Oct. 18, 1966 J. NAPLES 3,279,900

RAPID IGNITION CHARCOAL PACKAGE AND METHOD OF IGNITING

Filed July 15, 1963

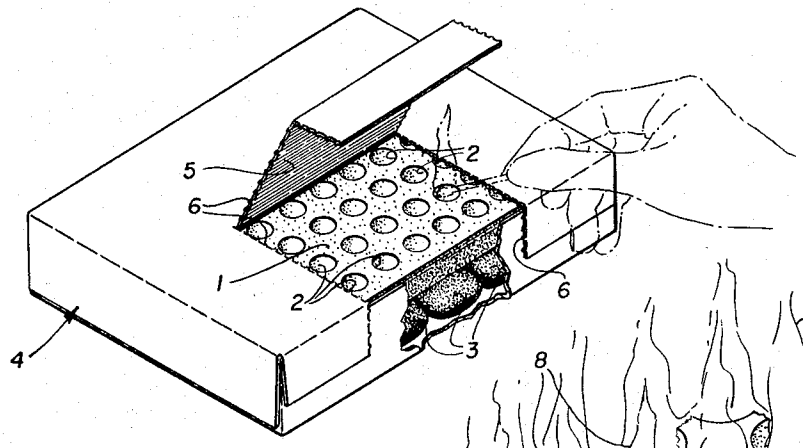


Fig. 1

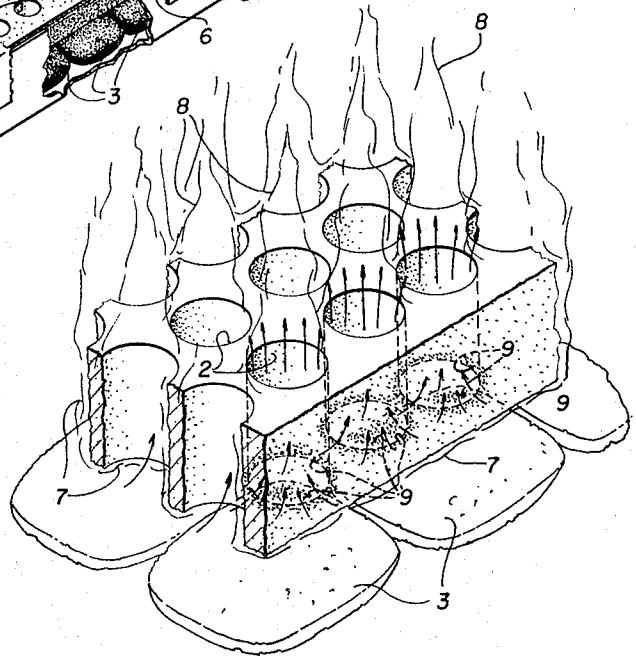


Fig. 2

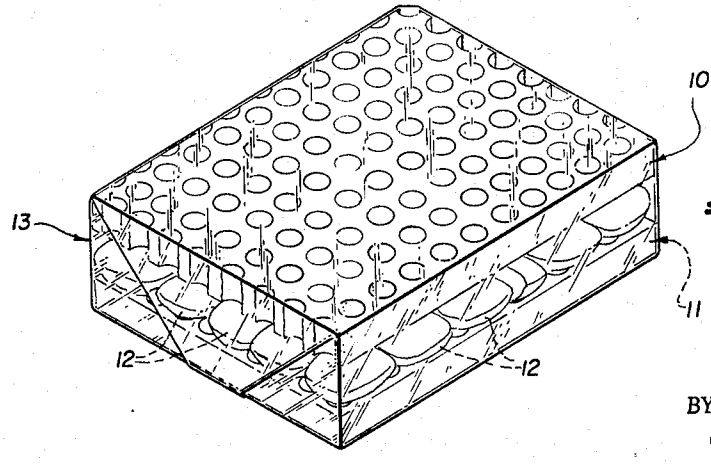


Fig. 3

INVENTOR.
John Naples
BY
Attorney

United States Patent Office 3,279,900 Patented Oct. 18, 1966

3,279,900

RAPID IGNITION CHARCOAL PACKAGE AND METHOD OF IGNITING

John Naples, Los Altos, Calif., assignor to Naples-Harrah, Inc., a corporation of California

Filed July 15, 1963, Ser. No. 295,249
2 Claims. (Cl. 44—40)

This invention relates to a package for charcoal primarily of the briquetted type commonly used in barbecuing and outdoor cooking adapted for rapid ignition of the charcoal and to a method of ignition of the latter. More particularly it relates to a package for briquettes which possesses all of the necessary qualifications for shipping and merchandising in the retail market and incorporates within itself a unique means and method of effecting very rapid ignition of the briquettes.

