July 25, 1933. G. F. WETZEL 1,919,266

DOOR

Filed March 13, 1930

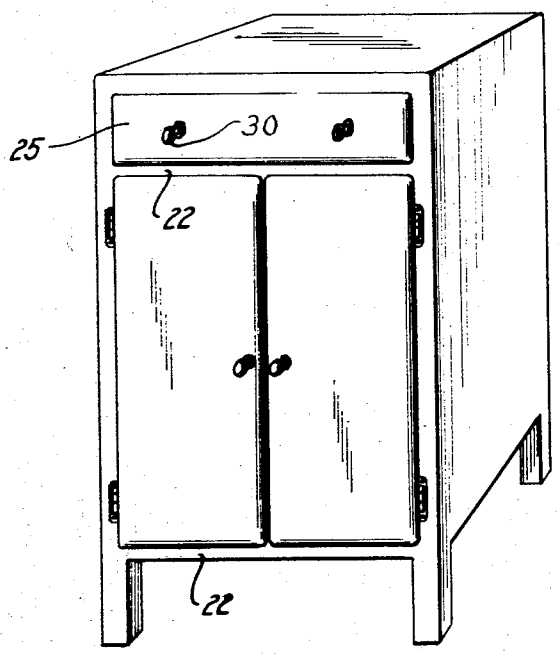


Fig. 1

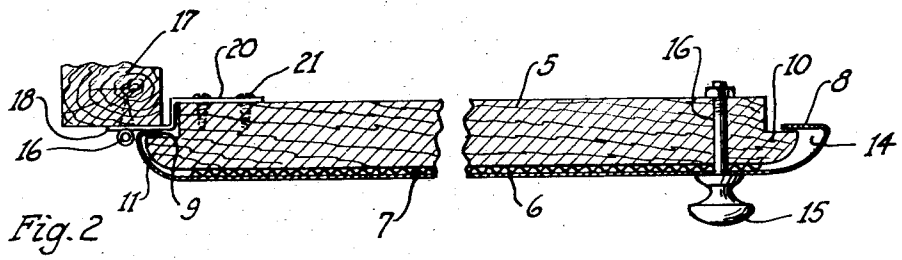


Fig. 2

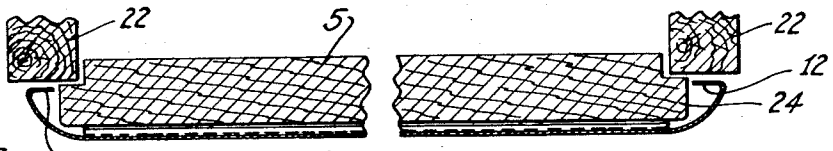


Fig. 3

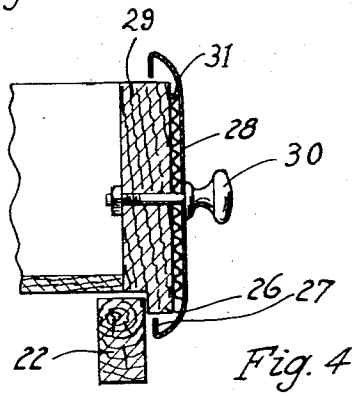


Fig. 4

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UNITED STATES PATENT OFFICE

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DOOR

Application filed March 13, 1930. Serial No. 435,418.

This invention relates to improvements in doors, and particularly to doors of kitchen cabinets and the like. One of the objects of the invention is to provide a door which is very neat in appearance and which is strong and very dependable; and one that is quiet in operation even under more or less rough usage; and one that is easily assembled and installed, and easily removed for cleaning or other purposes. A further object is to provide a door which is suitably insulated so as to prevent material changes in temperature in the cabinet.

Of the accompanying drawing, Fig. 1 is a perspective view of a cabinet which embodies the features of my invention; Fig. 2 is a transverse section of one of the doors of the cabinet; Fig. 3 is a longitudinal section of one of the doors; and Fig. 4 is a transverse section of the drawer of the cabinet.

My invention in general consists of a door which comprises an inner member 5 which is preferably of wood and of suitable thickness for providing stiffness, rigidity and suitable insulation. Mounted on the outside of this board is a second member 6, comprising a metallic shell, preferably porcelain-coated, which is arranged to be removably mounted upon the board. And, between the board and the shell, is a cushioning member 7 which is preferably composed of a corrugated board or stiff paper.

