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(54) **DEVICE FOR COVERING A COOKTOP**

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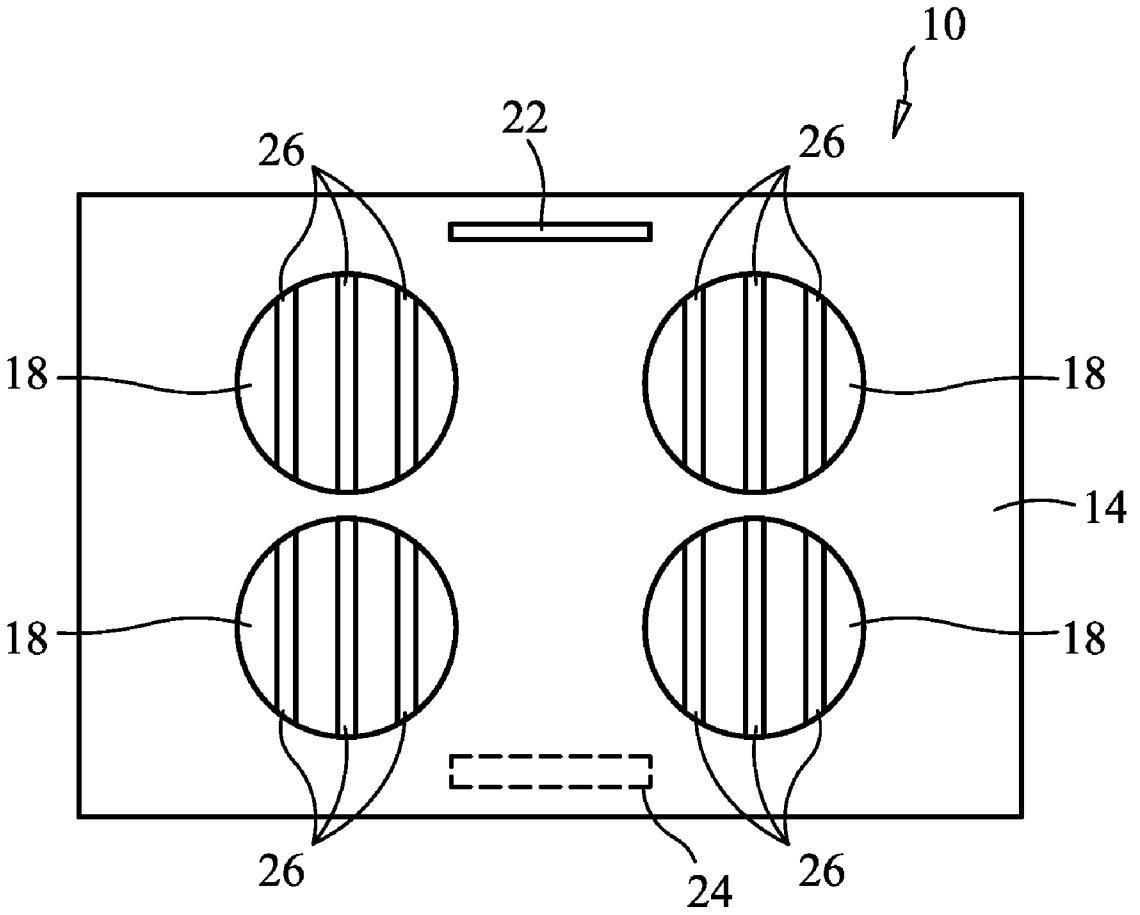
(57) **ABSTRACT**

A safety device for covering a hot cooktop surface includes a bottom layer with a plurality of at least one pad that is placed directly on at least one cooktop burner. A top layer is provided above a middle insulating layer that is located between the bottom layer and the top layer. The device may also include a vent located on the top layer for releasing heat from the cooktop surface and channels or conduits to help air circulate over the cooktop burner and base pad. In application of the device over a hot cooking surface, the middle layer prevents the top layer from becoming excessively hot thereby preventing burn injuries and damage to food or cookware set upon the top surface of the device.



