Jan. 3, 1939. E. J. G. PHILLIPS 2,142,408

MULTIPLE DOOR COMPARTMENT

Filed Jan. 6, 1936 8 Sheets-Sheet 1

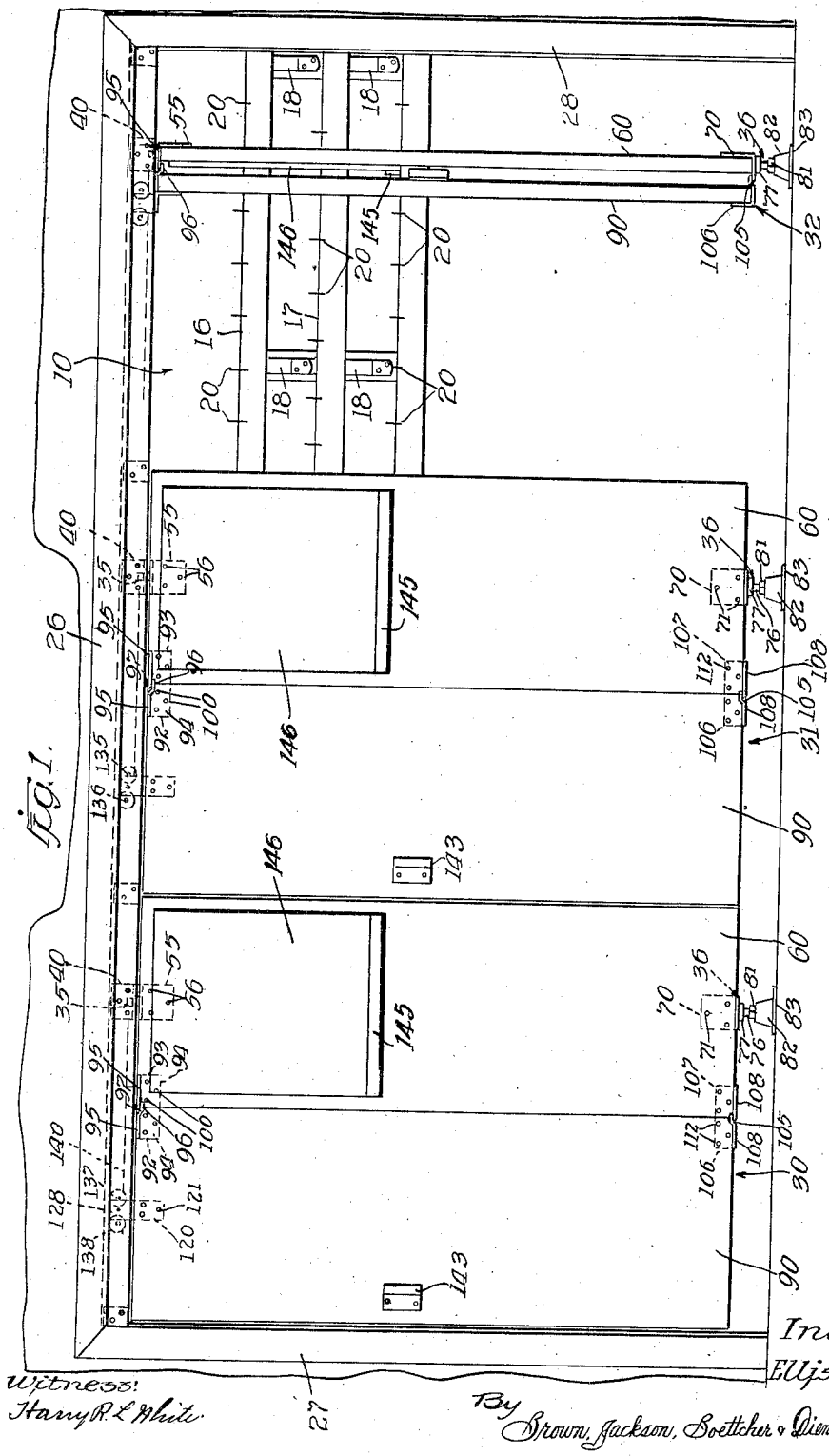


Fig. 1.

Witness:
Harry R. L. White

Inventor:
Ellis J. G. Phillips

By Brown, Jackson, Boettcher & Dienner Attys

Jan. 3, 1939. E. J. G. PHILLIPS 2,142,408

MULTIPLE DOOR COMPARTMENT

Filed Jan. 6, 1936 8 Sheets-Sheet 2

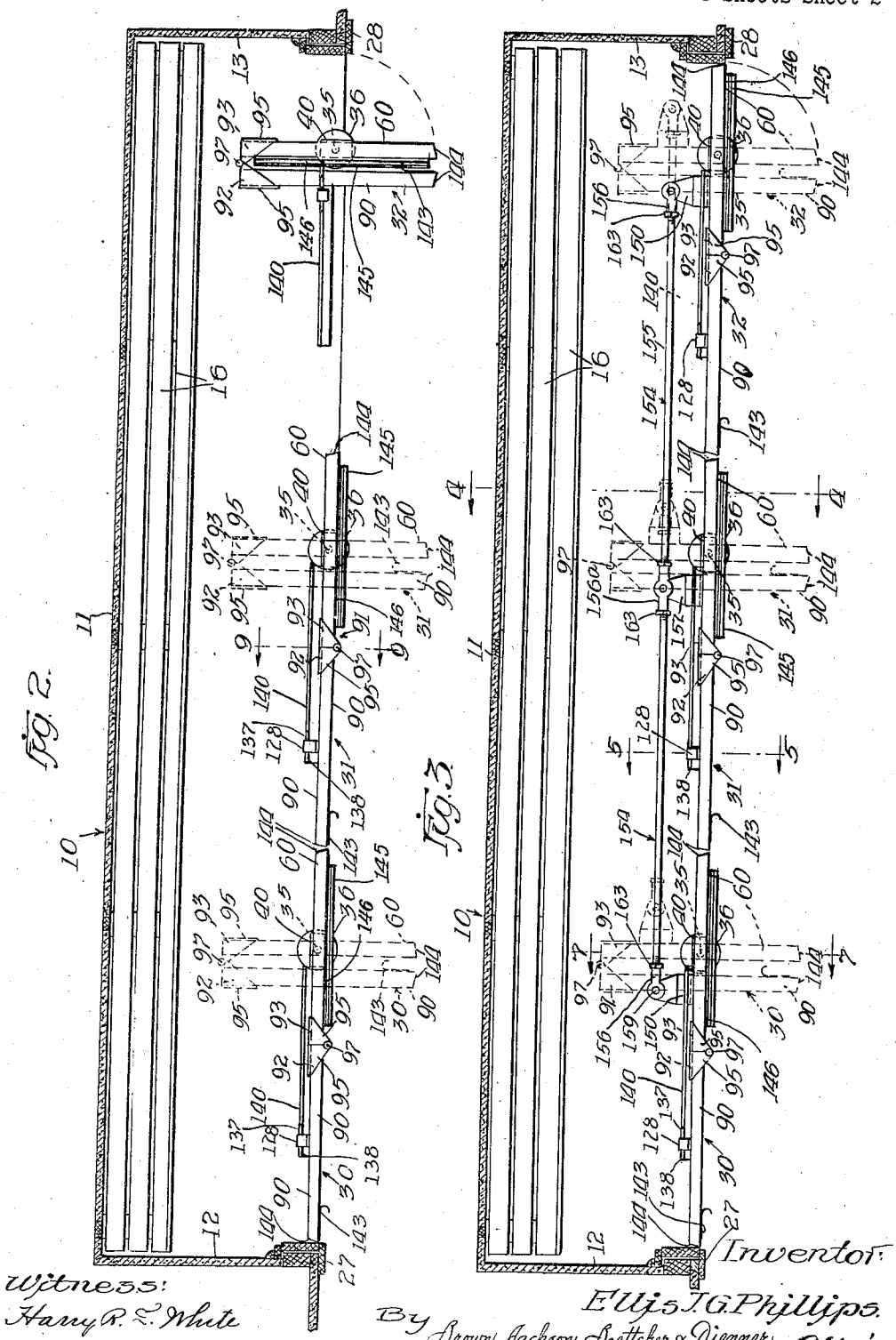


Fig. 2.

