

UNITED STATES PATENT OFFICE.

MAHLON FULTON, OF PHILADELPHIA, PENNSYLVANIA.

FUEL.

993,446.

Specification of Letters Patent. Patented May 30, 1911.

No Drawing.

Application filed October 13, 1909. Serial No. 522,481.

To all whom it may concern:

Be it known that I, MAHLON FULTON, citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Fuel, of which the following is a specification.

The object of my invention is to produce a novel fuel having desirable characteristics, as will be hereinafter fully described and particularly claimed.

Fuel made in accordance with my invention consists of a mixture of stearic acid and an alcohol. When it is deemed desirable, other ingredients of an inflammable nature—such, for example, as a solution of gun cotton, or wood sawdust, may be added to the mixture. Preferably, however, I employ only the mixture of the oleaginous substance and an alcohol.

In making my improved fuel, I combine the stearic acid and an alcohol such as grain alcohol or wood alcohol in such proportions as to produce a more or less solid compound, varying according to the proportions. A hard compound results when one part of the alcohol is used to two parts of stearic acid, and when two parts of the alcohol are used to one part of stearic acid the compound is of a more plastic nature. As to the various proportions, I have ascertained that three parts of stearic acid to from three to four parts of the alcohol results in a mixture possessing the best properties for the use intended.

In order to obtain the best admixture of the elements of my improved fuel, I employ the following method:—The normally solid stearic acid is first heated to the point of

liquefying; the alcohol is then added thereto, and the combined elements are agitated in a manner to thoroughly mix them together whereby a certain amount of the stearic acid is dissolved; after which the compound is permitted to cool to a normal temperature and solidify.

Fuel made in accordance with my invention as hereinbefore described is non-explosive and can be handled and transported without danger and loss. The fuel will produce intense heat, and it can be burned without a wick in any suitable container, such for example, as a metal cup-like burner similar in shape and size to an ordinary metal pill box with the cover removed. In using the fuel, a suitable quantity thereof is placed in the cup-like burner and a lighted match is applied thereto to ignite the fuel. Upon ignition, an alcohol flame results and continues until the alcohol is consumed, when the stearic acid instantly ignites, the color of the flame changing to white. The combustion is nearly perfect, there being but slight residue.

I claim:—

1. A fuel consisting of a mixture of alcohol and stearic acid.

2. A fuel consisting of a mixture of alcohol and stearic acid combined in such proportions that the mixture will liquefy when heated to a temperature above a normal temperature and solidify when cooled to said normal temperature.

In testimony whereof I affix my signature in presence of two witnesses.

MAHLON FULTON

Witnesses:

L. W. HERRING,
EDGAR H. BICKEL.