

Dec. 31, 1935

UNITED STATES PATENT OFFICE

2,025,929

STABLE FIRE-RESISTING HYDROCARBONACEOUS MATERIAL

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No Drawing. Application November 2, 1929,
Serial No. 404,452

7 Claims. (Cl. 134—78.6)

This invention relates to a fire-resisting normally non-fluid hydrocarbonaceous material and has for its object to produce a superior and stable composition of this character, as will be described.

To this end, a hydrocarbonaceous material which may be asphalt, pitch, wax, resin, paraffin, or the like which are normally non-fluid but rendered relatively fluid by heat, has incorporated with it a chlorinated poly-phenyl, preferably chlorinated diphenyl, to produce a fire-resisting hydrocarbonaceous material which is stable for substantially long periods of time, which is capable of being rendered at a relatively low temperature, of such fluidity as to enable it to saturate fibrous materials without danger of losses due to the use of relatively high temperatures; which is odorless at ordinary temperatures and therefore not objectionable to the operatives, and which does not lose its homogeneous character on long standing or upon heating.

Chlorinated diphenyl or poly-phenyl, which will be hereinafter referred to as chlorinated diphenyl, is light and dark in color, the light colored diphenyl being similar in appearance to light colored resins, and the chlorinated diphenyl of dark color has an appearance similar to a black.

These characteristics of chlorinated diphenyl enable it to be used to produce fire-resisting hydrocarbonaceous materials which are light in color like resins, waxes, paraffin, and the like, which may be given any desired light color, such as white, green, blue and the like, by the addition of the proper coloring matter, or the dark colored chlorinated diphenyl may be used with asphalts, pitches, tars, and the like to produce black or dark colored fire-resisting asphalts, pitches, and the like.

A light colored composition suitable for use as a saturant or coating for asbestos or other fibrous materials, may be produced by mixing 60% of light colored chlorinated diphenyl with 10% of paraffin and 30% of resins, in the presence of heat.

A dark colored composition for the same purpose may be produced by admixing 60% of chlorinated diphenyl with 10% of Montan wax, and 30% of blown asphalt.

For other purposes, a mixture of 60% of chlorinated diphenyl with 40% of Mexican flux, stearin pitch, or like asphalts or pitches may be used.

If a durable fire-resisting product is desired which is hard at ordinary temperatures and is to have a wax-like appearance, such a product may

be produced by admixing 60% of chlorinated diphenyl with 40% of Montan wax and gilsonite, asphalt or pitches.

The chlorinated diphenyl in these various compositions serves to impart to them fire-resisting properties and also serves to render them stable in weight and in efficiency for long periods of time. It also enables them to resist decomposition and evaporation losses on long standing and also imparts the ability to withstand relatively high temperatures.

One set of proportions has been mentioned which may be used, but it is not desired to limit the invention to the particular proportions specified and especially to the amount of chlorinated diphenyl used, as this may be varied within limits to meet the particular conditions of use, it being sufficient to employ enough of the chlorinated diphenyl to produce the desired fire-resisting and non-decomposing product desired.

It may be preferred to use chlorinated diphenyl but it is not desired to limit the invention in this respect, as other chlorinated poly-phenyls may be used alone or mixed with the chlorinated diphenyl, and by the term "poly-phenyl" as used herein it is intended to designate not only diphenyl but also those higher boiling-point products which are produced when diphenyl is formed by passing benzol vapors over heated catalysts under pressure, and which are commonly known to the industry as "high boilers" or poly-phenyls, the exact composition of which is at present unknown but which react with chlorine to form chlorinated products similar to chlorinated diphenyl.

What is claimed is:

1. A stable fire-resisting hydrocarbonaceous composition consisting of chlorinated diphenyl admixed with a normally non-fluid hydrocarbonaceous material, and in sufficient proportion to render the composition fire-resisting.

2. A stable fire-resisting hydrocarbonaceous composition consisting of chlorinated poly-phenyl admixed with a normally non-fluid hydrocarbonaceous material, and in sufficient proportion to render the composition fire-resisting.

3. A stable fire-resisting hydrocarbonaceous composition consisting of chlorinated diphenyl admixed with an asphalt, pitch, or like dark colored hydrocarbonaceous material, and in sufficient proportion to render the composition fire-resisting.

4. A stable fire-resisting hydrocarbonaceous composition consisting of a light colored chlorinated diphenyl admixed with a gum, resin, wax,

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6525
X380

or like light colored hydrocarbonaceous material, and in sufficient proportion to render the composition fire-resisting.

5 5. A stable fire-resisting hydrocarbonaceous composition consisting of a light colored chlorinated poly-phenyl admixed with a light colored normally non-fluid hydrocarbonaceous material, and in sufficient proportion to render the composition fire-resisting.

10 6. A stable fire-resisting hydrocarbonaceous

material consisting of chlorinated poly-phenyl and a normally non-fluid hydrocarbonaceous material, and having the chlorinated poly-phenyl in excess of the hydrocarbonaceous material.

7. A stable fire-resisting hydrocarbonaceous 5 composition consisting of chlorinated diphenyl admixed with wax and a light colored resin, and in sufficient proportion to render the composition fire-resisting.

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