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(54) **Sliding shutter door sectional wardrobe.**

(57) A sliding shutter door sectional wardrobe, characterised in that without side panels wardrobe of a components kit is provided particularly for floor-to-ceiling building wardrobes also for built-in wardrobes, comprising:

- a guide floor frame (2) with peripheral radiused upward sliding shutter door track-way (17);
- a guide ceiling frame (3) with peripheral radiused downward sliding shutter door track-way (17);
- guide frame supporting means (16,25) to connect and support rigidly fixed in opposed condition said guide floor and ceiling frames (2,3);
- at least one but preferably two opposed, sliding shutter doors (1) comprising a plurality of rolling hinged lath means, being said sliding door/s (1) placeable between said opposed guide floor and ceiling frames (2,3) in sliding condition, to close the composite wardrobe at least frontally and laterally.

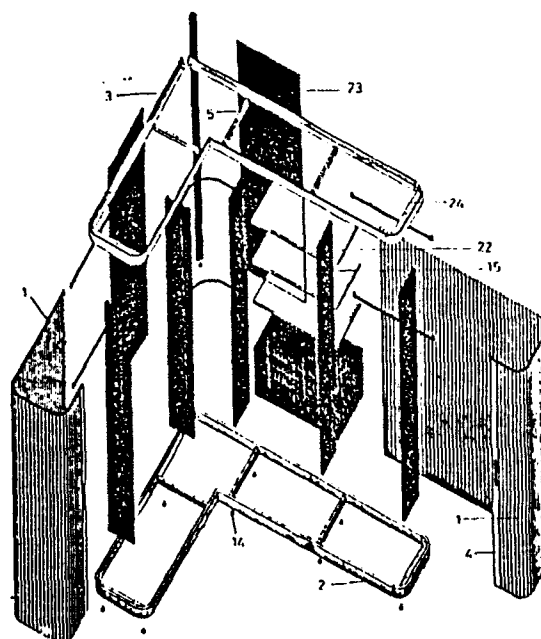


Fig. 11

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Sliding shutter door sectional wardrobe

15 The present invention relates to a sliding shutter door sectional wardrobe.

The invention is particularly useful for use in carrying out furniture, such as wardrobe both as separate pieces of furniture and preferably as built-in wardrobes or cupboards.

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At the present state of the art, sliding shutter door sectional wardrobes are well known. Reference is made to the Italian Patent n.884754, filed on September 19, 1969 in the name of the same Inventor, and to the Italian Registered Design n.140948 filed on September 26, 1969 in the name of the same Inventor, concerning:

- 25 - "A sliding shutter door for closet furniture, realized by strips of wood or laths connected by two opposed glued connecting cloths"; and
- "Eleven pieces of furniture for bedrooms with closet furniture sliding shutter door", respectively.
- 30

In these solutions a normal structure of a wooden closet furniture

is provided comprising a traditional box construction with closing ground panel, closing ceiling panel, closing back panel, closing side panels and said frontal sliding shutter doors, sliding in opposed pathways realized inside said closing ground and ceiling
5 panels, being said sliding shutter doors realized in rolling hinging by a plurality of exterior laths and corresponding opposed glued interior counterlaths enclosing between the opposed glued surfaces a connecting cloth with hinging function further being glued a second covering cloth in the counterlaths interior
10 surfaces.

This solution is restrictive since the utilization of said wooden strips and counterstrips cannot allow the realization of floor to ceiling wardrobes because said sliding shutter door becomes heavy and not straight. Furthermore, use of covering cloth increases
15 the respective production costs. But the main drawbacks concern:

- the restriction on fitness of the furniture to the various furnishing requirements;
- nonsectional furniture, which do not allow to realize different constructions and dimensions in length and height;
- 20 - very high noncompetitive production costs.

The invention as claimed is intended to provide a remedy to the above-mentioned disadvantages. It solves the problem providing a without side panels wardrobe kit of components particularly for
25 floor-to-ceiling building wardrobes also for built-in wardrobes, comprising:

- a guide floor frame with peripheral radiused upward sliding shutter door track-way;
- a guide ceiling frame with peripheral radiused downward sliding
30 shutter door track-way;
- supporting means to connect and support rigidly fixed in opposed

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condition said guide floor and ceiling frames;

- at least one but preferably two opposed, sliding shutter doors comprising a plurality of rolling hinged lath means, being said sliding door/s placeable between said opposed guide floor and
5 ceiling frames in sliding condition, to close the composite wardrobe at least frontally and laterally.

In a preferred embodiment the kit is completed by at least one partial back panel.

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In a further preferred embodiment said sliding shutter door is realized in interior rolling hinging composed lath means connection consisting in a plurality of exterior laths and corresponding opposed glued beveled interior counterlaths
15 enclosing between the opposed glued surfaces a connecting cloth or flexible net with hinging function wherein each counterlath further comprises a reinforcing straightening profile.

In a further preferred embodiment said reinforcing straightening
20 profile is made of metallic light aluminium alloy.

The advantages offered by this invention are mainly that with this solution it is possible to realize different wardrobe compositions and in different sizes depending on the various furnishing
25 requirements, wherein the wardrobe can be built in situ utilizing the respective kit, adapting the composition also in different geometrical plants and at very competitive production and assembling costs; being the components adaptable in length particularly for the respective mountable elements of said guide
30 floor and ceiling frame and said sliding shutter doors packed in rolls.

One way of carrying out the invention is described in detail below with reference to drawings which illustrate some preferred embodiments, in which:-

- 5 - Figure 1 is a schematic frontal view of a parallelepiped wardrobe;
- Figure 2 is a side view of the wardrobe of Fig.1;
- Figure 3 is a plan view of the wardrobe of Figure 1;
- Figure 4 is an enlarged transversal section of a sliding shutter
10 door;
- Figure 5 is an enlarged side section (A-A) view of the parallelepiped wardrobe mounted between floor and ceiling;
- Figure 6 is a further enlarged vertical section view of the mounted sliding shutter door slidable placed between the
15 respective guide floor frame and guide ceiling frame;
- Figure 7 is a perspective view of the connection system between the sectional guide frame elements;
- Figure 8 is a perspective view of a sliding track-way guide head insert upward insertable in said reinforcing profile of said
20 sliding shutter door;
- Figure 9 is a perspective view of a rolling track-way guide head insert downward insertable in said reinforcing profile of said sliding shutter door in alternate insertion with same of said slide guide heading inserts;
- 25 - Figure 10 is an exploded perspective view of the parallelepiped wardrobe as shown in the preceding Figures;
- Figure 11 is an exploded perspective view of the parallelepiped wardrobe in a corner placement construction;
- Figure 12 is an exploded cylindrical composition;
- 30 - Figure 13 is a perspective view of a parallelepiped wardrobe with sliding shutter doors closed;

- Figure 14 shows the same parallelepiped wardrobe with the respective doors open;
- Figure 15 is a perspective view of a parallelepiped wardrobe in corner construction with a sliding shutter door partially open;
- 5 - Figure 16 is a perspective view of the cylindrical wardrobe with a sliding shutter door partially open.

