H. P. BALL.

CULINARY UTENSIL.

APPLICATION FILED JULY 31, 1920.

1,411,076. **Patented Mar. 28, 1922.**

Fig. 1

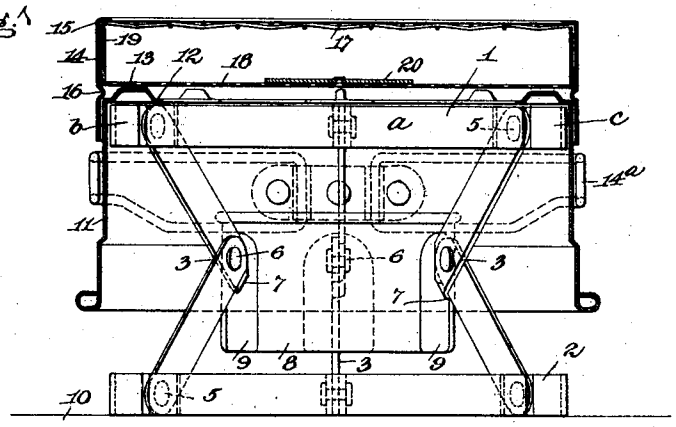


Fig. 2

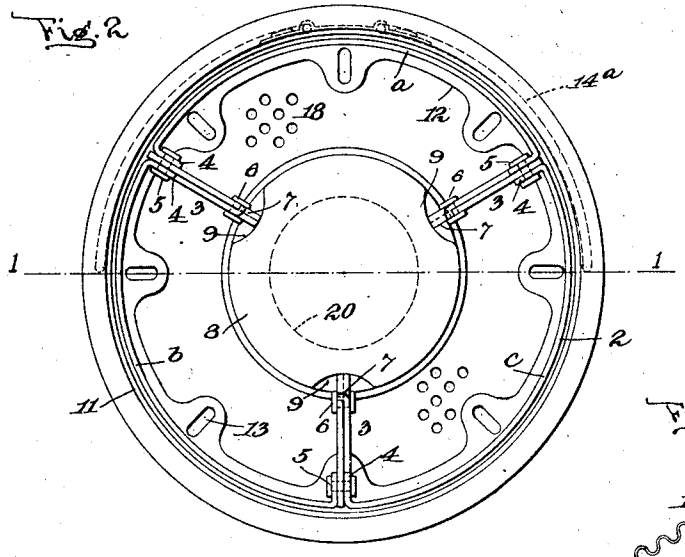


Fig. 4

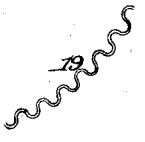
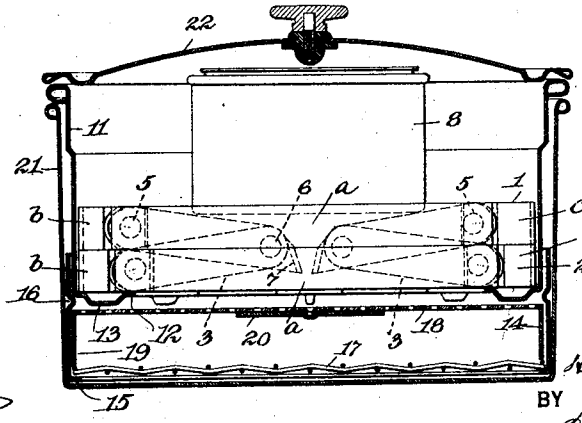


Fig. 3.



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CULINARY UTENSIL.

1,411,076. Specification of Letters Patent. Patented Mar. 28, 1922.

Application filed July 31, 1920. Serial No. 400,338.

To all whom it may concern:

Be it known that I, HENRY PRICE BALL, a citizen of the United States, and a resident of the borough of Brooklyn, county of Kings, city and State of New York, have invented a certain new and useful Culinary Utensil, of which the following is a specification.

The invention relates to cooking utensils of the type wherein a spirit lamp or stove is employed as the heating medium, and particularly to such devices wherein the fuel is burned in the container in which it is vended. The invention is more particularly directed to a device for toasting although it is to be understood that certain of the elements which constitute the device of the invention may be utilized for other purposes.

