US 20020185122A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2002/0185122 A1**

Bossler (43) **Pub. Date: Dec. 12, 2002**

(54) **PORTABLE OUTDOOR FIREPLACE**

(75) Inventor: **Martin C. Bossler**, Spring Grove, IL (US)

Correspondence Address:
Lawrence J. Crain
Greer, Burns & Crain, Ltd.
Suite 2500
300 S. Wacker Dr.
Chicago, IL 60606 (US)

(73) Assignee: **UNIFLAME CORPORATION**

(21) Appl. No.: **09/879,636**

(22) Filed: **Jun. 12, 2001**

Publication Classification

(51) **Int. Cl.**[7] **F23J 1/00**; F24C 1/16

(52) **U.S. Cl.** **126/519**; 126/506; 126/242; 126/276

(57) **ABSTRACT**

A portable fireplace assembly that rests upon a substrate includes a base for supporting and burning combustible material. A support frame is sized and configured to support the base, and includes one or more frame members. One or more vertical supports are provided to support the base in a vertical displacement from the substrate and include one or more generally vertical struts securable to the frame. The fireplace has one or more screen segments, being sized and configured to mount on the supports, preferably with a tab and slot mechanism. When mounted on the supports, the one or more screen segments form a cage, and are configured to surround the combustible material when the cage is formed. A lid is sized and configured to cover the cage.