According to the above figures the wardrobe consists of:

- a guide floor frame (2) with peripheral radiused upward sliding shutter door track-way (17);
- 10 - a guide ceiling frame (3) with peripheral radiused downward sliding shutter door track-way (17);
- supporting means (15,25) to connect and support rigidly fixed in opposed condition said guide floor and ceiling frames (2,3);
- 15 - at least one but preferably two opposed, sliding shutter doors (1) comprising a plurality of rolling hinged lath means, being said sliding door/s placeable between said opposed guide floor and ceiling frames (2,3) in sliding condition, to close the composite wardrobe by means of end handles, at least frontally and
- 20 laterally.

Conveniently between said guide ceiling frame (3) and the ceiling a covering lath (6) is placed fixed by clamping means (19), sealing means (20,18) being provided for sealing against the ceiling and the floor respectively.

- 25 In the parallelepiped embodiment said supporting means (15) constitute intermediate panel to be head connected with upper and lower guide frame transoms means (5,13) fixable into the respective guide frames (2,3). The structure thus composed can be fixed between the floor and the ceiling by upper and lower screw
- 30 means (16,14).

The respective guide frames (2,3) are decomposable as shown in

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Figure 7 utilizing non illustrated but well known head connecting screw means.

Conveniently between at least two supporting intermediate panels means (15) a drawer means (21) and placeable shelf means (22) are placed.

Both said guide ceiling frame (3) and the support intermediate panel means (15) can support clothing hang-up means (24).

At least one back panel (23) is provided backward to cover the back between two support intermediate panel means (15) placing said drawer means (21) and shelf means (22), being the back panel not necessary in the other lateral back surfaces that will be covered by opening the respective sliding shutter door (1).

Preferably to realize a sealing between said sliding shutter doors (1) and the back wall, conveniently a vertical sealing or brush sealing is placed to avoid dust into the wardrobe.

The interior rolling hinging sliding shutter doors (1) are realized by a plurality of exterior wood laths (7) and corresponding juxtaposed (8) opposed glued beveled interior light wood counterlaths (9) enclosing between the opposed glued surfaces a connecting cloth or flexible plastic net (11) with hinging function being a reinforcing straightening metallic light aluminium alloy profile (10) mounted on each counterlath.

The respective open heads of each reinforcing profile (10) are closed upward by a sliding track-way guide head insert (12) and downward with similar rolling track-way guide insert (12') in alternate placement with some of the first ones, to facilitate the sliding of the respective sliding doors on ist opposed track-ways (17).

The track-ways (17) are realized in plastic material and are inserted in the guide frame (2,3).

The parallelepiped embodiment can be realized also in corner as

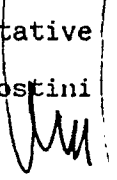
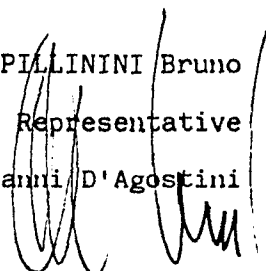
shown in Figure 11 with different lengths.

The wardrobe can be realized also in cylindrical form as shown in Figure 12 utilizing respective circular guide frames with radius (2,3) being the supporting structure constituted by a vertical
5 central shaft (25). The hinge clothes can be realized in the same form (26) and fixed on the central shaft (25). A single sliding shutter door (1) can be provided with a plurality of semicylindrical spaced apart back panels (27).

Udine, October 15, 1984.

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Claims:

1. Sliding shutter door sectional wardrobe, characterised in that without side panels wardrobe of a components kit is provided
5 particularly for floor-to-ceiling building wardrobes also for built-in wardrobes, comprising:
 - a guide floor frame (2) with peripheral radiused upward sliding shutter door track-way (17);
 - a guide ceiling frame (3) with peripheral radiused downward
10 sliding shutter door track-way (17);
 - guide frame supporting means (16,25) to connect and support rigidly fixed in opposed condition said guide floor and ceiling frames (2,3);
 - at least one but preferably two opposed, sliding shutter doors
15 (1) comprising a plurality of rolling hinged lath means, being said sliding door/s (1) placeable between said opposed guide floor and ceiling frames (2,3) in sliding condition, to close the composite wardrobe at least frontally and laterally.
- 20 2. A sliding shutter door sectional wardrobe as claimed in claim 1, characterised in that the kit is completed by at least one partial back panel (23,27).
3. A sliding shutter door sectional wardrobe as claimed in claims
25 1 and 2, characterised in that said sliding shutter door (1) is realized in interior rolling hinging composed lath means connection consisting in a plurality of exterior laths (7) and corresponding opposed glued beveled interior counterlaths (9) enclosing between the opposed glued surfaces a connecting cloth or
30 flexible net (11) with hinging function wherein each further counterlath comprises a reinforcing straightening profile (10).

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4. A sliding shutter door sectional wardrobe as claimed in the preceding claims, characterised in that said reinforcing straightening profile (10) is made of metallic light aluminium alloy.

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5. A sliding shutter door sectional wardrobe as claimed in the preceding claims, characterised in that in a parallelepiped wardrobe construction said supporting means (15) constitute intermediate panel means to be head connected with upper and lower guide frame transoms means (5,13) fixable into the respective guide frames (2,3), being the structure thus composed fixed between the floor and the ceiling by upper and lower screw means (16,14).

15 6. A sliding shutter door sectional wardrobe as claimed in the preceding claims, characterised in that said guide frame means are composable by mountable elements of different shapes and lengths.

7. A sliding shutter door sectional wardrobe as claimed in the preceding claims, characterised in that between at least two supporting intermediate panels means (15) a drawer means (21) and placeable shelf means (22) are placed and wherein at least one back panel (23) is provided backward to cover the back between two support intermediate panel means (15) placing said drawer means (21) and shelf means (22), being the back panel not necessary in the other lateral back surfaces that will be covered by opening the respective sliding shutter door (1).

8. A sliding shutter door sectional wardrobe as claimed in the preceding claims, characterised in that said guide means are circular (3) with radial connections and said connecting means

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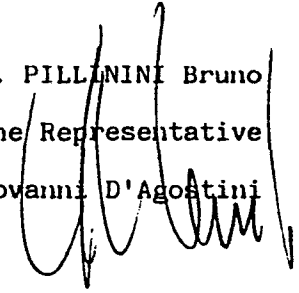
consist in a vertical central shaft (25).

9. A sliding shutter door sectional wardrobe as claimed in the preceding claims, characterised in that said exterior lath means
5 (9) are laterally rotatable and free extractable groove and tongue connectable.

10. A sliding shutter door sectional wardrobe as claimed in the preceding claims, characterised in that said reinforcing
10 straightening profiles (10) of said sliding shutter doors (1) are tubular with open heads being each respective open head closed upward by a sliding track-way guide head insert (12) and downward with similar rolling track-way guide insert (12') in alternate placement with some of the first ones, to facilitate the sliding
15 of the respective sliding doors on its opposed track-ways (17).

Udine, October 15, 1984.