Fig. 3

Witness:
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Jan. 3, 1939. E. J. G. PHILLIPS 2,142,408

MULTIPLE DOOR COMPARTMENT

Filed Jan. 6, 1936 8 Sheets-Sheet 3

Fig. 4.

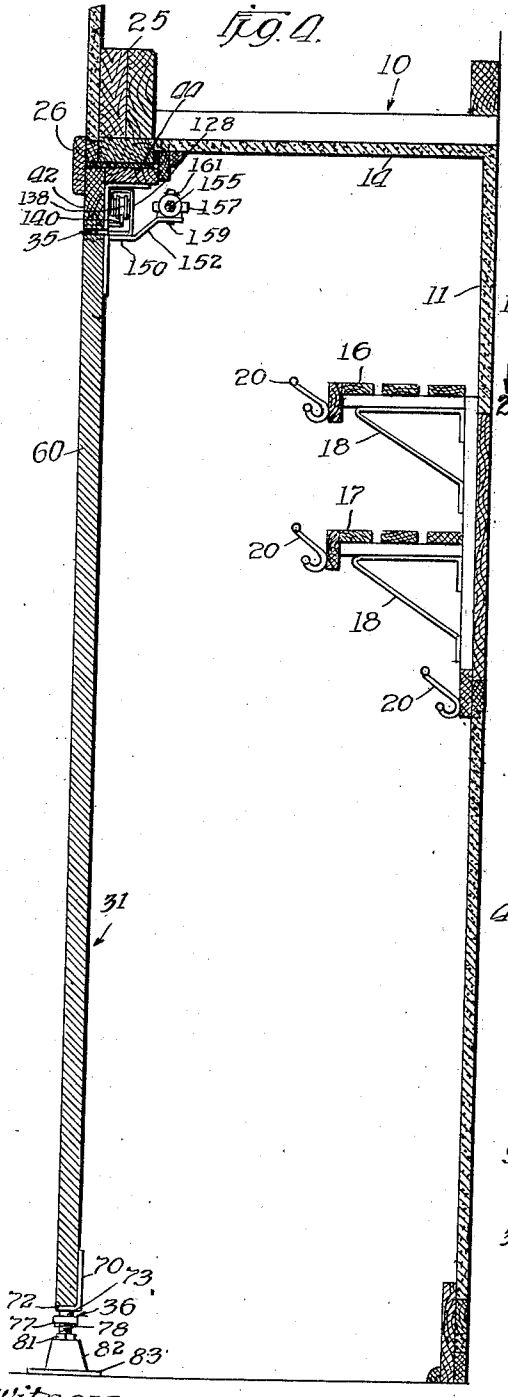


Fig. 5.

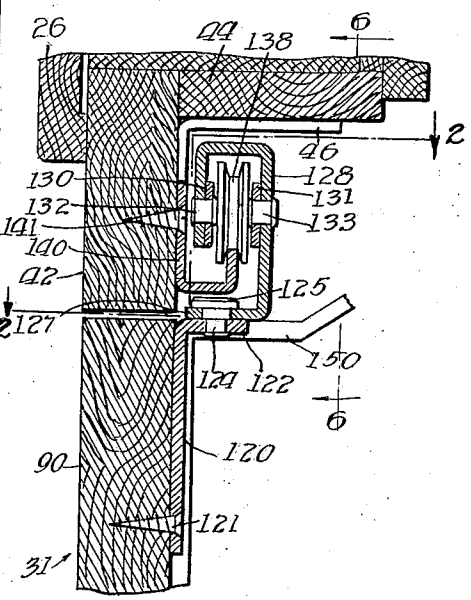
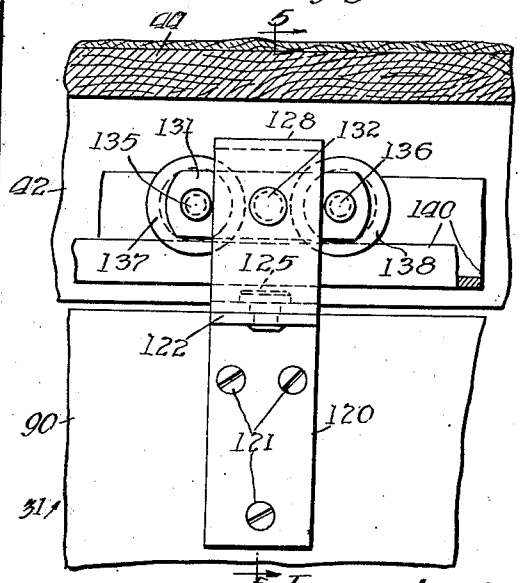


Fig. 6.



Witness:
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Jan. 3, 1939. E. J. G. PHILLIPS 2,142,408

MULTIPLE DOOR COMPARTMENT

Filed Jan. 6, 1936 8 Sheets-Sheet 4

Fig. 7.

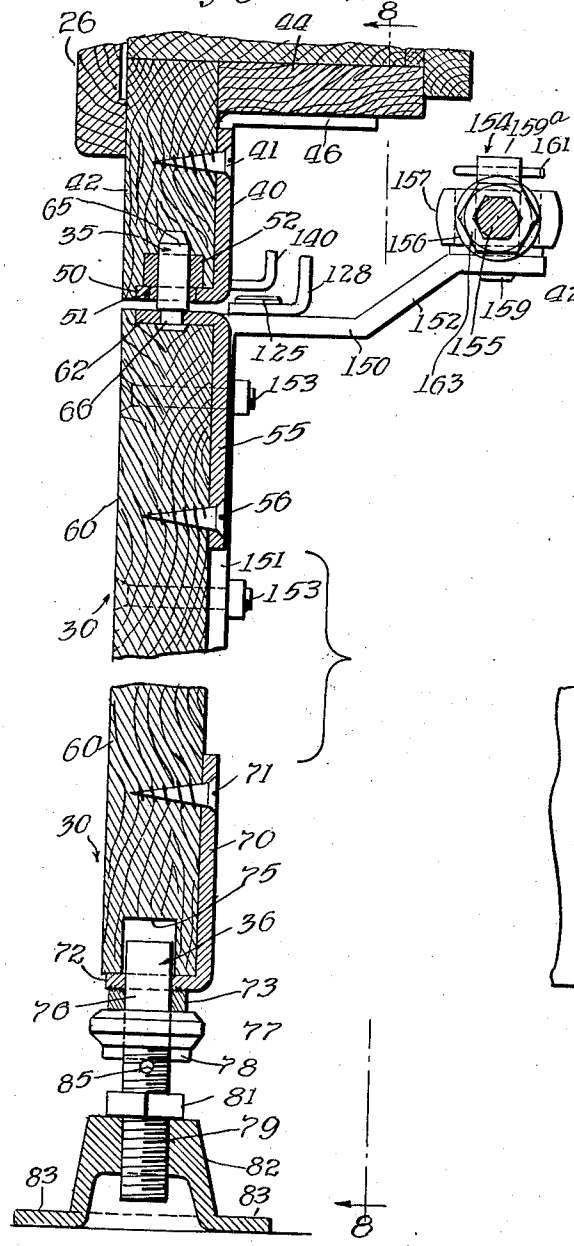
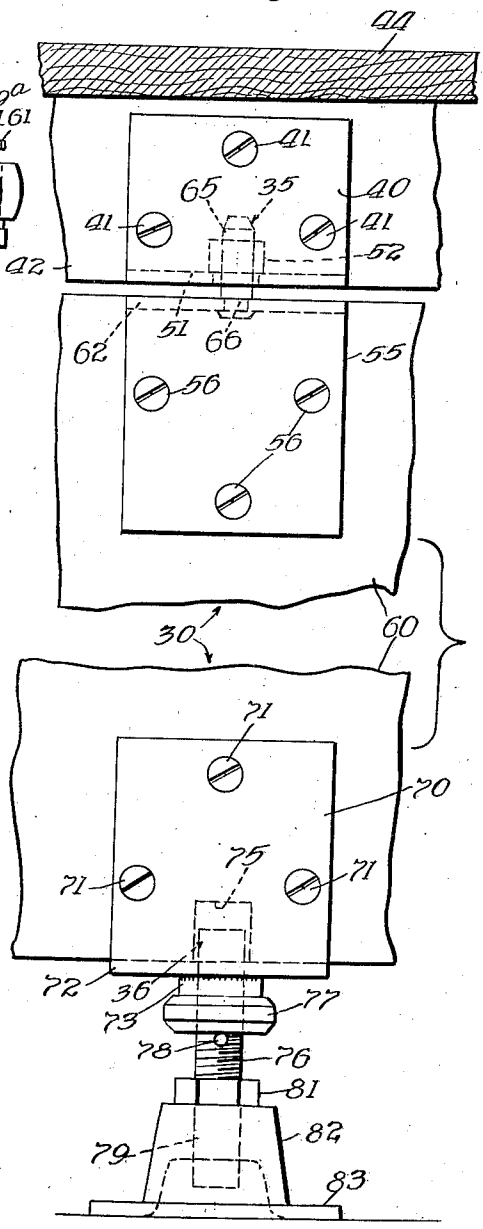


