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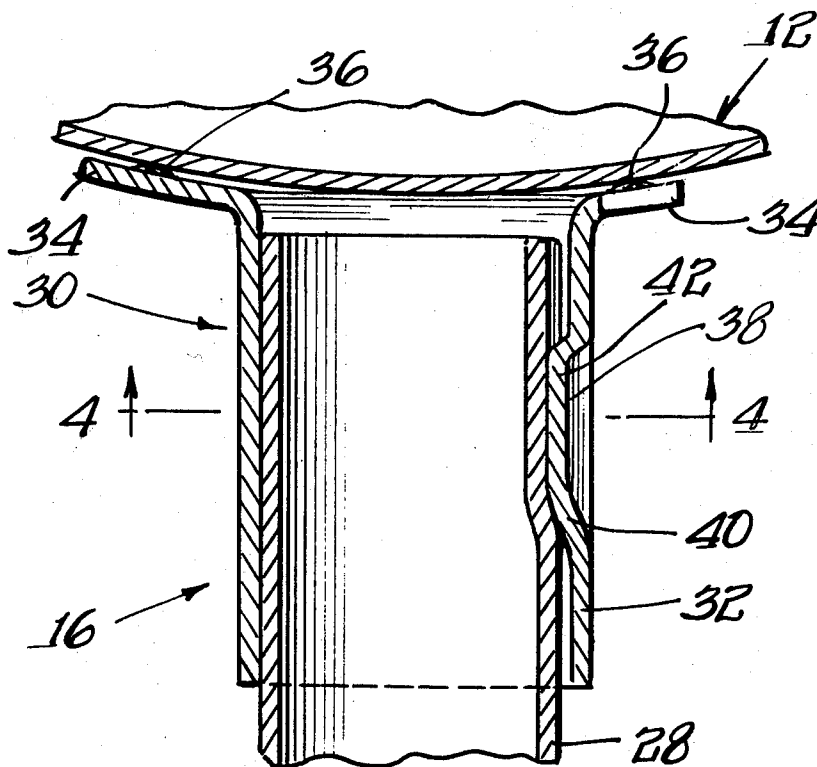
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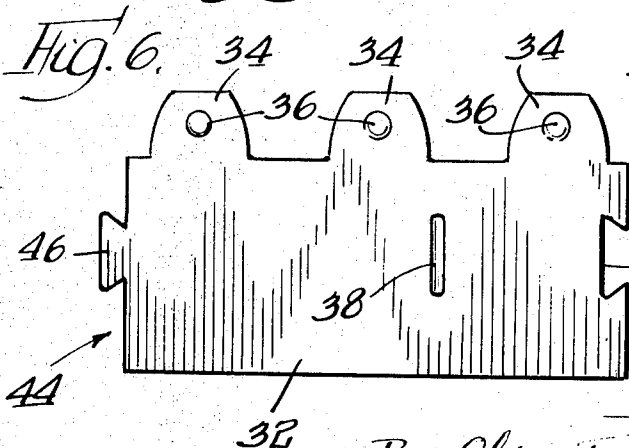
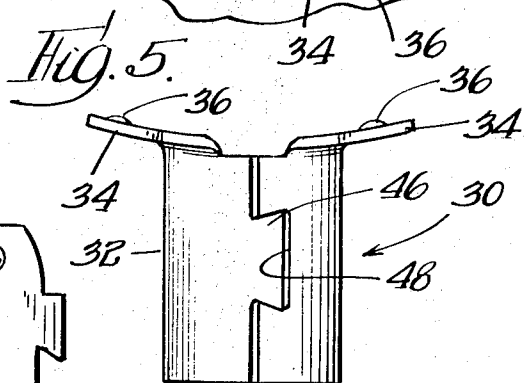
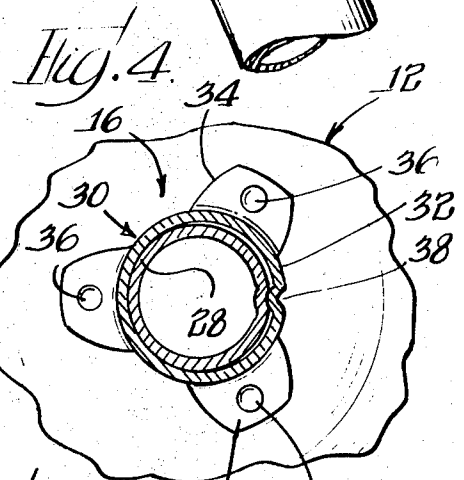