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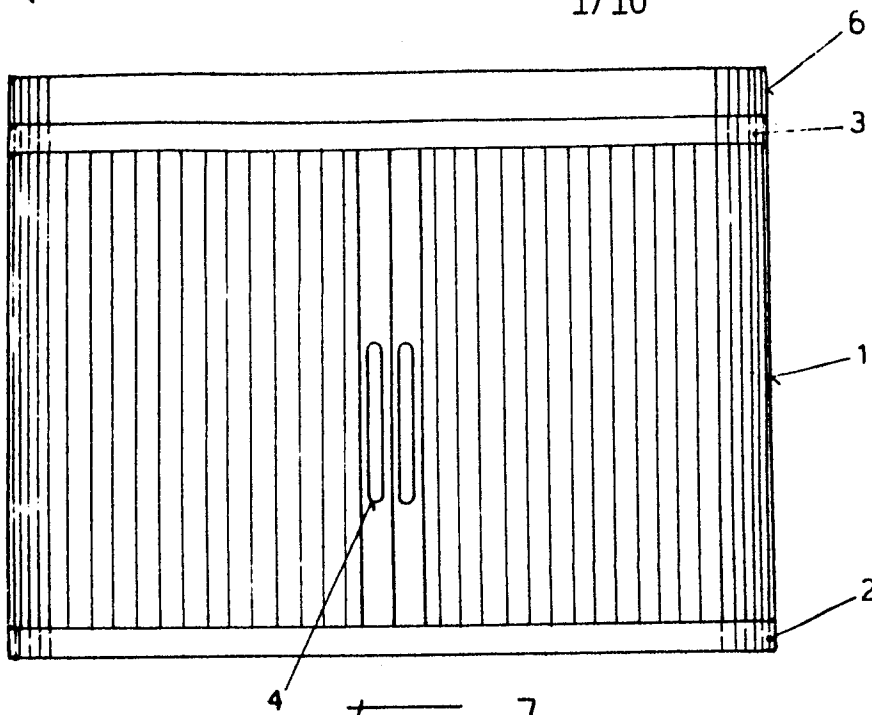


fig. 1.

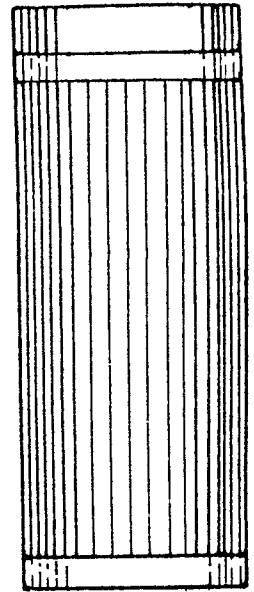


fig. 2.

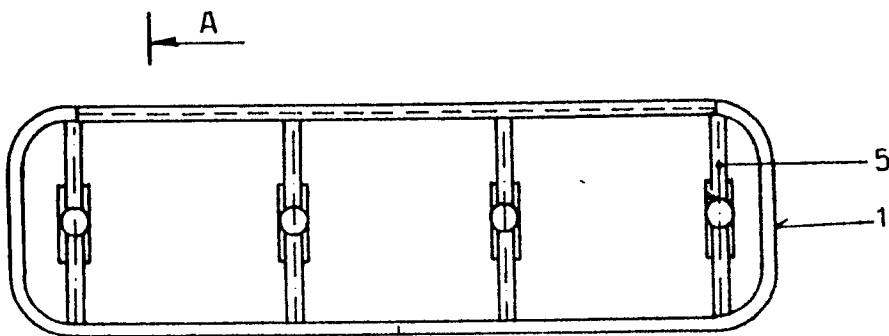


fig. 3.

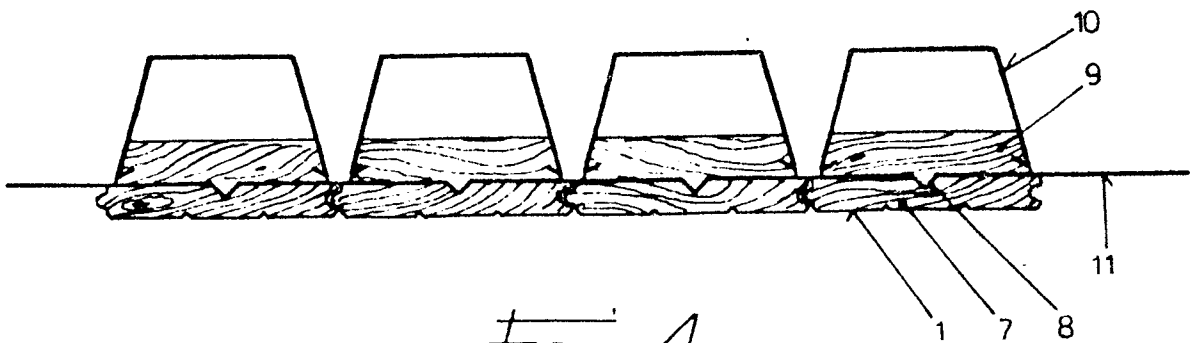


fig. 4.

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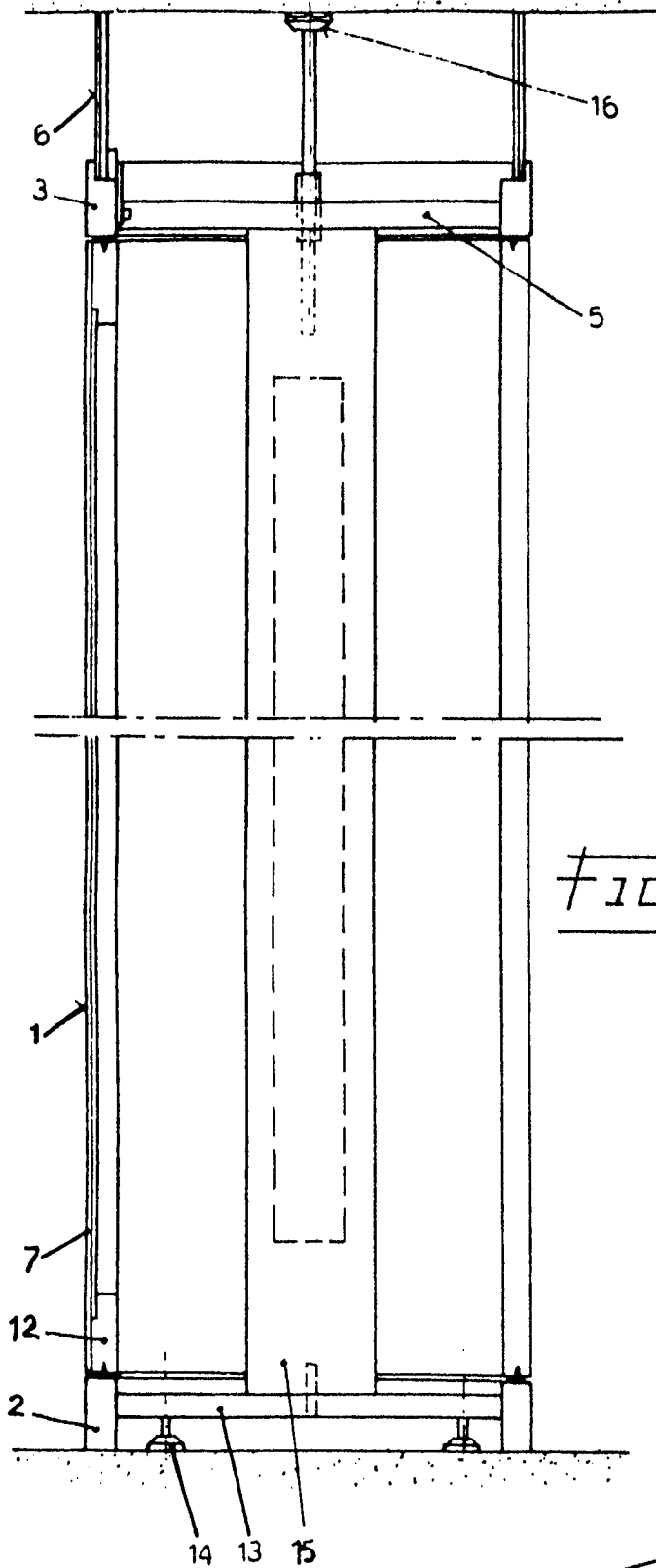