As is well known to those engaged in the art of outdoor cooking and barbecuing, the problem of starting a proper barbecue fire, that is igniting the briquettes properly and within a reasonable length of time, is a major one. Among the various methods used is the use of kindling wood entailing a long delay and non-uniform ignition and being virtually impossible under certain weather conditions. Another method well known comprises saturating the briquettes with a highly inflammable liquid and then igniting with a match which, of course, is not only hazardous, but expensive and in addition, is by no means entirely satisfactory from the standpoint of speed and uniformity. A third alternative is the use of electrical resistance igniters which are expensive, require an electrical connection nearby and frequently burn out, beside also leaving much to be desired from the standpoint of rapidity and uniformity.

In addition to the problem of ignition, there is the problem of cleanliness and the problem of convenience which are difficult when utilizing briquettes which are poured from a large bag into the brazier, broiler, or grille.

In an attempt to overcome these problems, briquettes have been marketed in small packages, the container being made of inflammable material so that the entire package may be thrown into the barbecue and ignited. In all of these the amount of ignition that may be built in is very limited and it is generally not possible to start a proper fire in a reasonable length of time without the use of some of the former methods of speeding up the rate of ignition.

In some instances packages have been supplied with highly combustible material packed in with the briquettes, together with an ignition fuse or the briquettes themselves have been coated with a highly inflammable material to solve this problem. Beside the danger and expense involved in this method there is also the objection that some of the chemicals used emit obnoxious fumes which spoil the taste of the barbecued food. Special configurations of package which would aid in combustion by providing a chimney type of construction have also been used, but these without the aid of some highly combustible ignition material have proven unsatisfactory. Likewise, coating the briquettes with a moulded pulp or wood base fiber overcomes some of the objections, but also in the absence of a high degree of combustible ignition material, these have proven unsatisfactory.

An important objection which is found in the case of most existing packages is that the entire package is not consumed in the fire for some time after the coals or the charcoal have been ignited and as it continues to smoulder and smoke, barbecuing or cooking may not commence promptly without the danger of ruining the food with the objectionable smoke.

It is therefore an object of my invention to provide

a package of briquetted charcoal which would be neat, compact, and incorporate within itself a means for rapid ignition of the charcoal.

Another object of my invention is to provide a rapid ignition charcoal package which would be completely safe to use.

It is still a further object of my invention to provide a package of briquetted charcoal incorporating a self-ignition feature in which the ignition time would be many times faster than any now in use.

It is a final object of my invention to provide a self-igniting package of charcoal briquettes which would be convenient, economical, safe, free from objectionable odors, and speedy in operation.

I have discovered that one of the principal reasons for the difficulties encountered with existing devices of this class is that in every case an attempt is made to ignite the briquettes from the bottom, or in other words to utilize an under-fire type of combustion. I have discovered that this is completely unsuited for rapid ignition of barbecue charcoals and that a speed of ignition many times greater is obtainable if the ignition is effected on the top surface of the charcoal.

I have discovered further that by utilizing the specially constructed igniter-combustion pad of my invention placed on the top surface of the bed of charcoal and then ignited, extremely rapid ignition of the latter is effected which in turn results in rapid burn up of my pad and consequently eliminates any objectionable smoke from slow burning remains and also since the combustion is so rapid, any objectionable chemical fumes are eliminated even though I may use a combustible impregnation for my igniter-combustion pad.

My invention is illustrated by the accompanying drawings which form a part of the specification, as follows:

FIG. 1 is a perspective view partly cut away of one embodiment of my invention shown ready for ignition.

FIG. 2 is a diagrammatic or schematic view showing the combination of charcoal briquettes and igniter-combustion pad immediately after ignition.

FIG. 3 is an alternate embodiment of the package of my invention.