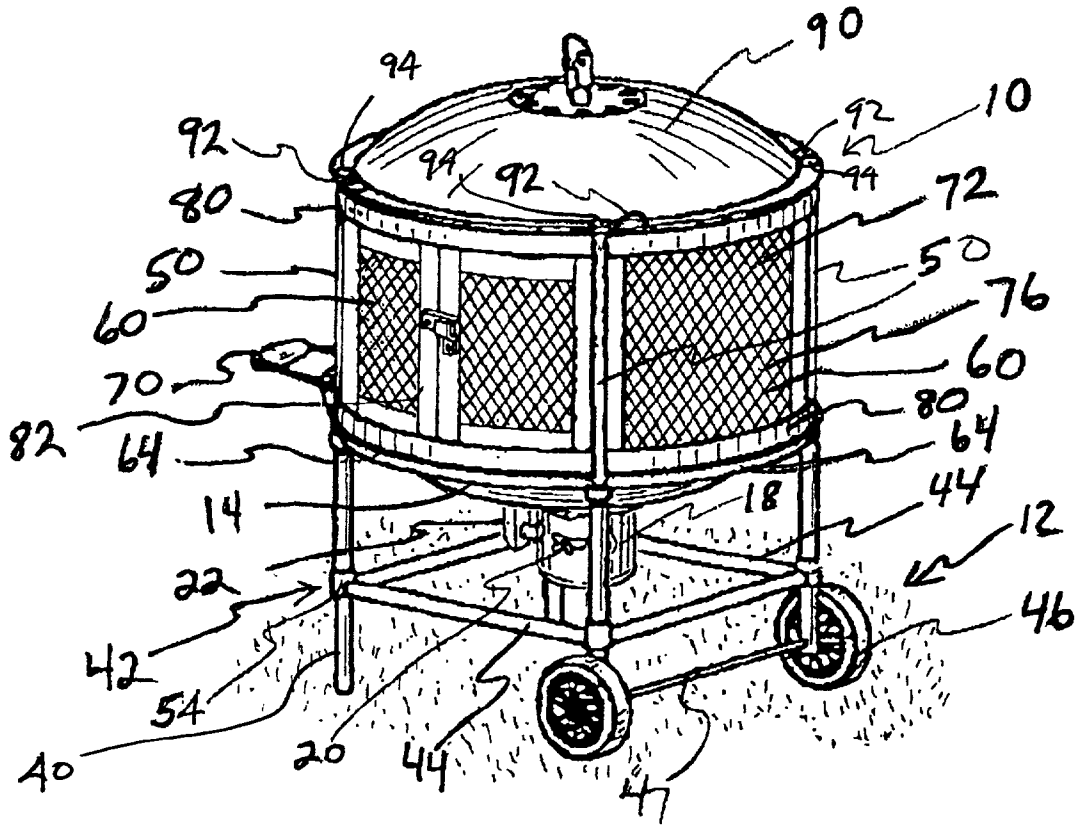


FIG. 1

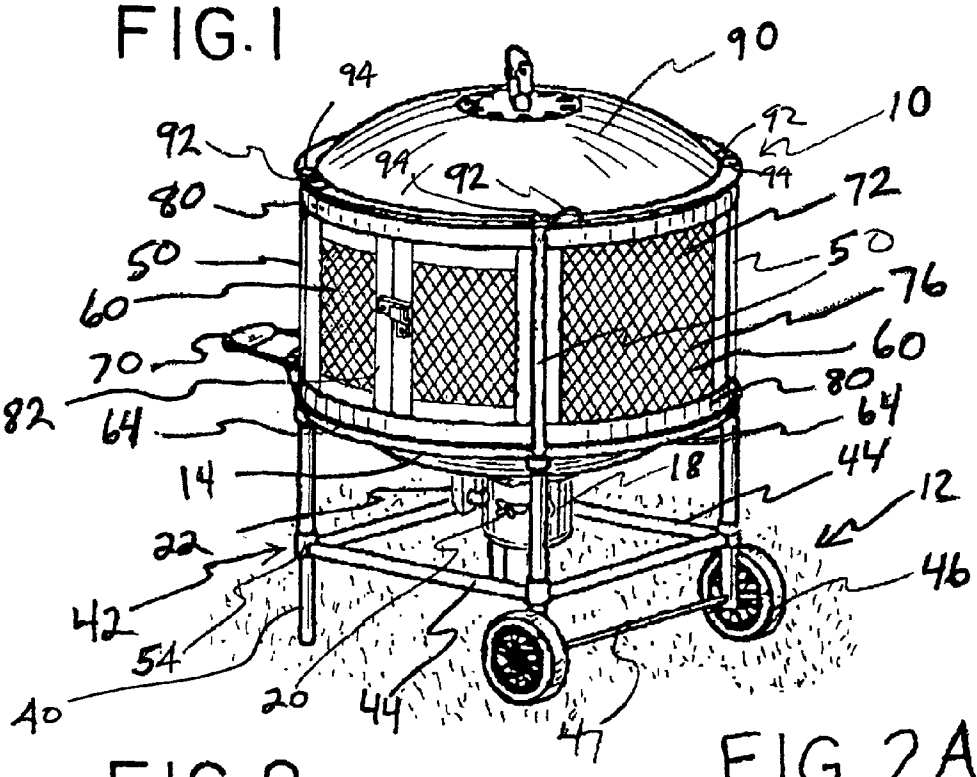


FIG. 2

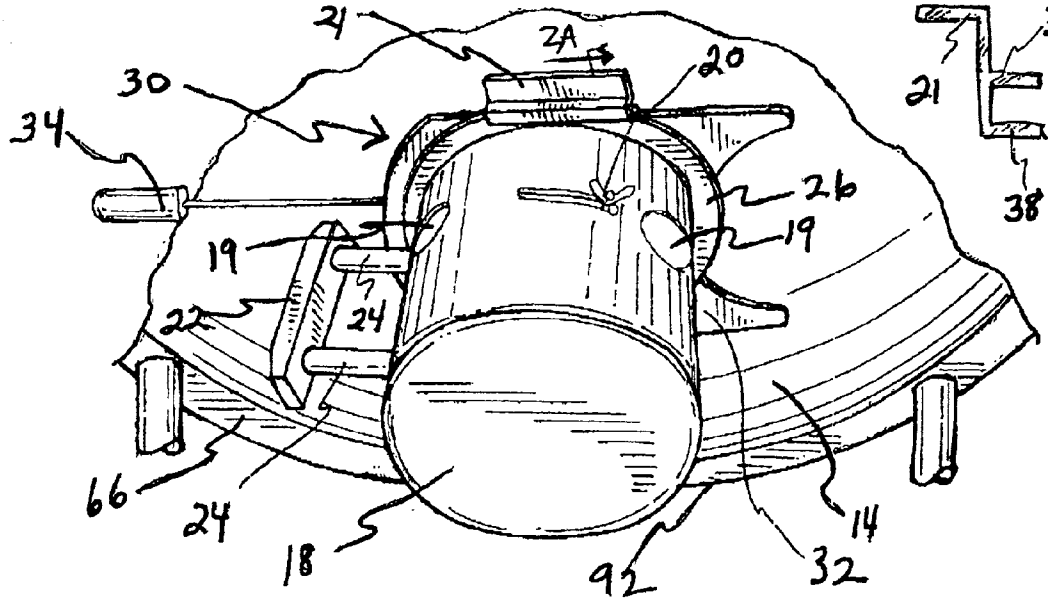


FIG. 2A

FIG. 3

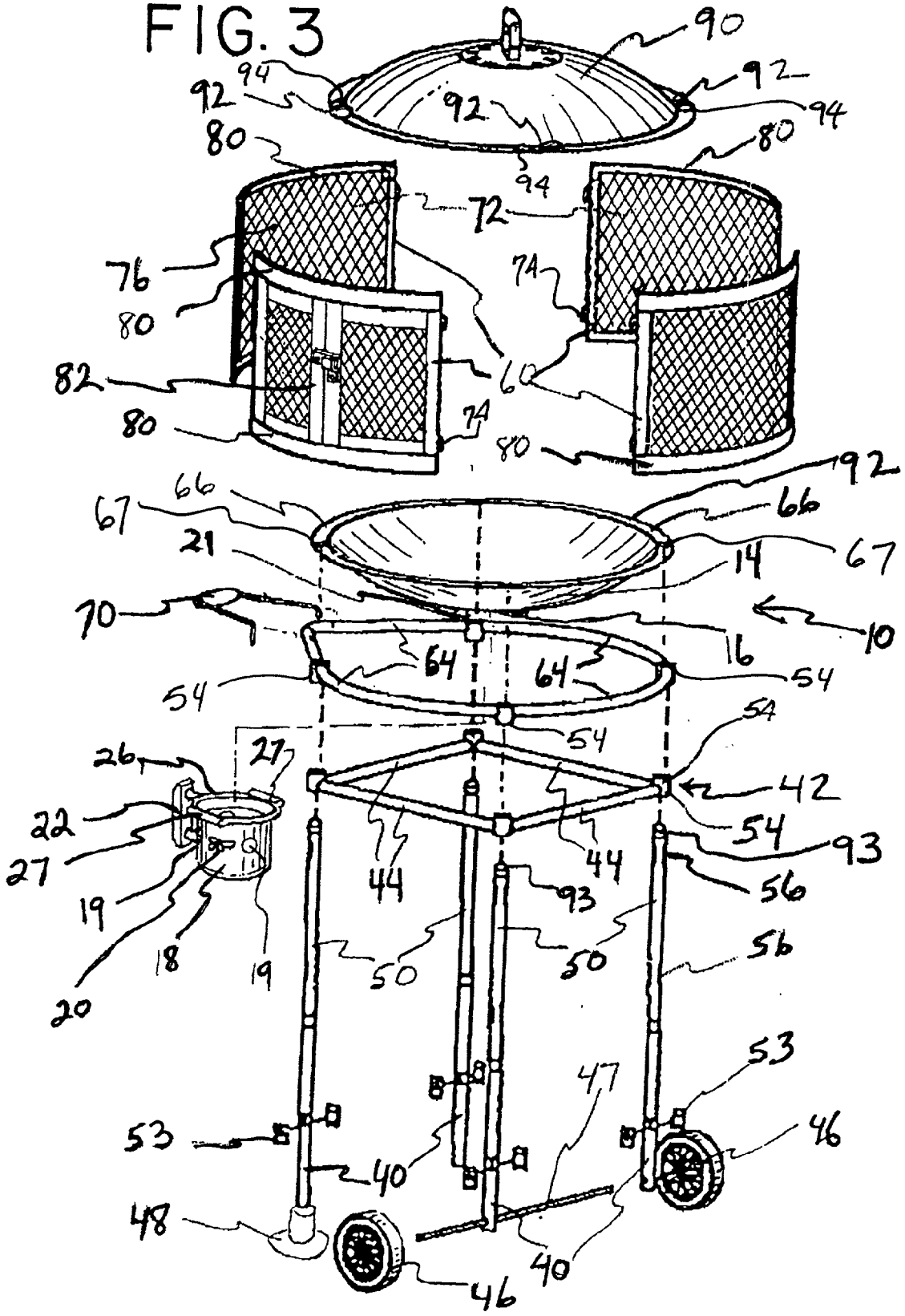

90
92
94
92
94
92
94
80
80
72
76
74
80
82
60
80
74
80
92
66
67
66
21
67
14
70
10
16
64
64
54
54
54
54
26
27
42
22
54
27
93
44
44
19
93
56
18
19
50
50
56
20
53
47
53
46
40
48
40
46

