

[54] **DEMOUNTABLE SWING SEAT
CONSTRUCTION FOR COUNTERS AND
THE LIKE**

- [75] Inventor: **Rodney G. Sparrow**, Watertown,
Mass.
[73] Assignee: **Peerless Pressed Metal Corporation**,
Watertown, Mass.
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248/415
[51] Int. Cl.² **A47B 39/00**
[58] Field of Search 297/142, 346; 108/139,
108/140, 142, 150, 42; 248/415, 416, 418

[56] **References Cited**

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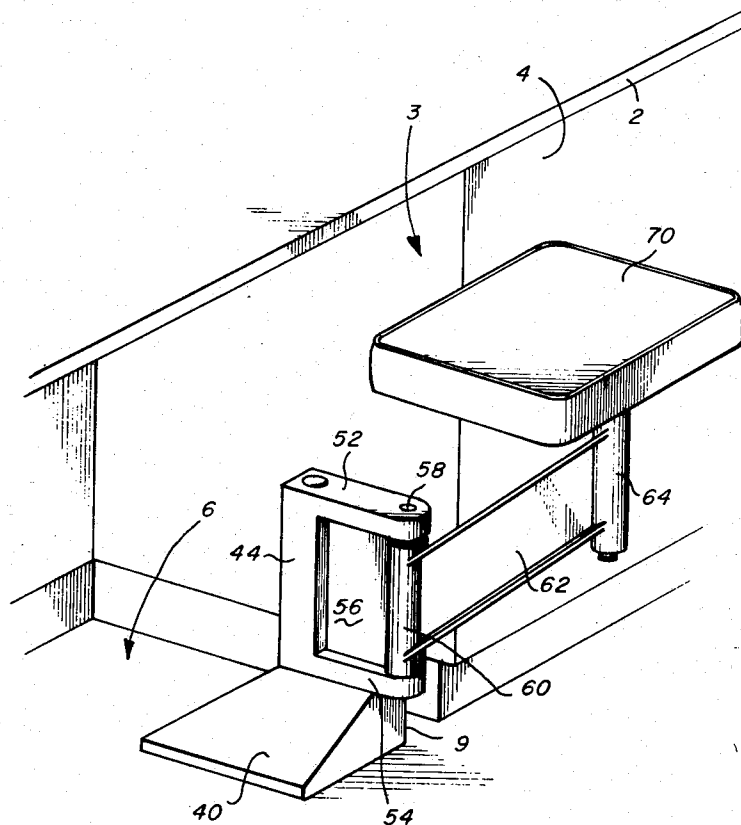
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Primary Examiner—James C. Mitchell
Attorney, Agent, or Firm—Munroe H. Hamilton

[57] **ABSTRACT**

Rapid and simplified installation of a counter swing seat is achieved by combining a pedestal base with a mating pedestal body and an elongated tie-rod member. The base is designed to be quickly and conveniently secured to a floor surface. An elongated vertically disposed tie-rod is housed in the hollow pedestal body whose underside mates with and engages around outer edges of the base in interlocking relationship therewith. The hollow pedestal body is constructed with an upper seat supporting bracket structure having at one side a tubular section in which the tie-rod is rigidly secured. The bracket structure supports a seat assembly for rotative movement. Pody weight forces on the seat are received and distributed throughout the hollow pedestal structure and the pedestal base in a manner to resist loosening or displacement of the parts and all fastening elements are concealed from view within the pedestal body.

