Aug. 13, 1940. C. FUSS 2,211,374

ADJUSTABLE STADIUM-SEAT BRACKET

Filed Jan. 10, 1939 2 Sheets-Sheet 1

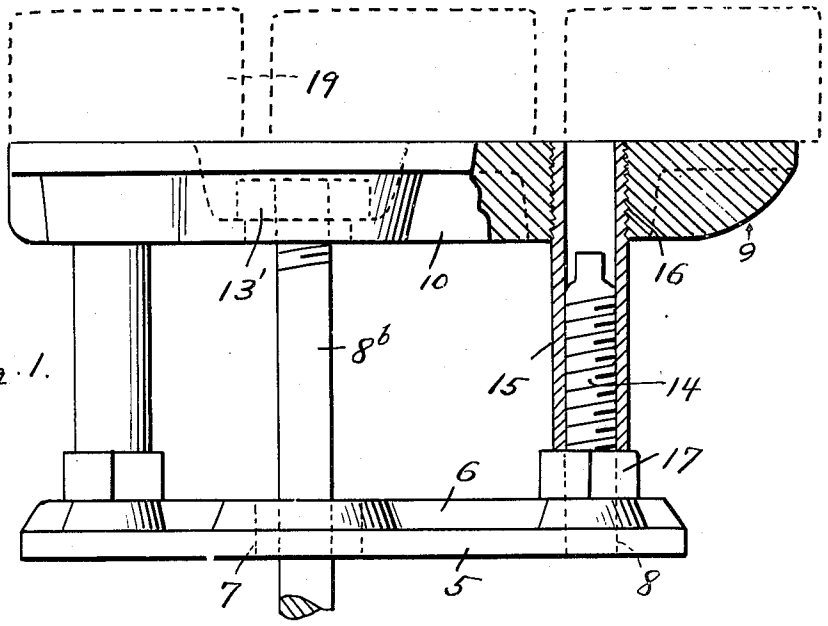


Fig. 1.

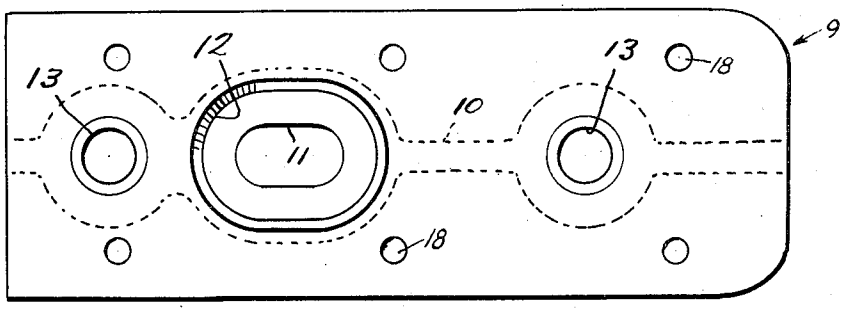


Fig. 2.

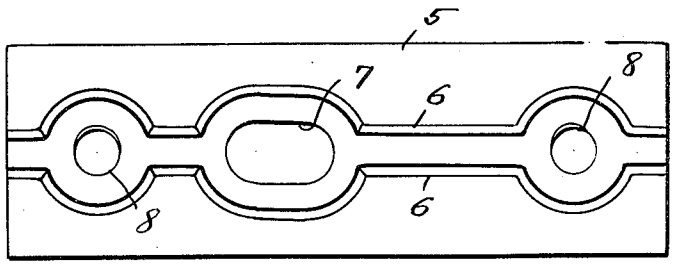


Fig. 3.

Inventor

Conrad Fuss

By Clarence O'Brien and Hyman Berman

Attorneys

Aug. 13, 1940. C. FUSS 2,211,374

ADJUSTABLE STADIUM-SEAT BRACKET

Filed Jan. 10, 1939 2 Sheets-Sheet 2

Fig. 4.