Referring now more particularly to FIG. 1, my combination igniter-combustion pad is shown at **1**. This I may make from any cellulose base material, such as wood pulp, or compressed wood fiber or felted fibrous pulp pressed into a pad approximately one-half inch thick. For best results I may treat this with ordinary paraffin wax or other mildly combustible material which will assist in the combustion but will not in itself be a fire hazard and which may constitute ten to twenty percent of the total weight of the pad. The cylindrical perforations or draft holes **2** may be approximately one-half inch in diameter and spaced on one inch centers when using an igniter-combustion pad having a thickness of about one-half inch. The draft holes **2** serve to communicate the upper surface of the briquettes **3** with the upper atmosphere. The whole is contained in a cardboard container **4** which may be of any convenient dimensions, such as seven inches by eleven inches by two inches thick. Hinged flap **5** and perforations or scoring **6** permit ready access to the interior but provide tightness when shipping. Thus the complete package, as received from the store, is merely tossed on to the brazier, fireplace, grille, or barbecue pit, the flap raised and a match touched to the igniter-combustion pad **1** as shown.

Operation

When the igniter-combustion pad is ignited as shown, flames shoot out from all of its surfaces. The lower surface of the pad is shielded from the upper atmosphere and is considerably hotter than the upper surface. It is here

that the draft holes 2 of my invention come into play. These act as individual chimneys communicating with the top surface of each briquette. Thus while a normal flame burns on the outer surfaces of my pad, a very high flame 8 shoots out of the holes 2. This increases the heat on the lower surface which in turn increases the amount of draft and consequently the intensity of the flame 8. This effect is cumulative until a very intense heat is developed at points 9. This results in ignition of the upper surfaces of the briquettes rapidly and uniformly.

I have discovered that when utilizing a package seven inches by twelve inches by two inches thick I am able to commence barbecuing satisfactorily in from ten to fifteen minutes after initial lighting of my pad. This is at least three to four times faster than the time required for the fastest of any existing methods or devices.

An alternate device of my invention is seen at FIG. 3 which comprises a sandwich type of package. Here I utilize two pads 10 and 11 wrapped tightly in a skin or covering of cellophane or polyethylene or similar material 12. The latter serves to keep the package together and remains dust-tight and impervious to the combustible impregnation when liquid is used. The lower pad 11 in this embodiment need not be of highly combustible material or be equipped with draft holes, but the latter features are helpful in effecting rapid consumption of the surplus materials of combustion. In this embodiment merely touching a match to the outer film is sufficient to start off the process and barbecuing may be commenced ten minutes later.

Another advantage of my invention is realized when lighting a fire in a high wind. While wind is advantageous after the charcoal is ignited, it is detrimental at first since it tends to blow the fire out before ignition takes place. With my invention even though a high wind might extinguish the flames on the outer surfaces, flames 8 are protected by the chimney action of holes 2 and continue to burn and function as hereinabove described.

Other modifications and variations of the preferred embodiments which I have disclosed herein may be made without departing from the spirit of my invention and I do not limit myself to the embodiments herein disclosed, except as I do so in the claims which follow.

I claim:

1. The combination of an igniter-combustion pad and a layer of briquetted charcoal in which:

said combustion pad comprises a wood fiber base saturated with an inflammable material and having vertical perforations therethrough;

said pad being normally positioned on top of and in contact with said layer of charcoal whereby said perforations communicate with the upper surface of said layer of charcoal;

said combination being enclosed in a tight container, said container being made of combustible material;

means adjacent to said pad for tearing open said container;

means for igniting said pad.

2. A method of rapidly igniting a flat bed of charcoal in the atmosphere comprising the steps of:

saturating a wood fiber base pad having vertical perforations therethrough with inflammable material;

said inflammable material being disposed over the inner surface of said perforations;

positioning said pad on the top surface of said bed of charcoal so that,

the lower surface of said pad covers said top surface of said bed, and,

said vertical perforations provide individual chimneys from said coals in said bed to said atmosphere above said pad;

igniting said pad.

References Cited by the Examiner

UNITED STATES PATENTS

286,103	10/1883	Wood et al.	44—40
967,242	8/1910	Robinson	44—40
1,401,803	12/1921	Lynes	44—40
2,666,695	1/1954	Brody	44—40
2,834,661	5/1958	Chaplin	44—40
2,948,594	8/1960	Doyle	44—6
3,010,809	11/1961	Peck	44—40
3,056,665	10/1962	Linda et al.	44—40

FOREIGN PATENTS

637,038	2/1962	Canada.

DANIEL E. WYMAN, *Primary Examiner.*

C. F. DEES, *Assistant Examiner.*