Fig. 5.

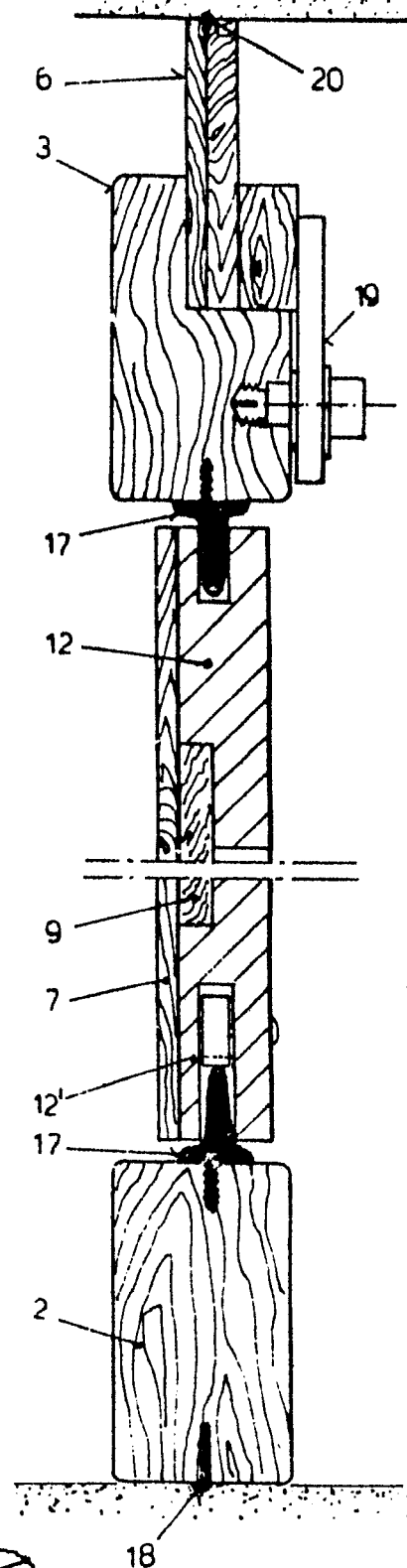


Fig. 6.

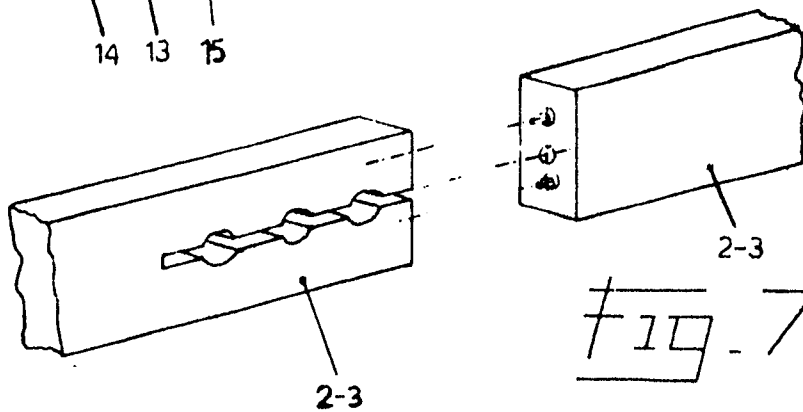
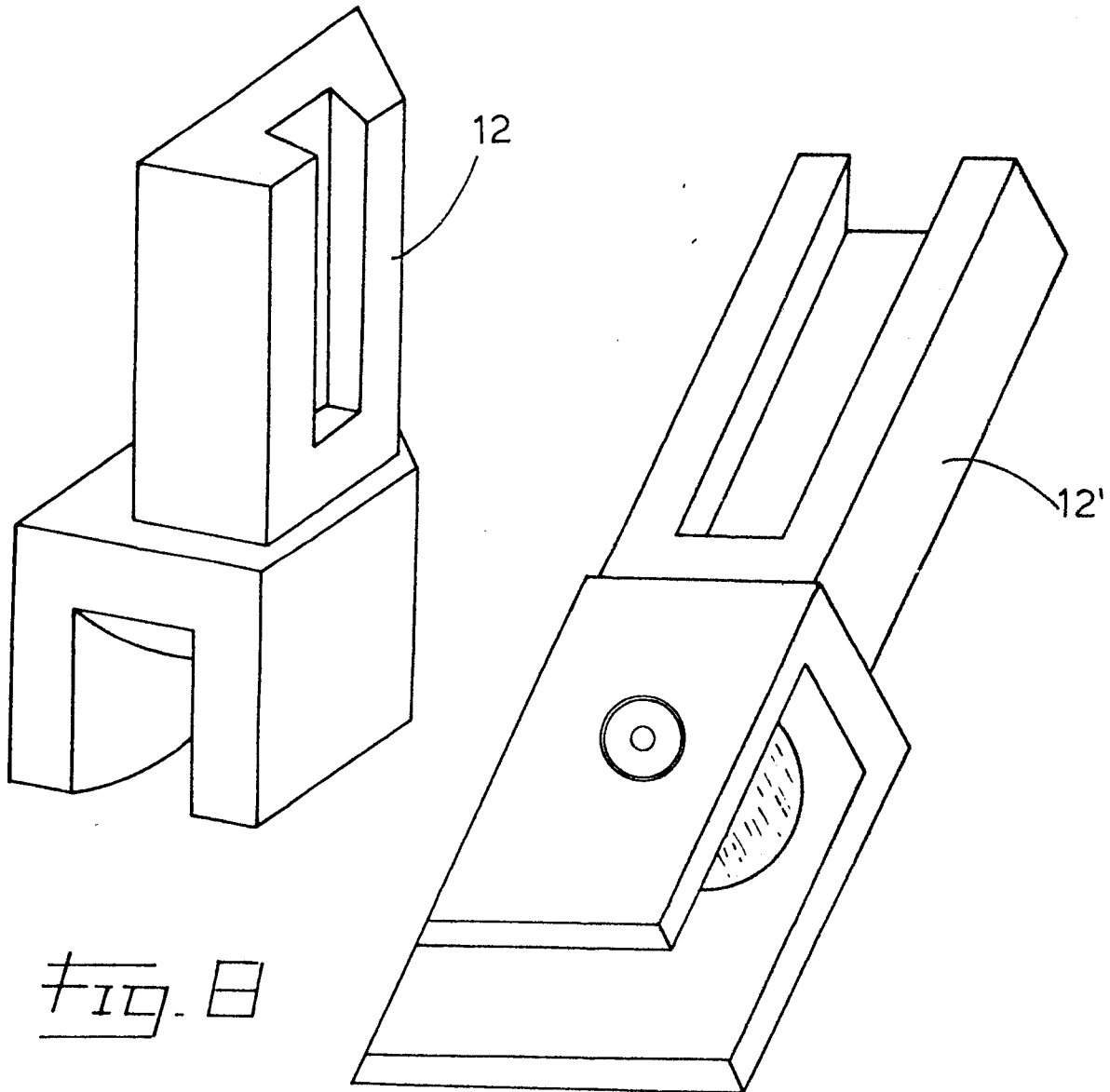


