July 10, 1962 E. G. MASON 3,043,624

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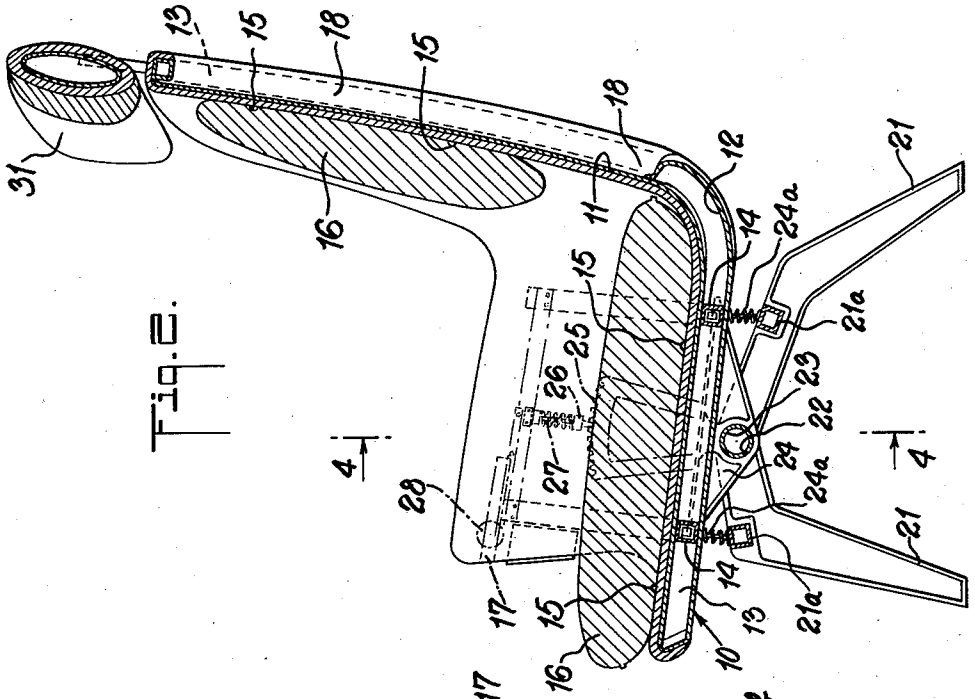


Fig. 2.

