United States Patent

Holder, Jr.

[15] **3,697,198**

[45] **Oct. 10, 1972**

[54] **ATTACHMENT FOR CHARCOAL BURNING UNIT**

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[22] Filed: **Dec. 1, 1970**

[21] Appl. No.: **94,236**

[52] **U.S. Cl.**.....**417/411,** 110/1 F, 126/25 B

[51] **Int. Cl.**.....**F04b 35/04**

[58] **Field of Search**.....126/25 B; 110/1 F; 417/411

[56] **References Cited**

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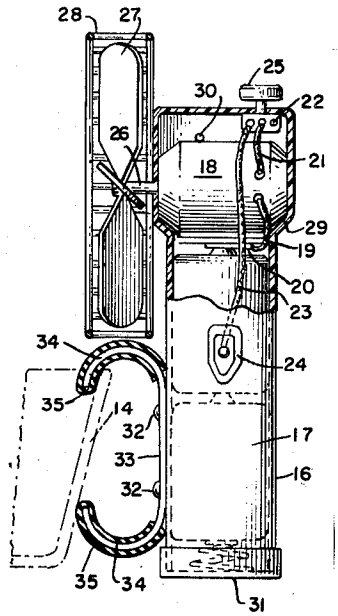
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[57] **ABSTRACT**

An attachment for a charcoal burning structure whereby an induced draft is provided by means of a relatively small portable unit which may readily be secured to the charcoal burning structure when needed and readily released therefrom for storage when not in use.

1 Claim, 3 Drawing Figures



PATENTED OCT 10 1972

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Fig. 1.

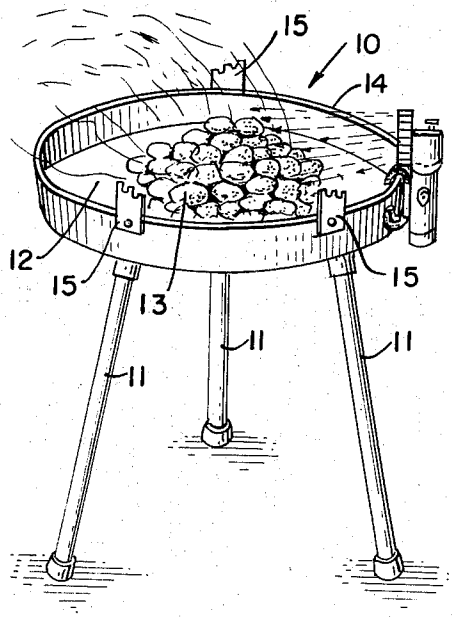


Fig. 2.

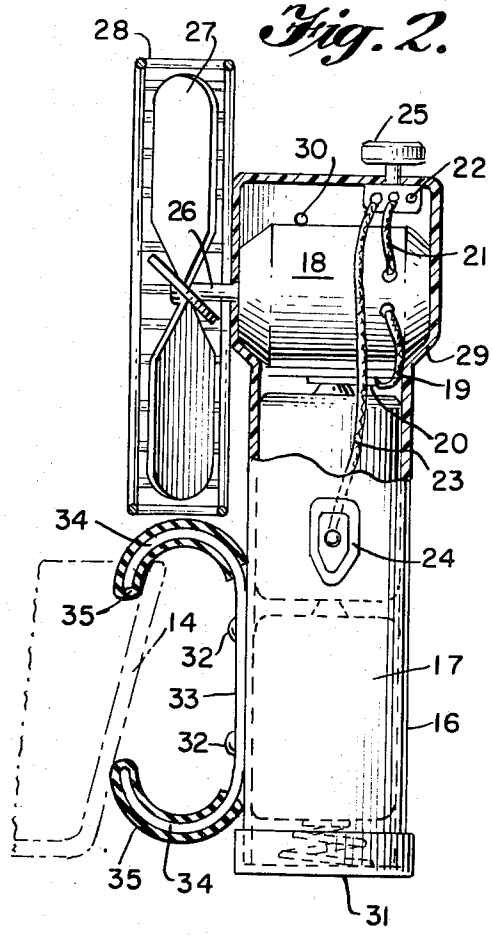
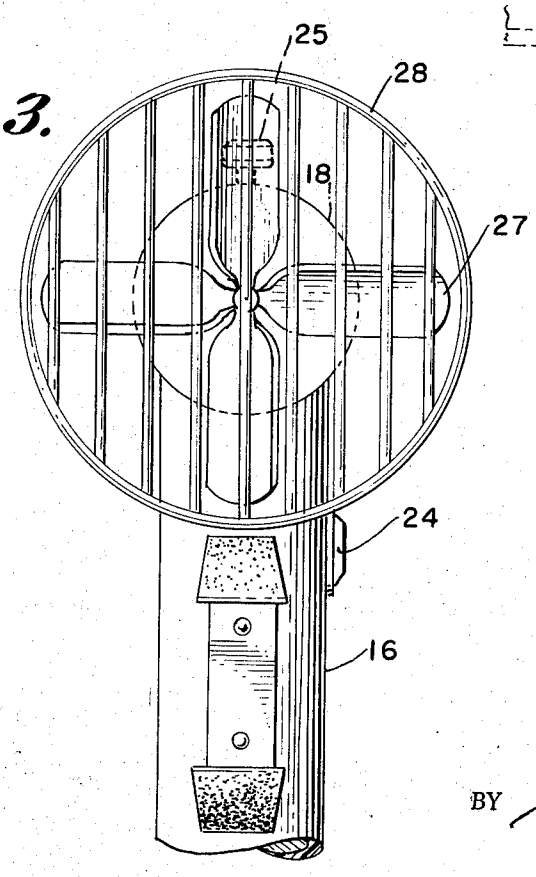


