Dec. 16, 1930. A. F. WASMUTH 1,785,661

DOOR WITH HINGE

Filed Oct. 7, 1929

Fig. 1.

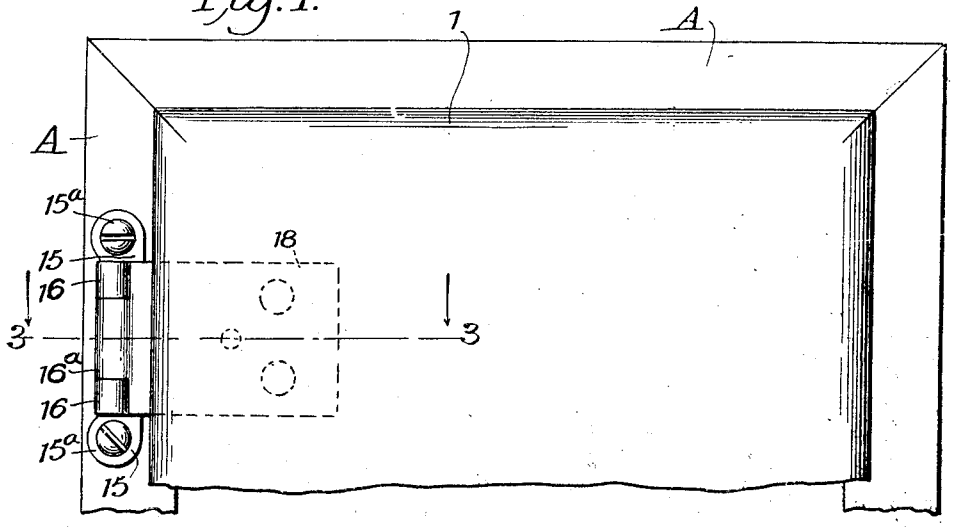


Fig. 2.

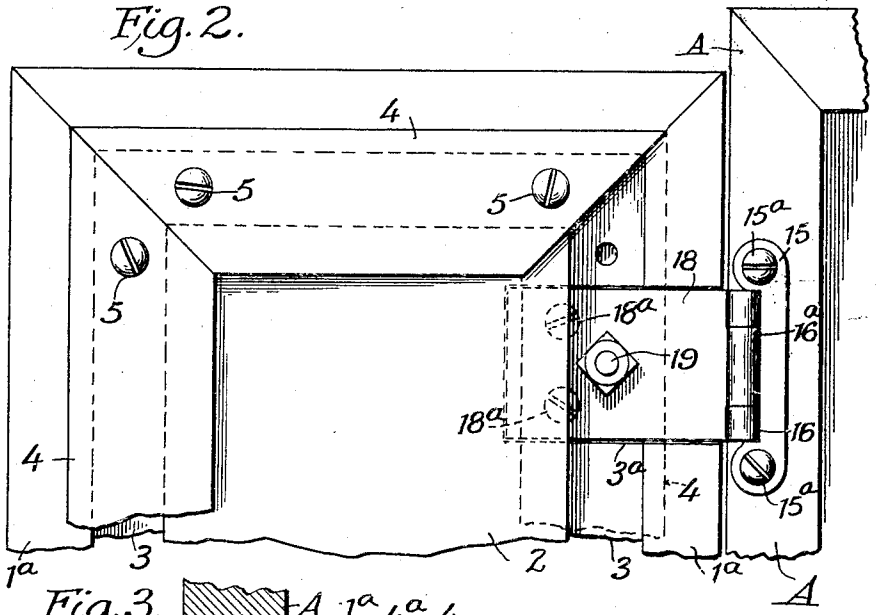
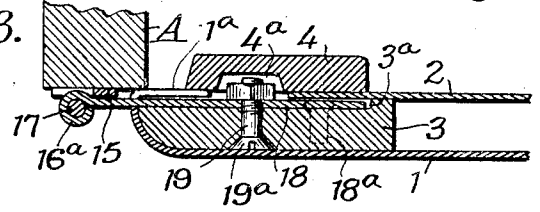


Fig. 3.



