The present invention relates to a washer/dryer (1) comprising two side walls (2) covering the volume from sides wherein the drum, in which the laundry is placed, and other machine elements are located, a front wall (3) covering the said volume front the front, a base (4) that supports the side walls (2) and other machine elements from below and a skirt (5) that extends into the body at the lower edge of the side wall (2) and perpendicularly to the side wall (2).
Description

A WASHER/DRYER WHEREIN EASE OF ASSEMBLY IS PROVIDED

[0001] The present invention relates to a washer/dryer wherein ease of assembly/disassembly is provided.

[0002] In washers/dryers; the outer cabinet is formed by fastening the rear, side and front walls to each other by connection elements such as screws, etc. Forces coming from various directions due to the impacts and falls that can occur during transportation act on these screws and connection elements. In case that the connection elements and the areas whereat they are mounted cannot resist the forces, deformations and metal sheet tearings can occur in these areas. On the other hand, the assembly made by using screws is disadvantageous both in terms of time and labor. Furthermore, disassembly of the walls fixed with screws in order to reach the interior volume of the washer/dryer for maintenance takes time and the walls are also damaged during unscrewing and re-screwing.

[0003] In the state of the art, various methods are used in order to prevent the damages that can occur at the connection points during transportation and for facilitating the assembly of the outer cabinet.

[0004] In the state of the art embodiment, United States Patent Application No. US2006225466, a washer/dryer is explained, the side walls of which are secured to the base thereof by means of screws.

[0005] Another state of the art embodiment is explained in the German Patent Application No. DE381 06476. The washer/dryer described in this application has a body that is assembled by mounting the protrusions disposed on the base into the housings disposed on the side walls.

[0006] The aim of the present invention is the realization of a washer/dryer that can be easily assembled.

[0007] The washer/dryer realized in order to attain the aim of the present invention is explicated in the claims.

[0008] In the washer/dryer of the present invention, the skirt extending along the lower edge of the side walls is seat onto the extension extending outwards from the base. The width of the extension is almost as much as the width of the skirt. A flange extending upwards at the inner side of the extension
is disposed on the base.

[0009] In the washer/dryer of the present invention, first the side wall is placed onto the base by being slid from top to bottom, then is mounted by being slid from back to front. At least one protrusion extending outwards is disposed on the flange. When the side wall is slid from back to front, the skirt enters under the protrusion and thus the side wall is provided to be fixed to the base.

[0010] Recesses are disposed on the skirt in order to mount the skirt onto the extension without getting stuck to the protrusion while the side wall is slid from top to bottom.

[0011] While the side wall is slid from top to bottom, the protrusion is aligned with the recess and hence, the skirt is seated onto the extension. Afterwards, the side wall is slid from back to front. Thus, the protrusions are nonaligined with the recesses and the protrusion bears against over the skirt. A distance almost as much as the skirt is present between the protrusion and the extension. Consequently, the skirt get stuck between the protrusion and the extension, and thus prevents the vertical movement of the side wall.

[0012] In an embodiment of the present invention, an all-around collar extending downwards is disposed on the edges of the recess. In this embodiment, a U-shaped channel with its end facing back open is disposed on the extension. When the side wall is slid from back to front for securing, the collar is seated into the channel and thus the side wall is prevented from moving outwards and forwards. Consequently, the side is prevented from moving in all directions but backwards.

[0013] In order to facilitate the back-to-front sliding movement of the side wall, the rear face of the protrusion is upwardly curved. Thus, the side wall is pushed forwards more easily after being moved from up to bottom.

[0014] In an embodiment of the present invention, at least one opening disposed on the skirt is mounted onto at least one stopper disposed on the extension in order to align the side wall and the base during the vertical movement of the side wall and to guide the movement during the horizontal movement.
In an embodiment of the present invention, a housing is formed under the extension. Thus, the collar is seated into the housing when the skirt is placed onto the extension.

In an embodiment of the present invention, the base and the elements such as the housing, the channel, the protrusion and the stopper disposed thereon are produced from plastic material. All the said elements are preferably shaped from plastic material as a single piece. On the other hand, the side wall and the skirt, the collar, etc. disposed thereon are formed by shaping sheet metal.

Preferably, each side wall is placed and secured onto the base by means of three recess-protrusion pairs.

The model embodiments relating to a washer/dryer realized to attain the aim of the present invention are illustrated in the attached figures, where:

Figure 1 - is the perspective view of a washer/dryer.
Figure 2 - is the perspective view of the base.
Figure 3 - is the partial perspective view of the side wall from inside.
Figure 4 - is the view of detail A in Figure 2.
Figure 5 is the partial perspective view of the flange and the skirt during the fixing and when the recess and the protrusion are aligned.
Figure 6 - is the partial perspective view of the flange and the skirt when the fixing is completed.

The elements illustrated in the figures are numbered as follows:

1. Washer/dryer
2. Side wall
3. Front wall
4. Base
5. Skirt
6. Extension
7. Flange
8. Protrusion
9. Recess
10. Collar
11. Channel
The washer/dryer (1) comprises:
- two side walls (2) covering the volume from sides wherein the drum, in which the laundry is placed, and other machine elements are located,
- a front wall (3) covering the said volume from the front,
- a base (4) that supports the side walls (2) and other machine elements from below,
- a skirt (5) that extends into the body at the lower edge of the side wall (2) and perpendicularly to the side wall (2).

