G. W. URMSON.

FOLDING PARTITION.

APPLICATION FILED NOV. 24, 1915.

1,230,345.

Patented June 19, 1917.

2 SHEETS—SHEET 1.

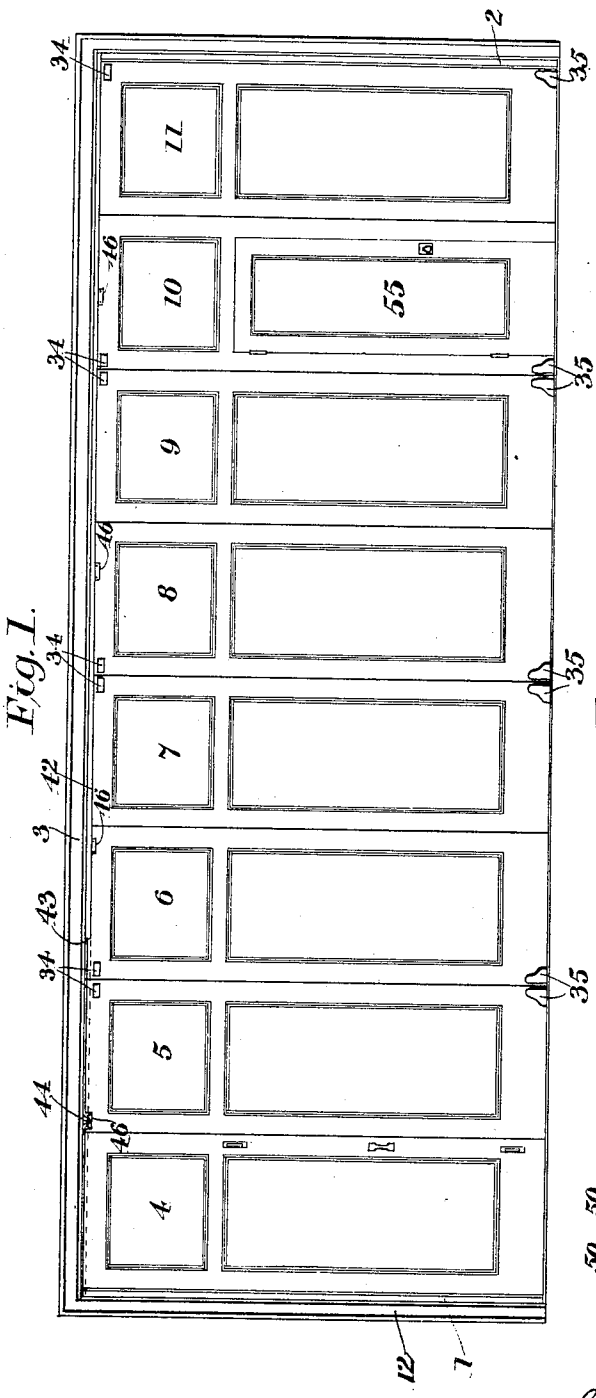


Fig. 1.