Fig. 8.



Witness:

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Jan. 3, 1939. E. J. G. PHILLIPS 2,142,408

MULTIPLE DOOR COMPARTMENT

Filed Jan. 6, 1936 8 Sheets-Sheet 5

Fig. 9.

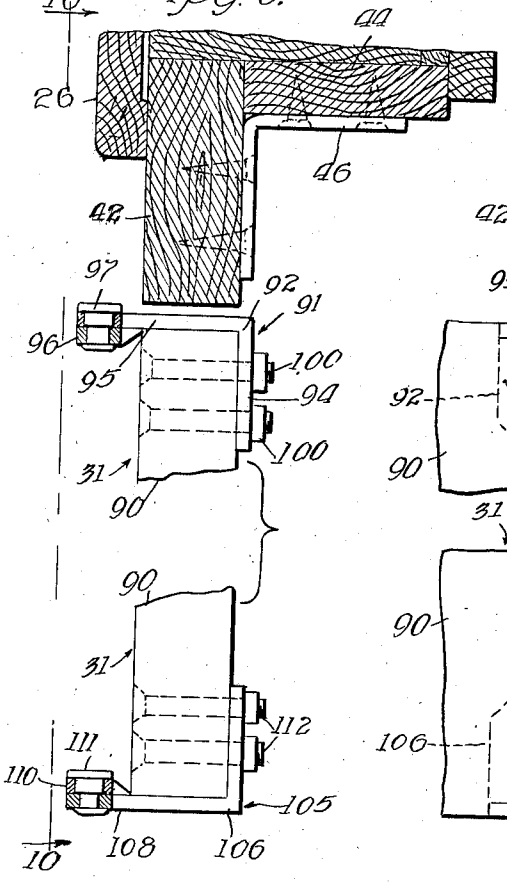


Fig. 10.

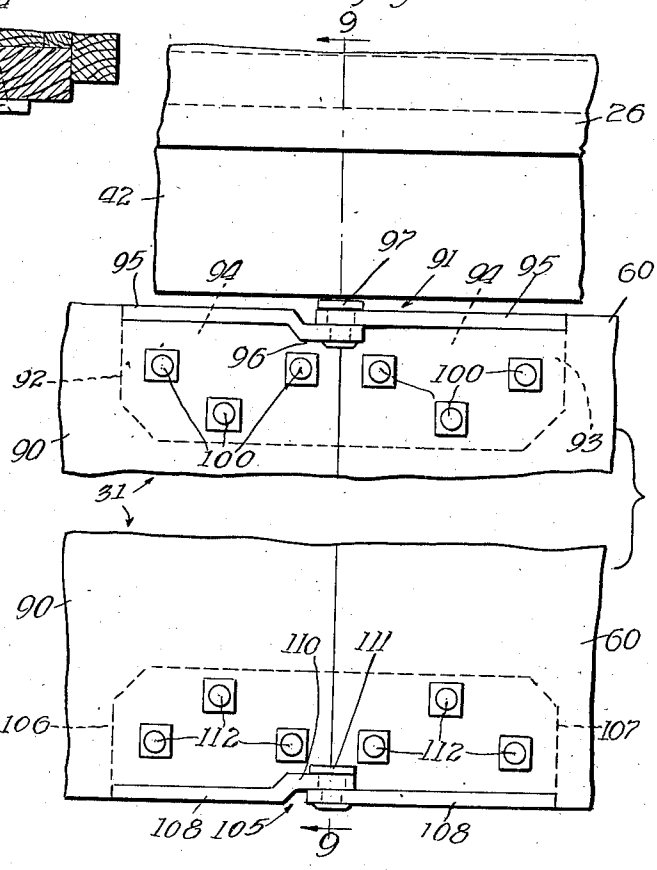
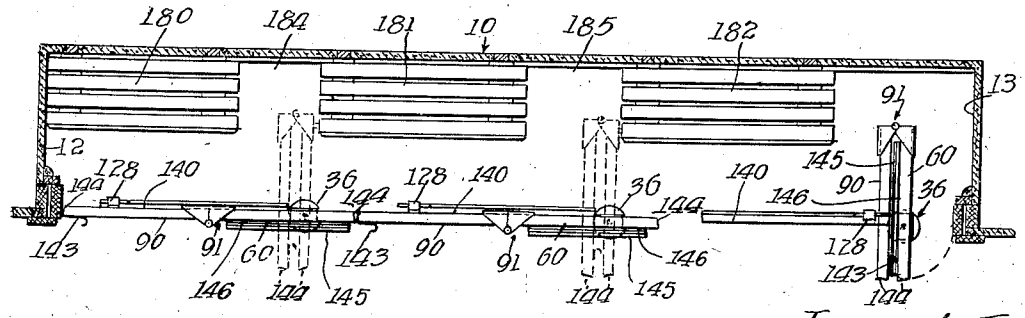


Fig. 11.



Witness:

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Jan. 3, 1939. E. J. G. PHILLIPS 2,142,408

MULTIPLE DOOR COMPARTMENT

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Fig. 12.

