

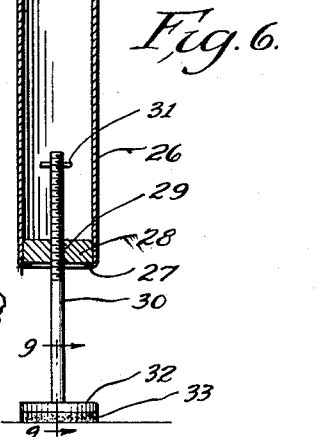
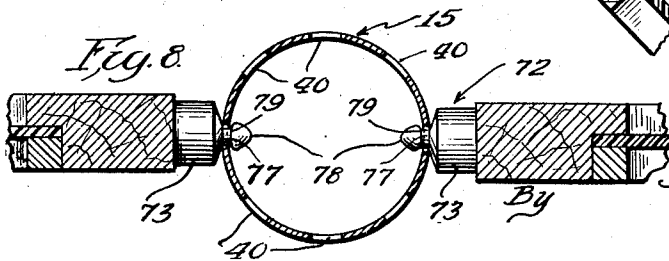
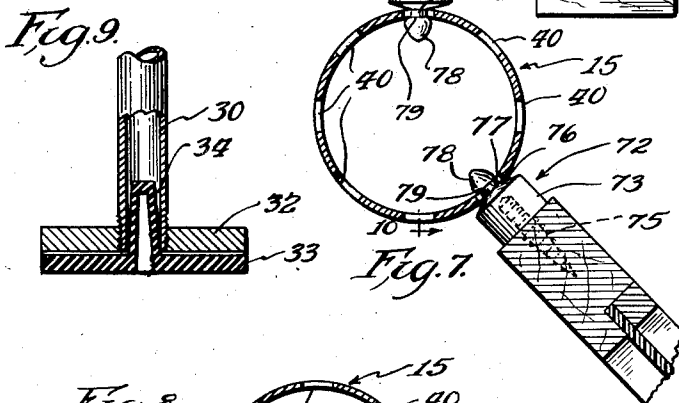
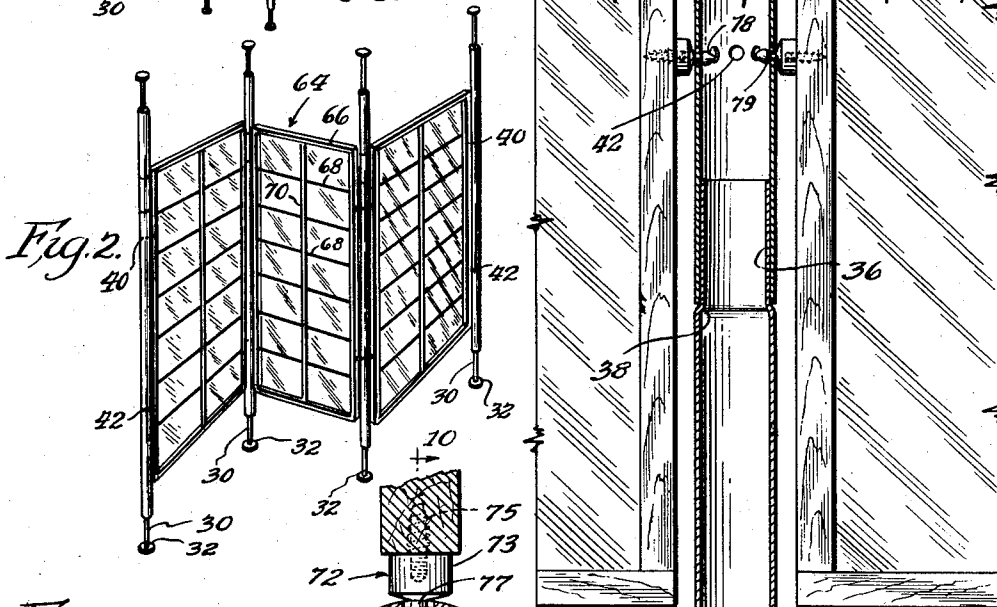
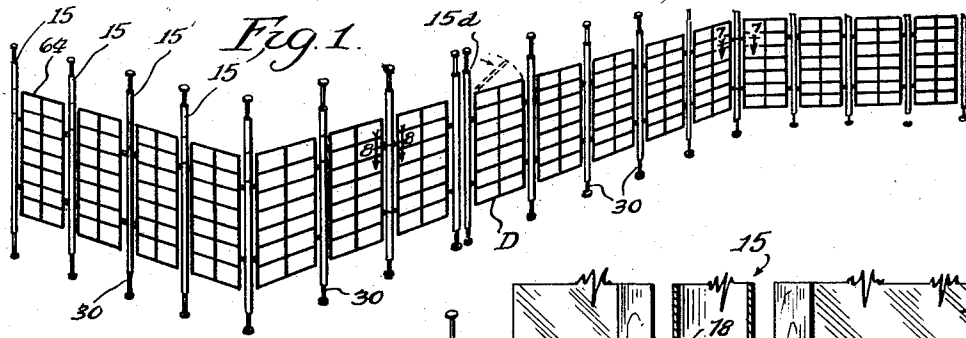
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PORTABLE WALL OR PANEL STRUCTURES AND MEANS
FOR SUPPORTING SAME