6 Claims, 12 Drawing Figures



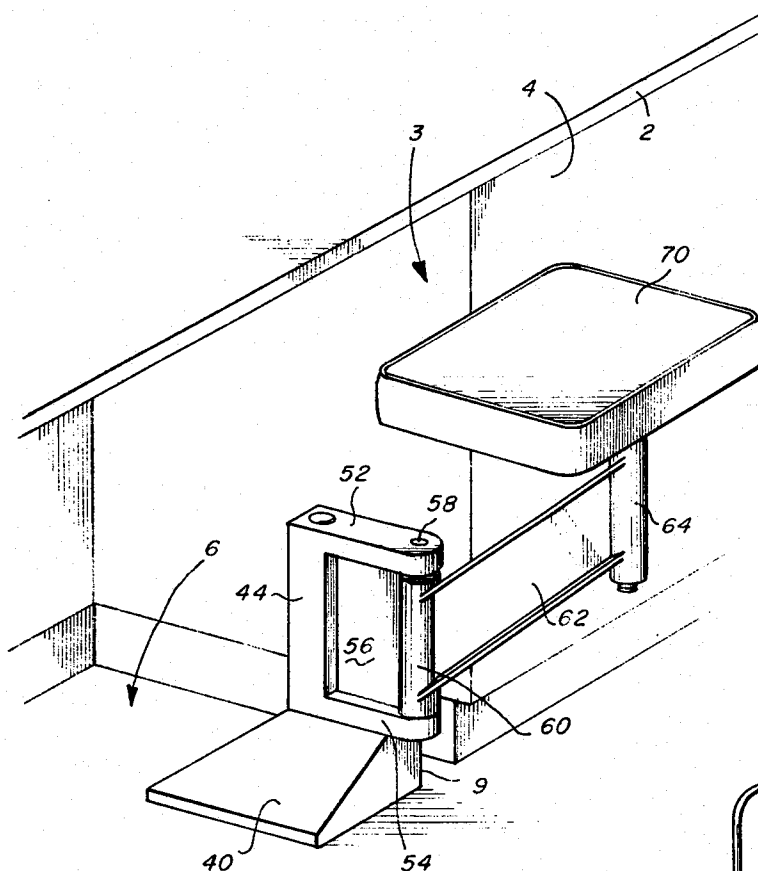


FIG. 1

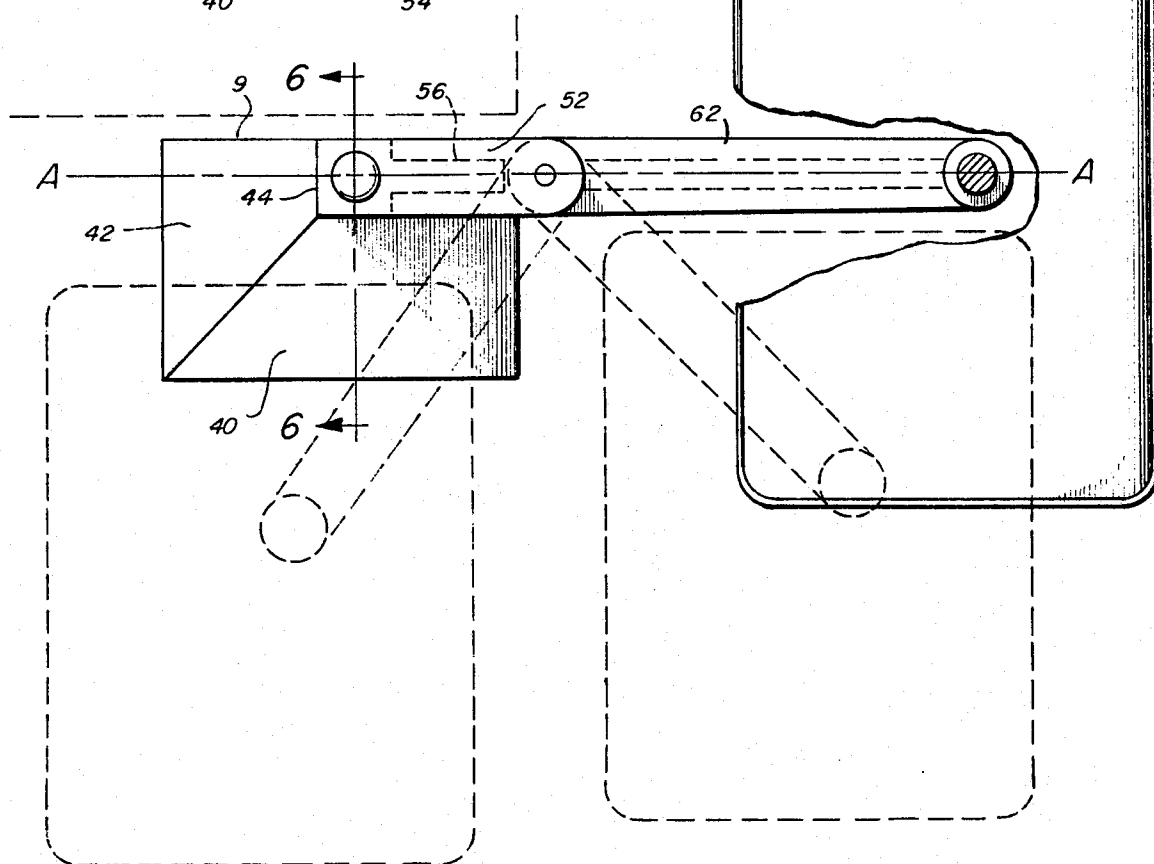
