Aug. 23, 1966 A. BEDOL 3,267,889

COLLAPSIBLE TABLE

Filed Feb. 26, 1965

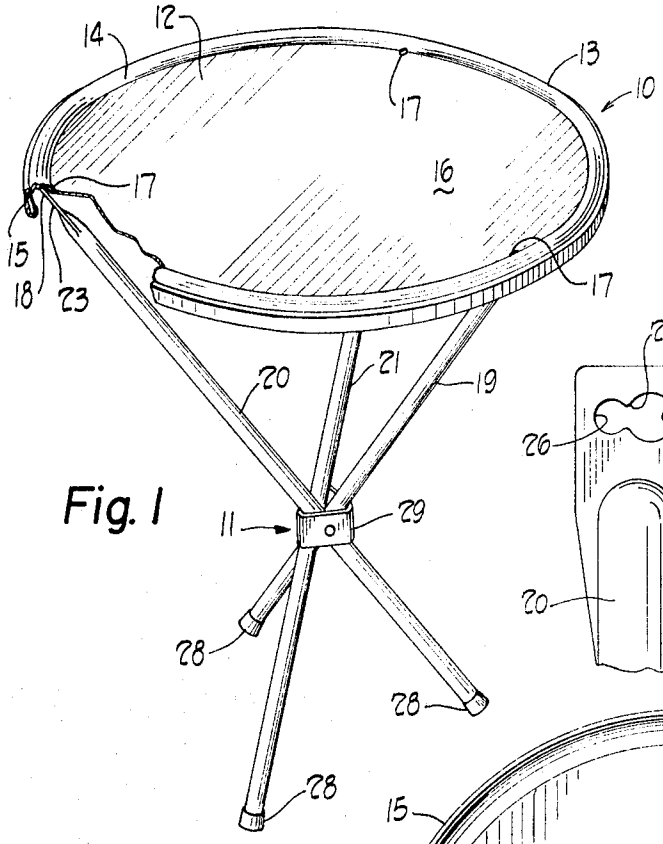


Fig. 1

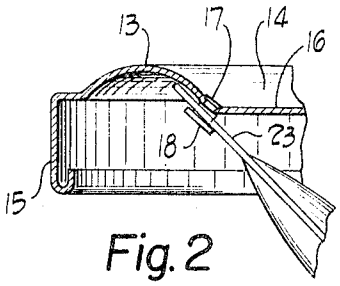


Fig. 2

Fig. 4

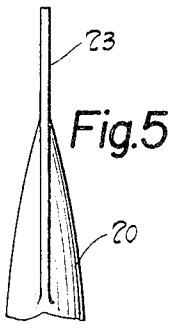


Fig. 5

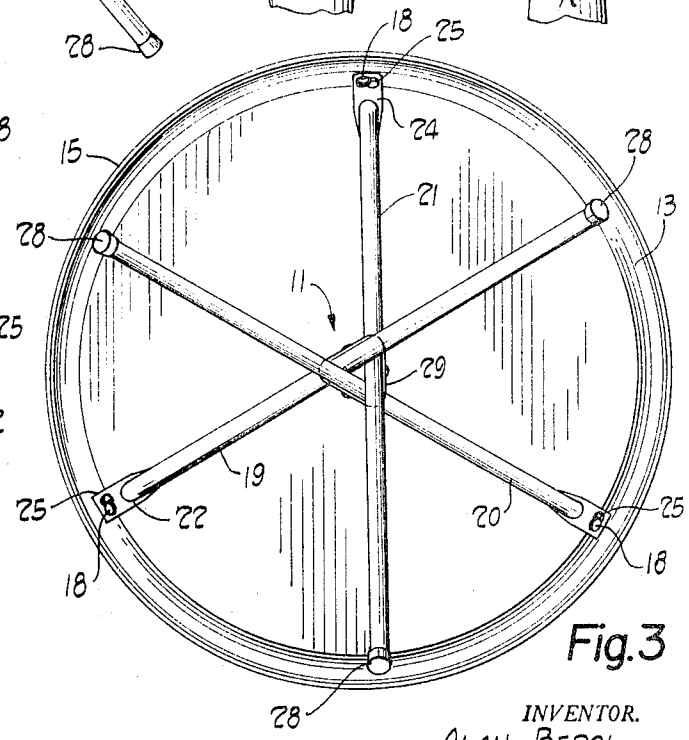


Fig. 3

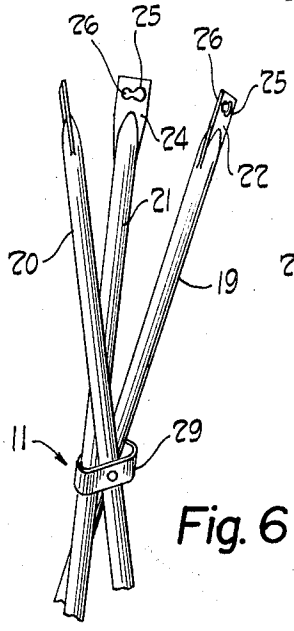


Fig. 6

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COLLAPSIBLE TABLE

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This invention relates to tables and particularly to collapsible sheet metal tables.

The primary object of the invention is to provide a collapsible table having a separable tripod leg unit that may be securely attached to, or detached from, the table top through interlocking means, requiring no tools.

Another object of the invention is to provide a collapsible table, of the type stated, whose top has spaced studs, on the underside thereof, adapted to interfit slots at the upper end of each of the tripod legs in interlocking engagement.

Another object is to provide a collapsible table having a table top supporting structure that is foldable upon itself, to facilitate storage of the table in a minimum space, when in a collapsed state.

Another object of the invention is to provide a collapsible table that is possessed of a high degree of stability when in its erected condition.

Still another object is to provide a novel and facile method of attaching a foldable frame to a table top, whereby the frame and top are held against accidental detachment, thereby facilitating the moving of the table from place to place, when in its assembled condition.

A further object of the invention is to provide a foldable table that is simple, yet sturdy, in construction, inexpensive to manufacture, and pleasing in appearance.

These and other objects of the invention will become apparent from a reading of the following specification and claim, together with the accompanying drawing, wherein like parts are referred to and indicated by like reference numerals, and wherein:

FIGURE 1 is a perspective view of the collapsible table that is the subject of the invention, with a portion of the top broken away;

FIGURE 2 is an enlarged sectional view of the edge of the table top, illustrated in FIGURE 1, showing how the top and one of its supporting legs interlock, when the table is in its assembled state;

FIGURE 3 is a bottom plan view of the assembled table;

FIGURE 4 is a front view of the top end of one of the table legs;