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PORTABLE WALL OR PANEL STRUCTURES AND MEANS FOR SUPPORTING SAME

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5 Claims. (Cl. 160—135)

This invention relates to portable wall or panel structure and means for supporting same.

One of the objects of this invention is to provide a structure wherein panels, walls, screens or room dividers may be readily positioned and secured in a room in any desired arrangement.

Another object is to provide a portable structure having posts secured under tension between the floor and ceiling of a room which posts detachably support panels, ornamental screens, wall surfaces, room dividers, or the like, in any desired arrangement, and which may be readily demounted and stored.

Another object is to provide a structure of the foregoing character in which the pole or supporting members as well as the panel may each be standardized so that only one type of pole and one type of panel need be used in setting up any desired panel or wall arrangement. Also one of said panels may be mounted to be swung open to act in the nature of a door.

Another object of this invention is to provide a pole for supporting panels or the like which is provided with circumferentially spaced or radial openings to permit the panels to be supported thereon in any of said openings, thus providing a very flexible arrangement in which the panels may be positioned radially on said posts in a number of positions.

Another object is to provide a post of the foregoing character which may be used to support shelves or the like.

Other objects will become apparent as this description progresses.

In the drawings:

Fig. 1 is a perspective view showing one form of arrangement of the portable wall or screen sections and also showing one of the swinging panels.

Fig. 2 is an enlarged view showing a fewer number of the wall or screen sections in another arrangement.

Fig. 3 is an enlarged view with the pole or supporting members in cross-section and showing the manner of securing the portable walls or screens to said poles.

Fig. 4 is an exploded cross-sectional view of the pole or supporting sections.

Fig. 5 is an enlarged view showing particularly the upper sections of the pole member in cross-section and the manner of attaching the wall sections thereto.

Fig. 6 is a view similar to Fig. 5 but showing the lower sections of the pole member.

Fig. 7 is a view partly in cross-section showing the manner of connecting the wall sections to the pole member and is taken on line 7—7 of Fig. 1.

Fig. 8 is a view similar to Fig. 7 and is taken on line 8—8 of Fig. 1.

Fig. 9 is an enlarged view partly in cross-section taken on lines 9—9 of Fig. 6.

Fig. 10 is a view taken on line 10—10 of Fig. 7.

Fig. 11 is a view showing the manner of mounting a swinging door.

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The poles or posts for supporting walls, panels, decorative screens, room dividers, as well as the swinging panel are all identically constructed and therefore only one of same will be described in detail, it being understood that the reference numerals are equally applicable to the remaining poles or posts forming this invention.

