Nov. 11, 1952 W. S. BAER, SR., ET AL 2,617,475

REVERSIBLE CHAIR SEAT

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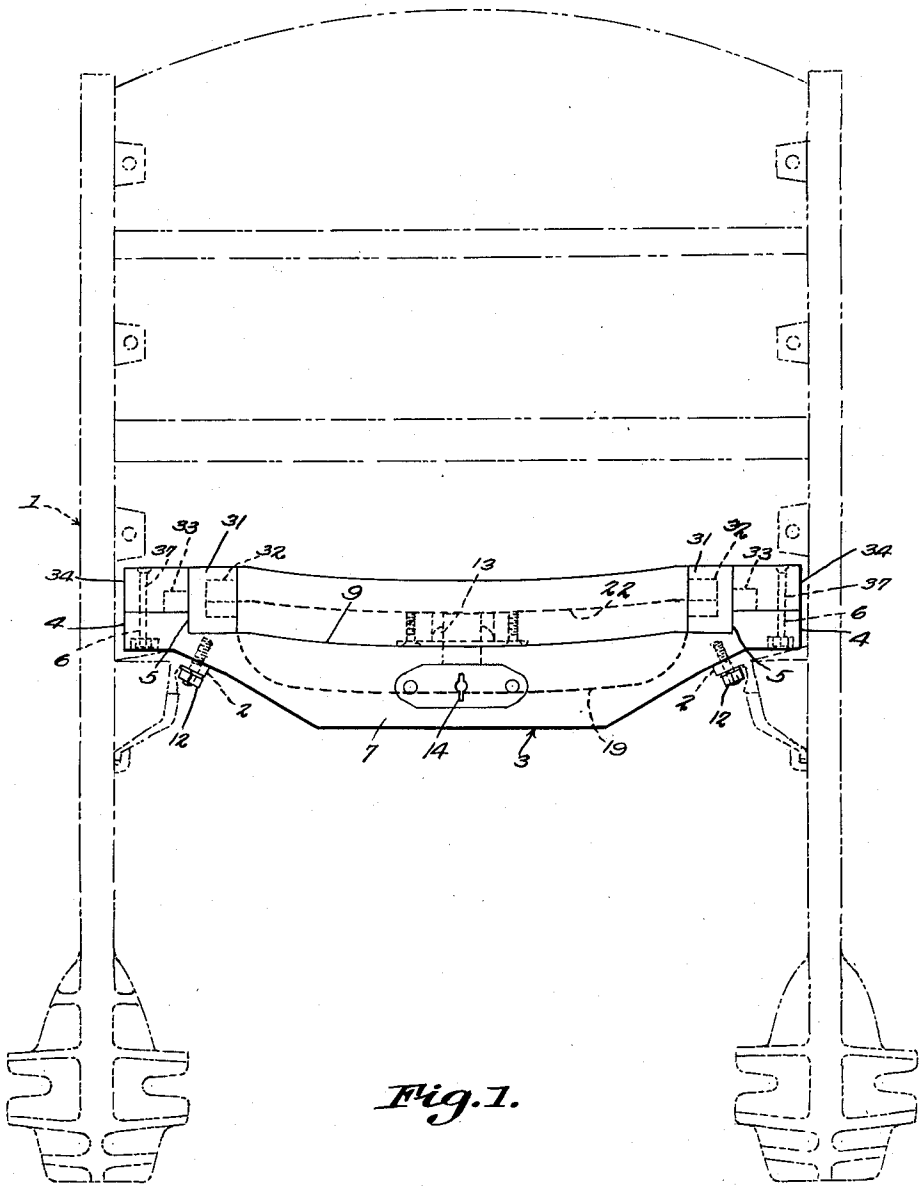



Fig. 1.

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Fig. 2.

