IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OKLAHOMA

PARTY KING GRILL & SMOKER CO., LLC, an Oklahoma Limited Liability Company,

Plaintiff,

v.

FREEDOM GRILL, INC., a California Corporation,

Defendant.

07 CV - 565 CVE - SAJ

Civil Action No.:

JURY TRIAL DEMANDED
ATTORNEYS LIEN CLAIMED

COMPLAINT

Plaintiff Party King Grill & Smoker Co., LLC, by and through its undersigned attorneys, brings this action against Freedom Grill, Inc. for a declaratory judgment that U.S. Patent No. 6,701,913 is invalid and unenforceable and not infringed by Party King Grill & Smoker Co., LLC and for tortious interference of business interests in violation of Oklahoma law.

PARTIES

1. Plaintiff Party King Grill & Smoker Co., LLC ("Party King") is a limited liability company duly organized and existing under the laws of the State of Oklahoma, having its principal place of business at Weatherford, Oklahoma.

2. On information and belief, Defendant Freedom Grill, Inc. ("Freedom Grill") is a California corporation with its principal offices at 13771 Danielson Street, Suite G, Poway, California 92064.

JURISDICTION AND VENUE

3. This Court has jurisdiction over the subject matter of Party Grills' Complaint for declaration of patent invalidity and non-infringement pursuant to the patent laws of the United

States, 35 U.S.C. § 271 *et seq.,* under the Declaratory Judgments Act, 28 U.S.C. §§ 2201 and 2202, and under 28 U.S.C. §§ 1331, 1332(a), 1338 and 1367.

4. This Court has personal jurisdiction over Defendant because, among other things, it has the requisite minimum contacts with the forum and, on information and belief, has physically conducted and continues to physically conduct business throughout the State of Oklahoma and in this judicial district.

5. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b), 1391(c), and 1400(b).

FACTS ON WHICH EACH COUNT IS BASED

6. On March 9, 2004, U.S. Patent No. 6,701,913 entitled "Swingable Apparatus Attachable to a Vehicle for Transporting a Cooking Device and Permitting Access to the Vehicle," was issued to Ernest W. LeDuc, Scott C. Salter and Steven J. Caliguri (the "913 patent"). A copy of the '913 patent is attached hereto as Exhibit "A."

7. On information and belief, Ernest W. LeDuc, Scott C. Salter and Steven J. Caliguri assigned their interest in the '913 patent to Freedom Grill, whereby it became the owner of the '913 patent.

8. On information and belief, Freedom Grill has been and is currently engaged in the manufacture and sale of tailgate grills and grilling accessories.

9. Party King has been and is currently engaged in the manufacture and sale of tailgate grills and grilling accessories.

10. Freedom Grill, in a letter to Party King dated August 30, 2007, copy attached hereto as Exhibit "B," represented that it was the owner of such patent, and alleged that certain of Plaintiff's products constitute an infringement of such patent, wherefore a case of actual

controversy within this court's jurisdiction exists between Plaintiff and Defendant with respect to the validity, infringement, and enforceability of such patent.

11. American Tailgaters Association ("ATA") is a national association of tailgaters, tailgating clubs, and tailgating businesses dedicated to growing the popularity of tailgating and the satisfaction of tailgaters. Party King is a corporate member of ATA.

12. Freedom Grill, in a letter to ATA dated September 18, 2007, copy attached hereto as Exhibit "C," represented that it was the owner of such patent, and alleged that ATA was assisting in the marketing, advertising and selling of products infringing of such patent.

13. As a result of the aforementioned letters and other contacts by Freedom Grill with Party King and associates of Party King, Party King has a reasonable fear and apprehension that patent infringement litigation will be brought against it as a direct, inducing or contributory infringer of the '913 patent. An actual and justiciable controversy therefore exists between the parties.

14. Party King has not directly infringed, induced the infringement of nor been a contributory infringer of the '913 patent.

15. As a result of the aforementioned letters and other contacts by Freedom Grill with associates of Party King, Party King has suffered and will suffer damages as a direct and proximate result of Freedom Grill's tortious interference with Party King's economic and business relations and interests in violation of Oklahoma law.

COUNT 1 - DECLARATION JUDGMENT OF INVALIDITY AND UNENFORCEABILITY OF THE '913 PATENT

16. Pursuant to the Declaratory Judgments Act, 28 U.S.C. §§ 2201 and 2202, Party King seeks a declaration by this Court that the Claims of the '913 patent are invalid for one or more of the following reasons:

(a) Prior to the time alleged invention of the '913 patent was made by the patentee, the alleged invention was known or used by others in this country, or was patented or described in a printed publication in this or a foreign country;

(b) The alleged invention of the '913 patent was patented or described in a printed publication in a foreign country or was in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States;

(c) The alleged invention of the '913 patent was described in a patent granted under a United States patent application filed by another before the alleged invention thereof by the patentee;

(d) The patentee did not invent the subject matter claimed in the '913 patent;

(e) Before the alleged invention of the '913 patent was made by the patentee, the alleged invention was made in this country by another who had not abandoned, suppressed, or concealed it;

(f) The differences, if any, between the subject matter of the alleged invention of the '913 patent and the prior art are such that the subject matter as a whole would have been obvious at the time the alleged invention was made to a person having ordinary skill in the art to which said subject matter pertains;

(g) The '913 patent does not distinctly point out or distinctly claim the subject matter which the patentee alleged constituted his invention;

(h) The '913 patent does not set forth the best mode contemplated by the patentee of carrying out his alleged invention; and

(i) The '913 patent does not contain a written description of the alleged invention thereof, and the manner and the process of making and using it, and such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains or to which it is most nearly connected, to make and use the same.

COUNT II: DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '913 PATENT

17. Pursuant to the Declaratory Judgments Act, 28 U.S.C. §§ 2201 and 2202, Party King seeks a declaration that none of the tailgate grills and grilling accessories that it manufactures, uses, offers for sale, or sells in the United States, or imports into the United States, infringes any of the Claims of the '913 patent.

COUNT III: TORTIOUS INTERFERENCE WITH BUSINESS INTERESTS

18. Freedom Grill's actions described herein above were committed with intent to injure, harm or infringe upon Party King's business and economic relations and interests.

19. Freedom Grill acted intentionally with malice and reckless disregard for the rights of Party King and without legal justification or excuse. As a direct and proximate result of Freedom Grill's tortious interference with Party King's economic and business relations and interests, Party King has suffered and will suffer damages.

PRAYER

WHEREFORE, Party King respectfully prays that, upon final jury trial hereof, this Court enter Judgment in Party King's favor and against Freedom Grill, as follows:

(a) That United States Letters Patent 6,701,913 is invalid and unenforceable; and

(b) That Party King does not manufacture, use, offer for sale, or sell in the United States, or import into the United States, any apparatus that infringes any of the Claims of such Patent; and

(c) That Party King has not induced the infringement of nor been a contributory infringer of the '913 patent; and

(d) That Freedom Grill's actions described hereinabove were committed with intent to injure, harm or infringe upon Party King's business and economic relations and interests; and

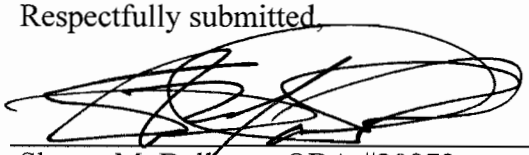
(e) That Freedom Grill and all officers, agent, employees, representatives and counsel for Freedom Grill, and all persons in active concert or participation with any of them, directly or indirectly, be enjoined from charging infringement or instituting any action for infringement of the '913 patent against Plaintiff, its customers, associates or manufacturers; and

(f) That this case is "exceptional" under 35 U.S.C. § 285 and award Party King its attorneys' fees, expenses and costs incurred in this action; and

(g) That Party King be granted such other and further relief as this Court deems just and proper.

Date: October 4, 2007

Respectfully submitted,



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US006701913B1

(12) **United States Patent**
LeDuc et al.

(10) **Patent No.: US 6,701,913 B1**
(45) **Date of Patent: Mar. 9, 2004**

(54) **SWINGABLE APPARATUS ATTACHABLE TO A VEHICLE FOR TRANSPORTING A COOKING DEVICE AND PERMITTING ACCESS TO THE VEHICLE**

(75) Inventors: **Ernest W. LeDuc**, Valley Center, CA (US); **Scott C. Salter**, San Diego, CA (US); **Steven J. Caliguri**, Poway, CA (US)

(73) Assignee: **Freedom Grill, Inc.**, Poway, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/261,800**

(22) Filed: **Sep. 30, 2002**

(51) **Int. Cl.**[7] **F24C 1/16**; F24B 3/00; B60R 9/00; B60R 11/00

(52) **U.S. Cl.** **126/276**; 126/30; 224/497; 224/506; 224/508

(58) **Field of Search** ..... 126/276, 30, 275 R; 224/488, 495, 497, 502, 504, 505, 506, 508, 510

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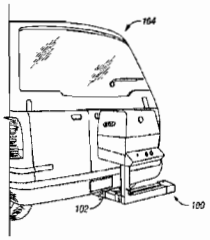
Primary Examiner—Alfred Basichas
(74) *Attorney, Agent, or Firm*—Timothy N. Ellis

(57) **ABSTRACT**

An apparatus that is selectively attachable to a vehicle, for transporting a cooking device and positioning the cooking device in a desired orientation for cooking that also permits access to the vehicle. The apparatus includes a hitch insertion member for insertion into a trailer hitch, a support arm attached to the hitch insertion member, a swing arm attached to the support arm with a locking hinge assembly, a pedestal attached to the swing arm, and a cooking device, for example a barbeque, that is attached to a column that is inserted into the pedestal and that can rotate in the pedestal. The locking hinge assembly has a plurality of locking holes for selective alignment with an angle securing hole in the support arm for locking the swing arm at a selected angle in relation to the support arm by placing an angle locking bar into the aligned holes.

28 Claims, 14 Drawing Sheets



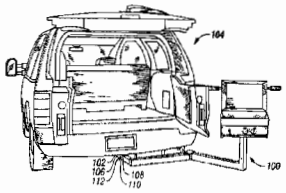


EXHIBIT
A

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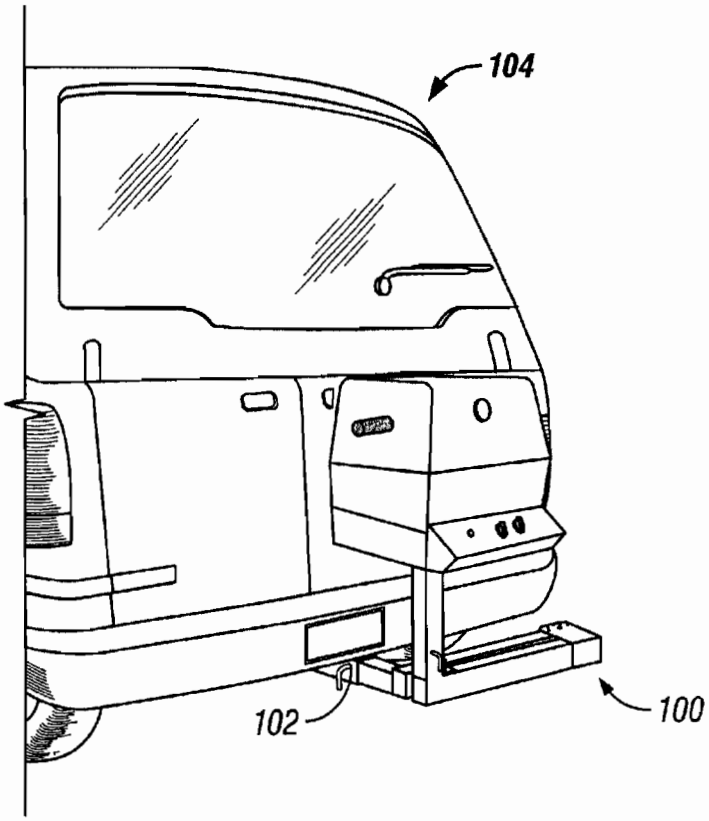

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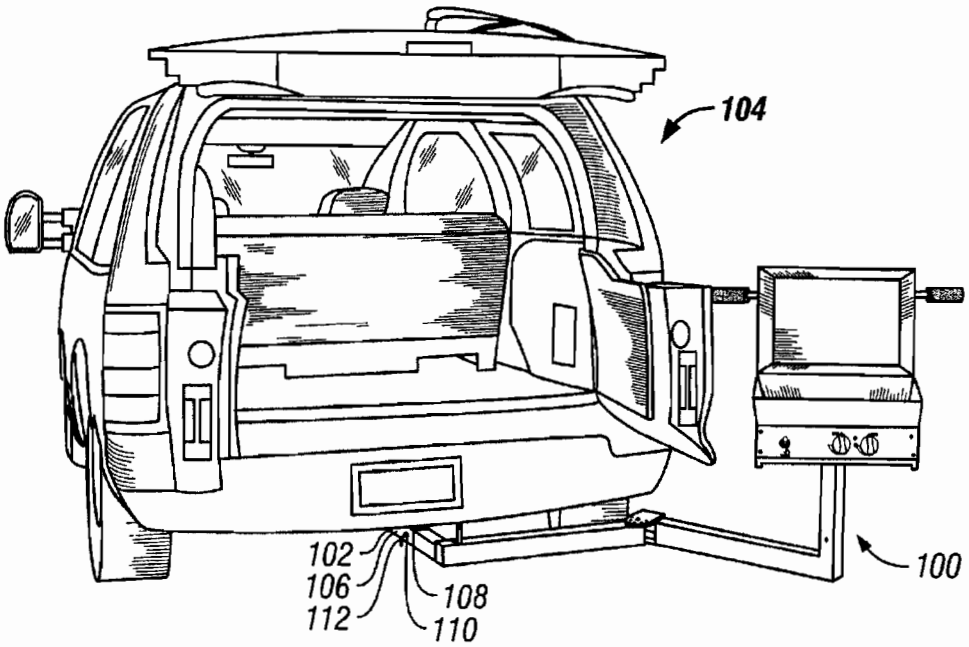

