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(54) IMPROVEMENTS IN OR RELATING TO COVER OR SHUTTER  
 MEMBERS OF DOMESTIC APPLIANCES

(71) We, LICENTIA PATENT-VERWALTUNGS-G.m.b.H., of Theodor-Stern-Kai 1, 6 Frankfurt am Main, Federal Republic of Germany, a limited liability company organised under the laws of the Federal Republic of Germany, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to a domestic appliance, such as a stove, a refuse press, a dish washing machine, a laundry washing machine, a laundry drier or the like, provided with a cover or shutter member of adjustable location.

To enable the height of a shutter to be adjusted, it is usual in built-in furniture to provide the shutter with fastening brackets which are connected with bottom brackets arranged on a cupboard body shell. The bottom brackets are in that case provided with elongate holes so that a vertical displacement is possible. Disadvantageous in this manner of fastening is the plurality of the screw connections required, thereby entailing an appreciable assembly effort. Furthermore, screws at eye level of the shutter disturb the appearance of the article.

According to the present invention, there is now provided a domestic appliance comprising a housing, a door member pivotably connected to the housing by hinge means including at least two spaced rod members, and a cover member detachably attachable to the housing by clip means and by connecting means, the clip means being provided on a surface portion of the cover member which faces inwardly of the housing when the cover member is attached thereto and being engageable with the rod members and the connecting means being provided at an adjustable spacing from the rod members to connect the cover member to the housing in a region of the cover member remote from the rod members.

The shutter thus hangs directly on the

bolts of the door hinge mounting thereby rendering superfluous any additional fastening brackets, which could not be moulded or otherwise shaped directly onto the housing frame parts and would moreover have to be arranged too far removed from the upper edge of the shutter due to the narrow space conditions.

The clips in that case advantageously form vertical guides for the bolts against the rear (inside) wall of the shutter and, furthermore, the gap between mutually facing edge portions of door and shutter is adjustable. Through the adjustability of the gap between the door and the shutter, an adaptation is possible to differently thick decorative plates of the front (outward) sides of the shutter and the door.

The shutter is preferably supported against a metal support plate of the door hinge mounting in the position, in which it is hooked by its clips against the bolts. The metal support plate locates the assembled shutter and tends to prevent vibration noises.

An embodiment of the present invention will now be more particularly described by way of example with reference to the accompanying drawing, in which:

Fig. 1 shows a section through the lower front end of a housing of a dish washing machine embodying the present invention and

Fig. 2 shows a view onto the inward surface of the shutter and door shown in Fig. 1.

Referring now to the drawing, there is shown a dishwashing machine provided with a door 2 mounted to be pivotable around a horizontal axis provided by bearing bolts 1. The bearing bolts 1 are arranged in the appliance housing in the region of the side walls and receive door hinges 3. Designated by 4 is a shutter or cover member, which is arranged underneath the door at a pivot gap *a* and which on the rear wall carries two clips 5, which are capable of being hooked in against prolongations of the bearing bolts. This manner of attachment renders

superfluous any screw fastening, which would be undesired in the upper visible region of the shutter, as well as any fastening brackets to be accommodated only with difficulty due to lack of space.

The clips 5 are preferably welded to the inward surface of the shutter and are so dimensioned that they are just capable of being pushed through below the bearing bolts on the shutter being lowered. When the upper edge 6 of the shutter is shortened and set back opposite the hook-in bracket portions 7 of the clips 5, a hooking-in of the shutter on the bearing bolts through turning-in is still possible even with clips set far forward towards the upper edge of the shutter. A metal support plate of the appliance housing limits the lowered position of the shutter, while the shutter in the position raised in the arrow direction *b* bears with bias against a metal support plate 8 mounting the hinges to the appliance housing.

The axial position of the bearing bolts 1 is fixed by securing rings 9, which locate the metal support plate 8 and door hinges 3. Furthermore, the shutter is capable of being connected to the housing frame 12 by means of brackets 11 arranged at the lower edge 10 of the shutter and screws or the like threadably interengageable members to attach the brackets 11 to the frame 12. Alternatively and in modification of the illustrated embodiment, the means connecting the cover member to the housing may comprise at least one pair of resiliently interengageable snap elements or at least one permanent magnet. Thereby, the shutter is mountable to the appliance housing at different heights without change of components so that the gap *a* between the shutter and the door provided thereover is alterable, for example for adaptation to differently thick decorative plates.

#### WHAT WE CLAIM IS:—

1. A domestic appliance comprising a housing, a door member pivotably connected to the housing by hinge means including at

least two spaced rod members, and a cover member detachably attachable to the housing by clip means and by connecting means, the clip means being provided on a surface portion of the cover member which faces inwardly of the housing when the cover member is attached thereto and being engageable with the rod members and the connecting means being provided at an adjustable spacing from the rod members to connect the cover member to the housing in a region of the cover member remote from the rod members.

2. A domestic appliance as claimed in claim 1, wherein the connecting means comprises a plurality of threadably interengageable members.

3. A domestic appliance as claimed in claim 1, wherein the connecting means comprises at least one pair of resiliently interengageable snap elements.

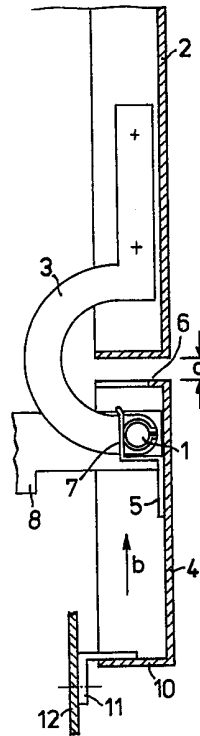
4. A domestic appliance as claimed in claim 1, wherein the connecting means comprises at least one permanent magnet.

5. A domestic appliance as claimed in any one of the preceding claims, wherein the clip means co-operate with said surface portion to provide a guide path for the rod members, the guide path extending parallel to said surface portion and a gap of adjustable width being provided between mutually facing edge portions of the cover member and of the door member.

6. A domestic appliance as claimed in any one of the preceding claims, wherein the cover member, when attached to the housing, bears in an inward facing surface portion against edge portions of metal plate members mounting the hinge means to the housing.

7. A domestic appliance substantially as hereinbefore described with reference to and as illustrated in the accompanying drawing.

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**FIG.1****FIG.2**