Fig. 3.



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ATTACHMENT FOR CHARCOAL BURNING UNIT

BACKGROUND OF THE INVENTION

In the past several years, the employment of a charcoal burning grill or like structure has gained wide popularity with those wishing to cook out of doors. This is particularly true when, during the summer months, a complete meal can be cooked out of doors, thus obviating the need for using the home stove or oven which only adds to the already high temperature within the home.

Charcoal burning structures take several forms, one being in the nature of a bowl-like member having suitable legs and usually transportable from one place to another without too much difficulty. Another type of charcoal burning structure may be in the nature of a fixed installation, usually in an area remote from a dwelling and usually comprising suitable brickwork on a proper foundation with an area therein supporting a grill and under which charcoal and the like is placed and caused to burn to provide the heat required to cook the items placed on the grill. There is one great drawback in the use of a charcoal burning structure to effect the cooking of the items on the grill, and that is that the charcoal is extremely slow in igniting and, initially, one must from time to time douse the charcoal with a combustible mixture to more quickly ignite all of the charcoal and to thus present a fire of sufficient intensity to quickly and effectively cook the items on the grill. The adding of a combustible mixture to promote the ignition of a charcoal sometimes produces adverse results such as the creation of an objectionable smoke and odor which could cause adverse effects to the taste of the items being cooked on the grill above the layer of charcoal. Also, in the case of an outdoor fixed installation, such as a fireplace grill, the same is left exposed to the elements and is subject to rust, etc. In the case of a portable charcoal burning structure, the same is almost invariably left out of doors following its use and, here again, the same is left uncovered and is exposed to the elements with ultimate deleterious effects on the structure.

In the past, various devices have been incorporated with either a fixed or portable type charcoal burning structure to induce a draft so as to promote the quick ignition of the charcoal. However, for the reasons set forth above, such draft inducing devices are usually built in or fixedly secured to a charcoal burning structure and are left exposed to the elements, and in a relatively short period of time, the same are rendered inoperative due to various reasons, such as the rusting of the moving parts, debris filtering into the moving parts, etc. Thus, the life of such permanently installed draft inducing devices is relatively short-lived for the reasons expressed above.

With the above in mind, it is the primary object of the invention to provide for a draft inducing attachment which may be readily affixed to either a portable or a fixed charcoal burning structure to promote the quick and efficient lighting of all of the charcoal to thus present in a short period of time a fire of sufficient intensity to effectively cook the edibles which are placed on the grill. Following the use of the draft inducing attachment, the same may be removed from the charcoal burning structure and stored in a suitable area to protect the same from the environment, thus insuring a long life for the working parts of the attachment.

Another object of the invention is to provide for a small, compact and portable type attachment which can be secured to the most advantageous area of a charcoal burning structure so as to insure the ignition of all of the charcoal employed, and since the attachment may be quickly shifted from place to place along the area surrounding the firebox, a complete ignition of all of the charcoal is effected without the addition thereto of any combustible mixture to promote the firing thereof.

Another object of the invention is the capability of employing a conventional flashlight casing and with a slight modification thereto, the same can be used to mount and have all of the parts required to form a draft inducing attachment made in accordance with the teachings of the present invention.

