

UNITED STATES PATENT OFFICE

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FIRE EXTINGUISHING COMPOUND

No Drawing.

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This invention relates to improvements in fire extinguishing compounds, and also to a method of preparing the said compound.

It is an object of the invention to provide
5 a fire extinguishing compound consisting primarily of a powdered material capable of liberating carbonic acid gas when decomposed by heat which is coated with a fatty acid and thereby rendered substantially
10 water-repellent, non-caking and free-flowing, so that after standing for prolonged periods the compound may be readily discharged from a container.

Another object of the invention is to provide
15 such a fire extinguishing compound wherein the fatty acid is mixed with the aid of heat with the powdered material so that a mechanical combination results, and wherein there is no fear of liberating carbonic acid
20 gas which the said powdered material gives off when heated beyond a certain temperature at which a chemical change would result to the detriment of the compound as a fire extinguishing medium.

Other objects and advantages of the invention will become apparent from the following specification wherein I describe both the ingredients employed and the preferred ways in which they are compounded.

I utilize a fatty acid, such as stearic acid, which must be rendered substantially liquid. This may be accomplished by heating the acid, or by forming it into a solution by the addition of carbon tetrachloride. In the
35 latter case I find that it is usually preferable to heat the solution though care must be taken that the tetrachloride is not heated to its boiling point which is relatively low.

To the heated acid, or acid solution, I add
40 some finely powdered silicate, such as fuller's earth or kaolin, and while so doing I prefer that the mixture be maintained in a heated state.

I then heat a finely powdered material
45 capable of liberating carbonic acid gas when decomposed by heat, such as sodium bicarbonate, calcium carbonate or the like, to about 140 degrees Fahrenheit, which I find is a safe temperature sufficiently below its point of decomposition and one which will cause rela-

tively rapid evaporation of the carbon tetrachloride when the latter is employed.

I then pour the heated mixture containing the acid and the silicate into the heated powdered material and agitate it so that the
55 latter becomes coated with the acid, and, as previously stated, the tetrachloride, when employed, is eliminated from the mixture by evaporation.

The powdered material and the silicate are
60 then found to be substantially water-repellant, free-flowing and non-caking. Moreover while a satisfactory result is obtained if the silicate is omitted I find that the latter does add to the free-flowing qualities of the
65 compound.

Very satisfactory results are obtained by the employment of the above ingredients in substantially the following proportion by weight:

11½% fatty acid
31½% powdered silicate
95% powdered material having the proper-
ties herein named. 75

When carbon tetrachloride is used it is mixed with the acid in substantially equal proportion thereto, though its addition does not ultimately change the proportions given above since it is subsequently eliminated by
80 evaporation.

While in the foregoing the preferred forms of the compound and the methods of compounding have been described, it is understood that the invention is susceptible to such changes as fall within the scope of the appended claims.

What I claim is:

1. A fire extinguishing compound consisting of a powdered material capable of liberating carbonic acid gas when decomposed by heat, and a fatty acid with which said material is coated so as to render it substantially water-repellent and free-flowing. 90

2. A fire extinguishing compound consisting of a powdered material capable of liberating carbonic acid gas when decomposed by heat, and stearic acid with which said material is coated so as to render it substantially water-repellent and free-flowing. 100

3. A fire extinguishing compound consisting of a powdered material capable of liberating carbonic acid gas when decomposed by heat, a powdered silicate, and a fatty acid with which said material and silicate are coated to render them substantially water-repellent and free-flowing.
4. A fire extinguishing compound consisting of a powdered material capable of liberating carbonic acid gas when decomposed by heat, a powdered silicate, and stearic acid with which said material and silicate are coated to render them substantially water-repellent and free-flowing.
5. A fire extinguishing compound consisting of sodium bicarbonate and a fatty acid.
6. A fire extinguishing compound consisting of sodium bicarbonate and stearic acid.
7. A fire extinguishing compound consisting of sodium bicarbonate stearic acid, and a powdered silicate.
8. A fire extinguishing compound consisting of a powdered material capable of liberating carbonic acid gas when decomposed by heat and a fatty acid which melts at substantially the same temperature as that at which the powdered material liberates carbonic acid gas.
9. A fire extinguishing compound consisting of sodium bicarbonate and a fatty acid which melts at substantially the same temperature as that at which the sodium bicarbonate liberates carbonic acid gas.

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