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**D-8000 München 22(DE)**(54) **Method for assembling a laundry dryer.**

(57) A method for the assembly of a laundry dryer of the type for domestic use, according to which the walls of the housing are hinged to one another and disposed in a common plane for mounting the functional elements of the laundry dryer thereon.

The walls are then rotated about their hinged connections, and after the drum has been inserted, the housing is closed and completed by the application of exterior decorative elements.

The method is suited for the assembly operations to be carried out at a single working station with a maximum degree of automatization.

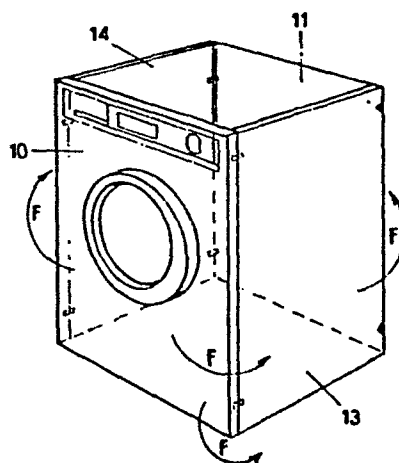


FIG. 2

1 Description

The present invention relates to a method for the assembly of a laundry dryer of the type for domestic use comprising  
5 a rotatable drum for containing the laundry to be dried and adapted to have heated air circulated therethrough.

Known laundry dryers have a housing composed of suitably cut metal sheet sections bent to the required shape and connected to one another as by welding or by means of  
10 screws, rivets or similar fastener means.

For mounting the functional elements inside the housing, the latter has to have at least one open side which is finally to be closed by a suitable wall.

15 This construction is designed for the assembly of the various component on an assembly line advancing at a pre-determined pace.

The assembly operation is thus rigidly restricted to a given  
20 sequence, resulting in considerable complications with regard to the overall assembly operation, and particularly with regard to any modifications required when switching over to the assembly of laundry dryers of a different type.

25 It is therefore an object of the invention to propose a method for the assembly of a laundry dryer, which permits the entire assembly operation to be carried out at a single working station with the greatest operational flexibility and the possibility of diversification of the production  
30 with the optimized employ of automatized production equipment.

The concept of the invention proceeds from the recognition that all of the functional elements of a laundry dryer, with the exception of the drum, can be directly mounted on  
35 the walls of the housing.

The novel assembly method according to the invention is thus characterized in that the walls of the housing are at

1 first hingedly connected to one another and subsequently  
disposed so as to extend in a common plane, that the  
functional elements of the laundry dryer are subsequently  
mounted on the respective housing walls, that the housing  
5 walls are then angularly displaced about the respective  
hinged connections, and that finally, after the drum has  
been inserted, the housing is completed by connecting the  
free edges of the housing walls to one another.

10 Alternatively, the functional elements may be mounted on  
only three housing walls, namely, the front wall, the rear  
wall, and the bottom wall, in which case the sidewalls may  
be formed separately to be added in a final phase of the  
assembly operation for completing the housing of the  
15 laundry dryer.

The 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:

20

fig. 1 shows a diagrammatical top plan view of a laundry  
dryer at an early phase of its assembly,

25

fig. 2 shows a perspective view of the completely assembled  
laundry dryer, and

figs. 3 and 4 show illustrations corresponding to figs. 1  
and 2, respectively, of a laundry dryer assembled  
according to an alternative method.

30 The procedure for assembling a laundry dryer according to  
the method of the invention will be immediately evident  
from a survey of figs. 1 and 2.

35 The front wall 10, rear wall 11, bottom wall 12 and side-  
walls 13 and 14 are formed of sheet metal and connected to  
one another by means of hinges 15, whereupon they are dis-  
posed so as to extend in a common plane as shown in fig. 1.