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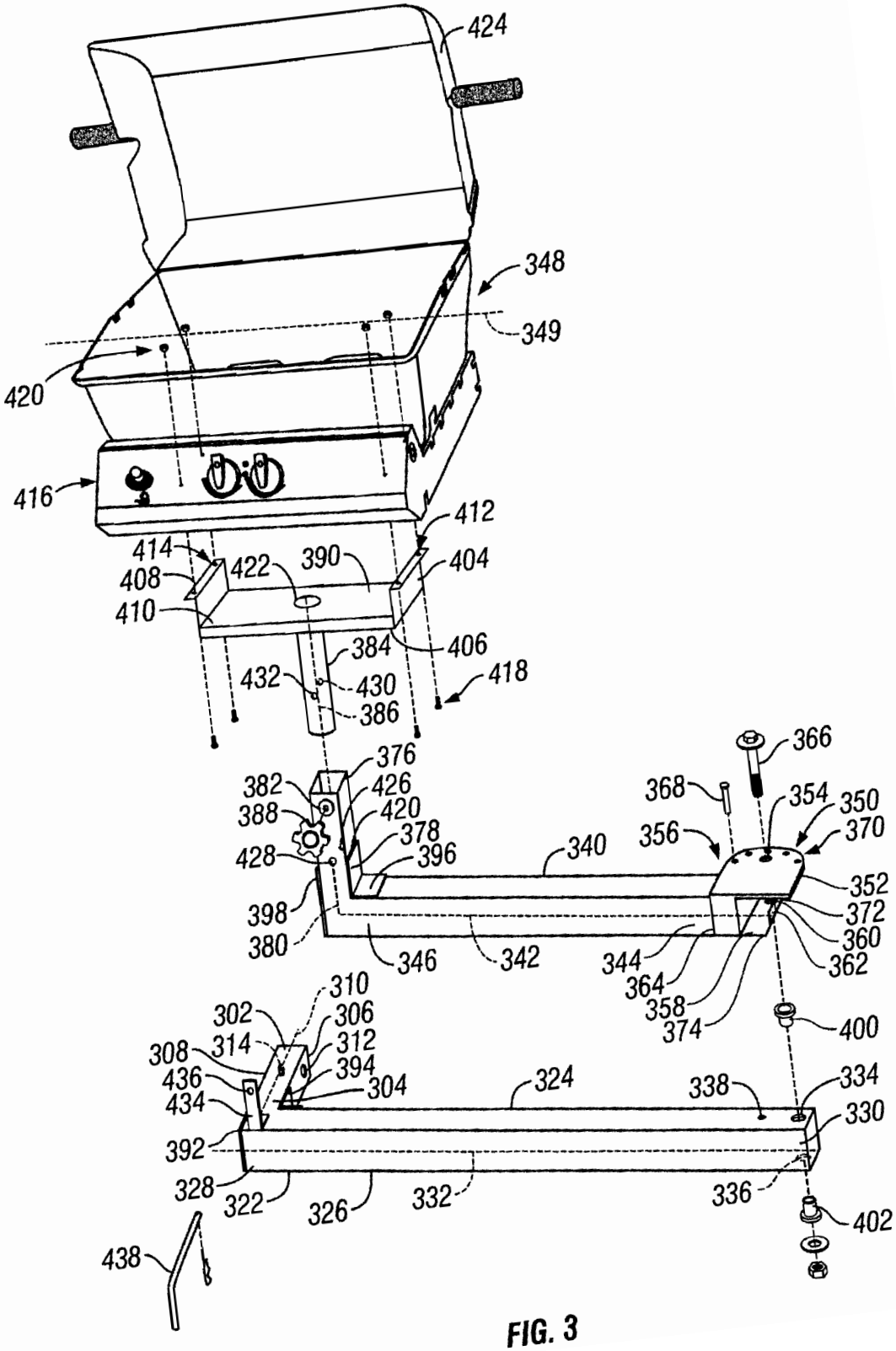
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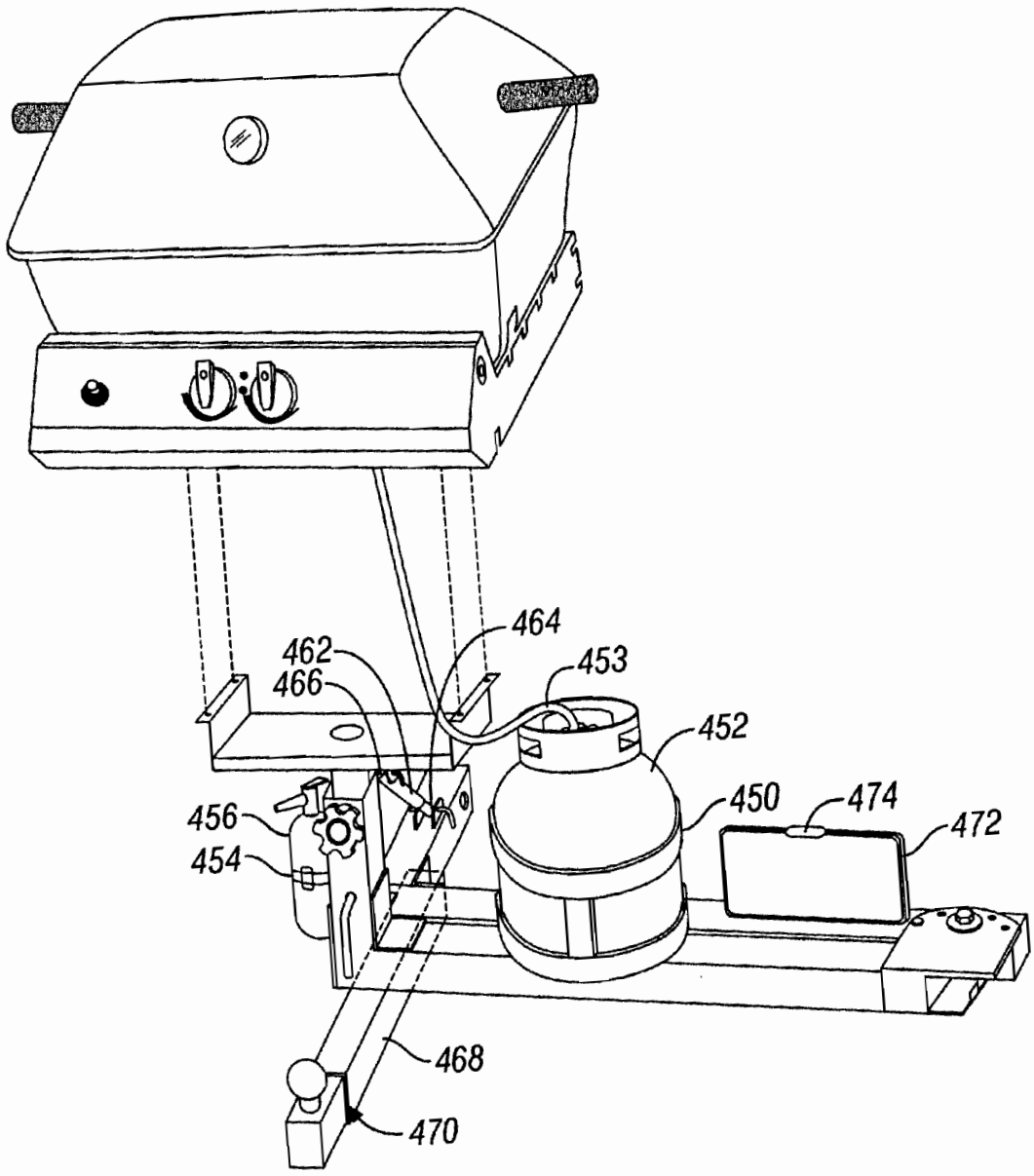
FIG. 3



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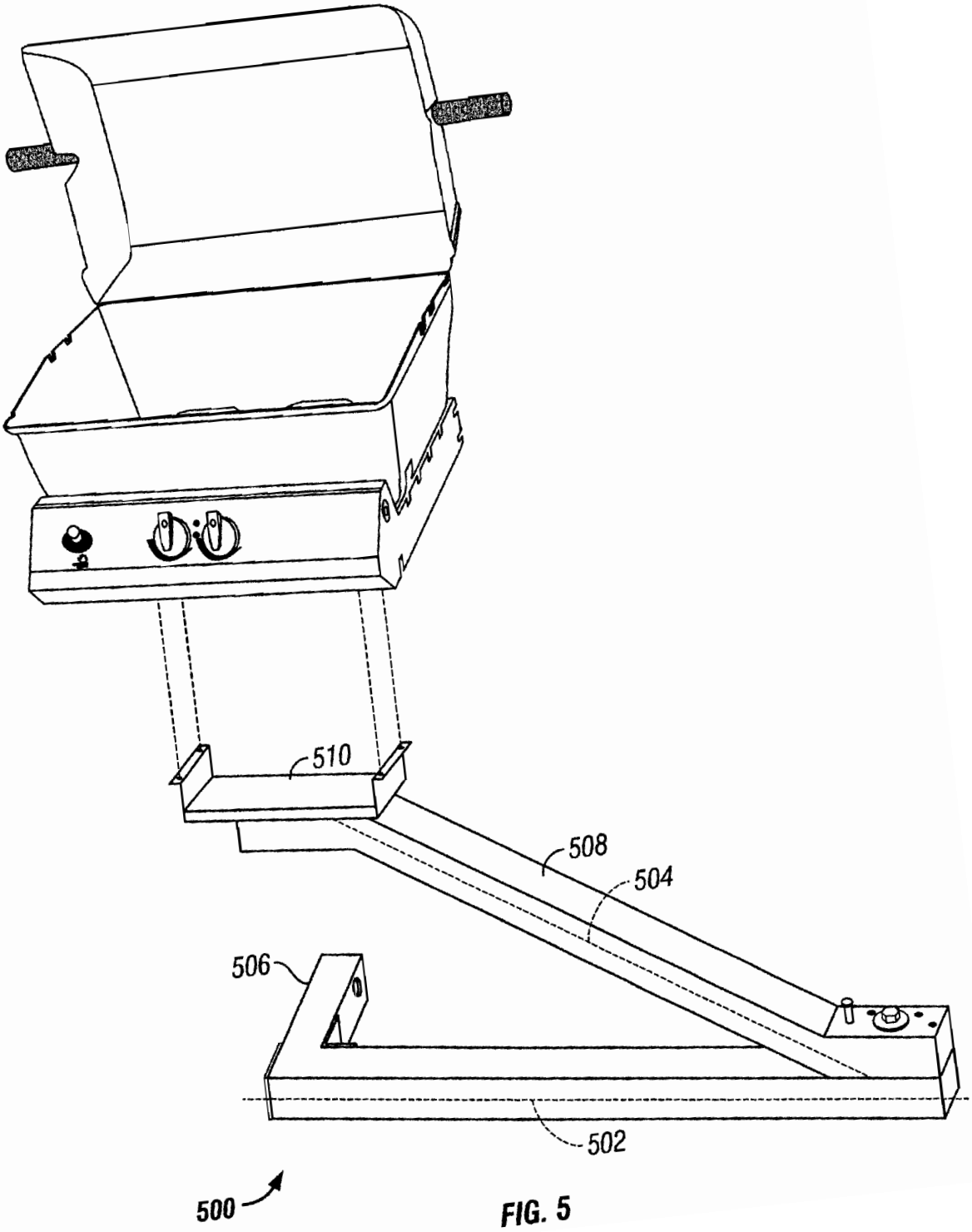

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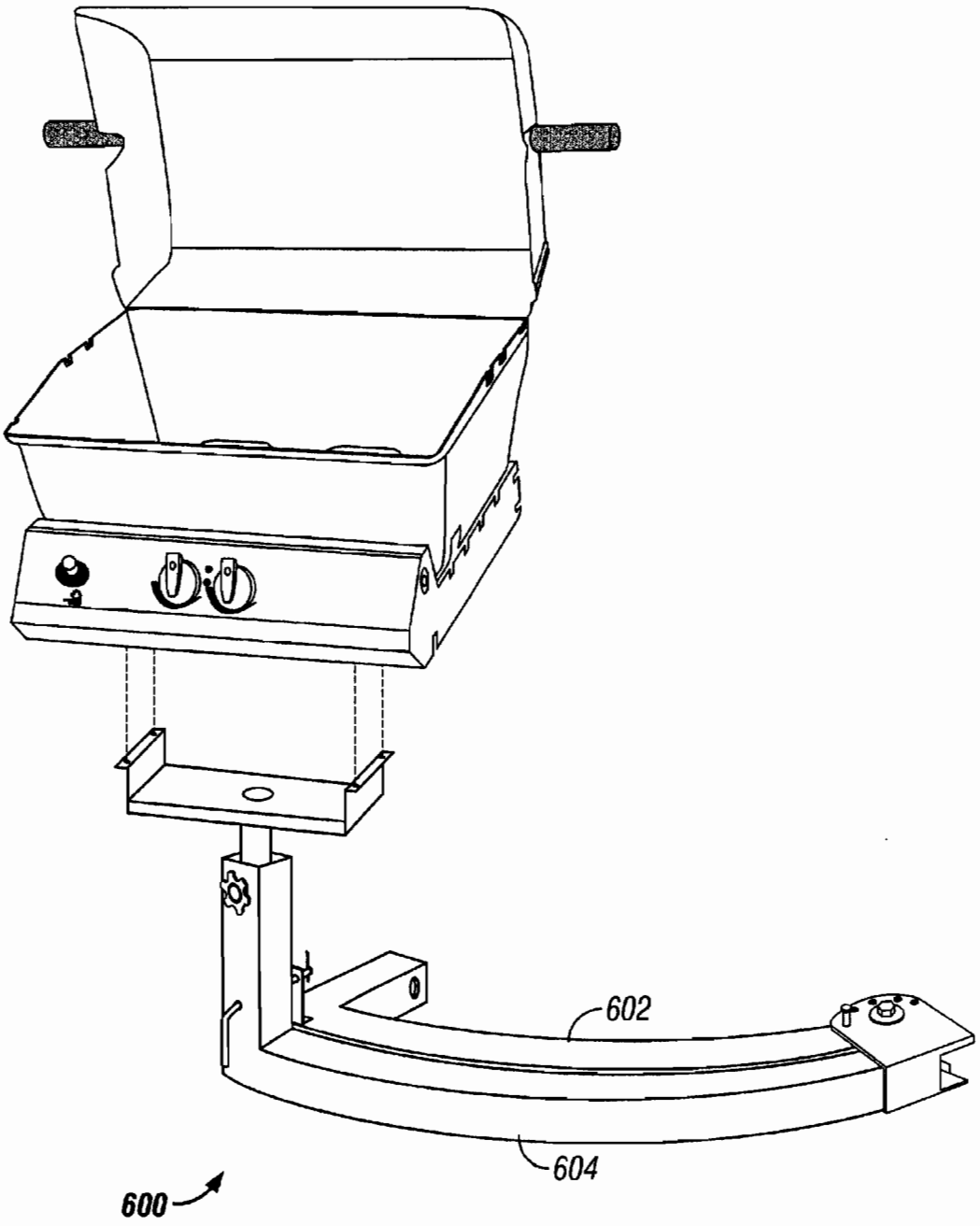
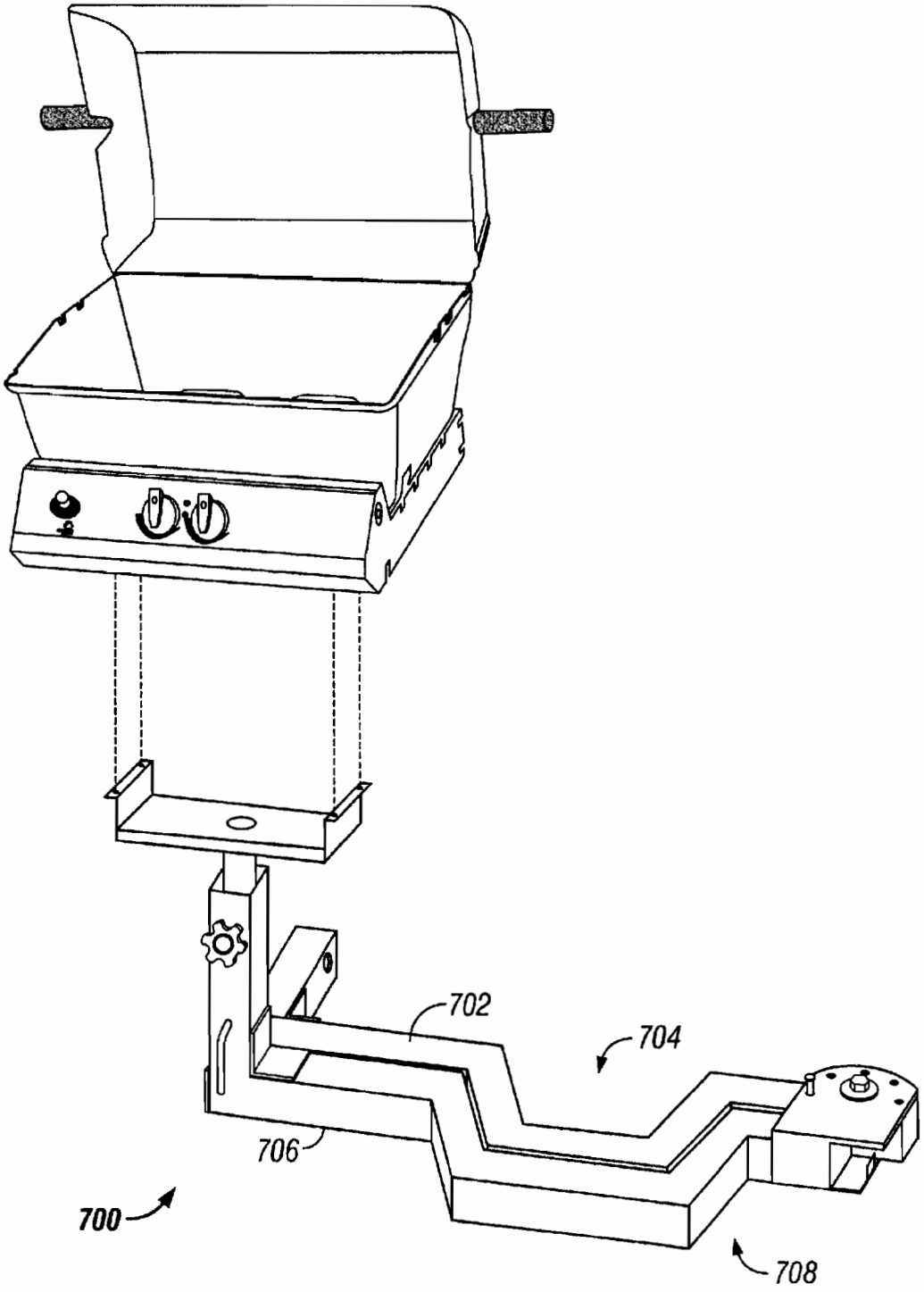


