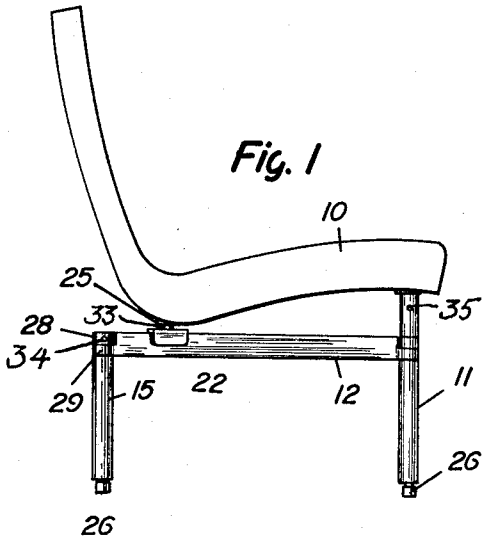
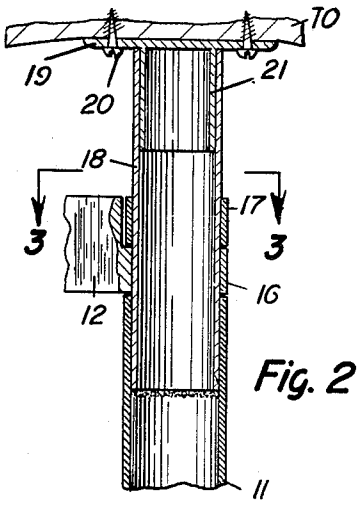
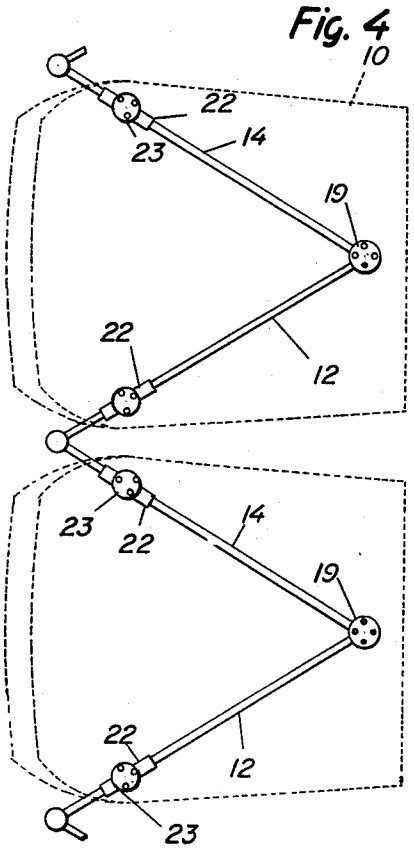
Aug. 25, 1964 J. HEANEY 3,146,025

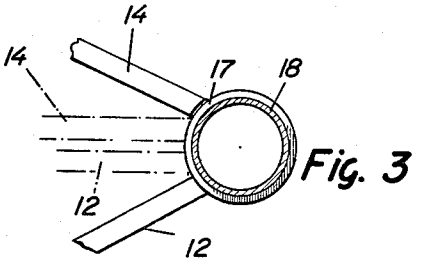
MULTIPLE SEATING DEVICE

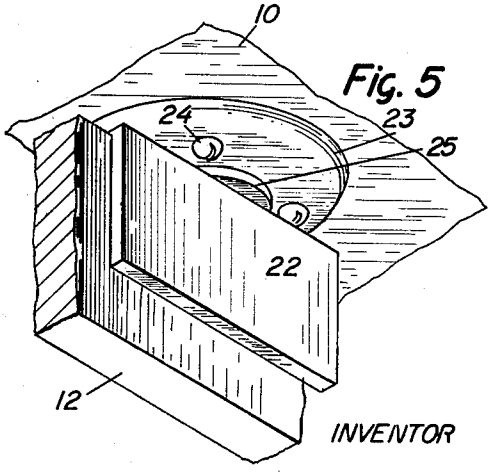
Original Filed Oct. 30, 1961 2 Sheets-Sheet 1











