

UNITED STATES PATENT OFFICE.

MAX BRESLAUER, OF CHARLOTTENBURG, GERMANY, ASSIGNOR TO THE FIRM OF
MINIMAX CONSOLIDATED LIMITED, OF LONDON, ENGLAND.

PROCESS OF EXTINGUISHING FIRES.

1,017,949.

Specification of Letters Patent.

Patented Feb. 20, 1912.

No Drawing.

Application filed May 24, 1909. Serial No. 497,886.

To all whom it may concern:

Be it known that I, MAX BRESLAUER, a chemist and a doctor of philosophy, a subject of the German Emperor, and a resident of 29 Kleiststrasse, in the city of Charlottenburg, near Berlin, Kingdom of Prussia, and German Empire, have invented a certain new and useful Frost-Proof Fire-Extinguishing Agent, of which the following is a specification.

This invention has reference to the utilization of the halogen salts of aluminium as fire extinguishing agents.

The utilization of chlorid of magnesia, as well as the utilization of certain other aluminium salts as fire extinguishing agents have already been suggested heretofore. It is a well known fact however, that not even the salts, belonging to one and the same chemical group, possess identical chemical, physical and therapeutical properties, and the differences in the properties, and effects of such substances, belonging to different chemical groups, as for instance of chlorid of magnesia and the halogen salts of aluminium, are very much larger. The same, as the highly valued antiseptic qualities of aluminium acetate are incomparably superior to those, possessed by magnesium acetate, the fire extinguishing properties of the halogen salts of aluminium, are far superior to those of magnesium chlorid, and of all known metal chlorids.

From the fact, that other aluminium salts have already been suggested for fire extinguishing purposes, experts have not been enabled to infer, that the halogen salts of aluminium are good fire extinguishing agents also, inasmuch as even in the case of substances belonging to one and the same chemical group, it is not possible, to assume under all circumstances an analogous behavior; and it has been found indeed, that the fire extinguishing properties of the halogen salts of aluminium are far superior to the properties of the aluminium salts, heretofore used for fire extinguishing purposes.

But the halogen salts of aluminium are not only distinguished from the aluminium salts heretofore used, as regards the fire extinguishing effect, and from magnesium chlorid, but these salts, of which aluminium chlorid may be mentioned as an instance, are advantageously distinguished from other salts by the fact, that their solutions are proof against frost and cold weather. While a concentrated solution of the aluminium salts, previously used, and of magnesium chlorid freezes at -15 degrees Celsius below zero, a solution of aluminium chlorid of a strength of about 27 to 30 degrees Bé. is capable of resisting degrees of cold of much more than -50 centigrade below zero. Furthermore than that, by means of chlorid of aluminium, it is possible to manufacture extinguishing solutions of the highest concentration imaginable, inasmuch as 400 parts of aluminium chlorid are soluble for instance in 100 parts of cold water. On the other hand, only 130 parts of magnesium chlorid are soluble in 100 parts of cold water, and the solution of aluminium sulfate, formerly used, presents for instance the following dissolving qualities:—36.1 parts $\text{Al}_2(\text{SO}_4)_3$ dissolve in 100 parts of cold water and 107 parts $\text{Al}_2(\text{SO}_4)_3 + 18 \text{H}_2\text{O}$ are soluble in 100 parts of cold water.

What I claim and desire to secure by Letters Patent is:—

1. The process of extinguishing fires consisting in treating the burning substances with an aqueous solution of halogen salts of aluminium.

2. The process of extinguishing fires consisting in treating the burning substances with an aqueous solution of aluminium chlorid.

In witness whereof I have hereunto signed my name this 12th day of May 1909 in the presence of two subscribing witnesses.

MAX BRESLAUER.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.