FIG. 6



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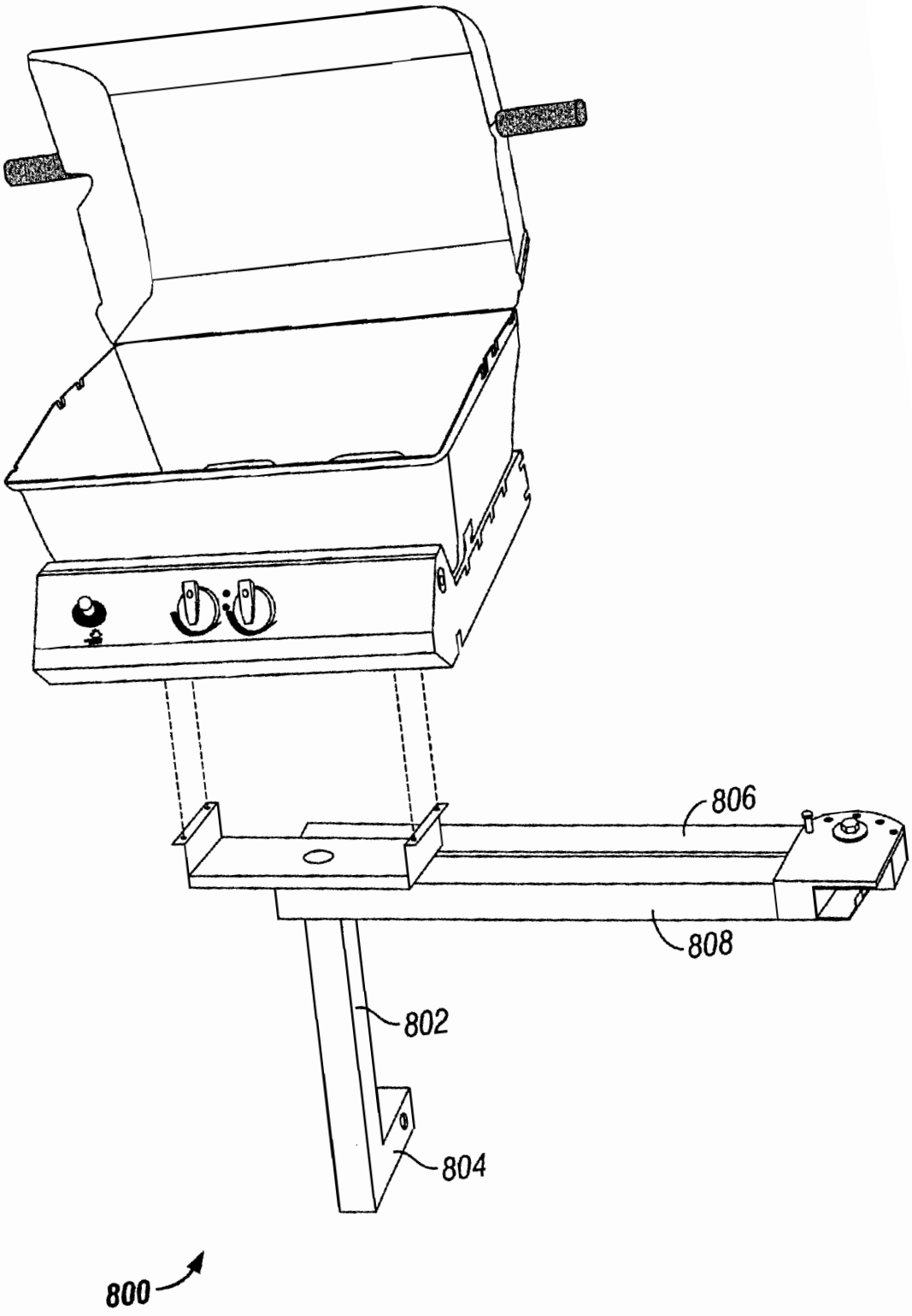

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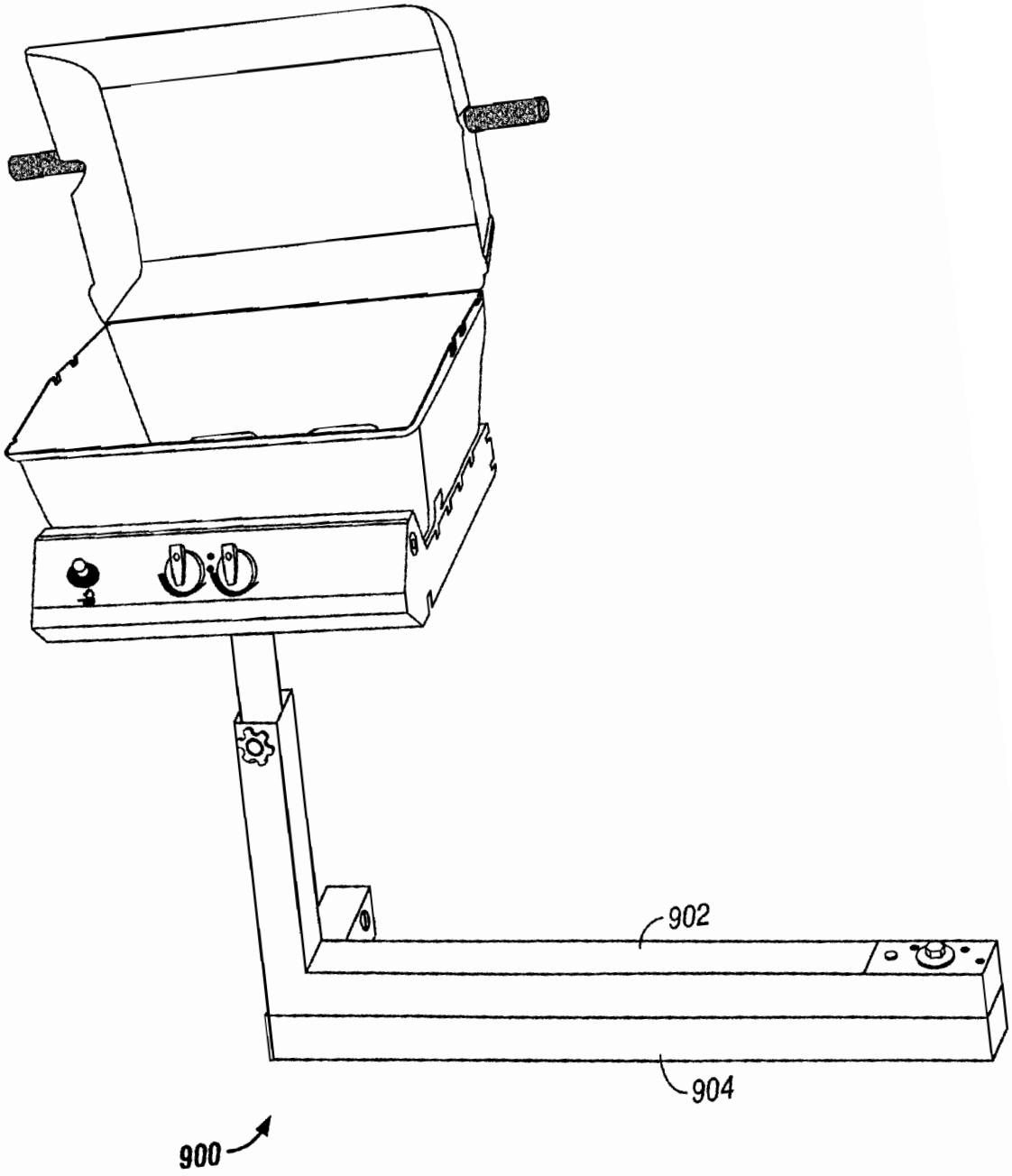
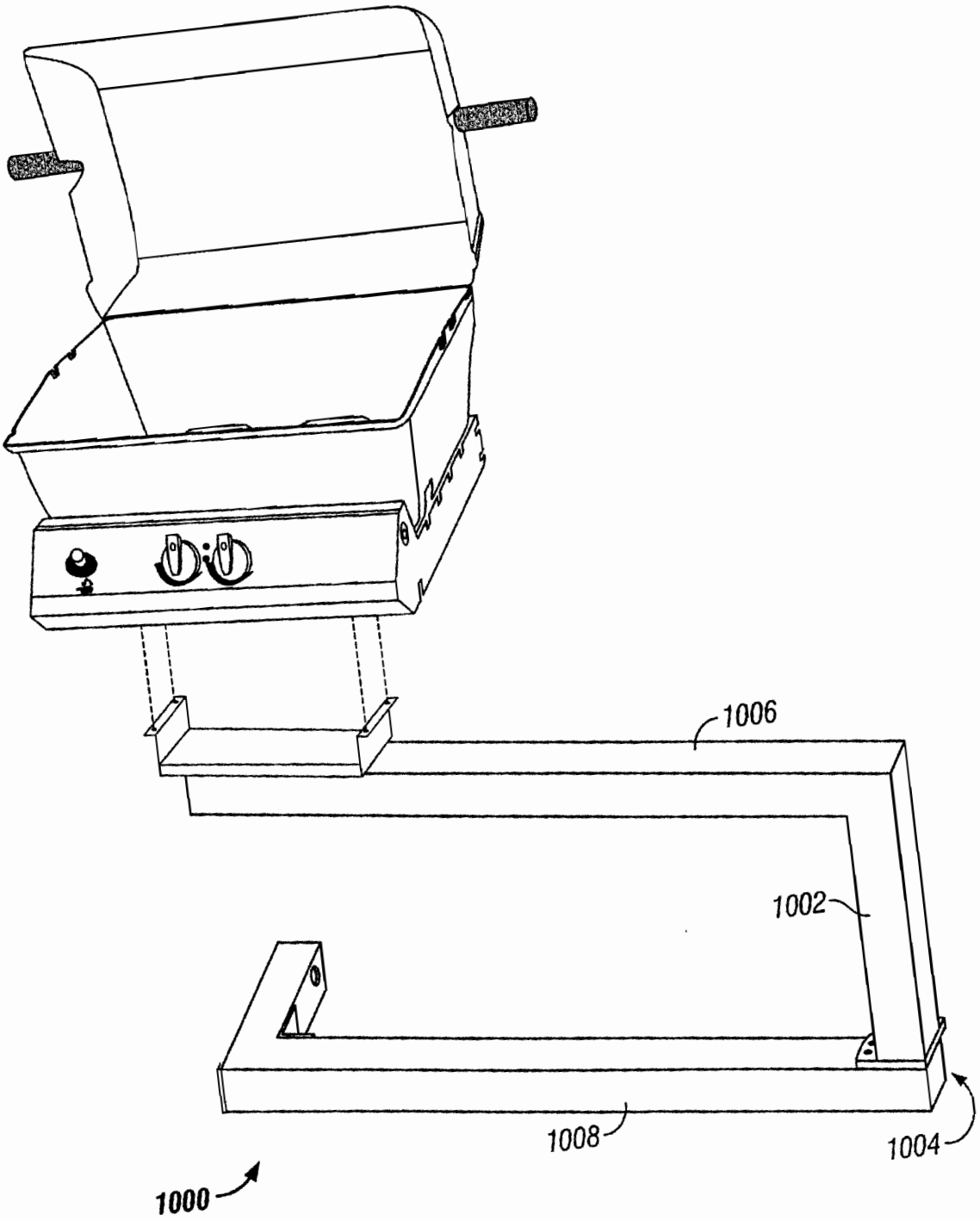


FIG. 9



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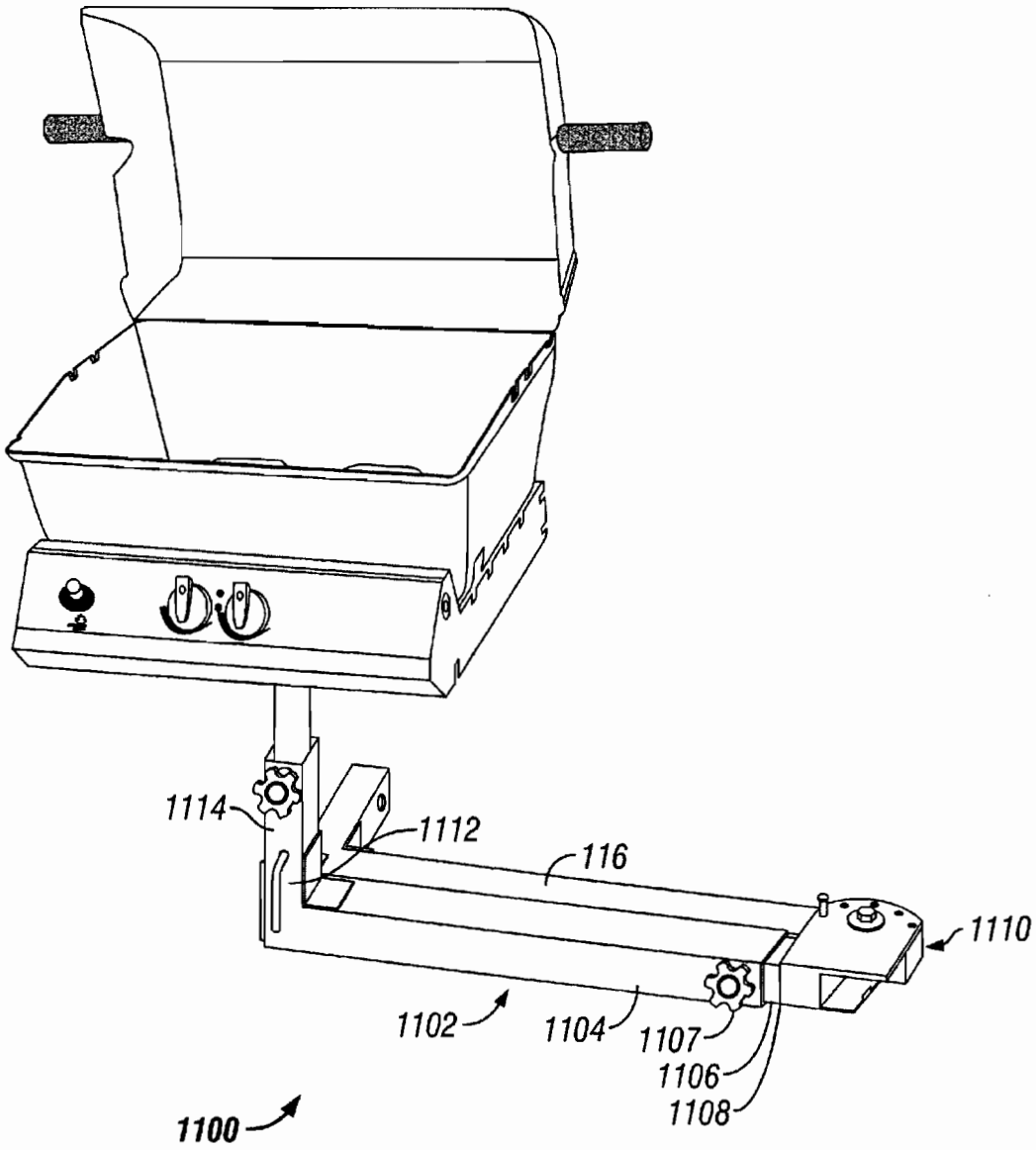

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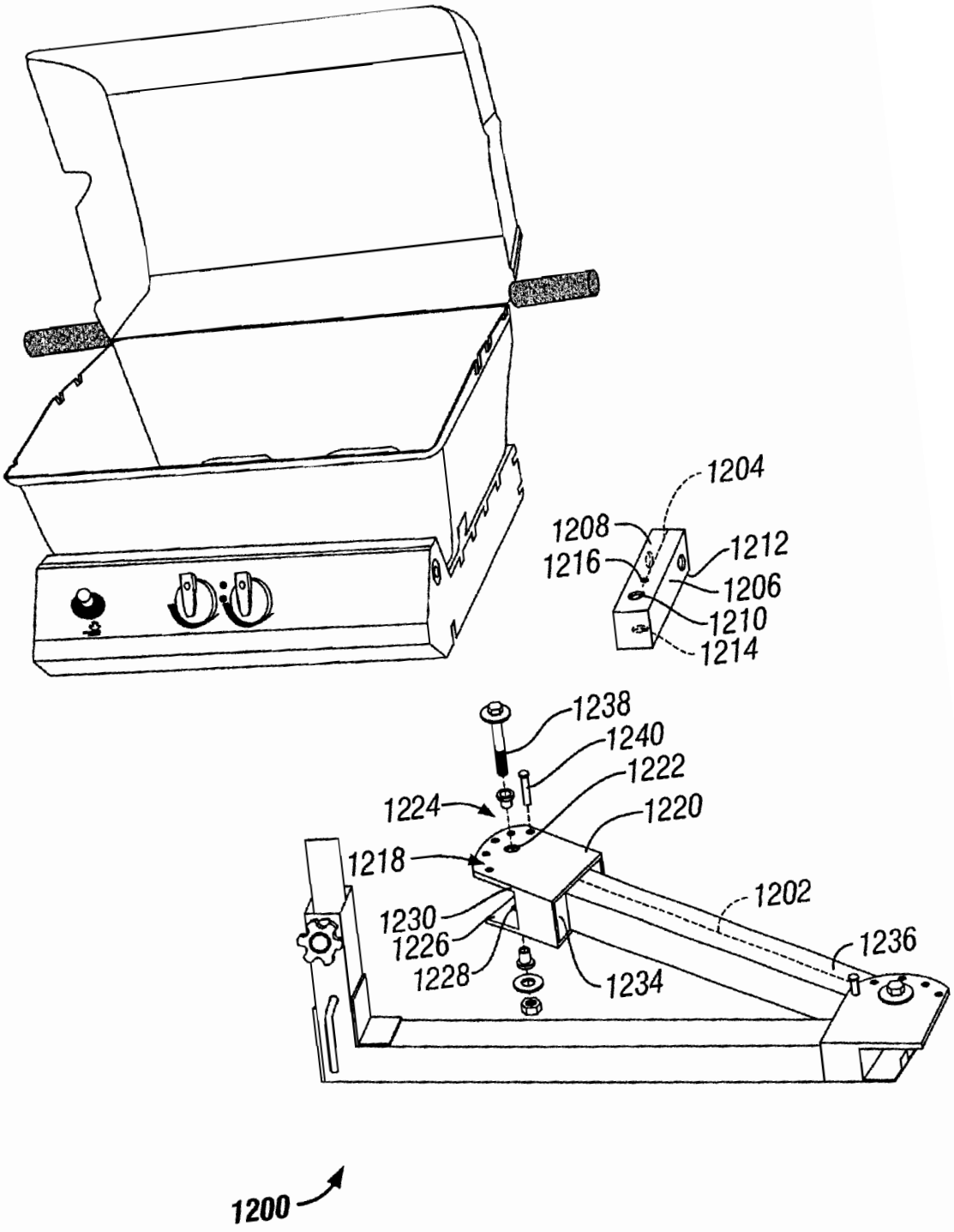
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FIG. 12