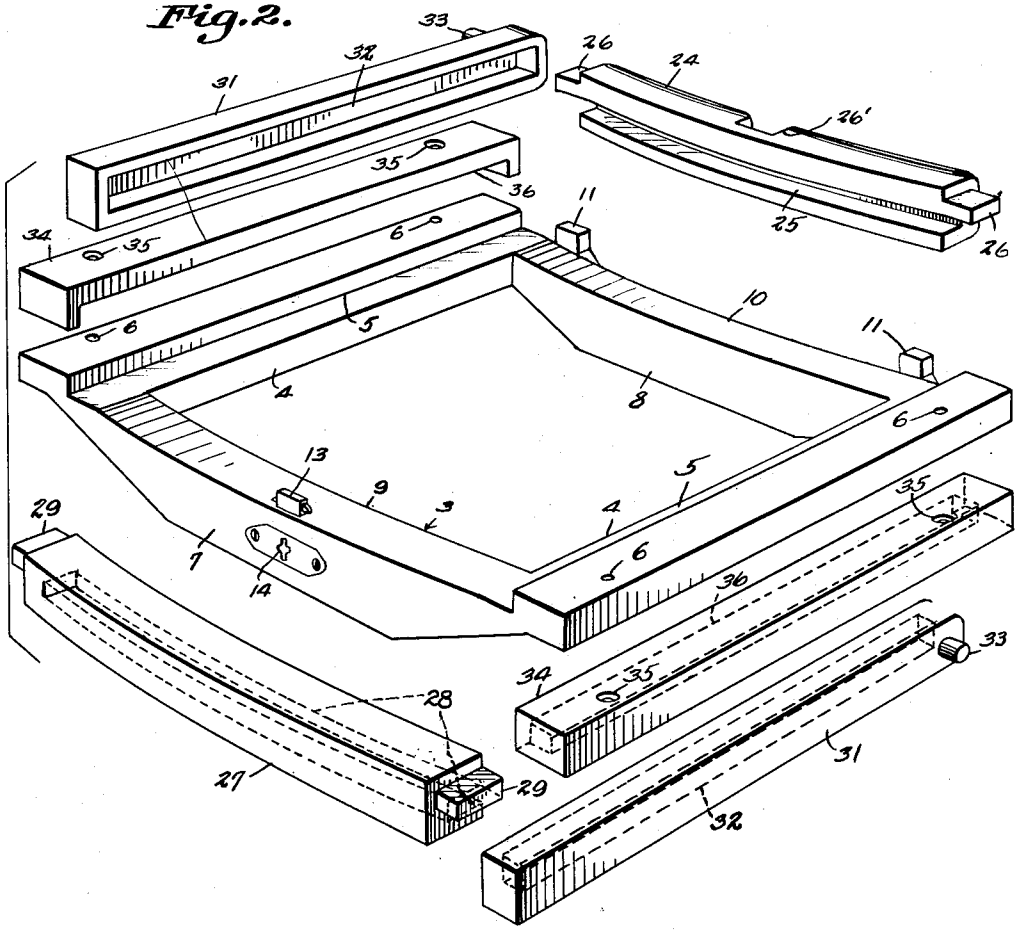
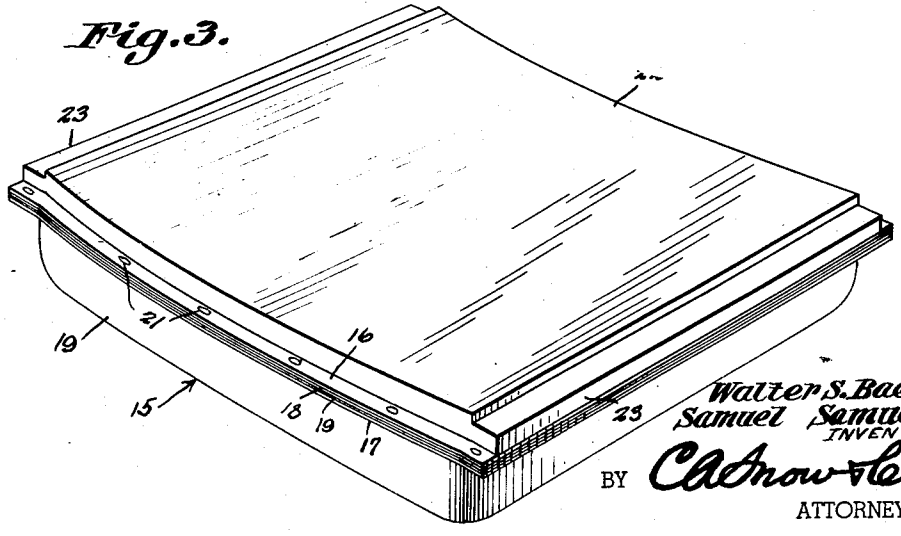