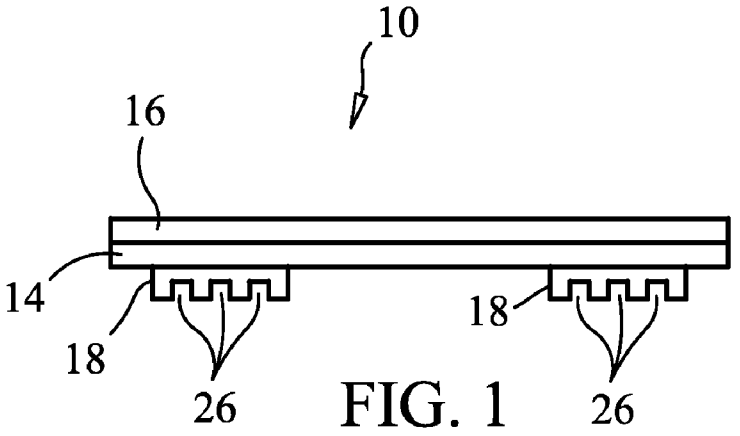


FIG. 1

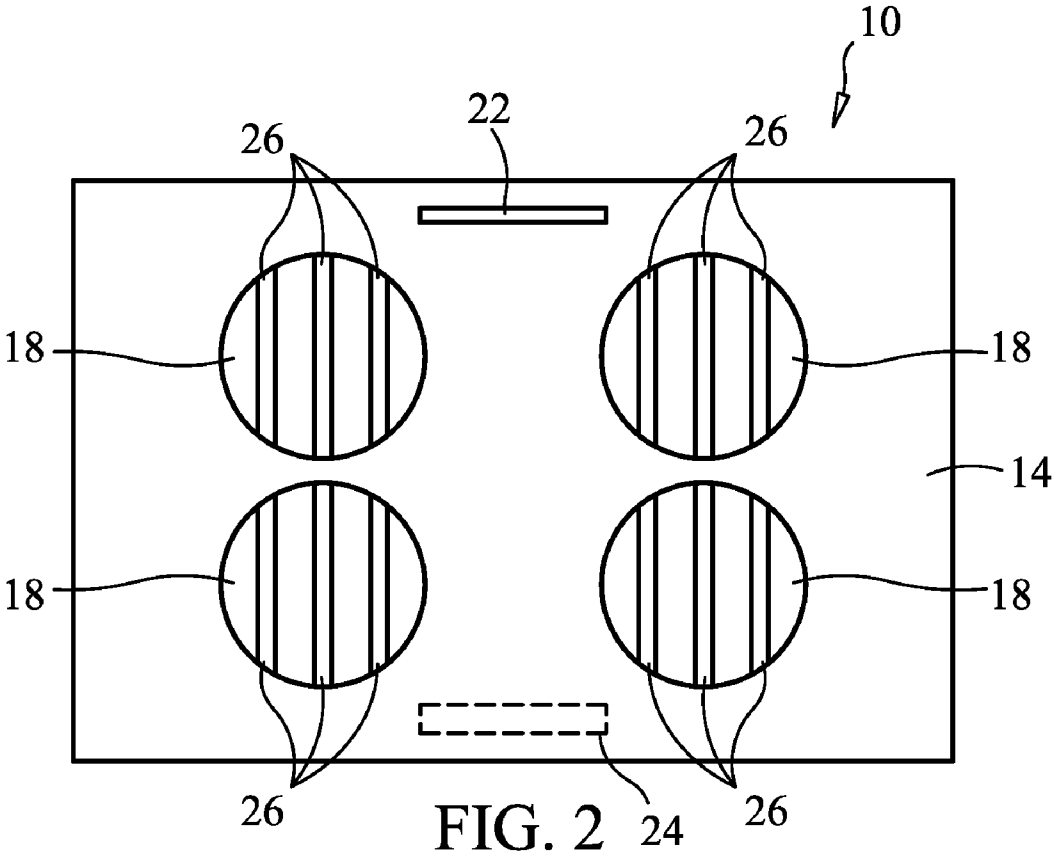


FIG. 2

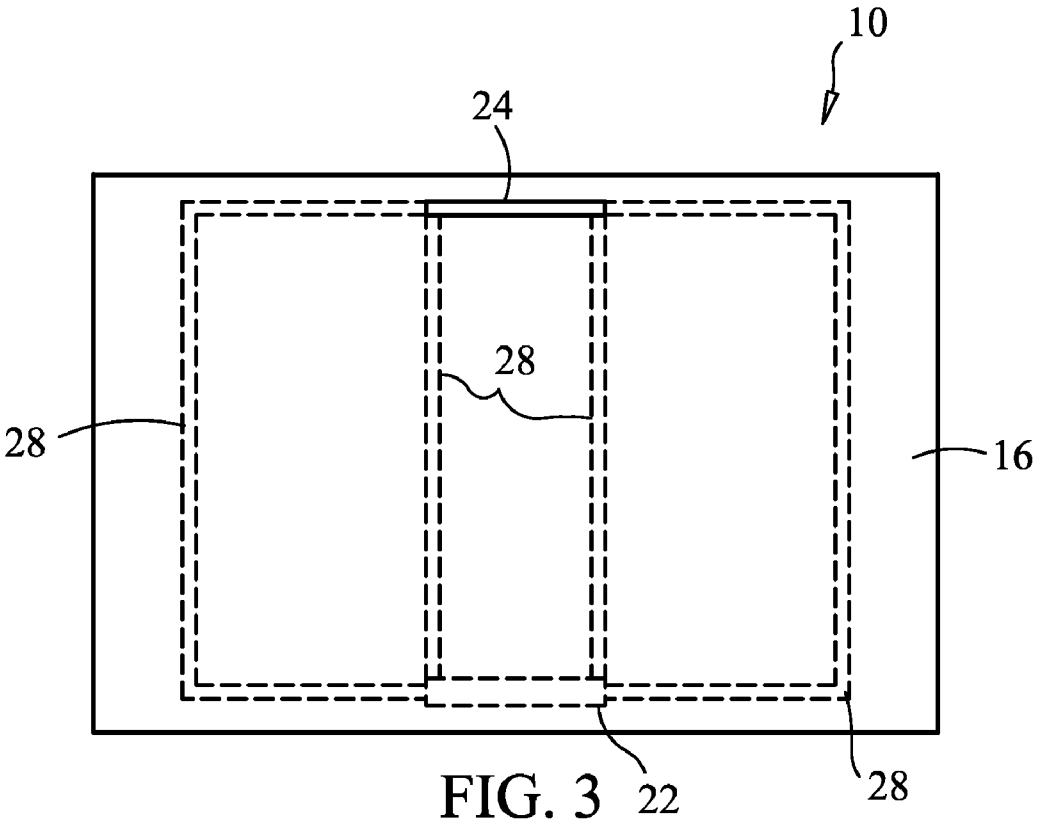


FIG. 3

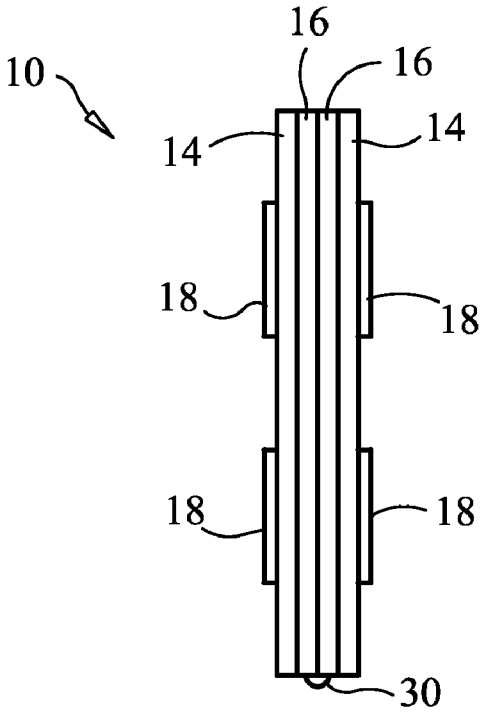


FIG. 4

DEVICE FOR COVERING A COOKTOP

BACKGROUND OF THE INVENTION

[0001] 1. Technical Field

[0002] This invention relates to a safety device, and more particularly, to a device for covering a cooktop surface.

[0003] 2. Description of Related Art

[0004] As early as Roman times, stoves made of clay, tile, or earthenware were used in Central and Northern Europe. It was not until late in the 15th century that cast-iron stoves were first made in Europe. These consisted of plates that were grooved to fit together in the shape of a box and the stoves were fueled by coal or wood.

