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United States Patent
Simon , et al.**9,468,337**
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Heatproof and waterproof cover for barbecue grills and other cooking apparatus

Abstract

A waterproof, heat-proof, and fire-proof protective cover for a hot barbecue grill or other cooking apparatus. In one embodiment, the protective cover includes a waterproof flexible outside shell conforming generally to the shape of the hot barbecue grill and having an underside, and at least one inside flexible shell coupled to the underside of the outside shell. The inside shell includes at least one heat-dissipating material disposed to contact a hot portion of the hot barbecue grill when the protective cover is placed thereon.

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References Cited [Referenced By]**U.S. Patent Documents**

3292245	December 1966	Pfau
4167175	September 1979	Malafouris
5737880	April 1998	Hayes
6328083	December 2001	Esterson
6506471	January 2003	Doppelt
D476518	July 2003	Doppelt
6863100	March 2005	Neal
7866358	January 2011	Simms, II
2005/0205180	September 2005	Goudeau
2008/0210214	September 2008	Wade
2009/0236019	September 2009	Maruzzo
2012/0266628	October 2012	Kieling
2012/0285588	November 2012	Sheppard
2014/0113044	April 2014	McIntire

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Parent Case Text**CROSS-REFERENCE TO RELATED APPLICATION**

This application claims priority to U.S. Provisional Patent Application Ser. No. 61/819,859, filed May 6, 2013, the disclosure of which is incorporated herein by reference in its entirety.

Claims

What is claimed is:

1. A protective cover for a cooking apparatus, the protective cover comprising: a waterproof flexible outside shell conforming generally to a shape of the cooking apparatus and having an underside, wherein the waterproof flexible outside shell includes two or more waterproof flexible panels; a flexible inside shell coupled to the underside of the waterproof flexible outside shell, the flexible inside shell comprising at least one heat-resistant and thermally insulating material disposed to contact a hot portion of the cooking apparatus when the protective cover is placed thereon, wherein the flexible inside shell includes two or more flexible panels that comprise the at least one heat-resistant and thermally insulating material; a plurality of first seams, wherein each of said first seams joins together respective two of the two or more waterproof flexible panels of the waterproof flexible outside shell; and a plurality of second seams, wherein each of said second seams joins together respective two of the two or more flexible panels of the flexible inside shell.
2. The protective cover of claim 1, wherein the flexible inside shell is configured to prevent the protective cover from melting and burning when in contact with the hot portion.
3. The protective cover of claim 2, wherein the flexible inside shell is further configured to cause the protective cover to dissipate heat from the hot portion over a surface area larger than a surface area corresponding to the hot portion.
4. The protective cover of claim 2, wherein the at least one heat-resistant and thermally insulating material

19. The protective cover of claim 17, wherein the plurality of third seams includes a seam that stitches together an edge of the respective one of the two or more flexible panels of the flexible inside shell and a middle portion of the respective one of the two or more waterproof flexible panels of the waterproof flexible outside shell.

20. The protective cover of claim 16, wherein the two or more waterproof flexible panels of the waterproof flexible outside shell include at least a front panel, a first side panel, a second side panel, and a rear panel; and wherein the two or more flexible panels of the flexible inside shell include at least: a respective front panel that is joined by one or more of the third seams to the front panel of the waterproof flexible outside shell; a respective first side panel that is joined by one or more of the third seams to the first side panel of the waterproof flexible outside shell; a respective second side panel that is joined by one or more of the third seams to the second side panel of the waterproof flexible outside shell; and a respective rear panel that is joined by one or more of the third seams to the rear panel of the waterproof flexible outside shell.

21. A method of protecting a cooking apparatus, the method comprising: providing a protective cover to be placed on the cooking apparatus while the cooking apparatus is at or near a temperature used for cooking, wherein the protective cover comprises: a waterproof flexible outside shell conforming generally to a shape of the cooking apparatus and having an underside, wherein the waterproof flexible outside shell includes two or more waterproof flexible panels; a flexible inside shell coupled to the underside of the waterproof flexible outside shell, the flexible inside shell comprising at least one heat-resistant and thermally insulating material disposed to contact a hot portion of the cooking apparatus when the protective cover is placed thereon, wherein the flexible inside shell includes two or more flexible panels that comprise the at least one heat-resistant and thermally insulating material; a plurality of first seams, wherein each of said first seams joins together respective two of the two or more waterproof flexible panels of the waterproof flexible outside shell; and a plurality of second seams, wherein each of said second seams joins together respective two of the two or more flexible panels of the flexible inside shell.