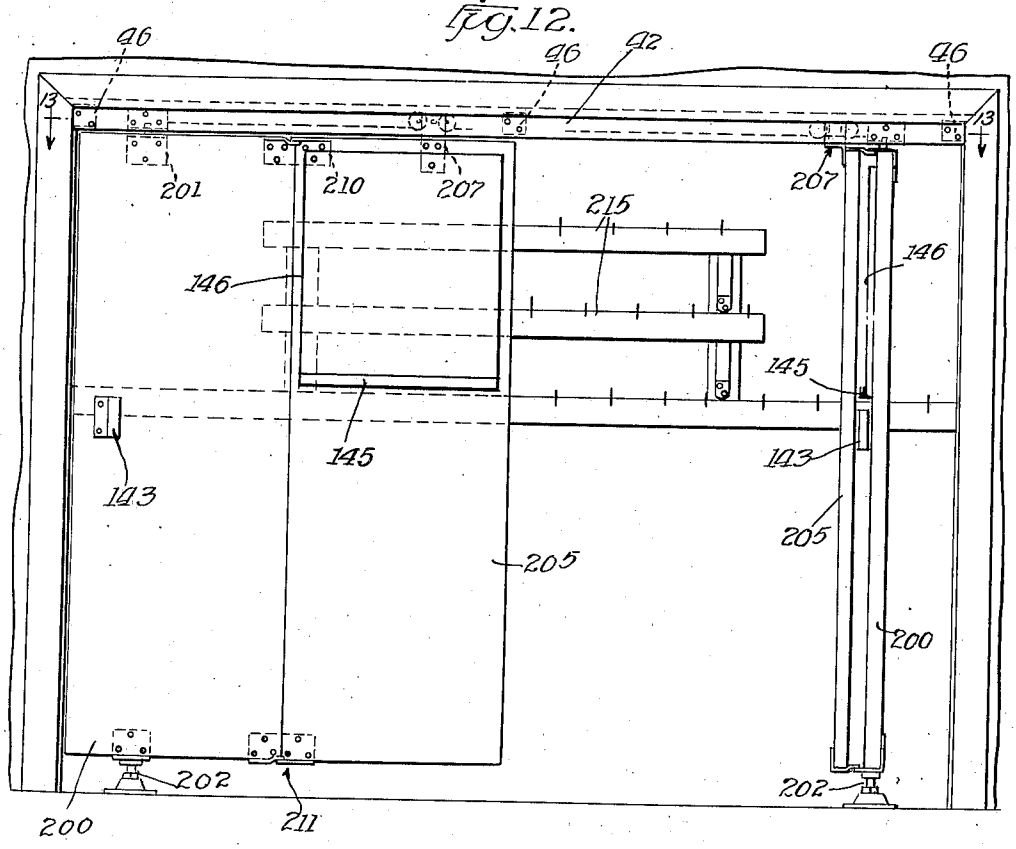
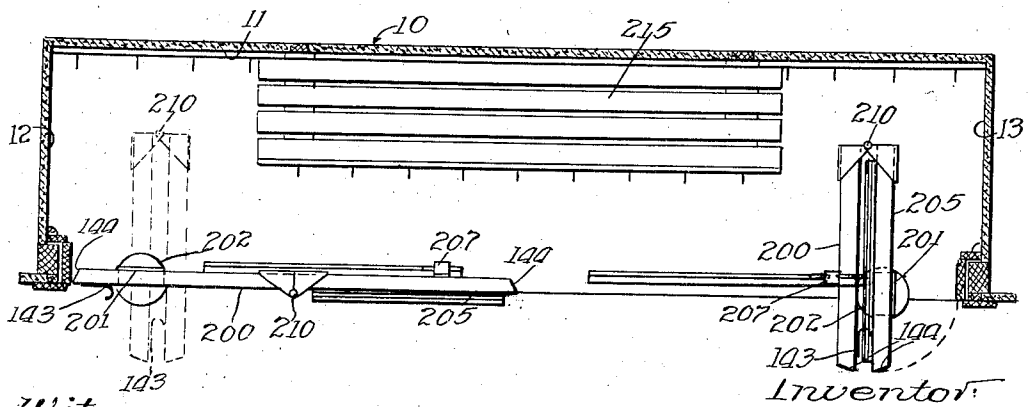


Fig. 13.



Witness:

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Jan. 3, 1939. E. J. G. PHILLIPS 2,142,408

MULTIPLE DOOR COMPARTMENT

Filed Jan. 6, 1936 8 Sheets-Sheet 7

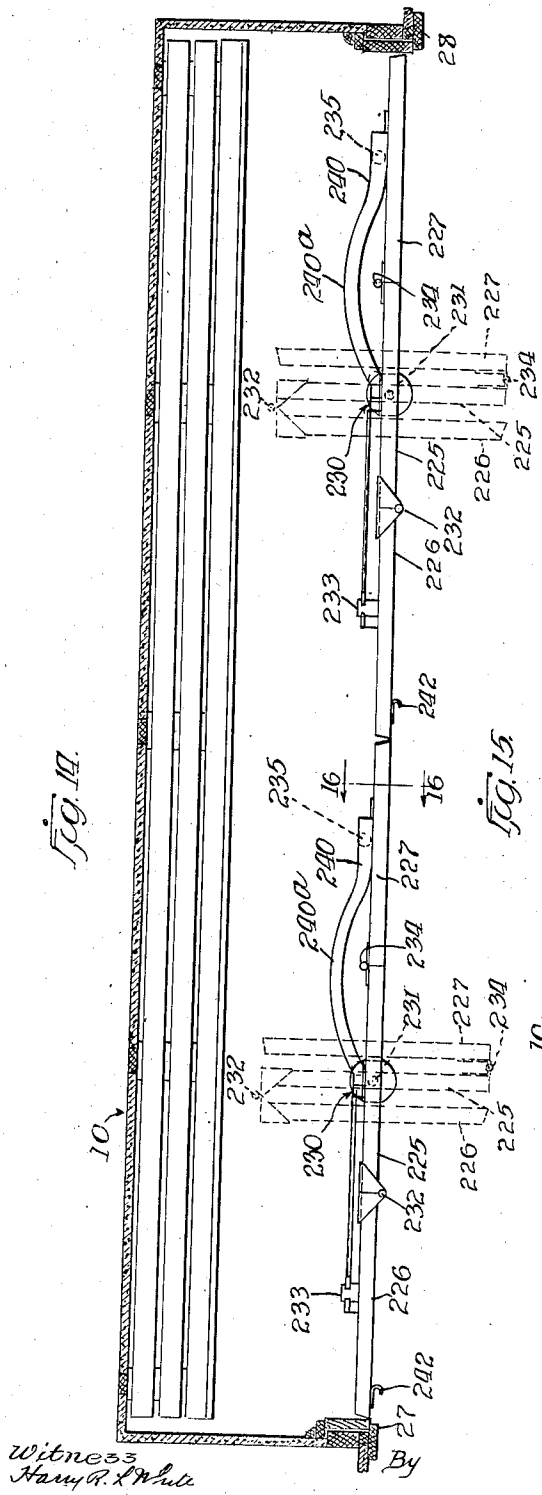


Fig. 14.

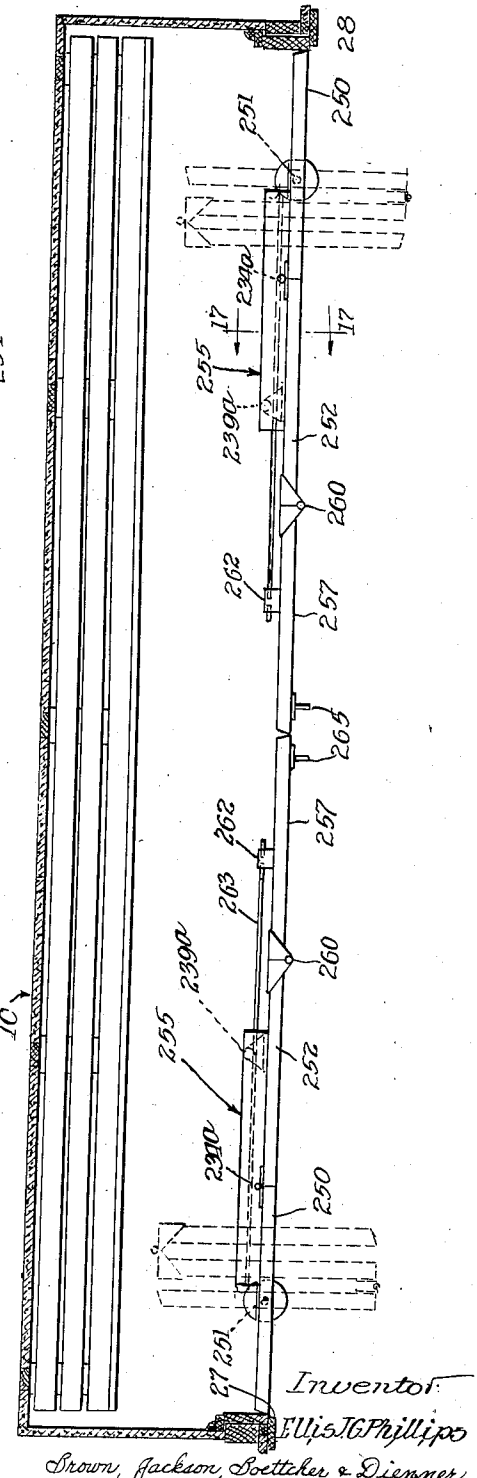


Fig. 15.

Witness
Harry R. White

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Jan. 3, 1939. E. J. G. PHILLIPS 2,142,408

MULTIPLE DOOR COMPARTMENT

Filed Jan. 6, 1936 8 Sheets-Sheet 8

Fig. 16.