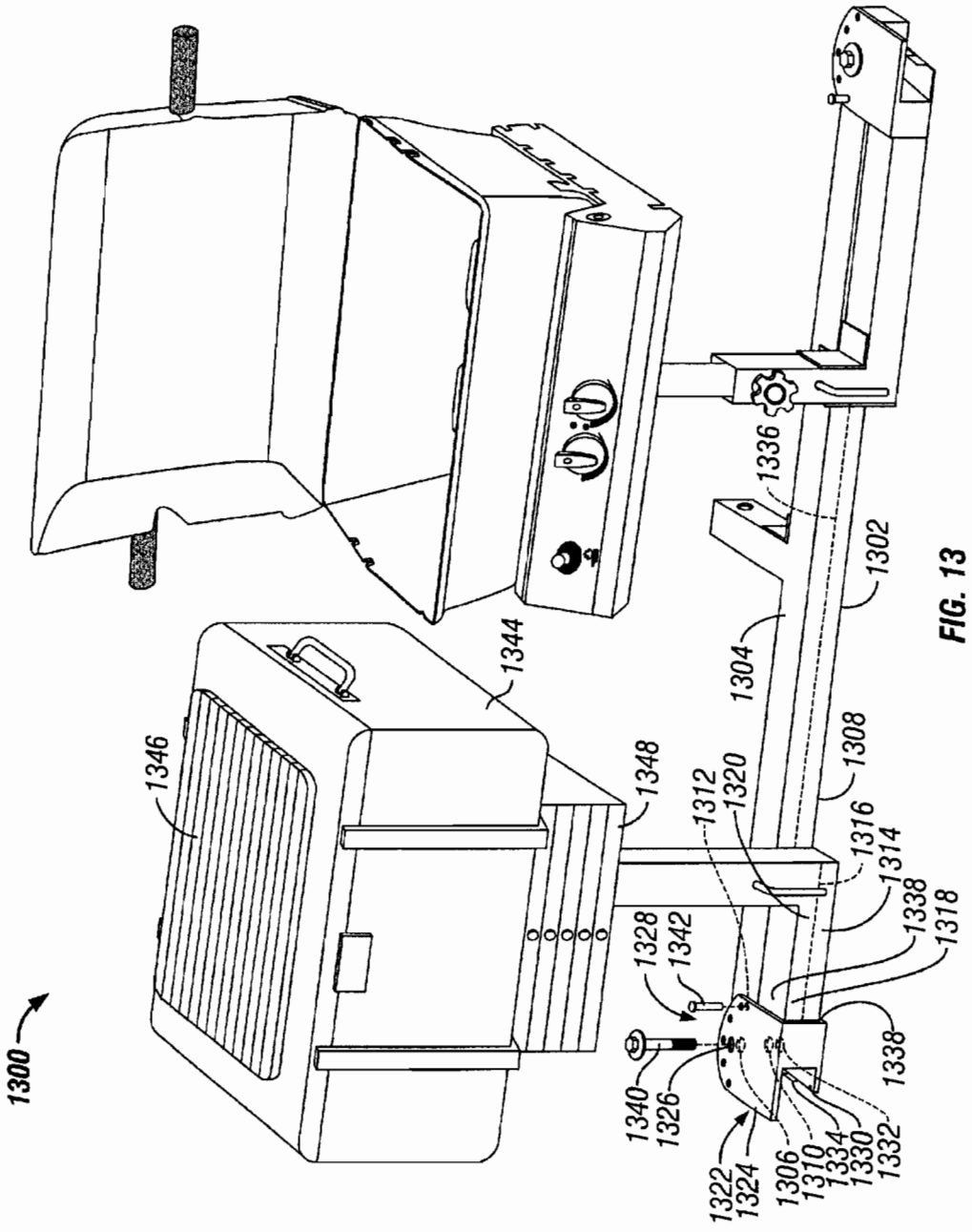
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FIG. 13

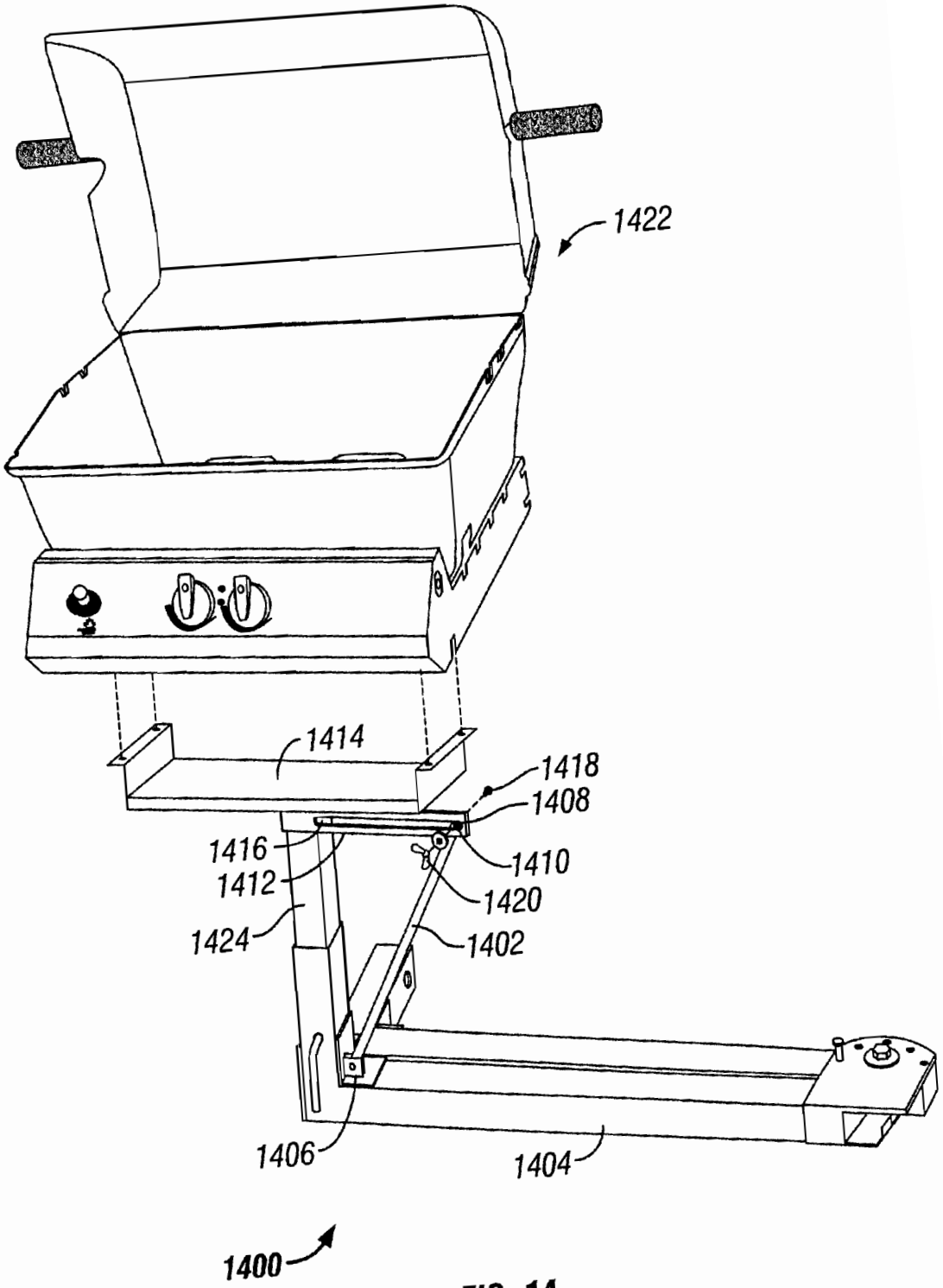
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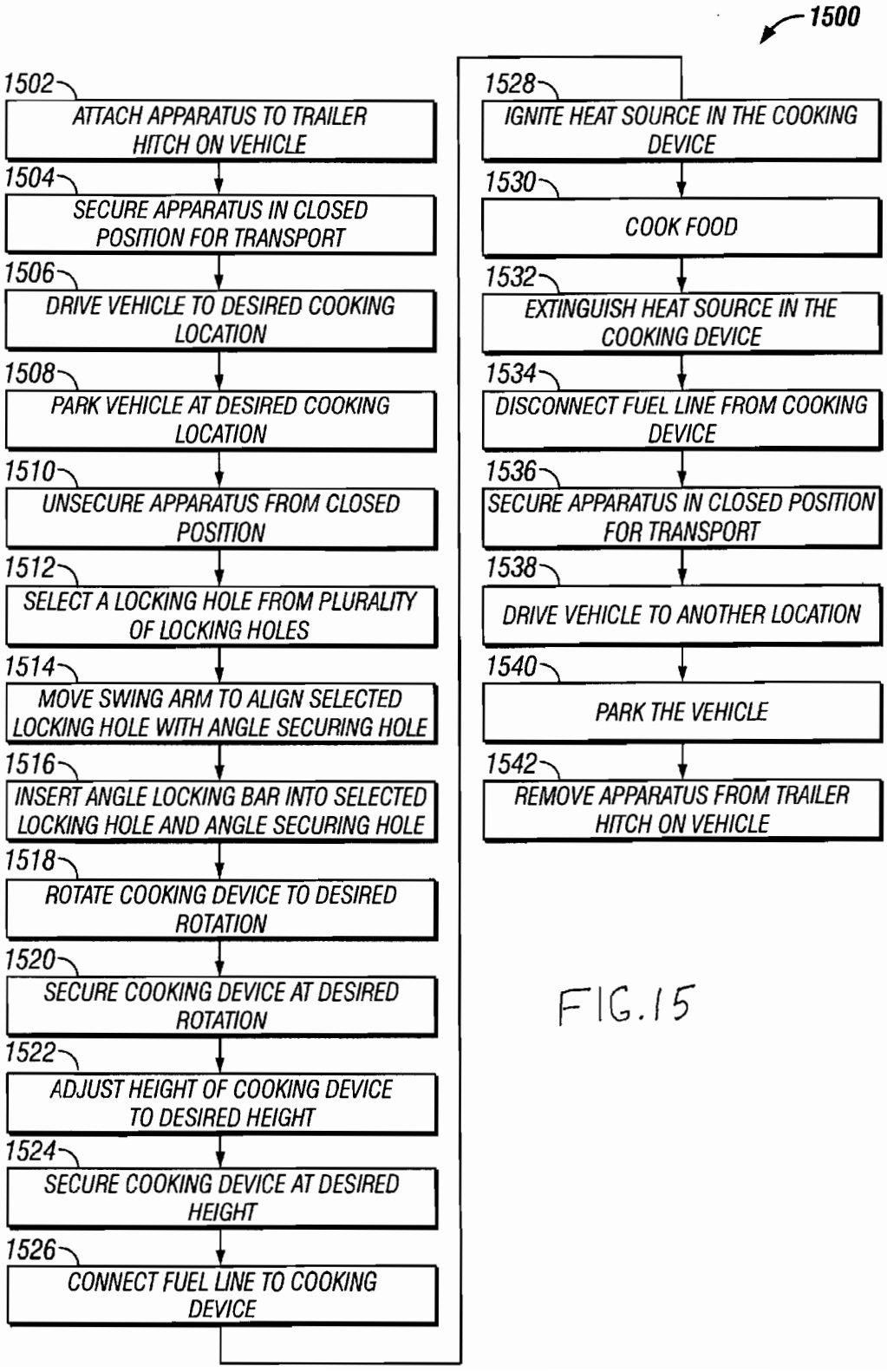
FIG. 14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ATTACH APPARATUS TO TRAILER HITCH ON VEHICLE
1504
SECURE APPARATUS IN CLOSED POSITION FOR TRANSPORT
1506
DRIVE VEHICLE TO DESIRED COOKING LOCATION
1508
PARK VEHICLE AT DESIRED COOKING LOCATION
1510
UNSECURE APPARATUS FROM CLOSED POSITION
1512
SELECT A LOCKING HOLE FROM PLURALITY OF LOCKING HOLES
1514
MOVE SWING ARM TO ALIGN SELECTED LOCKING HOLE WITH ANGLE SECURING HOLE
1516
INSERT ANGLE LOCKING BAR INTO SELECTED LOCKING HOLE AND ANGLE SECURING HOLE
1518
ROTATE COOKING DEVICE TO DESIRED ROTATION
1520
SECURE COOKING DEVICE AT DESIRED ROTATION
1522
ADJUST HEIGHT OF COOKING DEVICE TO DESIRED HEIGHT
1524
SECURE COOKING DEVICE AT DESIRED HEIGHT
1526
CONNECT FUEL LINE TO COOKING DEVICE
1528
IGNITE HEAT SOURCE IN THE COOKING DEVICE
1530
COOK FOOD
1532
EXTINGUISH HEAT SOURCE IN THE COOKING DEVICE
1534
DISCONNECT FUEL LINE FROM COOKING DEVICE
1536
SECURE APPARATUS IN CLOSED POSITION FOR TRANSPORT
1538
DRIVE VEHICLE TO ANOTHER LOCATION
1540
PARK THE VEHICLE
1542
REMOVE APPARATUS FROM TRAILER HITCH ON VEHICLE

FIG.15

SWINGABLE APPARATUS ATTACHABLE TO A VEHICLE FOR TRANSPORTING A COOKING DEVICE AND PERMITTING ACCESS TO THE VEHICLE

BACKGROUND

1. Technical Field

The present invention relates to mobile cooking apparatuses. More particularly, the invention concerns an apparatus that is selectively attachable to a vehicle, for transporting a cooking device and positioning the cooking device in an orientation for cooking that permits access to the vehicle.

2. Description of Related Art

Outdoor leisure and recreational activities such as camping, fishing, picnicking at the beach or a park, cookouts, road trips, and tailgate parties at sporting events have become increasingly popular. Often, people are transported to these types of outdoor activities in a vehicle such as a truck, pickup truck, sport utility vehicle, or recreational vehicle. Frequently, people partaking in these mobile outdoor activities desire a freshly cooked hot meal.

One way of cooking a hot meal is to build a campfire and cook the meal over the fire. However, building a campfire can require a lot of effort, and creates a risk of fires. Also, campfires are not permitted in many areas. Hot meals can also be cooked ou a public barbeque at a campground or picnic area. However, public barbeques are frequently dirty, are in a state of disrepair, or are not available.

Another way of cooking a hot meal is to bring a barbeque in the vehicle, set it up at the camping, picnicking, or tailgating site, and cook the meal on the barbeque. However, transporting the barbeque in the vehicle uses valuable space inside the vehicle, and further, the barbeque cannot be put back into the vehicle until it cools down after cooking.

Another approach has been to permanently attach a barbeque to the exterior of a vehicle. However, it is often undesirable to always have a barbeque attached to the exterior of the vehicle. For example, there is a risk of theft, the barbeque is exposed to the elements for a long period of time, and parking can be problematic.

Yet another approach is to attach a barbeque to a trailer hitch on the rear of the vehicle. Although this has the advantage of permitting removal of the barbeque from the vehicle, this approach has the disadvantage of blocking access to the rear doors or hatch of the vehicle when the barbeque is attached.

In summary, all of the known ways of cooking a hot meal when partaking in mobile outdoor activities have proven inadequate.

SUMMARY

One aspect of the present invention concerns a portable apparatus that is selectively attachable to a vehicle, for transporting a cooking device and positioning the cooking device in an orientation for cooking that permits access to the vehicle.