22. The method of claim 21, further comprising placing the protective cover on the cooking apparatus while the cooking apparatus is at or near the temperature used for cooking.

Description

BACKGROUND

The disclosure relates, generally, to cooking apparatus, and more particularly, to protective covering devices for barbecue grills and other cooking apparatus.

Conventional covers protect barbecue grills and other outdoor cooking apparatus against sun, rain, snow, dust, rodents, tree sap, spills, and the like.

After a barbecue grill has been used for cooking, a conventional protective cover can be placed over the grill only once the grill has cooled down to a temperature sufficient to avoid melting, deforming, or otherwise damaging the cover, or causing the cover to adhere to the grill.

SUMMARY

Embodiments of the present disclosure provide protective covers for use with barbecue grills fueled by propane, natural gas, and charcoal, as well as rotisseries, roasters, turkey fryers, seafood boilers, smokers, burners, and other indoor and other outdoor cooking apparatus. A protective cover consistent with embodiments of the disclosure can safely be applied to cover a hot grill or other cooking apparatus, immediately after the use of such apparatus for cooking.

In one embodiment, the disclosure provides a protective cover including a waterproof flexible outside shell having an underside, and at least one inside flexible shell coupled to the underside of the outside shell. The inside shell includes at least one heat-dissipating material.

FIG. 18 shows the inside shell, in the embodiment of FIG. 15; and

FIG. 19 shows a subsequent step of assembling the protective cover of FIG. 15.

DETAILED DESCRIPTION

Detailed illustrative embodiments of the present disclosure are disclosed herein. However, specific structural and functional details disclosed herein are merely representative for purposes of describing example embodiments of the present disclosure. Embodiments of the present disclosure may be embodied in many alternative forms and should not be construed as limited to only the embodiments set forth herein. Further, the terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting of example embodiments of the disclosure.

FIG. 1 shows a front perspective view of a protective cover 100 consistent with a first exemplary embodiment of the disclosure. In this embodiment, cover 100 is intended for use with a conventional cart-style barbecue grill up to 60 inches wide, including integral side burners and/or raised drop-leaf side tables or shelves.

As shown, cover 100 includes an outside shell 101 and an inside shell 102 (illustrated in dashed hidden lines) disposed within and joined to outside shell 101 by means of a plurality of individual upper seams 108 (illustrated in larger dotted hidden lines) and a continuous lower seam 109 (illustrated in smaller dotted hidden lines).

Outside shell 101 is constructed from polyester and/or nylon, with a waterproof inner coating (e.g., polyacrylic, polyurethane, PEVA, PVC, or the like), although, in alternative embodiments, shell 101 may be constructed from another waterproof material. The material of outside shell 101 may be treated to be flame-resistant and fire-retardant (non-propagating) and self-extinguishing if accidentally exposed to direct flame. Outside shell 101 is desirably flexible, although, in some embodiments, portions of outside shell 101 may be rigid.

Outside shell 101 includes a front panel 104, two side panels 105 (only one of which is visible in FIG. 1), a rear panel (not visible in the drawings), two sloping panels 106 (only one of which is visible in FIG. 1), and a top panel 107. Panels 104, 105, 106, and 107 are surfaces of an integral outside shell 101 formed by joining a plurality of sections of material via seams 110, as will be explained in further detail below.

Inside shell 102 is a baffle or felt-like blanket made from a heat-resistant and thermally-insulating material, such cover 100 does not melt or burn when applied to a hot grill, but rather, dissipates heat over a large surface area. "Felt-like" refers to a textile that is produced by matting, condensing, and pressing together fibers. However, inside shell 102 may include both woven and non-woven components. For example, one or more materials such as FR Rayon, Basofil.RTM. (BASF brand of preoxidized acrylonitrile fiber), Panox.RTM. (SGL Group brand of polyacrylonitrile fiber), Nomex.RTM. (DuPont brand of meta-aramid synthetic fiber), Kevlar.RTM. (DuPont brand of para-aramid synthetic fiber), other aramid fiber, asbestos, or the like, may be woven singularly or together in a blend to achieve sufficient heat-resistance and thermal-insulation. Other fibers that provide similar physical properties may be used. Inside shell 102 is constructed to have a degree of loft so that it can dissipate heat quickly and efficiently, for example, having a thickness of 3/16". Inside shell 102 is desirably flexible, although, in some embodiments, portions of inside shell 102 may be rigid.

