March 10, 1964 C. C. GENTRY 3,124,432

FUEL IGNITER

Filed Feb. 12, 1959

FIG. 1

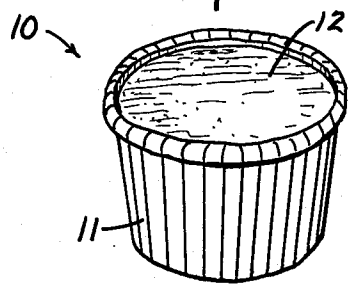


FIG. 2

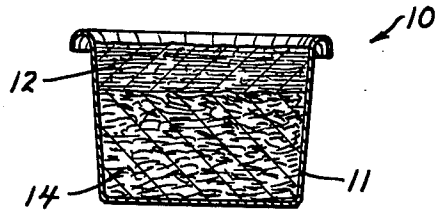


FIG. 3

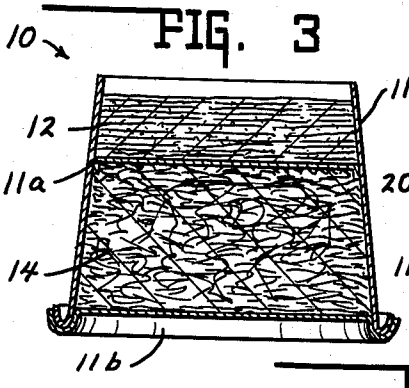


FIG. 4

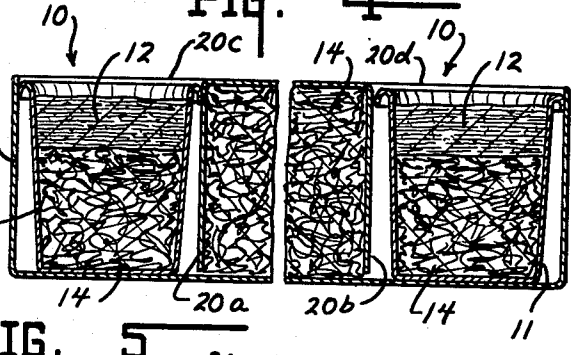


FIG. 5

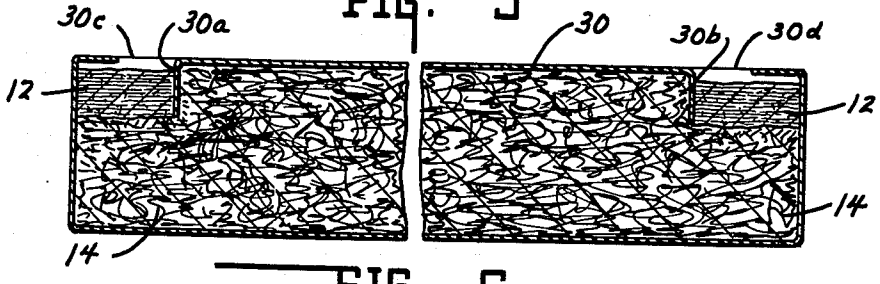
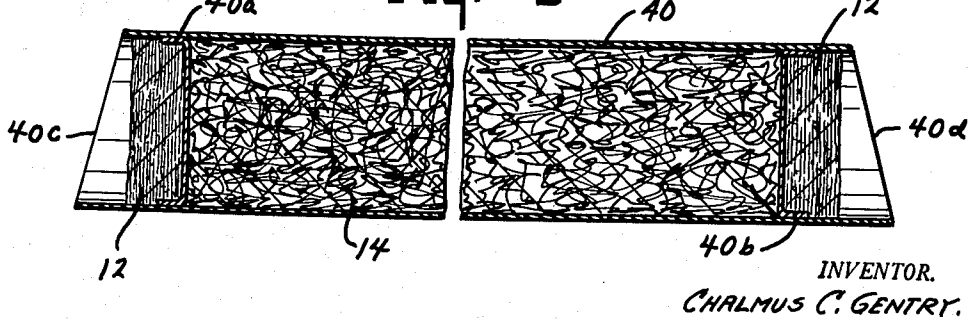


FIG. 6



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FUEL IGNITER

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The present invention relates to a fuel igniter, and more particularly to a new and improved solid type fuel igniter which may be safely and effectively used as well as carried.