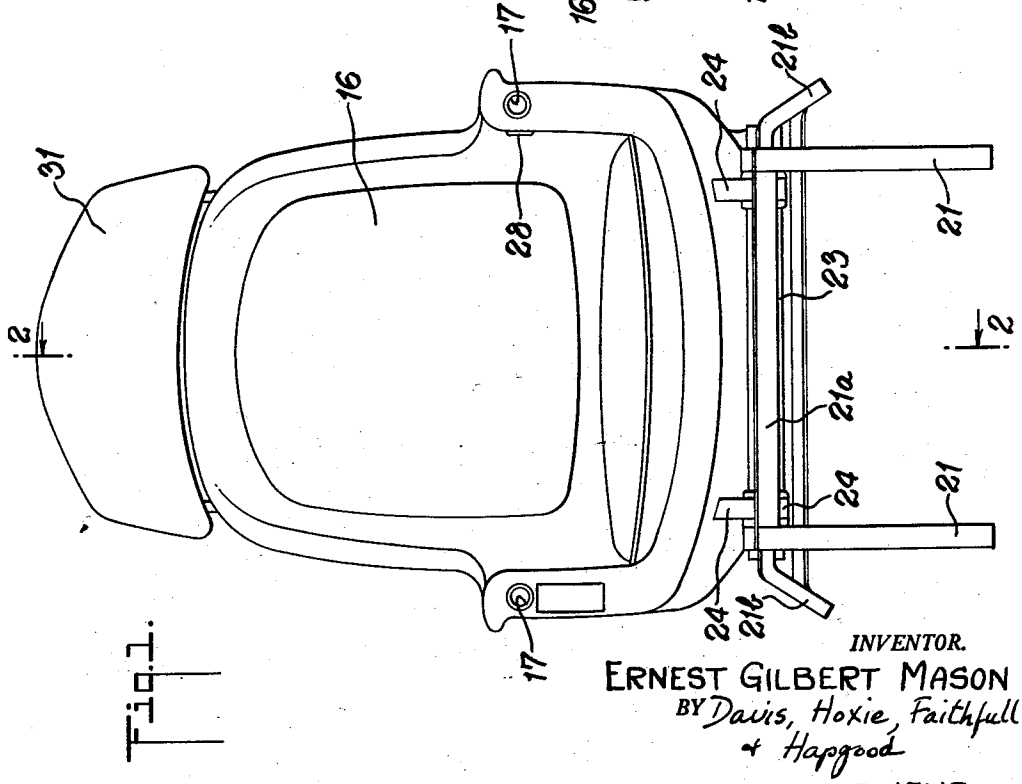


Fig. 1.

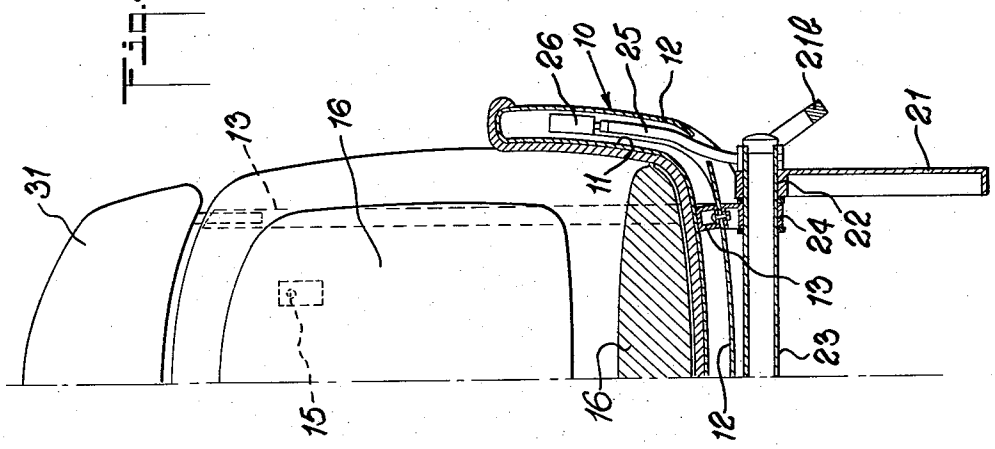
INVENTOR.
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ATTORNEYS

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Fig. 4.



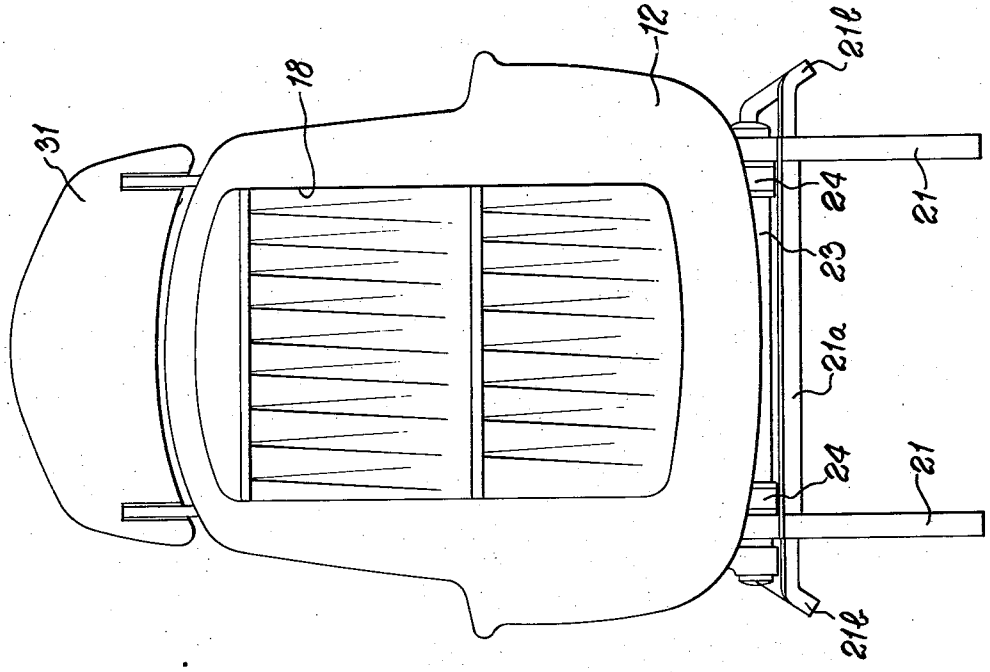


Fig.