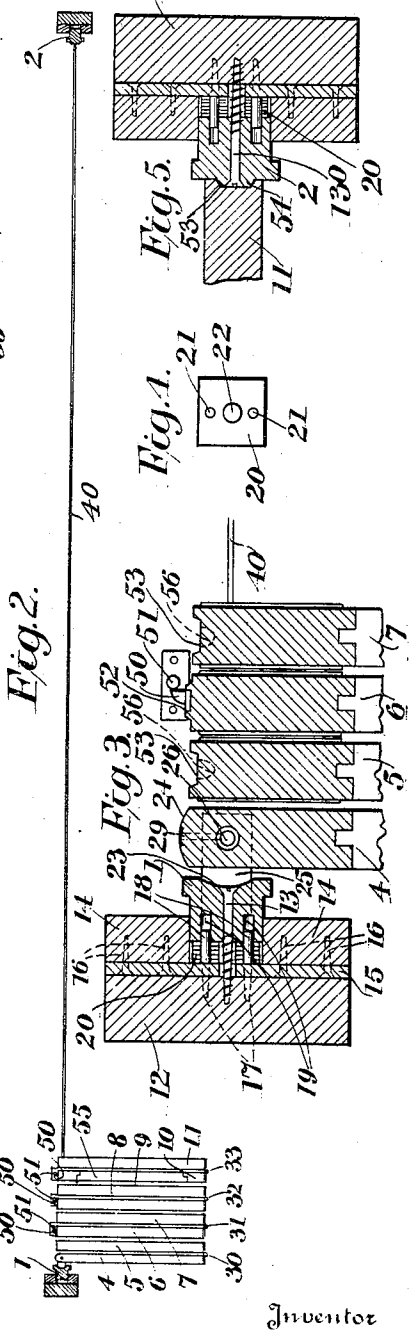


Fig. 2.

Fig. 5.

Fig. 4.

Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 6.

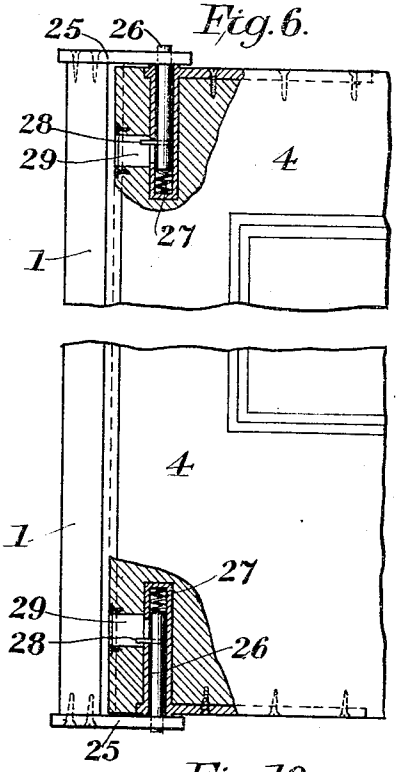


Fig. 7.

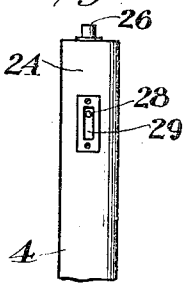


Fig. 8.

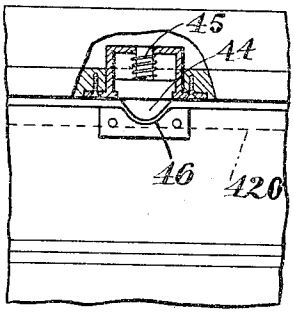


Fig. 9.

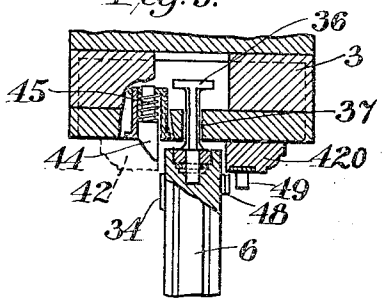


Fig. 10.

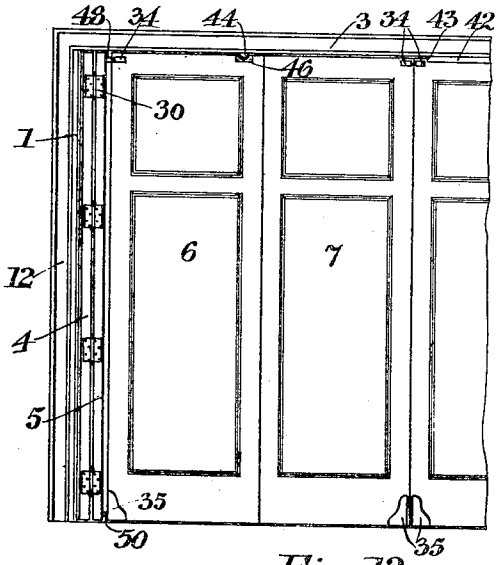


Fig. 11.