FIG. 4

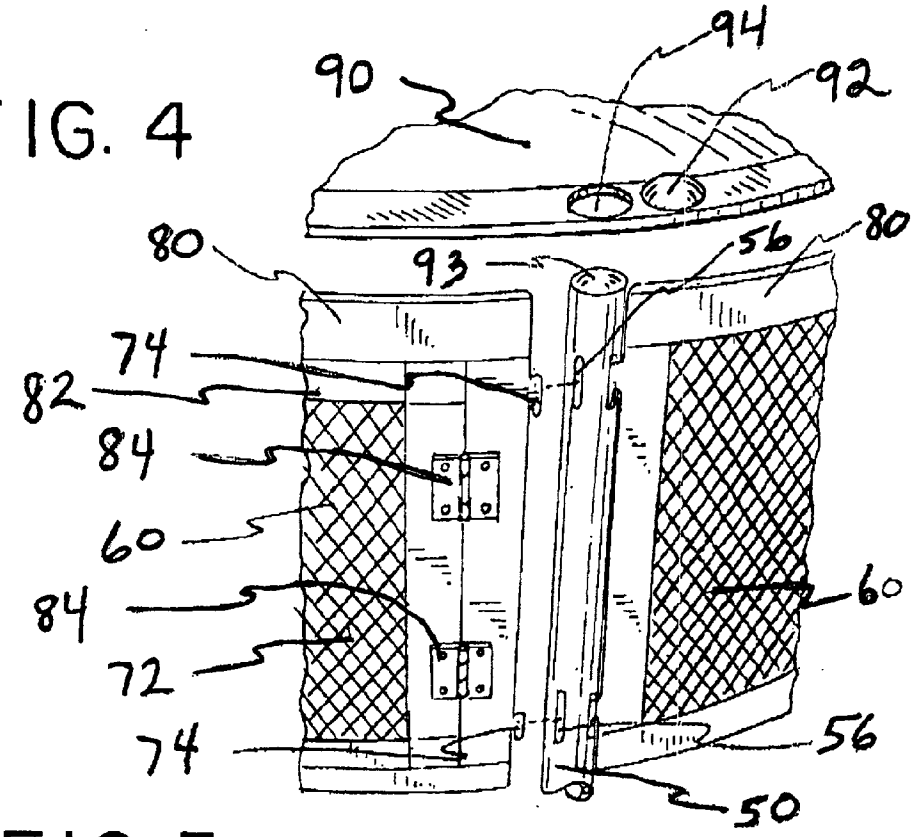

94
90
92
80
93
56
80
74
82
84
60
84
60
72
74
56
50

FIG. 5

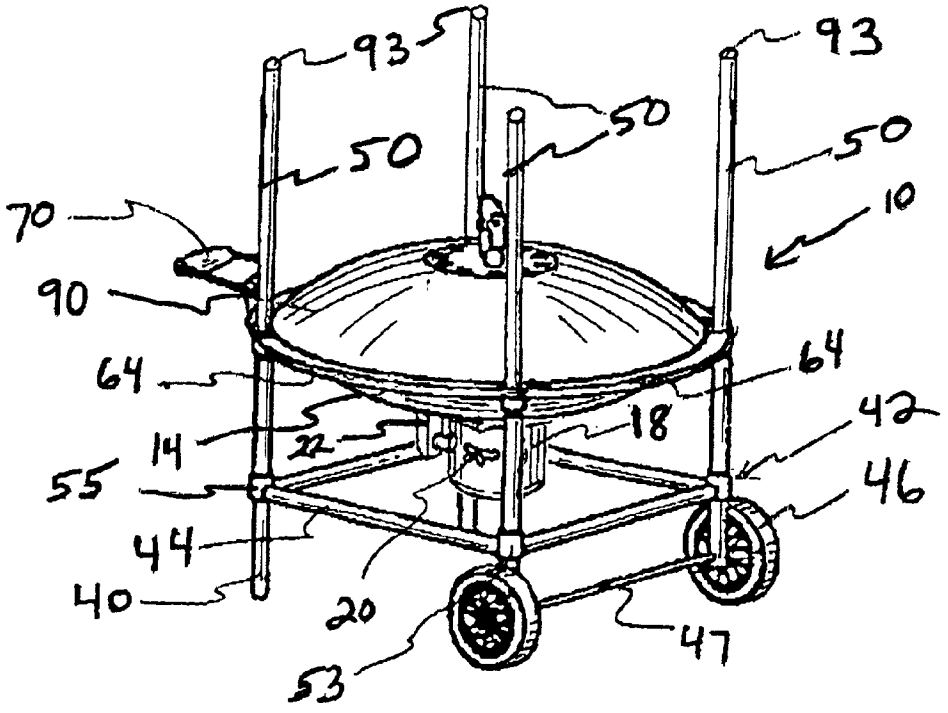

93
93
50
50
50
50
70
10
90
64
64
14
22
18
42
55
46
44
40
20
47
53

FIG. 6

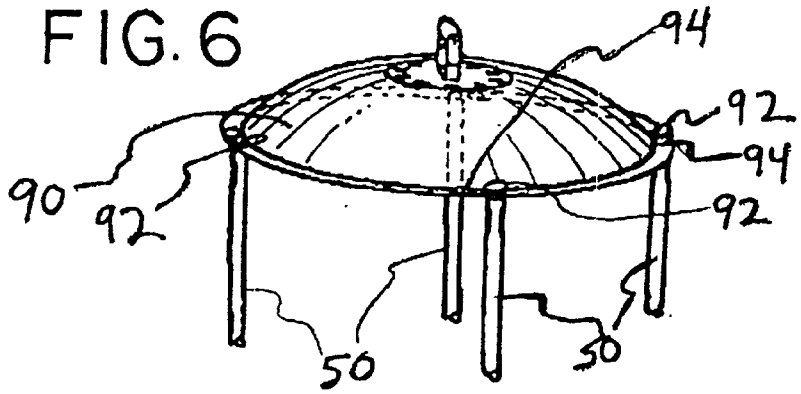

94
92
94
92
90
92
50
50

FIG. 7

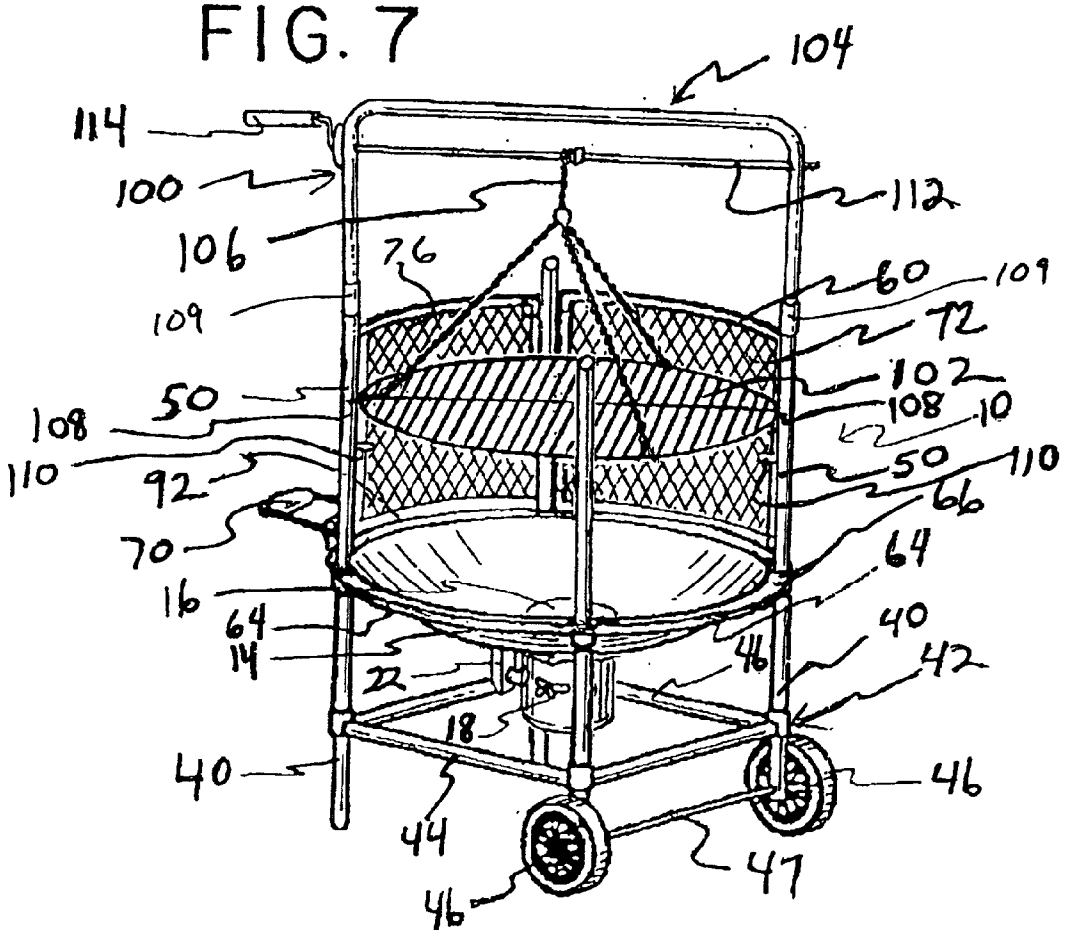
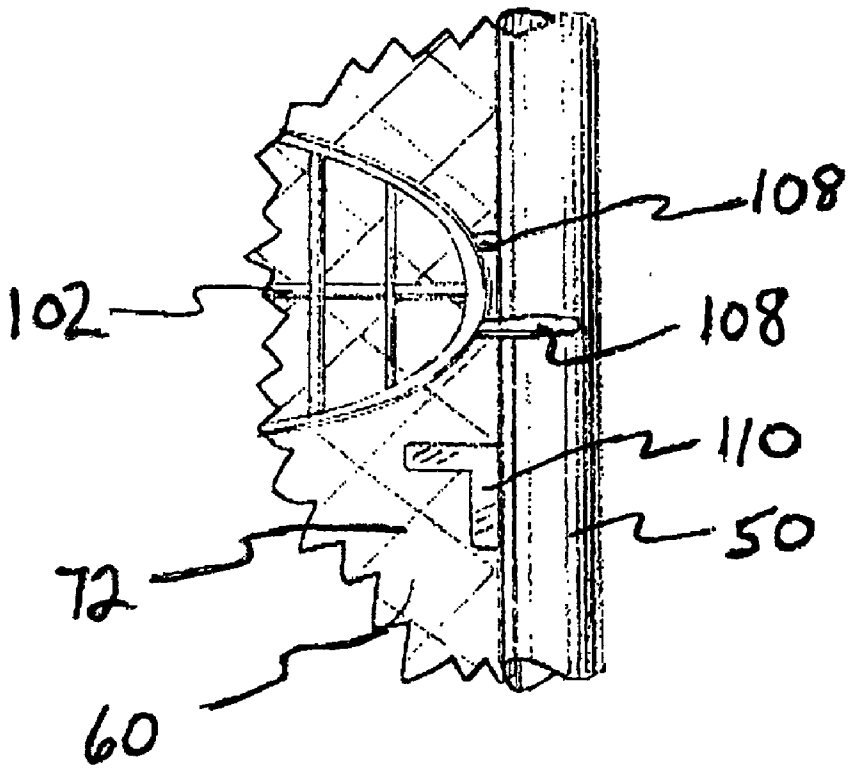

104
114
100
112
106
76
60
109
109
72
102
108
50
108
10
110
92
50
110
66
70
64
16
64
40
14
22
46
42
18
40
46
44
47
46

FIG. 8



PORTABLE OUTDOOR FIREPLACE

BACKGROUND OF THE INVENTION

[0001] This invention relates to a portable outdoor fireplace with a fire screen. More specifically, it relates to a portable outdoor fireplace which is easily assembled and disassembled without the use of tools. In another embodiment, the fireplace includes a cooking grill with an adjustable cooking height.

[0002] Fixed outdoor fireplaces, such as those made from brick, masonry and the like have been known for years. Concerns for the environment and the popularity of low impact camping have reduced the reliance on these structures in recent times. Portable outdoor fireplaces have recently entered the marketplace and have been well regarded. The size of these portable fireplaces is small and their structures are such that they permit them to be easily moved from one location to another. Although they may be enjoyed in a backyard, they are often used in remote locations, such as when camping, picnicking or doing other outdoor activities where it is inconvenient to carry a variety of tools. The ability to be able to assemble and disassemble the fireplace without the use of tools would be a desirable quality in this type of equipment. So-called, "knock-down" construction is known in the art as a means for making an apparatus that meets this criteria.

