May 22, 1934. G. F. HEFFERNAN, JR., ET AL 1,959,472

CHARCOAL BRIQUETTE

Filed May 6, 1932

Fig. 1.

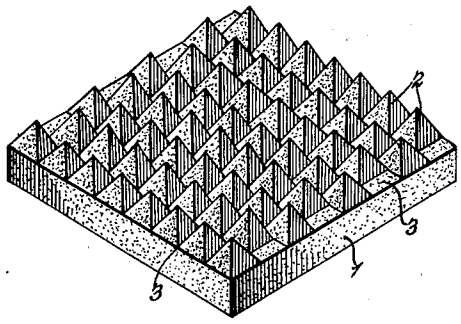


Fig. 2.

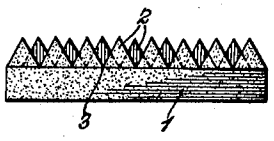


Fig. 3.

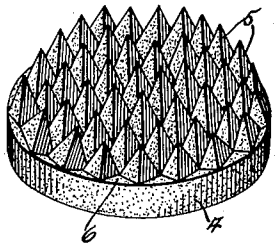


Fig. 4.

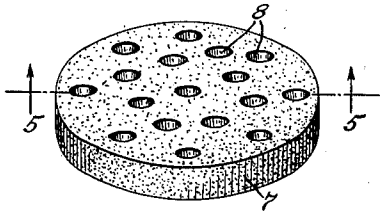


Fig. 5.

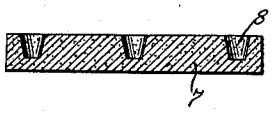


Fig. 6.

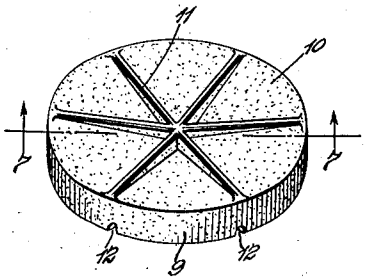
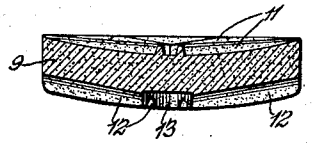


Fig. 7.



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UNITED STATES PATENT OFFICE

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CHARCOAL BRIQUETTE

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Application May 6, 1932, Serial No. 609,568

3 Claims. (Cl. 44—14)

This invention relates to improvements in charcoal briquettes of the class used in censers in ceremonials for producing volatilized incense or smoke, as well as for other purposes requiring a slow steady heat.

The invention comprises a briquette having a body of charcoal or other combustible material so treated as to ignite by friction, without flame, on its projections or edges against a prepared surface containing an abrasive, a glue and a reacting substance, similar to the surface used on safety match boxes and elsewhere as a surface for igniting safety matches by friction. The reacting substance may be red or amorphous phosphorous or antimony sulphide, sulphur, etc.

The treatment consists in impregnating the charcoal or combustible material, in part or throughout, with an oxidizing substance capable of liberating oxygen for combustion. Among such useful substances which are suggested and which may be suitable for this purpose are perborates, peroxides, nitrates, chlorates, permanganates, etc.

An object of this invention is to provide a convenient, safe and improved combustible device, including an impregnated body composed principally of charcoal or other combustible material impregnated with an oxidizing substance, and characterized by the quality that whereas the device will be completely consumed by combustion, its substance ordinarily will not produce an extended flame, such as is produced by a match, but is consumed by a slow glowing combustion, and is further characterized by the safety feature of being capable of ignition only by friction against the prepared surface and insuring ignition at all times when subjected to such friction. Additionally, the device may be ignited by the flame of a match or by any other flame.

In its physical form the device may be round or rectangular, or of other shape. The upper surface is preferably provided with pockets, corrugations or depressions designed and adapted to receive and retain incense which becomes lodged and thereby completely utilized or burned during the combustion of the device. Combustion may be spread along various surfaces of the device by the protruding edges or corrugations, and the pockets, corrugations or depressions may be formed by the spaces between these edges and corrugations, or by holes in the body of the device formed during the molding process.

Various other objects and advantages of the device will be apparent from the following description, reference being made to the accompanying drawing, in which

Fig. 1 is a perspective view of an appropriate embodiment of the invention.

Fig. 2 is a side elevation of the form shown in Fig. 1.

Fig. 3 is a perspective view showing the device embodied in a circular form.

Fig. 4 is a perspective view of the device provided with recesses instead of the protruding points.

Fig. 5 is a cross sectional view approximately along the line 5—5 of Fig. 4.