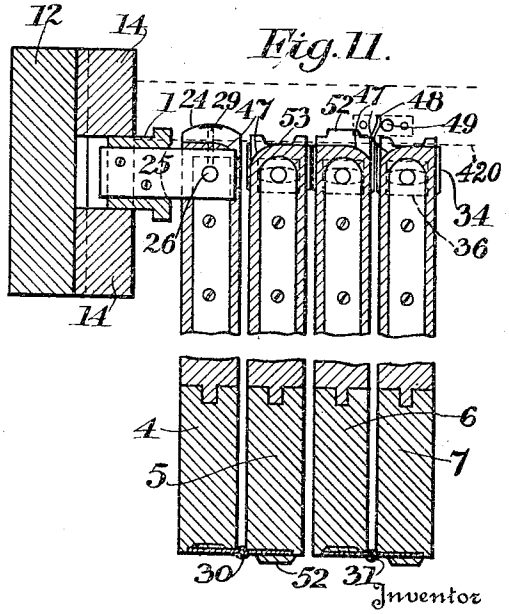
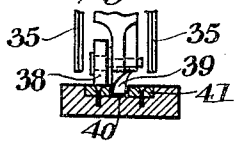


Fig. 12.



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UNITED STATES PATENT OFFICE.

GEORGE W. URMSON, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO GRACE M. ALBERTS, OF JERSEY CITY, NEW JERSEY.

FOLDING PARTITION.

1,230,345. Specification of Letters Patent. Patented June 19, 1917.

Application filed November 24, 1915. Serial No. 63,194.

To all whom it may concern:

Be it known that I, GEORGE W. URMSON, a subject of the King of England, residing at Jersey City, in the county of Hudson, State of New Jersey, have invented certain new and useful Improvements in Folding Partitions, of which the following is a full, clear, and exact specification.

This invention relates to folding partitions, and has for one of its objects to provide such partitions with adjustable jambs whereby allowance may be made for swelling and shrinkage of the wooden sections of the partition in order to always insure the proper closing or extension of said partition. Heretofore, the swelling of the sections has prevented them from being fully extended into line, at least one pair of the hinged sections being left buckled or projecting laterally from the line, while if allowance is made for swelling, the sections will not completely fill the opening when the wood shrinks. To overcome this condition, I provide jambs which may be retracted when the wooden sections of the partition are swollen, and which may be extended when the sections shrink, so that a precise fit of the partition between the jambs may always be had.

Other objects are to provide improved means for retaining the sections in extended position until the adjacent ones nearer the hinge jamb are folded, and for holding the sections, when folded, against being moved away from the hinge jamb except in the proper order as they are extended. Further objects will appear as the description proceeds.

The invention will be first hereinafter described in connection with the accompanying drawings, which constitute a part of this specification, and then be more specifically defined in the claims at the end of the description.

In the accompanying drawings, wherein similar reference characters are used to designate corresponding parts throughout the several views:—

Figure 1 is an elevation of the partition in extended position.

Fig. 2 is a horizontal section of the partition and jambs showing the sections of the partition folded against the hinge jamb.

Fig. 3 is an enlarged horizontal section of the hinge jamb and two pairs of the partition sections in folded position, the section being taken through the screw which removably holds the jamb in position, and also through the supporting pins for the filling plates.

Fig. 4 is a detailed face view of one of the filling plates.

Fig. 5 is a horizontal section of the other jamb and a portion of the partition section which engages the same when the partition is extended.

Fig. 6 is a broken side view, partly in section, of the hinge jamb and the partition section which is directly hinged thereto, showing the detachable hinge connections at the top and bottom of the section.

Fig. 7 is a fragmentary view of the upper end portion of the inner edge of the hinged section, showing the opening for the introduction of an instrument for withdrawing or retracting the spring pressed hinge pin.

Fig. 8 is a detailed view of the upper edge portion of one of the partition sections and the ceiling strip, showing the spring pressed latch carried by said strip for holding the sections in extended position until those nearer the hinge jamb have been folded and the sections in question have been moved up against said folded sections, the notch in the upper edge of the partition section which permits the same to be folded when moved to that position being also illustrated in this figure.

Fig. 9 is a transverse vertical section through the upper edge of the door and ceiling strip, showing the guide pin and slot, and one of the upper pins and catches for holding the sections of the partition folded, as well as the spring pressed latch illustrated in Fig. 8.