In one example of the invention, the apparatus includes a hitch insertion member, a support arm that is attached to the hitch insertion member, a swing arm that is attached to the support arm with a hinge, a pedestal attached to the swing arm, and a cooking device that is attached to a column that is inserted into the pedestal. As an example, the cooking device may be a propane fueled barbeque.

The hitch insertion member is shaped for insertion into a trailer hitch attached to a vehicle. The hitch insertion member has a hole in a first side, and a hole in a second side aligned with the hole in the first side, for securing the hitch insertion member to the trailer hitch. As an example, the hitch insertion member is inserted into the trailer hitch and is secured to the trailer hitch in a user's garage prior to driving to a sporting event for a tailgate barbeque party.

The support arm is attached to a base of the hitch insertion member. The support arm has a support arm top hinge hole, and a support arm bottom hinge hole that is aligned with the support arm top hinge hole. The support arm top also has a support arm angle securing hole.

The swing arm is attached to a locking hinge assembly. The locking hinge assembly has a top hinge plate that has a central hole that is aligned with support arm top hinge hole. The top hinge plate also has a plurality of locking holes for selective alignment with the support arm angle securing hole. The locking hinge assembly also has a bottom hinge plate that has a central hole that is aligned with the support arm bottom hinge hole. The locking hinge assembly also has a stop wall attached to the bottom hinge plate to establish the maximum angle the swing arm can rotate in relation to the longitudinal axis of the support arm. The locking hinge assembly also includes a hinge bar that is inserted through the central hole in the top hinge plate in the locking hinge assembly, the support arm top hinge hole, the support arm bottom hinge hole, and the central hole in the bottom hinge plate of the locking hinge assembly, to attach the swing arm to the support arm, and to permit the swing arm to rotate in relation to the support arm.

The locking hinge assembly further includes an angle locking bar, that the user inserts into one of the plurality of locking holes in the top hinge plate and into the angle securing hole in the support arm, to lock the longitudinal axis of the swing arm at a selected angle in relation to the longitudinal axis of the support arm. The selected angle is determined by the location of the locking hole in the plurality of locking holes in the top hinge plate that the user chooses to align with the angle securing hole in the support arm.

Prior to driving the vehicle that the apparatus is attached to, the user swings the swing arm into a closed position next to the support arm, which causes one of the locking holes in the top hinge plate to become aligned with the angle securing hole in the support arm. The user then places the angle locking bar into the aligned holes to lock the swing arm in the closed position next to the support arm.

After the user parks the vehicle at the desired cooking location, the user removes the angle locking bar from the angle securing hole in the support arm, and then swings the nonhinged end of the swing arm away from the support arm, to move the cooking device further behind the vehicle, or to the side of the vehicle, to generally position the cooking device in a desired location for cooking, and to permit access to the rear door(s) or hatch of the vehicle. The user can then lock the swing arm to keep the cooking device at the desired location. The swing arm is locked into position by moving the swing arm to align one of the locking holes in the top hinge plate with the angle securing hole in the support arm, and then placing the angle locking bar into the aligned holes. The angle between the longitudinal axis of the support arm and the longitudinal axis of the swing arm is determined by the location of the locking hole in the top hinge plate that is aligned with the angle securing hole.

The column that the cooking device is attached to is inserted into the pedestal that is attached to the swing arm. The column can rotate in the pedestal, which permits the

user to rotate the cooking device to a desired rotation. The user may secure the cooking device at the desired rotation by tightening a column rotation locking bar that, when tightened, presses against the column through a hole in the pedestal.

This example of the invention and other examples of the invention are described in the following sections.

The invention provides a number of advantages. Significantly, the apparatus of the present invention permits swinging the cooking device further behind the vehicle, or to the side of the vehicle, to permit complete accessibility to the vehicle cargo bay via the rear door(s) or the rear hatch of the vehicle, when loading or unloading the vehicle. The apparatus also permits moving the cooking device before or during cooking to optimally position the cooking device, for example, with regard to safety or the wind or sun, and the cooking device can be locked at a desired position. Another advantage is that the apparatus can be quickly moved into position for cooking, and can also be quickly secured for travel. Additionally, the apparatus can easily be temporarily attached to the vehicle prior to driving to an outdoor recreational location, and then can easily be removed from the vehicle when the user returns home. Further, the apparatus is not stored in the valuable interior cargo area of the vehicle, which leaves that space available for additional passengers or supplies. Also, with regard to fire safety, the contained cooking environment of the cooking device provides a much safer alternative to a campfire. Furthermore, the cooking device provides a clean cooking environment unlike many public barbeques. The invention also provides a number of other advantages and benefits, which should be apparent from the following description.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of an example of an apparatus in accordance with an illustrative embodiment of the invention, in its operative environment.

FIG. **2** is a perspective view of an example of an apparatus in accordance with an illustrative embodiment of the invention, in its operative environment.

FIG. **3** is an exploded perspective view of an example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **4** is a perspective view of an example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **5** is a perspective view of another example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **6** is a perspective view of another example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **7** is a perspective view of another example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **8** is a perspective view of another example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **9** is a perspective view of another example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **10** is a perspective view of another example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **11** is a perspective view of another example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **12** is a partially exploded perspective view of another example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **13** is a partially exploded perspective view of another example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **14** is a partially exploded perspective view of another example of an apparatus in accordance with an illustrative embodiment of the invention.

FIG. **15** is a flowchart of an operational sequence for using an apparatus in accordance with an illustrative embodiment of the invention.

DETAILED DESCRIPTION

The nature, objectives, and advantages of the invention will become more apparent to those skilled in the art after considering the following detailed description in connection with the accompanying drawings. Herein "attached" means directly or indirectly connected.

I. HARDWARE COMPONENTS AND INTERCONNECTIONS

A. First Examples

One aspect of the invention is an apparatus that is selectively attachable to a vehicle, for transporting a cooking device, and positioning the cooking device in an orientation for cooking that permits access to the vehicle. As an example the invention may be embodied by the apparatus **100** shown in its operative environment in FIG. **1**. In FIG. **1** the apparatus **100** is attached to the trailer hitch **102** of a vehicle **104**, with the apparatus **100** oriented for transport, and with the rear door and hatch of the vehicle **104** closed. The apparatus **100** is also shown in its operative environment in FIG. **2**, attached to the trailer hitch **102** of the vehicle **104**, with the apparatus **100** oriented for cooking, and with the rear door and hatch of the vehicle **104** open. As an example, the trailer hitch **102** is a standard tubular trailer hitch **102**, that typically has a hollow tube **106** that has a rearward facing hollow tubular end **108** and a hole in a first side (not shown) of the trailer hitch hollow tube **106** and a hole **110** the second side of the trailer hitch hollow tube **106** that is aligned with the first hole in the trailer hitch hollow tube **106**. A hitch locking pin **112** is used to secure the apparatus **100** to the trailer hitch **102**. The vehicle **104** may be any type of vehicle, for example a sport utility vehicle, a recreational vehicle, a pickup truck, a truck, a station wagon, or any other suitable vehicle.

Referring to FIG. **3**, the apparatus **100** includes a hitch insertion member **302** that has a base **304**, a hitch insertion member first side **306**, and a hitch insertion member second side **308**. The hitch insertion member defines a hitch insertion member longitudinal axis **310**. Optionally, the hitch insertion member **302** could be shortened to position the remainder of the apparatus **100** closer to the vehicle **104**. The hitch insertion member first side **306** has a hole **312**, and the hitch insertion member second side **308** has a hole **314** aligned with the hole **312** in the hitch insertion member first side **306**. As an example, the hitch insertion member **302** may be sized and shaped to fit into the standard tubular trailer hitch **102** (shown in FIGS. **1** and **2**). The opening of the hollow tubular end **108** of the trailer hitch **102** typically is two inches by two inches. This type of trailer hitch **102** is commonly provided in the standard tow package on most pickups, sport utility vehicles, and recreational vehicles. To secure the apparatus **100** to this type of trailer hitch **102**, the hitch insertion member **302** is inserted into the rearward

facing hollow tubular end **108** of the trailer hitch **102**, and the holes **312**, **314** in the first **306** and second **308** sides of the hitch insertion member **302** are aligned with the hole in the first side and the hole in the second side **110** of the trailer hitch hollow tube **106**, and the hitch locking pin **112** is inserted through the holes **312**, **314** in the first **306** and second **308** sides of the hitch insertion member **302** and the hole in the first side and the hole in the second side **110** of the trailer hitch hollow tube **106**, to secure the hitch insertion member **302** to the trailer hitch **102**. Alternatively, the hitch insertion member **302** could be configured to attach to tubular trailer hitch openings that have different sizes and shapes.

Alternatively, the hitch insertion member **302** may be configured for use with different types of trailer hitches. An example of another type of trailer hitch is a draw bar hitch (not shown) that has a horizontal bar having an aperture, and a threaded bar attached to a hitch ball for insertion into the aperture. For attachment to this type of hitch, the hitch insertiou member may be configured to have a vertical hole (not shown) or vertical holes into which the threaded bar attached to the hitch ball may be inserted to secure the hitch insertion member to the horizontal bar of the trailer hitch. Alternatively, a pin, rather than the threaded bar attached to a hitch ball, can be inserted into the aperture to secure the hitch insertion member to the trailer hitch. Alternatively, the hitch insertion member may be configured to have a vertical hole or vertical holes into which the hitch ball may be inserted to secure the hitch insertion member to the trailer hitch.

In an alternative example the apparatus **100** could be adapted to be attached to the frame of a vehicle, rather than being attached to a trailer hitch **102**. For example, the apparatus **100** could be permanently attached to the frame of a recreational vehicle. Likewise, in an alternative example the apparatus **100** could be adapted to attach to a bumper of a vehicle. In these alternative examples, a support arm **322** could be adapted to be attached directly to the frame or bumper of the vehicle **104**, without including a hitch insertion member **302** on the apparatus. Alternatively, instead of the hitch insertion member **302**, one or more attachment members (not shown) could be attached to the support arm **322** for attachment to the vehicle frame or bumper. Alternatively, the apparatus **100** could be attached to a portion of the vehicle **104** other than the frame or a bumper.

The apparatus **100** includes the support arm **322** that has a support arm top **324** and a support arm bottom **326**, and a support arm first end **328** and a support arm second end **330**. The support arm **322** also defines a support arm longitudinal axis **332**. The support arm top **324** has a support arm top primary hinge hole **334**, and the support arm bottom **326** has a support arm bottom primary hinge hole **336** that is aligned with the support arm top primary hinge hole **334**. If the support arm **322** is solid, the support arm top primary hinge hole **334** and the support arm bottom primary hinge hole **336** would be different ends of a single hole. The support arm top **324** may also have a support arm primary angle securing hole **338**. The support arm **322** is attached to the base **304** of the hitch insertion member **302**. As an example, the first end **328** of the support arm **322** may be attached to the base **304** of the hitch insertion member **302** with the support arm longitudinal axis **332** substantially perpendicular to the hitch insertion member longitudinal axis **310**. However, this perpendicular arrangement is not required.

In one example the support arm top primary hinge hole **334** is located about 2.7 centimeters from the support arm second end **330**, and the support arm primary angle securing hole **338** is located about 5.8 centimeters from the support arm top primary hinge hole **334**. Typically, the support arm top primary hinge hole **334** will be located within about five centimeters from the support arm second end **330**, and the support arm primary angle securing hole **338** will be located within about ten centimeters from the support arm top primary hinge hole **334**. However, the support arm top primary hinge hole **334** can be located at other distances from the support arm second end **330**, and the support arm primary angle securing hole **338** can be located at other distances from the support arm top primary hinge hole **334**. Optionally, more than one set of support arm top and bottom primary hinge holes and primary angle securing holes could be provided in the support arm **322**, to permit selectively attaching a primary swing arm **340** to different locations on the support arm **322**.

The apparatus **100** includes the primary swing arm **340**, which defines a primary swing arm longitudinal axis **342**, and which has a primary swing arm hinged end **344** and a primary swing arm swinging end **346**. The primary swing arm **340** is typically able to swing one hundred and eighty degrees. However, the apparatus **100** can be configured to permit larger or smaller maximum swing angles for the primary swing arm **340**. The capability of the primary swing arm **340** to swing one hundred and eighty degrees is a convenience and safety feature that allows the user to safely locate the cooking device **348** (which may be hot) in a safe location, and to position it in a desirable orientation in relation to the wind. The cooking device **348** defines a cooking device longitudinal axis **349**.

This example of the apparatus **100** further includes a primary hinge assembly **350** for pivotally attaching the primary swing arm **340** to the support arm **322**. However, any type of hinge, pivot, or other suitable apparatus for pivotally attaching the primary swing arm **340** to the support arm **322** could be used. The primary hinge assembly **350** has a top hinge plate **352** having a central hole **354** for alignment with the support arm top primary hinge hole **334**. The top hinge plate **352** may also have a plurality of locking holes **356** for selective alignment with the support arm primary angle securing hole **338**. The primary hinge assembly **350** also has a bottom hinge plate **358** having a central hole **360** for alignment with the support arm bottom primary hinge hole **336**. The primary hinge assembly **350** may also have a stop wall **362** attached to the bottom hinge plate **358** to establish the maximum angle the primary swing arm longitudinal axis **342** can rotate in relation to the support arm longitudinal axis **332**. The primary hinge assembly **350** also includes an attachment wall **364** connected to the top hinge plate **352** and the bottom hinge plate **358**. The attachment wall **364** is attached to the primary swing arm **340**. As an example, the attachment wall **364** may be attached to the hinged end **344** of the primary swing arm **340**. However, the attachment wall **364** could be attached to other locations on the primary swing arm **340**. The portion of the primary hinge assembly **350** that includes the top hinge plate **352**, bottom hinge plate **358**, stop wall **362**, and attachment wall **364**, may be made from two or more separate pieces that are attached together, or can be formed from a singe piece (for example a single piece of metal).

The primary hinge assembly **350** also includes a primary hinge bar **366** inserted through the central hole **354** in the top hinge plate **352** in the primary hinge assembly **350**, the support arm top primary hinge hole **334**, the support arm bottom primary hinge hole **336**, and the central hole **360** in the bottom hinge plate **358** of the primary hinge assembly **350**, to attach the primary swing arm **340** to the support arm

322, and to permit the primary swing arm 340 to rotate in relation to the support arm 322. The primary hinge assembly 350 may also have a primary angle locking bar 368 inserted into one of the plurality of locking holes 356 in the top hinge plate 352 of the primary hinge assembly 350 and into the primary angle securing hole 338 in the support arm 322, to lock the primary swing arm longitudinal axis 342 at an angle in relation to the support arm longitudinal axis 332 selected from a plurality of angles determined by the locations of the locking holes 356 in the top hinge plate 352 of the primary hinge assembly 350 and by the location of the support arm primary angle securing hole 338. The primary angle locking bar 368 may be in a self contained, spring loaded bar housing (not shown), which contains the bar to prevent the bar from being lost. The bar housing may be tack welded to the top hinge plate 352. Alternatively, the primary angle locking bar 368 is not in a bar housing. Optionally, the primary angle locking bar 368 may be held in place with a clip or pin.

Optionally, the central hole 354 in the top hinge plate 352 of the primary hinge assembly 350 is located in an overhang area 370 of the top hinge plate 352, and the plurality of locking holes 356 in the top hinge plate 352 of the primary hinge assembly 350 are also located in the overhang area 370 of the top hinge plate 352. Also optionally, the central hole 360 in the bottom hinge plate 358 of the primary hinge assembly 350 is located in an overhang area 372 of the bottom hinge plate 358, and the stop wall 362 is partially contiguous with the overhang area 372 and a nonoverhang area 374 of the bottom hinge plate 358.

The apparatus 100 also includes a pedestal 376 that has a base 378. The pedestal 376 defines a pedestal longitudinal axis 380. The base 378 of the pedestal 376 is attached to the primary swing arm 340. As an example, the base 378 of the pedestal 376 may be attached to the swinging end 346 of the primary swing arm 340 with the pedestal longitudinal axis 380 substantially perpendicular to the primary swing arm longitudinal axis 342. However, this perpendicular arrangement is not required. For example, in embodiments of the invention where the primary swing arm 340 is not horizontal, the pedestal longitudinal axis 380 is not perpendicular to the primary swing arm longitudinal axis 342. Also, the pedestal 376 could be attached to the primary swing arm 340 at a location other than the swinging end 346 of the primary swing arm 340. The pedestal 376 may have a rotation adjustment locking hole 382, which may be threaded. The apparatus 100 also includes a column 384, which is at least partially inserted into the pedestal 376. The column 384 defines a column longitudinal axis 386. The apparatus 100 may also include a column rotation locking bar 388, which may be threaded, that is secured through the rotation adjustment locking hole 382 to lock the column 384 at a selected rotation within the pedestal 376, by tightening the column rotation locking bar 388 against the column 384. The column rotation locking bar 388 could also be used to lock the column 384 at a selected height within the pedestal 376, by tightening the column rotation locking bar 388 against the column 384. Alternatively, a plurality of holes could be provided in the column 384, into which the column rotation locking bar 388 could be selectively inserted, to lock the column 384 at a selected height within the pedestal 376, to lock the cooking device 348 at a selected height. Alternative, a plurality of fixed locating pins attached to the pedestal 376 could be used to select a desired height. The apparatus may also include a lateral member 390 attached to the column 384. A collar swivel (not shown) could be attached at or near the top of the column 384, and to the lateral member 390, to permit the column 394 to rotate in relation to the lateral member 390, to permit three hundred sixty degree (or less) rotation of the cooking device 348. The collar swivel could have a securing knob, for example attached to a threaded or spring loaded bar, for locking the collar swivel at a selected rotation.