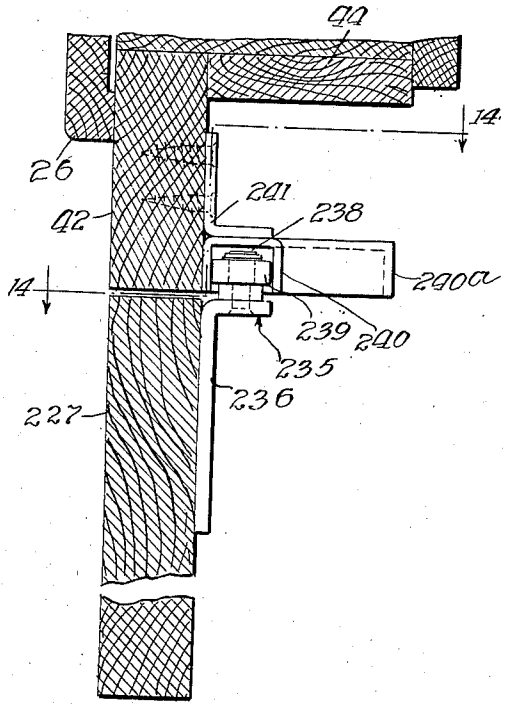


Fig. 17.

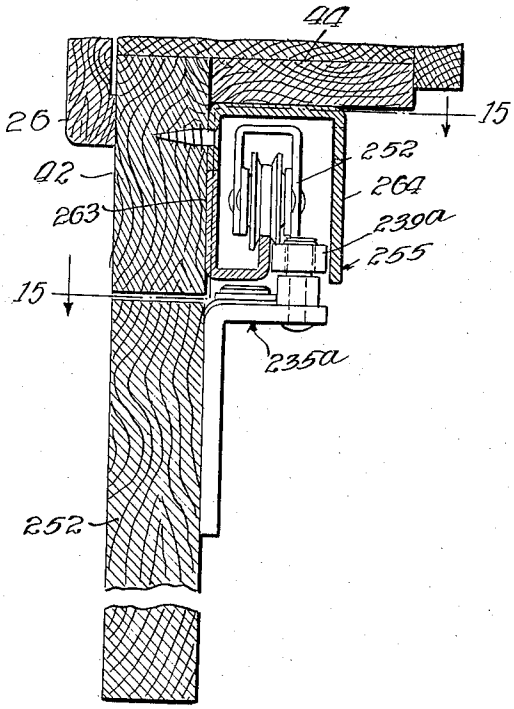
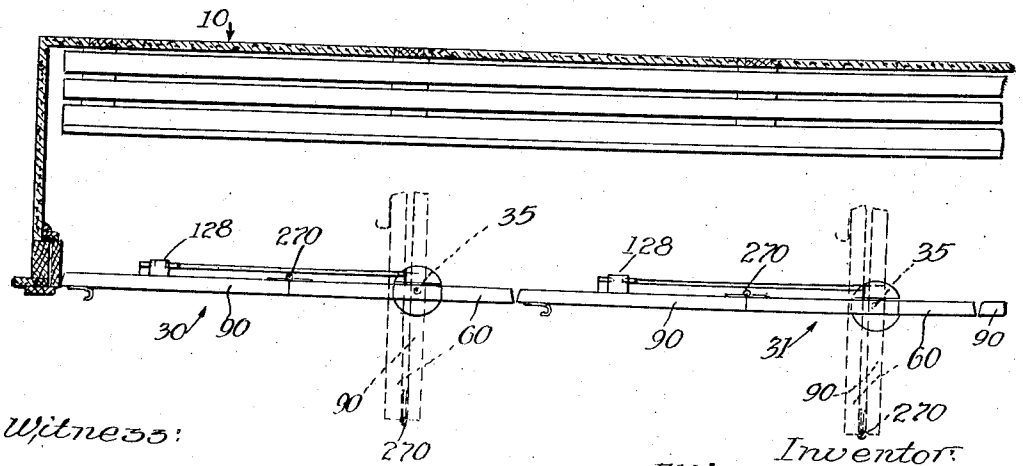


Fig. 18.



Witness:
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Patented Jan. 3, 1939 2,142,408

UNITED STATES PATENT OFFICE

2,142,408

MULTIPLE DOOR COMPARTMENT

Ellis J. G. Phillips, Aurora, Ill., assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill., a corporation of Illinois

Application January 6, 1936, Serial No. 57,794

12 Claims. (Cl. 20—20)

The present invention relates generally to compartments, such as wardrobes for school rooms and the like, and is especially concerned with such cabinets and compartments wherein a plurality of movable doors are provided to permit access to the compartment.

Heretofore, in compartments of the multiple door variety, the mounting hardware for the plurality of doors has been relatively complicated and expensive, and in some instances in the case of school room wardrobes, where the door panels are mounted to swing about offset pivots, the supporting brackets for the doors extend into the open space of the doorway when the doors are opened. These offset pivot brackets were not infrequently so disposed that children were likely to stumble over them.

With the above factors in mind, the principal object of the present invention is the provision of a multiple door arrangement embodying sets of hingedly connected door panels, one panel of each set being pivoted by relatively simple hardware for swinging movement about an axis that lies in the plane of the door, the other or companion panel or panels being supported from an overhead trolley of simple, yet sturdy, construction, and, being hingedly connected to the pivoted panels, the companion panels are adapted to be folded against the associated pivot panels, leaving a clear and unobstructed space between the folded pairs of door panels and providing for easy and convenient access to the compartment.

A further object of the present invention is the provision of a multiple door construction embodying two or more sets of door panels in groups of three, one being mounted for swinging movement about an axis that lies in the plane of the door opening and the other panels being hingedly connected to opposite edges of the pivoted panel, and a still further object of the present invention in this connection is the provision of supporting means for the two non-pivoted panels in which one is supported by a hanger and overhead track assembly and in which the other panel is guided for movement by a channel track.

Still further, an additional object of the present invention is the provision of a multiple door construction, embodying groups of three panels, one end panel of the group being pivoted while the other two panels are mounted for folding movement, at least one, preferably the one opposite the pivoted panel, being supported by a hanger unit, and another object of the present invention is the provision of suitable means for guiding the intermediate panel.

These and other objects and advantages of the present invention will be apparent to those skilled in the art after a consideration of the following detailed description of the preferred structural embodiments, taken in conjunction with the accompanying drawings.

In the drawings:

Figure 1 is a front elevational view of a compartment having three pairs of folding doors and so arranged that the article supporting racks within the compartment can be made continuous from end to end;

Figure 2 is a sectional view corresponding generally to a section taken along the line 2—2 of Figure 5;

Figure 3 is a view similar to Figure 2 but illustrating the use of linkage means for causing all of the door panels to swing together;

Figure 4 is a section taken along the line 4—4 of Figure 3;

Figure 5 is a section taken along the line 5—5 of Figures 3 and 6;

Figure 6 is a section taken along the line 6—6 of Figure 5;

Figure 7 is a section taken along the line 7—7 of Figure 3, illustrating the pivotal mounting of certain of the door panels;

Figure 8 is a view taken along the line 8—8 of Figure 7;

Figure 9 is a section taken along the line 9—9 of Figures 2 and 10;

Figure 10 is a view taken along the line 10—10 of Figure 9;

Figure 11 is a view similar to Figure 2 and shows a modified form of the present invention in which the axis of movement of the pivoted panels is disposed adjacent one edge thereof, resulting in an arrangement in which, when the panels are folded, the forward edges do not project very far forwardly of the doorway;

Figure 12 illustrates another modified form of the present invention, embodying two pairs of door panels similar to those illustrated in Figure 11 but arranged in opposite relation so that when they are folded the panels are disposed at opposite sides of the doorway, resulting in a wide, clear space, providing easy access to the compartment;

Figure 13 is a sectional view taken generally along the line 13—13 of Figure 12;

Figures 14 and 15 are views similar to Figure 13, showing two forms of multiple door constructions embodying groups of interconnected door panels arranged with three panels in each group, Figure 14 being a section taken generally

along the line 14—14 of Figure 16 and Figure 15 being a section taken generally along the line 15—15 of Figure 17;

Figure 16 is an enlarged section taken along the line 16—16 of Figure 14;

Figure 17 is an enlarged section taken along the line 17—17 of Figure 15; and

Figure 18 is a view similar to Figure 2 but showing the pairs of panels arranged so that the hinge side swings outwardly, rather than inwardly as in Figure 2.

