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CLAUDE R. MATTHIS, OF CORVALLIS, OREGON.

CARBON REMOVER

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This invention relates to improvements in compositions of materials for cleaning carbon deposits from gas-engine cylinders.

The object of the invention is to provide a carbon-destroying composition of materials that may be injected into the cylinders with entirely harmless effects upon the metal thereof and which will be particularly efficient in breaking down the hard carbon incrustations of long standing found in neglected cylinders and leave the cylinders in a relatively permanently clean condition.

The formula of my improved composition includes the following ingredients in approximately the proportions respectively set forth:

Oil of cedar-wood	Ten per cent
Acetone	Fifty per cent
Benzol	Sixteen per cent
Alcohol	Twenty-four per cent

Naphthalene, to the amount of approximately one pound to each six gallons of the liquid.

Such materials will resolve into a complete mixture and will be immediately ready for use.

The mixture is utilized by removing the spark-plugs from the several cylinders of the engine, pouring a small quantity of the composition into each cylinder, replacing the spark-plugs, and then starting the engine, whereupon the heat generated by the combustion of the gas-charge acting upon the remover material will cause the gases arising from the material to penetrate the carbon deposited on the cylinder walls and spark-plugs and rapidly disintegrate such incrustations and effect their removal by blowing them out with the exhaust gases. A few minutes interval of time may elapse with good results between the closing of the cylinders by screwing in the spark-plugs and the starting of the engine.

The most active single ingredient of my improved carbon destroyer is the oil of cedar-wood which is found to be most highly effective in penetrating the hardest carbon deposits and softening them to a condition of disintegration wherein they are resolved into a flaky state that may be readily blown from the cylinders. While the oil of cedar-wood may be used singly as a carbon-remover with most successful results its relatively high cost militates against such use as well as the fact that I have found that a mixture containing approximately ten per cent of the oil of cedar-wood combined with other suitable substances of more or less volatile structure will obtain just as good if not substantially better effects and with much reduced expense.

Each and all of the other ingredients are individually in more or less degree potent in destroying the integrity of the carbon incrustations and in addition supply an increased degree of volatility in their combination and including the highly pervasive oil of cedar-wood which under the high temperatures encountered will cause the immediate permeation thereby of the carbon and consequent destruction of its adhesion to the metals.

Such other ingredients in addition to the oil of cedar wood may be used in substantially the number and proportions specified or they may be omitted individually or the stated proportions varied to a considerable extent without affecting materially the effectiveness of the product providing the oil of cedar wood is present in a sufficient proportion.

Such ingredients utilized to combine with the oil of cedar-wood are hydrocarbons and all are, with the exception of alcohol, of coal-tar derivation having a marked affinity for carbon and serve as efficient solvents therefor.

The permanent results produced by the use of my improved carbon remover are also to be noted. It is found that for a considerable period after treatment with the compound and after continued use of the engine the interiors of the cylinders will bear odoriferous witness to the continued presence of traces of the remover therein, the decided cedar fragrance testifying to the prevalence and permanence of such essential oil and the relative freedom from carbon deposits in the cylinders thereafter indicates the lasting effects obtained by the use of the composition.

Having described my invention, what I claim, is:—

1. A carbon-remover consisting of the following ingredients in approximately the following proportions: oil of cedar wood, ten per cent; acetone, fifty per cent; benzol, sixteen per cent; and alcohol, twenty-four per cent.

2. A carbon-remover consisting of the following ingredients in approximately the following proportions: oil of cedar wood, ten per cent; acetone, fifty per cent; benzol, sixteen per cent; alcohol, twenty-four per cent; and naphthalene, one pound to each six gallons of the liquid.

CLAUDE R. MATTHIS.