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Fig. 7.

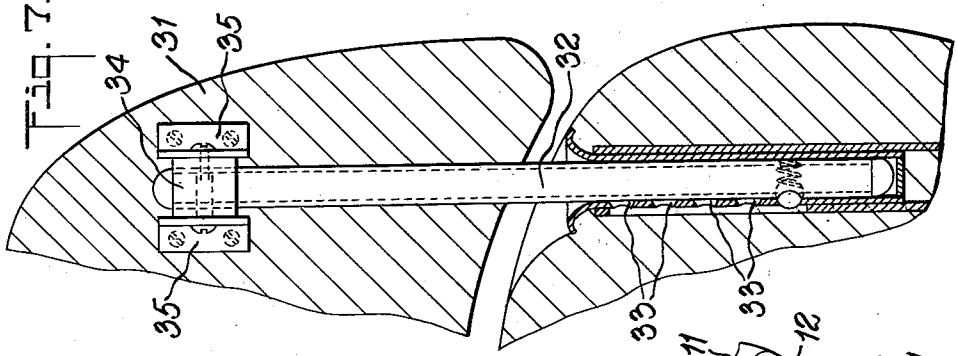


Fig. 8.

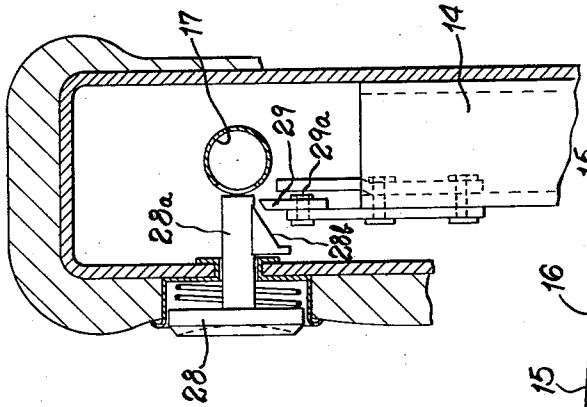


Fig. 9.

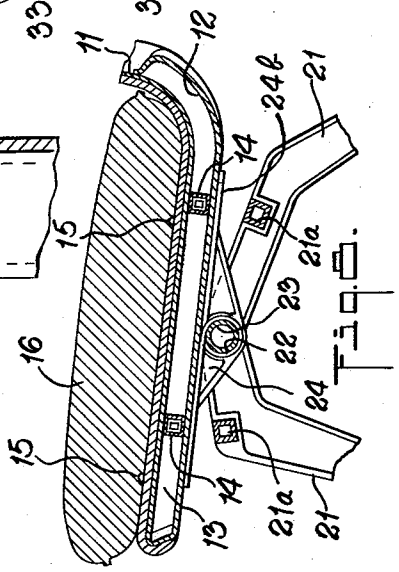
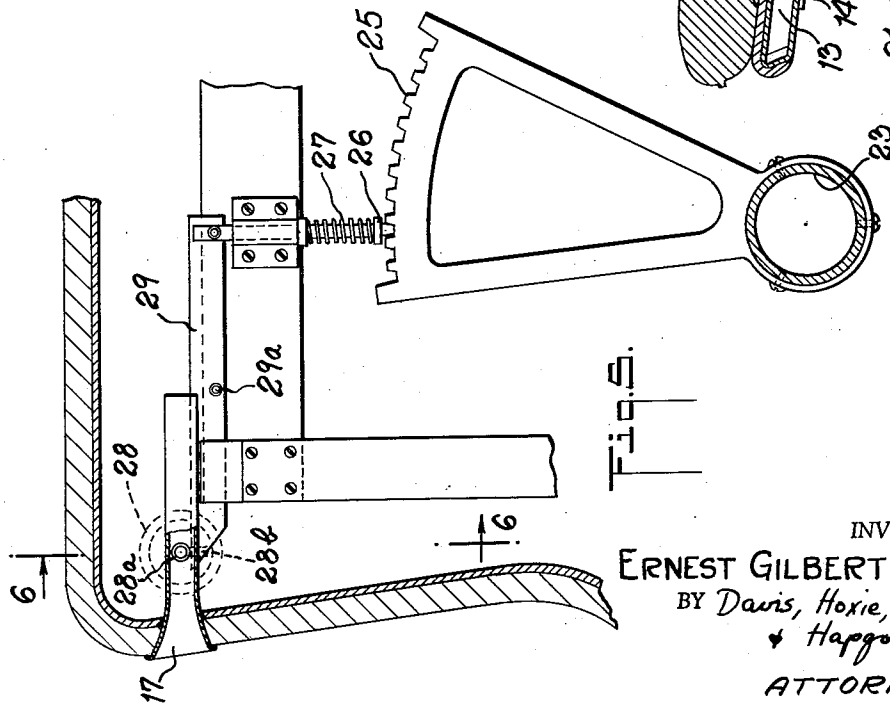