Subsequently the functional elements of the laundry dryer

1 are mounted on walls 10, 11 and 12. In particular, in the  
case of a laundry dryer having a charge opening 16 in front,  
an air duct portion 17 and a drum mounting flange 19 are  
mounted on front wall 10. An air heater assembly 18 is  
5 mounted on rear wall 11, and a blower 20 with its motor 21  
is mounted on bottom wall 12 together with a further air  
duct portion 22. These functional elements are of course  
connected to respective control and monitoring elements  
(not shown) which are likewise mounted during this phase  
10 of the assembly operation. By making use of the described  
coplanar arrangement of the housing walls, this system is  
ideally suited for carrying out the assembly operations at  
a single working station and permits the application of  
the most advanced automatized techniques.

15 After the functional elements have been mounted in the man-  
ner described, the housing walls are angularly displaced  
about their hinges as indicated by the arrow F in fig. 2,  
whereupon the drum (not shown) is inserted and the housing  
is completed by connecting the free edges of the walls to  
20 one another with the aid of suitable fastener means such  
as screws, snap-fit coupling elements or the like.

Figs. 3 and 4 show a modification of the method according to  
the invention. In this embodiment, only front wall 10,  
25 rear wall 11 and bottom wall 12 are initially connected to  
one another and disposed so as to extend in a common plane.  
The functional elements of the laundry dryer are then  
mounted on these three walls in the same manner as in the  
first embodiment. Subsequently walls 10, 11 and 12 are  
30 rotated about their respective hinges, whereupon the drum  
30 is mounted between front wall 10 and rear wall 11 and  
operatively connected to motor 21 by a transmission belt  
31. The housing is finally completed by adding sidewalls  
13 and 14 as for example by inserting them into simple  
35 guides (not shown) formed along respective sides of walls  
10 and 11.

It is to be pointed out that the method according to the

1 invention may also be advantageously employed for a so-  
called assembly kit system involving completion of the  
assembly at the point of sale of the laundry dryer. In  
5 this case, all of the components may be individually  
packed and shipped at the manufacturing plant to be readily  
assembled at the time the laundry dryer is sold. This  
results in a reduction of shipping costs and a simplification of storage of the finished product while permitting  
10 certain variations or different models of the laundry  
dryer to be assembled as requested by the customer.

In this context it is finally to be noted that the drum 30  
of the laundry dryer (fig. 4) may be of a telescoping construction comprising a number of nested annular elements  
15 so as to reduce its dimensions for shipping and storage.  
A drum of this type is then extended to its full length  
during the assembly operations. This feature is made possible by the fact that the drum is not to be filled with  
a liquid, so that the problem of providing a seal between  
20 the annular elements of the drum is readily overcome by  
the use of simple and conventional sealing elements such  
as rubber rings or the like.

The laundry dryer may also be equipped with a working table  
25 top (not shown) closing the top of the housing. Irrespective of the type of the laundry dryer thus assembled, the  
working table top may also be hinged to one of the walls  
to be rotatable about its respective hinges in the manner  
described for closing the top of the housing.

30 The laundry dryer may finally be completed by the provision of a control panel and a front door (not shown in the  
drawings) styled to give the finished laundry dryer the  
desired appearance.

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MAXIMILIANSTRASSE 56

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EP 2589

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Method for Assembling a Laundry DryerP a t e n t   C l a i m s

1. A method for assembling a laundry dryer of the type  
 25 for domestic use, comprising a housing, a drum mounted for  
 rotation within said housing, and various functional ele-  
 ments for rotating said drum and for heating and circulat-  
 ing drying air, the method being characterized in that the  
 walls of said housing are at first hingedly connected to  
 30 one another and subsequently disposed so as to extend in  
 a common plane, that the functional elements of the laundry  
 dryer are subsequently mounted on the respective housing  
 walls, that the housing walls are then angularly displaced  
 about the respective hinged connections, and that finally,  
 35 after said drum has been inserted, the housing is completed  
 by connecting the free edges of said housing walls to one  
 another.