Fig. 7.

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Fig. 8Fig. 9.

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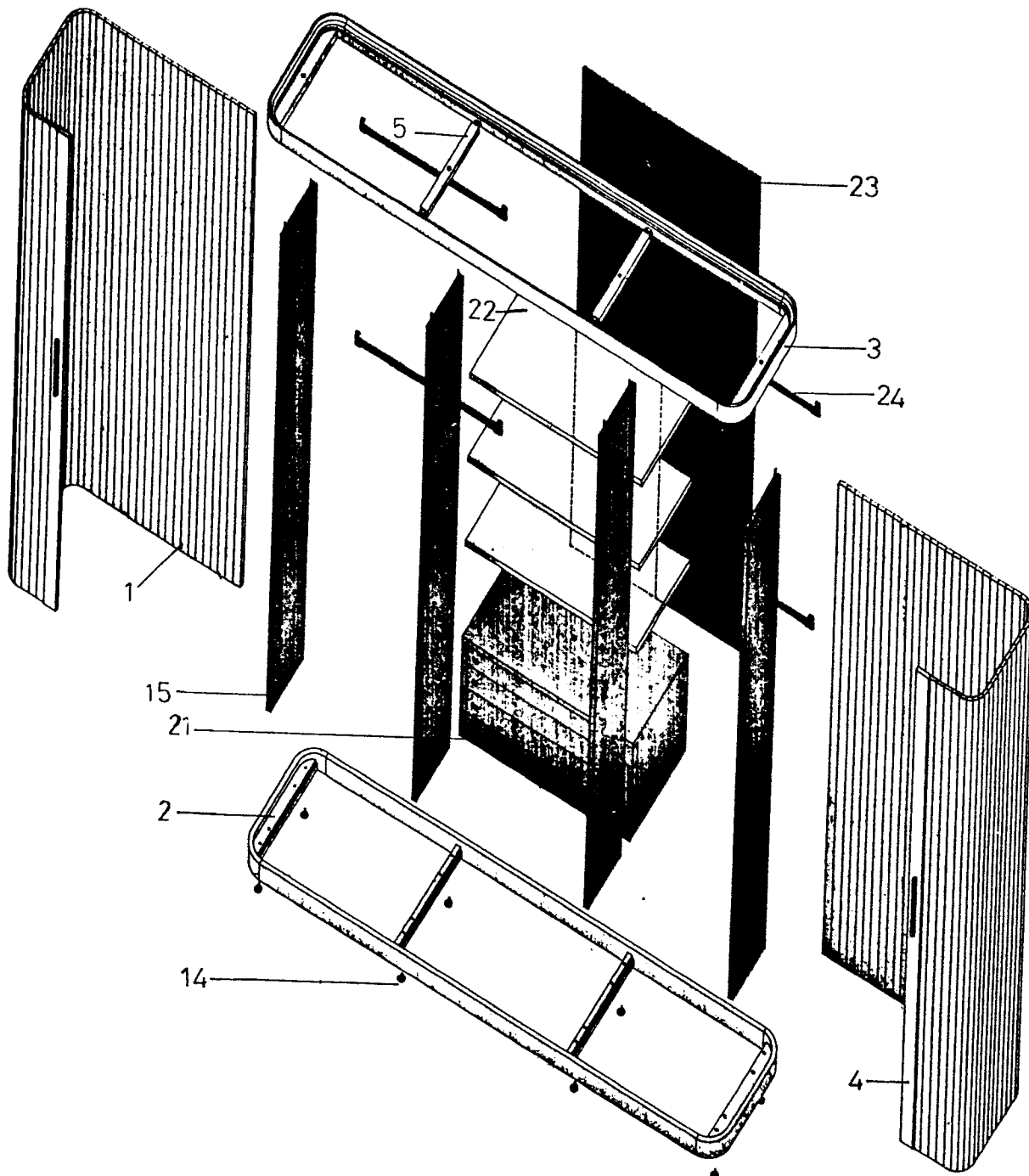


Fig. 10.

