## UNITED STATES PATENT OFFICE.

ALEXANDRE JACOB, OF VILVORDE, BELGIUM.

## DISINCRUSTANT FOR STEAM-GENERATORS.

No. 808,240.

Specification of Letters Patent.

Patented Dec. 26, 1905.

Application filed November 30, 1904. Serial No. 234,956.

To all whom it may concern:

Be it known that I, Alexandre Jacob, a citizen of the Kingdom of Belgium, residing at Vilvorde, in the Kingdom of Belgium, 5 have invented certain new and useful Improvements in Disincrustants for Steam-Generators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others 10 skilled in the art to which it appertains to

make and use the same.

This invention has for its object a composite product which has the property of detaching the fir or deposits from the walls of steam-15 generators and of retaining them in suspension in the condition of liquid mud or slime. Its action is the same in the case of incrustations of sodium salt or marine salt. It may be employed for steam - generators of all 20 kinds; but it is more particularly adapted for use with tubular boilers, in which it is extremely difficult to free the tubes from deposits by scaling.

The life of boilers and tubes is doubled by 25 dispensing with scaling, quite apart from the considerable economy of fuel and from the complete security attained, owing to the fact that the danger of burning and excessive expansion of the plates in contact with the hot

30 gases is entirely eliminated.

As a result of exhaustive experiments and researches the following composition, which has been submitted to extensive tests, has proved to give extremely satisfactory results, 35 although it is to be distinctly understood

that it is not desired to limit the invention to the exact proportions of the ingredients specified: soda salt, (sodium carbonate,) four parts; vinegar, two parts; chicory, one part; logwood, two parts; marine salt, (one thou- 40 sand grams,) one part. The whole is well mixed and infused in a liter of water for twenty-four or forty-eight hours.

Ten liters of this disincrustant are required per cubic meter of water. The quantity to 45 be employed should be introduced all at once. The proportion is not arrived at from the actual capacity of the boiler, but in accordance

with the effective quantity of water.

Having thus described my invention, what 50 I claim as new, and desire to secure by Letters Patent, is—

1. A disincrustant for steam-generators, containing soda salt, acetic acid, logwood and chlorid of sodium.

2. A disincrustant for steam-generators, containing soda salt, acetic acid, chicory, logwood and chlorid of sodium.

3. A disincrustant for steam-generators containing four parts by weight of soda salt, 60 two parts of acetic acid, one part of chicory, two parts of logwood and one part of marine salt.

In testimony whereof I affix my signature to this specification in the presence of two 65 witnesses.

ALEXANDRE JACOB.

Witnesses:

P. Derguin, Maurice Gerbeault.