The pole or post generally indicated by the numeral 15 is formed of a plurality of tubular sections designated by the numerals 20, 22, 24 and 26. The lower tubular section 26 has a circumferential flange 27 to which is secured a block 28 having a threaded opening 29 which threadably receives a hollow threaded leg 30. The upper end of said leg which extends into the tubular section 26 has a pin 31 secured thereto to prevent withdrawal of said leg from said section. The lower end of leg 30 is threaded to disc 32 and a rubber pad 33 having a cone shaped extension 34 is secured to the leg 30 so that the pole rests on the rubber pad. The leg 30 is adjustable with respect to the tubular section 26.

The upper end of section 26 has a reduced circumferential portion 36 providing a shoulder 37. The reduced end 36 nests within the section 24 and frictionally engages said section to detachably lock the two sections together, however, same may be detached from each other. The shoulder 37 limits the nesting of the section 24 with respect to section 26.

The tubular section 22, which is a short section is likewise provided with a reduced lower circumferential end 38 which nests within the upper end of section 24 and is frictionally secured thereto. Section 22 has a shoulder 39 for the same purpose as previously described. Circumferentially spaced or radially arranged around section 24 is an upper series of spaced apertures 40 and a lower series of spaced apertures 42 each of which is positioned adjacent to but inwardly of the nesting ends of the sections 26 and 22.

The apertures 40 and 42 are each circumferentially spaced 45° apart to provide 8 openings in each series as best shown in Figs. 7 and 8 for the purpose of securing the wall sections or the door sections to said posts. The uppermost section 20 of the post, which is shown in enlarged form in Fig. 5 is provided with a lower reduced circumferential portion 44 which is adapted to nest into and frictionally engage the upper end of section 22 up to shoulder 46. The lower end of section 20 is provided with a circumferential flange 48 to which is secured a plug 50 having a central opening 51. The upper end of section 20 is likewise provided with a circumferential flange 52 against which is positioned and secured a plug 54 having a central opening 55.

Slideably supported within the upper section 20 is a rod 56 which passes through the openings 51 and 55 in the opposite end plugs 50 and 54. The rod 56 inside the section 20 has secured to it a flanged washer 58 which is locked to said rod by means of a cross-pin 59 secured to said rod. A coiled spring 60 has its bottom resting on the plug 50 and its upper end confined within the flanged disc 58 and normally urges said rod upwardly so that it extends outwardly of the section 20. However, the rod is prevented from being withdrawn from said section by the cross-pin 59. The lower end of rod 56 extends downwardly of tubular section 20. The upper end of rod 56 has secured to it a disc 61 and rubber pad 62 in a manner similar to disc 32 and pad 33 previously described. The pad 62 on the slideable rod 56 is adapted to rest against the ceiling to support the post.

The post may be made in any number of sections and if necessary, additional sections similar to those previously described may be added or if the ceiling is lower than the height of the joined sections the post may be reduced by eliminating, for example one of the sections 22, and

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joining section 20 directly to section 24. It will thus be seen that the post may be made in any desired length depending upon the height between the floor F and the ceiling C and that when the post is supported between the floor and ceiling it is held in a tight fit by virtue of the spring action 44 against the rod 56. If desired the lower section 26 may be further adjusted by means of the adjustable leg 30.

The wall sections, panel sections, ornamental screen sections, or room dividers which are used to form the portable wall or screen structure may be all similarly constructed and should be preferably of the same size, shape and general appearance, and one of same will be described in detail. The panel section, as it will be referred to for the sake of uniformity of language, is generally designated by the numeral 64 and all such panels will bear a corresponding number. Each panel is formed of a rectangular shaped frame-work 66, preferably of wood which is additionally provided with equally spaced horizontal cross members 68 secured thereto and divided with a vertical frame member 70 which divides the panel into a plurality of equally sized sections which are covered with a suitable translucent or opaque material to provide a very distinctive and ornamental appearance. The panel section 64, as best shown in Figs. 3, 7, and 8 has secured to it on each side of the frame of the panel a pair of metal spaced latching members 72, all being of identical construction. Said latching member 72 comprises a circular body portion 73 which is internally threaded and which is secured to the side of the frame of the panel by means of a wood screw 75. The outer surface 76 of the latching member, extending outwardly of said body is gradually tapered or dome shaped from which extends centrally thereof a pin or neck 77 having an enlarged spear shaped head 78.