Fig. 6 is a perspective view showing another form of the device with incense receiving pockets on the upper side thereof between combustion spreading ribs.

Fig. 7 is a cross sectional view approximately on the line 7—7 of Fig. 6.

As shown in Figs. 1 and 2, the invention is in the form of a rectangular briquette including a body 1 composed principally of charcoal or other combustible material molded and shaped and formed to provide on its upper side a number of protruding points 2 between which are incense receiving spaces or pockets 3. The charcoal or other combustible material is impregnated, throughout or in part, with an appropriate oxidizing substance capable of liberating oxygen for combustion. This oxidizing substance may be composed of perborates, peroxides, nitrates, chlorates, and permanganates, etc. The protruding points 2 are designed and intended to be ignited by friction on or against a surface, such as the familiar surface used on safety match boxes, and elsewhere for igniting safety matches by friction.

This device is combustible, but not normally inflammable, which is to say that the device will not ordinarily produce a blaze or flame but will be entirely consumed by slow glowing combustion and will leave a gray ash residue. The combustion will easily spread along the sharp corners and points of the protruding points 2.

In Fig. 3 a variation in the shape of the device is shown, the same comprising a circular body 4 having on its upper side numerous projecting points 5 between which are the incense receiving spaces 6. Constituents of the device shown in Fig. 3 are the same as the constituents mentioned in describing the device shown in Figs. 1 and 2, and the mode of operation and use is the same.

The embodiment shown in Figs. 4 and 5 consists of a circular body 7 having numerous cells or cavities 8 in its upper side, which do not extend entirely through the body. These cavities

or cells 8 are designed and adapted to receive and retain incense, just as the spaces 3 and the spaces 6 receive and retain the incense which becomes volatilized by the combustion of the device.

The construction shown in Figs. 6 and 7 consists of a body 9 of charcoal, or other appropriate combustible material, impregnated wholly or in part with an oxidizing substance capable of liberating oxygen for combustion. Any of such oxidizing substances mentioned, or others that may be appropriate for such purposes, are recommended. The body 9 is formed with a concavity 10 in its upper side and with numerous ribs 11 forming protruding portions along which the combustion readily spreads to the center of the body, and then outwardly to the different edge portions. The spaces between these ribs 11 constitute pockets designed and adapted to receive and retain incense for the purposes indicated. The underside of the body may be convex and provided with grooves 12 and a central cavity 13 to facilitate packing or stacking of the devices, one upon the other. The grooves 12 will receive the ribs 11 and the central cavity 13 will receive the portion formed by the union of the ribs 11. Any of the protruding edges or corners of the devices may be ignited by friction against a special surface, such as the surfaces against which safety matches are ignited by friction.

This device possesses many advantages and is adapted for different uses. It is capable of rapid ignition without the use of matches or other devices of that type, and it retains the incense and may be placed in a censer for glowing combustion, such as the censer disclosed in the patent of George F. Heffernan, Jr., No. 1,866,931. The device is of slow combustion and, when of a proper size for use in the usual censers, the combustion extends for one hour. The products of combustion retain the shape of the device until combustion is complete. The device may be easily handled without soiling the hands or clothes and does not require a great amount of air for perfect combustion. It is easily possible to ignite the device while in the censer by rubbing the specially prepared surface against any of the protruding parts of the device.

The construction and arrangement may be varied otherwise than as particularly shown and described, without departing from the nature and principle of the invention. We do not restrict ourselves in any unessential respects, but what we claim and desire to secure by Letters Patent is:—

1. As an article of manufacture, a briquette for incense censers ignitible at any portion thereof by friction with a prepared surface and burning with a slow glowing combustion, said briquette being of the same composition throughout consisting essentially of charcoal and an oxidizing salt of the class consisting of perborates, peroxides, nitrates, chlorates and permanganates, and comprising a base portion having numerous spaced protuberances on its upper surface of sufficient height to form pockets therebetween to retain incense.

2. As an article of manufacture, a briquette for incense censers ignitible at any portion thereof by friction with a prepared surface and burning with slow glowing combustion, said briquette being of the same composition throughout consisting essentially of charcoal and an oxidizing chlorate, and comprising a base portion having numerous spaced protuberances on its upper surface of sufficient height to form pockets therebetween to retain incense.

3. As an article of manufacture, a briquette for incense censers ignitible at any portion thereof by friction with a prepared surface and burning with slow glowing combustion, said briquette being of the same composition throughout consisting essentially of charcoal and an oxidizing salt of the class consisting of perborates, peroxides, nitrates, chlorates and permanganates, and comprising a base portion having its upper surface provided with pockets of sufficient depth to retain incense.

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