[0003] On such outings, it is often desirable to prepare a meal in the outdoors and it would be convenient to utilize the same equipment for cooking. Cooking temperatures inside a grill are not easily varied, and in a remote setting, it may be inconvenient to remove a burning log to reduce the cooking temperature. It would, therefore, be useful to be able to adjust the height of the cooking grill from the fire to prevent burning of the food if the cooking fire is too hot. Portable outdoor fireplaces are known to have grills upon which to cook, such as U.S. Pat. No. 5,960,788 to Bach et al., but the cooking height is fixed and provides no means of regulating the amount of heat supplied to the cooking grill.

[0004] The prior art also teaches the use of outdoor cookers, but without the features of an outdoor fireplace. U.S. Pat. No. 4,732,138 to Vos, or U.S. Pat. No. 5,850,829 to Taylor et al., for example, each show a variable height grill suspended from a tripod that may be placed over a campfire. However, neither of these references utilizes a screen to contain burning wood or sparks from the fire as is commonly provided by a portable outdoor fireplace.

[0005] Use of this equipment in the outdoors also exposes it to weather and other damaging elements. Although many of the surfaces are supplied with a protective coating, such as porcelain, it is expensive to coat all surfaces in such a manner. It would be desirable to provide a secure area for storage of uncoated surfaces in a manner that would provide protection from the elements or accidental damage.

