July 29, 1952 A. G. DEAN ET AL 2,604,930

SEAT TABLE UNIT

Filed Dec. 21, 1948 2 SHEETS—SHEET 1

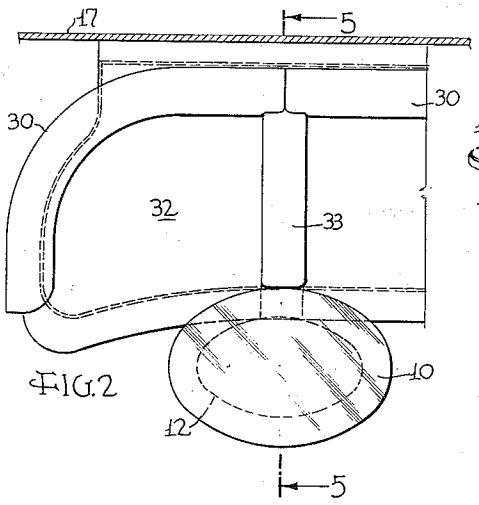


FIG. 2

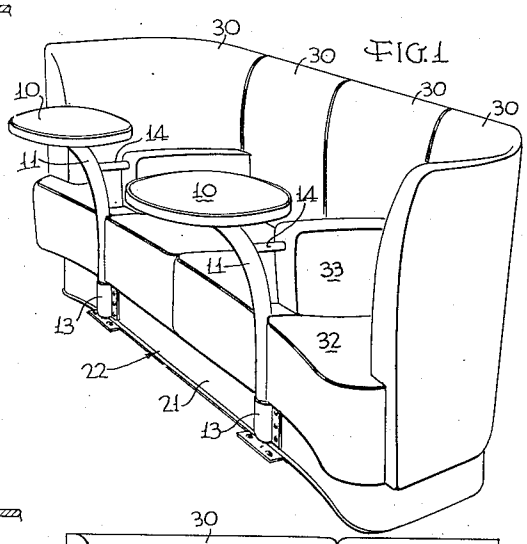


FIG. 1

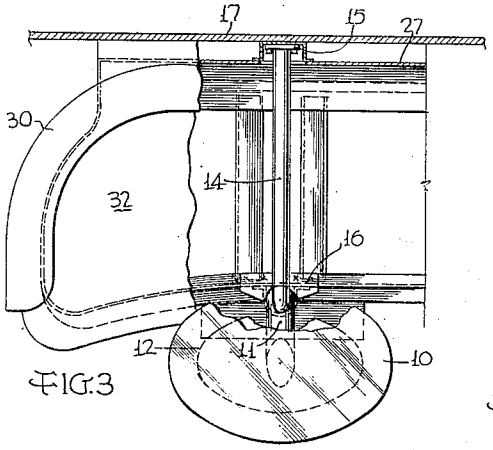


FIG. 3

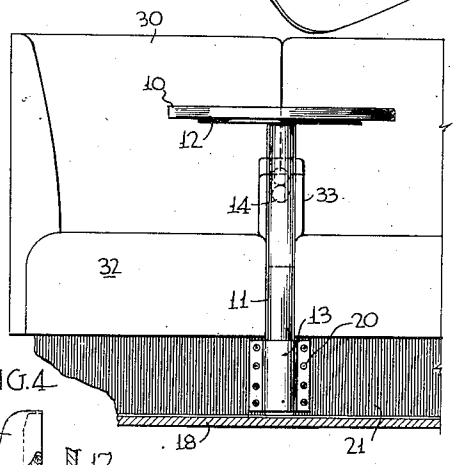


FIG. 4

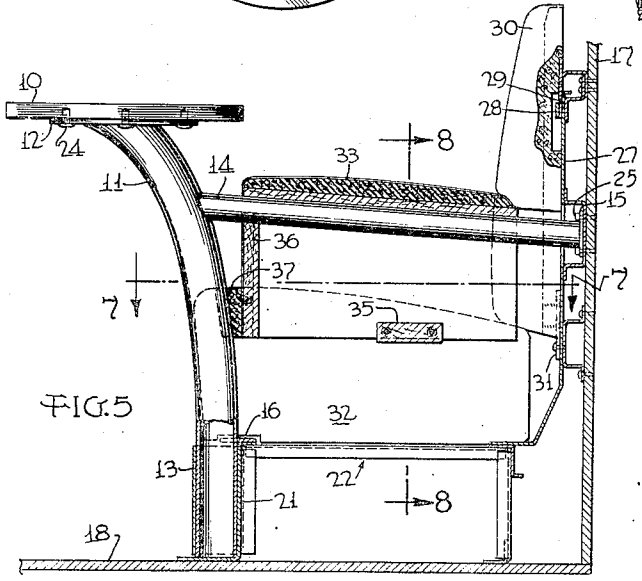


FIG. 5

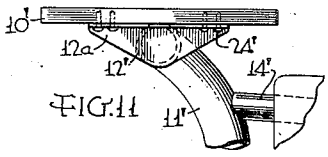


FIG. 11

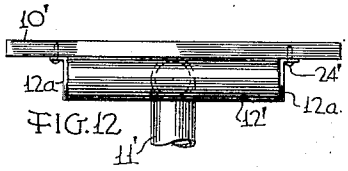


FIG. 12

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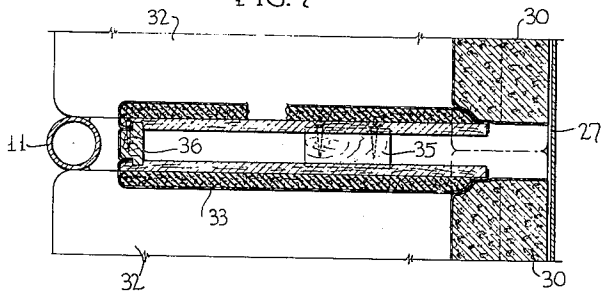
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FIG. 7



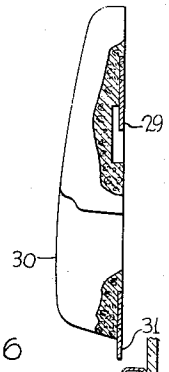
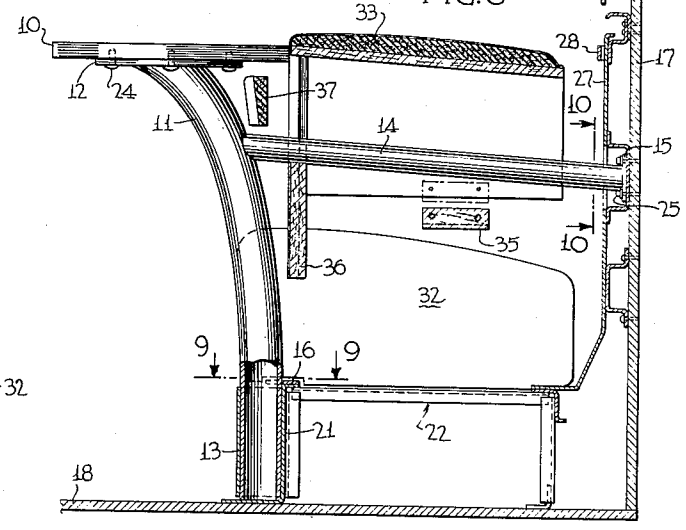


FIG. 6