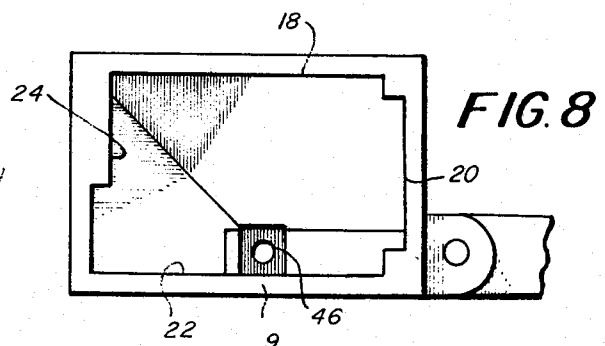
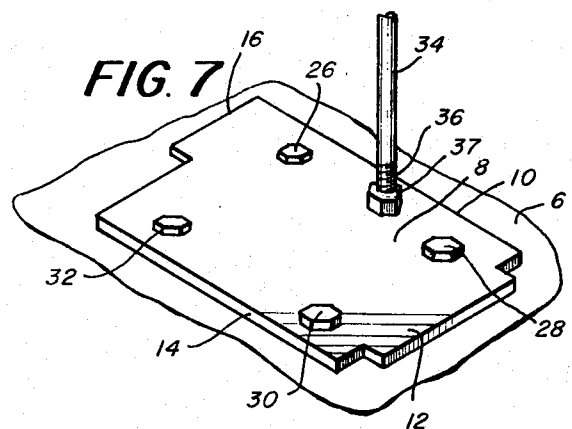