[0006] It is an object of this invention to provide an improved outdoor fireplace that is easily assembled and disassembled without the use of tools.

[0007] It is yet another object of this invention to provide an improved outdoor fireplace having a cooking grill wherein the distance between the fire and the cooking grill is adjustable.

[0008] It is still another object of this invention to provide an improved outdoor fireplace may be collapsed for storage in such a manner to protect portions of the fireplace that may be susceptible to exposure to weather.

SUMMARY OF THE INVENTION

[0009] These and other objects are met or exceeded by the present invention which features a portable outdoor fireplace of knock-down construction. In one embodiment, the screens are easily mounted to struts by use of a tab and slot arrangement. Another feature is an optional cooking grill with adjustable height. Yet another feature is a screen segment that includes at least one access door, that is mountable interchangeably with any other screen segment. A still further feature is an optional grill ash catcher which is mountable to the fireplace base.

[0010] More specifically, the present invention provides a portable fireplace assembly including a base for supporting and burning combustible material. A support frame is sized and configured to support the base, and includes one or more frame members. One or more vertical supports support the base in a vertical displacement from a substrate and include at least one generally vertical strut securable to the frame and preferably having one or more slots. The fireplace has one or more screen segments, each being mountable on struts and preferably having one or more tabs. In the preferred embodiment, the tabs are placed, sized and configured to matingly engage the slots on the struts. When mounted on the struts, the one or more screen segments form a cage, and are configured to surround the combustible material when the cage is formed. In the preferred embodiment, a lid is sized and configured to cover the cage.

[0011] In another embodiment, the lid is convertible from a fireplace lid in a first position to a secure, collapsible enclosure lid in a second position. Dimples and openings on the lid are associated with each of the struts. The first position is defined wherein the struts are engaged with the corresponding dimples to hold the lid in place covering the cage. The second position is defined wherein each of the struts is slidably engaged with the corresponding opening to allow the lid to contact the base.

[0012] Yet another embodiment describes two or more screen segments mountable on the struts and forming a cage when mounted on the struts. The cage is configured to surround the combustible material. At least one of the screen segments includes at least one door that is interchangeably mountable on the struts with any other of the screen segments.

[0013] The outdoor fireplace of the present invention has many advantages over the prior art. As it is built of knock-down construction, the fireplace is easily assembled and disassembled in remote areas without tools, for example by friction fit of the struts and frame members and by fitting tabs on the screen segments into slots on the struts.

[0014] When the unit is disassembled for storage, the side screen segments are easily removed, and fit inside the bowl of the fireplace. Protection of the screen segments from exposure to weather and accidental damage is provided by the lid, whereby the openings allow the lid to drop down and slide along the struts to rest on the bowl, storing the screen segments in the space between the lid and the bowl.

[0015] Cooking in the fireplace is easier than with prior art units because the cooking height is adjustable. If the fire is too hot or too cool, adjustment in cooking temperature is easily accomplished by varying the distance of the cooking surface from the fire. The cooking temperature is variable even with the screen segments in place, providing better containment of sparks and ash, particularly on a windy day.

DETAILED DESCRIPTION OF THE DRAWINGS

[0016] **FIG. 1** is a perspective drawing of the assembled fireplace;

[0017] **FIG. 2** is a bottom perspective view showing the ash receiver, sand trap and mounting bracket;

[0018] **FIG. 2A** is a cross section of the ash receiver mounting bracket seen along line **2A** of **FIG. 2**;

[0019] **FIG. 3** is an exploded view of the fireplace;

[0020] **FIG. 4** is a detail of the tab and slot for mounting the screen segments to the struts;

[0021] **FIG. 5** is a perspective view of the fireplace with the lid in the storage position and the screen segments stored in the space formed by the bowl and the lid;

[0022] **FIG. 6** is a detail of the lid with the struts resting in the dimples;

[0023] **FIG. 7** is a perspective view of the cooking assembly mounted over the fireplace bowl; and

[0024] **FIG. 8** is an enlarged fragmentary view of the embodiment of **FIG. 7**.

DETAILED DESCRIPTION OF THE INVENTION

[0025] **FIG. 1** illustrates a preferred portable outdoor fireplace of the present invention, generally designated **10**, resting on a substrate **12**. The fireplace **10** has a base **14** that is designed for supporting and burning combustible material therein. Most commonly, such fireplaces **10** are used to burn wood. However, the fireplace **10** of the present invention is not limited to the burning of wood. Any combustible material may be burned in the base **14** of the fireplace, including, but not limited to wood, charcoal or gas logs, the latter fueled by a supplemental supply of natural gas. A gas starter is optionally used to aid in starting wood or charcoal without the use of kindling, lighter fluid and the like. Preferably, the base **14** is disk or bowl-shaped, as this shape is convenient for reflecting heat upward, yet allowing ash to fall down the sides of the bowl and collect in the bottom of the base.

[0026] Tilting the entire unit and pouring the ash into an appropriate receptacle for disposal is one method of removing ash and unburned materials that remain in the base **14** after the fire. However, preferably there is an ash removal opening **16** (**FIG. 7**) provided in the bottom of the base **14** to simplify removal of unwanted materials from the base. If the base **14** has a concave shape, it is preferable to place the ash removal opening **16** at the lowest portion of the curve, since it is that area which will tend to collect ash and debris that falls down from the fire.

[0027] Referring now to **FIGS. 2 and 2A**, to collect the ash, the present fireplace assembly **10** optionally includes an ash receiver **18** descendably mountable to said base **14** in general alignment with the ash removal opening **16**. Generally, an inexpensive metal, cylindrical container serves well as the ash receiver **18** because they are easy to manufacture. To regulate the flow of combustion air to the fire, the ash receiver preferably includes multiple air vents **19**. An air vent controller **20**, preferably an apertured ring which selectively blocks the vent **19**, optionally controls increasing or decreasing the amount of combustion air. The shape of the ash receiver **18** is not important as long as the container is large enough to cover the ash removal opening **16** and is configured to be held by an ash receiver mounting bracket **21** on the base **14**. Any material may be used to construct the ash receiver **18**, as long as it will withstand the temperature of hot ash and small burning embers from the fire. Metal, especially when coated with a protective coating such as porcelain, or other ceramic coating, is preferred. A handle **22** is preferably mounted on the ash receiver with standoffs **24** as insulation to simplify emptying of the ash receiver **18** when hot.

[0028] The ash receiver **18** may be mounted to the base **14** by any means known in the art. The ash receiver mounting bracket **21** is preferably located on the convex side of the base **14**, in a position to align the ash receiver **18** with the ash removal opening **16**. Most preferably, the mounting bracket **21** is configured to slidingly accommodate the engagement of a radically extending flange or rim **26** on the ash receiver **18** with the ash receiver mounting bracket **21**, having a Z-channel shape. The rim **26** may include straight edges **27**, best seen in **FIG. 3**, to better engage with the ash receiver mounting bracket **21**.