The apparatus 100 may also include a support arm outside gusset 392 attached to the support arm 322 and the hitch insertion member 302. The apparatus 100 may also include a support arm inside gusset 394 attached to the support arm 322 and the hitch insertion member 302. The apparatus 100 may also include an inside pedestal gusset 396 attached to the pedestal 376 and the primary swing arm 340. Optionally, the inside pedestal gusset 396 could have a threaded hole aligned with a rotation adjustment locking hole in the pedestal 376. The apparatus 100 may also have an outside pedestal gusset 398 attached to the pedestal 376 and the primary swing arm 340. The apparatus 100 may also have a top hinge hole liner 400 inside the support arm top primary hinge hole 334, and a bottom hinge hole liner 402 inside the support arm bottom primary hinge hole 336. The apparatus 100 may also have a first bracket 404 attached to a first end 406 of the lateral member,390 and a second bracket 408 attached to a second end 410 of the lateral member 390. The first bracket 404 may have a plurality of holes 412 and the second bracket 408 may have a plurality of holes 414, and the cooking device 348 (for example a barbeque) may have a plurality of holes 416 aligned with the plurality of holes 412 in the first bracket 404 and the plurality of holes 414 in the second bracket 408. The apparatus 100 may also include a plurality of bolts 418 and a plurality of nuts 420 for attaching the cooking device 348 to the first bracket 404 and the second bracket 408 , wherein the cooking device 348 is attached to the lateral member 390 by attaching the cooking device 348 to the first bracket 404 and the second bracket 408 by inserting a bolt from the plurality of bolts 418 through each of the aligned holes in the cooking device 348 and the first bracket 404, and through each of the aligned holes in the cooking device 348 and the second bracket 408, and securing each bolt with a nut from the plurality of nuts 420. Typically, 6–8 bolts are used, although different numbers could be used. The lateral member 390 may have a lateral member hole 422, and the column 384 may be inserted into the lateral member hole 422 and attached to the lateral member 390. However, the cooking device 348 could be attached to the primary swing arm 340 in any other suitable way.

A cross section of the hitch insertion member 302 perpendicular to the hitch insertion member longitudinal axis 310 may be a square, rectangle, circle, oval or any other suitable shape. A cross section of the support arm 322 perpendicular to the support arm longitudinal axis 332 may be a square, rectangle, circle, oval or any other suitable shape. A cross section of the primary swing arm 340 perpendicular to the primary swing arm longitudinal axis 342 may be a square, rectangle, circle, oval or any other suitable shape. A cross section of the pedestal 376 perpendicular to the pedestal longitudinal axis 380 may be a square, circle, triangle, pentagon, hexagon, or any other suitable shape. A cross section of the column 384 perpendicular to the column longitudinal axis 386 may be a circle or any other suitable shape. The hitch insertion member 302, the support arm 322, the primary swing arm 340, and the column 384 may be hollow, tubular, bar stock, solid, honeycombed or any other suitable structure, and may have different structures. The pedestal 376 is hollow to permit insertion of the column 384.

The hitch insertion member **302**, support arm **322**, primary swing arm **340**, primary hinge assembly **350**, pedestal **376**, column **384**, lateral member **390**, first bracket **404**, second bracket **408**, and the other components of the apparatus **100** may be made of steel, stainless steel, aluminum, carbon fiber, plastic, or any other suitable material. Different components of the apparatus **100** may be made from different materials. Any suitable type of finish may be used for the components of the apparatus **100**, for example, zinc type **1**, zinc type **2**, paint, powder coat, or black oxide could be used for steel components; polished stainless steel could be used for stainless steel components; and soft anodized, hard anodized, paint, or powder coat could be used for aluminum components. Chrome plating could be applied to any material, and nickel plating could be applied to any material except plastic. The apparatus **100** could be painted to match the color of the vehicle **104** to which the apparatus **100** is removably attached.

The cooking device **348** may be attached to the lateral member **390**. However, the apparatus **100** does not have to include a cooking device **348**. The cooking device **348** could be, for example, a barbeque, a griddle, a wok, a gas burner, a smoker, a rotisserie, a deep fryer, or any other suitable device for cooking. Many of the possible cooking devices will have a grill. Almost any grilling area could be used, but typically the grilling area will range from about one hundred square inches to about two thousand square inches. Different sizes and types of barbeque models can be used as the cooking device **348**, and almost any barbeque could be used. Appropriate gas barbeques can have one, two, or more burners. Propane fueled barbeques having almost any BTU rating could be used, for example ten thousand BTU (or less) to one hundred thousand BTU (or more). A suitable barbeque can be obtained, for example, from Onward Manufacturing Company, Waterloo, Ontario, Canada. Although not required, the cooking device **348** typically will have a cover **424**. The cover **424** may include a logo.

The cooking device **348**, which for example may be a barbeque, can have almost any weight, and typically will range from, for example, about twenty-five pounds to about five hundred pounds. However, a lighter or heavier cooking device **348** could be used. A typical barbeque used as the cooking device **348** may weigh about twenty-five pounds. The weight of the apparatus **100** including a barbeque (but not including a fuel tank) may range, for example, from about thirty pounds to about five hundred pounds, commonly will be about thirty pounds to about seventy-five pounds, and typically will be about fifty pounds. However, the weight of the apparatus **100** could be lighter than thirty pounds or heavier than five hundred pounds. Typically, a propane tank will weigh from about ten pounds to about twenty pounds, but could weigh less than ten pounds or more than twenty pounds.

The fuel for the cooking device **348** can be, for example, propane (LPG), charcoal, wood, natural gas, electric, or any other type of gas or other fuel used for cooking. A wide variety of standard fuel tanks, for example standard propane tanks, could be connected to the cooking device **348**, typically by using a standard connector for quick connection and disconnection. Optionally, the apparatus **100** can include an attachment for connecting the cooking device **348** to a gas source on a vehicle, or to a land based gas source. For example, when used with a recreational vehicle (RV), the apparatus **100** could be attached to a propane tank on the recreational vehicle that is also used for the stove, refrigerator, and other appliances in the recreational vehicle.

Optionally, the pedestal **376** has a pedestal front securing hole **426** and a pedestal back securing hole **428**, wherein the pedestal front securing hole **426** and the pedestal back securing hole **428** are on opposite sides of the pedestal **376** and are aligned with each other. Similarly, optionally, the column **384** has a column front securing hole **430** and a column back securing hole **432**, wherein the column front securing hole **430** and the column back securing hole **432** are on opposite sides of the column **384** and are aligned with each other. The column front securing hole **430** is located to permit alignment with the pedestal front securing hole **426**, and the column back securing hole **432** is located to permit alignment with the pedestal back securing hole **428** when the column **384** is inserted into the pedestal **376**. The apparatus may also optionally include a securing wall **434** attached to the support arm **322**. The securing wall **434** has a securing wall hole **436** located to align with the pedestal back securing hole **428** when the primary swing arm **340** is in a closed position adjacent the support arm **322**. The apparatus **100** also optionally includes a locking bar **438** for insertion into the securing wall hole **436**, the pedestal back securing hole **428**, the column back securing hole **432**, the column front securing hole **430**, and the pedestal front securing hole **426**, to secure the apparatus **100** for transport. A clip may be attached to the locking bar **438** to secure the locking bar **438**, or alternatively, the locking bar may be part of a lock or may be attached to a lock. This arrangement of the securing holes and the securing wall **434** and the locking bar **438** permits securing or locking the column **384** (and therefore also the cooking device **348**) to the apparatus **100**. This arrangement also provides for securing or locking the column **384** and pedestal **376** to the securing wall **434** on the support arm **322**, thereby maintaining the primary swing arm **340** in a closed position next to the support arm **322** for safely transporting the apparatus **100**.

Optionally, the apparatus **100** could include a sensing device (not shown), for example an electrical or magnetic switch or a photovoltaic sensor, which could be attached, for example, to the support arm **322**, the primary swing arm **340**, the primary hinge assembly **350**, or the securing wall **434**, to detect when the primary swing arm **340** is in a closed position next to the support arm **322**. The sensing device could be coupled to a light, buzzer, speaker, or other type of indicator in the vehicle **104**, to notify the user when the apparatus **100** is not in a closed position when transporting or preparing to transport the apparatus **100**.

Optionally, as shown in FIG. **4**, the apparatus includes a fuel tank holder **450** attached to the primary swing arm **340** for attaching a fuel tank **452** to the apparatus **100**. Alternatively, the fuel tank holder **450** could be attached to the support arm **322**, the pedestal **376**, or the hitch insertion member **302**. Other types of fuel tank holders could also be used. Alternatively, rather than including a fuel tank holder on the apparatus **100**, the fuel tank **452** could be placed on the ground when connected to the cooking device **348** for cooking, and could be placed in the vehicle **104** when transporting the apparatus **100**. The fuel tank **452** may be stored in the vehicle, or placed in the fuel tank holder **450**, when transporting the apparatus **100**. The apparatus also **100** optionally includes fuel hose retaining clips (not shown) for the fuel hose **453**.

Optionally, as shown in FIG. **4**, the apparatus **100** could also include a fire extinguisher holder **454** attached to the pedestal **376**, for attaching a fire extinguisher **456** to the apparatus **100**. Alternatively, the fire extinguisher holder **454** could be attached to the support arm **322**, the primary swing arm **340**, or the hitch insertion member **302**. The fire extinguisher **456** may be stored in the vehicle **104**, or placed in the fire extinguisher holder **454**, when transporting the apparatus **100**.

Optionally, additional items could be permanently or temporarily attached to the support arm **322**, the primary swing arm **340**, and/or the pedestal **376**. The additional items could include one or more coolers (ice chests), refrigerators, cutting surfaces (for example cutting boards), condiment trays, and compartments or drawers for storing cooking utensils, grill covers, lights (for example for night barbequing), side-auxiliary grills (auxiliary burners), and/or additional cooking devices.

Optionally, as shown in FIG. **4**, the apparatus could include a shock dampening device **462** having a shock dampening device first end **464** permanently or removably attached to the hitch insertion member **302** (or the support arm **322** or the primary swing arm **340**), and a second shock dampening device end **466** permanently or removably attached to the lateral member **390** (or the cooking device **348**), to dampen the vibration of the cooking device **348** when transporting the apparatus **100**. The shock dampening device **462** may be a shock absorber or any other device for dampening movement and vibration of the cooking device **348**.

Optionally, as shown in FIG. **4**, the apparatus may include a supplemental trailer hitch receptacle **468**, and may also include a trailer hitch ball assembly **470** which may be attached to the supplemental trailer hitch receptacle **468**. The supplemental trailer hitch receptacle **468** is attached to the hitch insertion member **302**, to enable the user to tow something (for example a trailer or boat) with the vehicle **104**, while the apparatus **100** is attached to the trailer hitch **102** of the vehicle **104**. The supplemental trailer hitch receptacle **468**, and the trailer hitch ball assembly **470** could be temporarily attached and removable, or permanently attached, to the apparatus **100**. Also, the trailer hitch ball assembly **470** could be permanently or removably attached to the supplemental trailer hitch receptacle **468**. Alternatively, a trailer hitch ball assembly could be attached directly to the apparatus **100** without using a supplemental trailer hitch receptacle **468**.

Optionally, as shown in FIG. **4**, the apparatus includes a license plate mount **472** and a license plate light **474** attached to the support arm **322**. Alternatively, the license plate mount **472** and license plate light **474** could be attached to the primary swing arm **340**, the hitch insertion member **302**, the pedestal **376**, or any other portion of the apparatus **100**.

Optionally, the apparatus could be configured to be self-aligning for transport. For example, the cooking device **348** would be automatically rotated to orient the cooking device longitudinal axis **349** substantially parallel with the support arm longitudinal axis **332**, when the primary swing arm **340** is moved to a closed position next to the support arm **322**. This could be accomplished, for example, with an alignment arm (not shown) connected to the swing arm and the column **384**. The apparatus could also be configured to be self closing.

Optionally, one or more springs (not shown) could be attached to the support arm **322** and the primary swing arm **340** to assist in closing the apparatus **100** for transport (positioning the primary swing arm **340** next to the support arm **322**). Optionally, one or more springs (not shown) could be attached to the apparatus **100** to assist in raising the cooking device **348** when adjusting the cooking device **348** to a desired height for cooking.

Optionally, one or more electrical motors (not shown) could be attached to the support arm **322** and the primary swing arm **340** to swing the primary swing arm **340** away from the support arm **322**, and to close the primary swing arm **340** to a position next to the support arm **322**. A motor could also be attached to the column **384** or lateral member **390** and/or other part of the apparatus **100** to raise or lower the cooking device **348**. The motor or motors could be operated with a wireless remote control device, or with a switch in the vehicle wired to the motor or motors, or with a switch on the apparatus wired to the motor or motors.

Optionally, the apparatus **100** could include speakers (not shown) that could be connected to a vehicle audio system.

Optionally, a ground support leg (not shown) could be used with the apparatus to help support the cooking device **348** when cooking food that is particularly heavy. The ground support leg could be a vertical post with a base. The ground support leg could be placed between the ground and either the primary swing arm **340**, the lateral member **390**, the first bracket **404**, the second bracket **408**, or the cooking device **348**, to help support the cooking device **348**.

Optionally, the apparatus **100** could be placed in a carrier stand (not shown) when the apparatus is not attached to a vehicle. As an example, the carrier stand may have wheels to permit rolling the carrier stand on the ground. The carrier stand could be rolled to a location in the user's garage for storage of the apparatus **100**, and could be rolled to the trailer hitch **102** on the vehicle **104** when attaching the apparatus **100** to the trailer hitch **102**. As an example, the carrier stand could be configured to carry the apparatus **100** so that the hitch insertion member **302** is at a height that permits easy insertion into the trailer hitch **102** on the vehicle **104**. The carrier stand could also be configured to permit adjusting the height of the apparatus **100** when the apparatus **100** is in the carrier stand, to facilitate inserting the hitch insertion member **302** into the trailer hitch **102**. The apparatus **100** could also be used as a backyard, tailgate, or beach barbeque when placed in the carrier stand. Optionally, the carrier stand could be made with removable wheels, or without wheels.

B. Inclined Primary Swing Arm

As an example, as shown in FIG. **4**, the support arm longitudinal axis **332** and the primary swing arm longitudinal axis **342** are substantially parallel and horizontal, when the hitch insertion member **302** is oriented to be inserted into the trailer hitch **102**. In another example of the apparatus **500** shown in FIG. **5**, the support arm longitudinal axis **502** is substantially horizontal and the swing arm longitudinal axis **504** defines an angle alpha from horizontal, when the hitch insertion member **506** is oriented to be inserted into the trailer hitch **102**. In the apparatus **500** shown in FIG. **5**, the primary swing arm **508** is attached directly to the lateral member **510**, and the apparatus **500** may not have a pedestal **376** or column **384**.

C. Shapes of the Support Arm and Primary Swing Arm

In the example of the apparatus **100** shown in FIG. **4**, the support arm **322** and the primary swing arm **340** are substantially straight. In another example of the apparatus **600** shown in FIG. **6**, the support arm **602** and the primary swing arm **604** are curved, for example, to contour to the shape of a vehicle or to the shape of item(s) attached to a vehicle. Alternatively, the support arm **602** could be straight and the primary swing arm **604** could be curved, or, the support arm **602** could be curved and the primary swing arm **604** could be straight. Optionally, the pedestal **376** and column **384** could be curved (whether or not the support arm **602** and/or the primary swing arm **604** are curved). In another example of the apparatus **700** shown in FIG. **7**, the support arm **702** has extra segments **704** and the primary swing arm **706** has extra segments **708**, for example, to fit the apparatus **700** around a spare tire or fuel container or water container.

Alternatively, one or more additional extra segments, or less additional segments, could be used which are configured differently than the extra segments **704**, **708** shown in FIG. **7**. Alternatively only the support arm **702** or only the primary swing arm **706** has one or more extra segments, for example, to support a gas or water container. One or more straight or curved extra segments could also be included in a curved support arm and/or a curved primary swing arm, and curved extra segments could also be included in a straight support arm and/or a straight primary swing arm. Further, one or more extra segments could be included in the support arm and/or the primary swing arm and/or the secondary swing arm in the other examples of the apparatus described herein.

