Sept. 9, 1947. E. C. BOOTH 2,427,185

METAL TABLE

Filed Aug. 7, 1944 2 Sheets-Sheet 1

Fig. 1.

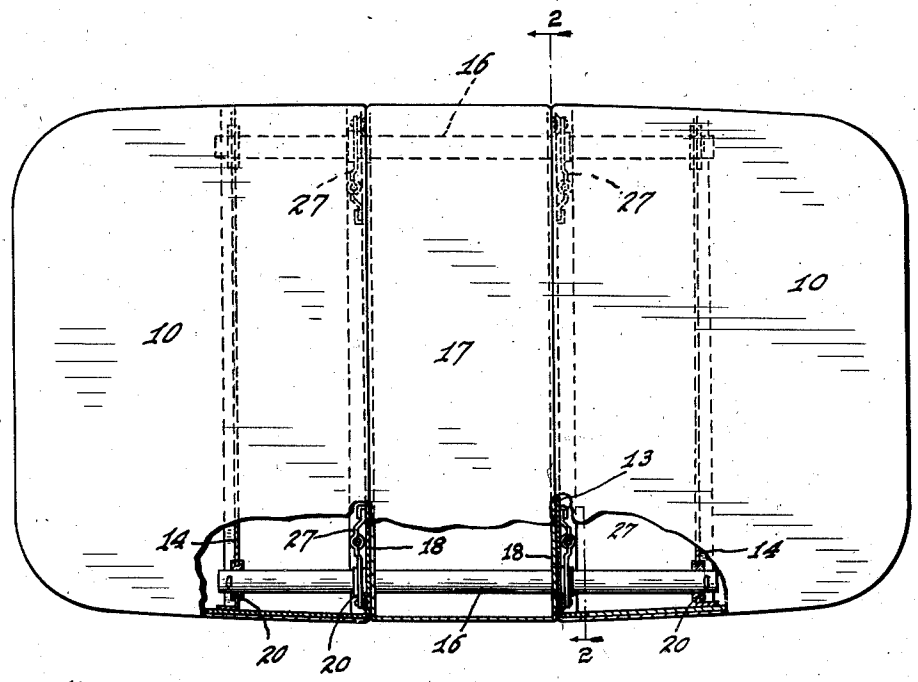
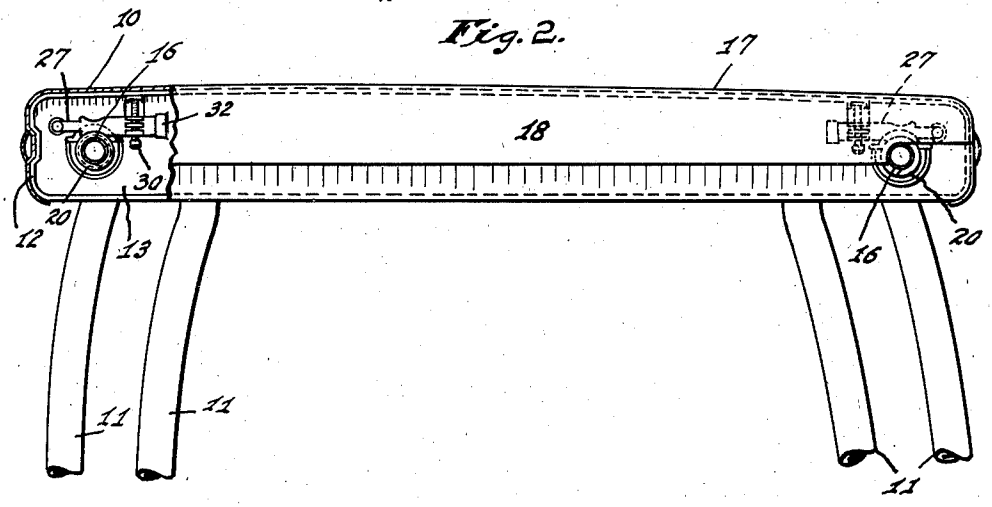


Fig. 2.



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METAL TABLE

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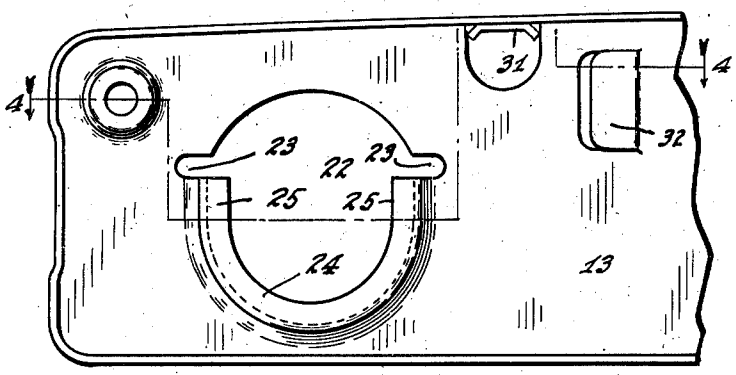


Fig. 3.

