

# UNITED STATES PATENT OFFICE.

ALONZO NOTEMAN, OF TOLEDO, OHIO.

## FUEL-OIL.

SPECIFICATION forming part of Letters Patent No. 512,894, dated January 16, 1894.

Application filed January 26, 1892. Serial No. 419,312. (No specimens.)

*To all whom it may concern:*

Be it known that I, ALONZO NOTEMAN, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Fuel-Oils; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

10 This invention relates to an improvement in fuel oils.

Heretofore it has been the custom where hydrocarbon oils have been employed as a fuel, to vaporize the oil previous to ignition, and then mix oxygen with the resulting vapor at the point of ignition. This procedure has been attended by two obstacles which have as yet been unsurmounted, viz: the attendant odor incident to the unconsumed products of combustion; and secondly, the coking of the vaporizing chamber, and as a result, the clogging of the burner orifices. This latter objection is the one which is conducive of the greatest amount of trouble, inasmuch as there is always an uncertainty as to the length of time which the burner will operate, the latter of course, being governed by the richness in carbon of the oil employed. In a word, the oil has always been converted into a vapor and burned as such.

35 It is the object of the present invention to overcome the above obstacles by supplying the oil previous to ignition with oxygen, or with an agent rich in oxygen under pressure, thereby not only supplying the necessary element to support combustion without the addition of atmospheric air, but also providing

a sufficient pressure to force the oil thus treated to any desired point for the purposes of combustion.

With these objects in view the invention consists broadly in a hydro-carbon oil impregnated or incorporated with oxygen or with an agent rich in oxygen, the oil thus treated being of such a nature that upon ignition the oxygen contained therein will be liberated and support combustion.

In carrying my invention into effect, I pregnate the oil, which has been previously inclosed in an air tight vessel or receptacle, with oxygen, or an agent rich in oxygen in the form of a gas which becomes incorporated with the oil, or the oil impregnated with it by agitation. The gas employed may be pure oxygen, nitrous oxide, carbon dioxide, &c. The oil thus prepared can be kept for an indefinite length of time prior to consumption without any deteriorating effect.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture a hydro-carbon oil impregnated with an agent rich in oxygen.

2. As a new article of manufacture a hydro-carbon oil impregnated with oxygen.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ALONZO NOTEMAN.

Witnesses:

WILLIAM WEBSTER,  
CARROLL J. WEBSTER.