Fig. 3.




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Fig. 4.

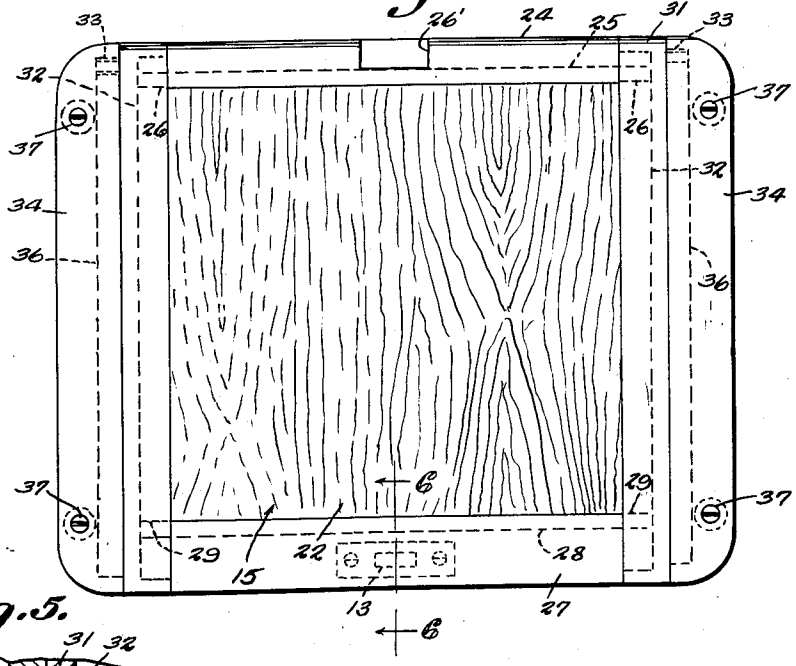



Fig. 5.

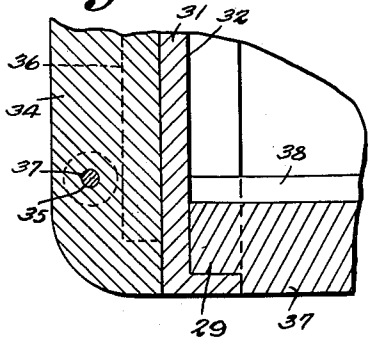



Fig. 6.

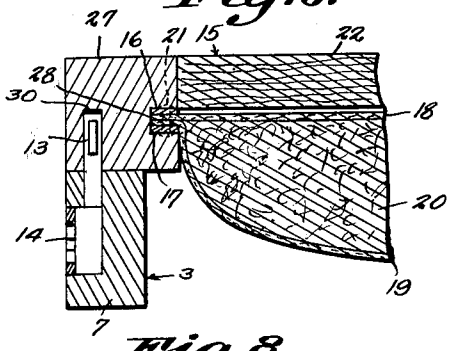



Fig. 7.

