

# UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON LORD, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED COMPOSITION FOR PREVENTING INCRUSTATION IN STEAM-BOILERS.

Specification forming part of Letters Patent No. **98,173**, dated December 21, 1869.

*To all whom it may concern:*

Be it known that I, GEORGE WASHINGTON LORD, of the city of Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Anti-Incrustation Powder; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in a certain powder by means of which I can easily detach the scales, whatever may be their thickness, from the inside of any boiler, even while in full operation, and without injury to the metal of the shell or other internal parts of said boiler.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its chemical composition, properties, and action.

My powder is composed as follows: I take of English soda, seventeen parts; of French ocher, one part; of ground logwood, two parts; equal to twenty parts. The whole being well pulverized and mixed up, the powder is thus ready for use.

The above proportions are given solely as an average, and I reserve the right to modify the said proportions if I find in practice that the powder might thus be made more powerful in its action, and I therefore do not con-

fine myself to the said proportions, but simply to the combination of the three said ingredients—viz. English soda, French ocher, and ground logwood.

The powder is used as follows: Into a boiler, say of an engine of forty-five horse-power, I throw from nine to ten pounds of my powder. This I do in preference on a Sunday, when the boiler is cold and the powder easily thrown in, either at the safety-valve, man-hole, or any aperture in the said boiler.

The effect of the soda and logwood is to attack, detach, and partly melt the scales, and of the French ochre, to precipitate them and settle the water. But the powder can be used in the same manner when the boiler is hot and in use, and will answer the purpose, although, perhaps, not so handily to the operator.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is—

A scale-detaching or anti-incrustation powder, when composed and used in the manner and for the purpose above set forth and described.

G. WASHINGTON LORD.

Witnesses:

LIONEL D'EPINEUIL,  
F. H. NOLAN.