Aug. 1, 1944. W. R. DOUGLAS ET AL 2,354,743

VOTING BOOTH ASSEMBLY

Filed Jan. 29, 1942 2 Sheets-Sheet 1

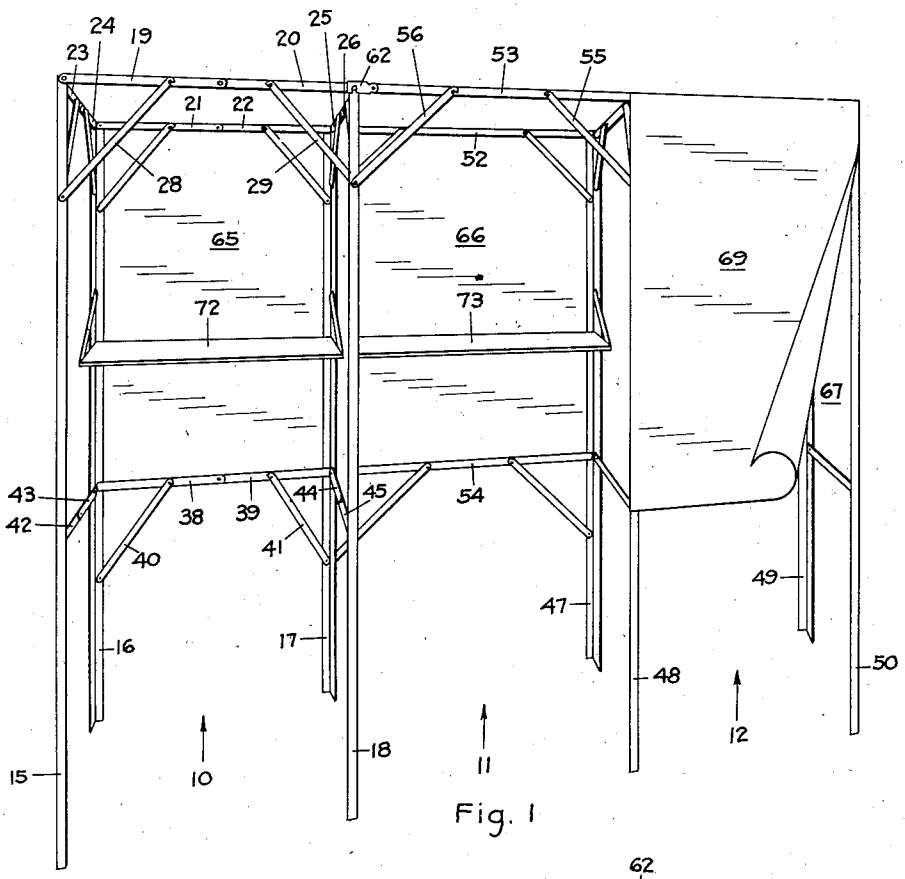


Fig. 1

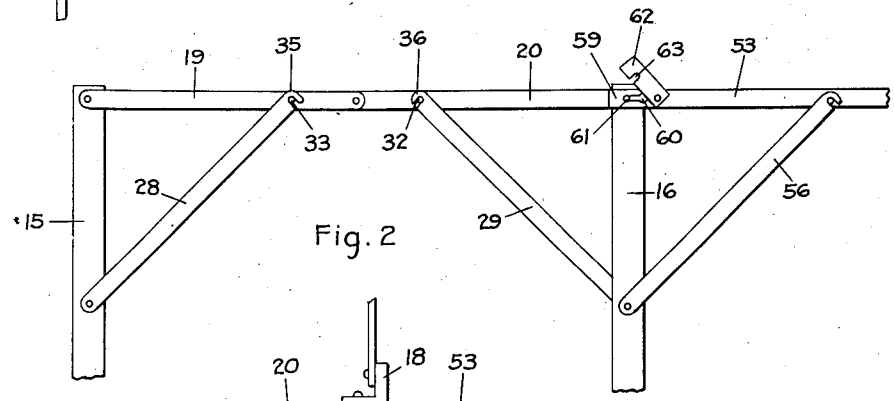


Fig. 2

Fig. 3

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VOTING BOOTH ASSEMBLY

Filed Jan. 29, 1942 2 Sheets-Sheet 2

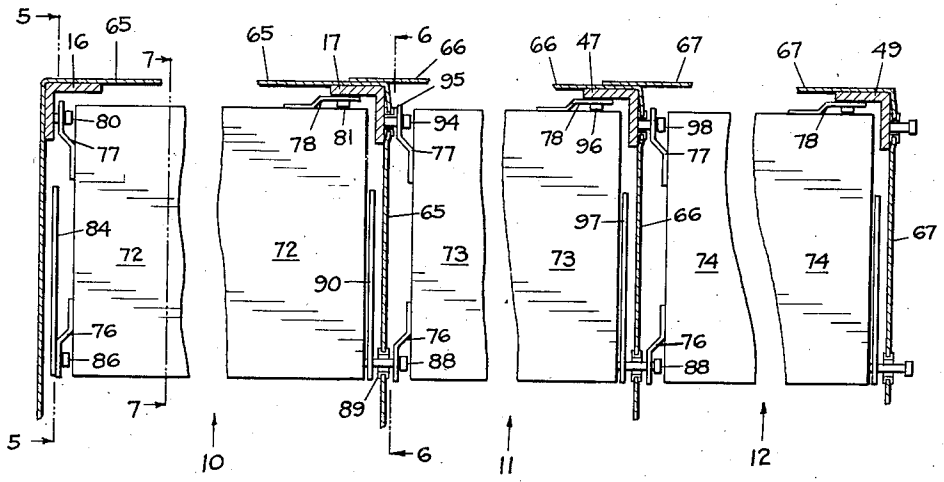


Fig. 4

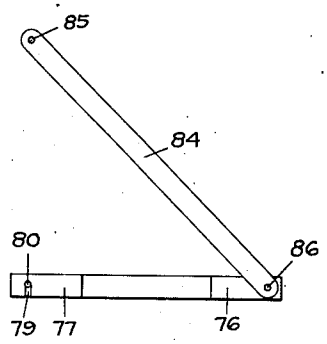


Fig. 5

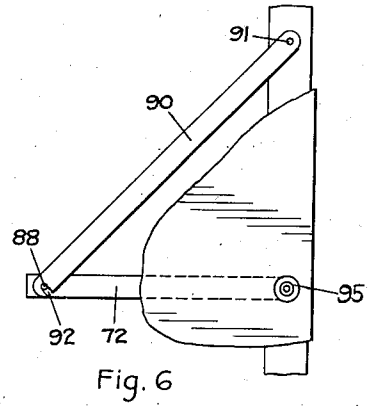


Fig. 6

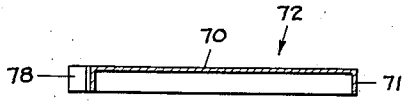


Fig. 7

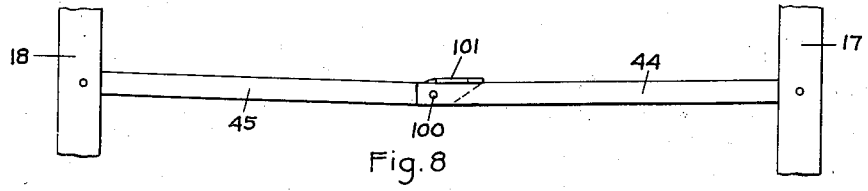


Fig. 8

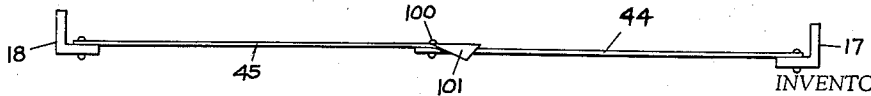


Fig. 9

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VOTING BOOTH ASSEMBLY

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Application January 29, 1942, Serial No. 428,726

9 Claims. (Cl. 20—3)

The present invention is concerned with voting booths and more particularly voting booths of the collapsible type.

In the Patent No. 1,514,038, issued to Elizabeth J. Douglas on November 4, 1924, there is disclosed an arrangement of collapsible voting booths wherein there is one master booth and a plurality of annex booths, each booth having an individual shelf on which the voter may write. The booths are designed so that after the election is over, they may be collapsed into a relatively small space and stored until the next election.

A general object of the present invention is to provide improved voting booths of the general type disclosed in the above mentioned Douglas Patent No. 1,514,038.