Fig. 5.



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SEAT FOR PUBLIC USE

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Filed Nov. 7, 1958, Ser. No. 772,456
3 Claims. (Cl. 297—303)

My invention relates to seats, more particularly to seats for public use.

It has been assumed generally that a manufacturer of seats that are subject to the wear and tear of public use must sacrifice comfort and convenience of the user in order to ensure that the seat is able to withstand rough treatment. Public seats in current use are subject to complaints that they provide little or no variety of positions, no support for the parts of the body that are especially vulnerable to fatigue, and not enough room for the user's shoulders, arms, legs or packages. The manufacturer's problem is made especially difficult by requirements that the seat occupy little space and be simple to manufacture and install.

I solve the problem by providing separate seat shells for each individual user, each made of half-shells, preferably with bracing between them, each suspended above the floor so that it is separately rotatable about a trunnion immediately below it to rock back and forth, and each provided with cushion supports attached to it and an adjustable and removable headrest immediately above it.

One embodiment is shown in the drawings, of which FIG. 1 is a front elevation view of the seat; FIG. 2 is a vertical section view taken on line 2—2 of FIG. 1; FIG. 3 is a rear elevation view; FIG. 4 is a front elevation view of a portion of the seat partly in section; FIG. 5 is a detail section view of a mechanism for adjusting the tilt of the seat; FIG. 6 is a section view of the mechanism of FIG. 5 taken on line 6—6 of FIG. 5; FIG. 7 is a vertical section view of headrest adjusting mechanism; and FIG. 8 is a vertical section view of a modified form of leveling spring support.

The embodiment shown has a hollow seat shell 10 made of two half shells 11 and 12 that are fastened together and have between them longitudinal bracing 13 and transverse bracing 14. The bracing may be augmented or replaced by one or more other structural members as, for example, a rigid plastic foam member. The half shells 11 and 12 are covered on the outside with foam rubber that is in turn covered with vinyl upholstery. Attached to the half shell next to the user by snap fasteners 15 are cushions 16. The bottom of the back cushion is high enough to permit the part of the body immediately below the kidneys to fit partially into an area below that cushion and above the seat cushion in order to provide support for the kidneys. The front of the seat shell 10 is provided with table leg sockets 17. In the back of the shell 10 is a cavity 18 between the vertical bracing members 13 for holding a table and literature. The seat shell 10 is molded to fit the human body but it is not so confining that it is difficult to get into or out of. The layer of foam rubber under the upholstery provides a soft feeling all over the shell. The cavity 18 is designed so that its face is flush with the rest of the seat when it contains a table and the normal complement of literature.

