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DOOR MOUNTING FOR STRUCTURES, INCLUDING CUPBOARDS

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FIG. 1.

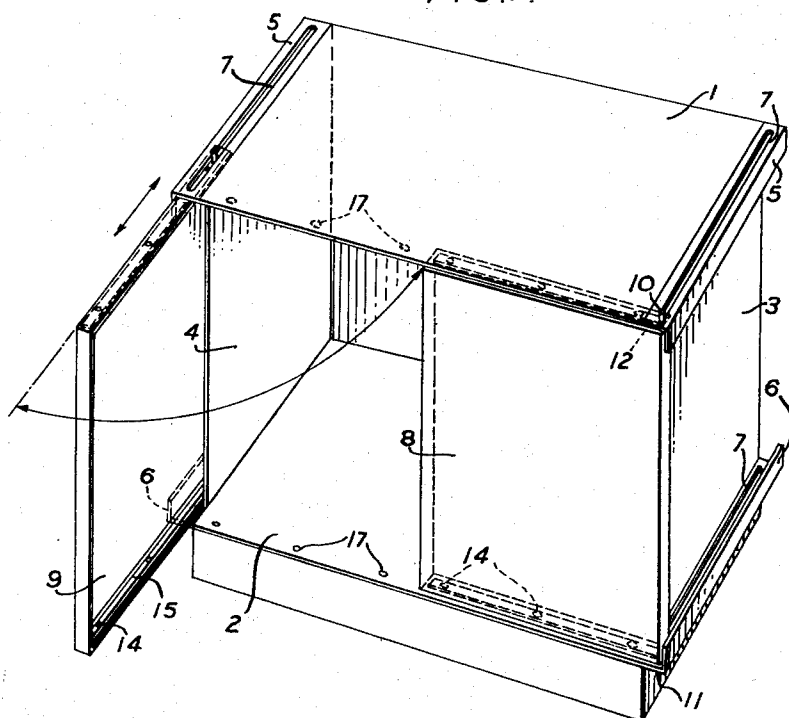


FIG. 2.

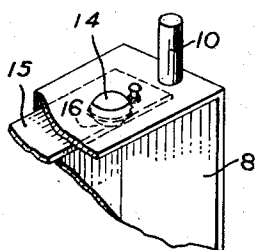
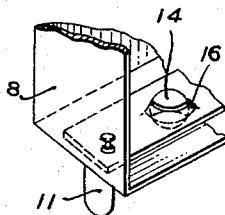


FIG. 3.



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DOOR MOUNTING FOR STRUCTURES,
INCLUDING CUPBOARDS

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3 Claims. (Cl. 312-322)

1

This invention relates to structures of the kind having a wall provided with a door opening, an adjacent wall provided with fixed spaced guide rails and a door which is provided on opposite edges thereof with pins and which is slidable edgewise with the pins engaging the guide rails from a position in which it is disposed alongside the said adjacent wall into a position to close the door opening.

It is an object of the invention to provide an improved door mounting for structures of the kind referred to.

It is a further object to provide a door mounting which can be made easily and economically and which facilitates the sliding movement of the door.

The invention is illustrated by way of example with reference to the accompanying drawings in which

Fig. 1 is a perspective view of a cupboard and Figs. 2 and 3 are fragmentary views on a larger scale of details of the cupboard shown in Fig. 1.

Referring to the accompanying drawings, a cupboard comprises a top 1, bottom 2 and opposite side walls 3 and 4. At the top and bottom of each side wall 3 and 4 are guide rails 5 and 6 which are rigid with the side walls. Each guide rail is provided with a slot 7. The front edges of the top 1 and bottom 2 project beyond the front edges of the side walls 3 and 4 and doors 8 and 9, in their closed position, engage between the projecting positions of the top and bottom. The door 8 is shown in the closed position from which it is adapted to be moved in the usual way by swinging about a hinge formed by pins 10 and 11 which project, respectively, from the top and bottom edges of the door. When the door 8 has been swung from the position in which it is shown through an arc of 90 degrees the pins 10 and 11 are movable along the slots 7, the door 8 moving edgewise in the guide rails 5 and 6 into a position in which it lies alongside the side wall 3. Both ends of each slot 7 are closed as shown so that the edgewise movement of each door is limited. The front end of each slot may open into a short angularly disposed slot 12 to facilitate the movement of the door into its closed position, the pins 10 and 11 engaging in these slots 12 when the forward edgewise movement of the door is complete.