More specifically, an object of the present invention is to provide an improved arrangement for supporting the shelves of the booths whereby the shelves may be more easily assembled and less material is needed in connection with the shelf supporting means.

A further object of the invention is to provide a more secure means for interlocking the master and the annex booths together.

A still further object of the present invention is to provide a generally simplified frame construction for the voting booths in which the number of exposed members is reduced to a minimum.

Other objects of the invention will be apparent from the accompanying specification, claims, and drawings of which:

Figure 1 is a perspective view of an assembly including one of our master booths and two annex booths;

Figure 2 is a view showing a portion of the frame construction and specifically the manner of interconnecting two booths;

Figure 3 is a top plan view of one of the joints between two booths;

Figure 4 is a transverse sectional view with portions broken away, of the rear portion of the series of booths, the sectional view being on a considerably larger scale and being taken at such an angle as to show the construction of the means for securing the shelves;

Figure 5 is a sectional view taken along the line 5—5 of Figure 4;

Figure 6 is a sectional view taken along the line 6—6 of Figure 4 with a portion of the curtain broken away;

Figure 7 is a transverse sectional view of one of the shelves, the section being taken along the line 7—7 of Figure 4;

Figure 8 is an elevational view of a portion of the frame and showing more specifically the improved means for bracing the uprights employed in the booth construction; and

Figure 9 is a top plan view of the portion of the bracing construction shown in Figure 8.

Referring more specifically to the drawings, the master booth is generally indicated by the reference numeral 10 and the annex booths by the reference numerals 11 and 12. The master booth 10 has four upright standards 15, 16, 17, and 18. These standards are shown as made of angle iron. The four upright standards 15 to 18 are connected together by a plurality of pairs of pivoted links. At the upper end, there are four pairs of pivoted links, one pair connecting each two upright standards. At the lower end, there is no connection across the front so that there are only three pairs of pivoted links. The links at the upper end have been designated by the reference numerals 19 and 20, 21 and 22, 23 and 24, and 25 and 26. It will be noted that links 19 and 23 are pivotally secured to the upper end of standard 15, links 24 and 21 to the upper end of standard 16, links 22 and 25 to the upper end of standard 17, and links 20 and 26 to the upper end of standard 18. The pairs of links 19 and 20, 21 and 22, 23 and 24, and 25 and 26 are pivotally connected together. It is obvious that when they are free to move, they can all be folded downwardly so as to permit the entire frame to be collapsed into a relatively compact form. Associated with each link is an angularly extending brace member. The brace members in connection with the links 19 and 20 have been designated by the reference numerals 28 and 29. The lower end of each of these brace members is pivoted to the corresponding standard. The upper end is slotted to provide a hook portion adapted to hook over a pin projecting from the link with which it is associated. This is best shown in Figure 2 in which the pins have been designated by the reference numerals 33 and 32 and the hooks by the reference numerals 35 and 36.

The brace construction for each of the other pairs of links is exactly the same and will be not further described. Furthermore, this portion of the construction is identical to that disclosed in the aforesaid Douglas Patent No. 1,514,038 and hence does not, in itself, constitute part of the novelty of this application.

The lower portions of standards 16 and 17 are connected together by a pair of links 38 and 39 which are pivotally connected to each other at their inner extremities. Pivotally associated

with the upright standards 16 and 17 are braces 40 and 41 which hook with links 38 and 39. The standards 15 and 16 are connected by a pair of links 42 and 43 and the standards 17 and 18 by a pair of links 44 and 45. The pairs of links 42 and 43 and 44 and 45 are different from the previously described pairs of links in that they do not require angularly extending braces such as braces 40 and 41. The construction of these links is best shown in Figures 7 and 8 and will be discussed later.