[0005] Since gas and electricity have become generally available, wood-burning and coal-burning stoves have been largely replaced by a wide variety of cooking apparatus using natural or manufactured gas, oil, acetylene, gasoline, or electricity as fuel. Modern stoves are typically considered a basic appliance in homes in developed nations and typically contain a cooktop having from three to eight burners or plates of various sizes and power levels. The size of the cooktop is only limited by the size of the burner and the size of the space the cooktop is used in. Typically the size ranges from a width of about 14 inches to about 48 inches and a depth of about 19 inches to about 28 inches.

[0006] The cooktop burners and areas surrounding the burners, typically remain hot for a long period of time after use. As a result, numerous children and adults are burned by contact with the hot cooktop surface. Furthermore, on ceramic or glass cooktops, the cooktop is a flat cooking surface made of ceramic or glass and the cooking surface is usually built into a countertop. Because the burners on a ceramic or glass cooktop are flush with the cooktop surface and countertop, the burners can difficult to perceive and the chances of inadvertent contact with the hot cooktop burners are increased, especially by younger children.

SUMMARY OF INVENTION

[0007] The present invention solves the above-described problem by providing a device for covering a cooktop. The cover helps prevent contact with the hot surface of the cooktop and thereby avoids injuries. The device includes a bottom layer which is placed directly on at least one cooktop burner, a top layer, and a middle insulating layer which is located between the bottom layer and the top layer. The middle layer prevents the top layer from becoming excessively hot that would otherwise cause a burn injury to human skin. Further, the device maintains the top layer at a temperature that allows it to be used for food preparation so that food, cookware, dishes and the like will not be damaged by the hot stove being covered.

[0008] More particularly, the bottom layer may be comprised of a plurality of at least one pad, wherein each base pad is placed directly on a cooktop burner. In a preferred embodiment, the bottom layer is comprised of heat resistant plastic, the middle layer is comprised of foam insulation, and the top layer is comprised of plastic. The device may also include a vent located on the top layer for releasing heat from the cooktop surface and channels or conduits to help air circulate over the cooktop burner and base pad.

[0009] Other features and advantages of the present invention will become apparent upon reading the following detailed description of embodiments of the invention, when taken in conjunction with the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The novel features believed characteristic of the invention are set forth in the appended claims. The invention itself, however, as well as a preferred mode of use, further objectives and advantages thereof, will be best understood by reference to the following detailed description of illustrative embodiments when read in conjunction with the accompanying drawings, wherein:

[0011] FIG. **1** is a side view of a device made in accordance with an embodiment of the present invention;

[0012] FIG. **2** is a bottom view of a device made in accordance with an embodiment of the present invention;

[0013] FIG. **3** is a top view of a device made in accordance with an embodiment of the present invention; and

[0014] FIG. **4** is a side view of a folded device made in accordance with an alternative embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0015] In the following detailed description, reference is made to the accompanying drawings that form a part hereof, and in which is shown by way of illustration, specific embodiments in which the invention may be practiced. These embodiments are described in sufficient detail to enable those skilled in the art to practice the invention, and it is to be understood that other embodiments may be utilized. It is also to be understood that structural, procedural and system changes may be made without departing from the spirit and scope of the present invention. The following detailed description is, therefore, not to be taken in a limiting sense, and the scope of the present invention is defined by the appended claims and their equivalents. For clarity of exposition, like features shown in the accompanying drawings are indicated with like reference numerals and similar features as shown in alternate embodiments in the drawings are indicated with similar reference numerals.

[0016] Referring to FIGS. **1-3**, shown is cover **10** for covering a cooktop of a typical four burner stove. Cover **10** includes base pad **18**, middle insulating layer **14**, and top layer **16**. Middle layer **14** may be attached to base pad **18** and top layer **16** by any method or means known to those having skill in the art. For example, base pad **18**, middle layer **14**, and top layer **16** may be attached using screws, tacks, rivets, glue, adhesive, or hook and loop fastener such as Velcro®.

[0017] Cover **10** contains at least one base pad **18** and preferably contains the same number of base pads **18** as the number of burners on the cooktop being covered by cover **10**. Because a majority of cooktops have four burners, in a preferred embodiment, as illustrated in FIG. **2**, cover **10** contains four base pads **18** wherein each base pad **18** can be placed directly on a cooktop burner. Each base pad **18** of cover **10** is orientated such that each base pad **18** can be placed directly on a cooktop burner such that each burner on the cooktop is covered by base pad **18**.