It will be seen that the circumference of the pin or neck 77 is smaller than the adjacent end of the spearhead 78 to provide a circumferential shoulder 79 for engagement with the post. The dome-shaped portion 76 of the latching knob 72, as will be described later, serves a very important function of spacing the body of the knob from the post, as best shown in Figs. 7, 8 and 10 so that minimal contact is established between the body 72 and the post and this prevents the scraping of any finish of the post as the panels are attached to or detached from the posts. The latching knobs 72 are spaced on each of the sides of the panel to conform to the longitudinal spacing of the openings 40 and 42 on section 24 so that they are aligned therewith. If it is desired to provide a panel arrangement, such as shown in Fig. 1, the posts 15 are vertically spaced and positioned around the room area in the position shown therein. The posts being supported under tension or spring pressure by engaging the floor and ceiling of the room.

A panel 64 is secured between each pair of posts by merely slipping the spearhead 78 of the latching member 72 in the openings 40 and 42 of the post. The neck or pin portion 77 of the latching member will be positioned in the opening and the shoulder 79 will engage the inner wall of the tubular section to removably receive the panel to the post. The weight of the panel will maintain the latching member in the lower portion of the opening. Each panel is secured between two posts and is supported by four latching members, two on each side. The panels may be arranged in a straight line position as shown in the left hand of Fig. 1 and then may continue at right angles thereto or at any other angle for the reason that the panels may be inserted in the posts at any of the circumferential openings, and as shown in Fig. 8 the panels adjacent each other would be aligned in a straight line, whereas as shown in Fig. 7 the panels would be positioned at approximately 135° with respect to each other, however, the panels may be positioned anywhere around the space defined by the circumferential openings and the spaces are positioned 45° from each other

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around the circumference. The panels are readily removable from the posts by lifting same upwardly to permit the head 78 of the latching member to clear the openings 40 and 42.

By using a fewer number of posts and fewer panels an arrangement such as shown in Fig. 2 may be produced. It will be seen that with either of these arrangements a panel is supported between the pairs of posts with the intermediate posts supporting two adjacent panels and the end post supporting only one of the panels. An unlimited number of arrangements may be produced as desired to conform to particular requirements. The panels may be readily removed from the posts and the posts may be readily removed and stored if desired.

If it is desired to provide an entrance between a series of panels in the nature of a door, one of the panels is mounted on the post on only one side so that one side of the panel is free or unlatched so that it may be pushed to allow an entrance. This is indicated by the letter D in Fig. 1 and is also shown in Fig. 11. In a panel used as a door the latching members 72 are positioned only on one side of the panel, such as shown in Fig. 11, and as the panel is pushed to allow a person to pass through the panel will rotate the post slightly and the panel will remain in such position until pushed back. If desired a panel with latching members on both sides may be used as a door panel but the post adjacent the free end of the door should be spaced slightly to be out of engagement therewith.

In using a door arrangement, however, it is necessary to provide an additional pole, indicated at 15d best shown in Fig. 1 which is identical to the previously described poles but which is positioned adjacent one of the poles 15 supporting the panel and said additional pole is only used for the purpose of supporting the panel door, thus, as best shown in Fig. 1, where a door panel is used two poles are positioned adjacent each other, one of the poles supporting the door only, and the pole next adjacent thereto serving to support the panel. At the opposite end of the door another post is provided which serves as the first post for supporting the next series of panels.

As will be seen, with this arrangement panels may be set up in any desired arrangement and may be readily collapsed and door sections may be provided anywhere along same as desired.

With this invention there is thus provided means for readily setting up wall sections in any desired arrangement and for readily demounting and storing same, also entrance openings are provided. This structure is uniform so that only one type of pole and panel is used.