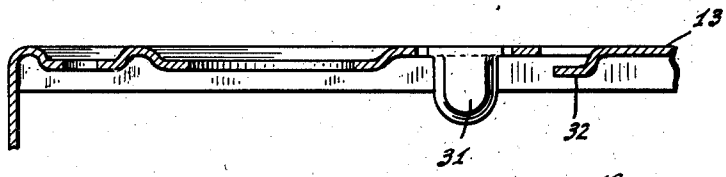


Fig. 4.

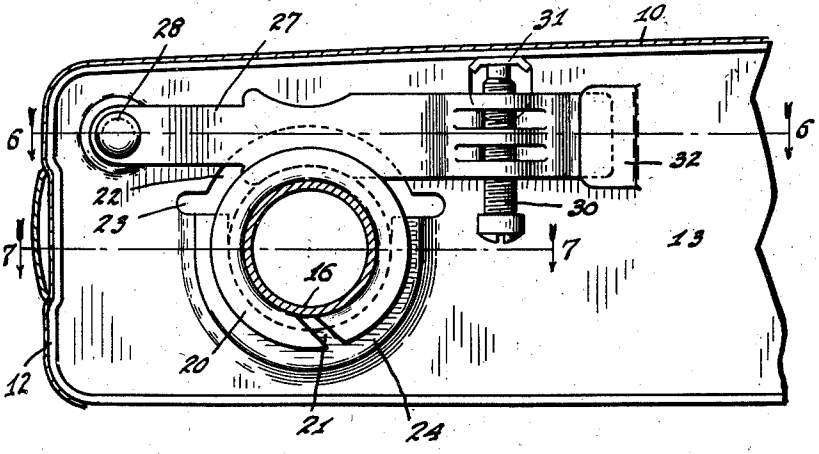


Fig. 5.

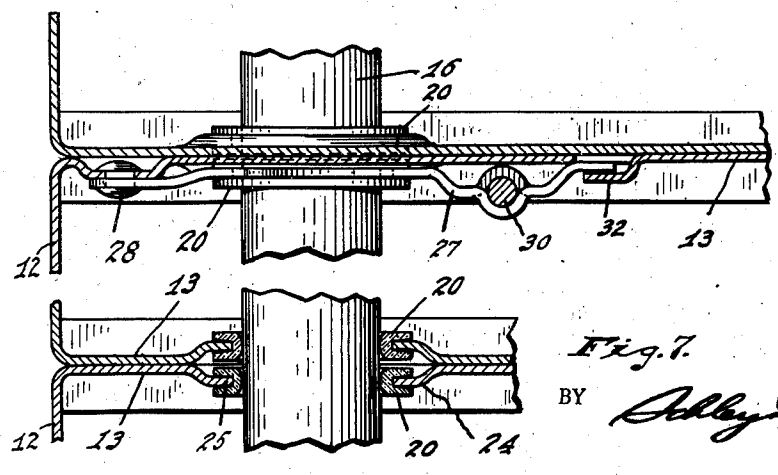


Fig. 6.

Fig. 7.

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METAL TABLE

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8 Claims. (Cl. 311—42)

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My invention relates to tables and more particularly to extensible tables formed of metal. Such tables commonly comprise two sections each provided with a top in the form of a sheet-metal stamping suitably re-inforced, the two sections being slidably interconnected by two parallel guide rods to provide for the insertion of an extension leaf between the two tops.

It is the object of my invention to improve the construction of tables of the type above described. More specifically, it is one of my objects to eliminate the possibility of disagreeable noise which sometimes results from relative movement of the metal guide-rods through the comparatively thin sheet-metal members in which they are received. Another object of my invention is to provide means by which the tops of the two table-sections may be made accurately flush with each other when the table is collapsed or flush with the upper surface of the extension leaf when the table is extended.

In carrying out my invention, I provide each table section with a pair of coaxial non-metallic bushings or grommets for the receipt of each of the guide rods by which the two sections of the table are interconnected. At least one of the two grommets nearest the center of each guide rod is mounted for vertical adjustment relative to its associated table-section so that the meeting edges of the tops of the two sections can be adjusted relatively to make them flush with each other.