Fig. 10 is an elevation of a portion of the partition, showing one pair of sections folded and the next pair moved up against them so as to bring the notch in the upper edge of the next section in line with the spring latch on the ceiling strip for permitting said next pair of sections to be folded.

Fig. 11 is an upper edge view of the partition in folded position, showing one of the upper catches for holding said sections in that position, and

Fig. 12 is a detailed transverse section through the slotted floor plate, showing one

of the combined supports and guides for the sections of the partition.

Referring more particularly to the drawings, 1 designates the adjustable hinge jamb, that is the jamb to which the adjacent section of the partition is hinged, and 2 is the opposite jamb against which the section of the partition farthest removed from the hinged one is adapted to fit when the partition is extended. The ceiling strip which fits at the tops of the sections of the partition is indicated at 3, and the eight sections of the partition shown are designated 4, 5, 6, 7, 8, 9, 10 and 11.

The adjustable hinge jamb 1 is detachably connected to the permanent jamb strip 12 by means of a screw 13, of which there may be any desired number suitably spaced apart from the bottom to the top of the jamb. The jamb 1 is arranged between molding strips 14 which are secured to plates 15 by screws 16, while said plates are fastened to the jamb strip 12 by screw 17. It will be understood that as many of the plates 15 as are necessary or desirable may be used, preferably the same number as there are screws 13 being employed, one of said screws passing through the central portion of each plate. The plates 15 have outwardly projecting pins 18 which engage correspondingly shaped sockets 19 in the inner face of the jamb 1. These pins 18 serve to support a variable number of filling plates 20, each of which has a central opening 22 for the passage of the screw 13, and other passages 21 to fit over said pins 18, see Figs. 3 and 4. By varying the number of the filling plates 20 placed between the plates 15 and the jamb 1, said jamb may be retracted or projected to a sufficient extent to counteract any swelling or shrinkage of the partition, so as to always insure the complete closing and proper fit of the partition when extended as shown in Fig. 1. The jamb 2, Fig. 5, may be adjusted in a similar manner with respect to the permanent jamb strip 120 by means of screws 130 and a variable number of the filling plates 20.

The outer face of the jamb 1 is concave, as at 23 to provide a close fit with the rounded or convex inner edge 24 of the partition section 4 which is detachably hinged to the jamb 1 so that it may be taken off to permit access to the screws 13 when it is desired to change the number of filling plates 20 between the jamb 1 and the plate 15. As illustrated best in Figs. 6 and 7, the detachable hinge connection between the section 4 of the partition and the adjustable jamb 1 comprises straps or plates 25 secured to the upper and lower end portions of said jamb, and spring pressed hinged pins 26 carried by the upper and lower ends of said section 4. Springs 27 normally hold the pins 26 projected so as to engage suitable openings in the straps 25. The pins 26 have lateral projections 28 arranged in passages 29 opening on the inner rounded edge 24 of the section 4. When the section 4 is folded, as illustrated in Fig. 3, the pins 26 may be withdrawn from engagement with the straps 25 by inserting a suitable instrument, such as a nail, into the passages 29 and thereby forcing the projections 28 toward the springs 27.

The sections of the partition are hinged together in pairs by hinges 30, 31, 32 and 33, see Figs. 2 and 11. The free or unhinged edges of all of the sections of the partition except the section 4 which is hinged directly to the jamb 1, are guided along the ceiling strip and floor by suitable hangers, such as the I-shaped guides 36 extending through the slot 37 in the ceiling strip 3, as shown in Fig. 9, and the combined caster roller 38 and guide 39 shown in Fig. 12. This combined caster and guide, as used on the bottom corners of the free edges of the partition sections, is preferably made as described in my allowed application filed September 8, 1915, Ser. No. 49,551. The guide 39 extends into the slot 40 in the floor plate 41, as will be readily understood.

