

E. W. WALSH.
DOOR.
APPLICATION FILED JULY 9, 1912.

1,052,108.

Patented Feb. 4, 1913.

Fig. 1.

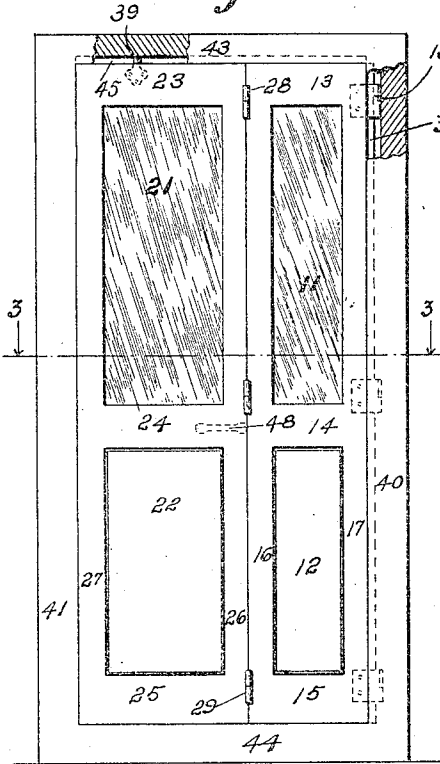


Fig. 2.

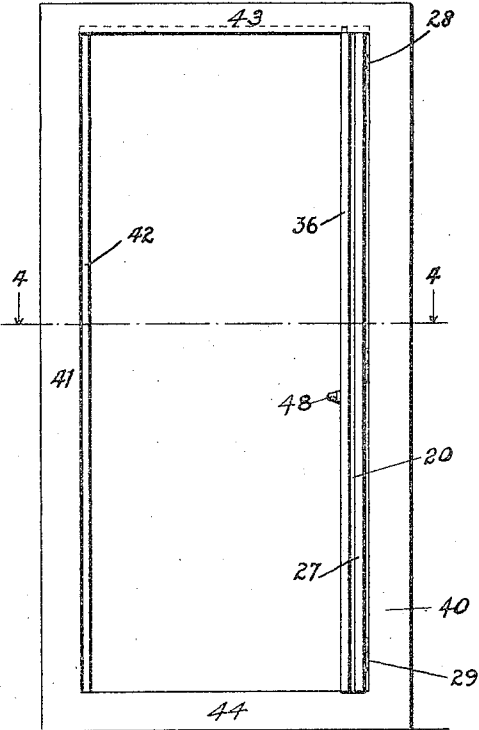
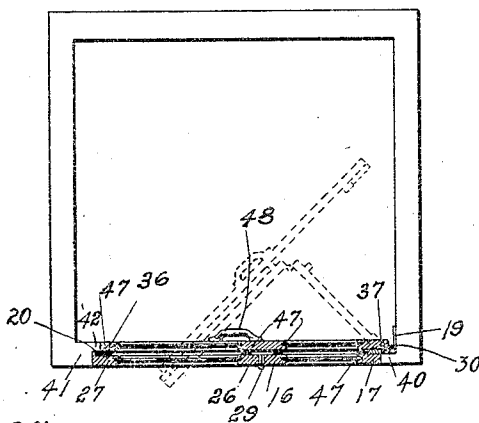
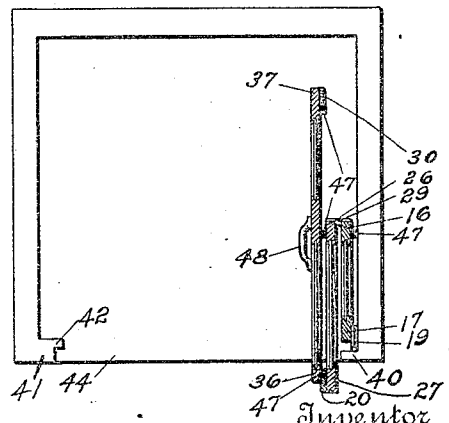


Fig. 3.



Witnesses:
Arthur Choquet
Warren E. Willis.

Fig. 4.