The accompanying drawing illustrates my invention: Fig. 1 is a plan view of a metal table with portions of the top broken away; Fig. 2 is a transverse vertical section on the line 2—2 of Fig. 1; Fig. 3 is a fragmental elevation of the inner end wall of a table-top; Fig. 4 is a section on the broken line 4—4 of Fig. 3; Fig. 5 is a view similar to Fig. 3 showing a grommet and its adjusting means in place; and Figs. 6 and 7 are fragmental sections on the lines 6—6 and 7—7 respectively of Fig. 5.

The table shown in Fig. 1 comprises two sections, each having a top 10 provided with legs 11 at its outer corners. Each top 10 is formed with a downwardly extending peripheral flange 12 and with an inner end wall 13. In addition, each section is provided with reinforcements including, in the construction shown, a transversely extending cross member 14. Each top, including the end wall 13 and reinforcing members 14, is desirably built up of sheet-metal stampings.

As will be clear from Fig. 1, the two sections of the table are interconnected by a pair of parallel guide-rods 16 which pass through and are slidably supported from the end walls 13 and cross-members 14. The two guide-rods are desirably in the form of metal tubes. By relative movement of the two table-sections along the guide rods the two tops 10 can be brought together or can be separated for the interposition of an extension leaf 17. The leaf 17 is desirably formed as a sheet-metal stamping and provided with a peripheral flange 18 notched to receive the guide rods 16 so as to be located and supported thereby, as will be clear from Fig. 2.

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Where it passes through the end wall 13 or reinforcing member 14 of each table-section, each of the guide rods 16 is surrounded by a non-metallic grommet 20 provided with an outwardly presented peripheral groove adapted to receive the edges of the opening in the sheet-metal member (13 or 14) through which the guide rod 16 extends. Conveniently, each grommet 20 is of a synthetic plastic and is split, as indicated at 21 in Fig. 5, so that it may be collapsed to an extent sufficient to permit it to be inserted into an opening in the sheet-metal member with which it is to be associated. If the grommet is made of thermoplastic material, the split 21 may be eliminated and the grommet inserted after warming it to a temperature sufficient to permit its distortion.

When the grommet has been inserted as just described and the guide rod 16 placed within it, it can not be again collapsed and hence will remain permanently located relative to the table-section. The grommets 20 prevent metal-to-metal contact of the guide-rods with the sheet-metal elements through which they pass, and hence eliminate the possibility of disagreeable noises which might otherwise result when the table-sections are moved toward or away from each other.

In order to bring the upper surfaces of the two table tops 10 into a flush condition, grommets associated with the end walls 13 are mounted for vertical adjustment relative to such end walls. To accomplish this result, the openings 22 which receive the guide-rods in each end wall 13 are formed as indicated in Fig. 3. As there shown, each such opening is elongated vertically and is provided at its side edges with notches 23. Below such notches, the metal at the edge of the opening is offset inwardly relative to the table-top to provide an arcuate flange 24 having upwardly projecting parallel extensions 25. The distance between the extensions 25 corresponds approximately to the base diameter of a grommet

20, so that a grommet may be disposed in association with the opening 22 with the flange 24—25 received in its peripheral groove and be capable of vertical movement while still located axially of itself by the flange.

To control the position of a grommet on the flange 24—25 I employ an adjusting lever 27 pivoted to the end wall 13 by a bolt or rivet 28. The lever 27 is of a thickness such that it can be received in the peripheral groove of the grommet and its side edge is desirably provided with a notch approximately corresponding in curvature to the base of the grommet-groove, as will be clear from Fig. 5. Beyond the grommet 20, the adjusting lever 27 is screw-threaded for the reception of an adjusting screw 30 adapted to bear against an ear 31 struck up from the end wall 13. A tongue 32 offset from the end wall 13 provides a guide for the free end of the adjusting lever 27.

At the inner end of each table-top 10 the table top will bear downwardly on the guide-rod 16 as the result of the force of gravity, in consequence of which it is necessary only to limit upward movement of the grommets 20 associated with the end walls 13. The adjusting levers 27 and their associated screws 30 provide a means by which such upward movement can be limited. Where it is deemed necessary to provide for bringing the two table tops into a flush condition only when the table is collapsed, only two of the adjusting levers 27, one in association with each guide-rod 16, need be employed, as is indicated in Fig. 6. But by employing four of the adjusting levers, one at each point where a guide-rod 16 passes through an end wall 13, the table tops 10 can be brought into a condition flush with each other when the table is collapsed or flush with the extension leaf 17 when the table is extended.