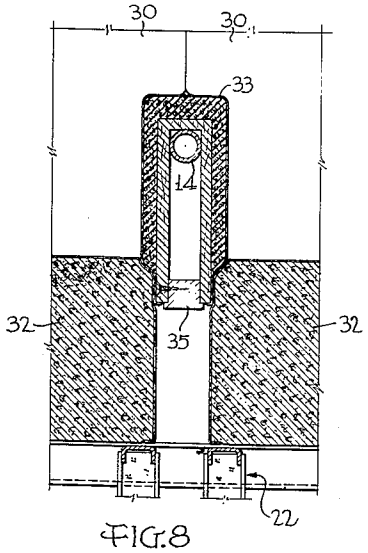


FIG. 8

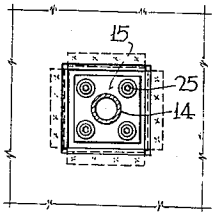


FIG. 10

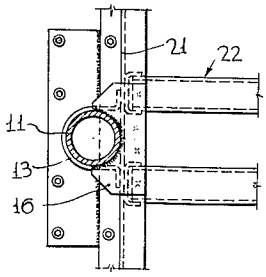


FIG. 9

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UNITED STATES PATENT OFFICE

2,604,930

SEAT-TABLE UNIT

Albert G. Dean, Narberth, and William H. Chandlee, Jr., South Hampton, Pa., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Application December 21, 1948, Serial No. 66,418

11 Claims. (Cl. 155—128)

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This invention relates to seat-table units, especially adapted for seats such, for example, as the fixed-position sofas of railway lounge cars, and has for an object the provision of improvements in this art.

