Theater Engineering Conference

Auditorium Design

The New Slide-Back Chair*

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Summary—**The need for a retractable chair in theaters, and the features that should be embodied in a chair of this type are outlined.**

Why the necessity for a retractable chair? In the author's experience in the seating business, which goes back some twenty-five years or more, the big problem has been, how can the necessity of standing up to allow others to pass between the rows of chairs in a theater be eliminated. In an overwhelming majority of theaters, the space between the rows of chairs is so narrow that it is absolutely necessary to stand up to let others pass, and when a person has a hat, overcoat, and perhaps a bundle or two on his or her lap, it becomes quite a problem to stand up, let alone allowing someone to pass.

There are two ways of eliminating this inconvenience. One method is by spacing the rows far enough apart so that there will be ample room for people to get through without the occupant of the chair having to stand up, or use a retractable chair that will serve the same purpose.

The seating industry, which has been faced with this problem, has devoted years of research and experimentation in trying to overcome this problem, and this is what has been found. In order to achieve the desired effect it has been found that chairs would have to be spaced at least 40 inches back to back to allow passage without body contact. On a spacing of 36 inches back to back, it was found that it was possible to pass with some difficulty. This, of course, was out of the question in most of the cases; the loss of seating capacity would not permit such practice. The demand is always for more capacity even at the expense of discomfort to the theater patron.

Now comes the retractable chair. In this research, all types of human models, both male and female were used, and the conclusion

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was reached that the average size of theater patrons is as follows: males 5 feet 7 inches in height, weight 165 pounds, females; 5 feet 4 inches in height, weight approximately 130 pounds. One can readily appreciate that chairs must be manufactured to fit the average size person. Using a man 5 feet 8 inches tall, weighing 170 pounds as a model, which is above average, it was found that there was more passing room with retractable chairs spaced at 32 inches back to back than with stationary chairs spaced the same distance with the occupant standing. There was more passing room with less body contact. It was also found that this same spacing of 32 inches back to back using retractable chairs gave more passing room than with the stationary chairs spaced 36 inches back to back with the chairs occupied. These facts concerning retractable chairs should be very interesting to the theater owner, as its enables him to put in the maximum number of chairs and still give his patrons more comfort than if he had used stationary chairs spaced at 36 inches back to back. Another interesting discovery is that there is more passing room with the retractables at 34 inches back to back than with the stationary chairs at 40 inches back to back. The same result was obtained using as a model a girl 5 feet 6 inches tall, weighing 120 pounds. The retractable chairs used in these experiments had a retraction of 6 inches.

During the past twenty-five years or more, numerous developments in retractable chairs have been patented only to be found impractical or so lacking in the necessary mechanical requirements that they were discarded. Some of these were absolutely fantastic. There is one outstanding example. In 1931 in Los Angeles a man showed something he had developed that he thought would revolutionize the entire seating industry. The device worked something like this. Two rows of chairs are fastened to a traveling conveyor much like a merry-go-round, which travels around at the push of a button. The usher brings two patrons down and seats them, pushes a button, and slides them over a couple of seats. This goes on until the two rows are filled. When a person wants to leave, he pushes a button and the chairs travel around until his chair arrives at the aisle. He then can get out without disturbing anyone. Now mind you, the inventor had taken out a patent on this device, which he was sure would revolutionize the seating industry. When asked what he figured the cost would be, he thought that it would cost about $75.00 per chair. This was back in 1931 at a time when a good theater chair was selling for around $10.00.

The second question that presents itself is, "what are we to expect in a retractable chair?" The following enumerates some of the things that should be embodied in a chair of this type to insure durability, comfort, safety, and years of troublefree service.

1. Ease of operation. The retractable chair should be so designed and constructed that the seat will move back on a horizontal plane smoothly without hindrance, and with the least amount of effort on the part of the occupant of the chair.

2. The retractable chair should embody an automatic retracting device that automatically retracts the chair when the occupant stands up to leave. This device should retract the chair slowly and smoothly without bumping or jarring the mechanism.

3. The retractable chair should embody a seat-lifting device which lifts the seat as the chair is retracted, to an angle of approximately 45 degrees. This leaves the seat in a position so that the occupant can sit down without the necessity of holding the seat down with his hands as he occupies the chair. With the chair retracted, and the seat raised, this leaves the space between rows free of any obstruction, which is a big safety factor in case of emergency and also eliminates the necessity of raising the seats when cleaning under the chair.

4. The retractable chair should embody the ultimate in relaxing comfort. This can be achieved by perfect posture, which is brought about through the proper relationship of the back to the seat, and by the use of deep spring cushions in the seat, and the proper padding of the back. The back should be so constructed that it completely covers the back of the seat, thus preventing the person sitting in the row in back from using the seat as a footrest. The bottom edge of the back should be so designed as to eliminate sharp edges that might bump the shins of the person in the next row as the chair is retracted.

5. The retractable chair should be so constructed that it will not require oiling, greasing, or other maintenance. The fact that this type of chair has more moving parts than the stationary chair should by no means mean that it will require more care than any other type of chair. On the contrary, the retractable chair should and can be built with oilless bearings that need no oil and will give troublefree service for years without any maintenance whatever.

6. The retractable chair should have no obstructions in its understructure that will in any way hinder cleaning under the chair.

7. The retractable chair should be designed and constructed so

that it will embody the flexibility required to compensate for floor conditions that are encountered, and to facilitate the installation of the chair.

8. For reupholstering purposes, the retractable chair should be so constructed that the upholstered parts can be removed from the chair, recovered and replaced with the least amount of effort, and without the need for specialized mechanics to do the job.

Finally, there is no reason why the retractable chair should not be just as attractive in style and design as the most modern conventional-type theater chair.

The retractable chair has proved itself and is definitely here to stay. The yearly increase of this type of seating compared to the total of chairs manufactured will be so marked, that at the end of a few years, the retractable-chair sales will pass those of the conventional type. A theater with a conventional-type chair, except in the balcony, will be as obsolete as a car without a self-starter.