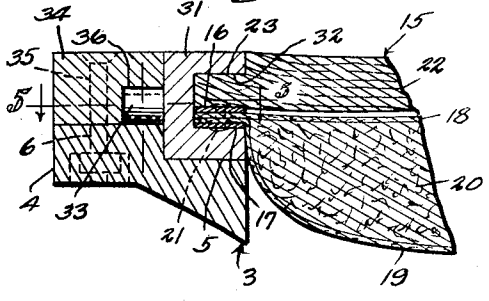
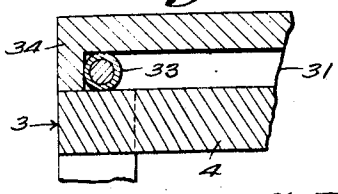



Fig. 8.




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Patented Nov. 11, 1952 2,617,475

# UNITED STATES PATENT OFFICE

2,617,475

## REVERSIBLE CHAIR SEAT

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Application April 24, 1950, Serial No. 157,824

4 Claims. (Cl. 155—183)

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This invention relates to chair or bench construction, and more particularly, has reference to a chair, bench, or similar structure equipped with a reversible seat portion, so as to expose for use a seating surface either cushioned or hard surfaced.

Conventionally, establishments such as baseball parks, race tracks, field houses, municipal stadiums, and the like, are equipped with hard surfaced chair seats which, whether they be of slatted or solid formation, tend to cause patrons considerable discomfort. Particularly is this true where some sport or amusement is being viewed that is of several hours duration, and this of course is quite common.

Understandably, establishments of the type stated are disinclined to incur the substantial expense of installation and maintenance of cushioned seats for patrons on the basis of the standard price of admission. Nevertheless, a substantial number of patrons are quite willing to pay an added amount for the use of soft-surfaced seats. To meet this demand, these establishments have in some instances rented individual cushions, and in other instances have cushioned certain blocks of seats and charged higher admissions therefor. However, these practices have proved unsatisfactory, in the first instance because an individual seat cushion is an object which can be thrown and inevitably is thrown if spectators' emotions are excited during the heat of the contest. And, in the second instance, the provision of blocks of permanently cushioned seats requires that those desiring the use thereof sit at particular locations which may be personally undesirable to them, and further, it is not possible to estimate accurately how many patrons might desire the use of cushioned seats and how many might be satisfied with the hard surfaced ones.

It is, accordingly, the main object of the present invention to provide a seat construction which will permit any and all patrons to have cushioned seats who so desire them, at any location where they might be sitting; will be designed in a manner to prevent the use of the cushions as thrown objects; will return a profit to the establishment; and will be capable of swift and easy adjustment to expose either a hard or soft surface, so that a single attendant can service large spectator areas.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter

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more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawing

Figure 1 is a front elevational view, the chain dotted lines indicating a conventional seat frame in which the reversible chair seat is installed, the hard surface of the seat being exposed.

Fig. 2 is an exploded perspective view of the seat base and seat frame.

Fig. 3 is a perspective view of the seat body, the hard surface being turned upwardly.

Fig. 4 is a top plan view, the hard surface being exposed.

Fig. 5 is an enlarged fragmentary horizontal section through a corner of the reversible chair seat.

Fig. 6 is a fragmentary enlarged sectional view through the latch mechanism.

Fig. 7 is an enlarged fragmentary sectional view through a portion of the seat.

Fig. 8 is an enlarged sectional view through a fragment of one of the side bars.

Referring to the drawings in detail, a chair frame 1, such as found in ball parks or similar establishments, is of conventional construction and constitutes per se no part of the present invention. This is equipped with the parallel supporting flanges 2 carried by and extending adjacent opposite sides of said chair frame.

In accordance with the present invention, a fixed or stationary seat base generally designated 3 is carried by the supporting flanges 2, and this, as best seen from Fig. 2, is of rigid construction and is formed with a large central opening in which, in a manner to be discussed in detail hereafter, a seat body is mounted. In the present instance the seat base is rectangular in plan, but we believe it could be of other shapes, as desired, without critically affecting its efficient discharge of its intended functions, and of course, the design of the particular chair frame 1 in which the reversible chair seat is to be installed would have some bearing on the general overall configuration or shape of said seat base and the reversible chair seat itself.