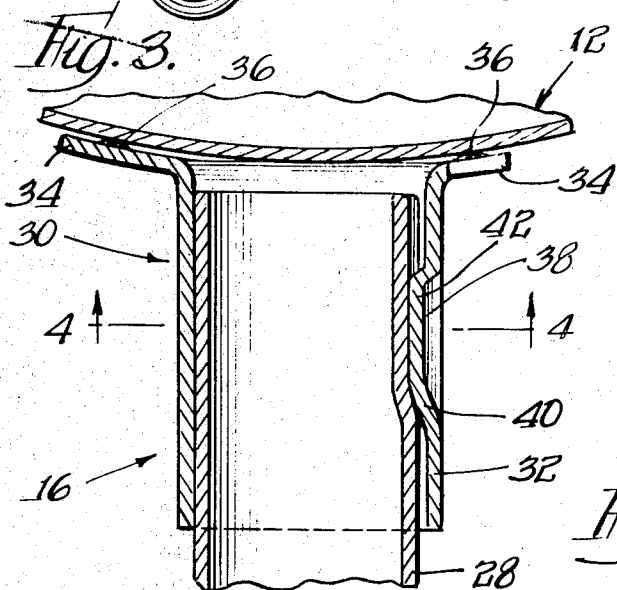
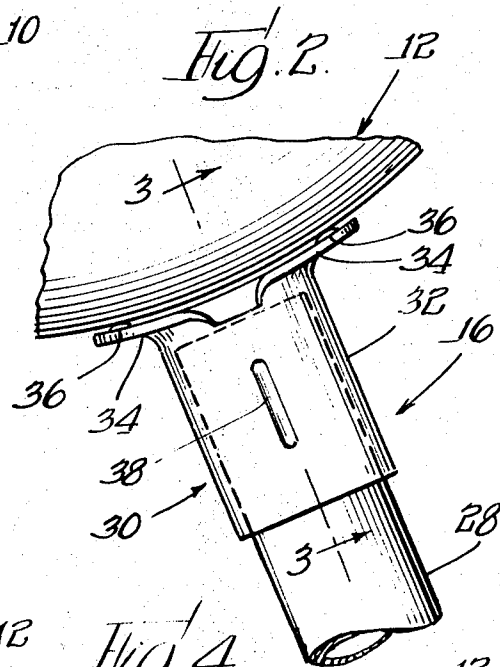
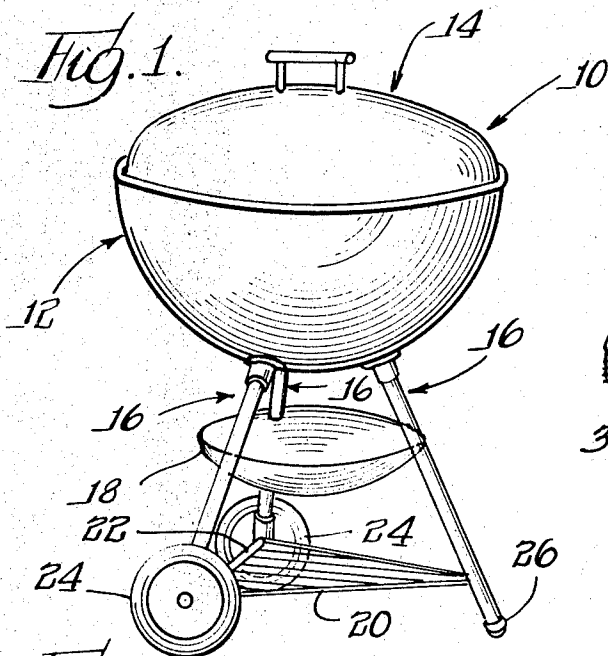
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[54] **BARBECUE SUPPORT ARRANGEMENT**
 3 Claims, 6 Drawing Figs.

