

UNITED STATES PATENT OFFICE.

JOEL A. OMENS, OF UTICA, NEW YORK.

COMPOUND FOR PREVENTING BOILER-SCALE.

SPECIFICATION forming part of Letters Patent No. 361,180, dated April 12, 1887.

Application filed January 5, 1887. Serial No. 223,482. (No specimens.)

To all whom it may concern:

Be it known that I, JOEL A. OMENS, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, have invented a new and useful Improvement in Boiler-Cleaning Compounds, of which the following is a specification.

My invention relates to boiler-cleaning compounds; and it consists in a certain combination of chemicals which produces a powder adapted, when applied, to remove the scales and thoroughly clean off the other matter which accumulates on the inside of boilers and boiler-flues, and also to prevent the said matter from accumulating, when used in the manner herein described.

My compound consists in the following ingredients combined in the proportions stated, viz: Sal-soda, fifty-five parts, by weight; potash, thirty parts, by weight; bone-black, three parts, by weight; wood-dust, no definite quantity. The manner of compounding these ingredients is as follows: Heat the sal-soda in a vessel until it reaches the boiling-point; then add the potash, which must be ground and of the best quality; agitate the mixture thoroughly, and then add the bone-black. After carefully and thoroughly commingling these ingredients add wood-dust, finely powdered, until the liquid is absorbed and the compound becomes dry. It is now in the shape of a powder, light in weight, and therefore easily transported.

When it is desired to clean a tubular boiler having a coating of scales on the inside, dissolve in water three pounds of the compound for every ten-horse power of the engine, and pump or otherwise place the solution in the boiler, and run the boiler ten days or two weeks. Then allow the boiler to stand and cool, after which the water must be run out. Now, when the scales are touched they will be

found loose and easily removed. The compound does not remove the scale, but simply loosens it from the iron without injuring the boiler in the least.

To remove the scales from large flue-boilers, use five pounds for every ten-horse power and run for two or three weeks. In all other respects proceed the same as for tubular boilers.

To prevent the scales from forming on the sides of the boilers, use from one-half to one pound of the compound in the boiler to every ten-horse power every week. It is also well to blow off the boiler every morning before starting the fire about one-quarter to one-half gage of water. In this way boilers may be kept clean for any length of time, thus saving great expense and obviating the danger of the boiler bursting, as frequently happens, owing to the accumulation of sediment and impurities forming on and fastening to the sides of the boiler.

The wood-dust used in this compound is employed only as a vehicle to reduce the mixture to a powder form, which is more convenient to handle and transport, the said wood-dust having no chemical action to perform.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The herein-described composition of matter, consisting of sal-soda, potash, and bone-black in the proportions named.

2. The herein-described compound for cleaning boilers, consisting of sal-soda, potash, bone-black, and wood-dust in the proportions stated, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOEL A. OMENS.

Witnesses:

JAMES INGLIS,
JOHN COLLIES.