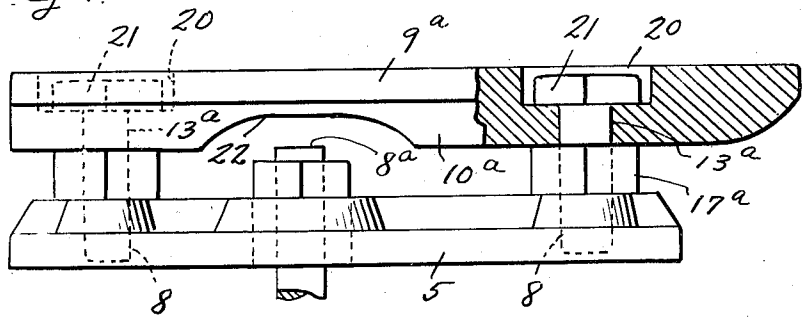
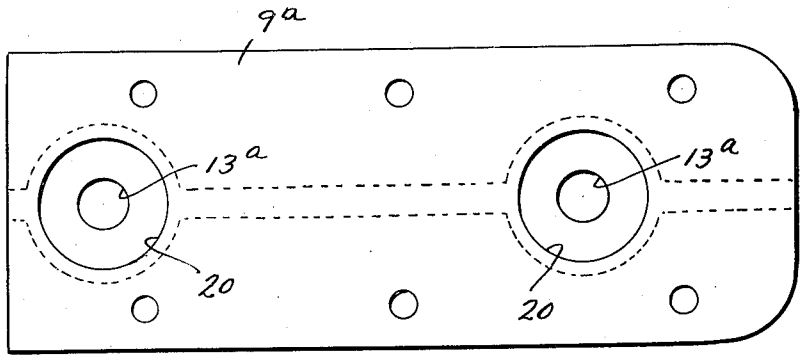


Fig. 5.



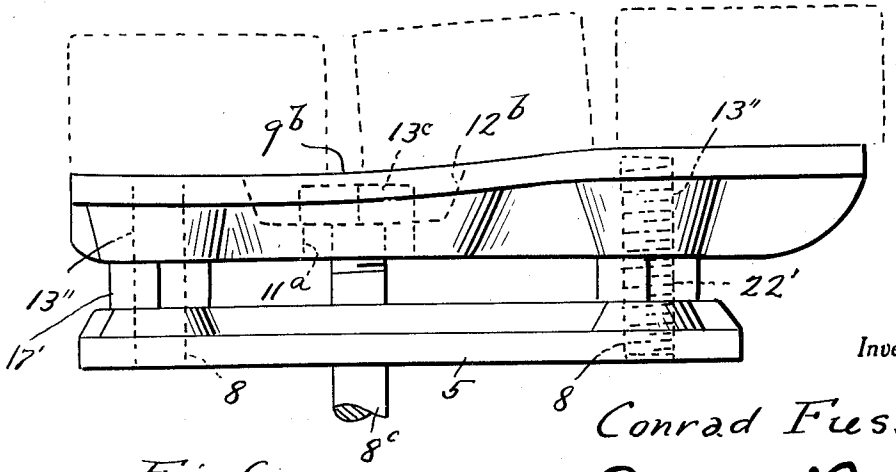


Fig. 6.

Inventor

Conrad Fuss

By Clarence A. O'Brien and Hyman Berman

Attorneys

Patented Aug. 13, 1940

2,211,374

UNITED STATES PATENT OFFICE

2,211,374

ADJUSTABLE STADIUM-SEAT BRACKET

Conrad Fuss, Lincoln, Nebr.

Application January 10, 1939, Serial No. 250,213

3 Claims. (Cl. 155—130)

This invention relates to brackets and more particularly to brackets designed for supporting the planks or slats used in the construction of seats and particularly the seats of stadia and the like.

An object of the invention is to provide for the mounting of seats on the "steps" of stadia seating terraces in a positive, efficient and inexpensive manner.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein:

Figure 1 is a side elevational view of one form of bracket with certain parts broken away and shown in section.

Figure 2 is a top plan view of the plank-supporting plate forming part of the bracket.

Figure 3 is a top plan view of the base plate of the bracket.

Figure 4 is a view similar to Figure 1 and illustrating a slightly modified form of bracket.

Figure 5 is a top plan view of the plank-supporting plate forming part of the bracket shown in Figure 4, and

Figure 6 is a view similar to Figure 1 illustrating still another form of the invention.

This invention is designed for use on the steps of stadiums which are formed of concrete and have bolts projecting upwardly therefrom and where the steps gradually increase in height from the lower one to the upper one, with this gradual increase in the heights of the steps making the bolts gradually decrease as to the projecting portions from the lower step to the upper step, it being understood that all the bolts of each step project the same amount. This invention contemplates the use of bracket means which are held in place by nuts on said bolts and said bracket means supporting seat forming planks.

Referring to the drawings more in detail it will be seen that in each form of the invention the bracket comprises a base plate **5** that is rectangular and is adapted to rest on one of the concrete "steps" or the like of the seating terrace of the stadium, to extend transversely of the length of such "step."

