

UNITED STATES PATENT OFFICE.

ARTHUR A. BACKHAUS, OF BALTIMORE, MARYLAND, ASSIGNOR TO U. S. INDUSTRIAL ALCOHOL CO., A CORPORATION OF WEST VIRGINIA.

LIQUID FUEL.

1,271,114.

Specification of Letters Patent.

Patented July 2, 191

No Drawing.

Application filed October 12, 1917. Serial No. 196,179.

To all whom it may concern:

Be it known that I, ARTHUR A. BACKHAUS, of Baltimore, in the State of Maryland, have invented a certain new and useful Improvement in Liquid Fuel, and do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates particularly to fuels designed to be used in any desired manner, but it has application especially to fuels adapted to be used as a source of power, as for example fuels for burners and motor fuels.

The object of my invention is to provide a fuel containing a petroleum hydrocarbon, as well as alcohol, and an ingredient adapted to blend the same or form a solution with the hydrocarbon and alcohol.

A further object of my invention is to provide a fuel of this character, which is of such a nature that only a very small quantity of the third ingredient is found necessary.

A further object is to provide a fuel of this character which contains a large percentage of the petroleum hydrocarbon, notwithstanding the small percentage of the third ingredient.

A further object is to provide a fuel of this character in which the third ingredient is an aromatic nitro compound.

A further object is to provide a fuel of this character in which the third ingredient is a nitro-benzol.

Further objects of my invention will appear from the detailed description thereof contained hereinafter.

While my invention is capable of being carried out in different ways, for the purpose of illustration I shall describe only certain ways of carrying out the same herein.

For example, a fuel made in accordance with my invention may be comprised of:—

25 parts by volume of ethyl alcohol,
25 parts by volume of gasoline,
25 parts by volume of kerosene, and
9 parts by volume of mononitrobenzol or a trinitrobenzol.

Furthermore, additional blending agents may be added, if desired.

For example, a fuel made in accordance with my invention and containing such additional blending agents may be comprised as follows:—

25 parts by volume of kerosene,

25 parts by volume of gasoline,
25 parts by volume of ethyl alcohol,
17 parts by volume of methyl alcohol,
17 parts by volume of benzol,
17 parts by volume of nitrobenzol,
17 parts by volume of cresol,
17 parts by volume of toluene.

It is to be understood, however, that many other aromatic nitro compounds may be used in place of the nitrobenzol above referred to, as for example the nitrotoluenes, etc.

It will be understood, also, that, instead of using gasoline and kerosene in the above examples, I may use only gasoline.

While I have described my invention above in detail, I wish it to be understood that many changes may be made therein without departing from the spirit thereof.

I claim:

1. A fuel comprising a petroleum distillate, an alcohol and an aromatic nitro compound adapted to blend the other constituents.

2. A fuel comprising a petroleum distillate, an alcohol and an aromatic nitro hydrocarbon adapted to blend the other constituents.

3. A fuel comprising a petroleum distillate, an alcohol and a nitrobenzol adapted to blend the other constituents.

4. A fuel comprising gasoline, an alcohol and an aromatic nitro compound adapted to blend the other constituents.

5. A fuel comprising gasoline, an alcohol and an aromatic nitro hydrocarbon adapted to blend the other constituents.

6. A fuel comprising gasoline, an alcohol and a nitrobenzol adapted to blend the other constituents.

7. A fuel comprising gasoline, kerosene, an alcohol and an aromatic nitro compound adapted to blend the other constituents.

8. A fuel comprising gasoline, kerosene, an alcohol and an aromatic nitro hydrocarbon adapted to blend the other constituents.

9. A fuel comprising gasoline, kerosene, an alcohol and a nitrobenzol adapted to blend the other constituents.

10. A fuel comprising a petroleum distillate, ethyl alcohol and an aromatic nitro compound adapted to blend the other constituents.

11. A fuel comprising a petroleum distillate, ethyl alcohol and an aromatic nitro

hydrocarbon adapted to blend the other constituents.

12. A fuel comprising a petroleum distillate, ethyl alcohol and a nitrobenzol adapted to blend the other constituents.

13. A fuel comprising gasolene, ethyl alcohol and an aromatic nitro compound adapted to blend the other constituents.

14. A fuel comprising gasolene, ethyl alcohol and an aromatic nitro hydrocarbon adapted to blend the other constituents.

15. A fuel comprising gasolene, ethyl alcohol and a nitrobenzol adapted to blend the other constituents.

16. A fuel comprising gasolene, kerosene, ethyl alcohol and an aromatic nitro compound adapted to blend the other constituents.

17. A fuel comprising gasolene, kerosene, ethyl alcohol and an aromatic nitro hydrocarbon adapted to blend the other constituents.

18. A fuel comprising gasolene, kerosene, ethyl alcohol and a nitrobenzol adapted to blend the other constituents.

In testimony that I claim the foregoing I have hereunto set my hand.

ARTHUR A. BACKHAUS.