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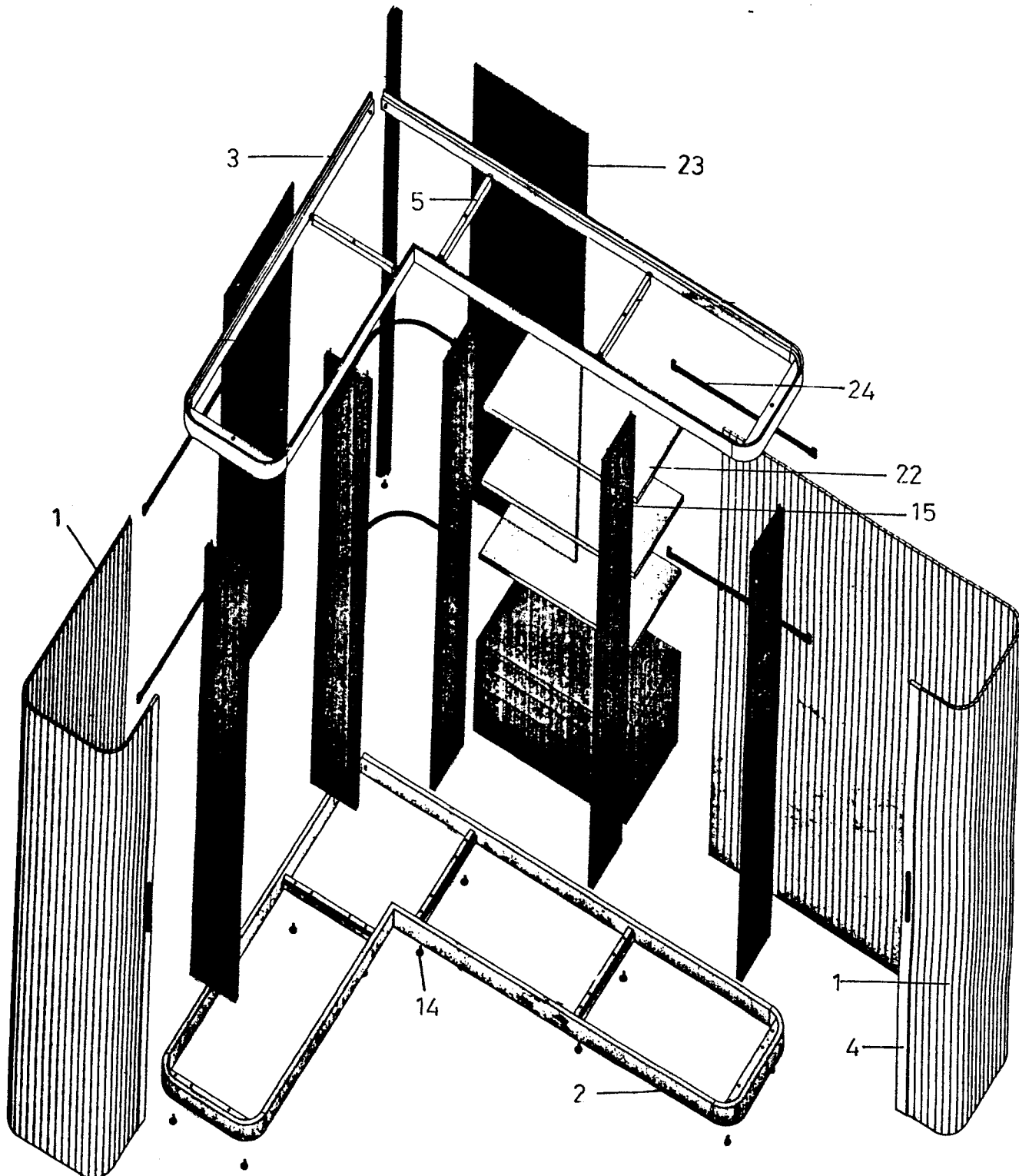
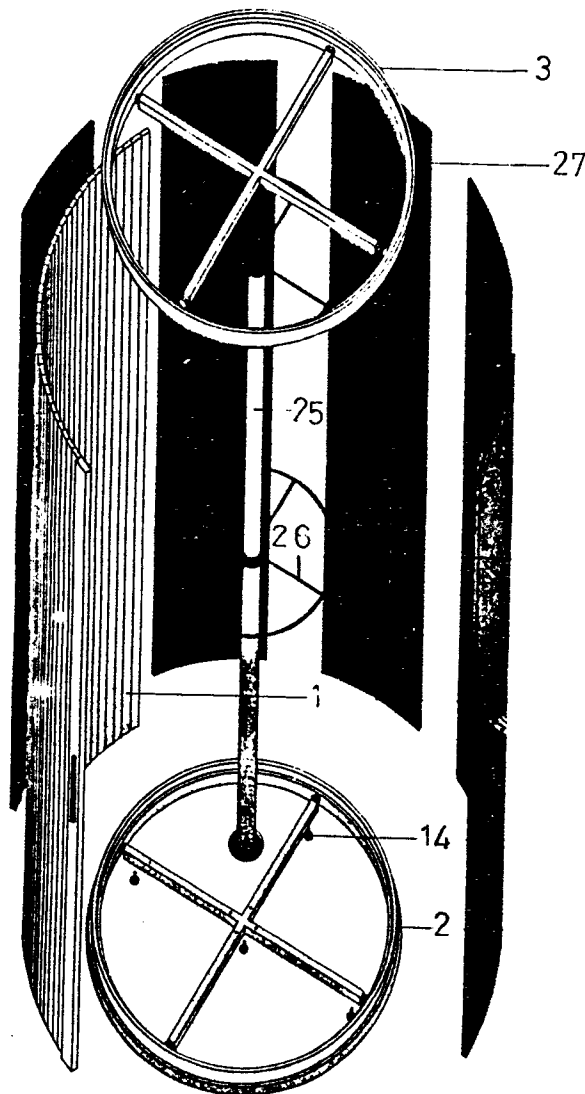


Fig. 11.

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Fig. 12.