[52] U.S. Cl. 126/25,
 108/159, 126/304, 248/165, 248/188
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 F24b 3/00, 24c 15/08
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 108/159

ABSTRACT: A support arrangement for use with outdoor barbecue equipment includes a smooth-walled tubular leg and a mounting element interference fit to one end of the leg. The mounting element itself comprises a tubular coupling portion which telescopes with the leg end and detent means projecting from the wall of the coupling portion to engage the leg end in an attachably deformable manner.





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BARBECUE SUPPORT ARRANGEMENT

BACKGROUND OF INVENTION

This invention relates generally to outdoor cooking equipment and more particularly to arrangements for elevatedly supporting barbecue kettles and the like.

Because of its structural strength and economy, metal tubing has proved eminently suitable for use as the legs for outdoor barbecue equipment. Nevertheless, problems have arisen in utilizing such tubing for this purpose, especially with respect to mounting of the legs to the main body of the grill. Permanent factory mounting is impractical because attachment of the legs adds considerable bulk to the unit and, accordingly, is undesirable from the standpoint of packaging and shipping. Tubular fitments with various types of set screws have commonly been secured to the body of the grill for receiving the tubular legs, but even this approach has presented drawbacks in that some kind of tools are required by the end user in assembling his equipment or that undesirable projections, in the form of thumb screws or the like, are presented.

Therefore, an important object of the present invention is to provide a new and improved support arrangement for outdoor barbecue equipment which overcomes the aforesaid difficulties of the prior art.

Another object of the present invention is to provide a support arrangement comprising a tubular leg and a mounting element which arrangement is fashioned for repeated assembly and disassembly of the parts.

Still another object of the invention is to provide a support arrangement which facilitates a quick, manual assembly of a tubular leg without the need for fasteners.

And still another object of the invention is to provide a mounting element for a tubular leg which presents a smooth, catch-free exterior.

These and other objects and features of the invention will become more apparent from a consideration of the following descriptions.

BRIEF DESCRIPTION OF THE DRAWING

The invention, both as to its structure and its mode of operation, will be better understood by reference to the following disclosure and drawing forming a part thereof, wherein:

FIG. 1 is a perspective view of a kettle-type barbecue that is supported in compliance with the principles of the present invention;

FIG. 2 is an enlarged, fragmentary view showing a leg support arrangement used in the barbecue equipment of FIG. 1;

FIG. 3 is a further enlarged view taken substantially along the line 3-3 of FIG. 2;

FIG. 4 is a cross-sectional view taken on a reduced scale along the line 4-4 of FIG. 3;

FIG. 5 is an elevational view of the mounting element used in the support arrangement of the invention, showing in particular the clinching tongue and mating slot; and

FIG. 6 is a plan view of the sheet metal blank used to make the mounting element of FIG. 5.

DETAILED DESCRIPTION

Referring now in detail to the drawing, specifically to FIG. 1, barbecue apparatus indicated generally by the reference numeral 10 comprises, in the illustrated embodiment, a substantially hemispherical grill body or kettle 12, a removable cover 14 and three equiangularly displaced leg support arrangements 16. In accordance with conventional practice, the kettle 12 contains a suitable number of grill plates or racks, not shown; and the leg support arrangements 16 diverge from the kettle 12 to accommodate an ash catching bowl 18 and a utility shelf 20 beneath the kettle. Conveniently, two of the leg support arrangements 16 are spanned by an axle 22 that is connected to a pair of rubber-tired wheels 24. The third leg support arrangement terminates at its lower end in a stabilizing foot cap 26.

Turning to FIGS. 2-4 inclusive, a typical leg support arrangement 16 comprises a smooth-walled, imperforate tubular leg 28 and a cooperating mounting element 30. The mounting element 30 includes a tubular coupling portion 32 which is sized to receive the upper end of the leg 28 in loosely telescoping engagement, the mounting element 30 additionally including a selected number of equiangularly spaced basal flanges 34. Advantageously, each of the flanges 34 is fashioned with a raised welding button 36 which extends generally toward the lower surface of the grill body 12 for facility in making a fusion attachment of the mounting element 30. Other types of attachments may, of course, be employed.

In compliance with the features of the present invention, the mounting element 30 is provided with a leg-securing detent arrangement which, in the illustrated embodiment, comprises a longitudinally extending rib 38, rib 38 projecting from the wall of coupling portion 32 to engage the upper end of leg 28 in a deformable manner. The rib 38 specifically projects inwardly of the tubular coupling portion to wedge the leg 28 against the confronting interior sidewall region of the coupling portion, as is best shown in FIGS. 3 and 4.