Heretofore, liquid type igniters or lighters have been used for igniting charcoal or like fuel commonly used for outdoor cooking. The serious objection to these prior forms of liquid lighter is the danger inherent with the use thereof, oftentimes brought about by the faliure to follow instructions, as, for example, pouring the liquid lighter directly into the flame or burning area. Moreover, the aforementioned danger associated with the liquid type of fuel lighter considerably diminished the desirability thereof on the part of the potential purchaser.

By virtue of the instant invention, the applicant has provided a novel fuel lighter which is solid in form and which is safe to carry and use, and, at the same time, nontoxic in overall effect. The applicant's novel invention comprises a cup made from a flammable material of the type which does not instantaneously burn, such as common lightweight paper, for example, having a multi-layered composition of matter therein including a layer of fine cut wood or wood dust, preferably hickory wood with bark, and a layer of paraffin, which may be decoratively colored, thereabove. In use, charcoal or like fuel is readily placed over and around the fuel lighter in a common outdoor grill and, after the cup thereof is lighted with a match or other means, the lighter burns slowly and continuously, without any danger of exploding, to readily ignite the charcoal fuel. Use of the hickory wood in the applicant's novel fuel lighter is preferred, of course, because of its hickory scent during the burning thereof.

In another embodiment of the invention, the applicant provides lighters similar in form to that described hereabove, but disposed within a package or carton and spaced apart by a wall of fine cut hickory or other such wood dust. The use of this latter embodiment, as well as several additional modifications thereof, to be discussed herebelow, achieves a smoking effect and, hence, is desirable for smoking food products, for example, which are positioned on a grill thereabove.

The principal object of the present invention, therefore, is to provide a solid type fuel lighter which is safe to use as well as to carry, and which, during the use thereof, is nontoxic.

A further object of the present invention is to provide a fuel lighter which overcomes the dangerous flammable characteristics of prior liquid type fuel igniters through a novel structure which permits a slow and steady burning rate sufficient to ignite the desired fuel,

A further and more general object of the present invention is to provide a fuel igniter useful in outdoor cooking to simply ignite the charcoal or other fuel and, in alternate embodiments, to effect a smoked food product.

Other objects and a better understanding of the invention will become more apparent from the following description, taken in conjunction with the accompanying drawing, in which:

FIG. 1 is a view in perspective of a fuel lighter in accordance with the instant invention;

FIG. 2 is a view in vertical section showing the composition of the fuel lighter of FIG. 1;

FIG. 3 is a view in vertical section showing a modified form of the fuel igniter of FIGS. 1 and 2;

FIG. 4 is a view in vertical section showing another embodiment of the instant invention, which incorporates the fuel lighters of FIGS. 1 and 2;

FIG. 5 is a view in vertical section of still another embodiment of the applicant's novel invention; and,

FIG. 6 is a view in vertical section of still a further embodiment of the instant invention.

For the purposes of promoting an understanding of the principles of the invention, reference will now be made to the embodiments illustrated in the drawing and specific language will be used to describe the same. It will nevertheless be understood that no limitation of the scope of the invention is thereby intended, such alterations and further modifications in the illustrated devices, and such further applications of the principles of the invention as illustrated therein being contemplated as would normally occur to one skilled in the art to which the invention relates.