The washer/dryer (1) of the present invention comprises
- an extension (6) whereon the skirt (5) is seated, extending outwards from the base (4),
- a flange (7) disposed on the base (4) inwards from the side wall (2) at least as much as the width of the skirt (5), perpendicular to the extension (6), extending parallel to the side wall (2),
- a protrusion (8) disposed on the flange (7), extending outwards so as to remain on the extension (6) and
- at least one recess (9) disposed on the skirt (5).

The side wall (2) used in the washer/dryer (1) of the present invention has
- a first position wherein the side wall (2) is placed onto the base (4) such that the skirt (5) is seated onto the extension (6) and wherein the recess (9) is aligned with the protrusion (8) and
- a second position to which the side wall (2) is changed by being slid from back to front from the first position and wherein it is secured onto the base (4) by the skirt (5) entering under the protrusion (8).

Thus, the side wall (2) is easily mounted and secured onto the base (4) and the side wall (2) is prevented from moving in the vertical direction.

In an embodiment of the present invention, the skirt (5) comprises a collar (10) disposed around the recess (9), extending towards the base (4) and the extension (6) comprises a channel (11) wherein the collar (10) is seated when the side wall (2) is in the second position and that prevents
the side wall (2) from moving outwards. Thus, the side wall (2) is prevented from moving outwards both in the vertical and the horizontal directions and an efficient securing is provided.

[0031] In an embodiment of the present invention, the rear face of the protrusion (8) that the side wall (2) contacts in the first place while being changed from the first position to the second position is upwardly curved so as to facilitate the sliding movement.

[0032] In an embodiment of the present invention, the skirt (5) comprises at least one opening (12) and the extension (6) comprises a stopper (13) entering into the opening (12). The stopper (13) passes through the opening (12) while the skirt (5) is seated onto the extension (6) by moving the side wall (2) from top to bottom in order to shift it to the first position. While the side wall (2) is slid from back to front in order to be shifted to the second position, the stopper (13) slides inside the opening (12) and guides the movement.

[0033] In an embodiment of the present invention, the extension (6) comprises a housing (14) disposed at the same level with the protrusion (8), forming a volume wherein the collar (10) is placed when the skirt (5) is seated onto the extension (6).

[0034] In the preferred embodiment of the present invention, the washer/dryer (1) comprises three protrusions (8) and three recesses (9) disposed at the front, middle and the back in order to secure each side wall (2) onto the base (4). Thus, an efficient securing is provided along the lower edge of the side wall (2).

[0035] In the washer/dryer (1) of the present invention, the side walls (2) are provided to be quickly and accurately secured onto the base (4). Furthermore, by means of the protrusion (8) - recess (9) and the collar (10) - channel (11) pairs providing the securing, the side wall (2) is prevented from moving both in the horizontal and vertical directions and an efficient securing is provided.

[0036] It is to be understood that the present invention is not limited to the embodiments disclosed above and a person skilled in the art can easily introduce different embodiments. These should be considered within the
scope of the protection postulated by the claims of the present invention.
Claims

1. A washer/dryer (1) comprising
   -two side walls (2) covering the volume from sides wherein the drum, in which
   the laundry is placed, and other machine elements are located,
   -a front wall (3) covering the said volume from the front,
   -a base (4) that supports the side walls (2) and other machine elements from
   below, and
   -a skirt (5) that extends into the body at the lower side of the side wall (2) and
   perpendicularly to the side wall (2).

   characterized by
   -an extension (6) whereon the skirt (5) is seated, extending outwards from the
   base (4),
   -a flange (7) disposed on the base (4) inwards from the side wall (2) at least as
   much as the width of the skirt (5), perpendicular to the extension (6), extending
   parallel to the side wall (2)
   -a protrusion (8) disposed on the flange (7), extending outwards so as to
   remain on the extension (6),
   -at least one recess (9) disposed on the skirt (5) and
   -the side wall (2) having a first position wherein the side wall (2) is placed onto
   the base (4) such that the skirt (5) is seated onto the extension (6) and wherein
   the recess (9) is aligned with the protrusion (8) and a second position to which
   the side wall (2) is changed by being slid from back to front from the first
   position and wherein it is secured onto the base (4) by the skirt (5) entering
   under the protrusion (8).

2. A washer/dryer (1) as in Claim 1, characterized by the skirt (5) comprising a
   collar (10) disposed around the recess (9), extending towards the base (4) and
   the extension (6) comprising a channel (11) wherein the collar (10) is seated
   when the side wall (2) is in the second position and that prevents the side wall
   (2) from moving outwards.

3. A washer/dryer (1) as in Claim 1 or 2, characterized by the protrusion (8), the
   rear face of which, that the side wall (2) contacts in the first place while being
   changed from the first position to the second position, is upwardly curved so as
   to facilitate the sliding movement.
4. A washer/dryer (1) as in any one of the above claims, characterized by the skirt (5) comprising at least one opening (12) and the extension (6) comprising one stopper (13) entering into the opening (12).

5. A washer/dryer (1) as in any one of the above claims, characterized by the extension (6) comprising a housing (14) disposed at the same level with the protrusion (8), forming a volume wherein the collar (10) is placed when the skirt (5) is seated on the extension (6).

6. A washer/dryer (1) as in any one of the above claims, characterized by three protrusions (8) and three recesses (9) disposed at the front, middle and the back in order to secure each side wall (2) onto the base (4).
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

INV. D06F39/12
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
D06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database consulted during the international search (name of database and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Further documents are listed in the continuation of Box C.

X See patent family annex.

* Special categories of cited documents:
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X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search 23 February 2012

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Name and mailing address of the ISA/EE
European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HJ Rijswijk
Tel. (+31-70) 340-2040,
Fax. (+31-70) 340-3016

Authorized officer
Diáz y Diáz-Caneja

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