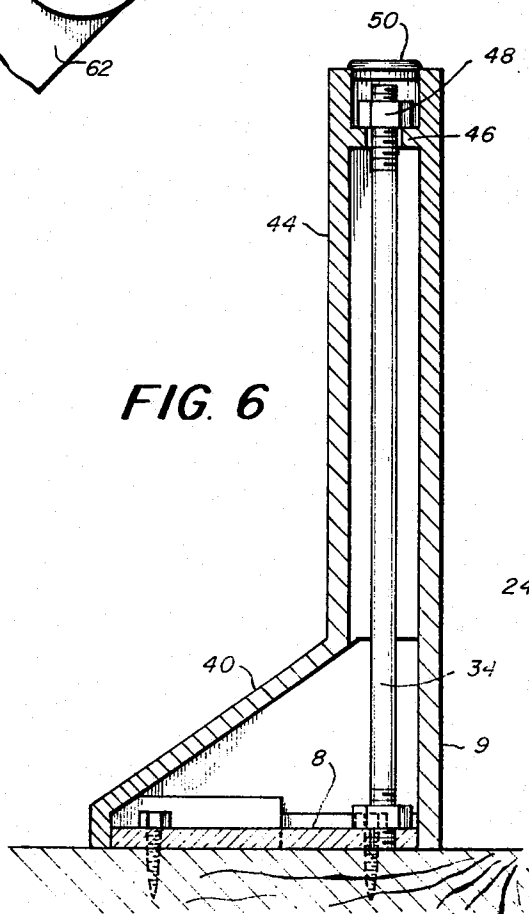
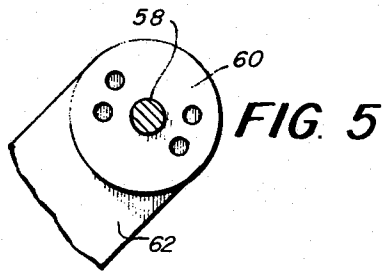
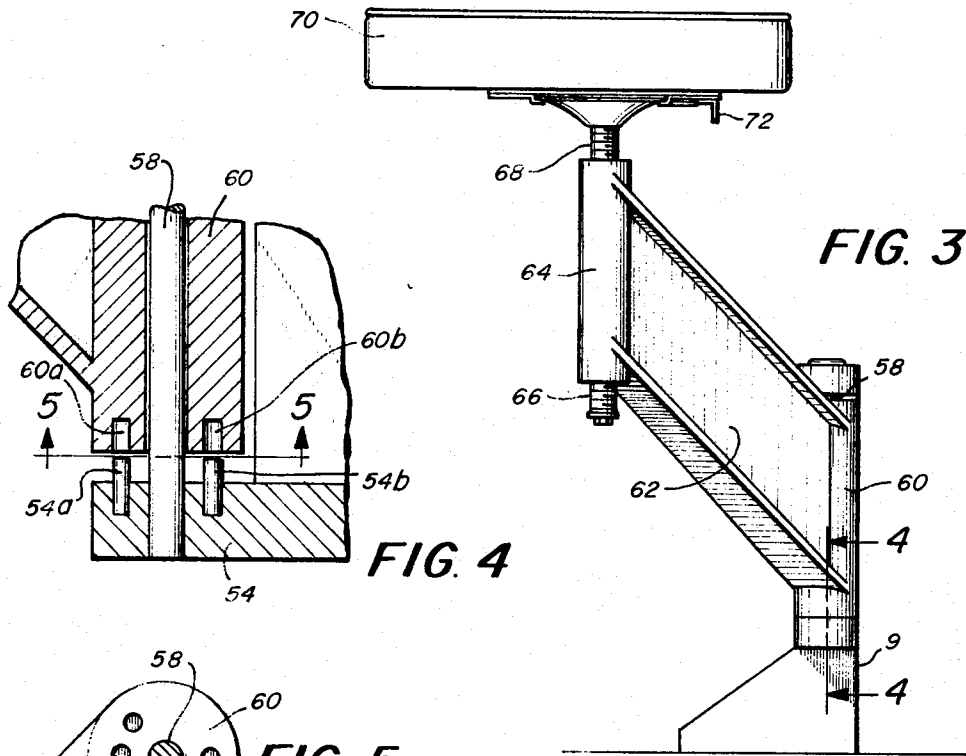