In accordance with the principles of the present invention and in compliance with the illustrated embodiment, the material from which the leg 28 is fabricated has a relatively low modulus of elasticity and the material from which the mounting element 30 is fabricated, particularly the detent rib 38 thereof, has a relatively high modulus of elasticity. Thus, the detent rib may engage and deform the upper end of the leg 28 when the leg end is forceably inserted in the tubular coupling portion 32 of the mounting element, forming thereby a secure assembly of the leg and mounting element. The tubular leg can be arranged to yield elastically, in which case the leg material suffers no permanent deformation upon engagement with the detent rib; and reassembly of a leg with the mounting element may take place without regard to any previous orientation of the leg and mounting element. On the other hand, the material of the tubular leg may be arranged to undergo a permanent deformation, as is suggested in the drawing; and in the latter instance, care must be exercised on reassembly of the leg and mounting element, after the leg is once detached, to assure that a deformed portion of the leg is not in axial alignment with the detent rib.

In further compliance with the features of the present invention, the longitudinally extending detent rib 38 is arranged to taper from a minimal inward projection 40 adjacent the entrance end of coupling portion 32, as shown in FIG. 3, to a maximal inward projection 42 adjacent the basal end of the coupling portion. This taper of the rib 38 facilitates assembly of the leg and its mounting element.

Advantageously, the mounting element 30 is fabricated from sheet stock material; and a flat blank 44 arranged for this purpose is illustrated in FIG. 6. There, a rectangular section is arranged to comprise the material for the tubular coupling portion 32 of the mounting element with laterally extending regions comprising material for the basal flanges 34. In addition, the projections comprising the welding buttons 36 and the detent rib 38 are stamped into the blank 44. Finally, means are provided for retaining the tubular coupling portion 32 in cylindrical form, and these means specifically comprise a clinching tongue 46 and a mating slot 48. Engagement of the tongue 46 and the slot 48 in the completed mounting element is illustrated in FIG. 5.

Numerous materials are suitable for construction of the tubular leg 28 and the mounting element 30. Exemplary materials for the tubular leg include various aluminum alloys. Suitable materials for construction of the mounting element include cold rolled and hot rolled steels.

In practice, the legs 28 may be shipped unassembled and attached at the point of use by the purchaser of the barbecue apparatus 10. Simple manual insertion of each leg in one of the mounting elements 30 is all that is required to accomplish attachment. The tapering surface of the detent rib 38 achieves an easy entry of the leg into the tubular portion of one of the mounting elements, a guiding action being provided by the in-

terior wall surfaces of the tubular portion both opposite and beneath the rib 38. Similarly, disassembly of the leg, as for storage of the unit, is equally simple, requiring merely a forceable withdrawal of the leg from its mounting element. Thus, the present invention provides for a simple but secure slide-fit assembly of the legs to the grill body. Furthermore, the mounting elements 30 present a smooth exterior without projections to catch on factory assembly equipment or packaging.

The drawing and the foregoing descriptions are not intended to represent the only forms of the invention in regard to the details of its construction and manner of operation. Changes in form and in the proportion of parts, as well as the substitution of equivalents, are contemplated as circumstances may suggest or render expedient; and although specific terms have been employed, they are intended in a generic and descriptive sense only and not for the purpose of limitation, the scope of the invention being delineated in the following claims.

We claim:

1. A barbecue grill unit comprising: a grill body having a curved outer wall; a plurality of smooth-walled tubular legs depending from said grill body; and a mounting element telescopically assembled to the upper end of each of said legs,

said mounting elements each including a tubular coupling portion attachably engaging said leg end, detent means projecting from the wall of said coupling portion to engage said leg end deformably, and three radially outwardly extending mounting flanges disposed at equiangularly spaced positions at the basal end of said coupling portion and attached to the curved outer wall of said grill body to secure the corresponding leg in position, each of said mounting flanges having a mounting projection raised toward said grill body to cooperate in said attachment.

2. A support arrangement comprising: a smooth-walled tubular leg; and a mounting element telescopically assembled to one end of said leg, said mounting element including a tubular coupling portion engaging said leg end and detent means projecting from the wall of said coupling portion to engage said leg end deformably, said detent means comprising a longitudinally extending rib which tapers from a minimum projection adjacent the entrance end of said coupling portion to a maximum projection adjacent the basal end thereof.

3. A support arrangement according to claim 2 wherein the material of said leg has a relatively low modulus of elasticity and wherein the material of said mounting element has a relatively high modulus of elasticity.

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