FIGURE 5 is a left end view of the same; and

FIGURE 6 is a perspective view of the upper half of the leg frame in its semi-collapsed condition.

Referring more particularly to the drawing, there is seen in FIGURE 1 the collapsible table that is the subject of the invention, broadly indicated by reference numeral **10**.

The table comprises a sheet material top, or tray **12**, and a foldable tripod frame **11**, the latter being adapted, when in its expanded condition, to support the top **12** in a horizontal plane.

The frame, or tripod **11**, comprises three elongated tubular legs **19**, **20** and **21**, of uniform diameter and length, which are assembled in clustered relation and operatively connected to one-another, intermediate their ends, by an encompassing triangular collar **29**, as described in my U.S. Patent No. 3,160,121, issued December 8, 1964.

Each of the legs has affixed to its lower end a tip **28** which is preferably formed of rubber, plastic, or other suitable non-slipping material.

The tripod **11** and the top **12** may be joined to form the table **10**, or separated and collapsed for compact storage, when not in use. Furthermore, the top **12**, itself, may be used as a serving tray when not combined with the tripod **11**.

The top **12** is circular in configuration, and is preferably stamped and formed from a blank of sheet metal, and may have a suitable decorative design imprinted thereon.

The formed top has a plane central portion **16** bounded by a circumferential convexo-concave ridge **13**, rising above the central portion **16**, which is in turn, bounded by a dependent peripheral rim **15**. The curvature of the ridge **13** is such that its inner face **14** meets the central portion **16** at a continuous abutment having an inclination of approximately 30° to the plane of the central portion **16**.

Three, equi-spaced studs **17** are mounted on the underside of the ridge face **14** at its abutment with the central portion **16**, of the top **12**, as is seen most clearly in FIGURE 2.

Each stud **17** has a circular, disc-like, head **18** mounted on the end of the neck thereof and spaced outwardly of the concave undersurface of the ridge **13**, at an approximate angle of 30° to the plane of the central portion **16** of the top **12**.

The upper end of each leg **19**, **20** and **21** is flattened to provide anchor plates **22**, **23** and **24**, respectively.