Referring now to FIGS. 1 and 2, the applicant's novel fuel lighter **10** generally comprises a composition of paraffin **12** and wood dust **14**, in layers, disposed within a flammable container **11**. In a typical embodiment of the invention, the flammable container **11** is filled with the paraffin **12** to about one-third of the volume thereof, with the remaining two-thirds of the volume being the wood dust **14** which is disposed thereunder. The wood dust **14** is preferably fine cut hickory wood with bark, while the paraffin **12**, which is visible to the user, is decoratively colored. Although it should be understood that any type of wood dust **14** may be used, the fine cut hickory wood with bark is preferable in view of its pleasant scent during burning.

The flammable container **11** in which the layers of paraffin **12** and wood dust **14** are found is preferably made from lightweight paper, for example, or any similar material which does not burn instantaneously. In a typical embodiment of the invention, the filled container **11** weighs approximately 10 to 12 grams, with the paraffin **12** approximating two-thirds of the weight and the combined flammable container **11** and the wood dust **14** making up the remaining weight.

In a typical use, the fuel lighter **10** is placed in an outdoor grill or other cooking apparatus beneath the desired fuel, such as charcoal, for example. The user simply and effectively lights the rim of the flammable container **11** forming the lighter, with a match or like means, whereupon the container **11** starts to burn, with the burning rim of the container **11** acting as a starting wick therefor. The burning path is around the lip of the container **11** and down the sides thereof and, as the burning continues, the wood dust **14** begins to burn, which wood dust serves to cause the entire unit to burn slowly and steadily. The typical lighter unit described hereabove burns steadily for some six to nine minutes, which is ample to ignite the charcoal or like fuel thereabout, and ultimately the unit is totally consumed by the burning.

An alternate form of fuel lighter is disclosed in FIG. 3 which includes components similar to those described hereabove in connection with FIGS. 1 and 2. In the embodiment of FIG. 3, however, the flammable container **11** is a truncated cone in outer physical shape, similar to an inverted common type waxed drinking cup. In this embodiment, the flammable container **11** has a partition **11***a* therein which separates the layer of paraffin **12**, disposed thereabove, from the layer of wood dust **14**, disposed therebelow. The fine cut wood or wood dust **14** is introduced into the container **11** through the bottom thereof and a conventional cover member **11***b* is secured onto the lower lip of the container for effectively retain-

ing the wood dust 14 therein. The paraffin 12 is poured into the top portion of the container 11 and cooled, and when the rim of the container 11 is ignited, the latter serves as a starting wick for the lighter, as indicated hereabove.

FIGS. 4, 5 and 6 disclose embodiments of the invention which are particularly adaptable where it is desired to have a smoked food product. These embodiments of the invention are common in the fact that each includes a wall or barrier of fine cut wood or wood dust 14 between the lighter sections of the structures. The latter relationship is desirable inasmuch as when the charcoal or other fuel is lighted by the lighters, the larger wood dust area, which burns last, smokes for a period of time sufficient to flavor a food product which is on a grill thereabove.

Noting particularly each of the figures, FIG. 4 discloses a flammable continer 20, elongated in length and preferably rectangular in cross section, having portions 20*a* and 20*b* of the top wall bendable downwardly to approach, in a typical embodiment, the bottom wall thereof. The end portions of the container 20 are adapted to receive the novel fuel lighters 10 of FIG. 2 therein through openings 20*c* and 20*d* defined by the downward positioning of the depending walls 20*a* and 20*b*, respectively, each being secured to the container through any desired means, such as by an adhesive (not shown), for example, or the like. Disposed between the downwardly depending walls 20*a* and 20*b* of the flammable container 20 is the area in which the sawdust or fine cut wood 14 is introduced and retained, which wood dust 14 effects the smoking action, during use, described above.

In the embodiment of FIG. 5, a flammable container 30, which may be rectangular in cross section, has end flaps or other like means (not shown) through which, when opened, wood dust 14 may be poured therein, after which operation the flaps are closed. The top wall of the container 30 has portions 30*a* and 30*b* defined thereon which may be forced downwardly to provide openings 30*c* and 30*d*, respectively, therein. The wood dust 14 below these openings 30*c* and 30*d* is then packed downwardly to provide space for paraffin 12, which is poured therein through the respective openings.