[0018] Base pad **18** may be any size and shape which provides for substantial coverage of the burner when cover **10** is placed on the cooktop surface. For example, suitable

shapes for base pad **18** include, but are not limited to a square, oval, or circle. Preferably, base pad **18** is circular in shape.

[0019] Base pad **18** contains at least one channel **26**. Channel **26** allows for air to circulate over the cooktop burner and through base pad **18**. The circulating air helps to cool the cooktop burner as well as base pad **18**.

[0020] Base pad **18** is comprised of any material capable of maintaining its shape and structure at high temperatures. Specifically, the material should be capable of withstanding temperatures up to about 700° F. Examples of suitable materials include, but are not limited to heat resistant plastic, ceramic, metal and metal alloys, and foam tile. Preferably, base pad **18** is comprised of heat resistant plastic. Base pad **18** protects middle insulating layer **14** from direct contact with the cooktop burners.

[0021] Middle insulating layer **14** may be comprised of any insulating material known in the art which is capable of effectively insulating top layer **16** from base pad **18** and the heated cooktop burners. Suitable materials middle layer **14** may be comprised of include, but are not limited to fiberglass, foam insulation, or ceramic foam tile. Middle insulating layer **14** prevents top layer **16** from becoming excessively hot, and desirably prevents top layer **14** from being heated at all.

[0022] Top layer **16** may be comprised of any material that is durable enough to allow for proper functioning of the cover **10**. Suitable materials include, but are not limited to plastic, metal, metal alloy, wood, or particle board with laminate cover. Preferably, top layer **16** is comprised of plastic. Top layer **16** may contain a decorative design such that the appearance of cover **10** on a cooktop is aesthetically pleasing. In addition, cover **10** or top layer **16** may have beveled corners.

[0023] In use, top layer **16** of cover **10** is the surface a user sees and comes in contact with after cover **10** is placed over the cooktop and middle layer **14** helps ensure that top layer **16** remains relatively cool. In one embodiment, top layer **16** is relatively rigid and after cover **10** is placed over a cooktop, the surface of top layer **16** may be utilized as a normal countertop space. Therefore, in addition to preventing burn injuries, cover **10** may also be used to protect a cooktop surface from damage caused by dropped items or other impacts that may damage the cooktop, especially a ceramic or glass cooktop.

[0024] Cover **10** of the present invention typically has a width between about 14 inches and about 48 inches, and a depth between about 19 inches and about 28 inches. Preferably, cover **10** has a width between about 21 inches and about 36 inches, and a length between about 21 inches and about 24 inches.

[0025] The thickness of base pad **18**, middle layer **14** and top layer **16** can vary depending upon the type of material each layer is comprised of However, preferably, base pad **18** and middle layer **14** each have a thickness between about 0.0625 inch and about 0.5 inch, and more preferably have a thickness between about 0.125 inch and about 0.25 inch. Top layer **16** preferably has a thickness between about 0.0625 inch and about 0.5 inch, and more preferably has a thickness between about 0.0625 inch and about 0.25 inch.

[0026] As illustrated in FIGS. **2** and **3**, cover **10** may also include heated air intake vent **22** and exhaust vent **24** for the release of heat from the cooktop surface. Intake vent **22** and exhaust vent **24** may be any shape, and are connected by at least one conduit **28** which passes through middle layer **14** and top layer **16**. Upon the placement of cover **10** on the cooktop burners and cooktop surface, ambient air may enter from around the bottom perimeter of cover **10**. This ambient air absorbs some of the heat from the cooktop burners and a cooktop surface of, in this example, of a recently used stove. The air then enters intake vent **22**, travels through conduit **28** and is heated further by the heat absorbed into cover **10** from the cooktop burners and the cooktop surface. The heated air is passed out of conduit **28** by exhaust vent **24**. This creates a chimney-effect whereby new cooler air is drawn into intake vent **22** that is then heated while passing through conduit **28**. This causes air to circulate through cover **10** cooling base pads **18**, the cooktop burners and the cooktop surface. In one embodiment, channel **26** and conduit **28** are the same or are fluidly connected. To further aid in the cooling process, a mechanical air moving device such as a fan may be incorporated into conduit **28** to allow for more rapid cooling as increased flow rate of air will increase the convective cooling.