The objects of the invention are to provide a device which may be nested to occupy a minimum of space; wherein the fuel container will be supported above the surface on which the device rests; wherein the heat of the flame will be concentrated; in which the flame will be protected from draughts; wherein sufficient air to support combustion will be assured; wherein the parts are secured against accidental displacement; wherein the material acted on by the flame will be shielded from the direct action of the flame; wherein the action of the flame will not be concentrated at one point on the material acted on and in which the heat of the flame will be directed to the entire surface to be acted on.

These and further objects will more fully appear in the following specification and accompanying drawings considered together or separately.

One embodiment of the invention is illustrated in the accompanying drawings in which like parts in all of the several figures are designated by similar characters of reference, and in which—

Fig. 1 is a sectional view partly in side elevation of the device, the section being taken on the line 1—1 of Fig. 2.

Fig. 2 is a bottom plan view of the device.

Fig. 3 is a view similar to Fig. 1 showing the parts nested in a stew pan or the like, and

Fig. 4 is a detail view of the spacer.

In carrying out the invention a stand is provided for supporting the parts in operative position. The stand comprises a pair of rings 1 and 2 carried in axial alinement by means of toggle members 3, preferably three in number. Each ring is preferably composed of three elements *a*, *b*, *c* each bent to an arc of approximately 120°. The ends of each ring element are bent inwardly to form lugs 4, and the extremities of the toggle arms are pivotally secured between the lugs 4 of adjacent elements by means of rivets 5, or otherwise, and extend toward the axial line of the rings. The inner ends of toggle arms of each toggle member are pivoted together as by means of rivets 6. One arm of each toggle member is preferably provided with a lip 7 adapted to engage the other element of the same member to limit the pivotal movement of the arms at the pivot 6 and thus limit the movement of the rings 1 and 2 away from each other.

When the stand is in position with the rings 1 and 2 axially separated to the distance permitted by the engagement of the lips 7 with the arms of their respective toggle members, a can 8, such as that illustrated in my Patent 1,323,567, and containing a solid alcohol fuel, is inserted axially within the upper ring 1 with inner pivoted ends of the toggle members engaging with the grooves 9 in the cylindrical surface of the can. The grooves 9 extend from the bottom to points short of the top of the can, and the toggle members resting against the upper walls of the grooves will prevent further downward movement of the can, and the latter will be supported with its bottom spaced above the surface 10 on which the lower ring 2 rests.

The engagement of the inner ends of the toggle members with the can 8 will prevent movement of the toggle members toward the axial center line of the rings and the rings will be rigidly supported one above the other. The engagement of the toggle members with the grooves 9 will prevent relative rotation of the can and stand, and the lips 7 will prevent further movement of the rings away from each other, thereby obviating the danger of the can being released from its position in the axial line of the rings and above the support 10.

The stand comprising the rings 1 and 2, toggle members 3 and can 8, may constitute a complete stove, the cooking utensil resting on the ring 1, and the ring 2 resting on the support. No amount of weight short of that necessary to rupture the parts of the device, will effect the stove just described.

The can cannot be moved downward without spreading the rings and the can cannot be forced upward to release the toggles by the pressure of the toggle members on the walls of the grooves as the top of the can will contact with the bottom of the utensil on the ring 1 before the can can be raised enough to free the ends of the toggle members.

Co-operating with stand above described is a windshield comprising an open ended cylindrical member 11. One end of the member 11 has an annular flange 12 adapted to rest upon the ring 1 with the cylindrical wall of the member encircling the stand. The wind shield is so proportioned that the lower edge thereof is positioned a short distance above the support 10 to permit of the entrance of air to support combustion. The flange 12 is preferably provided with struck-up lugs 13 adapted to support a cooking utensil above the flange and permit the flame to play between the bottom of the utensil and the flange, as is common. The wind shield may be provided with a handle such as 14^a which, when not in use may be folded against the wind shield as shown.

In Figs. 1 and 2 the stand, with the wind shield as a part thereof, is illustrated in connection with a toaster of improved construction. The toaster comprises a cylindrical casing 14 adapted to engage over that end of the wind shield having the flange 12. The opposite end of the casing is provided with an inturned flange 15, and the cylindrical wall of the casing has a bead 16 rolled on the interior thereof to limit the movement of the casing over the wind shield.