[0029] At combustion temperatures, any moisture that may be present, as from the wood or humidity in the air, will rapidly oxidize an unprotected iron or steel surface. Therefore, the surface of the base **14** is frequently coated with a protective material, such as porcelain or other ceramic coating, to protect the base **14** from oxidation due to weather or the fires contained therein. When the base **14** is coated, the user optionally places sand in the base **14** as an insulator under the fire to protect the finish and keep it looking new.

[0030] Referring again to **FIG. 2**, to prevent the sand from falling through the ash removal opening **16** or filling up the ash receiver **18**, the fireplace assembly **10** optionally includes a sand trap, generally designated **30**, sized and configured to be removably engaged by on the base **14** to close the ash removal opening **16**. The sand trap **30** preferably includes a paddle **32** that is sized and configured to cover the ash removal opening **16**, and an insulating handle **34** to permit removal of the paddle in a convenient manner.

[0031] Referring now to **FIGS. 2 and 2A**, a sand trap mounting bracket is located on the convex side of the base **14** to hold the sand trap **30** in place during use. Most preferably, a single bracket performs the function of both the ash receiver mounting bracket **21** and the sand trap mounting bracket, and is sized and configured to hold both the ash receiver **18** and the sand trap **30** simultaneously. To achieve this goal, each of the sand trap **30**, the ash receiver **18** and the mounting bracket **21** are sized and configured so that the sand trap **30** and the ash receiver **18** will be held in the mounting bracket **21** at the same time, and also so that either the sand trap **30** or the ash receiver **18** can be removed, while leaving the other in place. This allows maximum flexibility for the user and conserves space. Specifically, in the pre-

ferred embodiment, the bracket **21** includes inward projections, beneficially displaced flanges or shelves **38** for receiving each of the ash receiver **18** and the sand trap paddle **32**.

[**0032**] Turning to **FIGS. 1 and 3**, the base **14** is supported by one or more legs **40** that are held in place by a support frame, generally designated **42**. One or more frame members **44** hold the legs **40** spaced apart, stabilizing the grill assembly **10**. The legs **40** support the base **14**, vertically displacing it from the substrate **12**. Holding the base **14** off the substrate **12** not only protects the substrate from the heat of the fire, but also holds the base **14** at a more convenient height for the user to tend the fire.

[**0033**] The legs **40** may optionally be sized and configured to accept wheels **46**, with or without an axle **47**, for ease in moving the fireplace unit **10** from one place to another. Instead of wheels, preferably two of the legs **40** may be fitted with pads **48** that provide additional surface area in contact with the substrate **12**. The pads **48** distribute the weight of the fireplace **10** more evenly on mud or soft ground. It is also possible to configure the pads **48** and the legs **40** with threads suitable for making minor adjustments in the overall length of the leg **40** with the pad **48** to level the fireplace **10** on an uneven substrate **12**.

[**0034**] The fireplace **10** of the present invention also includes one or more generally vertical struts or strut portions **50** securable to the support frame **42**. Although the legs **40** and the struts **50** are referenced separately by function for convenience, it is to be understood that they are preferably part of a single generally vertical support **40**, **50** but may be physically separate, if suitable. As shown in **FIG. 3**, for example, the leg **40** is one end of a bar or pipe in contact with the substrate **12**, while the strut portion **50** is the opposite end of the same unit, farthest away from the substrate **12**. As referenced in this discussion, the leg **40** is the portion of the generally vertical support between the substrate **12** and the support frame **42**, and the strut portion **50** that portion of the generally vertical support that is above (when oriented as in **FIG. 3**) the support frame **42**. It is also contemplated that the generally vertical support **40**, **50** is optionally constructed of a plurality of segments (not shown), such as when two segments are threaded or otherwise fastenable together to make the unitary vertical support.

[**0035**] Regardless of the configuration of the legs **40** and the struts **50**, they are spaced apart by the support frame **42** and the frame members **44**. The support frame **42** may be connected to the legs **40** and the struts **50** by any suitable means. In the preferred embodiment, this feature is achieved by providing a lower bracket **53** provided in two halves, each with a male frustoconical section shape and an inner semicircular shape that engages the vertical supports **40**, **50**. The support frame **42** has at least two corners, each corner having a tubular female frusto-conical section shape **54** and being configured to receive and securely engage a pair of bracket halves **53**. This type of system is disclosed for suspending wire shelves in U.S. Pat. Nos. 3,757,705 and 3,523,508, which are incorporated by reference herein. In the preferred configuration, the frame members **44** are of equal length, spacing the legs **40** and struts **50** equidistantly around the base **12**.

[**0036**] The struts **50** have fittings **56** for attachment of screen segments **60**. Preferably, the fittings **56** are such that no tools are required for their use, such as slots upon which the screen segments **60** hang (**FIG. 4**). Each fitting **56** may be an integral part of the corresponding strut **50**, as when the slot is cut directly in to the strut **50**, or the fitting may be a separate piece that is affixed to the strut, a screen bracket including a slot. In the most preferred fitting **56**, there are a plurality of rows of axially displaced slots in each strut **50**, allowing a plurality of screen segments **60** to be mounted to the same strut **50**.

[**0037**] Another preferred option, shown in **FIG. 3**, utilizes at least one stabilizing member, generally designated **64**, upon which the base **14** rests. Generally, the legs **40** support the base **14** by any method known in the art. Use of the stabilizing members **64** adds additional support to the fireplace **10** preventing it from flexing from side to side. The stabilizing members **64** also provide a place upon which a rim **66** of the base **14** rests, bearing the weight of the base **12** and holding it in place by gravity. Apertures **67** in the rim **66** are in registry with, and are slidably engageable upon the vertical supports **40**, **50**. The stabilizing members **64** are attached to the struts **50**, preferably by the same types of fasteners **53** and tubular female frusto conical shapes **54** as the support frame **42**. Alternative attachment constructions are contemplated, but knock-down assembly (without tools) is preferred. An insulating handle **70** is optionally attached to either the base frame **64** or the support frame **42** to allow movement of the fireplace **10**, needed while the unit is still warm.

[**0038**] Referring now to **FIGS. 3 and 4**, as the screen segments **60** are preferably constructed of screen cloth **72** made of fire resistant material, with a connector **74** made to matingly engage the corresponding slot fitting **56** on each of the struts **50**. One or more of the screen segments **60** attach to the struts **50** to form a cage **76** around the base **12**, acting to contain hot ash or sparks from the fire. The screen segments **60** are attached to the struts **50**, preferably hanging from the struts, and are not supported by the base **14**. Metal is the preferred construction material for the screen segments **60** for several reasons. It is a relatively inexpensive raw material, and is easily shaped into a screen. The screen **72** must not have gaps small enough to disrupt the supply of combustion air to the fire when the screen segments **60** are in place.

