

UNITED STATES PATENT OFFICE

2,030,033

TREATMENT OF CRACKED PETROLEUM
DISTILLATESElliott B. McConnell, Cleveland Heights, Ohio, as-
signor to The Standard Oil Company, Cleve-
land, Ohio, a corporation of OhioNo Drawing. Application June 10, 1933,
Serial No. 675,297

8 Claims. (Cl. 44-9)

This invention relates to petroleum products manufacture, and more particularly motor fuels; and it is among the objects of the invention to provide a treatment inhibitive of gum-formation which is not difficult or critical to apply, and which is desirably dependable in the conditions encounterable generally.

To the accomplishment of the foregoing and related ends, the invention, then, comprises the features hereinafter fully described, and particularly pointed out in the claims, the following description setting forth in detail certain embodiments of the invention, these being indicative however, of but a few of the various ways in which the principle of the invention may be employed.

In accordance with my invention, the cracked petroleum distillate is subjected to the action of a hydroxyquinoline. Representative of such compounds for example, are 8-hydroxyquinoline, 2-hydroxyquinoline, 6-hydroxyquinoline, 7-hydroxyquinoline; also tetrahydro-derivatives, such as 2-hydroxytetrahydroquinoline, 6-hydroxytetrahydroquinoline, 7-hydroxytetrahydroquinoline, etc. The amount of the treating agent is small, less than 1 per cent and in general 0.004 to 0.5 per cent. The treating agent may be dissolved directly in the distillate to be treated, or where preferred may be dissolved in an organic solvent such as alcohol, benzol or the like, and such solution may then be incorporated with the distillate.

As an illustrative example: 250 gr. of 8-hydroxyquinoline is incorporated in each 1000 gallons of cracked gasoline, and is thoroughly disseminated.

As another example: 250 gr. of 2-hydroxyquinoline is dissolved in a solvent, as alcohol, to make up substantially one gallon volume, and this is mixed into each 1000 gallons of cracked gasoline to be treated.

Other modes of applying the principle of the

invention may be employed, change being made as regards the details described, provided the features stated in any of the following claims, or the equivalent of such, be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. A process of inhibiting gum-formation in cracked petroleum distillates, which comprises subjecting such distillate to the action of a small amount of an agent selected from the group consisting of 8-hydroxy quinoline, 2-hydroxy quinoline, 6-hydroxy quinoline, 7-hydroxy quinoline, 2-hydroxy tetrahydroquinoline, 6-hydroxy tetrahydroquinoline, 7-hydroxy tetrahydroquinoline, 8-hydroxy tetrahydroquinoline.

2. A process of inhibiting gum-formation in cracked petroleum distillates, which comprises subjecting such distillate to the action of a small amount of 8-hydroxyquinoline.

3. A process of inhibiting gum-formation in cracked petroleum distillates, which comprises subjecting such distillate to the action of a small amount of 2-hydroxyquinoline.

4. A process of inhibiting gum-formation in cracked petroleum distillates, which comprises subjecting such distillate to the action of a small amount of 6-hydroxyquinoline.

5. A cracked petroleum motor fuel treated with a small amount of an agent selected from the group consisting of 8-hydroxy quinoline, 2-hydroxy quinoline, 6-hydroxy quinoline, 7-hydroxy quinoline, 2-hydroxy tetrahydroquinoline, 6-hydroxy tetrahydroquinoline, 7-hydroxy tetrahydroquinoline, 8-hydroxy tetrahydroquinoline.

6. A cracked petroleum motor fuel treated with a small amount of 8-hydroxyquinoline.

7. A cracked petroleum motor fuel treated with a small amount of 2-hydroxyquinoline.

8. A cracked petroleum motor fuel treated with a small amount of 6-hydroxyquinoline.

ELLIOTT B. McCONNELL.