Fixed to the floor are two leg brackets 21, each in the form of an inverted U made of forged aluminum. The brackets 21 are held rigid by leg braces 21*a*. Mounted in the braces 21*a* is a foot step 21*b* for use in connection with overhead luggage racks and the like. Each bracket 21 has a hole 22 at its apex. Extending through the holes 22 of both leg brackets is a tube 23 of circular cross-section. Rotatably mounted on the tube 23 are seat mounting brackets 24, and it is to these brackets that the seat shell 10 is fixed. Extending from the brackets 21 to the

shell 10 are seat leveling springs 24*a*. These springs may be replaced by a single spring 24*b* as shown in FIG.8. Fixedly mounted on the tube 23 is a toothed reclining adjustment member 25 cooperating with a member 26 mounted on the shell 10 and biased by a spring 27 to engage the member 25 and prevent rotation of the seat around the tube 23. The member 26 can be disengaged from the member 25 by pressing a spring loaded release button 28 which is so situated that it is operative normally but inoperative when a table leg is inserted in the leg socket 17.

The mechanism achieving this last-mentioned effect has a release button 28 attached to a shaft 28*a* mounted outside the hole 17 in such a way that it enters the hole when the button is moved inward unless there is a table leg in the hole; a cam 28*b*, mounted on the shaft, and a pivot bar 29, mounted at a pivot 29*a*. The bar 29 is attached to the member 26 at the opposite side of the pivot 29*a*. Normally when the button 28 is moved forward the shaft 28*a* moves inward, moving the cam 28*b* inward and causing the bar 29 to swing about the pivot 29*a* to raise the member 26 out of engagement with the member 25. However, when a table leg is in the hole this action is prevented.

From the above description it will be seen that the reclining adjustment mechanism is reduced to a minimum of parts for simplicity of manufacture and use; and for dependability and consequent minimizing of maintenance the rotatable mounting on the tube provides the comfort of a rocking chair in a minimum of space. The brackets 21 provide chair legs which are simple to make and install and adjustable to fit any kind of tie-down fitting. The length of tube 23 can be varied to accommodate any number of seats, making it possible to use any available space with maximum efficiency. The provision that the seat reclining button is inoperative when table legs are inserted in the sockets 17 minimizes the danger of spilling from the table.

The headrest 31 is mounted on rods 32. The rods 32 are mounted telescopically in the vertical bracing 13 so that they can be raised and lowered to adjust the height of the headrest and can even be removed if desired. In the lower end portion of each rod 32 is a spring loaded ball bearing capable of coacting with any of a series of ball bearing seats 33 in the bracing 13 to hold the rod at a selected height. Mounted on the upper end of each rod 32 is a hard rubber sleeve 34 to which the headrest is rotatably attached by mounting brackets 35 to enable the headrest to be revolved about a horizontal axis. The sleeve 34 and the mounting brackets 35 are held together tightly enough to provide friction in order to hold the headrest in any selected position to which it is rotated. It has been found that a hard rubber sleeve provides greater friction with a metal bracket than a metal sleeve does.

The advantages to the user, in addition to those already mentioned, are that (1) the seat can be supported any distance from a neighboring seat to give each passenger room for his shoulders, and also to give him his own armrest for each arm; (2) the seat is suspened so that his legs can be extended in any direction or he can place under it his packages or luggage; and (3) the seat can be rocked as far as he desires without trespassing on the rights of his neighbors. The advantage to the manufacturer, installer and properietor is that the seat requires a minimum of space and parts.

I claim:

1. In combination, a trunnion, a trunnion supporting means, a bracket rotatably mounted on the trunnion, a chair having a seat and a back mounted on the bracket and having its back vertical with respect to the trunnion and its seat surface above the trunnion, spring means be-

tween the bracket and the trunnion supporting means, and a member fixed with respect to the chair and cooperating with a second member fixed with respect to the trunnion so that the two members interlock in a plurality of positions with respect to each other, whereby the chair rocks backward and forward and can rock to a selected position and be locked in that position.

2. The combination of claim 1 in which the trunnion is a shaft of circular cross-section.

3. The combination of claim 1 having a tube in the chair for mounting a platform on the chair and a button assembly as the member fixed with respect to the chair including a plurality of connected members, in which chair at least one of the button assembly members is free to move within the tube when the tube is empty but is blocked from such movement by the insertion of the platform in the tube.

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