FIG. 2



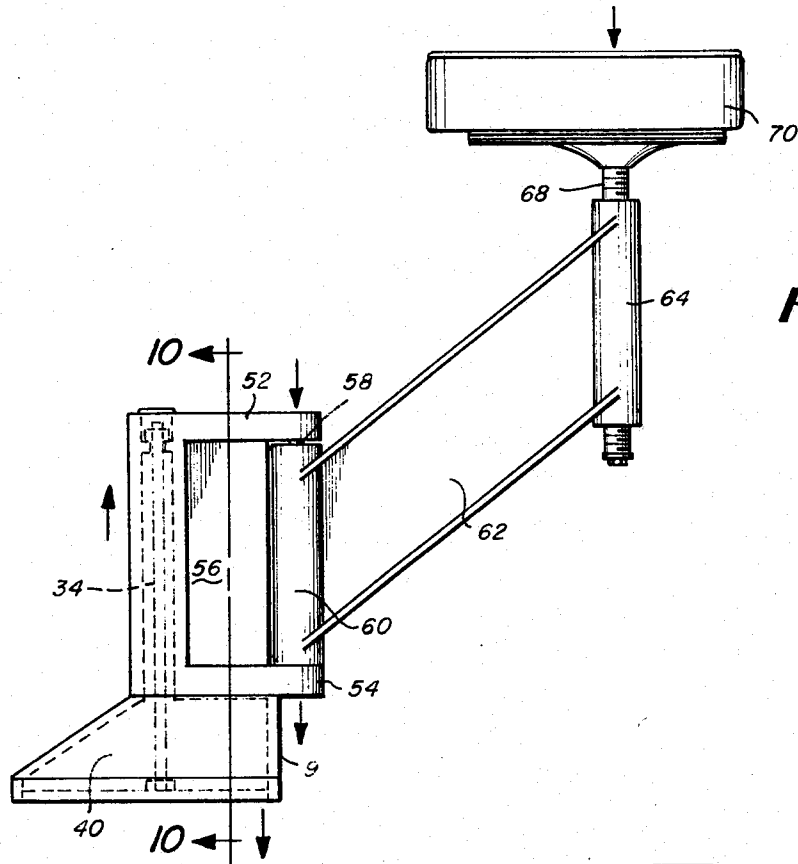


FIG. 9

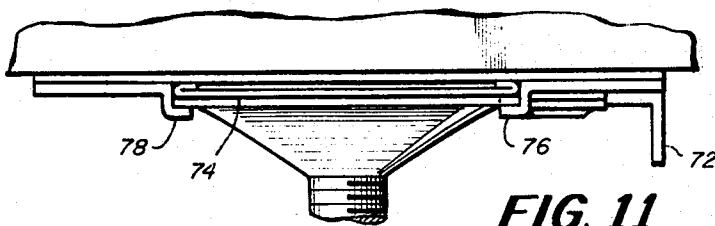


FIG. 11

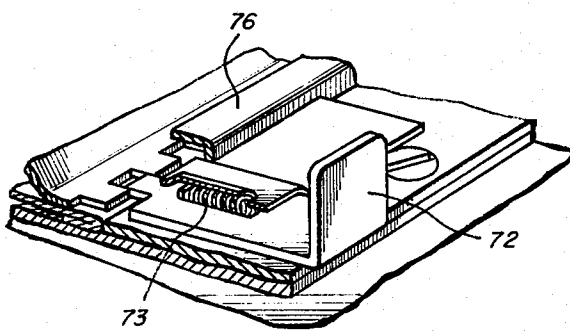


FIG. 12

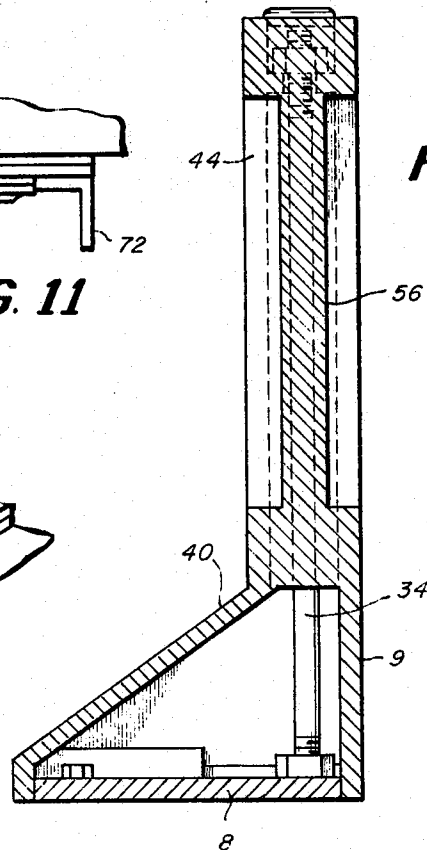


FIG. 10

DEMOUNTABLE SWING SEAT CONSTRUCTION FOR COUNTERS AND THE LIKE

BACKGROUND OF THE INVENTION

Swing seats are well-known in the art for use in bank counters and various other counter stations where it is desired to swing a seat member into and out of a stored under-counter position. Presently in use are three different types of swing seats including a pedestal type which is bolted to a floor surface; a bracket type in which a bracket member is fastened to a vertical wall surface; and a pole type in which both a wall bracket and a floor supported pole are arranged. Typical of the pedestal class of swing seat is that disclosed in U.S. Pat. No. 3,708,203 to Barecki, et al., and various other patents cited therein. In the Barecki seat, as well as others, the mounting structure is customarily secured by bolts or screws which are exposed to view in a rather unsightly manner and there may develop a lack of stability, particularly with pedestal type seats where bolts or fastenings at one side of the pedestal base are subjected to much greater stresses than those at an opposite side. To avoid this, the fastenings are required to be very solidly secured involving procedures which make installation somewhat difficult and time-consuming.