The top edge of the door 8 is provided with holes through which project the upper portions of balls 14. These balls are supported by a strip 15 of resilient material which are riveted to the door and are pressed to form bearings 16

2

which prevent the balls from falling. The balls 14 are thus held resiliently towards the slotted wall of the guide rail 5, which thus serves as a ball race. A similar arrangement of balls 14 and resilient strip 15 is provided at the bottom edge of the door 8, the bearings 16 in this case being arranged to prevent the balls from moving up through the strip, the strip again holding the balls towards the slotted portion of the guide rail 6.

The projecting portions of the top 1 and bottom 2 are provided with shallow recesses 17 which are so disposed that, when the door 8 is closed, the balls 14 enter these recesses and resiliently hold the door closed. The arrangement of balls 14 and strips 15 thus serve the dual purpose of facilitating the edgewise movement of the door in the guide rails 5 and 6 and to keep the door closed.

The door 9 is identical with the door 8, being provided with balls 14 and strips 15 and pins 10 and 11 which move in slots 7 in the guide rails 5 and 6 associated with the side wall 4. The door 9 is shown in an intermediate position alongside the wall 4.

The cupboard shown is formed of pressed steel members and it will be appreciated that other materials may be employed.

I claim:

1. A structure having a wall provided with a door opening, an adjacent wall provided with fixed spaced guide rails and a door which is provided on opposite edges thereof with pins and which is slidable edgewise with the pins engaging the guide rails from a position in which it is disposed alongside the said adjacent wall into a position in which it is adapted to pivot into position to close the door opening wherein the door comprises opposite edges formed by flanges of which at least one flange is perforated, pins on said flanges and engaging the guide rails, a resilient strip fixed to the inner face of a perforated flange and anti-friction rolling members engaging said strip and projecting through the perforations in the perforated flange to the guide rails.

2. A structure having a wall provided with a door opening, an adjacent wall provided with fixed spaced guide rails and a door which is provided on opposite edges thereof with pins and which is slidable edgewise with the pins engaging the guide rails from a position in which it is disposed alongside the said adjacent wall into a position in which it is adapted to pivot into position to close the door opening wherein the door

3

comprises opposite edges formed by flanges, each of the said flanges being perforated and each having a pin which engages a guide rail, a resilient strip fixed to the inner face of each flange and anti-friction rolling members which engage said strip and project through the perforations in the flange to the guide rail engaged by the pin on the flange.

3. A structure comprising a wall provided with a door opening, a top wall and a bottom wall each having a portion extending into said door opening, an adjacent side wall, guide members on said adjacent side wall arranged in spaced apart relation, a door for masking and unmasking said door opening and mounted for slidable edgewise movement on said guide members to and from a position in which it is disposed alongside said adjacent side wall and to and from a position in which it is adapted to pivot into position to mask the door opening, a guide element on the upper edge of said door for engaging one of said guide members, a guide element on the lower edge of said door for engaging the other of said guide members, a plurality of spaced

4

apart anti-friction rolling members on the upper and lower edges of said door and projecting therebeyond and engaging said guide members during said edgewise sliding movement of the door and resilient strips on the upper and lower edges of the door and cooperating therewith to retain the rolling members in position on the door, each of said top and bottom wall portions having at least one recess for receiving one of said rolling members when said door is in its door opening masking position to hold the door in said masking position.

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