

United States Patent Office.

JOSIAH J. ALLEN, OF PHILADELPHIA, PENNSYLVANIA.

*Letters Patent No. 63,453, dated April 2, 1867.*

IMPROVED MATERIAL FOR PREVENTING INCRUSTATION IN STEAM BOILERS.

*The Schedule referred to in these Letters Patent and making part of the same.*

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOSIAH J. ALLEN, of Philadelphia, Pennsylvania, have invented a Mode of Preventing Incrustation in and Removing it from Steam Boilers; and I do hereby declare the following to be a full, clear, and exact description of the same.

By repeated and careful experiments I have found that hydrocarbons, applied to the interior of a steam boiler, will remove incrustation therefrom and prevent its accumulation therein. Ordinary crude petroleum will serve the desired purpose, and may be applied in the following manner:

After the water has been blown off from the boiler, and the latter has become cool, a quantity of crude petroleum is introduced by pouring it through the safety-valve or any available opening. The oil finds its way to, and becomes spread over, the bottom of the boiler, into which water may be now introduced through the usual feed opening. As the water flows into the boiler the petroleum rises with it, and is brought in contact with the entire inner surface of the shell. When the water has reached the desired altitude the fire may be applied and steam raised as usual.

In a short time after making this application it will be found, on examining the boiler, that whatever incrustation was in it prior to the introduction of the petroleum had become detached or loosened from the shell.

The application of the petroleum may be made at intervals of three months, or more frequently, as circumstances may require, the quantity of petroleum to be used depending upon the condition of the boiler.

The petroleum may be applied in different ways, for instance, the interior of an empty boiler may be washed over with the material, or a coating of paraffine may be applied prior to the introduction of water.

Refined oils may be used, or any of the hydrocarbons or mineral oils, whether they are obtained from wells or by the distillation of bituminous coal, shale, &c.

I claim as my invention, and desire to secure by Letters Patent—

The application to steam boilers, in the manner described, or any equivalent to the same, of hydrocarbons, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

Witnesses:

J. J. ALLEN.

H. HOWSON,

W. J. R. DELANY.