

UNITED STATES PATENT OFFICE.

FERDINAND FRÖHLICH, OF NEW YORK, N. Y.

FIRE-EXTINGUISHING COMPOUND.

SPECIFICATION forming part of Letters Patent No. 310,404, dated January 6, 1885.

Application filed May 15, 1884. (Specimens.)

To all whom it may concern:

Be it known that I, FERDINAND FRÖHLICH, a citizen of the Republic of Switzerland, residing at New York, in the county and State of New York, have invented new and useful Improvements in Compounds for Extinguishing Fires, of which the following is a specification.

My invention relates to compound of silicate of soda, alum, common salt, and phosphate of ammonia, which, when mixed together in the proper proportion and reduced to a powder, form a compound which is easily soluble in water, and which, when mixed with water and poured upon burning wood or other materials, assists materially to extinguish the flame, and it also prevents the materials from reigniting.

In carrying out my invention I take silicate of soda, seven parts, (by weight); alum, five parts, (by weight); common salt, two parts, (by weight); phosphate of ammonia, one part, (by weight.) All the ingredients, with the exception of the silicate of soda, are reduced to a fine powder, and then they are dried in the open air until they contain no moisture. The alum is then mixed with the liquid silicate of soda and well stirred until a solid mass is formed, which is dried in a place from which the sun and also artificial heat are excluded, but in which a considerable draft of air exists. After having become dry it is reduced to a fine powder, and then it is mixed with the salt and with the phosphate of ammonia. By following these directions a powder is obtained which is not hygroscopic, and which can be kept for a long time without becoming pasty or liquid.

In preparing my compound, silicate of potash may be substituted for silicate of soda.

In using my compound for extinguishing fires I dissolve the same in any desired proportion in water, and introduce the solution into a fire-engine, so as to be able to throw it upon the burning substances, or I pour it upon the desired spot or spots in any other manner. As the solution comes in contact with the burning materials the flames are extinguished, and at the same time a coating is formed on the surfaces of the materials, whereby the air is excluded and the reigniting of said materials is prevented. It must also be remarked that all the ingredients contained in my compound are perfectly harmless, and that the solution of the compound when brought in contact with textile fabrics, wood, or other materials, is not liable to injure the same.

What I claim as new, and desire to secure by Letters Patent, is—

1. A fire-extinguishing compound consisting of an alkaline silicate, alum, common salt, and phosphate of ammonia, combined and mixed together in about the proportion herein set forth.

2. A powder for admixture with a liquid in extinguishing fires, consisting of silicate of soda, alum, common salt, and phosphate of ammonia, combined and mixed together substantially as herein described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

FERDINAND FROHLICH. [L. S.]

Witnesses:

E. F. KASTENHUBER,
CHAS. S. HAYES.