Inventor

Augustus F. Wasmuth

By Alexander Sell

Attorney

Patented Dec. 16, 1930 1,785,661

UNITED STATES PATENT OFFICE

AUGUSTUS F. WASMUTH, OF HUNTINGTON, INDIANA, ASSIGNOR TO WASMUTH-ENDICOTT COMPANY, OF ANDREWS, INDIANA, A CORPORATION OF INDIANA

DOOR WITH HINGE

Application filed October 7, 1929. Serial No. 397,987.

This invention is a novel improvement in cabinet doors with hinges such as shown in my U. S. Letters Patent No. 1,727,319; and the principle thereof is to provide a novel mounting for the hinges on cabinet doors such as shown in my co-pending application Serial No. 388,966, filed August 28, 1929, each hinge having a straight swinging leaf applied to the door in such manner that the swinging leaf will overlap and conceal the stationary pad of the hinge on the door frame, and will extend into a recess in the rear face of the door so as to be concealed from view from the outside of the door when closed; the recess for the swinging leaf of the hinge being closed by a removable frame on the rear face of the door so as to also conceal the swinging leaf from view when the door is opened; whereby the front and rear faces of the door may be left intact and unencumbered by the swinging leaf of the hinge and its fastening means. The above feature lends to the door an aspect of neatness and simplicity.

Other minor objects of the invention will be hereinafter set forth.

I will explain the invention with reference to the accompanying drawing which illustrate one practical embodiment thereof to enable others to adopt and use the same; and will summarize in the claims the novel features of construction, and novel combinations of parts, for which protection is desired.

In said drawings:—

Fig. 1 is a fragmentary front elevation of a cabinet door in "closed" position showing the adjacent portions of the door frame, and showing a hinge applied thereto in accordance with my invention.

Fig. 2 is a rear elevation of the door showing same in "open" position.

Fig. 3 is a transverse section on the line 3—3 Fig. 1.

As shown, the stationary pad 15 of the hinge is applied to a door frame A, and the swinging leaf 18 applied to a door of slightly larger area than the frame A, said door slightly overlapping the same frame.

Preferably the door is formed as set forth in my co-pending application Serial No. 388,966, filed August 28, 1929, same briefly comprising front and rear plates 1 and 2 respectively separated by an enclosed skeleton frame 3 and provided with a similar outer skeleton frame 4 removably attached to the rear frace of the door; the whole constituting a light hollow door to which the hinges are readily attachable as hereinafter explained. Frame 3 is preferably made of wood or the like and in exterior dimensions corresponds to the desired exterior size and form of the complete door.

Front plate 1 is preferably sheet metal and of larger area than that of frame 3, and the edges of sheet 1 are turned over and around the outer edges of frame 3 and turned back, as at 1*a*, on the rear side of the door to entirely enclose the front and outer edges of frame 3 and to partially cover the rear side of frame 3. The metal of sheet 1 may be cut away at the corners thereof so that the inturned portions 1*a* will make a neat mitred joint at the corners of the door. These inturned portions 1*a* of the sheet 1 underlie the outer edges of the frame 4 as shown in the drawing.

The rear plate 2 is preferably also of sheet metal, and is of larger area than the inner boundaries of the frames 3 and 4, but is of somewhat smaller area than the field bounded by the inner edges 1*a* of the inturned portions of sheet 1.

The frame 4, preferably of wood or any other desired material, is of less external size than the inner frame 3, and is removably secured to the frame 3 at back of the door with the outer edges of frame 4 overlying the inturned edges 1*a* of the sheet 1 and also the edges of the sheet 2, the frame 4 being fastened to the frame 3 by means of suitable fastenings such as screws 5, which pass into frame 3 between the adjacent edges of the sheets 1*a* and 2 as shown in Fig. 2.

The hinge consists of a stationary pad 15 having perforated lugs 16 for supporting the pintle 17; and a swinging leaf 18 which overlaps the pad 15 and has one or more perforated lugs 16*a* positioned between the above

mentioned lugs 16 of the pad 15. The hinge is applied to the door frame A by securing the pad 15 upon the front face of frame A by screws 15*a*.