One of the particular objects of the invention is to provide a strong but attractive table unit with a simple support which can readily be secured in a fixed position relative to a seat position and which is highly resistant to damaging forces in all directions.

Another object is to provide a table unit which when installed becomes a coordinated part of a seat or sofa.

The above and other objects and advantages of the invention will be apparent from the following description of an exemplary embodiment, reference being made to the accompanying drawings, wherein:

Figure 1 is a front perspective view of two table units assembled with a multi-place seat unit or sofa as in a lounge car;

Figure 2 is a partial top plan view of the assembly shown in Fig. 1;

Figure 3 is a plan view similar to Fig. 2 but with parts removed to show other parts in horizontal section below;

Figure 4 is a front elevation;

Figure 5 is a vertical section taken on the line 5—5 of Fig. 2;

Figure 6 is a section similar to Fig. 5 but showing the parts during the assembly stage;

Figure 7 is a horizontal section taken on the line 7—7 of Fig. 5;

Figure 8 is a vertical section taken on the line 8—8 of Fig. 5;

Figure 9 is a partial horizontal section taken on the line 9—9 of Fig. 6;

Figure 10 is a partial vertical section taken on the line 10—10 of Fig. 6;

Figure 11 is a side elevation of a modified form of table top anchorage; and

Figure 12 is a front elevation of the modified form shown in Fig. 11.

The table comprises a top 10, a pedestal 11, a top anchorage 12, a base member 13, and a brace 14 secured as by a bracket 15 to any convenient structure, such as the sidewall 17 of a compartment. The compartment floor is designated by the numeral 18. The base member serves, either directly or indirectly, to fasten the pedestal to the floor so as to provide vertical support and also to resist leaning movements of the pedestal in one or more vertical planes, the specific base member 13 illustrated being formed as a bracket

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adapted to be secured as by screws 20 to the vertical front base plate 21 of a fixed seat base 22. Preferably, the pedestal is rigidly secured to the base member 13, as by welding, to resist turning movement therebetween. The rear side of the pedestal 11 is fitted into and secured, as by arc welding, to a concave forward edge of a plate 16, and this plate is in turn welded to the seat base 22, as shown especially in Figs. 5, 6 and 9. The top anchorage 12 in the first form of Figs. 1 to 10 is made as a flat plate which is rigidly secured to the top end of the pedestal 11, as, for example, by welding it to the horizontally cut upper end of the pedestal. The anchorage plate 12 is secured to the under side of the table top, as by screws 24. The brace 14 is rigidly secured to the rear side of the pedestal 11, as by welding. Its bracket plate 15 is secured to the rear wall 17 by screws 25. The pedestal is curved forwardly above the base member 13, being approximately vertical from the floor to the top of the base member, as shown in Fig. 5. The curvature is slight in the lower portions and greatest near the upper end.

The table unit thus made and mounted has full utility apart from coordinated structural assembly with a seat or couch, being very useful, for example, in connection with movable chairs which may be placed beside it; and while its greatest advantages are realized when it is structurally assembled with a fixed couch, as illustrated, the functioning of the simple unit alone will be described first.

One of the primary objects in designing an article of this type is to make it attractive in appearance. This object is achieved here by the graceful curve of the pedestal and the fact that only a single metal tube is used for the pedestal; also by the smaller tubular metal brace and the smooth fillet weld between the tubes. The attractive appearance is enhanced by chrome plating, enameling or the like.

On the mechanical side, the tubes provide great strength for size and weight, especially in torque. The base connection provides resistance to leaning movement in a vertical plane transverse to the brace tube; and the brace resists movement in a vertical plane perpendicular to the first-mentioned plane, that is, the second plane through the axis of the tubular brace, besides which the brace prevents turning movement of the pedestal about a vertical axis. The horizontally cut surface of the bent upper end of the pedestal provides a broad support for the top anchorage plate 12 and, moreover, this dis-

position of the top relative to the pedestal provides great resistance to side bending of the top because in effect it increases the diameter of the pedestal and also utilizes a torque resistance component of the pedestal along with the bending component, i. e., an eccentricaly applied vertical loading. If the pedestal were truly vertical, substantially only bending resistance of the pedestal would be involved; if the pedestal tube were disposed in a fully horizontal position and the top secured on its upper side, substantially only torque would be involved; but in the intermediate position shown, both torque and bending resistance of the pedestal act against side bending of the top. The strong resistance of the table to bending and twisting in all directions is very important because in railway cars, particularly, passengers are likely to sit on the edge of a table.