It will be understood that various changes and modifications may be made from the foregoing without departing from the spirit and scope of the appended claims.

I claim:

1. In a structure of the character described comprising a plurality of tubular sections frictionally joined together to form a single pole, certain of said sections having end portions nesting within the end portions of adjacent sections, said sections having means formed thereon for limiting the telescopic nesting of said sections and for holding said sections in fixed immovable telescopic relation with respect to each other to form a continuous hollow rigid peripheral wall of substantially uniform diameter throughout the length of said sections when said sections are joined together, one of said sections supporting a rod, spring means within said section for normally urging said rod outwardly of said section for engagement with the surface of a room to support said pole vertically between the ceiling and floor of a room, said peripheral wall of said pole having a small upper and lower opening, a panel having upper and lower stationary latching members immovably secured to the side of said panel and extending laterally of said panel for insertion only into said upper and lower openings whereby said panel is adapted to be detachably supported on said pole with the

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side of said panel spaced from the peripheral wall of said pole.

2. In a structure of the character described comprising a plurality of separate individual poles and a panel supported between each pair of said poles, a plurality of tubular sections frictionally joined together to form a single pole, certain of said sections having end portions nesting within the end portions of adjacent sections, said sections having means formed thereon for limiting the telescopic nesting of said sections and for holding said sections in fixed immovable telescopic relation with respect to each other to form a continuous hollow rigid peripheral wall of substantially uniform diameter throughout the length of said sections when said sections are joined together, one of said sections supporting a rod, spring means within said section for normally urging said rod outwardly of said section for engagement with the surface of a room to support said pole vertically between the ceiling and floor of a room, each said pole having a small opening therein, said panel having a rigid immovable latching member at its opposite sides extending laterally of said panel and adapted to engage only the small openings on the peripheral walls of said poles to detachably support said panel, so that the sides of the panel are adjacent the peripheral wall of the pole but do not extend inside said peripheral wall.

3. In a structure of the character described to be supported by and between floor and ceiling surfaces, comprising a plurality of elongated sections detachably joined together to form a single pole, and having means at each end thereof for engaging said floor and ceiling surfaces for supporting the pole in a vertical position, one of said sections having an abutment member extending therefrom, and spring means in said section for normally urging said abutment member outwardly of said section for engagement with one of the surfaces to support the pole under compression between the two surfaces, said sections of said pole having a continuous peripheral wall of substantially uniform diameter, said wall having a small opening therein, a panel having a stationary latching member immovably secured to the side of said panel and extending laterally of the side of the panel and engaging only said peripheral wall opening for detachably supporting said panel.

4. In a structure of the character described to be supported by and between floor and ceiling surfaces, com-

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prising a plurality of elongated sections detachably joined together to form a single pole, and having means at each end thereof for engaging said floor and ceiling surfaces for supporting the pole in a vertical position, one of said sections having an abutment member extending therefrom, and spring means in said section for normally urging said abutment member outwardly of said section for engagement with one of the surfaces to support the pole under compression between the two surfaces, said sections of said pole having a continuous peripheral wall of substantially uniform diameter, said peripheral wall having plurality of circumferentially spaced openings, a panel having a stationary latching member immovably extending from the side of said panel for detachable engagement only with any of said openings for detachably supporting said panel.

5. In a structure of the character described to be supported by and between floor and ceiling surfaces, comprising a plurality of elongated sections detachably joined together to form a single pole, and having means at each end thereof for engaging said floor and ceiling surfaces for supporting the pole in a vertical position, one of said sections having an abutment member extending therefrom, means for moving said abutment member outwardly of said section for engagement with one of the surfaces to support the pole by and between the two surfaces, said sections of said pole having a continuous peripheral wall of substantially uniform diameter, said peripheral wall having a small circular opening therein, a panel having a stationary latching member immovably secured to the side of said panel, said latching member including an extension provided with a reduced circumference which engages said circular opening for detachably supporting said panel.

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