Swinging leaf 18 is straight, and housed in a recess 3*a* in the back of door B, said recess being of size to suit the leaf 18, and being cut through the turned portion 1*a* of place 1 at the back of the door and into the rear face of the frame member 3, the recess being of such depth that the inturned portions 1*a* will be flush with the stationary pad 15 (as shown in Fig. 3) when the door is closed. Leaf 18 is secured in position in said recess by means of screws 18*a* at the outer corners of the leaf, and by means of a bolt 19 passing through a perforation in leaf 18 adjacent its center, the head 19*a* of bolt 19 being countersunk and housed in a countersunk recess in the outer face of frame 3, bolt 19 making a strong connection between the swinging leaf 18 and frame 3. Bolt 19 is disposed in the gap between the edges of plates 1*a* and 2 and directly under the rear frame 4, which may be gouged out as at 4*a* in way of the nut on said bolt 19. Hence when the rear frame 4 is applied, the recesses 3*a*, bolts 19, screws 18*a*, and the portion of swinging leaf 18 under the frame 4 will all be concealed from view from the rear side of the door; and the frame 4 will also cover up the gap between the edges of plates 1*a* and 2.

When the door B is closed the outer edges of the rear face of the door will seat squarely against the front face of door frame A and the swinging leaf 18 and its fastening bolts and screws are concealed from view from the front of the door, and the face of the door is thereby left intact and unencumbered by the leaf 18 and its fastening means, lending thereto an aspect of neatness and simplicity.

I claim:

1. In combination with a door having recesses in one face; concealed hinges each consisting of a pad and a leaf pivoted upon and overlapping the pad, each leaf entering a recess; the recesses being of such depth that the recessed face of the door will be substantially flush with the pad; means for securing each leaf in its recess; and a member on the door covering the recesses.

2. In a combination as set forth in claim 1; said door comprising an inner frame, a cover sheet on the front face of said frame having its edges bent over the edges of the frame and lapped back upon the rear face thereof; said recesses extending through the lapped portions of the sheet and into the inner frame; and said recess covering member comprising an outer frame secured to the back of the inner frame and overlapping the edge of the sheet.

3. In a combination as set forth in claim 1; said door having a cover sheet; and said securing means including a concealed bolt passing through the leaf between the sheet and the recess covering member.

4. In combination, a door frame, a door having recesses in the rear face and having its edges slightly overlapping said frame; and concealed hinges connecting the door and frame, each hinge consisting of a pad secured to the frame and a pivoted leaf overlapping the pad and entering a recess; the recesses being of such depth that the rear face of the door will be substantially flush with the frame when the door is closed; means for securing each leaf in its recess; and a member on the door covering the recesses.

5. In a combination as set forth in claim 4; said door comprising an inner frame, a cover sheet covering the front face of said frame and having its edges bent over the outer edges of the frame and lapped back upon the rear face thereof; said recesses extending through the lapped portions of the sheet and into the inner frame; and said recess covering member comprising an outer frame member secured to the back of the inner frame and overlapping the edge of the sheet.

6. In a combination as set forth in claim 4; said door having a cover sheet; and said securing means including a concealed bolt passing through the leaf between the sheet and the recess covering member.

7. In combination with a door having recesses in its rear face and having a metal facing; concealed hinges each consisting of a pad and a straight leaf pivoted upon and overlapping the pad, each leaf entering a recess; said recesses being of such depth that the rear face of the door will be substantially flush with the pad when the door is in closed position; a member on the door covering the recesses; and means for securing the leaves in the recesses including concealed bolts passing through the leaves between the metal facing and the recess covering member.

8. In a combination as set forth in claim 7; said door comprising an inner frame, a metal sheet covering the front face of said frame and having its edges bent over the outer edges of the frame and lapped back upon the rear face thereof; a second metal sheet on the rear face of said frame; said recesses extending through the lapped portion of the first mentioned sheet and into the inner frame; and said recess covering member comprising an outer frame member secured to the back of the inner frame and overlapping the edges of the sheets.

AUGUSTUS F. WASMUTH.