[**0039**] A metal border or frame **80** preferably surrounds the screen **72** to better hold its shape or to simplify mounting of the connectors **74**. As an attachment or as an integral part of the screen segment **60**, the connector **74** will often, but not necessarily be constructed of the same material as the screen **72**. The connector **74** is placed, sized and configured to matingly engage the fitting **56** on one of the struts **50**. When the preferred slot **56** is used, the connector **74** preferably takes the shape of a tab that fits into the slot and allows the screen segment **60** to fall somewhat so that the tabs are securely held within the slots. Since the screen segment **60** attaches to a plurality of struts **50**, generally, at least two multiple sets of connectors **74** are provided on each side of the screen segment **60**, preferably on the frame **80**. It is also contemplated that the tab connector **74** is located on the strut **50** and the slot **56** is located on the frame **80**.

[**0040**] One or more of the screen segments **60** include at least one door **82** shown in **FIGS. 1 and 4**. Use of the door **82** facilitates adding wood and tending the fire without requiring removal of the screen segments **60**, which may be

hot. Any style door **82** may be used. One simple style of the door **82** includes a framed portion of the screen **72** that has a hinge **84** (**FIG. 4**), allowing it to swing, and a latch **86** that holds the door **82** closed. In the preferred embodiment, two such doors **82** are provided, however a single door **82** is also contemplated. Other door configurations are contemplated depending on the application.

[**0041**] In the preferred embodiment, the screen segments **60**, including the one which houses the doors **82**, are interchangeably mountable on any pair of adjacent struts **50** with any other of the screen segments. When the struts **50** are equally spaced apart, and the screen segments **60** are all the same size, the process of assembling the fireplace unit **10** is simplified. Interchangeability of the screen segments **60** allows the user to choose any segment **60** and attach it to any adjacent struts **50**. Thus, an advantage of the present fireplace **10** is that, when assembling the unit, there is no need to search for certain screen segments **60** that must be installed between any two particular struts **50**.

[**0042**] The fireplace **10** further includes a lid **90** that is sized and configured to cover the cage **76**. Although the lid **90** need not be any particular shape, a dome shape is particularly suitable and is preferred. One important feature of the present fireplace **10** is the ability to convert the lid **90** from a fireplace lid in a first position, seen best in **FIG. 6**, to a secure, collapsible enclosure lid in a second position shown in **FIG. 5**. If the lid **90** is in use while a fire is burning, it is an important safeguard for containing sparks and flying ash within the cage **76** shown in **FIG. 1**. The first position is defined by the lid **90** covering the cage **76**. A plurality of circumferentially spaced, dome-shaped dimples **92** are preferably located on the lid **90** and are used as locators. When preferably blunt, radiused upper ends **93** of the struts **50** rest in the dimples **92**, the lid **90** is secure on the top of the cage **76**.

[**0043**] The second position (**FIG. 5**) is defined by the lid **90** being in contact with the base **14**. The lid **90** is placed in the second position for storage only when there is no fire and when the screen segments are detached. It is, therefore, not critical that there be a sealing contact between the lid **90** and the base **14**. However, to provide optimum protection from weather in the storage, or second, position, the lid **90** preferably has a diameter sufficient to extend to the edge of the base **14** or beyond it so that water does not run under the lid **90** and settle in the bottom of the base **14**.

[**0044**] To be placed in the second position in contact with the base **14**, the lid **90** and the struts **50** must cooperate so that the position of the struts **50** does not block movement of the lid **90** to that position. Referring to **FIG. 4**, when the lid **90** is wide enough to completely cover the cage **76**, as in the preferred embodiment, the lid **90** has lid openings **94** configured and disposed for slidably and matingly engaging one of the struts **50**. This allows the lid **90** to move downward toward the substrate **12** and contact the base **14** as shown in **FIG. 5**. It is preferred that the lid openings **94** are each located adjacent a corresponding dimple **92**, and all are located on the same sides of each corresponding dimple.

[**0045**] When the preferred bowl-and dome-shapes are used, and the lid is axially rotated, and placed in the second position, the base **14** and the lid **90** form a cavity that may be used for storage purposes. For protected storage when not in use, the screen segments **60** are removed from the struts **50** and placed inside the base **14** (best seen in **FIG. 5**), the lid **90** is then lowered to the second position, covering the screen segments. When use of the fireplace **10** is desired, the lid **90** is removed, screen segments **60** are affixed to the struts **50**, and the lid **90** is replaced in the first position.

[**0046**] Referring now to **FIG. 7**, the present fireplace is also suitable for cooking when the optional grill assembly, generally designated **100**, is used. A cooking grate **102** is held over the fire by a rack, generally designated **104**. The cooking grate **102** is sized and configured to fit within the cage **76** while holding a quantity of food to be cooked. Preferably, the height of the cooking grate **102** is adjustable to a plurality of distances from the base **14**. One way of adjusting the cooking height is by adjusting the length of a suspending line **106** to which the grate is connected. The suspending line **106** is made of any material suitable for use in a fireplace, with a metal chain being the most preferred. Attachment of the suspending line **106** to the cooking grate **102** preferably occurs at multiple points to promote stability of the cooking grate **102**.

[**0047**] Referring to **FIG. 8**, stability of the cooking grate **102** is improved by the optional addition of one or more locating fingers **108** and stop plates **110**. The locating fingers **108** are projections from the cooking grate **102** that engage with one of the struts **50** to minimize rotation of the cooking grate about the suspending line **106**. Preferably, two pair of locating fingers **108** are placed on opposite sides of the cooking grate **102**, and slide easily along the length of the strut **50** as the cooking grate **102** is raised or lowered. The number and arrangement of the fingers may vary to suit the application. The stop plates **110** are projections mounted to one or more of the struts **50** or the rack **104** that define the lowest recommended cooking position for the cooking grate **102** above the fire, allowing the grate to rest in a level position.

[**0048**] The rack **104** is mountable to and supported by one or more of the struts **50** as shown in **FIG. 7**. Preferably, the rack **104** is slidably and matingly engaged with the struts **50** so that it is assembled and disassembled without using tools of any kind. To this end, the preferably tubular rack **104** has a pair of sockets **109** which are configured to matingly engage a corresponding pair of the struts **50** by sliding over the upper ends **93**. Height and size of the rack **104** are not important, so long as it is high enough to hold the cooking grate **102** a sufficient height above the base **14** to prevent burning of the food, and the unit should be strong enough to support the weight of the cooking grate **102** loaded with food. The rack **104** preferably allows for the adjustable height of the cooking grate **102**. For example, the preferred rack includes a bar **112** rotatably engaged in the rack **104**, and having a handle **114** forming a windlass, however other means of changing the height of the cooking grate **104** are contemplated.