D. Vertical Members and Telescoping Portions

In another example of the apparatus **800** shown in FIG. **8**, a hitch vertical member **802** is attached to the hitch insertion member **804** and the support arm **806**, to attach the support arm **806** to the hitch insertion member **804**, and to locate the support arm **806** and the primary swing arm **808** in a plane that is a specified distance above the trailer hitch **102**. Alternatively, the hitch vertical member **802** could extend below the hitch insertion member **804** and could be used to locate the support arm **806** and the primary swing arm **808** in a plane that is a specified distance below the trailer hitch **102**. Optionally, the hitch vertical member **802** could have an outer telescoping portion and an inner telescoping portion, to permit adjustment of the length of the hitch vertical member **802**, which optionally could be locked at a desired length with a threaded locking pin that could be inserted in a threaded hole in the outer telescoping portion to push against the inner telescoping portion.

In another example of the apparatus **900** shown in FIG. **9**, the primary swing arm **902** is above the support arm **904**. Alternatively, the primary swing arm **902** could be located below the support arm **904**.

In another example of the apparatus **1000** shown in FIG. **10**, a support vertical member **1002** is attached to the primary hinge assembly **1004** and the primary swing arm **1006**, to position the primary swing arm **1006** a specified distance above the support arm **1008**. Alternatively, the support vertical member **1002** could extend below the support arm **1008** and could be used to position the primary swing arm **1006** a specified distance below the support arm **1008**. Optionally, the support vertical member **1002** could have an outer telescoping portion and an inner telescoping portion, to permit adjustment of the length of the support vertical member **1002**, which optionally could be locked at a desired length with a threaded locking pin that could be inserted in a threaded hole in the outer telescoping portion to push against the inner telescoping portion.

In another example of the apparatus **1100** shown in FIG. **11**, the primary swing arm **1102** has a retainer portion **1104** and a telescoping insertion portion **1106** that is partially inserted into the retainer portion **1104** and secured to the retainer portion **1104**, wherein the telescoping insertion portion **1106** can be partially extended from within the retainer portion **1104** to extend the length of the primary swing arm **1102**. A retainer knob **1107** connected to a threaded retainer bar may be inserted into a threaded hole in the retainer portion **1104**, to push against the telescoping insertion portion **1106** to hold the telescoping insertion portion **1106** in place. In this example the attachment wall **1108** of the primary hinge assembly **1110** is attached to the telescoping insertion portion **1106** of the primary swing arm **1102**, and the base **1112** of the pedestal **1114** is attached to the retainer portion **1104** of the primary swing arm **1102**. Similarly, the support arm **1116** could have a retainer portion (not shown) and a telescoping insertion portion (not shown) to extend the length of the support arm.

E. Swinging Support Arm

Another example of the invention may be embodied by the apparatus **1200** shown in FIG. **12**. The apparatus **1200** generally has the features of the apparatus **100**, and also has the following additional components and features. In one implementation of the example of the invention shown in FIG. **12**, the support arm longitudinal axis **1202** could swing approximately one hundred eighty degrees, from perpendicular to the hitch insertion member longitudinal axis **1204** in a first direction, to perpendicular to the hitch insertion member longitudinal axis **1204** in a second opposite direction. For example, the support arm longitudinal axis **1202** could be swung to a position substantially parallel to a rear bumper of the vehicle **104** in one direction, and then could be swung one hundred and eighty degrees to a position substantially parallel with the rear bumper of the vehicle **104** an opposite direction. However, the range of swing could be greater, or smaller, than one hundred eighty degrees. In the apparatus **1200**, the hitch insertion member **1206** has a hitch insertion member top **1208** that has a hitch insertion member top hinge hole **1210**, and the hitch insertion member **1206** also has a hitch insertion member bottom **1212** that has a hitch insertion member bottom hinge hole **1214** that is aligned with the hitch insertion member top hinge hole **1210**. The hitch insertion member top **1208** also has a hitch insertion member angle securing hole **1216**.

The apparatus **1200** also includes a central hinge assembly **1218**. However, any type of hinge, pivot, or other suitable apparatus for pivotally attaching the support arm **1236** to the hitch insertion member **1206** could be used. The central hinge assembly **1218** has a top hinge plate **1220** having a central hole **1222** for alignment with the hitch insertion member top hinge hole **1210**. The top hinge plate **1220** may also have a plurality of locking holes **1224** for selective alignment with the hitch insertion member angle securing hole **1216**. The central hinge assembly **1218** also has a bottom hinge plate **1226** having a central hole **1228** for alignment with the hitch insertion member bottom hinge hole **1214**. The central hinge assembly **1218** may also have a stop wall **1230** attached to the bottom hinge plate **1226** to establish a maximum angle the support arm longitudinal axis **1202** can rotate in relation to the hitch insertion member longitudinal axis **1204**. Optionally, a second stop wall (not shown) could also be used. For example, a first stop wall could limit the extent of swing of the support arm **1236** in a first direction, and a second stop wall could limit the extent of swing of the support arm **1236** in a second direction. The central hinge assembly **1218** also includes a back wall **1234** connected to the top hinge plate **1220** and the bottom hinge plate **1226**. The back wall **1234** is attached to the support arm **1236**. The central hinge assembly **1218** also includes a central hinge bar **1238** inserted through the central hole **1222** in the top hinge plate **1220** in the central hinge assembly **1218**, the hitch insertion member top hinge hole **1210**, the hitch insertion member bottom hinge hole **1214**, and the central hole **1228** in the bottom hinge plate **1226** of the central hinge assembly **1218**, to attach the support arm **1236** to the hitch insertion member **1206**, and to permit the support arm **1236** to rotate in relation to the hitch insertion member **1206**. The central hinge assembly **1218** may also have a central angle locking bar **1240** inserted into one of the plurality of locking holes **1224** in the top hinge plate **1220** of the central hinge assembly **1218** and into the angle securing hole **1216** in the hitch insertion member **1206**, to

lock the support arm longitudinal axis **1202** at an angle in relation to the hitch insertion member longitudinal axis **1204** selected from a plurality of angles determined by the locations of the locking holes **1224** in the top hinge plate **1220** of the central hinge assembly **1218** and by the location of the angle securing hole **1216** in the hitch insertion member **1206**. The central angle locking bar **1240** may be in a self contained, spring loaded bar housing (not shown), which contains the bar to prevent the bar from being lost. The bar housing may be tack welded to the top hinge plate **1220**. Alternatively, the primary central angle locking bar **1240** is not in a bar housing.

F. Secondary Swing Arm

Another example of the invention may be embodied by the apparatus **1300** shown in FIG. **13**. The apparatus **1300** generally has the features of the apparatus **100**, and also has the following additional components and features. The support arm **1302** in the apparatus **1300** may be longer than the support arm **322** in the apparatus **100**. In the apparatus **1300**, the support arm top **1304** has a support arm top secondary hinge hole **1306**, and the support arm bottom **1308** also has a support arm bottom secondary hinge hole **1310** that is aligned with the support arm top secondary hinge hole **1306**. The support arm top **1304** may also has a support arm secondary angle securing hole **1312**.

The apparatus **1300** also includes a secondary swing arm **1314** defining a secondary swing arm longitudinal axis **1316**, and having a secondary swing arm hinged end **1318** and a secondary swing arm swinging end **1320**. The apparatus **1300** further includes a secondary hinge assembly **1322**. However, any type of hinge, pivot, or other suitable apparatus for pivotally attaching the secondary swing arm **1314** to the support arm **1302** could be used. The secondary hinge assembly **1322** has a top hinge plate **1324** having a central hole **1326** for alignment with the support arm top secondary hinge hole **1306**. The top hinge plate **1324** may also have a plurality of locking holes **1328** for selective alignment with the support arm secondary angle securing hole **1312**. The secondary hinge assembly **1322** also has a bottom hinge plate **1330** having a central hole **1332** for alignment with the support arm bottom secondary hinge hole **1310**. The secondary hinge assembly **1322** may also have a stop wall **1334** attached to the bottom hinge plate **1330** to establish the maximum angle the secondary swing arm longitudinal axis **1316** can rotate in relation to the support arm longitudinal axis **1336**. The secondary hinge assembly **1322** also includes an attachment wall **1338** connected to the top hinge plate **1324** and the bottom hinge plate **1330**. The attachment wall **1338** is attached to the secondary swing arm **1314**. The secondary hinge assembly **1322** also includes a secondary hinge bar **1340** inserted through the central hole **1326** in the top hinge plate **1324** in the secondary hinge assembly **1322**, the support arm top secondary hinge hole **1306**, the support arm bottom secondary hinge hole **1310**, and the central hole **1332** in the bottom hinge plate **1330** of the secondary hinge assembly **1322**, to attach the secondary swing arm **1314** to the support arm **1302**, and to permit the secondary swing arm **1314** to rotate in relation to the support arm **1302**. The secondary hinge assembly **1322** may also have a secondary angle locking bar **1342** inserted into one of the plurality of locking holes **1328** in the top hinge plate **1324** of the secondary hinge assembly **1322** and into the secondary angle securing hole **1312** in the support arm **1302**, to lock the secondary swing arm longitudinal axis **1316** at an angle in relation to the support arm longitudinal axis **1336** selected from a plurality of angles determined by the locations of the locking holes **1328** in the top hinge plate **1324** of the secondary hinge assembly **1322** and by the location of the secondary angle securing hole **1312** in the support arm **1302**. The secondary angle locking bar **1342** may be in a self contained, spring loaded bar housing (not shown), which contains the bar to prevent the bar from being lost. The bar housing may be tack welded to the top hinge plate **1324**. Alternatively, the secondary angle locking bar **1342** is not in a bar housing.

In the illustrated example, a secondary pedestal **1343** is attached to the secondary swing arm **1314**. Optionally, the secondary pedestal **1343** can have front and back holes for securing the secondary swing arm **1314** to a securing wall (not shown) with a secondary locking bar **1345**. Optionally, one or more additional items may be permanently or removably attached to the secondary pedestal **1343** and/or the secondary swing arm **1314**. Optionally, the secondary pedestal **1343** is not included and one or more of the additional items is attached directly to the secondary swing arm **1314**. These additional items could include one or more coolers **1344** (ice chests), refrigerators, cutting surfaces **1346** (for example cutting boards), condiment trays, and compartments or drawers **1348** for storing cooking utensils, grill covers, lights (for example, for night barbequing), side-auxiliary grills (auxiliary burners), and/or additional cooking devices.

G. Height Locking Bar

Another example of the invention embodied by the apparatus **1400** is illustrated in FIG. **14**. The apparatus **1400** includes a height locking bar **1402** pivotally connected to the swing arm **1404** with a pivot assembly **1406**, wherein the height locking bar **1402** has a movable end **1408** that has a hole **1410**. The apparatus **1400** also has a ledge **1412** attached to the lateral member **1414**, wherein the ledge **1412** has a lateral slit **1416**. The apparatus -**1400** also has a height locking bolt **1418** inserted through the hole **1410** in the movable end **1408** of the height locking bar **1402** and through the lateral slit **1416** in the ledge **1412** of the lateral member **1414**. The apparatus **1400** also has a wingnut **1420** attached to the height locking bolt **1418**, for securing the movable end **1408** of the height locking bar **1402** to the ledge **1412**, to lock the cooking device **1422** at a desired height. Optionally, the height locking bar **1402** could have two telescoping portions, and a locking rod for locking the telescoping portions so that the height locking bar **1402** could be locked at different lengths. Optionally, one or more additional height locking bars, height locking bolts, and wingnuts could be used, and one or more additional ledges and lateral slits could be used (or the ledge **1412** and the lateral slit **1416** could be extended). Optionally, as illustrated in FIG. **14**, in the apparatus **1400** the column **1424** may have a square cross section rather than a circular cross section (although a circular cross section could be used). Also, the apparatus **1400** may not include a column rotation locking bar **388** or a rotation adjustment locking hole **382**.

II. OPERATION

In addition to the various hardware embodiments described above, a different aspect of the invention concerns a method for using an apparatus that temporarily attaches to a vehicle, for transporting a cooking device **348** and positioning the cooking device **348** in an orientation for cooking that permits access to the vehicle. FIG. **15** shows a sequence **1500** for an exemplary method for using the apparatus. However, other methods of using the apparatus could be used. For ease of explanation, but without any intended limitation, the example of FIG. **15** is described in the context of the apparatus **100** described above in FIGS. **1–4**.

The sequence **1500** begins with task **1502** in which the apparatus is attached to the trailer hitch **102** on the vehicle **104**. In task **1504**, the user secures the apparatus in a closed position for safe transport for driving the vehicle **104**. The apparatus **100** may be secured by orienting the primary swing arm **340** in a closed position next to the support arm **322**, and then inserting the primary angle locking bar **368** into the primary angle securing hole **338** and also into the locking hole from the plurality of locking holes **356** in the top hinge plate **352** of the primary hinge assembly **350** that is lined up with the support arm primary angle securing hole **338** when the primary swing arm **340** is in a closed position next to the support arm **322**. Alternatively, or in addition to using the primary angle locking bar **368** to secure the apparatus **100**, the apparatus **100** may be secured by orienting the primary swing arm **340** in a closed position next to the support arm **322**, and then inserting the locking bar **438** into the securing wall hole **436**, the pedestal back securing hole **428**, the column back securing hole **432**, the column front securing hole **430**, and the pedestal front securing hole **426**, and securing the locking bar in place, for example with a locking pin or a lock. In task **1506**, the user drives the vehicle **104** to a desired cooking location. The user then parks the vehicle **104** at the desired cooking location in task **1508**. In task **1510**, the user unsecures the apparatus **100** from the closed position, while leaving the apparatus **100** connected to the trailer hitch **102** on the vehicle **104**. The apparatus **100** is unsecured by removing the primary angle locking bar **368**, and/or by removing the locking bar **438**. Next, in task **1512**, the user selects a locking hole from a plurality of locking holes **356** on the primary hinge assembly **350**, to line up with the angle securing hole **338** on the support arm **322**, to establish a desired angle between the support arm longitudinal axis **332** and the primary swing arm longitudinal axis **342**, wherein the desired angle is selected from a plurality of angles determined by the locations of the plurality of locking holes **356** and the angle securing hole **338**. In task **1514**, the user moves the primary swing arm **340**, to align the selected locking hole with the angle securing hole **338**. Next, in task **1516**, the user inserts the primary angle locking bar **368** into the selected locking hole from the plurality of locking holes **356** and into the angle securing hole **338**, to lock the primary swing arm longitudinal axis **342** at the desired angle in relation to the support arm longitudinal axis **332**. Optionally, in task **1518**, the user rotates the cooking device **348** to a desired rotation. Optionally, in task **1520**, the user secures the cooking device **348** at the desired rotation. Optionally, in task **1522**, the user adjusts the height of cooking device **348** to a desired height. Optionally, in task **1524**, the user secures the cooking device **348** at the desired height. If the cooking device **348** is not already connected to a fuel source or does not already have a fuel source, then in task **1526**, the user connects a fuel line connected to a fuel source to the cooking device **348**. In task **1528** the user ignites a heat source in the cooking device **348**. The user cooks some food in task **1530**. Next, in task **1532**, the user extinguishes the heat source in the cooking device **348**. Optionally, in task **1534**, the user disconnects the fuel line from the cooking device **348**. Typically, the fuel line will be disconnected from the cooking device **348** prior to transporting the apparatus **100**. However, the fuel line could be left connected if the fuel tank **452** is attached to the apparatus **100** during transport, for example in a fuel tank holder **450**. Next, in task **1536**, the user secures the apparatus in a closed position for safe transport for driving the vehicle **104**, as described above. In task **1538**, the user then drives the vehicle **104** to another location. In task **1540**, the user parks the vehicle **104**. Finally, in task **1542**, the user removes the apparatus **100** from the trailer hitch **102** on the vehicle **104**.

Alternatively, after parking the vehicle **104** at the location desired for cooking, the user removes the apparatus **100** from the trailer hitch **102** of the vehicle **104** places the apparatus **100** on a carrier stand that is separate from the apparatus **100**, optionally connects a fuel line connected to a fuel source to the cooking device **348**, ignites the heat source in the cooking device **348**, cooks some food, extinguishes the heat source, optionally disconnects the fuel line from the cooking device **348**, removes the apparatus **100** from the carrier stand, attaches the apparatus **100** to the trailer hitch **102** on the vehicle **104**, secures the apparatus **100** in a closed position for safe transport for driving the vehicle **104**, drives the vehicle **104** to another location, parks the vehicle **104**, and then removes the apparatus from the trailer hitch **102** on the vehicle **104**.

III. OTHER EMBODIMENTS

While the foregoing disclosure shows a number of illustrative embodiments of the invention, it will be apparent to those skilled in the art that various changes and modifications can be made herein without departing from the scope of the invention as defined by the appended claims. Furthermore, although elements of the invention may be described or claimed in the singular, the plural is contemplated unless limitation to the singular is explicitly stated.