Similarly, the seat base and other portions of the invention might be made of various materials but we prefer that the seat base be of cast aluminum for ease of manufacture, lightness, strength, and resistance to the elements.

In any event, the seat base 3 in the present instance includes the parallel side members 4,

the inside surface of each of which is formed with a longitudinal groove 5, which opens through the top and inner side of its respective side member. Formed in said side members are longitudinally spaced vertical screw receiving openings 6. Integral with the end portions of the side members 4 and extending between said members are the dropped front and back members 7 and 8 respectively, having in their top surfaces longitudinal shallow curved depressions 9 and 10 opposite ends of which merge into the bottoms of the grooves 5. Formed upon the rear surface of the back member 10 are longitudinally spaced seat stops 11 that extend upwardly a short distance above the top surface of said back member, for a purpose to be made apparent.

Formed in the bottom surfaces of the respective side members 4 are threaded recesses receiving screws 12 that extend through openings formed in the flanges 2 of the chair frame 1, for the purpose of rigidly mounting the seat base 3 in a horizontal position upon the chair frame.

Intermediate the ends of the front member 7, we provide an upstanding latch 13 of any desired design, and in the illustrated example the latch 13 is controlled by a key inserted through the keyhole 14. Other forms of latches might well be used, and other forms of latch controls could also be used. It is mainly important to provide means releasably engaging the reversible portion of the device, that will be described hereinafter, against movement from at least one, and possibly both, of its respective extreme positions.

Considering now this movable or reversible portion of the structure this can conveniently be termed herein the seat portion, as distinguished from the seat base described above, this seat portion including a seat body and a seat frame.

The seat body has been generally designated 15, and its opposite faces are respectively hard and soft. In the illustrated example, the seat body includes rectangular cushion clamp frames 16 and 17 between which are clamped the peripheral portions of the flexible cushion coverings 18 and 19 enclosing the padding 20 (Figs. 6 and 7). Rivets 21 or other fastening means extend between the cushion clamp frames 16 and 17 and clamped marginal portions of the coverings.

Overlying the inner face of the cushion so provided is the hard faced portion of the seat body, provided in the present instance by a solid plate 22 here shown as being of wood construction, though capable of fabrication from metal or any other suitable material. This plate need not be secured to the cushion member unless a special desire or need to do so should arise, the construction in the present instance being adapted to hold these parts against relative movement within a seat frame specially provided therefor. The plate, as seen from Fig. 3, has the side tongues 23 overlying the sides of the cushion clamping frame, while the front and back portions of said cushion clamping frames 16 and 17 are left exposed to define the front and back tongues carried by the seat body, as readily seen from Fig. 3.

Referring now to the seat frame which encloses the seat body and with the seat body defines the seat potrion of the device, this includes a back frame member 24 (see Fig. 2) shallowly depressed longitudinally to conform to the curvature of the depression 10 in the top surface of the back member 8 of the seat base, said member 24 having a longitudinally extending groove 25 opening through its inner face and opposite ends. Ears 26 are carried by and project from opposite ends of the frame member 24 and the upper edge of the back surface of said member 24 is rounded to provide clearance for swinging movement of the seat portion of the device, in a manner to be made apparent. Formed in the top surface of the rear frame member 24 and opening through the back thereof, intermediate its ends is a latch clearance recess 26'. This is to permit the seat portion to clear the latch 13 when the seat portion is reversed to expose the cushioned face thereof. If preferred, the recess 26' could well be provided with a lock plate to permit the locking of the seat portion with the cushioned face up, this being considered sufficiently obvious as not to require special illustration.

Extending across the front portion of the seat frame is the front frame member 27, having extending throughout its entire length a longitudinal groove 28 (Fig. 6). End ears 29, are carried by and extend longitudinally from opposite ends of the frame member 27 and formed in said member 27 intermediate the ends thereof is a latching recess 30 in which the latch 13 is received.