Each annex booth includes only two upright standards and relies for its support on two standards of the preceding booth. Thus, the annex booth 11 includes upright standards 47 and 48 and the annex booth 12 standards 49 and 50. In each case, the standards are of angle iron construction and are substantially the same in dimensions as standards 15 to 18. Pivotally connected to standards 47 and 48 are three links 52, 53, and 54. If desired, these links may each in turn be formed of two links pivoted at their inner ends as with links 19 and 20. This is not essential, however, with the annex booths. Each of these links 52 to 54 is adapted to have hooked therewith a pair of angularly extending braces. In each case, one of these braces is carried by the standard of the annex booth and the opposite brace by the adjacent standard of the preceding booth. Thus, referring specifically to link 53, this link is supported in position by braces 55 and 56. The brace 55 is pivotally connected to standard 48 and brace 56 to standard 18 of booth 10. Each of these braces 55 and 56 has a hook at its upper end which is designed to engage with a pin carried by the link 53. It is believed from the foregoing description that the construction of the braces of links 52 and 54 is obvious. In any event, this construction is similar to that described in the aforementioned Douglas patent to which reference may be had for a fuller understanding of the details of the construction. While the detailed construction of the frame work of booth 12 is shown, it is to be understood that it is identical in every respect to that of booth 11.

Booth 11 is secured to annex booth 10 by securing links 52 and 54 to the adjoining links of booth 10. Thus, link 53 is secured to link 20, link 52 to link 22, and link 54 to link 39. A novel feature of the present invention is the rigid manner in which these links are secured together. Referring specifically to Figures 2 and 3, it is to be noted that a connecting member 59 is secured to the left hand end of link 53. This connecting member is rigidly secured as by spot welding, rivets, or the like. This connecting member has a slot 60 which is relatively narrow over a substantial portion of its length and terminates at its right hand end in a large opening. A headed stud 61 is secured to the standard 18 and serves to pivotally connect the brace 20 to standard 18. The stem portion of the stud is adapted to extend through the slot 60. The head of the stud is of such size that it will pass only through the enlarged right hand end of the slot. A locking member 62 is pivotally secured to the connecting member 59, this locking member being shown in its raised position in Figure 2. The locking member 62 is provided with a slot 63 designed to straddle the stem of the stud 61 when the stud 61 is in the left hand narrow end of slot 60. In assembling the annex section, the link 53 is manipulated before brace 56 is secured thereto, so that the stud 61 passes through the enlarged right hand end of slot 60. Link 53 is then pulled to the right so that the stud assumes a position in the left hand end of slot 60. When this is done, it is now possible to hook brace 56 over its associated pin on link 53. The locking member 62 is now swung downwardly into the position shown in Figure 1 in which stud 61 is within the slot 63. With the locking member in this position, the link 53 is held rigidly with respect to link 20. It is to be noted that link 53 is held rigidly with respect to link 20 both by the action of brace 56 and by the action of locking member 62.

A curtain of canvas or similar material is provided in connection with each booth. One curtain 65 is employed to cover the two sides and the back of the master booth 10. The curtain is desirably secured to the top by any suitable means such as hooks (not shown). Each annex booth has a curtain which covers the back and the side farthest away from the master booth. Thus, curtain 66 starts at the standard 17, extends across the back, covers the right hand side, and is finally secured to standard 48. Similarly, there is a curtain 67 for booth 12. As evident from Figure 1, the curtains extend down only to the lower links. A further curtain is secured to the front of each booth. This curtain is shown only in connection with booth 12 and is indicated by the reference numeral 69. This curtain is so secured that it can be folded or drawn aside for a voter to enter the booth.

Each booth has a shelf disposed at a convenient writing level. It is in the mounting means for the shelf that much of the novelty of the present invention resides. In general, the position of the shelves with respect to the booths is indicated in Figure 1 while the manner in which the shelves are mounted is best indicated in Figures 4 to 7. Referring to Figure 4, in which the intermediate portions of the shelves are broken away, the shelves are indicated by the reference numerals 72, 73, and 74. Only shelves 72 and 73 are visible in Figure 1. Each shelf is formed of sheet metal. As best indicated in Figure 7, the main portion 70 of the shelf is relatively flat so as to provide a writing surface. The edges of the shelf are turned down to provide a flange 71. By reason of the turned down flange, the shelf is relatively rigid and free of any sharp edges.

With an arrangement such as just described in which there are only two upright standards for each annex booth, it is obvious that it is impossible to support the shelf completely from the standards of the annex booth and provide a rigid structure. This is the case because the standards of the annex booth are adjacent only one end of the shelf and any attempt to support the shelves from this one end would result in them being insecurely supported. As a result, it is necessary to support one end only of the shelf in each annex booth from one of the standards of that booth and to support the other end from the standard in the adjacent booth. This is accomplished in the previously mentioned Douglas patent by an arrangement which necessitated the provision of three pivoted angularly extending brackets in the master booth and two in each annex booth. Furthermore, as will be evident from a reference to that patent, it was necessary after partially placing a shelf of the annex booth in position to step around into the previous booth and hook one of these angular braces to a pin carried by the shelf of the annex booth. The

present invention provides a much simpler arrangement for supporting these shelves.