In operating the adjusting mechanism, the table sections are brought into the relative positions they are to occupy when a flush condition of the table tops is desired, and the screws 30 are adjusted either to lower the top which is too high or to raise the top which is too low until the desired flush condition is attained. The provision of this adjustment makes it unnecessary to control manufacturing operations with the accuracy which would be required if the vertical location of grommet-receiving openings in the end walls 13 were depended upon to maintain the two table-tops flush with each other.

It is not essential that the guide rods 16 be slidable in both sections of the table; but I prefer to make them so, as it is thereby possible to increase the extensibility of the table while still maintaining an adequate spacing of the two points at which each guide rod is supported in each table section. It is of course necessary to provide the grommets 20 only at points where there is relative movement between guide rods and table-sections.

I claim as my invention:

1. In an extension table having two sections each including a top and legs, guide rods interconnecting said sections and longitudinally slidable relative to at least one of them to permit the inner ends of the two tops to be brought together or separated for the insertion of an extension leaf between them, a bushing slidably receiving each guide rod, means supporting said bushing for vertical movement in one of said table-sections, and means for adjusting said bushing vertically in said supporting means.

2. The invention set forth in claim 1 with the addition that said adjusting means comprises a lever pivoted at one end to the table section on a horizontal axis and extending over and bearing on said bushing, and an adjusting screw for adjusting the other end of said lever.

3. In an extension table having two sections each including a top and legs, guide rods interconnecting said sections and longitudinally slidable relative to at least one of them to permit the inner ends of the two tops to be brought together or separated for the insertion of an extension leaf between them, each table section being provided with a sheet-metal end wall extending in a substantially vertical plane beneath and transversely of the top at its inner end, said end wall being provided with an opening through which one of said guide rods extends, said opening being larger than said guide rod, the metal around the lower edge of said opening being offset from the plane of the wall to form a generally U-shaped flange, a guide-rod receiving bushing in each of said openings, said bushing being provided with a peripheral groove receiving said flange; and means for adjusting said bushing vertically relative to said flange.

4. In an extension table having two sections each including a top and legs, guide rods interconnecting said sections and longitudinally slidable relative to at least one of them to permit the inner ends of the two tops to be brought together or separated for the insertion of an extension leaf between them, each table section being provided with a sheet-metal end wall extending in a substantially vertical plane beneath and transversely of the top at its inner end, said end wall being provided with an opening through which one of said guide rods extends, said opening being larger than said guide rod, the metal around the lower edge of said opening being offset from the plane of the wall to form a generally U-shaped flange, a guide-rod receiving bushing in each of said openings, said bushing being provided with a peripheral groove receiving said flange; a lever pivotally attached at one end to said end and extending across and bearing on said bushing, and means for adjusting the other end of said lever.

5. In an extension table having two sections each including a top and legs, guide rods interconnecting said sections and longitudinally slidable relative to at least one of them to permit the inner ends of the two tops to be brought together or separated for the insertion of an extension leaf between them, each table section being provided with a sheet-metal end wall extending in a substantially vertical plane beneath and transversely of the top at its inner end, said end wall being provided with an opening through which one of said guide rods extends, said opening being larger than said guide rod, the metal around the lower edge of said opening being offset from the plane of the wall to form a generally U-shaped flange, a guide-rod receiving bushing in each of said openings, said bushing being provided with a peripheral groove receiving said flange; a lever pivotally attached at one end to said end and extending across and bearing on said bushing, an adjusting screw mounted in said lever, and an ear struck up from said end wall, the upper end of said screw bearing on said ear.

6. In an extension table having two sections each including a top and legs, guide rods interconnecting said sections and longitudinally slidable relative to at least one of them to permit the inner ends of the two tops to be brought together or separated for the insertion of an extension leaf

between them, a member disposed beneath the top of each section near each inner corner thereof, said guide rods being slidably received within said members, and means for vertically adjusting each of said members relative to its associated top.

7. In an extension table having two sections each comprising a top and legs, one of said sections being provided with two parallel, longitudinally spaced sheet-metal reinforcing members extending transversely of and beneath the top, each of said reinforcing members having a web disposed in a vertical plane, alined holes in said webs, bushings of nonmetallic material in said holes, and guide rods slidable in said bushings, said guide rods being operatively connected to the other table-section.

8. In an extension table having two sections

each comprising a top and legs, each of said sections being provided with two parallel, longitudinally spaced sheet-metal reinforcing members extending transversely of and beneath the top, each of said reinforcing members having a web disposed in a vertical plane, alined holes in said webs, bushings of nonmetallic material in said holes, and guide rods slidable in said bushings.

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The following references are of record in the file of this patent:

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