[**0049**] It will therefore be evident that the portable outdoor fireplace **10** as described herein is easily assembled or disassembled without the use of tools. The featured structure has struts **50** that hold screen segments **60** which are easily removed for protective storage between the base **14** and the lid **92**. The optional grill assembly **100** allows the fireplace **10** to be used for cooking at an adjustable height from the cooking fire. However, it is contemplated that a basic fireplace **10** may be provided which lacks one or more of the ash receiver **18**, the sand trap **30** and the grill assembly **100**.

[0050] While a particular embodiment of the present portable outdoor fireplace has been shown and described, it will be appreciated by those skilled in the art that changes and modifications may be made thereto without departing from the invention in its broader aspects and as set forth in the following claims.

What is claimed is:

1. A portable fireplace assembly comprising:

a base for supporting and burning combustible material therein;

a support frame being sized and configured to support said base, and comprising one or more frame members;

at least one vertical support supporting said base in a vertical displacement from a substrate;

one or more screen segments, and being mountable on said vertical supports; said one or more screen segments forming a cage when mounted on said supports, and being configured to surround the combustible material when said cage is formed; and

said screen segments being securable to said struts by a tab and slot mechanism.

2. The fireplace assembly of claim 1 wherein said vertical supports are each provided with at least one of said slots, and each said segment is provided with at least one of said mating tabs for engaging a corresponding one of said slots.

3. The fireplace assembly of claim 1 further comprising a grill assembly supported by one or more of said supports, said grill assembly comprising:

a cooking grate;

a rack that is mountable to said vertical supports; and

said cooking grate is suspended from said rack.

4. The fireplace assembly of claim 3, wherein said cooking grate is adjustable to a plurality of distances from said base.

5. The fireplace assembly of claim 4, wherein said rack includes a windlass.

6. The fireplace assembly of claim 1, wherein said vertical support includes a strut and a leg, said support frame further comprises a plurality of leg fittings and a plurality of strut fittings.

7. The fireplace assembly of claim 1, wherein each said vertical support includes a leg and a strut, and is configured to be made of one of a single component and two or more components joined together.

8. The fireplace assembly of claim 1, further including a lid configured to cover said cage, wherein said lid is convertible from a fireplace lid in a first position to a secure, collapsible enclosure lid in a second position, said first position being defined by said lid covering said cage, and said second position being defined by said lid being in contact with said base.

9. The fireplace assembly of claim 8 further comprising dimples and openings on said lid corresponding to each of said struts, wherein each of said struts engage said corresponding dimple to hold said lid in place covering said cage in said first position, and wherein each of said struts slidably engage said corresponding opening allowing said lid to contact said base with said struts engaging said openings.

10. The fireplace assembly of claim 1, wherein at least one of said one or more screen segments includes at least one door.

11. The fireplace assembly of claim 9, wherein said at least one screen segment including at least one door is interchangeably mountable on said struts with said other screen segments.

12. The fireplace assembly of claim 1 further comprising an ash removal opening in said base.

13. The fireplace assembly of claim 12 further comprising a sand trap sized and configured to be removedly engaged on said base to close said opening.

14. The fireplace assembly of claim 12 further comprising an ash receiver mountable to said base over said ash removal opening.

15. The fireplace assembly of claim 14 further comprising a sand trap sized and configured to mountably engage said base over said ash removal opening with said ash receiver in place.

16. A portable fireplace assembly for containing a fire comprising:

a base for supporting and burning combustible material therein;

a support frame being sized and configured to support said base, comprising one or more frame members;

one or more vertical supports each including a leg and a strut, each of said legs supporting said base in a vertical displacement from the substrate;

one or more screen segments mountable on said vertical supports and forming a cage when mounted on said supports, said cage being configured to surround the combustible material; and

a lid convertible from a fireplace lid in a first position to a secure, collapsible enclosure lid in a second position, said lid comprising dimples and openings on said lid corresponding to each of said struts, said first position being defined wherein said struts are engaged with said corresponding dimples to hold said lid in place covering said cage, said second position being defined wherein each of said supports is slidably engaged with said corresponding opening to allow said lid to contact said base.

17. The fireplace assembly of claim 16 further comprising a grill assembly supported by one or more of said struts, said grill assembly comprising:

a cooking grate;

an adjustable length suspending line; and

a rack that is mountable to said struts and supports said cooking grate and said suspending line, whereby the cooking temperature is varied by adjusting the height of said cooking grate from the fire.

18. The fireplace assembly of claim 17, wherein said cooking grate is suspended from said rack.

19. The fireplace assembly of claim 18, wherein said cooking grate includes a plurality of locating fingers that minimize rotation of said cooking grate.

20. The fireplace assembly of claim 19, further comprising a plurality of stop plates to prevent said cooking grate from descending below a lowest recommended cooking position.

21. The fireplace assembly of claim 16, wherein said support frame further comprises a plurality of leg fittings and a plurality of strut fittings, each of said legs being sized and configured to engage one of said leg fittings, each of said struts being sized and configured to engage one of said strut fittings.

22. The fireplace assembly of claim 16, wherein one or more pieces directly connect to each other to form a unitary member comprising said leg and said strut.

23. The fireplace assembly of claim 16, wherein said struts further comprise slots and said screen segments further comprise tabs that are sized and configured for mounting said screen segments to said struts.

24. The fireplace assembly of claim 16 having at least two legs, and further comprising at least one wheel rotatably mounted to at least one of said legs.

25. The fireplace assembly of claim 24, wherein said at least one screen segment comprising a door is interchangeably mountable on said struts with said other screen segments.

26. The fireplace assembly of claim 21, wherein said frame members attach to said legs with a bracket having a female frusto-conical shape.

27. The fireplace assembly of claim 21, wherein said legs and said struts comprise a unitary vertical support.

28. The fireplace assembly of claim 16 further comprising an ash receiver mountable to said base over an ash removal opening.

29. The fireplace assembly of claim 28, wherein said ash receiver further comprises a plurality of air vents and a controller to regulate the amount of combustion air.

30. A portable fireplace assembly that rests upon a substrate, comprising:

a base for supporting and burning combustible material therein;

a support frame being sized and configured to support said base, comprising one or more frame members;

one or more legs, each of said legs supporting said base in a vertical displacement from the substrate;

a plurality of generally vertical struts securable to said frame;

a plurality of screen segments mountable on said struts and forming a cage when mounted on said struts, said cage being configured to surround the combustible material, and at least one of said screen segments configured to form at least one door and being interchangeably mountable on said struts with any other of said screen segments; and,

a lid that is sized and configured to cover said cage.

* * * * *