

UNITED STATES PATENT OFFICE.

HOWARD GREGG, OF EAST NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
HEIPERSHAUSEN BROTHERS, OF SAME PLACE.

METHOD OF PREVENTING INCRUSTATION OF STEAM-BOILERS.

SPECIFICATION forming part of Letters Patent No. 361,281, dated April 19, 1887.

Application filed October 30, 1883. Serial No. 111,626. (Specimens.)

To all whom it may concern:

Be it known that I, HOWARD GREGG, a citizen of the United States, residing in East New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in the Method of Preventing the Destruction of Boilers, of which the following is a specification.

My invention relates to improvements in the method of preventing the destruction of boilers by the formation or deposit on the plates or tubes of the boiler of an oxide of copper created or formed in the surface-condenser, as well as to provide for the consumption of any grease or fatty matter which may pass into the said boilers from any of the attendant or attached mechanism.

In carrying out my invention I employ a ball or series of balls or globular forms composed by preference of pure charcoal ground and rounded by hand into the desired shape. These balls of charcoal are placed in the bottom of the boiler before filling the same with water from time to time, and are blown out, or partially blown out, with the water when the boiler is blown off.

In all cases it will not be necessary to blow out the whole of the balls or forms of charcoal at each blowing off of the boiler, but simply to add fresh balls from time to time, as may be found or considered necessary or expedient.

The object of the charcoal balls or forms is to absorb and neutralize the destructive agents and prevent the action of the deposits of oxide of copper, grease, and other deleterious matter, and prevent any galvanic action being induced or generated by deposit on the plates or internal surface of the boiler.

In carrying out my invention I take a quantity—say twenty-five (25) pounds, more or less, according to the size of the boiler—of finely ground or crushed charcoal, which I mix up into a paste by the aid of water or other suitable binding agent. The charcoal, having

been thus reduced to a pasty mass, is molded or formed into balls or cakes by preference of about three (3) inches in diameter. These balls may be formed by hand or by any other suitable means, although I prefer that they should be formed by hand.

In place of forming the charcoal into spherical or globular blocks, I can, if desired, form the same into blocks of polygonal or other shapes. The balls so made have in them sufficient moisture to make their specific gravity greater than that of water, and thus prevent their floating in water. The balls are placed in the legs and on the bottom of the boiler, and remain there during the use of the boiler, and are gradually dissolved in the water, and pass off with it when the water is blown off, or form in thin coating on the interior plates of the boiler.

I am aware that charcoal has been before introduced into boilers to prevent the formation of incrustation on the boilers by attracting such incrustation to itself; but the charcoal so introduced prior to this my invention has been of light specific gravity, so that it floated on the water and did not sink to the bottom of the boiler and there remain until gradually disintegrated, as in this my invention.

What I claim as new, and desire to secure by Letters Patent, is—

The method hereinbefore described of protecting steam-boilers from interior corrosion, consisting of inserting within the boiler to be protected balls of charcoal-paste of greater specific gravity than water, and subjecting the same to contact with the water contained in the boiler during the use of the boiler, substantially as specified.

Witness my hand this 25th day of October, A. D. 1883.

HOWARD GREGG.

Witnesses:

PHILLIP HEIPERSHAUSEN,
W. L. BENNEM.