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MULTIPLE SEATING DEVICE

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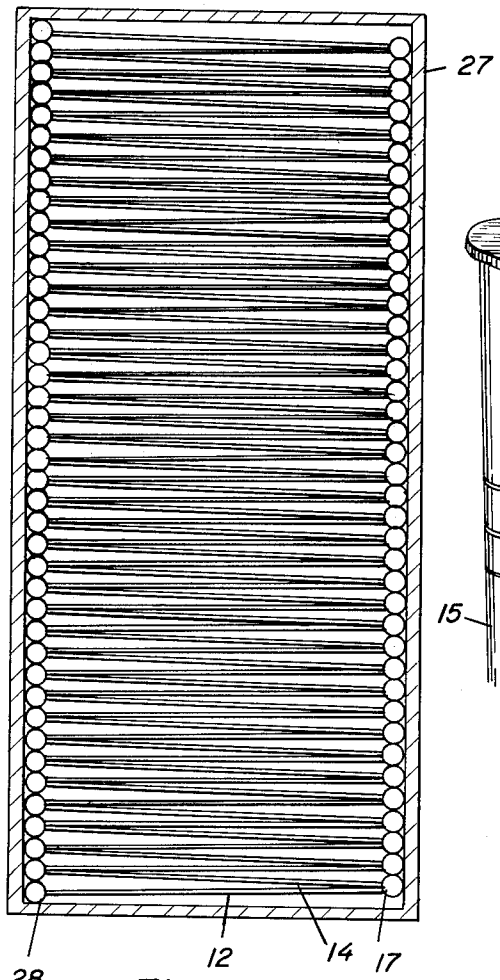


Fig. 6

Fig. 7

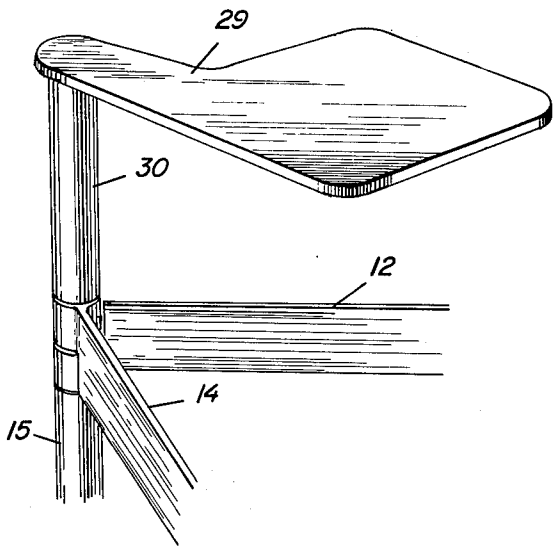


Fig. 8

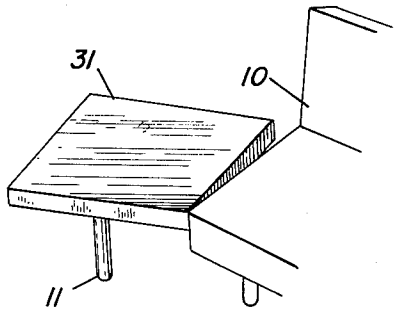
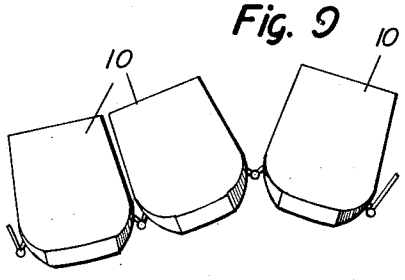


Fig. 9



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MULTIPLE SEATING DEVICE

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Continuation of application Ser. No. 148,676, Oct. 30, 1961. This application Aug. 5, 1963, Ser. No. 303,203
6 Claims. (Cl. 297—248)

This invention relates to a multiple seating device which may be arranged in various positions to accommodate itself to the space available and also to arrange the seats in various configurations such as a circle, an arc, rectilinearly or in undulations and the like.

This case is a continuation of my co-pending application, Serial No. 148,676, filed October 30, 1961, now abandoned.

An object of the invention is to provide a construction wherein a plurality of supports for lounge seats, for instance, may be easily stacked within a limited space when not in use.

A still further object of the invention is to provide a construction wherein the lounge seats may be removably mounted upon the supports and such seats may be stacked within a limited space when not in use.

A still further object of the invention is to provide a construction wherein an end table may be incorporated with the seats or an arm or a tablette may be associated with any one of the seats of a group.

With the above and other objects in view, a preferred modification of the invention is shown in the drawings wherein:

FIGURE 1 is a side view of one unit of the plural seating device.

FIGURE 2 is a partial cross-sectional view illustrating the connection made between the supporting frame and the front end of a seat.

FIGURE 3 is a cross-sectional view taken upon section line 3—3 of FIGURE 2 looking in the direction of the arrows.

FIGURE 4 is a top plan view of the support for the seats with the position of two adjacent seats shown in dotted lines located in a straight row.

FIGURE 5 is a perspective view of a channel member secured to the bottom of a seat for engaging the stretchers of a support.

FIGURE 6 is a cross-sectional view showing the stacking of a plurality of supports for the seats in assembled condition within a container.