Completing the formation of the seat frame are the side frame members 31 having longitudinally extending grooves 32 opening through the inner sides thereof and these grooves terminate just short of the opposite ends of the respective side members. Axially aligned trunnions or pivot pins 33 are carried by the side members 31 and project laterally therefrom on the sides thereof remote from the grooves 32. These trunnions are located adjacent one end of the seat frame and project over the top surfaces of the side members 4 when the device is assembled.

In assembling the seat body with the seat frame, the members 24 and 27 are respectively positioned so that the grooves 25 and 28 thereof receive the front and back tongues of the seat body 15, while the side members 31 are positioned so that the side tongues of the seat body are received in the slots 32 thereof. The ears 26 and 29 of the members 24 and 27 respectively extend into the end portions of the slot 32 and in this way the entire seat portion is assembled.

The assembled seat portion is now positioned upon the seat base 3, cushion side down, and as seen from Fig. 8, the trunnions 33, suitably bushed, overlie the side members 4 of the seat base. A slideway is now provided for the respective trunnions, by the provision of the bars 34 having the openings 35 registering with the openings 6 of the members 4, said guide bars being formed with the closed longitudinal recesses 36 providing slideways for the pivot pins or trunnions 33. The guide bars 34 are now rigidly connected to the members 4 by means of the screws 37, and thus can be considered as a part of the fixed or stationary seat base.

Normally, the reversible chair seat is positioned hard side up as in the various figures of the drawing. In this position of the seat portion, the latch 13 locks the seat portion against reversal, and the pivot pins 33 are at the back ends of the recesses 36.

Assuming that the seat portion is to be reversed so as to expose the soft or cushioned side or face thereof, the latch is released, and one simply swings the seat portion upwardly upon its pivots 33, said pivot pins or trunnions being at the same time slidably shifted to the other ends of their guide recesses. The soft or cushioned side of the seat portion is now exposed, and if

no special latch is provided to lock the seat portion cushion side up, the seat stops 11 act to prevent movement of said seat portion during use thereof.

What is claimed is:

1. A reversible chair seat comprising a pair of spaced parallel substantially horizontal side bars having elongated longitudinally extending guideways in their opposed faces, a seat extending between said side bars, laterally extending trunnions carried by the seat adjacent one end thereof and extending into the guideways for pivotally and slidably supporting one end of said seat between said side bars, spaced parallel cross bars carried by the side bars and extending therebetween adjacent opposite ends thereof, and one of said cross bars forming a support for the end of the seat remote from the trunnions when the trunnions are adjacent the cross bar at the opposite ends of the side bars.

2. A reversible chair seat comprising a pair of spaced parallel substantially horizontal side bars having elongated longitudinally extending guideways in their opposed faces, a seat extending between said side bars, laterally extending trunnions carried by the seat adjacent one end thereof and extending into the guideways for pivotally and slidably supporting one end of said seat between said side bars, spaced parallel cross bars carried by the side bars and extending therebetween adjacent opposite ends thereof, one of said cross bars forming a support for the end of the seat remote from the trunnions when the trunnions are adjacent the cross bar at the opposite ends of the side bars, and means carried by one of the cross bars for engaging the seat and releasably holding it against movement.

3. The structure recited in claim 2 in which the means for holding the seat against movement comprises a latch carried by and extending upwardly from the cross bar, and a keeper carried by the seat for engaging the latch.



4. A reversible chair seat comprising a pair of spaced parallel substantially horizontal side bars having elongated longitudinally extending guideways in their opposed faces, a seat extending between said side bars, laterally extending trunnions carried by the seat adjacent one end thereof and extending into the guideways for pivotally and slidably supporting one end of said seat between said side bars, spaced parallel cross bars carried by the side bars and extending therebetween adjacent opposite ends thereof, one of said cross bars forming a support for the end of the seat remote from the trunnions when the trunnions are adjacent the cross bar at the opposite ends of the side bars, means carried by one of the cross bars for engaging the seat and releasably holding it against movement, and stops carried by the cross bar opposite that carrying the seat holding means for engaging the seat and holding it against movement longitudinally of the side bars.

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