Patented Nov. 15, 1927. 1,649,485

UNITED STATES PATENT OFFICE.

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FUEL FOR INTERNAL-COMBUSTION ENGINES.

No Drawing. Application filed October 18, 1926. Serial No. 142,522.

My invention relates to internal combustion engine practice, and it has particular relation to a novel fuel mixture which may be employed advantageously therewith.

The principal and most satisfactory fuel which is now employed in internal combustion engines, is of hydrocarbon species. Its use is attended with certain shortcomings, however, which manifest themselves by the overheating of the engine, premature detonations, or as is commonly termed "knocking", carbon formation and other undesirable attributes. It is the object of this invention to overcome such defects by mixing an ingredient with the fuel which will modify its characteristics in a manner whereby the recognized shortcomings are obviated.

In practicing my invention, I dissolve from one hundredth of one percent to five percent, or any other desired proportion of an organic compound, such as aniline oleate in the fuel. The presence of this substance evidences itself not only by its tendency to eliminate the carbonaceous residue that normally deposits within the cylinder of the engine, but at the same time aids in the lubrication, and otherwise improves the operating characteristics of the motor. Thus, for example, the engine is not overheated readily, at the same time it runs more smoothly in that it does not display the usual knocking, characteristics that attend premature explosions within the cylinder chambers.

The present invention not only enables one to improve the operating characteristics of the ordinary gasoline engine by eliminating the knocking that is often to be noted, but its use may be extended to relatively high compression combustion engines with the same advantages. Furthermore, by incorporating preferably from one tenth to three percent of these ingredients, a leaner mixture than is ordinarily possible can be employed satisfactorily. It is evident therefore, that the principles underlying the invention are susceptible to many widely different modifications.

Obviously, other substances embodying the same general chemical characteristics of aniline oleate may be utilized. Accordingly, in place of the oleate radical, other acid groups may be substituted, particularly those of the higher fatty acid series, such as stearic, palmitic and others. Likewise, other amido bodies may be employed, particularly those of the aromatic series such as the toluidines, the xylidines and others. In the same manner the various acid amides may be employed, and particularly the anilides, toluides and the xylides. Derivatives of acidic bodies, and derivatives of basic bodies which are capable of interacting to form compounds having characteristics similar to aniline oleate for example, are considered to be within the scope of the terms "acid" and "amine" respectively, as herein employed.

It will be understood, of course, that while according to the preferred embodiment, the salt or compound itself is dissolved or otherwise uniformly mixed with the hydrocarbon base, one may incorporate the individual components preferable in equimolecular proportions with the fuel, without departing from the spirit of the invention. Furthermore, the desired constituents may be added in other relative proportions with or without diluents and coloring compositions.

While I have described a single specific embodiment of my invention, the principles underlying the same have been set forth in detail, and I desire therefore, that the invention be limited only to accord with the prior art in the appended claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A fuel for internal combustion engines embodying a hydrocarbon base and a material formed by the interaction of an organic acid and an amine.

2. A fuel for internal combustion engines embodying a hydrocarbon, an aromatic amine and an aliphatic acid.

3. A fuel for internal combustion engines embodying a hydrocarbon base and aniline oleate.

4. A fuel for internal combustion engines comprising a hydrocarbon base, an organic acid and an amino body.

In testimony whereof, I affix my signature.

JOHN WESLEY ORELUP.