What is claimed is:

1. An apparatus selectively attachable to a vehicle, for transporting a cooking device and positioning the cooking device in an orientation for cooking that permits access to the vehicle, the apparatus comprising:

a hitch insertion member having a base;

a support arm having a support arm top and a support arm bottom, and wherein the support arm defines a support arm longitudinal axis, and wherein the support arm top has a support arm top primary hinge hole and the support arm bottom has a support arm bottom primary hinge hole aligned with the support arm top primary hinge hole, and wherein the support arm is attached to the base of the hitch insertion member;

a primary swing arm defining a primary swing arm longitudinal axis;

a primary hinge assembly comprising:

a top hinge plate having a central hole for alignment with the support arm top primary hinge hole;

a bottom hinge plate having a central hole for alignment with the support arm bottom primary hinge hole; and

an attachment wall connected to the top hinge plate and the bottom hinge plate, the attachment wall being attached to the primary swing arm;

a primary hinge bar inserted through the central hole in the top hinge plate in the primary hinge assembly, the support arm top primary hinge hole, the support arm bottom primary hinge hole, and the central hole in the bottom hinge plate of the primary hinge assembly, to attach the primary swing arm to the support arm, and to permit the swing arm to rotate in relation to the support arm;

a pedestal having a base, wherein the base of the pedestal is attached to the primary swing arm; and

a column, the column being at least partially inserted into the pedestal.

2. The apparatus of claim 1:

wherein the hitch insertion member has a hitch insertion member first side and a hitch insertion member second side, and wherein the hitch insertion member first side has a hole and the hitch insertion member second side has a hole aligned with the hole in the hitch insertion member first side;

wherein the support arm has a support arm primary angle securing hole;

wherein the top hinge plate of the primary hinge assembly has a plurality of locking holes for selective alignment with the support arm angle securing hole;

wherein the primary hinge assembly further comprises a stop wall attached to the bottom hinge plate to establish the maximum angle the longitudinal axis of the primary swing arm can rotate in relation to the longitudinal axis of the support arm;

wherein the pedestal has a rotation adjustment hole;

further comprising a primary angle locking bar inserted into one of the plurality of locking holes in the top hinge plate of the primary hinge assembly and into the primary angle securing hole in the support arm, to lock the longitudinal axis of the primary swing arm at an angle in relation to the longitudinal axis of the support arm selected from a plurality of angles determined by the locations of the locking holes in the top hinge plate of the primary hinge assembly and by the location of the primary angle securing hole in the support arm;

further comprising a column rotation locking bar secured through the pedestal rotation adjustment hole to lock the column at a selected rotation within the pedestal; and

a lateral member attached to the column.

3. The apparatus of claim 2 further comprising a cooking device attached to the lateral member.

4. The apparatus of claim 3 wherein the cooking device is a barbeque.

5. The apparatus of claim 4:

wherein the pedestal has a pedestal front securing hole and a pedestal back securing hole, and wherein the pedestal front securing hole and the pedestal back securing hole are on opposite sides of the pedestal and are aligned with each other;

wherein the column has a column front securing hole and a column back securing hole, wherein the column front securing hole and the column back securing hole are on opposite sides of the column and are aligned with each other, and wherein the column front securing hole is located to permit alignment with the pedestal front securing hole and the column back securing hole is located to permit alignment with the pedestal back securing hole when the column is fully inserted into the pedestal; and

further comprising:

a securing wall attached to the support arm, the securing wall having a securing wall hole located to align with the pedestal back securing hole when the primary swing arm is adjacent the support arm; and

a locking bar for insertion into the pedestal front securing hole, the column front securing hole, the column back securing hole, the pedestal back securing hole, and the securing wall hole, to secure the apparatus for transport.

6. The apparatus of claim 5:

wherein the central hole in the top hinge plate of the primary hinge assembly is located in an overhang area of the top hinge plate, and wherein the plurality of locking holes in the top hinge plate of the primary hinge assembly are also located in the overhang area of the top hinge plate; and

wherein the central hole in the bottom hinge plate of the primary hinge assembly is located in an overhang area of the bottom hinge plate.

7. The apparatus of claim 6 wherein the bottom hinge plate also has a nonoverhang area, and wherein the stop wall is partially contiguous with the overhang area and the nonoverhang area of the bottom hinge plate.

8. The apparatus of claim 7 wherein the support arm has a first end, and wherein the support arm top primary hinge hole is located within about 5 centimeters from the second end of the support arm, and wherein the support arm primary angle securing hole is located within about 10 centimeters from the support arm top primary hinge hole.

9. The apparatus of claim 8:

wherein the hitch insertion member defines a hitch insertion member longitudinal axis, and wherein a cross section of the hitch insertion member perpendicular to the hitch insertion member longitudinal axis is a square;

wherein a cross section of the support arm perpendicular to the support arm longitudinal axis is a rectangle;

wherein a cross section of the primary swing arm perpendicular to the primary swing arm longitudinal axis is a rectangle; and

wherein the pedestal defines a pedestal longitudinal axis and wherein a cross section of the pedestal perpendicular to the pedestal longitudinal axis is a square; and wherein the column defines a column longitudinal axis, and wherein a cross section of the column perpendicular to the column longitudinal axis is a circle.

10. The apparatus of claim 9 further comprising:

a support arm outside gusset attached to the support arm and the hitch insertion member;

a support arm inside gusset attached to the support arm and the hitch insertion member;

an inside pedestal gusset attached to the pedestal and the primary swing arm, the inside pedestal gusset having a threaded hole aligned with the rotation adjustment hole in the pedestal;

an outside pedestal gusset attached to the pedestal and the primary swing arm;

a top hinge hole liner attached to the support arm top primary hinge hole;

a bottom hinge hole liner attached to the support arm bottom primary hinge hole;

a first bracket attached to a first end of the lateral member;

a second bracket attached to a second end of the lateral member;

a plurality of bolts and nuts; and

wherein the first bracket has a plurality of holes and the second bracket has a plurality of holes, and the barbeque has a plurality of holes aligned with the plurality of holes in the first bracket and the second bracket, and wherein the barbeque is attached to the first bracket and the second bracket with a bolt from the plurality of bolts inserted through each of the aligned holes in the barbeque and the first bracket, and through each of the aligned holes in the barbeque and the second bracket, with each bolt being secured with a nut from the plurality of nuts; and

wherein the lateral member has a lateral member hole, and the column is inserted into the lateral member hole.

11. The apparatus of claim **4**:

wherein the hitch insertion member defines a hitch insertion member longitudinal axis and the pedestal defines a pedestal longitudinal axis;

wherein the support arm has a support arm first end, and wherein the support arm first end is attached to the base of the hitch insertion member with the support arm longitudinal axis substantially perpendicular to the hitch insertion member longitudinal axis; and

wherein the primary swing arm has a primary swing arm hinged end and a primary swing arm swinging end, and wherein the attachment wall of the primary hinge assembly is attached to the primary swing arm hinged end, and wherein the base of the pedestal is attached to the primary hinge assembly swinging end, with the pedestal longitudinal axis substantially perpendicular to the longitudinal axis of the primary swing arm.

12. The apparatus of claim **4**, wherein, the support arm longitudinal axis and the swing arm longitudinal axis are substantially parallel and horizontal, when the hitch insertion member is oriented to be inserted into a trailer hitch.

13. The apparatus of claim **3**, wherein the support arm longitudinal axis is substantially parallel to horizontal, and wherein the swing arm longitudinal axis defines an angle alpha from horizontal, when the hitch insertion member is oriented to be inserted into a trailer hitch.

14. The apparatus of claim **3**, wherein the support arm and the primary swing arm are curved.

15. The apparatus of claim **3**, wherein the support arm has at least one additional support arm segment and the primary swing arm has at least one additional swing arm segment.

16. The apparatus of claim **3**, further comprising a hitch vertical member attached to the hitch insertion member and the support arm for attaching the support arm to the hitch insertion member and to locate the support arm and the primary swing arm in a plane that is a specified distance above the trailer hitch.

17. The apparatus of claim **4** wherein the primary swing arm is above the support arm.

18. The apparatus of claim **3**, further comprising a support vertical member attached to the primary hinge assembly and the primary swing arm to position the primary swing arm a specified distance above the support arm.

19. The apparatus of claim **3**, wherein the primary swing arm comprises a retainer portion and a telescoping insertion portion partially inserted into the retainer portion and secured to the retainer portion, wherein the telescoping insertion portion can be partially extended from within the retainer portion to extend the length of the primary swing arm, and wherein the attachment wall of the primary hinge assembly is attached to the retainer portion, and wherein the base of the pedestal is attached to the telescoping insertion portion.

20. The apparatus of claim **3**, further comprising a supplemental trailer hitch receptacle attached to the apparatus.

21. The apparatus of claim **20**, further comprising trailer hitch ball attached to the supplemental trail hitch receptacle.

22. The apparatus of claim **4** further comprising a license plate mount and a license plate light attached to the apparatus.

23. The apparatus of claim **4** further comprising a fuel tank retaining rack attached to the apparatus, for attaching a fuel tank to the apparatus.

24. The apparatus of claim **4** further comprising a shock dampening device having a shock dampening device first end attached to the hitch insertion member and a shock dampening device second end attached to the lateral member.

25. The apparatus of claim **3** further comprising:

a height locking bar pivotally connected to the swing arm, the height locking bar having a movable end having a hole;

a ledge attached to the lateral member, the ledge having a lateral slit;

a height locking bolt inserted through the hole in the movable end of the height locking bar and the lateral slit in the ledge of the lateral member; and

a wingnut attached to the height locking bolt, for locking the cooking apparatus at a desired height.

26. The apparatus of claim **3**, wherein the hitch insertion member has a hitch insertion member top and a hitch insertion member bottom, and wherein the hitch insertion member top has a hitch insertion member top hinge hole and the hitch insertion member bottom has a hitch insertion member bottom hinge hole aligned with the hitch insertion member top hinge hole, and wherein the hitch insertion member top has a hitch insertion member angle securing hole; and

further comprising:

a central hinge assembly comprising:

a top hinge plate having a central hole for alignment with the hitch insertion member top hinge hole, the top hinge plate also having a plurality of locking holes for selective alignment with the hitch insertion member locking hole;

a bottom hinge plate having a central hole for alignment with the hitch insertion member bottom hinge hole;

a stop wall attached to the bottom hinge plate to establish a maximum angle the longitudinal axis of the support arm can rotate in relation to the longitudinal axis of the hitch insertion member; and

a back wall connected to the top hinge plate and the bottom hinge plate, the back wall being attached to the support arm;

a central hinge bar inserted through the central hole in the top hinge plate in the central hinge assembly, the hitch insertion member top hinge hole, the hitch insertion member bottom hinge hole, and the central hole in the bottom hinge plate of the central hinge assembly, to attach the support arm to the base of the hitch insertion member, and to permit the support arm to rotate in relation to the hitch insertion member; and

a central angle locking bar inserted into one of the plurality of locking holes in the top hinge plate of the central hinge assembly and into the locking hole in the hitch insertion member, to lock the longitudinal axis of the support arm at an angle in relation to the longitudinal axis of the hitch insertion member selected from a plurality of angles determined by the locations of the locking holes in the top hinge plate of the central hinge assembly and by the location of the angle securing hole in the hitch insertion member.

27. The apparatus of claim **3**:

wherein the support arm as a support arm top secondary hinge hole and the support arm bottom has a support arm bottom secondary hinge hole aligned with the support arm top secondary hinge hole, and wherein the support arm top has a support arm secondary angle securing hole; and

further comprising:

a secondary swing arm defining a secondary swing arm longitudinal axis;

a secondary hinge assembly comprising:

a top hinge plate having a central hole for alignment with the support arm top secondary hinge hole, the top hinge plate also having a plurality of locking holes for selective alignment with the support arm secondary angle securing hole;

a bottom hinge plate having a central hole for alignment with the support arm bottom secondary hinge hole;

a stop wall attached to the bottom hinge plate to establish the maximum angle the longitudinal axis of the secondary swing arm can rotate in relation to the longitudinal axis of the support arm; and

an attachment wall connected to the top hinge plate and the bottom hinge plate, the attachment wall being attached to the secondary swing arm;

a secondary hinge bar inserted through the central hole in the top hinge plate in the secondary hinge assembly, the support arm top secondary hinge hole, the support arm bottom secondary hinge hole, and the central hole in the bottom hinge plate of the secondary hinge assembly, to attach the secondary swing arm to the support arm, and to permit the secondary swing arm to rotate in relation to the support arm; and

a secondary angle locking bar inserted into one of the plurality of locking holes in the top hinge plate of the secondary hinge assembly and into the secondary angle securing hole in the support arm, to lock the longitudinal axis of the secondary swing arm at an angle in relation to the longitudinal axis of the support arm selected from a plurality of angles determined by the locations of the locking holes in the top hinge plate of the secondary hinge assembly and by the location of the secondary angle securing hole in the support arm.

28. An apparatus selectively attachable to a vehicle, for transporting a cooking device and positioning the cooking device in an orientation for cooking that permits access to the vehicle, the apparatus comprising:

means for connecting the apparatus to a trailer hitch on a vehicle;

a support arm defining a support arm longitudinal axis, wherein the support arm is attached to the means for connecting the apparatus to a trailer hitch;

a primary swing arm defining a primary swing arm longitudinal axis;

means for pivotally attaching the primary swing arm to the support arm;

means for locking the longitudinal axis of the primary swing arm at an angle in relation to the longitudinal axis of the support arm selected from a plurality of angles determined by the locations of a plurality of locking holes and an angle securing hole;

means for attaching the cooking device to the primary swing arm;

means for rotating the cooking device;

means for adjusting the height of the cooking device; and

means for securing the apparatus for safe transport while driving the vehicle.

* * * * *

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August 30, 2007

Via Certified Mail

Chuck Frantz
VP Operations & Product Development
Party King® Grills, LLC
P.O. Box 465
Weatherford, Oklahoma 73096

Re: Freedom Grill, Inc./Notice of Rights

Dear Mr. Frantz:

This firm represents Freedom Grill, Inc., owner of United States Patent No. 6,701,913 (the "Patent") covering a vehicle-mounted portable grilling apparatus known as the Freedom Grill (the "Patented Product"). My client also owns several trade names and marks (the "Marks") used in connection with marketing and selling the Patented Product. My client's protected trademarks include: "Freedom Grill," "The Official Grill of Tailgating," "Official Grill of the Outdoors," "Extreme Tailgating," "Born to Grill," "Get Your Grill On," and "Tailgating Times."

Freedom Grill recently became aware that you market and sell a similar vehicle-mounted portable grilling apparatus (the "Similar Product"). We write to ensure you are on notice of my client's rights in connection with the Patent and the Marks, and to advise you that your Similar Product may infringe the Patent, and that any use by you of the Marks or any substantially similar name may constitute unlawful trademark infringement. My client has not given you permission to use the Patent or the Marks, does not consent to any such use, and specifically reserves all of its rights with respect to its intellectual property.

EXHIBIT
B

Please contact Steven Caliguri, CEO of Freedom Grill, directly at (619) 985-7088 if you wish to discuss this matter further. If you have any other questions, please direct them to this office.

Sincerely,

Steven J. Davis, Esq.

Cc: Steven Caliguri, CEO, Freedom Grill, Inc.

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September 18, 2007

American Tailgaters Association
John Largent, CEO
2819 Woodcliffe, Suite 204D
San Antonio, TX, 78230
866.920.4282

Re: Freedom Grill: Notice of Rights

Dear Mr. Largent

I believe that you are aware of our company, Freedom Grill, Inc., and the fact that we are the owners of United States Patent No. 6,701,913 (the "Patent") covering a vehicle-mounted portable grilling apparatus known as the Freedom Grill (the "Patented Product").

Freedom Grill recently became aware that you are assisting in the marketing, advertising, and selling of a similar vehicle-mounted grilling apparatus (the "Similar Product").

We write to ensure that you are on notice of our rights in connection with the Patent, and to advise you that your activities related to this Similar Product put you in a position of potentially significant liability due to our obligation to fully defend the rights granted under their Patent. Freedom Grill has not granted any company permission to use the Patent, does not consent to any such use, and specifically reserves all of its rights with respect to its intellectual property and will hold any company directly infringing on these rights or contributing to any business activity related to the Similar Product liable.

If you cease and desist all activities related to the Similar Product immediately you can avoid being drawn into sharing the costly damages related to any aggressive defense that our attorneys are likely to recommend. Given that you have been aware of our patent for some time your potential liability may be quite significant as it may be construed as willful infringement.

If you have any questions, please direct them to me directly.

Sincerely,

Steven J. Caliguri
CEO
Freedom Grill, Inc.
619-985-7088

EXHIBIT
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