FIG. 6 discloses a tubular structure 40 forming another embodiment of the applicant's novel fuel igniter. In the structure of FIG. 6, partitions 40*a* and 40*b* are provided within the tubular container, and during the typical manufacturing of the lighter, one partition 40*a* is disposed within the container and the wood dust 14 introduced from the opposite end. When the desired amount of wood dust 14 is introduced, a second partition 40*b* is disposed within the tubular container 40. Thereafter, paraffin 12 is poured into the respective ends of the tubular container 40 and, of course, allowed to cool prior to use. It has been found that in the preferred form of this embodiment of the invention, ends 40*c* and 40*d* of the tube 40 should taper outwardly so that during the use of the fuel lighter, the paraffin 12 will not run therefrom onto the surface on which the lighter unit is positioned.

As indicated hereabove, the use of the embodiments of the applicant's novel invention disclosed by FIGS. 4, 5 and 6 is simple and effective. The flammable container of each is ignited at a portion thereof near the paraffin 12, which portion acts as a starting wick, until the entire unit is ignited. Inasmuch as the wood dust 14 disposed between the respective lighter sections of each of the structures of FIGS. 4, 5 and 6 burns last, this wood dust begins to smoke, which smoke serves to effect the smoked flavoring of a food item which is being cooked on a grill thereabove. It should be understood with reference to the embodiments of the invention of FIGS. 4, 5 and 6 that either one or more paraffined lighter areas may be used, and that such paraffined areas may be disposed, where desired, along the length of the overall structure.

From the preceding it should be apparent that the applicant has provided a novel fuel igniter which is simply and effectively used, which is readily carried, and which is extremely safe during carrying and use. The applicant's novel lighter may effectively serve to initiate the burning of a fuel disposed therearound or, in combination, with a larger volume of fine cut wood or wood dust, serves not only to light the fuel, but as a smoking medium as well.

The applicant's novel fuel lighter structure is susceptible to various changes within the spirit of the invention. For example, any type material may be used for the flammable container as long as the burning thereof would not create an offensive odor. The latter is also true, of course, with respect to the wood dust for, as indicated hereabove, hickory is preferred mainly because of its pleasant odor during burning, and its satisfactory rate of burning. Moreover, the various embodiments of the invention are also susceptible to changes in physical dimensions, and overall configurations, such as to create an increase in volume, for variable durations of burning. Thus, the above description should be considered as illustrative and not as limiting the scope of the following claims.

I claim:

1. An article of manufacture comprising at least two flammable containers each having an open end, a layer of petroleum wax and a layer of fine cut wood disposed within each of said flammable containers, said petroleum wax layer being above said fine cut wood layer and at said open end of each of said flammable containers, and said flammable containers each having a rim extending above said petroleum wax layer serving as a starting wick, and another volume of fine cut wood disposed between said flammbale containers.

2. An article of manufacture comprising a flammable receptacle adapted to receive at least two flammable containers at ends thereof, each of said flammable containers having an open end, a layer of petroleum wax and a layer of fine cut wood disposed within each of said flammable containers, said petroleum wax layer being above said fine cut wood layer and at said open end of each of said flammable containers, and said flammable containers each having a rim extending above said petroleum wax layer serving as a starting wick, and a volume of fine cut wood disposed within said flammable receptacle between said flammable containers.

3. The article of manufacture of claim 2 where flammable partitions define said volume of fine cut wood disposed within said flammable receptacle between said flammable containers.

4. An article of manufacture comprising a flammable receptacle having ends, a layer of petroleum wax disposed at each of said ends of said flammable receptacle and at an opening thereto, and a volume of fine cut wood disposed within said flammable receptacle between said layer of petroleum wax at said ends thereof.

5. The article of manufacture of claim 4 where flammable partitions separate at least a portion of said petroleum wax from said fine cut wood.

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