A screen 17 preferably of wire netting, of relatively large mesh, is placed within the casing 14 and in engagement with the flange 15. A second screen 18 of foraminous material is placed within the casing and resting upon the bead 16. An annular spacer 19 is interposed between the screens 17 and 18 to retain them in position with a space between them. The spacer may be positioned at a short distance from the wall of the casing 14 to more or less insulate the same from the heat of the flame. For this purpose the spacer may be made of corrugated material 19 as shown in Fig. 4.

The perforations in screen 18 are relatively small in order to prevent the flames of the burning fuel in the can from passing therethrough while at the same time all of the heat of the flames will pass through the screen. Carried at the center of the screen 18 is a deflector plate 20 to prevent localizing of the heat at the center of the screen directly above the can. It is obvious that instead of the plate 20 the center of the screen 18 may be imperforate and the same result will be accomplished. The toaster may be supported by the engagement of the screen 18 with the lugs 13, or by the engagement of the bead 16 with the flange 12.

By providing the toaster with a handle (not shown) the same may be employed to toast bread or even broil articles over any open flame.

When the toaster is not in use any culinary utensil, such for example as a stew pan 21 may be supported on the lugs 13.

When it is desired to pack the device, the wind shield with the toaster is removed from the stand proper, the cover of the can is replaced, the can is removed from the stand and the latter is collapsed, as shown in Fig. 3. The wind shield with the toaster in place is now inverted and placed within the stew pan. The collapsed stand and the can of fuel are placed within the wind shield, and the cover 22 is placed over all closing the package.

In operation the article to be toasted or broiled will be placed upon the screen 17. The flames will play against the under side of the screen 18. The flames will not pass through the perforations in the screen, but the air between the screens and confined more or less by the article on the screen 17, will heat the bread or meat, as the case may be, but the same will not be burned or scorched by contact with the flames.

When used without the stand and over an open flame, such, for example, as that of a campfire, the deflector 20 may be omitted.

Instead of the plate 18 a wire screen of relatively small mesh may be employed.

Instead of being circular, the toaster, wind shield, and members 1 and 2 may be of any other shape.

In accordance with the provisions of the patent statutes the principle of the invention has been described, together with what is now considered the best embodiment thereof, but it is to be understood that the embodiment described is merely illustrative and the invention may be carried out in other ways.

Having now described the invention, what is claimed and desired to be secured by Letters Patent, is:—

1. A device of the character described, comprising a support for an article to be acted on by the heat of a flame, a screen against which a flame may play, there being a space between the screen and support, and a casing surrounding the space, said support and screen being rigidly secured to the casing.

2. A device of the character described, comprising a support for an article to be acted on by the heat of a flame, a foraminous screen against which a flame may play, there being a space between the screen and support, a casing surrounding the space, an inturned flange at one end of the casing, said support engaging the flange, means on the

casing to support the plate, and means for retaining the support and plate in engagement with said flange and plate supporting means respectively.

3. A device of the character described, comprising a screen adapted to support an article to be cooked, said screen being of relatively large mesh; a second screen against which a flame may play, the openings in the second screen being relatively small, a tubular casing surrounding said screens, an inturned flange at one end of the casing, said first mentioned screen engaging the flange, an interiorly projecting annular member at the opposite end of the casing, said second screen engaging said member, and a spacer for retaining the screens in engagement with the flange and annular member respectively.

4. A device of the character described, comprising a tubular casing, an inturned flange at one end of the casing, a grill or grid within the casing and resting against the flange, an annular spacer within the casing and engaging the grill or grid, a foraminous screen within the casing and engaging the spacer, said spacer spacing the grill or grid and screen apart one from the other, said casing being indented whereby the indentation will retain the screen in engagement with the spacer.

5. A device of the character described, comprising a tubular casing, an inturned flange at one end of the casing, a grill or grid within the casing and resting against the flange, an annular spacer within the casing and engaging the grill or grid, said spacer being spaced from the casing, a foraminous screen within the casing and engaging the spacer, said spacer spacing the grill or grid and screen apart one from the other, said casing being indented whereby the indentation will retain the screen in engagement with the spacer.

