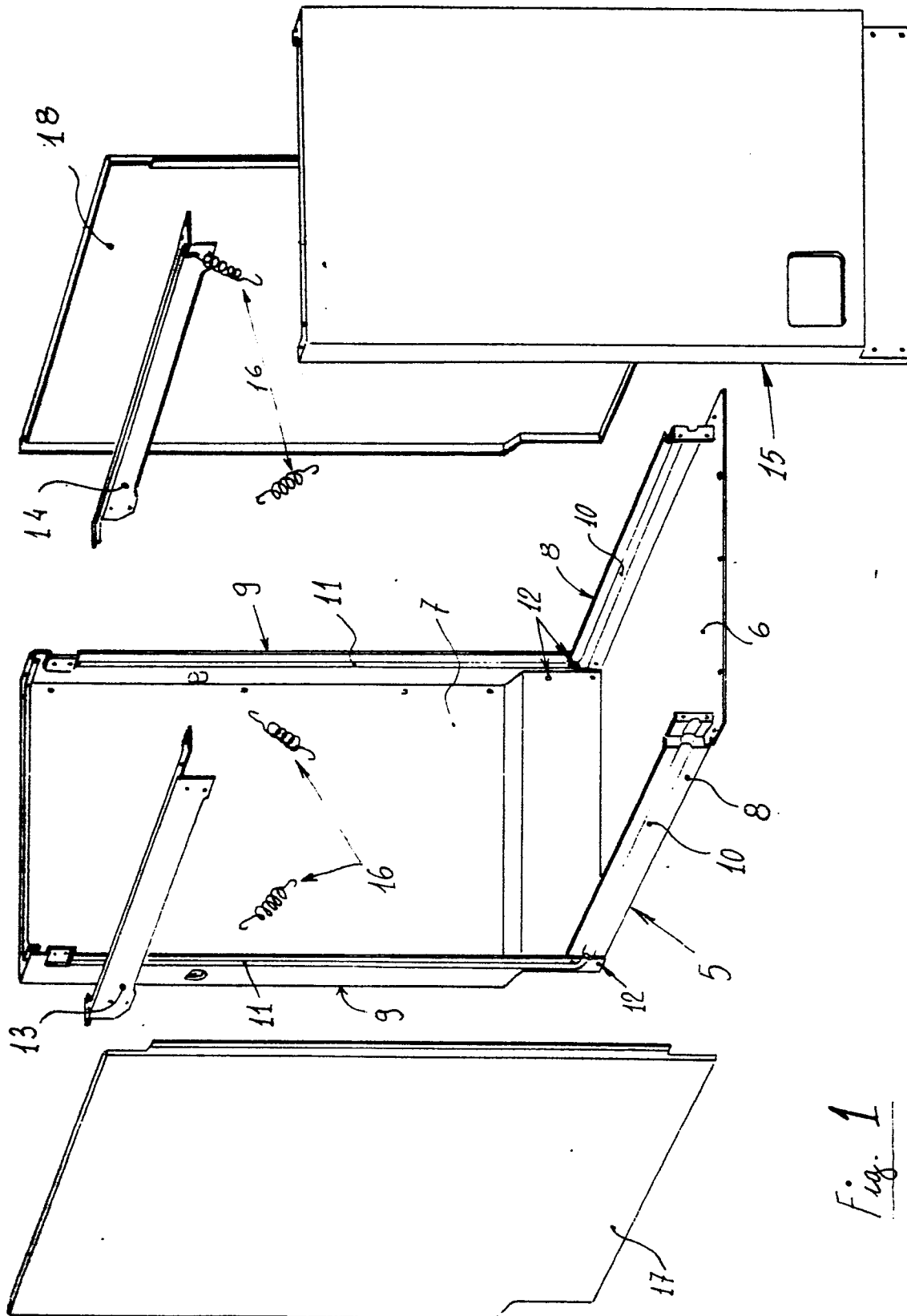


Fig. 1