Another object of the invention is the provision of a suitable means whereby the speed of rotation of a fan or like impeller may be varied to meet varying conditions of fire propogation to insure for the quick ignition of all of the charcoal in the firebox to thus present a fire of sufficient intensity to effectively cook the items on a grill.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a portable type charcoal burning grill showing the draft inducing attachment removably mounted thereon,

FIG. 2 is an enlarged sectional view showing the working parts of the attachment, and

FIG. 3 is an enlarged elevational view showing the attachment as viewed from the front thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, there is shown at FIG. 1 thereof a portable type grill designated generally by the reference numeral **10**. The grill is provided with the customary supporting legs **11** of conventional construction. The grill **10** is shown as having the usual firebox **12** in which the charcoal **13** is placed for eventual burning. Vertically extending sidewalls **14** surround the firebox **12** and there are affixed thereto in any suitable manner grill-supporting standards **15**. As can be appreciated, a grill-like member, not shown, is adapted to be supported by the said standards in an adjusted height over the bed of charcoal therebeneath. While I have shown the portable grill to be one of generally circular formation and leg-supported, it is obvious that the attachment of the present invention can be adapted to grills of differing contours and/or shapes and, for that matter, the firebox of the grill may be of any configuration, suffice to say that all that is required of the burning structure is for the same to have some means whereby the attachment may be removably mounted thereon and to be in close proximity to the bed of charcoal. Also, while I have shown the attachment as being mounted on a portable-type charcoal burning structure, it is obvious the same may be effectively employed with a stationary or fireplace-type grill structure, provided that some means are present for the attachment to be secured thereto for use.

Referring now to FIG. 2 of the drawings, there is shown therein a conventional flashlight casing **16** housing the conventional dry cell batteries **17**, operatively associated with one another to provide current for operating a small 3 Volt DC electrical motor **18** in a manner to be more fully described hereinafter. A first electrical lead **19** extends from a metal disc **20** which is in contact with the positive end of the battery **17** and to the positive side of the motor **18**, and a second electrical lead **21** extends from the negative side of the motor **18** to a potentiometer or like motor speed varying control unit **22**. A third electrical lead **23** extends from the speed varying control unit **22** and connects to an off/on switch **24** which is designed to operate in a conventional manner. With the parts assembled as aforesaid, the turning of the nob **25**, which is associated with the potentiometer **22**, will cause a variance in the speed of rotation of the motor **18**. A shaft **26**, secured to the motor **18** in any well known manner, extends outwardly of the casing **16**, and fixed thereto in any known manner is a fan or impeller **27**. Secured to the casing **16** in any well known manner is a fan guard **28** which completely encircles the aforesaid fan.

The casing **16** shown in FIG. **2** of the drawings is provided with supporting shelves **29** for the motor **18**. However, wherever required, a rod **30** welded or otherwise secured to the casing of the motor **18** with the rod ends extending into opening forms in the side of the casing can be employed to assist in supporting the motor in proper position within the casing top. As can be seen, a removable cap **31** is provided for the ready removal and replacement of the batteries in the casing.

Secured to the casing **16** as by rivets **32** is a supporting clip **33** which comprises a pair of bent ears **34** which are covered with rubber sleeves **35** for a purpose to be more fully described hereinafter.

Having thus described the components employed in the present invention, there will now be described the manner of operation of the present structure. With the required amount of charcoal placed in the firebox of the grill, a firing of the charcoal may be initiated through suitable means, and following the starting of burning of any of the charcoal, the draft inducer of the present invention can be secured in a position in close proximity to the started fire, the motor started and the speed thereof adjusted as aforesaid. By reason of the induced draft, the fire will progress quickly from one section of the charcoal area to the next, and so on, until the entire bed of charcoal will be glowing and will then produce the intensity heat required to cook the edibles on the grill. Once this condition is present, the attachment may be removed from the vicinity of the firebox and stored for future use. The fact that the attachment may be readily placed in close proximity to any of the burning areas in the firebox presents a distinct advantage over prior art devices of this type, since by the strategic placement of the attachment in varying areas, it is possible to lessen considerably the amount of time required to ignite the entire bed of charcoal. When the motor and fan are operating for the purposes aforesaid, any crawling or other movement of the attachment with respect to the firebox will be prevented by reason of the rubber covered ears on the supporting clip.

While I have shown and described what I believe to be the preferred embodiments of my present invention, it will be understood by those skilled in the art that various modifications and rearrangements may be made therein without parting from the spirit and scope of my invention.

I claim:

1. A portable battery-operated blower unit for use in conjunction with a charcoal-burning grill, comprising a unitary casing including a compartment to house battery means, said casing also having an enlarged compartment above the first mentioned compartment, an electric motor in said enlarged compartment having its axis at right angle to the vertical axis of the flash-light casing, an axial flow impeller driven by said motor outwardly of the casing, a supporting clip positively secured to the casing and extending therefrom to a position beneath the impeller, said clip having flexible turned in terminals or ears for mounting on the grill, said terminals being rubber-covered to deaden the sound of the motor while in operation on the grill and to prevent creeping when the casing is in position on the grill, a rheostat carried in the aforesaid enlarged compartment of the casing to vary the speed of the motor, and a switch mounted on the casing to control admission of current to the motor.

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