The plate **5** on the top side thereof is provided with coextensive longitudinal strengthening ribs **6—6**. Intermediate the ends thereof the plate **5** is provided with an elongated slot **7** to accommodate the anchoring bolt **8***b* that rises from the "step" of the seating terrace. Adjacent the ends thereof the plate **5** is provided with threaded openings **8** for the reception of threaded studs as will be hereinafter more fully described.

Also, in accordance with the present invention, each form thereof is provided with a top or seat-plank or slat-supporting plate and the seat-plank or slat-supporting plate of the bracket shown in Figures 1 to 3 inclusive is indicated by the reference numeral **9**.

The plate **9** is oblong and is provided on the underside thereof with a strengthening rib **10**.

The plate **9** is also provided intermediate the ends thereof, and for alignment with the slot **7** in the plate **5**, with an oblong slot **11** that also accommodates the upper end of the anchoring bolt **8***b*. In the region of the slot **11** the plate **9** is recessed as at **12** so that the anchoring nut **13'** threaded on the upper end of the anchoring bolt **8***b* is accommodated therein in a manner not to project above the top surface of the plate **9**.

Also, the plate **9** adjacent the opposite ends thereof is provided with threaded openings **13** that align with the openings **8**.

In the form of the invention shown in Figures 1 to 3 inclusive, there are threaded into the openings **8** of the base plate **5** threaded studs **14** on which are sleeved tubular shanks **15** that at one end are threaded as at **16** into the openings **13** in the plate **9**.

Threaded on the studs **14** are nuts **17** against which the lower ends of the tubular members **15** abut.

Obviously **17** may be threaded longitudinally on the studs **14** to the desired position of adjustment on the studs and thereby cooperate with the tubular shanks **15** for supporting the plate **9** of the bracket at the desired position of elevation, that is to say in any raised or lowered position as found desirable or as the conditions of construction of the seating terrace, or the like may require. Figure 1 shows the parts adjusted to position the plate **9** in its lowest position but, if the device is to be used with a bolt **8***b* shorter than that shown in Figure 1, then shanks **15** are used which are shorter than those shown in Figure 1 so that the plate **9** can be lowered to suit the height of the shorter bolt **8***b*.

Also, and as shown the plate **9** is provided with pairs of bolt-accommodating openings **18** through the medium of which a single seat-plank or a plurality of slightly spaced seat-slats **19** are positively secured to the plate **9** of the bracket.

From the above it will be seen that the bracket embodying the features of the present invention may replace the concrete or wooden blocks now generally resorted to for supporting the seat-

planks or slats elevated above the surfaces of the "steps" of the seating terrace of the stadium or the like.

The bracket, in the form shown in Figures 4 and 5, is very similar to the form of bracket shown in Figures 1 to 3, inclusive. However, in the form of the invention shown in Figures 4 and 5 the seat-plank or seat-slat supporting plate, therein designated by the reference numeral 9a, is provided with but two unthreaded openings 13a, and in the top surface thereof, concentric to the openings 13a, is provided with recesses 20. Also, in this second form of the invention the plate 9a is secured in spaced relation to plate 5 through the medium of headed studs 21 that thread into the apertures 8 in the base plate 5, with the heads of the studs being accommodated within the recesses 20. Also placed on the studs 21 are nuts 17a which serve to support the plate 9a above the base plate 5 so as to clear the upper end of the anchoring bolt 8a, which in this instance is shown as being materially shorter than the anchoring bolt 8b.

Also to clear the anchoring bolt 8a the reinforcing rib 19a of the plate 9a is notched as at 22.

In the form of the invention shown in Figure 6, the seat-plank or seat-slat supporting plate, therein indicated by the reference numeral 9b, instead of having the top thereof perfectly flat as is the case with the plates 9 and 9a, said plate 9b has a high rear part, a forwardly and downwardly sloping intermediate part and a substantially flat front part so as to give the finished seat a curvature providing for a more comfortable seating of the occupant.

Also in this third form of the invention the plate 9b is shown as in its lowermost position, and except for the shape of the top surface thereof, is substantially identical in construction with the plate 9 of Figures 1 and 2. Also for securing the plate 9b to the base plate 5 threaded studs 22' are employed, these studs at one end thread into the openings 8 of the base plate and at the upper ends thereof pass through unthreaded openings 13'' of the plate 9b. Nuts 17' are placed on the studs 22' so that when the device shown in Figure 6 is to be used on a longer bolt than that shown at 8c, the plate 9b can be raised to suit the longer bolt by turning the nuts 17' upwardly on the studs 22'.