Besides its artistic appeal and its mechanical strength, the outwardly curved pedestal has the further advantage of placing the table top out where it is convenient and clear of the space between seated passengers, while at the same time keeping the base inwardly where it will not interfere with the feet of passengers.

A preferred form of table top mounting where a large top is used is shown in Figs. 11 and 12. Here the upper end of the pedestal 11' is arcuately cut to horizontally extending cylindrical form and welded to a top anchorage 12' in the form of a metal tube. To the ends of the tube there are welded brackets 12a having horizontal top flanges to which the table top 10' is secured by screws 24'. It will be obvious that this mounting provides great resistance of the table to bending in all directions.

As stated above, while the table has pronounced advantages when used alone, it has further advantages when used with a sofa having arm rests. The sofa herein illustrated comprises, in addition to the seat base 22, a back support 27 having loops 28 near the top adapted to receive hooks 29 of removable seat backs 30. At their lower ends the seat backs 30 are provided with depending projections 31 adapted to be held by loops, screws, or any suitable means to the back support. The back support is provided with cups or recesses adapted to allow the screws 25 of the brackets to pass through the bottom and find firm securement in the wall 17. The back support is spaced from the wall 17 and open at the top to allow hot air to rise from heaters located behind the seats.

The seats also include cushions 32 and arm rests 33 adapted to fit between the cushions. The arm rests are U-shaped and, as shown in Fig. 6, are adapted during assembly to be dropped down over brace tubes 14 with their lower edges between two cushions 32 which have previously been put in place. Before an arm rest is dropped fully down and while its lower edge is located above the level of the cushions, a filler block or blocks 35 of any desired length is placed between the ends of the U-sides and secured, as by screws or the like. Also, a front filler block 36 is started upward along guides between the sides of the arm. Then when the arm is fully down, the front spacer may be secured by screws or the like. If desired, a concave positioning member 37 may be secured to the lower end of the front spacer block before it is used and this positioning member fits against the rear side of the pedestal to hold the arm rest firmly in position (see Fig. 5). After the arm rests have been placed, the backs 30 are dropped down into position. The backs hold the arm rests forward against the pedestals. The braces 14 except at the front end are covered and concealed by the arm rests. One table serves the occupants of two adjacent seats.

This seat construction is inexpensive to manufacture, provides an easy method of assembly and is not readily taken apart except by authorized persons having suitable tools.

While one embodiment of the invention has been described in detail for the purpose of illustration, it is to be understood that there may be various modifications within the scope of the invention.

What is claimed is:

1. A seat-table unit comprising in combination, a pedestal disposed alongside a longitudinal plate forming part of the base of an arm seat mounted in front of a side wall, a recessed plate welded to the rear of the pedestal and to the seat base, a clamp embracing said pedestal and secured to the base plate, said pedestal being curved forward in front of the arm of the seat, a top secured on the upper end of the curved pedestal portion, a lateral brace welded to the rear of the pedestal along the curve and extending through the seat arm to an anchorage at said wall, said arm being U-shaped and having vertical movement downward on said brace before assembly and at its lower end fitting between adjacent cushions of the seat.

2. A seat-table unit comprising in combination, a pedestal secured in front of the seat, a table top on said pedestal, a brace rod secured to the rear side of said pedestal and extending to an anchorage at the rear of the seat, an arm for said seat having vertical movement on said rod before final assembly position, said arm at its lower end fitting between seat cushions and, when in final position fitting at its ends between the pedestal and seat backs, and means insertable in the arm below the rod for holding the arm down in final assembly position.