Referring now to the drawings, particularly to Figures 1, 2, and 3 it will be noted that for the purpose of illustrating my invention I have chosen a wardrobe or multiple door compartment of the type that is adapted to be incorporated in a school building wherein the compartment takes the form of a wardrobe or closet adapted to receive wearing apparel, books, and the like, having a relatively wide doorway closed by a series of door panels, and if desired, the latter may have blackboards and chalk rails mounted on the outer faces thereof.

The compartment is indicated in its entirety by the reference numeral 10 (Figure 2) and includes a back wall 11, and walls 12 and 13, and a ceiling 14 (Figure 4), and these walls may be plastered or of any other desired construction. Secured to the rear wall 11 is a pair of article supporting racks 16 and 17, supported upon brackets 18 of any desired construction, and a plurality of hooks 20 are carried on the forward edges of the racks 16 and 17 and on the rear wall 11 below the racks. The framing of the compartment follows conventional building construction and includes a suitable header support 25 extending horizontally across the top of the wardrobe opening, and suitable exterior trim, including, for example, a head casing 26 and side casings 27 and 28.

As illustrated in Figure 1, three pairs of folding door panels may be provided for closing the doorway opening, these pairs being indicated in Figure 1 by the reference numerals 30, 31 and 32, the latter pair being shown in the right-hand portion of Figure 1 as in their open or folded position, while the other two pairs of panels are shown in their closed or extended position. One panel of each pair is mounted for swinging movement about fixed pivots, and the other panel is suported by hanger means operating along track sections, whereby the panel so supported can move from its extended position to a folded position alongside the pivoted panel.

Referring now more particularly to Figures 4, 7 and 8, the upper and lower pivots are indicated, respectively, by the reference numerals 35 and 36. The upper pivots 35 each consists of an angle member 40 fastened, as by screws 41, to a head strip 42. The head strip is secured in any suitable manner to the longitudinally disposed header support 25, as by suitable plates 44 and angle clips 46, best shown in Figure 9. Each of the angle members 40 includes a forwardly extended portion 50 fitting against the bottom edge of the header strip 42, and the forwardly extending portion 50 of each angle member 40 is apertured, as at 51, to receive a bushing 52 having a reduced end tightly fitting in the opening 51. The bottom edge of the head strip 42 is cut out at various points to receive the several bushings 52 and associated pivots.

An angle member 55 is fastened, as by screws 56, to the upper edge of the door panel, each of the pivoted door panels, or sections, being indicated by the reference numeral 60. Like the angle member 40, the member 55 also includes a forwardly bent portion 62 which seats in a recess on the upper edge of the associated door panel 60 and is apertured to receive a pivot stud 65, the latter having a reduced end 66 received by and riveted to the forwardly extending portion 62 of the top pivot angle member 55. The bottom pivot includes an angle member 70 fastened by screws 71 and having a forwardly bent portion 72 that is apertured and receives a circular bearing member 73 which is preferably welded to the angle member 70 of the bottom pivot. The bottom edge of the panel 60 is recessed, as at 75, to receive the upper end of an adjusting pivot 76, and the latter carries a ball-bearing 77 resting on a pin 78 inserted through an opening in the pivot 76. The lower end of the latter is threaded, as at 79, and an adjusting nut 81 is disposed thereon. The lower end of the pivot 79 is slidably received in a bottom pivot plate 82 which preferably is formed with flanges 83 by which the bottom pivot plate may be screwed to the floor. By inserting a suitable tool in the opening 85 and turning the nut 81, the pivoted panel 60 may be raised and lowered to bring the same to the proper position, the upper pivot stud 65 sliding in the top pivot bushing 52 during such adjustment. The upper pivot 65 and the lower pivot 76 establish a generally vertical pivot axis passing substantially through the center of the panel 60 and in the general plane thereof about which the panel may swing. Each of the pivoted panels 60 is mounted by the same construction, so that further description as to the other panels 60 is not necessary.

The companion panels of each pair are each indicated by the reference numeral 90, and each is hingedly connected to the adjacent edge of the associated pivoted panel 60 by upper and lower hinges which will now be described. Referring more particularly to Figures 9 and 10, the upper hinge, indicated at 91, comprises two leaves 92 and 93, each in the form of an angle member including a vertical portion 94 and a forwardly bent section 95. The forwardly bent portions are of generally triangular formation (Figures 2 and 3), and the forward portion 95 of the leaf 92 includes a downwardly bent portion 96 (Figure 10) which is apertured and receives a hinge pin or pintle 97, the head of which is carried in an aperture formed in the overlapping portion of the companion leaf 93. By virtue of the downwardly bent portion 96, the two forwardly extending leaf sections 95 are disposed in the same plane adjacent the upper edge of the two hingedly connected door panels 60 and 90. Preferably, bolts 100 are utilized for fastening the hinge leaves 92 and 93 to the associated panels. It is to be noted, further, that the axis established by the hinge pin 97 is disposed outwardly of the forward face of the panels, so that when the panels are swung to their folded position (see the right-hand portion of Figure 1), the outer faces of the panels are brought adjacent one another but with sufficient clearance to accommodate chalk rails, blackboards, operating handles, and the like, as best shown in Figures 1, 11, 12 and 13. The amount of offset may be varied as desired.

The lower hinge, indicated in its entirety by the reference numeral 105, is of substantially the same construction, embodying a pair of leaves 106 and 107 in the form of angle members having forwardly extending portions 108 of generally triangular formation, and one of them being offset as at 110 and receiving a hinge pin 111 lat-

erally offset so as to be disposed in line with the upper hinge pin 97. Bolts 112 are provided for fastening the hinge leaves to the panels.

The companion panel 90, hingedly connected to the pivoted panel 60 of each pair, is preferably supported by a hanger unit of relatively simple and inexpensive construction, and preferably the hanger units are each connected with the associated companion panel in substantially the center line thereof so that no part of the weight of the companion panel 90 is imposed on the pivoted panel 60 or upon the hinge means connecting the two panels of each pair. The hanger units are best illustrated in Figures 5 and 6. Each unit consists of a bracket 120 fastened to the hinged door panel on the inside thereof by screws 121, and includes a rearwardly or inwardly directed section 122 which is apertured to receive the reduced end 124 of a pivot stud 125. The latter is carried in the outwardly bent end 127 of a roller carriage 128 in the form of a generally U-shaped member to which straps 130 and 131 are fixed, as by pivots 132 and 133 arranged in alignment. The outer ends of the straps 130 and 131 carry axles 135 and 136 upon which rollers 137 and 138 are mounted. The rollers are grooved so as to operate on track sections 140 which are securely fixed, as by screws or bolts 141, to the inside of the head strip 42. By virtue of the pivot 125, the door panel 90 may swing laterally and, at the same time, may be shifted along the track 140. Thus, when the pivoted panel 60 is swung from an extended position to a crosswise position, as at the right-hand end of Figure 2, the associated companion panel 90 hinged thereto is shifted to the right along the track 140, and, at the same time, is folded alongside the panel 60, the laterally offset relation of the hinge pins 97 and 111 providing the required clearance for handles, such as the hand grips 143, chalk rails 145, blackboards 146, and the like. The chalk rails, blackboards, etc., have been omitted from some of the other figures for convenience of illustration, but it is to be understood that chalk rails, blackboards and the like may be provided where desired. Also, the adjacent edges of the panels are beveled, as at 144, to facilitate the opening and closing movements.