Nuts 17' are carried by the studs.

Also the plate 9b is provided with an elongated slot 11a to accommodate the anchoring bolt 8c, and in the region of the slot 11a is provided with an elongated recess 12b to accommodate the nut 13c threaded on the upper end of the anchoring bolt 8c.

The advantages of a bracket embodying the features of the present invention are numerous and thought to be apparent. Among such advantages are of course the replacement of the wooden blocks with brackets of this character, and which brackets will last practically as long as the construction of the stadium in its entirety lasts, thus overcoming the objection to wooden blocks which must be replaced periodically, generally every three years.

As before stated this invention is designed for the steps of stadiums where the steps gradually increase in height from the lower one to the upper one, and this gradual increase in the heights of the steps makes the bolts of the steps project more at the lower steps than at the upper steps. For instance, a bolt 6b of the bottom step would project above the top of the step to a much greater extent than would a bolt 8a at the top step as shown in Figures 1 and 4. Of course, all the bolts of each step project to the same extent. Thus with the use of wooden blocks it is necessary to make the blocks of each step lower than the blocks used for the step next below. With my invention, however, the brackets can be adjusted to suit the varying distances the bolts project from the steps. For instance, say that the bracket shown in Figure 1 is used for the lowermost step where the bolt 8b projects to the maximum extent and thus the parts would be adjusted to suit the bolt 8b so that the nut 13' was tightened on the bolt 8b the step supporting bracket would be in proper position to hold the seat strips 19 at the desired height. If it was necessary to increase the distance between plate 9 and plate 5 then the nuts 17 are raised to raise the tubular shanks 15, and, therefore, the plate 9, so that the plate 9 would properly receive the nut of the bolt 8b. If it is desired to reduce the distance between the plates 9 and 5 so the device can be used on a shorter bolt than that shown at 8b then shorter shanks 15 can be used than those shown in Figure 1. The arrangement shown in Figures 4 and 5 is used for the top seat where the bolts 8a only project a small distance above the seat or step. In this case the lower plate 5 is simply fastened to the bolt 8a and studs 21 are used for fastening the top plate 9a to the plate 5. In Figure 6 different lengths of studs 22' can be used for threading into the holes 8 of plate 5 and the nuts 17' can be adjusted on the studs to adjust the distance between the top plate 9b and the lower plate 5 when the device is to be used on a longer bolt 8c.

Having thus described the invention what is claimed as new is:

1. In combination with a stadium seat step having a bolt rising therefrom, a seat bracket comprising a base plate of elongated form and extending transversely on said step and having in an intermediate part thereof a longitudinally extending slot for receiving the bolt, a seat supporting top plate of elongated form having in its intermediate part a longitudinally extending slot through which the bolt passes and said top plate having a recess surrounding the slot receiving the nut of the bolt and means for adjustably connecting the top plate with the base plate for adjusting the top plate from the base plate in accordance with the length of the bolt.

2. In combination with a stadium seat step having a bolt rising therefrom, a seat bracket comprising a base plate of elongated form and extending transversely on said step and having in an intermediate part thereof a longitudinally extending slot for receiving the bolt, a seat supporting top plate of elongated form having in its intermediate part a longitudinally extending slot through which the bolt passes and said top plate having a recess surrounding the slot receiving the nut of the bolt and means for adjustably connecting the top plate with the base plate for adjusting the top plate from the base plate in accordance with the length of the bolt, said adjusting means including threaded holes in the ends of the base plate, threaded members engaging the holes and nut members engaging the threaded members and parts of the top plate.

3. In combination with a stadium seat step having a bolt rising therefrom, a seat bracket comprising a base plate of elongated form and extending transversely on said step and having

in an intermediate part thereof a longitudinally extending slot for receiving the bolt, a seat supporting top plate of elongated form having in its intermediate part a longitudinally extending slot through which the bolt passes and said top plate having a recess surrounding the slot receiving the nut of the bolt and means for adjustably connecting the top plate with the base plate for adjusting the top plate from the base plate in accordance with the length of the bolt, said adjusting means including threaded holes in the base plate adjacent the ends thereof, threaded members threaded in said holes, nut members threaded on the threaded members and sleeves depending from the top plate and enclosing the threaded members and abutting the nut members.

CONRAD FUSS.