Inventor
Eugene W. Walsh

UNITED STATES PATENT OFFICE.

EUGENE W. WALSH, OF NEW YORK, N. Y., ASSIGNEE TO TELEPHONE BOOTH RENTING AND SALES CO., OF NEW YORK, N. Y.

DOOR.

1,052,108.

Specification of Letters Patent.

Patented Feb. 4, 1913.

Application filed July 9, 1912. Serial No. 708,466.

To all whom it may concern:

Be it known that I, EUGENE W. WALSH, a citizen of the United States, and a resident of New York, county and State of the same name, have invented certain new and useful Improvements in Doors, of which the following is a specification.

This invention relates to improvements in doors and particularly to that class used in telephone booths and other similar structures where the available operative space is restricted and in which it is desirable to have the door recede or fold compactly out of the way when open. Its objects are, first, to provide such doors in forms which will, by reason of their construction, fold closely against the wall so as to occupy a minimum of room, which shall be easy and smooth in operation, convenient of manipulation, and which present an attractive appearance, either opened or closed. Second, to provide doors which effectually prevent the transmission of sound therethrough and which are practically noiseless in operation. These and other minor objects are attained by the novel construction and arrangement of parts hereinafter fully described and shown in the accompanying drawings, forming part of this specification, and in which:—

Figure 1 is a front elevation of a booth, showing the door closed, parts being broken away to show interior connections. Fig. 2 is a similar view of the same, showing the door completely open. Fig. 3 is a sectional view, taken on line 3—3 of Fig. 1, showing the door closed and indicating by broken lines its operative movement, and, Fig. 4 is a similar sectional view, taken on line 4—4 of Fig. 2, showing the door open.

The invention embraces a door, its frame and connections; the door being comprised of three distinct members; the first being formed of an upper panel 11, preferably of glass, and a lower panel 12 of wood, like the other parts of the door, as the rails 13, 14 and 15 and stiles 16 and 17. This member, which is relatively narrow, is attached at one edge of its stile 17, by hinges 18 and 19 to the jamb 40 of the door-frame, the jamb being of a thickness corresponding to that of the stile, which is so arranged as to swing clear of the door-frame immediately it is folded inwardly in the initial opening move-

ment. The opposite stile 16 is provided with hinges 28 and 29 connecting the stile 26 of the wider, adjoining member to the narrow member, and having its opposite stile 27, adapted, when the door is closed, to outwardly register with the jamb 41 and make contact with the inner member 42 of the door-frame, through the vertical strip 20.

Between the stiles 26 and 27 of the wider member, are rails 23, 24 and 25 which form frames for the glass and wood panels 21 and 22 respectively. To the wider member, on its inner side is rigidly secured a third member which constitutes the inner leaf or plate and is adapted to make contact, at its front edge 36, with the inner portion 42, of the door-frame, while at its rear edge 37 is a strip 30 which contacts with the jamb 40, when the door is closed, but clears the same when swung inwardly. The inner member is of a width equal to the clear distance between the sides of the door-frame, the same as the combined widths of the outer members, but is offset therefrom so that the edges of the inner and outer leaves are not in register but overlap, or extend past each other; the inner member is of similar construction to the outer members and includes a pair of glass panels arranged to register with those in the outer leaf; a pin 39, secured to the top rail of the inner leaf and traverses in a guide-slot 45 formed in the head-piece 43 of the door-frame. As a further provision against the transmission of sound, felt or rubber strips 47 are interposed between the woodwork surrounding the panels thereby effectually preventing sound waves from passing.

In order to conveniently operate the door a handle 48 is provided on the inside of the inner leaf, while a similar handle may be provided on the exterior rail 14.

In operation from the inside, the door being closed, the handle is drawn inwardly, causing both sets of hinges to turn while the guide pin moves straight across the doorway in the slot, over the threshold 44, causing the door to describe a peculiar receding motion; from the outside the door may be opened by pressing directly upon the wider, outer member, causing it to fold in the direction of the hinged jamb. The design is such that it can be used with perfect safety

and freedom from danger of having the fingers, person or clothing of the operator caught on projections or between joints, as at the hinges, the inner leaf acting as a shield or guard against such accidents.