Each shelf has secured to it three ears, each with a downwardly facing slot, and one stud. These ears are indicated by the reference numerals 76, 77, and 78. Each of these ears is secured at its inner end to the flange 71 of the shelf and is bent so as to extend outwardly and then again parallel to the flange so as to provide a portion parallel to the flange but spaced therefrom. In this portion, a downwardly extending slot 79 is provided (Figure 5). The ears 76 and 77 extend parallel to the flange at the right hand end of the shelf and the ear 78 parallel to the rear flange. A headed stud 80 projects inwardly from the standard 16. The stem of this stud is adapted to extend into the downwardly extending slot of ear 77 and to support ear 77 and thus support the rear left hand corner of shelf 72. In this connection reference is made to Figure 5. A headed stud 81 also projects inwardly from angle iron 17 in such a position as to cooperate with the slot of ear 78. In the case of both studs 80 and 81, the head of the stud slides in between the ear and the adjoining portion of flange 71. A bracket 84 is pivotally secured by a pivot pin 85 to the standard 16. The lower end of bracket 84 carries an inwardly projecting headed stud 86, the stem of which is adapted to extend into the down turned slot in ear 76. As will be pointed out later, this bracket is provided only in connection with the master booth 10.

At the front right hand corner of each shelf, a stud 88 is secured. This stud is relatively long and is adapted to extend through a grometted opening 89 into the next booth 11. A bracket 90 is pivotally secured at 91 to the standard 17. The lower end of bracket 90 is provided with a slot 92 to form a hook portion adapted to extend over the stem of stud 88.

It will be seen from the foregoing description that the four corners of the shelf 72 are supported by the studs 80 and 81 secured to the standards 16 and 17 and by braces 84 and 90 secured to the same two standards. In other words, the four corners of the shelf are supported from the two rear standards 16 and 17. As previously pointed out, there is only one rear standard in the annex booth so that it is necessary to support one end of each annex booth shelf by a standard in the adjoining booth. This construction will now be described.

As previously explained, the stud 88 extends through the grommet 89 into the booth 11. The ear 76 of shelf 73 is adapted to hook over the stem of this stud in the same manner as ear 76 is hooked over stud 86 in booth 10. Thus, the left front corner of shelf 73 is supported directly from shelf 72, the adjacent corner of which is supported by the bracket 90.

Extending outwardly from the upright standard 17 is a headed stud 94. This stud extends through a grommet 95 in the curtain 65 so as to extend into booth 11. The ear 77 of shelf 73 hooks over this stud. Thus, the left rear corner of shelf 73 is supported from the standard 17 by means of the stud 94. The standard 47 is provided with a headed stud 96 which is adapted to engage in the slot of ear 78 of shelf 73. Pivotally secured to the standard 47 is a bracket 97 corresponding in location and function to bracket 90. This bracket is adapted to hook over and support stud 88 of shelf 73.

From the above it will be seen that the shelf 73 is supported at its right hand end directly by the standard 47 in the same manner as the right hand end of shelf 72 of the master booth is supported by standard 17. The left hand end of shelf 73 is, however, supported by standard 17. The means for supporting the left hand end of the shelf from the standard 17 includes two members which project through the curtain of the master booth. This permits the operation of applying shelf 73 to be done entirely from within the booth 11. In the previously mentioned Douglas patent, the left hand front end of the shelf 11 carries a pin which projects back into the master booth and which engages with a second pivoted bracket corresponding to bracket 90. This necessitates inserting the pin through the opening in the curtain and then in reaching around into the other booth and hooking the bracket over the pin. Furthermore, this type of arrangement necessitates the use of an extra bracket which is avoided by the present arrangement. This bracket added to the expense of the arrangement.

It is believed unnecessary to specifically describe the manner of mounting the shelf 74 of booth 12 as this is the same as in the case of booth 11. In other words, the ear 76 engages with the stud 88 of shelf 73, the ear 77 with the stud 98 carried by standard 47, and the right hand end of the shelf by the standard 49.