1 2. A method for assembling a laundry dryer according  
to claim 1, characterized in that the functional elements  
of the laundry dryer are mounted on only three housing  
walls, namely, the front wall, the rear wall, and the  
5 bottom wall, and that said housing is completed by the  
addition of the two sidewalls, and optionally of a working  
table top.

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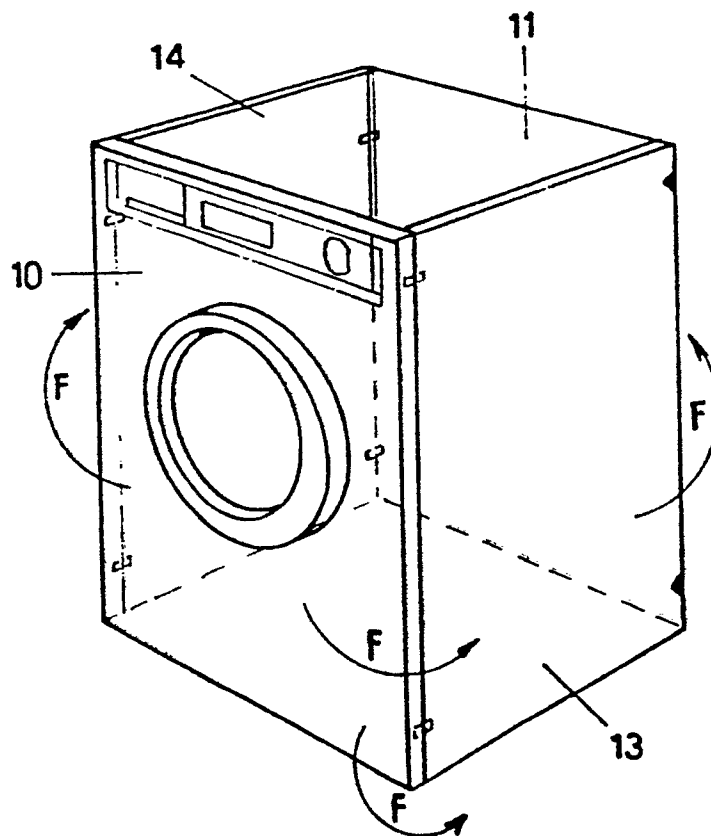
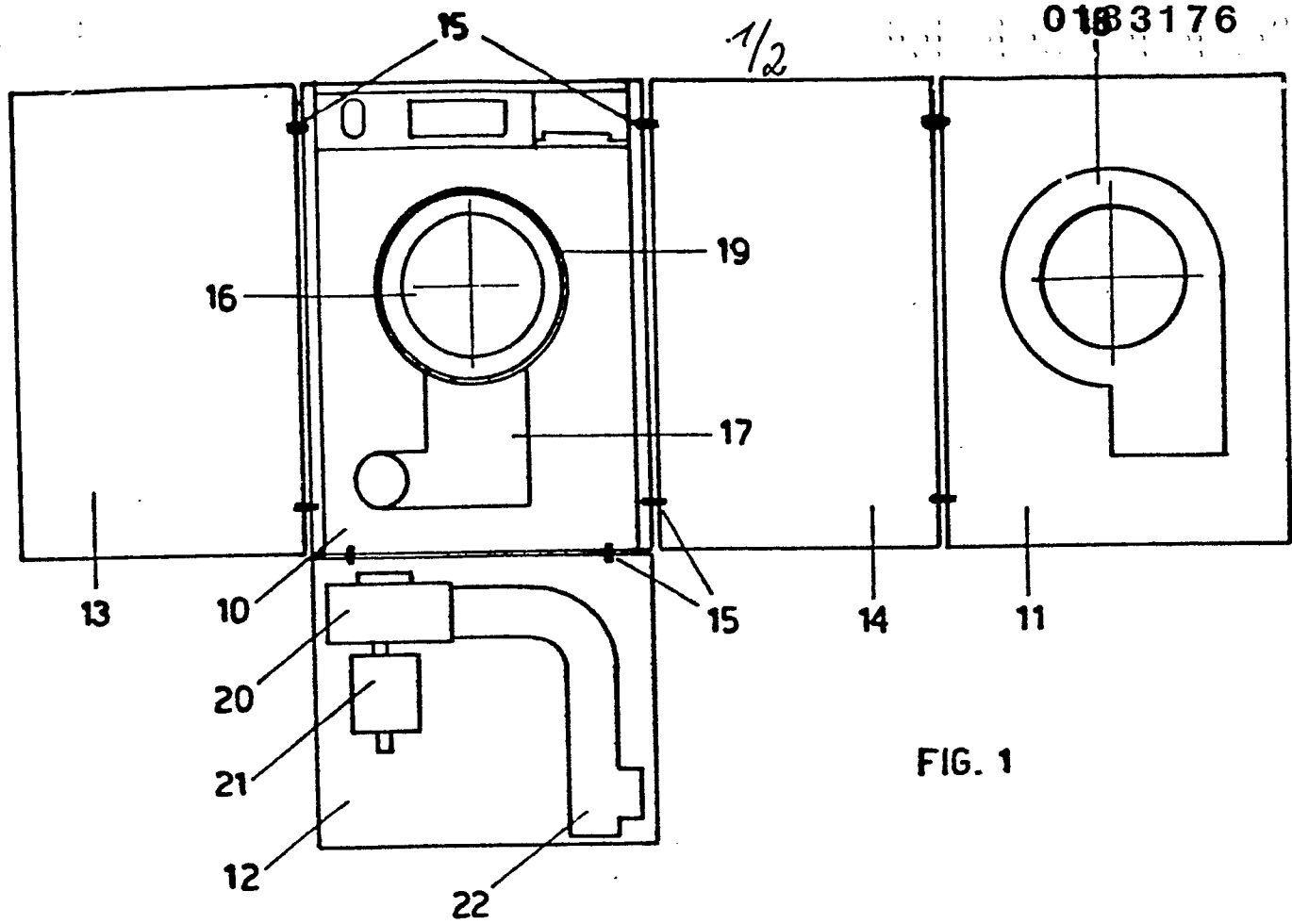
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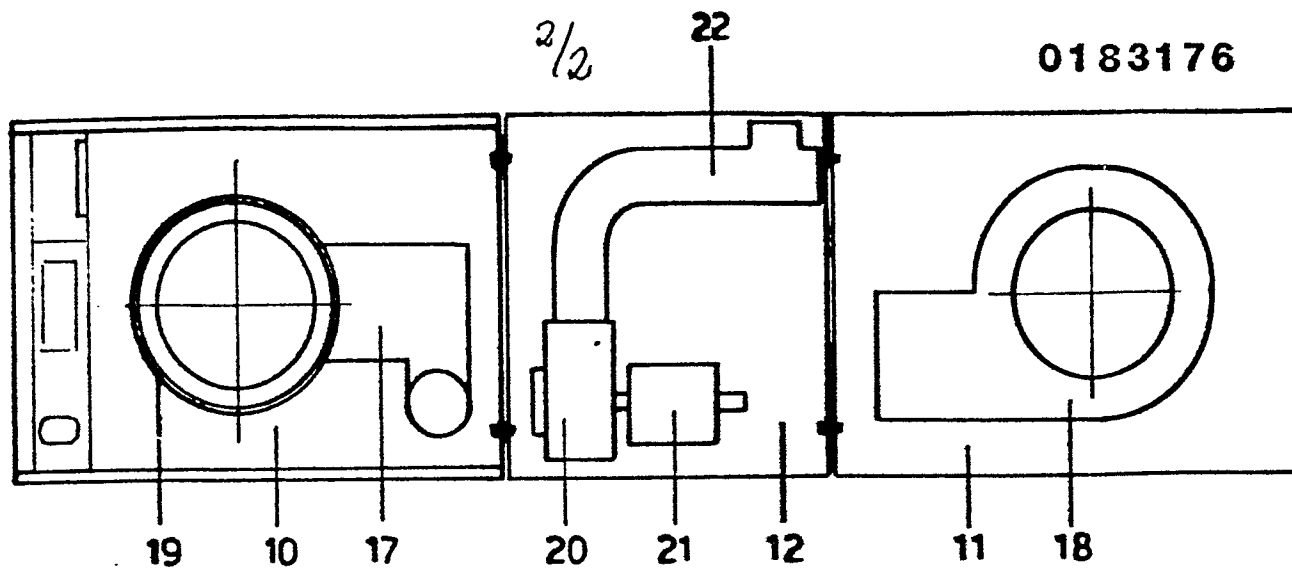