The shell is mounted on the board 5 by means of two side flanges 8 and 9 which are shaped so as to pass over projections 10 and 11 on the side edges of the board. The ends of the shell also have flanges 12 and 13. The flanges 8 and 9 are so formed that the board may be passed into the shell after the cushioning member 7 has been placed in the shell, by passing the projection 10 into the space 14 of the shell until the projection 11 will pass the flange 9. The board is then pressed inwardly and forced to the left until the projection 11 passes under the flange 9. When in this position, the flange 8 will be sufficiently long to pass well over the projection 10, as indicated. The arrangements of the parts are such that, when so positioned, the board and shell will press firmly against the cushioning member, so as to prevent all vibrating tendency of the shell, and also so as to materially stiffen the shell and prevent injury thereto.

The board may be held in place in the shell in any suitable manner. For instance, the operating knob 15 may have its stem 16 passing through the shell and the board and suitably fastened on its inner end, so that the two members are held relatively in the proper position. However, this method of fastening may be dispensed with, and I prefer to prevent relative movement of the two members, by means of the hinge 16 to which the door is pivoted to the stile 17. This hinge has the outer leaf 18 fixed to the stile and the inner leaf 20 fixed to the board. In order to allow the board to project into the frame of the cabinet more or less, the leaf 20 of the hinge is bent as indicated, so as to pass adjacent to the flange 9 and then pass inwardly and outwardly along the inner surface of the door. At the same time, the pivot portion of the hinge is positioned adjacent to the edge of the shell.

When so arranged, the board cannot be moved relative to the shell, so that there can be no separating of the two members, without loosening the screws 21. If it is desired to remove the shell for any purpose when the two members are held in position only by the hinges, it is necessary only to loosen the screws 21 sufficiently to allow the flange 9 to pass over the pivot of the hinge.

Then the shell may be removed by forcing it to the left, leaving the board still supported by the stile. Or, if the knob 15 is in use, it can be readily removed so as to allow the shell to be slipped off and cleaned or otherwise operated on, if it is desired.

I prefer to have the door close against the upper and lower frame pieces 22 of the cabinet. For this purpose, projections 24 are formed on the ends of the board, and these projections are arranged to strike against the members 22. To allow for this, the flanges 12 and 13 are set back a sufficient distance, so that they will not come in contact with the members 22. This arrangement not only prevents any hazard of injury to the

shell by bending or knocking off the enamel when the door is closed, but it also reduces materially the noise caused by the slamming of the doors, as the contact is between two pieces of wood rather than the wood and the metal.

This same arrangement is provided for with reference to the drawer 25. The shell 28 is fixed to the end board 29 by means of the stems of the knobs 30, and the cushioning member 31 is pressed between the shell and the end board. Also, the lower edge of the end board of the drawer has a projection 26 which strikes against the upper piece 22 when the drawer is closed, the flange 27 of the shell 28 being set back so as to prevent its striking against the frame piece.

By these means, it will be seen that I provide a door that is very suitable for the purpose, and one which may be made very artistic, but which will also be free from any danger of injury by inadvertent or rough handling of the door. At the same time, it is arranged so that the shell, which is the only portion which can be seen when the door is closed, may be readily removed and re-enameled or otherwise operated on. Also, the arrangement of the hinge is such as to serve the ordinary purpose and to prevent separation of the members of the door, and it is mainly hidden from view. Also, some features of the invention are applicable to cabinet drawers, such as the drawer 25.

I claim as my invention:

1. A door comprising two flat members, one member having an outwardly projecting flange on each of two opposite edges, the other member having an inwardly projecting flange on each of two opposite edges, one of the latter flanges being wider than the other, the distance between the outer edges of the first-mentioned flanges being less than the distance between the inner edges of the other flanges, the two members being assembled with the outwardly projecting flanges positioned between the other member and the flanges thereon, and means to prevent relative movement of said members.

2. A door as claimed in claim 1, comprising cushioning means positioned between said members.

3. A door comprising two flat members, one member having an outwardly projecting flange on each of two opposite edges, the other member having an inwardly projecting flange on each of two opposite edges, one of the latter flanges being wider than the other, the distance between the outer edges of the first-mentioned flanges being less than the distance between the inner edges of the other flanges, the two members being assembled with the outwardly projecting flanges positioned between the other member and the flanges thereon, said door being in combination with a frame, and hinges connecting said door to said frame.

4. A door as claimed in claim 3, in which said hinges prevent relative movement of said two members sufficient to separate the two members.

5. The combination of a frame and a door, hinges pivoting said door to said frame, said door comprising a non-metallic inner plate, and a metallic outer plate, said outer plate having flanges on all of its edges extending inwardly parallel with the main portion of the outer plate, said inner plate having outwardly extending projections on its edges, some of the projections being positioned between the outer plate and some of its flanges, the other projections being arranged to strike against said frame when said door is closed, the said flanges being spaced from said frame when said door is closed.

GUY F. WETZEL.