If desired, suitable linkage means may be provided for causing all of the panels to be operated together. Referring now to Figures 3, 4 and 7, each of the pivoted panels 60 carries a bracket 150 having a vertical leg 151 that is securely fastened on the inside of the associated panel, and a rearwardly and upwardly extending section 152 terminating in a horizontally apertured ear disposed above the level of the upper edges of the door panels. Preferably, bolts 153 are provided for fastening the brackets 150 in position. Link means 154 serves to connect the several brackets together, as best shown in Figure 3, so as to cause all of the panels to swing together. Preferably, the link means 154 is similar to that shown and described in my prior Patent No. 1,973,878, issued September 18, 1934, this connecting linkage including connecting rods 155 provided with threaded ends suitably received in sleeve connectors 156 provided with apertured eye portions 157, each serving as a socket for receiving a ball stud 159 fixed in the inwardly and upwardly disposed ear portions of the associated bracket 150 (Figure 7). The upper end of each of the studs is extended, as at 159a, and receives a cotter pin 161 which serves to prevent the coupling or sleeve connector from becoming detached. The intermediate coupling, indicated in Figure 3, by the reference numeral 156a, is arranged with opposite portions arranged to receive the threaded ends of the associated connecting rods. Lock nuts 163 are provided for securely fixing the connecting rods 155 in position and, at the same time, serve to retain the effective length of the connecting rods to which they have been adjusted. The ends of the connecting rods are provided, respectively, with right and left hand threads, so that rotating the connecting rods in one direction after the lock nuts 163 have been loosened serves to bring the brackets 150 closed together, and turning the connecting rods in the other direction causes them to separate. By this means, the connecting linkage 154 may be adjusted so that the panels, when extended, all lie in the same plane.

In the construction described above, the door panels are disclosed as arranged in hingedly connected pairs, with the pivot supporting means for one panel and the hanger supporting means for the companion panel arranged, respectively, in the center lines of the panels. As a result of this arrangement, when the panels are all opened, as illustrated in Figures 2 and 3, the hingedly connected edges move inwardly and the opposite edges of the pairs of panels move outwardly of the doorway opening. The hingedly connected edges, when the pairs of panels are folded, approach but do not contact the article supporting racks 16 and 17. Thus, these latter parts may be made continuous from end to end of the compartment. Under some conditions, it may not be desirable to have the outer edges of the panels extend outwardly of the doorway when the panels are folded to the extent shown in Figure 2. Figure 11 illustrates a construction in which the pivot axes of the pivoted panels are arranged, while still generally in the central portions of the panels so as to support practically all of the weight of the panels in substantially balanced relation, somewhat closer to the outer edges of the associated panels than to the inner edges thereof, and the hanger units are anchored to the companion panels in a corresponding location so that when the panels are folded, the hingedly connected edges thereof move to points well within the compartment and the outer edges of the panels do not extend quite so far outwardly of the compartment doorway opening, as in the case of Figure 2, for example. In this case, it is desirable to have the article supporting racks arranged in separated sections, so as to accommodate the inner or folded positions of the door panels. This construction is illustrated in Figure 11 and, referring now to this figure, the reference numerals 180, 181 and 182 indicate the article supporting rack sections that are spaced apart as at 184 and 185 to accommodate the inner position of the two left-hand pairs of panels, the rack section 182 being spaced from the right-hand end wall 13 a sufficient distance to accommodate the right-hand pair of panels. So far as the structural details of the folding pairs of panels shown in Figure 11 and the supporting and suspending hardware therefor, the construction employed in Figure 11 is substantially the same as that described above, except that the axis of pivoting for the pivoted panels in each case is disposed adjacent one edge of the panel, rather than in the center line of the latter, as shown in Figure 1. Similarly, the hanger unit for the companion panel is disposed in each case substantially the same distance from the edge that the pivot axis is

disposed from the outer edge of the associated pivoted panel.

Figures 12 and 13 illustrate a construction similar to that indicated in Figure 11, but especially adapted for compartments which are of such size that more than two pairs of hingedly connected panels are not required. In Figures 12 and 13, the pivotally mounted panels, indicated by the reference numeral **200**, are provided with upper and lower pivots **201** and **202**, respectively, which are, in each case, arranged adjacent the sides of the doorway. The companion or intermediate panels **205**, when extended, are disposed in the central portion of the doorway and are supported by hanger units **207** of substantially the same construction as described above. Similarly, upper and lower hinge means **210** and **211** serve to connect the pivoted and suspended panels for folding movement. By virtue of this construction, the right-hand pair of panels may be folded into a position closely adjacent the right-hand side of the doorway, and the left-hand pair of panels may be folded in a position closely adjacent the left-hand side of the doorway, as indicated in dotted lines in Figure 13. Thus, a clear space between the folded pairs of doors is provided and which is wider than the combined width of the two intermediate or companion panels. In the construction indicated in Figures 1 to 11, the clear space between the pairs of panels, when folded, is substantially equal to the combined width of two of the panel sections. It is to be noted, however, that in the construction shown in Figures 12 and 13, the article supporting racks **215** are disposed in the central portion of the compartment and do not extend to the end walls **12** and **13**, as in the case in the construction shown in Figures 2 and 3. However, in all of the modifications described above, it is to be noted that the axis of pivotal motion of each of the pivoted panels lies substantially in the plane of the panel itself, and as a result of this arrangement, there are no protruding pivot brackets or the like extending into the open space of the doorway when the panels are folded, and therefore no one is likely to stumble when entering or leaving the compartment.

Referring now to Figure 14, it will be seen that the wardrobe or compartment **10** is in this case closed by two sets of three-door units, each set consisting of three hingedly interconnected panels **225**, **226** and **227**. The panels **225** and **226** are substantially identical with the panels **60** and **90**, respectively, described above. The panel **225** is pivoted, as at **230**, by upper and lower pivots **231** of substantially the same construction as is indicated at 35 and **36** in Figures 1, 7 and 8. Such a pivotal support for the intermediate panel **225** establishes an axis of swinging movement for the latter which lies substantially in the plane of the panel and also in the plane of the opening of the compartment doorway. The panel **226** is hingedly connected to one edge of the pivoted panel **225** by upper and lower hinges **232** of substantially the same construction shown at **95** and **105** in Figures 9 and 10 and described above, the axis of the relative swinging movement between the panels being disposed far enough in advance of the forward face of the panels so as to accommodate the usual moldings, chalk rails and the like, as described above. Also, the panel **226** is supported by a hanger unit **233** like that shown in Figures 5 and 6 and described above.

The third or inner panel **227** of the sets is pivoted to the edge of the center panel **225**, opposite the edge to which the outer panel **226** is connected, by a pair of standard surface hinges **234**. The hinges **234** are disposed on the inside of the door panels, and the axis of the hinge pins is disposed inwardly a slight distance. The third door panel **227** is guided by means of a guide roller unit **235** (Figure 16) which comprises a bracket **236** having its vertical leg fastened to the inside of the door panel, the horizontal leg of the bracket **236** supporting a pivot shaft **238** on which a roller **239** is journaled. The roller **239** is disposed in a stationary channel guide **240** fastened by means of angles **241** to the header strip **42**. The channel track **240** is curved, as at **240***a*, in the manner best shown in Figure 14 so as to facilitate the opening and closing movement of the panel **227**. While Figure 14 illustrates a wardrobe or compartment having a doorway closed by six panels, two sets of three panels each, it is to be understood that any number of sets desired might be used. It is also to be understood that the pivots could be arranged in the manner shown in Figure 13, that is, with the axis of the pivoted panel adjacent one edge thereof, rather than in the center. A handle **242** for operating the panels is carried adjacent the outer edge of the panel **226** of each unit.

In Figure 15 I have illustrated a construction in which the outer panel of each set is the one that is pivoted to the floor and head jamb, rather than the intermediate panel as in Figure 14. Referring now to Figure 15, the reference numeral **250** indicates the pivoted panel supported by pivot means **251** of substantially the same construction as described above in connection with Figures 7, 8 and 9. The panel **250** is pivoted adjacent the associated door jamb or casing **27**. The second or intermediate door panel, indicated at **252**, is hinged to the pivoted panel **250** by means of a pair of offset surface hinges **234***a* substantially the same as the hinges **234** described above in connection with Figure 14. The panel **252** is provided with a guide roller **239***a* substantially the same as the guide roller **239** described above. In Figure 15, however, the guide roller **239***a* is mounted for movement in a track **255** that is straight and parallel with respect to the plane of the doorway, instead of being curved like the track shown in Figure 14.