SUMMATION OF THE INVENTION

The present invention is concerned with swing seats of the pedestal type and comprises an improved demountable swing seat construction wherein a chief object is to provide an improved seat assembly which is of attractive streamlined appearance and which is capable of being installed by a simplified and rapid assembly operation. It is a further object of the invention to devise an assembly of interlocking parts which provide for greatly increased stability and resistance to unbalanced body weight forces. Still another object is to provide a combination of fastenings and interlocking parts wherein the fastenings are concealed from view and the components are arranged to transmit and distribute unbalanced forces resulting from body weight in a manner which minimizes stresses being localized at any one point or side of the pedestal structure.

With the foregoing objectives in mind, I have devised a demountable pedestal structure which includes a pedestal mounting base and a hollow mating pedestal body capable of being quickly positioned over the base and secured thereto in solidly interlocked relationship.

An important component in this demountable base structure is an elongated threaded tie-rod which is internally located within the mating pedestal body in a position to conveniently secure the parts together. When thus installed, the elongated tie-rod also functions by reason of its design and rigidity to transmit body weight forces exerted at the top of the pedestal body and to distribute these forces throughout the pedestal mounting base in a manner which prevents stresses from becoming localized at one point or side of the pedestal structure.

The nature of the invention and its other objects and novel features will be more fully understood and appreciated from the following description of a preferred embodiment of the invention selected for purposes of illustration and shown in the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a fragmentary perspective view illustrating a counter structure and showing the demountable swing seat of the invention located in an operative position at one side of the counter;

FIG. 2 is a plan view of the swing seat in a fully extended position and also indicating in dotted lines a stored under-counter position of the swing seat;

FIG. 3 is a side elevational view of the swing seat assembly;

FIG. 4 is a cross section taken on the line 4—4 of FIG. 3;

FIG. 5 is a cross sectional detail view taken on the line 5—5 of FIG. 4;

FIG. 6 is a cross section taken on the line 6—6 of FIG. 2;

FIG. 7 is a fragmentary perspective view of a pedestal mounting base element of the invention;

FIG. 8 is a bottom plan view of the pedestal structure which interlocks with the pedestal base of FIG. 7;

FIG. 9 is an elevational view of the assembled seat construction;

FIG. 10 is a cross section taken on the line 10—10 of FIG. 9;

FIG. 11 is a detail perspective view;

FIG. 12 is a fragmentary elevational view of seat adjustment means.

DESCRIPTION OF PREFERRED EMBODIMENT OF THE INVENTION

Referring more in detail to the demountable pedestal structure and swing seat assembly illustrated in FIGS. 1 to 12, inclusive, numeral 2 denotes a counter which is intended to be illustrative of a bank counter, at one side of which a bank teller, cashier or other attendant may be required to be seated. The swing seat of the invention will be described with special reference to this type of counter, however, it should be understood that the invention may also be utilized with various other types of installations where a swing seat is to be installed for movement into and out of a stored position.

As shown in FIG. 1, the counter 2 is supported on side walls as 3 and 4 extending upwardly from a floor 6. In one preferred arrangement of a swing seat with respect to the counter 2, it is desirable to locate the bottom of the pedestal member in a position such that it does not project appreciably outwardly beyond the wall 4, and it will be noted that such a location of pedestal bottom has been illustrated in FIG. 2.

As earlier noted, the principal parts of my demountable pedestal structure include a pedestal mounting base, a hollow mating pedestal body and an elongated threaded tie-rod. The pedestal mounting base is most clearly shown in FIGS. 6, 7 and 10 and is denoted by the numeral 8. The hollow mating pedestal body is denoted by numeral 9 and its bottom side is most clearly shown in FIG. 8. The tie-rod member is shown in FIG. 7 and is denoted by numeral 34.