FIGURE 7 is a partial perspective view showing the connection of an arm or tablette with one of the seats in a group.

FIGURE 8 is a perspective view showing the mounting of an end table at the end of a group of seats, and

FIGURE 9 is a diagrammatic view illustrating how the seats may be assembled with adjacent seats in either a concave or convex configuration.

Referring to the drawings, and particularly FIGURE 4, the removable seats 10 are preferably of a configuration which may be readily stacked upon one another so as to occupy a minimum of space when not in use. The seating portion of the seats 10 are tapered towards the front so that the seats may be arranged in a circle or semicircle such as indicated by the two seats at the left in FIGURE 9.

Each seat 10 has secured to the mid portion at the underside thereof a plate 19 secured to the bottom of the seat by the screws 20. This plate 19 has preferably a tubular stem portion 21.

At the rear portion of the seat at the underside thereof and adjacent the sides are secured the plates 23 by means of the screws 24. Rotatably mounted in the plates 23 by means of a stem at the upper portion thereof is

a channel member 22. Interposed between the channel member upon the stem 33 thereof is a washer 25.

The supporting elements for the seats 10 comprise the front legs 11 which are designed to cooperate removably with the stem 21 and rear legs 15. Extending from the rear legs 15 are the stretcher elements 12 and 14 as shown particularly in FIGURE 4 and at the front the stretcher elements 12 are provided with a reduced loop 16 and the stretcher elements 14 with a reduced loop 17 as shown particularly in FIGURE 2. The loops 16 and 17 are placed one above the other rotatably upon a tubular stem 18 which fits into the tubular leg 11. The tubular stem 18 extends above the stretchers 12 and 14 as shown in FIGURE 2 and the stem 21 upon the flange 19 is removably and rotatably mounted within such stem 18. When the stem 21 is assembled with the tubular extension 18 it may be fixed in position by means of a set screw 35 as shown in FIGURE 1. The tubular member 18 is welded to the tubular leg 11 and the loop extensions 16 and 17 of the stretchers 12 and 14 are rotatably mounted upon the extension 18. The stretchers 12 and 14 at their rear ends are also provided with loop elements 29 which engage a stem similar to the stem 18 in the forward foot 11 which is welded in the same way to the rear feet 15. At the rear the loop extensions 29 are held in place by a cap 28 secured to the tube welded to the legs 15. The tube welded within the legs 15 similar to the tube 18 may be provided with different lengths so that an arm may be mounted thereon as shown in FIGURE 7 or an end table such as shown in FIGURE 8.

As shown in FIGURE 7 an arm 29 provided with a tubular extension 30 may be mounted upon one of the rear legs 15 and in such case the tubular element welded inside of the rear legs 15 is extended upwardly so as to be accommodated in the tubular element 30 fixed to the arm 29.

When an end table such as 31 is to be fitted to the supporting elements then in such case the extension within the legs 15 may not be so great as for an arm and a table such as 31 may be mounted on the supporting elements in the same way as the seats 10. It will be noted that with such a mounting for the arm and the end table 31 these elements may be easily removed from the supporting elements when a plurality of seats and supporting elements are to be stacked when not in use. FIGURE 6 illustrates a plurality of supporting elements comprising the stretchers 12 and 14 and the legs 11 and 15 contained within a storage chest such as 27.

The plurality of seats may be arranged in various configurations such as illustrated briefly in FIGURE 9. When the seats 10 are swung to the position of the two right hand seats in FIGURE 9 the plurality of seats will be arranged in a convex configuration and as may be appreciated, a plurality of seats may be arranged in any undulating or circular arrangement so as to satisfy any arrangement of seats as may be desired within a room. The channel member 22 may have the stem element 33 as a loose rivet with the washer 25 interposed between the channel member and the disc 23 and such channel member rides upon the stretchers 12 and 14 as shown particularly in FIGURE 1. In FIGURE 3 the dotted lines indicate how the stretchers 12 and 14 may be pivoted to collapsed position at the front and similar collapsing takes place at the rear legs 15.

The seats 10 may be manufactured as small plywood shells if desired and foam rubber may be applied thereto. The tubular legs 11 and 15 may be manufactured from any desired metal and preferably at the ends thereof there are secured coasters such as 26 although as is obvious casters or domes of any type may be provided.

The multiple seating arrangement may comprise as many seats as desired.

It is thought that the invention and its advantages will be understood from the foregoing description and it is apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing its material advantages, the forms hereinbefore described and illustrated in the drawings being merely preferred embodiments thereof.