As previously indicated, the construction of links 42 and 43 and 44 and 45 is different from that of the other pairs of pivoted links. The links 44 and 45 are shown in greater detail in Figures 8 and 9. It will be noted that these links are pivoted together by a pivot pin 100 and are pivoted at their opposite ends to standards 17 and 18. The left hand end of link 45 is inclined upwardly and a triangular portion of this end is turned over so as to lie in the path of link 44. This triangular portion is indicated by the reference numeral 101. It will be seen that because of this triangular portion 101 overlying link 44, it is impossible to move links 44 and 45 downwardly beyond the position shown in Figures 8 and 9. It is possible, however, to fold these links upwardly. As shown, the pivot pin 100 is slightly below the line extending between the pivots connecting links 44 and 45 to standards 17 and 18. In other words, the links have been moved slightly over center. In this position of the links, any force tending to move standards 17 and 18 together tends to force the links 44 and 45 farther over center, which movement is resisted by the triangular ear 101. Thus, the booths are made entirely rigid in spite of the absence of the diagonal braces such as braces 40 and 41. The elimination of braces in connection with the lower side links not only decreases the material which it is necessary to employ but materially improves the appearance of the booths. It is to be noted that it is only the lower braces which would be visible from the exterior of the booth and it is particularly the side braces which would be visible. By eliminating these braces, the amount of the frame work visible from the exterior is limited to a minimum.

It will be seen that our improved voting booths are much simpler, employ less material, and are very much easier to assemble.

While we have shown one master booth and two annex booths, it will be understood that any number of annex booths may be used. In general, while we have shown a specific embodiment of our invention, it is to be understood that this is for purposes of illustration and that our in-

vention is limited only by the scope of the appended claims.

We claim:

1. A plurality of voting booths comprising a master booth and one or more annex booths, said master booth having a frame including upright standards at each of two rear corners and a shelf which is secured to said rear standards, said annex booths each including an upright standard at the rear corner most remote from the master booth and rigidly but detachably connected to the adjacent standard of the next booth proceeding back in the direction of said master booth, a shelf in each annex booth, a partition wall between said booths, extending uninterruptedly from the top thereof to a point below said shelves, means associated with the rear standard of the annex booth for supporting the adjacent end of the shelf, and supporting means for the opposite end of the shelf, said last named means including means detachably supported directly from the shelf in the next adjoining booth by an element secured to said last named shelf and projecting through an opening in said wall of approximately the size of said element.

2. A plurality of voting booths comprising a master booth and one or more annex booths, said master booth having a frame including upright standards at each of two rear corners and a shelf which is secured to said rear standards, said annex booths each including an upright standard at the rear corner most remote from the master booth and rigidly connected to the adjacent rear standard of the next booth proceeding back in the direction of said master booth, a shelf in each annex booth, a partition wall between said booths extending uninterruptedly from the top thereof to a point below said shelves, means associated with the rear standard of the annex booth for supporting the adjacent end of the shelf, means at the rear opposite corner of the shelf for supporting said corner from the standard of the next adjoining booth, and means adjacent the front opposite corner for supporting said corner directly from the shelf in the adjoining booth, each of said two last named means comprising an element projecting through an opening in said wall of approximately the size of said element.

3. A plurality of voting booths comprising a master booth and one or more annex booths, said master booth having a frame of rectangular cross-section including upright standards at each of its four corners and a shelf which is adapted to be secured to the rear pair of standards, each annex booth including a pair of upright standards at the corners most remote from the master booth and detachably connected to the adjacent pair of standards of the next booth proceeding back in the direction of said master booth, a curtain between each booth extending uninterruptedly from the top to a point below the level of said shelf in said master booth, a shelf in each annex booth disposed at the same level as said shelf in said master booth, means associated with the rear standard of the annex booth for supporting the adjacent end of the shelf, and supporting means for the opposite end of the shelf, said last named supporting means including means detachably supported directly from the shelf in the adjoining booth by an element secured to said last mentioned shelf and projecting through an opening in said curtain of approximately the size of said element.