As shown in FIG. 2, inside shell 102 includes a front panel 204, two side panels 205 (only one of which is visible in FIG. 2), a rear panel (not visible in the drawings), two sloping panels 206 (only one of which is visible in FIG. 1), and a top panel 207. Panels 204, 205, 206, and 207 are surfaces of an integral inside shell 102 formed by joining a plurality of sections of material via seams 210, as will be explained in further detail below.

Cover 100 includes straps 103 disposed at the hem 111 of cover 100 for fastening cover 100 around the grill. Straps 103 may include, e.g., hook-and-loop fastener, snaps, zippers, buckles, locks or other anti-theft devices, or the like. Alternatively or additionally, one or more cords, elastic members, locks or other anti-theft devices, or similar devices (not shown in the drawings) may be used at or near hem 111 to secure cover

100 and/or to create a snug fit around the grill.

FIG. 3 shows details of the construction of outside shell 101, which includes four individual sections of material joined together by means of seams 110. The individual sections include an irregular octagonal front section 304, two irregular hexagonal side sections 305, and an irregular hexagonal rear section 311. Sections 304, 305, and 311 are shown in FIG. 3 as being laid out in plan view, prior to being assembled by means of seams 110 to form outside shell 101 of protective cover 100. While only certain representative areas that are joined by seams 110 are indicated by arrows 110 in FIG. 3, it should be understood that seams 110 are, in fact, used (i) to join section 304 to sections 305, (ii) to join sections 304 and 311, and (iii) to join section 311 to sections 305. FIG. 5 shows a portion 500 of one such seam 110, which joins front section 304 with one of the side sections 305. In this embodiment, seams 110 are bound seams of type BSa-1, although other types of seams may be used in alternative embodiments. As shown in FIG. 5, each bound seam 110 is formed by folding binding strips 112 (or ribbon, braid, tape, or the like) over the edges of front section 304 and side section 305 and using a single-needle stitch to reinforce and finish the edges.

FIG. 4 shows details of the construction of inside shell 102, which includes four individual sections of material joined together by means of seams 210. The individual sections include an irregular octagonal front section 404, two irregular hexagonal side sections 405, and an irregular hexagonal rear section 411. Sections 404, 405, and 411 are shown in FIG. 4 as being laid out in plan view, prior to being assembled by means of seams 210 to form inside shell 102 of protective cover 100. While only certain representative areas that are joined by seams 210 are indicated by arrows 210 in FIG. 4, it should be understood that seams 210 are, in fact, used (i) to join section 404 to sections 405, (ii) to join sections 404 and 411, and (iii) to join section 411 to sections 405. Seams 210 are substantially similar to seams 110, which are shown in further detail in FIG. 5, and, in this embodiment, are bound seams of type BSa-1, although other types of seams may be used in alternative embodiments.

FIGS. 6 and 7 show a portion 600 of one of upper seams 108, which joins front panel 104 of outside shell 101 with front panel 204 of inside shell 102. In this embodiment, seams 108 are single-needle bound seams of type BSa+BSa, although other types of seams may be used in alternative embodiments. As shown in FIG. 1, three seams 108 join front panel 104 to front panel 204, four seams 108 join each sloping panel 106 to a respective sloping panel 206 (although only one set of side panels 106, 206 is visible in FIG. 1), and four seams 108 join each side panel 105 to a respective side panel 205. Although not visible in FIG. 1, three seams 108 also join the rear panel of outside shell 101 with the rear panel of inside shell 102, in like manner to the three seams 108 that join front panels 104, 204. In this embodiment, to reduce labor and material costs, seams 108 do not extend to the edges and corners of the panels being joined, because the shorter lengths of seams 108 are sufficient to couple outside shell 101 securely to inside shell 102. However, in other embodiments, one or more seams 108 may extend all the way to their respective edges and/or corners.

FIG. 8 shows a portion 800 of lower seam 109, which is a continuous seam that joins outside shell 101 with inside shell 102. In this embodiment, lower seam 109 is a lapped seam of type LSd-1, although other types of seams may be used in alternative embodiments. As shown in FIG. 8, continuous lapped lower seam 109 is formed by folding in the edge of front panel 204 and using a single-needle stitch to join front panels 104, 204. Lower seam 109 is continuous because it traverses the entire width of front panel 104, side panels 105, and the rear panel (not shown) of outside shell 101, joining each of those panels to its respective counterpart panel of inside shell 102, namely, front panel 204, side panels 205, and the rear panel (not shown). Lower seam 109 encircles outside shell 101 and inside shell 102 and forms a seal between outside shell 101 and inside shell 102 to prevent the infiltration of dirt, moisture, food residue, and the like.