It may be noticed that the edge portions of the door are so arranged in combination with the jamb members as to form two distinct sets of joints so that no passage or aperture of any kind exists when the door is closed.

While no latches or catches are used in the construction the door will remain in any position until it is moved and it is further noticeable that the operation can be effected without noise as where rollers or the like are used.

While I have shown a working embodiment of my invention I may modify the details in some respect, as for instance, use a beveled surface at the door jamb and stile edges and it is evident that the door may be constructed to hinge upon either side, right or left, as preferred.

I am aware that folding doors have long been in use for similar purposes and hence do not claim such broadly as my invention, but

What I do claim and desire to secure by Letters Patent is:—

1. The combination with a door frame of a door consisting of two leaves having their sides adjacently disposed and containing an air space therebetween, the outer leaf being in two sections, relatively wide and narrow, said narrow section hingedly engaging the door frame at one edge and said wide section at the other, the inner leaf being rigidly attached along its edges to said wider section of the outer leaf.

2. The combination with a door-frame, of a door comprising two vertical plate portions, the outer being in two sections, relatively wide and narrow, the latter being hinged at its outer edge to the door-frame and also hinged at its opposite edge to the wider section, the inner plate being secured to the side of said wider, outer portion in such manner as to have its front edge recedent to the corresponding edge of the outer portion and to have its rear edge project beyond the rear edge of said outer portion.

3. The combination with a door-frame, of a door comprising two vertical plate portions, the outer being in two sections, relatively wide and narrow, the latter being hinged at its outer edge to the door-frame and also hinged at its opposite edge to the wider section, the inner plate being secured to the side of said wider, outer portion in such manner as to have its front edge recedent to the corresponding edge of the outer portion and to have its rear edge project beyond the rear edge of said outer por-

tion, said outer plate portion being adapted to make direct contact with the door-frame at its front edge and said inner plate portion being adapted to make contact with the door-frame at its rear edge.

4. In a door of the class described, the combination with a door-frame, of a door comprising an element hingedly attached to one side of said door-frame, a relatively wider element hingedly attached to the first named element and adapted to make contact with the door-frame opposite, an inner member having a width corresponding to the combined width of both the outer elements and attached to the wider element thereof, out of register therewith, and sound proofing material interposed between said inner and outer members.

5. In a door of the class described, the combination with a door-frame, of a door comprising an element hingedly attached to one side of said door-frame, a relatively wider element hingedly attached to the first named element and adapted to make contact with the door-frame opposite, an inner member having a width corresponding to the combined width of both the outer elements, attached to the wider element thereof, so that its edges are offset therefrom, and a guide pin secured to the upper edge of the last named member cooperating with a slot-way formed in the upper portion of said door-frame.

6. In a door of the class described, the combination with a door-frame, of a door comprising an element hingedly attached to one side of said door-frame, a relatively wider element hingedly attached to the first named element and adapted to make contact with the door-frame opposite, an inner member having a width corresponding to the combined width of both the outer elements and attached to the wider element thereof, so that its edges are offset therefrom, sound proofing material interposed between said inner and outer members, and a guide pin secured to the upper edge of the inner member adapted to traverse a slot in the upper portion of said door-frame.

7. In a door of the class described, the combination of two members forming inner and outer leaves respectively, and having an air space therebetween, said outer leaf being in two sections of different widths, the narrower hingedly engaging with its support at one edge and with the wider section at the other, and sound proofing strips arranged along the inner edges of said wider section adapted to contact with said inner leaf.

8. In a door of the class described, the combination of two plate members forming inner and outer leaves, having an air space therebetween, said outer leaf being divided into vertical sections, one of said sections

being rigidly affixed to the inner leaf and the other hingedly engaging with a support at one edge and being further similarly hinged to the other section at its opposite edge, sound proofing material disposed about the edges of the fixed section in such manner as to be in contact with the inner leaf at all times and similar sound proofing material disposed about the edges of the hinged

section in such manner as to be in contact with the inner leaf when the door is closed.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EUGENE W. WALSH.

Witnesses:

LAURA J. MARSH,
FRANK SINGLE.