It is desirable to retain the partition sections in extended position until each pair in turn is moved over against the hinge jamb 1, and to fold each pair of such sections separately and successively beginning with the pair of sections 4 and 5 which are hinged directly to the jamb 1. To accomplish these ends, moldings 42 and 420 are fastened to the ceiling strip 3 at either side of the slot 37, but the molding 42 on the side at which the hinged edges of the partition sections must project, is terminated at 43, Figs. 1 and 10, at a point near the meeting edges of the sections 5 and 6 when the partition is extended.

A depending latch 44 is carried by the ceiling strip and is arranged in line with a notch or transverse groove 46 in the section 5 when the sections 4 and 5 are extended as shown in Fig. 1. These sections may, therefore, be folded because the groove or notch 46 will allow for the escapement of the latch 44. As the sections 4 and 5 are folded to the position shown in Fig. 10, the upper free corner of the section 5 will pass under the latch 44 and automatically displace said latch owing to the curved form of its projecting end, as illustrated in Fig. 8. As soon as the latch is released, it will be forced down again into projected position by the spring 45.

After the first pair of partition sections 4 and 5 have been folded, the remaining sections are moved toward them until projecting catches 48 and 50, which are mounted respectively on the upper and lower corners of the section 6, come in contact with stop plates 34 and 35 on the section 5. The notch or groove 46 in the section 6 will then be in line

with the latch 44, as shown in Fig. 10, and the section 7 will be past the end 43 of the molding 42, so that the second pair of sections 6 and 7 may be folded against the first pair, as indicated in Fig. 11. It may be here noted that the upper corners of the free ends of the partition sections are cut away, as at 47, Fig. 11, on curved lines concentric with the guides 36, in order to permit said corners to escape the molding 420 which extends the full length of the ceiling strip.

As the sections 6 and 7 are folded from the position shown in Fig. 10 to that shown in Figs. 3 and 11, the catches 48 are brought into engagement with pins 49 on the molding 420, and the catches 50 are likewise brought into engagement with pins 51 on the floor. It will be understood that each successive pair of partition sections is folded in the manner described and that each pair of sections is provided with catches 48 and 50 which engage pins 49 and 51 suitably placed along the molding 420 and the floor to retain said sections when folded from being moved outward or away from the jamb 1 without being successively extended in the reverse order from that in which they were folded.

The meeting edges of the partition sections are preferably provided with interengaging tongues 52 and grooves 53 to prevent sight being had through the joints when the partition is extended. The jamb 2 is preferably provided with a tongue 54 similar to the tongues 52 on the partition sections, said tongue 54 being engaged with the groove 53 in the section 11, as shown in Fig. 5, when the partition is extended. It will be noted that the catches 48 and 50 are carried by only one section of each pair. Sockets 56 are provided in the adjacent sections for housing the catches 50 when the sections are extended, see Fig. 3. The catches 48 are offset so as to overlap the edges of the adjacent sections.

One or more of the sections of the partition may be fitted with a door 55, as shown in the section 10, Figs. 1 and 2. Any desired number of the sections may also be equipped with black-boards when the partitions are to be used in school rooms. It is obvious that other modifications may be made without departing from my invention, and I therefore reserve the right to make such changes as fairly fall within the scope of the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States is:

1. The combination with a folding partition comprising sections hinged together in separate pairs, of means for guiding the free ends of said sections along the line into which the partition is designed to be extended, a catch projecting from the edge of one section of each pair and arranged within the planes of the sides of said section, there being cavities in the edges of the adjacent sections for housing said catches when the sections are extended, and fixed pins so positioned as to be engaged by said catches when the sections are folded for preventing them from being moved along the line of extension until they are unfolded.

2. The combination with a folding partition comprising sections hinged together in separate pairs, of means for guiding the free ends of said sections along the line into which the partition is designed to be extended, a catch projecting from the edge of one section of each pair and arranged within the planes of the sides of said section, a stop plate on the face of the other section of each pair to be engaged by the catch on the next pair of sections after the first pair of sections has been folded and the second pair is moved up to it, and fixed pins so positioned as to be engaged by said catches when the sections are folded for preventing said sections from being moved along the line of extension until they are unfolded.

In testimony whereof I have signed my name to this specification.

GEORGE W. URMSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."