As will be seen from an inspection of FIG. 7, the mounting base 8 is of a generally rectilinear shape and is preferably constructed of solid metal plate such as steel or aluminum. Along outer sides the base is recessed to provide relieved guide edges 10, 12, 14 and 16 which are designed to mate with and fit tightly inside of complementary bottom edges 18, 20, 22 and 24 of the hollow pedestal body 9 (FIG. 6). FIG. 7 indicates the pedestal base 8 solidly secured to the floor 6 by

means of bolts or other threaded fastenings as 26, 28, 30 and 32. These fastenings are received through holes in the base member and may, for example, be driven into formed openings provided in the floor 6.

With the pedestal base thus solidly anchored, the hollow pedestal body 9 may be quickly positioned over the base with the recessed edges 10, 12 and 14 and 16 guiding the pedestal bottom into interlocking relation with edges 18, 20, 22 and 24, and with the tie-rod 34 being locked in a position to engage with the top of the pedestal body as noted in more detail below.

As shown in FIG. 7 the lower end of the rod 34 is preferably engaged in the pedestal base by means of a threaded bottom section and is held in a vertically disposed fixed position by retaining nut 37. The tie-rod may be comprised by a rigid steel rod member of a diameter of, for example, from one-half inch to three quarters of an inch or longer. The upper end of the rod 34 is also threaded and is housed in the top section of the pedestal body 9, as suggested in FIGS. 6 and 10. The pedestal body, as shown in FIGS. 6 and 10, and also FIG. 2 has a base section which is formed with sloping sides as 40 and 42 which merge with an upwardly extending tubular bracket section 44. This combination of parts provides a trapezoidally reinforced base section of increased area especially suited to resisting twisting or torque forces exerted through a rotatable swing seat carrying body weight.

At the top of the tubular bracket section 44 is a recessed retaining collar or flange 46. The tie-rod member 34, as is best shown in FIG. 6 projects upwardly through the collar 46 against which a retaining nut 48, threaded around the upper extremity of the rod 34, tightly engages to clamp the tubular housing and the lower section of the pedestal body against the pedestal base in solidly interlocked relationship.

It will be observed that the collar portion 46 is located well below the top edge of the tubular section 44 so that there is provided a well in which the nut 48 may be conveniently positioned and threaded around the rod and when thus positioned, may be concealed from view. A cap 50 detachably fitted into the well covers the opening and provides a completely streamlined appearance with no unsightly fastening members being exposed to view at any point along the outer surface of the pedestal body.

Formed integrally with the tubular bracket section 44 at one side thereof, are upper and lower bracket portions 52 and 54 which project horizontally outwardly and which are spaced apart and rigidly supported by a vertical supporting web 56. Outer extremities of the bracket portions 52 and 54 have located therebetween a pivot element 58 and about this pivot element is rotatably mounted a sleeve part 60. The sleeve part 60 has extending angularly upwardly therefrom an arm 62 which supports a threaded cylindrical holder 64.

In the holder 64 is adjustably received a threaded seat post 68, the lower end of which projects downwardly from the holder as shown in FIG. 3. The seat member can be vertically adjusted as desired by rotating the post 68 in the holder 64. Horizontal adjustment of the seat 70 may also be carried out by means of a locking slide mechanism 72. This slide may be pulled out against the resistance of a spring 73, as shown in FIGS. 11 and 12. When the slide is thus disengaged a bottom guide plate 74 is free to be slid forwardly or rearwardly in rails as 76 and 78.

In FIGS. 1 and 2, the seat 70 and arm 62 are shown in a fully extended position away from the counter top 2, and these parts may be held in this position by means of locking pins 54a and 54b fixed in the part 54, as is more clearly shown in FIG. 4. The sleeve part 60 is formed with mating openings 60a and 60b which can be engaged over the pins as desired. By lifting the bracket part 60 and the arm 62 the seat assembly may be rotated into a stored under-counter position as indicated in dotted lines in FIG. 2. The seat assembly with arm 62 may be readily removed from the upper bracket structure of the pedestal 9 by removing the pivot element 58.

Installation of the demountable pedestal structure is quickly carried out by securing the base in a desired position and then fitting the hollow pedestal body down around the guide edges of the base relationship, interlocking relationship. At the same time the tie-rod is guided through the column member 46 and while in this position, the retaining nut 48 is engaged and tightly threaded into a clamped position. The entire operation described can be very quickly carried out with a minimum of labor and preparation. The assembly results in the components being rigidly secured together in interlocking relationship with one another in a manner to resist unbalanced body weight forces.