[0027] As shown in FIG. **4**, cover **10** may be a bi-fold device. This configuration is particularly convenient for storage purposes. In addition, a bi-fold design allows for the partial coverage of a cooktop surface, when it is desirable to leave one or more cooktop burners exposed. In the embodiment shown in FIG. **4**, base pad **18**, middle layer **14**, and top layer **16** are each comprised of two laterally disposed pieces. If there is more than one base pad **18**, then only middle layer **14** and top layer **16** are each comprised of two laterally disposed pieces.

[0028] Hinge **26** or a similar structure allows for the folding of two pieces and may be located on cover **10** to allow cover **10** to be folded in half For example, hinge **26** may be located on the joint between the laterally disposed pieces of top layer **16**, middle layer **14**, or base pad **18**. Cover **10** may be configured to fold inwardly when top layer **12** is facing up, or cover **10** may be configured to fold in the opposite direction. In addition, cover **10** may be designed to fold in half lengthwise or widthwise. For example, if cover **10** is designed to fold in half lengthwise (front to back), the folded device may be placed over the two front cooktop burners or the two back cooktop burners. If cover **10** is configured to fold in half widthwise (side to side), the folded device may be placed over the two left cooktop burners or the two right cooktop burners.

[0029] It should be understood that the foregoing relates to exemplary embodiments of the invention and that modifications may be made without departing from the spirit and scope of the invention as set forth in the following claims.

What is claimed is:

1. A device for covering a cooktop comprising:

a bottom layer which may be placed directly on at least one cooktop burner;

a top layer disposed above the bottom layer, and

a middle insulating layer located between the bottom layer and the top layer wherein the middle layer prevents the top layer from becoming excessively hot and to remain at a temperature below that which would cause a burn injury to human skin.

2. The device of claim **1**, wherein the bottom layer is comprised of a plurality of base pads, wherein each base pad may be placed directly on a cooktop burner.

3. The device of claim **2**, wherein the bottom layer is comprised of four base pads.

4. The device of claim **3**, wherein the base pads are circular in shape.

5. The device of claim **1**, wherein the bottom layer is comprised of heat resistant plastic, or ceramic foam tile.

6. The device of claim **5**, wherein the bottom layer is comprised of heat resistant plastic.

7. The device of claim **6**, wherein the heat resistant plastic maintains its shape at temperatures up to about 700° F.

8. The device of claim **1**, wherein the middle layer is comprised of fiberglass, foam insulation, or ceramic foam tile.

9. The device of claim **8**, wherein the middle layer is comprised of foam insulation.

10. The device of claim **1**, wherein the top layer is comprised of plastic, particle board with laminate cover.

11. The device of claim **10**, wherein the top layer is comprised of plastic.

12. The device of claim **1**, wherein the device has a width between about 14 inches and about 48 inches, and a depth between about 19 inches and about 28 inches.

13. The device of claim **1**, wherein the bottom layer has a thickness between about 0.0625 inch and about 0.5 inch.

14. The device of claim **1**, wherein the middle layer has a thickness between about 0.0625 inch and about 0.5 inch.

15. The device of claim **1**, wherein the top layer has a thickness between about 0.0625 inch and about 0.5 inch.

16. The device of claim **1**, further comprising a vent for the release of heat from a cooktop.

17. The device of claim **16**, wherein an intake vent is located on the bottom layer.

18. The device of claim **16**, wherein an exhaust vent is located on the top layer.

18. The device of claim **1**, wherein the device is a bi-fold device.

19. The device of claim **18**, wherein the top layer and middle layer are each comprised of at least two laterally disposed pieces.

20. A device for covering a cooktop comprising:

a bottom layer which may be placed directly on at least one cooktop burner and is comprised of heat resistant plastic, or ceramic foam tile;

a top layer wherein the top layer is comprised of plastic, particle board with laminate cover;

a middle insulating layer located between the bottom layer and the top layer, wherein the middle layer prevents the top layer from becoming hot and wherein the middle layer is comprised of fiberglass, foam insulation, or ceramic foam tile;

a vent located in the top layer for the release of heat from a cooktop; and

wherein the combination of the bottom layer, top layer, middle layer, and top layer has a width between about 14 inches and about 48 inches, and a depth between about 19 inches and about 28 inches.

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