Each anchor plate has two intersecting circular holes, or apertures, **25** and **26** therethrough, joined through a locking slot **27** whose width is slightly less than the diameter of the stud neck so that the stud neck can only be forced therethrough, from one aperture to the other, by exerting lateral pressure. In other words, the stud neck cannot pass freely through the slot **27**.

The diameter of the entry aperture **25** is such that the stud head **18** may be fitted therethrough, while the diameter of the stud retaining aperture **26** is such that it will retain the stud neck therethrough, with the stud head **18** positioned outwardly thereof, as seen in FIGURE 2.

By referring to FIGURE 3 it will be seen that the entry apertures **25** are to the right of the longitudinal axes of legs **19** and **21**, and to the left of the longitudinal axis of leg **20**, for a reason to be explained hereinafter.

To secure the legs **19**, **20** and **21** to the top **12**, the top is placed on a flat surface with its underside facing up, as seen in FIGURE 3.

The tripod **11** is then expanded and the anchor plates **22**, **23** and **24** of the legs **19**, **20** and **21**, respectively, are positioned over the table top studs **17** with their entry apertures **25** aligned with the stud heads **18**. Each anchor plate is then pressed against the top ridge **13** until the stud heads **18** enter and pass through the anchor plate entry apertures **25**.

With pressure still maintained the anchor plates **22** and **24** are moved clock-wise, as seen in FIGURE 3, to move the stud neck from entry aperture **25** through lock slot **27** into retaining aperture **26**. Then the anchor plate **23** is moved counter-clockwise to similarly move its associated stud neck from entry aperture **25** through lock slot **27** into retaining aperture **26**.

The leg anchor plates are now in locked engagement with the studs **17** due to the fact that each anchor plate is held in pressed engagement against the underside of the top ridge abutment wall **14** by the stud heads **18**, which cannot pass through the anchor plate retainer apertures **26**, which snugly surround the stud necks now positioned therethrough.

The so assembled table **10** may now be lifted by its top **12**, and turned upright, without danger of the tripod unit **11** becoming separated therefrom.

The tripod unit **11** can be intentionally removed by reversing the assembly procedure, just described.

When the table **10** is in its dis-assembled condition, the tripod legs may be collapsed against one another, as seen in FIGURE 6, for storage with the top **12** in a small space.

However, due to the fact that the leg anchor plates **22** and **24** must be moved in a direction opposite to that of anchor plate **23**, for disengagement, the several anchor plates react against one another to prevent accidental, or unintentional, disengagement of the legs.

Furthermore, the studs **17** cannot move from retaining aperture **26** to entry aperture **25** unless intentionally pressed through lock slot **27**, which does not offer free passage for the stud **17**.

It will now be clear that there has been provided a device which accomplishes the objectives heretofore set forth.

While the invention has been disclosed in its preferred form, it is to be understood that the specific embodiment thereof as described and illustrated herein is not to be considered in a limited sense, as there may be other forms or modifications of the invention which should also be construed to come within the scope of the appended claim.

I claim:

A collapsible table, comprising in combination, a circular sheet material top having a plane portion bounded by a circumferential convexo-concave ridge rising above the central portion, the ridge defining a continuous circular abutment at the central portion at approximately 30° to the plane of the under-side thereof; three, circumferentially spaced, headed studs mounted on the under-side of the top, at the circular abutment, with their heads spaced outwardly of the abutment in a plane inclined at approximately 30° to the under-side of the top central portion; three support leg elements, arranged in clustered relation within a collar positioned intermediate the ends

of said legs, and adapted to hold said legs in either expanded or collapsed positions; each leg having a flat anchor plate, at the upper end thereof, extending crosswise of its longitudinal axis; each anchor plate having two intersecting holes therethrough defining a first, stud entry, aperture and a second, stud retaining, aperture, positioned on opposite sides of the longitudinal axes of the legs, joined through a lock slot; the diameter of the first aperture being greater than that of the stud head, the diameter of the second aperture being less than that of the stud head; the entry and retaining apertures of one of the leg anchor plates being reversely positioned relative to the longitudinal axis of its leg, to those of the other two leg anchor plates; the several table-top studs being adapted to be inserted through the leg anchor plate first apertures, when the legs are in their expanded positions, and moved laterally thereof through the lock slots into the second apertures, whereat the leg anchor plates are pressed between the table-top abutment and the stud heads, to secure the top and legs together in interlocked engagement.

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