6. A device of the character described, comprising a tubular casing, an inturned flange at one end of the casing, a grill or grid within the casing and resting against the flange, a corrugated annular spacer within the casing and engaging the grill or grid, a foraminous screen within the casing and engaging the spacer, said spacer spacing the grill or grid and screen apart one from the other, said casing being indented whereby the indentation will retain the screen in engagement with the spacer.

7. A device of the character described, comprising a pair of co-axially disposed open members, elements connecting the members, said elements being inclined toward the axial line of the members, and a device of smaller size than the members supported by contact with the elements, said device acting to retain the members in spaced relation.

8. A device of the character described, comprising a pair of co-axially disposed open members, elements connecting the members, said elements being inclined toward the axial line of the members, and a device of smaller size than the members supported in axial alinement with the members by contact with the elements, said device acting to retain the members in spaced relation.

9. A device of the character described, comprising a pair of co-axially disposed open members, elements connecting the members, said elements being inclined toward the axial line of the members and free of each other, and a device of smaller size than the members supported in axial alinement with the members by contact with the elements, there being longitudinal grooves or flutes in the device for the reception of the elements.

10. A device of the character described, comprising a pair of co-axially disposed open members, a plurality of equally spaced toggle elements pivoted to and uniting the members whereby the members may be moved axially relatively to each other, means carried by the elements for limiting the movement of the members away from each other, and removable means engaging the elements for preventing movement of the members toward each other.

11. A device of the character described, comprising a pair of co-axially disposed open members, a plurality of equally spaced toggle elements pivoted to and uniting the members whereby the members may be moved axially relatively to each other, means carried by the elements for limiting the movement of the members away from each other, and a removable fuel container for preventing movement of the members toward each other.

12. A device of the character described, comprising a stand, said stand consisting of a pair of co-axially disposed rings, each ring carrying a plurality of equally spaced arms pivoted therein, the arms of one ring being pivoted to the free ends of the corresponding arms of the other ring whereby the rings may be moved axially relatively to each other, the toggles formed by the pivoted arms extending toward the axial line of the rings, a cylindrical fuel container having a plurality of grooves or flutes extending longitudinally of the same and for a distance less than the height thereof, the grooves corresponding in angular position with the toggles whereby the container may be inserted axially within the stand with the pivoted elbow of each toggle in engagement in a groove and in contact with the end thereof and be supported above one of the rings, the engagement of the toggles with the grooves preventing collapsing of the stand and rotation of the container.

13. A device of the character described,

comprising a stand formed of a pair of rings disposed one above the other, a plurality of elements connecting the rings, a fuel container supported by the elements and above the base on which the lower ring is supported, the top of the container being below the upper ring, a skirt depending from the upper ring to a point an appreciable distance above the lower ring whereby air to support combustion of the fuel in the container may be supplied, and means for supporting a cooking utensil above the fuel container.

14. A device of the character described, comprising a stand formed of a pair of rings disposed one above the other, a plurality of elements connecting the rings, a fuel container supported by the elements and above the base on which the lower ring is supported, the top of the container being below the upper ring, a skirt depending from the upper ring to a point an appreciable distance above the lower ring whereby air to support combustion of the fuel in the container may be supplied, a device supported by the stand and above the fuel container, said device comprising a pair of parallel screens spaced apart, and means for enclosing the space between the screens.

15. A device of the character described, comprising a stand formed of a pair of rings disposed one above the other, a plurality of elements connecting the rings, a fuel container supported by the elements and above the base on which the lower ring is supported, the top of the container being below the upper ring, a skirt depending from the upper ring to a point an appreciable distance above the lower ring whereby air to support combustion of the fuel in the container may be supplied, a device supported by the stand and above the fuel container, said device comprising a pair of parallel screens spaced apart, and a rim for enclosing the space between the screens for supporting the device.

16. A device of the character described, comprising a stand formed of a pair of rings disposed one above the other, a plurality of elements connecting the rings, a fuel container supported by the elements and above the base on which the lower ring is supported, the top of the container being below the upper ring, a skirt depending from the upper ring to a point an appreciable distance above the lower ring whereby air to support combustion of the fuel in the container may be supplied, a device supported by the stand and above the fuel container, said device comprising a pair of parallel screens spaced apart, and a rim for enclosing the space between the screens, said rim engaging the skirt and supporting the device.

This specification signed and witnessed this 29th day of July, 1920.

HENRY PRICE BALL.

Witnesses:

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