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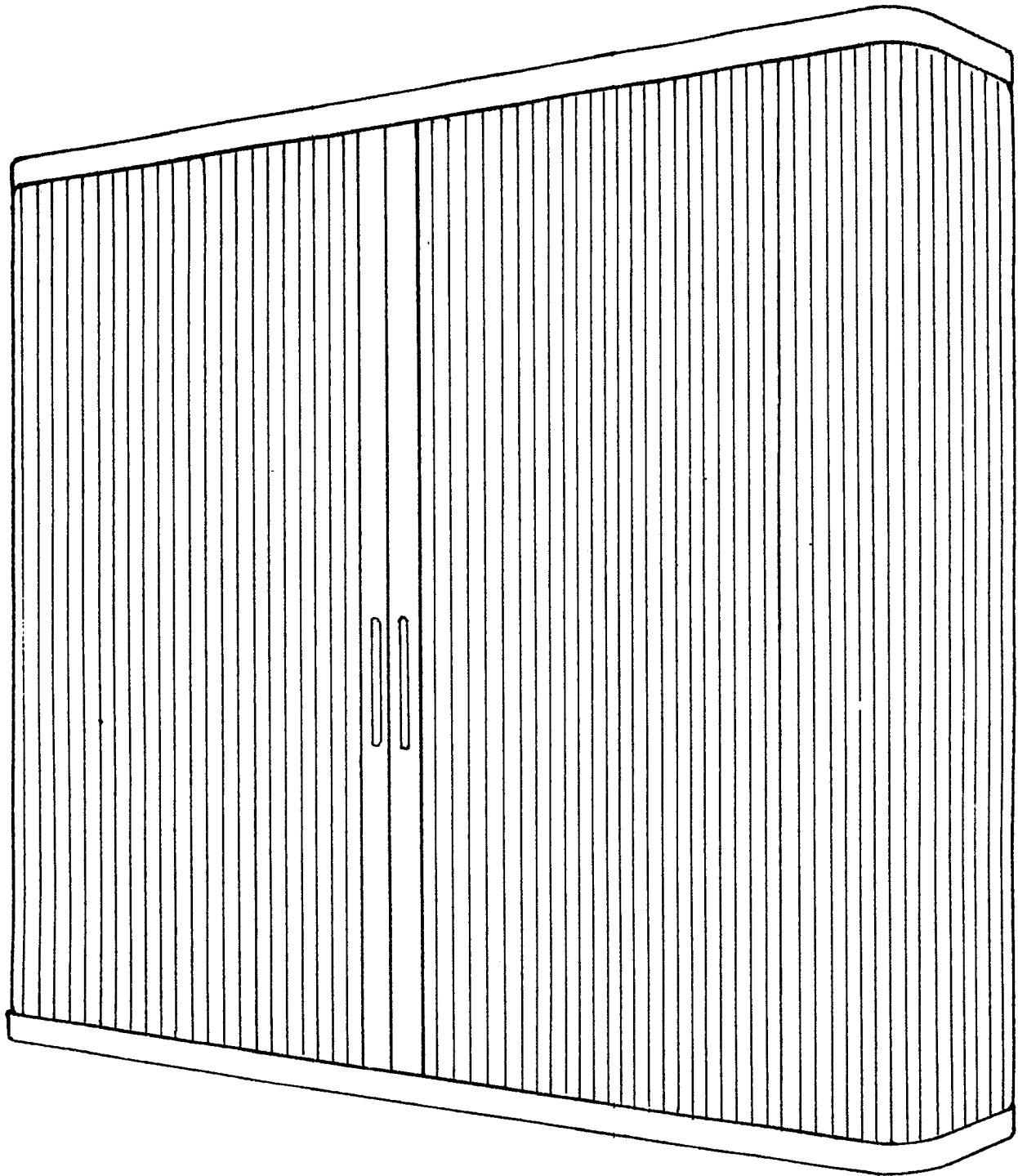
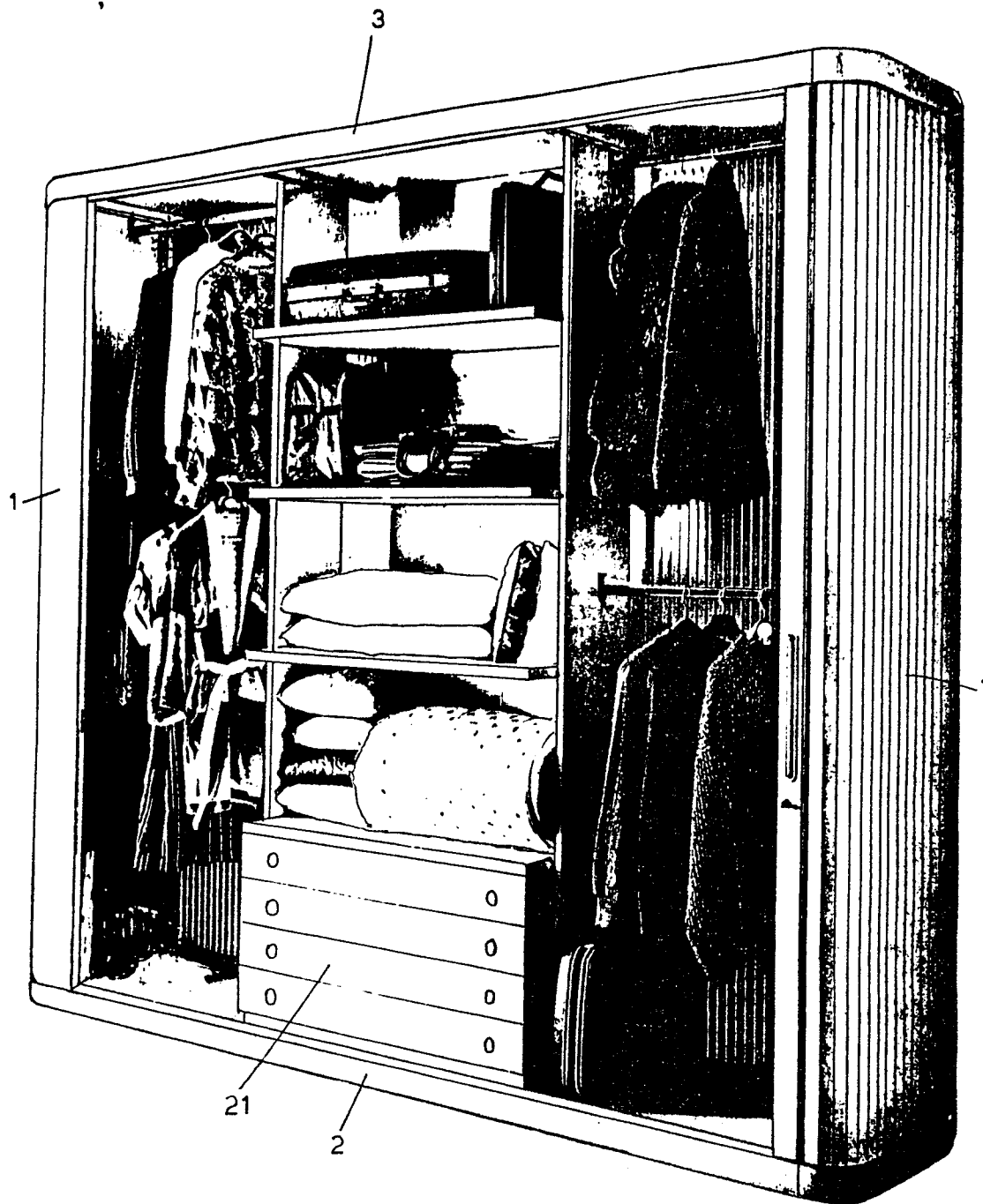


Fig. 13.

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Fig. 14.