4. A plurality of voting booths comprising a master booth and one or more annex booths, said master booth having a rectangular frame including upright standards at each of its four corners and a shelf which is adapted to be secured to the rear pair of standards, each annex booth including a pair of upright standards at the corners most remote from the master booth and detachably connected to the adjacent pair of standards of the next booth proceeding back in the direction of said master booth, a curtain between each booth extending uninterruptedly from the top to a point below the level of said shelf in said master booth, a shelf in each annex booth, means associated with the rear standard of the annex booth for supporting the adjacent end of the shelf, means at the rear opposite corner of the shelf for supporting said corner from the standard of the next adjoining booth, and means adjacent the front opposite corner for supporting said corner directly from the shelf in the adjoining booth, each of said two last named means comprising an element projecting through an opening in said curtain of approximately the size of said element.

5. A plurality of voting booths comprising a master booth and one or more annex booths, said master booth having a frame including upright standards at each of two rear corners and a shelf which is secured to said rear standards, said annex booths each including an upright standard at the rear corner most remote from the master booth and rigidly but detachably connected to the adjacent standard of the adjacent booth proceeding back in the direction of said master booth, a shelf in each annex booth, a partition wall between each booth extending uninterruptedly from the top thereof to a point below said shelves, means associated with the rear standard of the annex booth for supporting the adjacent end of the shelf, and supporting means for the opposite end of the shelf, said last named means including a stud secured to the shelf in the adjoining booth and projecting into the annex booth through an opening in said wall of approximately the same area as the cross-sectional area of said stud, and an ear on the shelf of the annex booth adapted to engage said stud.

6. A plurality of voting booths comprising a master booth and one or more annex booths; said master booth having a frame including upright standards at each of two rear corners and a shelf which is secured to said rear standards; said annex booths each including an upright standard at the rear corner most remote from the master booth rigidly but detachably connected to the adjacent standard of the next booth proceeding back in the direction of said master booth; a shelf in each annex booth; a partition wall between each booth extending uninterruptedly from the top thereof to a point below said shelves; means associated with the rear standard of the annex booth for supporting the adjacent end of the shelf; and supporting means for the opposite end of the shelf; said last named means including studs secured to the standard and the shelf of the adjoining booth and projecting through openings approximately the size of said studs into the annex booth, and ears on the shelf of the annex booth adapted to engage said studs.

7. A plurality of voting booths comprising a master booth and one or more annex booths, said master booth having a frame including upright standards at each of two rear corners and a shelf which is secured to said rear standards, said

annex booths each including an upright standard at the rear corner most remote from the master booth and rigidly but detachably connected to the adjacent standard of the next booth proceeding back in the direction of said master booth, a shelf in each annex booth, a partition wall between each booth extending uninterruptedly from the top thereof to a point below said shelves, means associated with the rear standard of the annex booth for supporting the adjacent end of the shelf, and supporting means for the opposite end of the shelf, said last named means including means detachably supported directly from the shelf in the next adjoining booth by an element secured to said last mentioned shelf and projecting through an opening in said wall of approximately the size of said element, the elements of said supporting means for the shelves for the annex booth and the master booth being such that all of said shelves are identical in construction.

8. A plurality of voting booths, each booth including an upright standard at one rear corner rigidly but detachably connected to the adjacent standard of the next booth proceeding in one direction, a shelf in each of said booths, a partition wall in each booth extending uninterruptedly from the top thereof to a point below said shelves, means associated with the rear standard of each booth for supporting the adjacent end of the shelf, and supporting means for the opposite end of the shelf, said last named means including means detachably supported directly from the shelf in the next adjoining booth by an element secured to said last mentioned shelf and projecting through an opening in said wall of approximately the size of said element.

9. A plurality of voting booths comprising a master booth and one or more annex booths; said master booth having a frame including upright standards at each of two rear corners and a shelf which is secured to said rear standards; said annex booths each including an upright standard at the rear corner most remote from the master booth rigidly but detachably connected to the adjacent standard of the next booth proceeding back in the direction of said master booth; a curtain between each booth; a shelf in each annex booth; means associated with the rear standard of the annex booth for supporting the adjacent end of the shelf; and supporting means for the opposite end of the shelf; said last named means including studs secured to the standard and the shelf of the adjoining booth and projecting into the annex booth through openings in said curtain of approximately the same size as said studs, and ears on the shelf of the annex booth adapted to engage said studs, said curtain, except for said openings, extending uninterruptedly from the top of the booth to a point substantially below said shelf.

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