3. A seat-table unit comprising in combination, a base member extending across the front of a seat, a rigid pedestal secured at its base to said base member so as to be held against movement in the vertical plane of said base member, said pedestal being relatively straight vertically at its lower end and being curved outward toward its upper end away from the plane of said base member and seat front, a table top secured on the top end of said curved upper end of the pedestal, and a rigid brace secured to the rear side of said pedestal near its upper end and extending transversely of said plane in a generally horizontal direction to a fixed anchorage at the rear of the seat to resist movement of the pedestal transversely of the plane of said base member.

4. A seat-table unit comprising in combination, a vertically deep base plate extending across the front of the seat, a rigid pedestal secured at its base to said plate which holds the pedestal rigidly against movement in the plane of the plate, said pedestal being relatively straight vertically at its lower end and being curved outward toward its upper end away from the plane of said plate and seat front, a table top secured on the top end of said curved upper end of the pedestal, and a rigid brace secured to the rear side of said pedestal near its upper end and extending transversely of said plane to a fixed anchorage at the rear of the seat to resist movement of the pedestal transversely of the plane of said base member.

5. A seat-table unit comprising in combination, a vertically deep base plate extending across the front of the seat, a rigid pedestal secured at its base to said plate which holds the pedestal rigidly against movement in the plane of the plate, said pedestal being relatively straight vertically at its lower end and being curved outward toward its upper end away from the plane of said plate and seat front, a cross-bar secured to the upper end of said pedestal in a plane parallel to the plane of said plate, table top supporting brackets secured to the ends of said cross-bar, and a rearwardly extending rigid lateral brace secured to the rear side of said pedestal near its upper end and extending transversely of said plate plane to a fixed anchorage at the rear of the seat to resist movement of the pedestal transversely of the plane of said base member.

6. A seat-table unit comprising in combination, a rigid tubular metal pedestal having a vertically relatively straight lower portion secured at its lower end to the floor at the front of a seat and having an upper portion curved outward toward its upper end away from the front of the seat, a rearwardly extending rigid tubular metal brace disposed in the plane of pedestal curvature welded to the rear side of the pedestal near its upper end, an anchorage for said brace at the rear of the seat, a tubular metal cross bar disposed in a plane perpendicular to the plane of curvature welded to the upper end of the pedestal, and metal plate top support brackets welded to the ends of said cross bar.

7. A seat-table unit comprising in combination, a rigid pedestal having a vertically relatively straight lower portion anchored at its lower end at the front of a seat and curved outward away from the front of the seat toward its upper end, a top fixture for a horizontal table top secured to the top end of the pedestal, and a rearwardly extending horizontal rigid brace secured to the rear side of the pedestal near its upper end on the convex side of its curvature, the other end of the brace being secured to a fixed anchorage at the rear of the seat, the anchorage for the lower end of the pedestal providing strong resistance to movement in a plane perpendicular to said brace.

8. A seat-table unit comprising in combination, a rigid pedestal having a vertically relatively straight lower portion secured at its lower end to the floor at the front of a seat and having an upper portion curved outward toward its upper end away from the front of the seat, a rearwardly extending rigid brace rigidly secured to the rear side of the pedestal near its upper end and secured at its other end to an anchorage at the rear of the seat, and a top support rigidly secured at a horizontal joint to the curved upper end of the pedestal.

9. A seat-table unit comprising in combination, a rigid pedestal having a vertical lower portion secured at its lower end to the floor in front of an arm seat and a curved upper portion extending away from the front of the seat, a top secured on said pedestal, a rearwardly extending rigid brace rigidly secured at one end to the rear side of the pedestal and at the other end to an anchorage behind the seat, the intermediate part of said brace passing through the arm of the seat.

10. A seat-table unit comprising in combination, a rigid pedestal having a vertically relatively straight lower portion secured at its lower end to a seat base by an outer clamp and a recessed plate welded to the back of the pedestal and attached to the seat base, the pedestal having a curved upper portion extending away from the front of the seat, a top secured on said pedestal, and a rigid brace rigidly secured to the rear side of said pedestal near its upper end and to an anchorage at the back of the seat.

11. A seat-table unit comprising in combination, a rigid pedestal having a vertical lower portion secured at its lower end to the floor in front of a seat, the pedestal having a curved upper portion extending away from the front of the seat, the seat being mounted in front of a wall and having a back support disposed in front of the wall, a top secured on the upper end of said pedestal, and a rearwardly extending rigid brace secured to said pedestal near its upper end, the brace at its rear end entering a recess in the back support and being anchored to the wall.

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WILLIAM H. CHANDLEE, JR.

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