I claim:

1. A multiple seating arrangement comprising a plurality of independent seats, a support for said seats comprising a series of connected triangular disposed leg structures including a front tubular leg for each seat, a pair of spaced rear legs for each seat, one of said rear legs being common for adjacent pairs of said seats and stretchers pivotally interconnecting said rear legs with said front leg of said seats respectively whereby all of said front and rear legs are serially interconnected, and means for removably connecting said seats to said support, said last named means including a stem mounted upon the underside of each seat at the front thereof, a hollow socket upon said support to receive said stem, and a pair of channel members fixed to the underside of each seat cooperating with said stretchers.

2. A multiple seating arrangement of modular unit construction wherein each of the modular units are adapted to be ganged in connected side-by-side relationship for attaining a number of variable seating arrangements comprising a support means adapted to fold between a collapsed inoperative position and an extended operative position, said support including "*n*" number of front legs, and "*n* plus 1" number of rear legs, stretcher means pivotally interconnected between each front leg and an adjacent rear leg so as to define an accordion folding type support, a plurality of independent seats adapted to be supported on said support in the extended position thereof, means for detachably connecting each of said support, said latter means including a stem depending from the under side of the seat at the front thereof, and a complementary socket means forming an extension to each of said front legs adapted to receive the stem of said respective seats.

3. The invention as defined in claim 2 and including a pair of channel members fixed to the underside of each seat adjacent the rear thereof for receiving and supporting the rear portion of the respective seats on the stretcher means connected between a front leg and the adjacent rear legs disposed to either side thereof in the operative position of said support.

4. A multiple seating arrangement which is adapted to be readily knocked down between operative and inoperative position comprising:

(*a*) a support adapted to extend and distend between operative and inoperative positions,

(*b*) said support including a series of connected triangularly disposed leg structures in the operative position of said support,

(*c*) each of said leg structures including one front leg and a pair of rear legs, and

(*d*) stretcher means interconnecting the front leg of each of said leg series with its corresponding pair of rear legs whereby one of said rear legs is common to two adjacent series of leg structures,

(*e*) means pivotally connecting the ends of stretcher means between the corresponding front and rear legs interconnected thereby,

(*f*) a tubular extension connected to the upper end of each front leg of said series of leg structures,

(*g*) a plurality of separate and distinct seat structures adapted to be supported on said support in the extended operative position thereof,

(*h*) means for detachably connecting each of said seat structures to said support whereby each seat is supported over one of said leg structures,

(*i*) said latter means including a mounting stem connected to the under surface and adjacent the front of the respective seat structures,

(*j*) said stem being adapted to be received in the tubular extension connected to each of said front legs, and

(*k*) mounting means connected to the under surface and adjacent the rear of the respective seat structures,

(*l*) said mounting means including a pair of channel members adapted to straddle the respective stretchers interconnecting the front leg and corresponding pair of rear legs of the respective series of leg structures.

5. A multiple seating arrangement which is adapted to be readily knocked down and folded between operative and inoperative position comprising:

(*a*) a support adapted to extend and distend between operative and inoperative positions,

(*b*) said support including a series of leg structures,

(*c*) each of said leg structures including one front leg and a pair of rear legs, and

(*d*) a stretcher interconnecting the front legs of each of said leg series with its corresponding pair of rear legs so that one of said rear legs is common to two adjacent series of leg structures,

(*e*) each of said legs being of tubular configuration,

(*f*) ring means connected to the ends of each of said stretchers for pivotally connecting said stretcher between the respective front and rear legs interconnected thereby,

(*g*) a tubular extension connected to the upper end of said front leg,

(*h*) a plurality of independent seat structures adapted to be supported on said support in the extended operative position thereof,

(*i*) means for detachably connecting each of said seat structures to said support,

(*j*) said latter means including a mounting stem fixed centrally to the under surface adjacent the front of the respective seat structures,

(*k*) said stem being adapted to be received in the tubular extension connected to each of said front legs, and

(*l*) mounting means connected to the under surface adjacent the rear of the respective seat structures,

(*m*) said mounting means including a pair of channel members adapted to straddle the respective stretchers interconnecting the front leg to its corresponding pair of rear legs.

6. A multiple seating arrangement comprising a plurality of independent seats, a support for said seats comprising a front leg for each seat, a pair of spaced rear legs for each seat, one of said rear legs being common to two adjacent seats, stretcher means pivotally interconnecting said rear legs with said front legs whereby said front and rear legs are serially interconnected, and means for removably connecting said seats to said support, said last named means including complementary interengaging means mounted upon the undersurface of each seat at the front thereof and upon said support, said complementary means being readily detachable with respect to one another, and a pair of members connected to the underside of each seat at a rearwardly portion thereof to engage with said stretchers for detachably retaining and positively positioning the rearward portion of the seat with respect to said stretchers.

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