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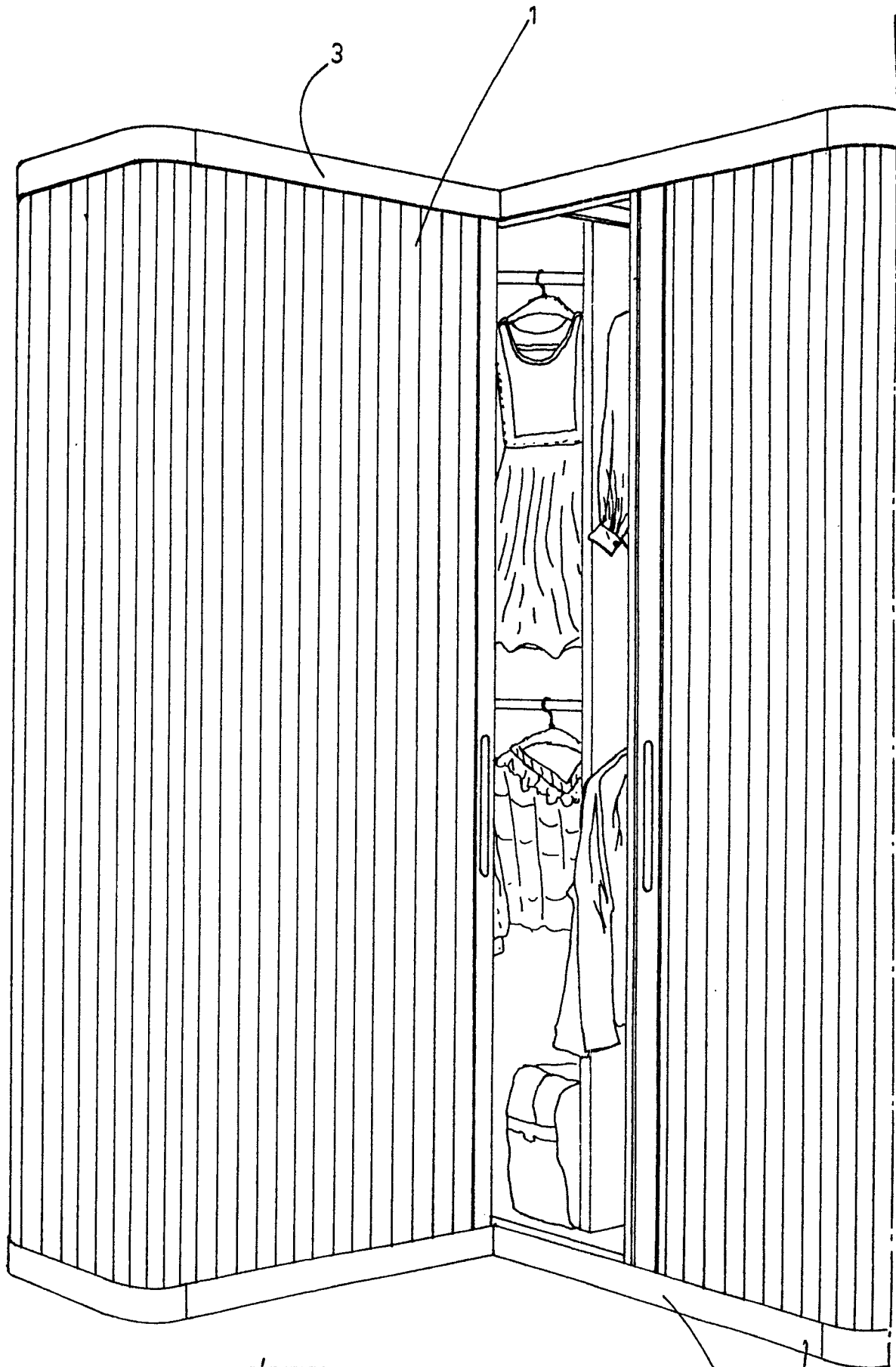
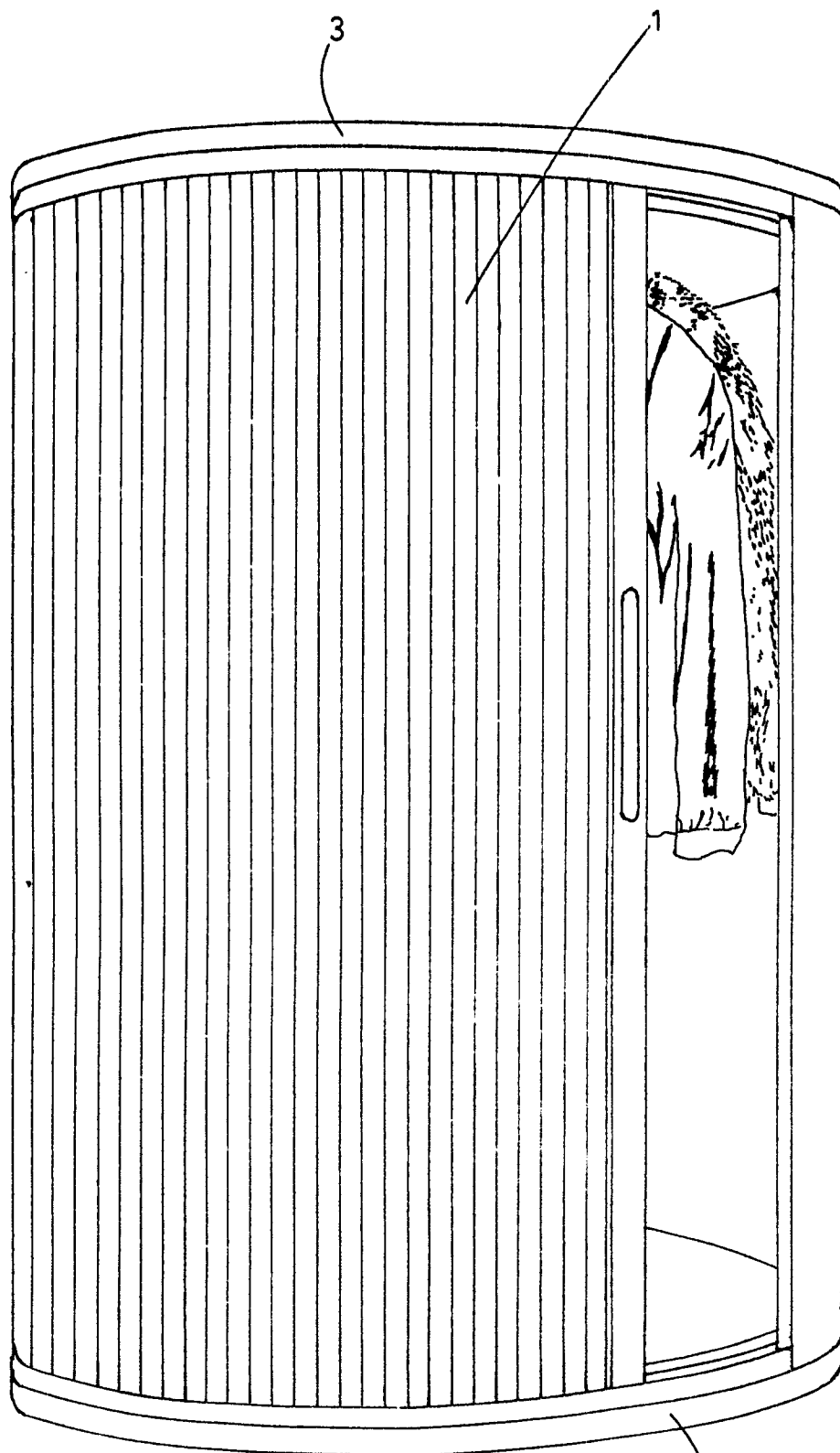


Fig. 15.

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Fig. 16.

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EUROPEAN SEARCH REPORT

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EP 84 83 0287

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.4)
Y	CH-A- 322 578 (HERTEL) * Whole document *	1,2,5- 7	E 06 B 9/10 A 47 B 61/00
A		3	
Y	DE-A-2 064 538 (BAUMGARTEN) * Page 3, paragraph 10 - page 4, paragraph 3; page 8 - page 9, paragraph 2; figures 1-3,8,9 *	1,2,5- 7	
A	DE-C- 866 725 (WEHNER) * Page 1 - page 2, line 11; page 2, lines 51-75; figures 1-3 *	1,3,5	
A	GB-A- 883 322 (LEBUS) * Page 2, lines 6-29; figures 1,2 *	3	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
A	DE-A-1 779 226 (PITTERI) * Page 4, paragraph 7 - page 5, paragraph 1; page 6, paragraph 3 - page 7; figures 1,2 *	4,9,10	A 47 B E 06 B
A	US-A-1 736 007 (JOHNSTON) * Page 1, lines 68-99; figures 1,2 *	8	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 31-01-1986	Examiner OFFMANN P.A.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			