Although not shown in the drawings, hem 111, in this embodiment, is a bound seam of type BSa-1, although other types of seams may be used in alternative embodiments.

The thread used for seams 108, 109, 110 and hem 11 is a heat-resistant thread, such as one or more of Aramid.RTM., Kevlar.RTM., Nomex.RTM., or the like.

In alternative embodiments, instead of employing seams with threads, one or more of seams 108, 109, 110 may be constructed using ultrasonic bonding, e.g., to create a waterproof cover. In this scenario, an ultrasonic bonding system may be employed, which includes an engraved anvil drum and an ultrasonic system with acoustic stack (e.g., converter, amplitude coupler, and sonotrode). The acoustic stack is mounted above the

out on top of joined sections 1604 and 1611.

Next, inside shell 1502 is joined to sections 1604 and 1611 by means of one or more continuous, lapped seams (not shown). To complete the assembly of cover 1500, bound seams are then used to join sections 1604 and 1611 to sections 1605, in like manner to the seams used to join the sections of outside shell 301 shown in FIG. 3.

Alternatively, instead of employing one or more seams with threads, ultrasonic bonding may be used for one or more seams that join the various components of cover 1500.

As with cover 100, cover 1500 can safely be applied to a hot grill immediately after cooking, without requiring the user to wait until the grill cools, and without risk of cover 1500 melting or igniting. Since inside shell 1502 does not involve the assembly of multiple components, as is the case with panels 204, 205, 206, and 207 of cover 100, the construction of cover 1500 is simplified relative to that of cover 100, thus saving time and lowering manufacturing costs by reducing labor and materials used to construct cover 1500.

Although cover 100 and cover 1500 both include inside shells that are suitably sized and shaped and disposed in a region intended to contact hot portions of a grill being covered, it should be understood that, in alternative embodiments, the sizes, shapes, and locations of the inside shell may vary. In some alternative embodiments, multiple inside shells (each of which could be, e.g., a single section of material) may be used within an outside shell, where the inside shells are disposed at different locations within the underside of the outside shell that are intended to contact hot portions of a grill being covered.

Although embodiments of the disclosure are described as being used in connection with cooking apparatus, it should be understood that a protective cover consistent with embodiments of the disclosure may alternatively be used as a heatproof and/or waterproof protective cover for other items.

It should be understood that various changes in the details, materials, and arrangements of the parts which have been described and illustrated in order to explain the nature of this disclosure may be made by those skilled in the art without departing from the scope of the disclosure.

Reference herein to "one embodiment" or "an embodiment" means that a particular feature, structure, or characteristic described in connection with the embodiment can be included in at least one embodiment of the disclosure. The appearances of the phrase "in one embodiment" in various places in the specification are not necessarily all referring to the same embodiment, nor are separate or alternative embodiments necessarily mutually exclusive of other embodiments.

Although the disclosure has been described using relative terms such as "front," "back," "side," "top," "bottom," "over," "above," "under" and the like in the description and in the claims, such terms are used for descriptive purposes and not necessarily for describing permanent relative positions. It is understood that the terms so used are interchangeable under appropriate circumstances such that the embodiments of the disclosure described herein are, for example, capable of operation in other orientations than those illustrated or otherwise described herein.

Although the disclosure is described herein with reference to specific embodiments, various modifications and changes can be made without departing from the scope of the present disclosure as set forth in the claims below. Accordingly, the specification and figures are to be regarded in an illustrative rather than a restrictive sense, and all such modifications are intended to be included within the scope of the present disclosure. Any benefits, advantages, or solutions to problems that are described herein with regard to specific embodiments are not intended to be construed as a critical, required, or essential feature or element of any or all the claims.

It should be understood that the steps of the exemplary methods set forth herein are not necessarily required to be performed in the order described, and the order of the steps of such methods should be understood to be merely exemplary. Likewise, additional steps may be included in such methods, and certain steps may be omitted or combined, in methods consistent with various embodiments of the disclosure.

Although the elements in the following method claims, if any, are recited in a particular sequence with corresponding labeling, unless the claim recitations otherwise imply a particular sequence for implementing