The third panel **257** of the left hand set is hingedly connected to the edge of the intermediate panel **252** opposite its hinged connection with the pivoted panel at **234***a* by hinges **260**, the latter being substantially the same as the hinges described above in connection with Figures 9 and 10. The innermost panel **257** is supported for bodily movement by hanger means **262** operating on a track **263** of substantially the same construction as the hanger units shown in Figure 5 and described above. However, it will be observed from Figure 17 that the lower part of the track **263**, upon which the rollers of the hanger travel, cooperates with the lower part of an angle **264** in forming the guideway **255** for the guide roller **239***a* of the guide unit, indicated in its entirety by the reference numeral **235***a*, for the intermediate panel **252**. As mentioned above, the track **255** for the roller **239***a* is straight, rather than curved as shown in Figure 14, this construction being feasible since the innermost panel **257** is used to open and close the panels, being provided with handle means **265** for this purpose. In Figure 14 it was the outer panel of the set that carried the handle means, and hence it was desirable to have the track for the panel **227** curved

to aid in securing the proper movement for the inner panel from the movement of the pivoted panel.

One of the advantages of the arrangement shown in Figure 15 is that when the panels are opened, as indicated in dotted lines, there is very wide open clear space in the doorway, making the compartment easily accessible. If desired, the pivots 251 may be disposed closely adjacent to the sides of the doorway in the manner shown in Figure 13, thereby increasing the clear space in the doorway.

Figure 18 is a view similar to Figure 2, in which the panels are arranged in pairs, but with the pivot axes disposed closer to one edge of the pivoted door panel than the other, somewhat along the lines suggested by the construction shown in Figure 13. Moreover, the hinged edges of the interconnected panels swing outwardly rather than inwardly as illustrated in Figures 2 and 13. This makes it possible to use standard surface hinges, indicated at 270 in Figure 18, for the hinged connection between the interconnected panels, rather than offset hinges of the type shown in Figures 9 and 10. In the arrangement illustrated in Figure 18, the outer sides of the panels are on the outside when the panels are folded, thereby making it unnecessary for the hinged connection 260 to be such as to accommodate moldings, chalk rails and the like. Hence, standard hinges may be employed. Since the other parts of the construction shown in Figure 18 are substantially the same as those indicated in Figure 2, the same reference numerals have been applied.

While I have shown and described above the preferred structural embodiments which have been chosen to illustrate the principles of the present invention, it is to be understood that, in fact, widely different means may be employed in the practice of the broader aspects of my invention.

What I claim, therefore, and desire to secure by Letters Patent is:

1. In a multiple door compartment, a plurality of door sections hingedly connected together at their adjacent edges, pivot means arranged to support substantially the entire weight of one section, and hanger means associated with another section and arranged to support substantially the entire weight of said other section.

2. In a multiple door compartment, the combination of a pair of door sections of substantially the same width, means hingedly connecting the sections together at their adjacent edges, pivot means disposed between the vertical edges of and arranged to support substantially the entire weight of one section, and hanger means disposed in a plane between the vertical edges of and associated with the other section and arranged to support substantially the entire weight of said other section, said pivot means and said hanger means being disposed substantially the same distance along their respective sections from the hinged connecting means at the adjacent edges of the sections.

3. In a multiple door compartment, the combination of a set of three door sections hingedly connected together at their adjacent edges, pivot means disposed in the plane of and in between the edges of one section and arranged to support substantially the entire weight of said one section, hanger means associated with another section of each set and arranged to support substantially the entire weight of said other section, said third section being disposed in between said above mentioned sections and hingedly connected at opposite edges to the latter, and means for guiding said third section into and out of folded position relative to the first two sections.

4. In a multiple door compartment, the combination of a plurality of door panels arranged in sets of three panels of substantially the same width, pivot means disposed in the plane of and substantially centrally between the edges of one panel of each set to support the same for swinging movement, means hingedly connecting the other panels of each set to the pivoted panel at its opposite edges, so that when the pivoted panel of each set is swung about its axis the companion panels hingedly connected thereto are folded alongside the pivoted panel, hanger means for each set at one side of the axis established by said pivot means for supporting one of said last mentioned panels, and means at the other side of said axis for guiding the other of said last mentioned panels of each set into and out of folded position with respect to said pivoted panel.

5. In a multiple door compartment, the combination of a set of three door panels, pivot means disposed substantially centrally between the edges of and supporting one panel of said set, hanger means supporting another panel of said set, hinge means connecting said two panels together, and guide means for guiding the third panel.

6. In a multiple door wardrobe for schools and the like, the combination of a plurality of pairs of door sections, certain of said sections being adapted to carry chalk rails, operating handles, blackboards and the like on their outer faces, means pivotally mounting one section of each pair for swinging movement about a vertical axis lying within the plane of the panel and in between the edges thereof, hanger and track means supporting the other section of each pair of sections for both swinging and translational movement, and hinge means operatively connecting the adjacent edges of said door sections and including pintle carrying portions extending away from the plane of said door sections and serving to establish, when the pivoted section is swung about its axis and the other section is shifted laterally and folded against the pivoted section, a clearance between the outer surfaces of the door sections to accommodate operating handles, chalk rails and the like.

7. In a multiple door compartment having a doorway with a header support extending along the top thereof, the combination of a plurality of sets of door panels, pivot means for one panel of each set and including upper and lower angle members secured to the top and bottom portions of the door and having forwardly disposed portions overlying the upper and lower edges of the door, adjustable pintle means for the lower edge of the door and reacting against the forwardly extending portion of the lower angle member, a pivot stud carried by the forwardly extending portion of the upper angle member, and a third angle member supported from said header support and receiving said pivot stud, a plurality of track sections also supported from said header support and extending to points adjacent said third angle members, respectively, and a plurality of hanger units respectively supported from said track sections and operatively connected with certain of the other panels to support the latter and to accommodate their movement toward and away from folded position with respect to the associated pivoted panels.

8. In a multiple door compartment having interconnected door panels of equal width and adapted to close a wardrobe door opening, pivot means disposed between the vertical edges of one panel for pivotally supporting the latter, means hingedly connecting the edge of another panel to the adjacent edge of said one panel, a hanger supporting said other panel and disposed in a plane spaced in between the edges thereof in a position corresponding to the position of said pivot means in between the edges of said one panel, and track means carrying said hanger and arranged parallel to said door opening.

9. In a multiple door compartment having a doorway with a header support extending along the top thereof, the combination of a plurality of sets of door panels, pivot means for one panel of each set and including upper and lower pivots secured to the top and bottom portions of the panel and supporting the latter with its upper end closely adjacent said header support and with its lower end spaced a substantial distance from the floor, the lower pivots including means serving as an adjustable pintle and extending into the space at the bottom of the panel, a plurality of track sections supported from said header support, and a plurality of hanger units respectively supported from said track sections and operatively connected with certain of the other panels to support the latter with their upper ends also closely adjacent said header support and with their lower ends spaced a distance from the floor corresponding to said pivoted panels.

10. In a multiple door compartment having a doorway with a header support extending along the top thereof, the combination of a plurality of door panels, and pivot means for each panel and including upper and lower pivots secured to the top and bottom portions of the panel and supporting the latter with its upper end closely adjacent said header support and with its lower end spaced a substantial distance from the floor, the lower pivots including means serving as an adjustable pintle and extending into the space at the bottom of the panel.

11. A multiple section door comprising a pair of door sections, one of said sections having a pivot and supported substantially entirely and in substantially balanced relation thereon, hanger means pivotally supporting substantially the entire weight of the other section in substantially balanced relation thereon, and means hingedly connecting said sections together at their adjacent edges and substantially free of the weight of both said sections.

12. A multiple section door comprising a pair of door sections, a pivot supporting one of said sections and disposed substantially centrally between the opposite vertical edges thereof, hanger means pivotally supporting the other section and disposed substantially centrally between the opposite vertical edges of said other section, and means hingedly connecting said sections together at their adjacent edges.

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