It is pointed out that with the arrangement of parts described, greatly increased resistance to load forces is realized. By locating the tie-rod member 34 internally of the pedestal body and inside the edges of the pedestal base, not only are the parts capable of being solidly secured together, but body weight forces exerted through the upper and lower horizontally projecting portions 52 and 54 and their connecting web 56, are rigidly supported and distributed in an effective manner.

Thus, with the seat 70 in the extended position shown in FIGS. 1 and 2 and carrying body weight, forces are exerted through the bracket portions 52 and 54 which place these parts in tension and compression. As a result, the tie-rod member 34 is in compression with load forces being transmitted through the tie-rod to the pedestal base. The transmitted forces are therefore distributed over a relatively large bearing area instead of a relatively small bearing area such as would be comprised by outer bottom edges of just the pedestal body. Strength and ease of installation are therefore combined in a unique manner with a smoothly contoured exterior of an attractive nature and with all fastening means being completely concealed.

I claim:

1. A demountable swing seat construction for supporting body weight of a user in varying positions of adjustment, said swing seat construction including a pedestal base member consisting in a rectangularly shaped base plate, fastening means for securing the base plate to a supporting surface, a hollow pedestal body overlying the base plate, a tubular load sustaining column extending vertically upwardly at one side of the pedestal body and being solidly anchored to the base plate, a weight bearing bracket structure vertically disposed at an opposite side of the pedestal body in spaced relation to the tubular load sustaining column, a reinforcing web rigidly disposed between the load sustaining column and the weight bearing bracket structure, a seat supporting arm rotatably mounted in the bracket structure and a seat member adjustably located at the oppo-

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site end of the supporting arm for receiving body weight of a user.

2. A structure according to claim 1 in which the pedestal body is formed with an enlarged bottom section and said tubular load sustaining column and reinforcing web cooperate with the weight bearing bracket structure to distribute load forces throughout the enlarged bottom section of the pedestal body.

3. A structure according to claim 1 in which the weight bearing bracket structure is located in projecting relationship with respect to one side of the pedestal to permit swinging the said supporting arm and the seat member bearing body weight in an extended arc of rotation through a range of positions of adjustment occurring in variably spaced relation to the said pedestal body.

4. A structure according to claim 1 in which the pedestal body is formed with an enlarged lower section defined by bottom bearing edges for overlying and mating with the rectangular base member and for engaging against the said supporting surface and said enlarged lower section of the pedestal body being formed with angularly disposed side wall means extending upwardly to brace the said tubular load sustaining column, the reinforcing web and the weight bearing bracket structure when the arm and seat member is swung through varying positions of adjustment relative to the hollow pedestal body.

5. A structure according to claim 4 in which the angularly disposed side wall means includes two side wall

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portions which occur in intersecting relationship to one another to form a V-shaped resisting rib.

6. In a bank counter construction of the class presenting an undercounter storage space defined by a counter top section, a floor section lying directly below the said top section, a vertical front wall section and a vertical side wall section extending inwardly under the counter top at right angles to the front wall section, the combination of an adjustable bank counter swing seat for supporting body weight of a user in varying positions of adjustment relative to the counter and being movable into a stored position beneath the said counter top section when not in use, said swing seat including a base plate, fastening means for securing the base plate on said floor section below the counter top section, a hollow pedestal body overlying the base plate and located below the said counter top section, a tubular load sustaining column extending vertically upwardly at an inner side of the pedestal body and being solidly anchored to the base plate, a weight bearing bracket structure vertically disposed at an opposite outer side of the pedestal body in spaced relation to the tubular load sustaining column in a position to project outwardly beyond the counter top section, a seat supporting arm, a seat for receiving body weight of a user adjustably mounted at one end of the arm, the opposite side of said arm being rotatably mounted in the said bracket structure for locating the seat in the storage space and swinging the seat outwardly through an extended arc of rotation into a range of positions of adjustment.

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