FIG. 3

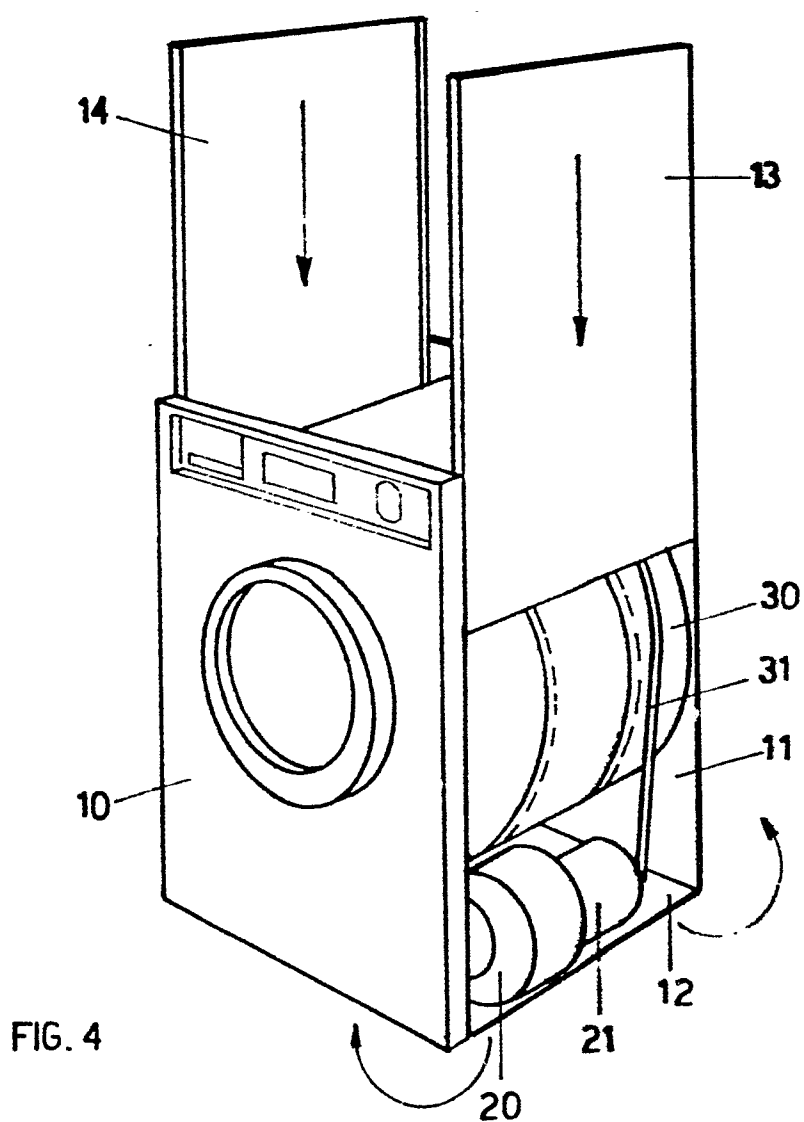


FIG. 4