

## UNITED STATES PATENT OFFICE

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## FIRE EXTINGUISHING COMPOUND

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The invention relates to fire extinguishing compounds, more especially compounds acting by the formation of an air-foam. The compound according to the invention is distinguished from the hitherto used fire extinguishing compounds of this type by the fact that the foam produced therewith has a considerably higher stability and resistance to heat and other physical or chemical influences than the foams hitherto known. Consequently the extinguishing compound forming the object of the invention is especially suitable for cases in which an otherwise hardly extinguishable fire, as for instance that caused by alcohol, aromatic hydrocarbons and the like, is to be combated.

The compound according to the invention consists in a mixture of solubilized proteins or materials containing protein and a small percentage of a soluble aluminum compound. The inventor has ascertained that even a very small addition of a soluble aluminum compound suffices to increase the stability of a foam produced by means of proteinous material to a considerable extent. Such aluminum compounds may be, for instance, aluminum salts or aluminates. The fire extinguishing compound according to the invention may be obtained, for instance, in the following manner:

1 kilogram of keratin is solubilized by heating the material with 150 grams of slaked lime and 3 to 5 kilograms of water. The resulting mass is neutralized by the addition of surfuric acid and subjected to filtration. The filtrate is evaporated to a specific gravity of 1.15. To 1 kilogram of the resulting liquid a solution of 20 grams of aluminum hydroxide in an excess of acetic acid is added whilst stirring and finally the liquid is neutralized by the addition of caustic soda solution.

A solution of 1 kilogram of this liquid in 20 liters of water when subjected to the action of a suitable air-foam producer is transformed into an extraordinarily tough foam from which the liquid contained therein separates twice to three times as slowly as a foam obtained under similar conditions from a solution having the same strength without the addition of an aluminum compound.

Instead of aluminum acetate another soluble aluminum compound, for instance, aluminum lactate or an aluminate may be added to the foam forming liquid. The use of aluminum salts of organic acids has proved especially advantageous.

## I claim:

1. A foam-forming compound for extinguishing fire, consisting of a solution of a solubilized proteinous material and a small quantity of a soluble aluminum compound.

2. A foam-forming compound for extinguishing fire, consisting of a solution of a solubilized keratinous material and a small quantity of a soluble aluminum compound.

3. A foam-forming compound for extinguishing fire, consisting of a solution of a solubilized proteinous material and a small quantity of a soluble aluminum salt of an organic acid.

4. A foam-forming compound for extinguishing fire, consisting of a solution of a solubilized proteinous material and a small quantity of aluminum acetate.

5. A foam-forming compound for extinguishing fire, consisting of a solution of a solubilized proteinous material and a small quantity of aluminum lactate.

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