

UNITED STATES PATENT OFFICE.

FRIEDRICH BERGER, OF PILGER, NEBRASKA.

COMPOUND FOR CLEANING BOILERS.

SPECIFICATION forming part of Letters Patent No. 517,562, dated April 3, 1894.

Application filed September 14, 1893. Serial No. 485,475. (No specimens.)

To all whom it may concern:

Be it known that I, FRIEDRICH BERGER, a citizen of the United States of America, residing at Pilger, in the county of Stanton and State of Nebraska, have invented certain new and useful Improvements in Compounds for Cleaning Boilers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in compounds for cleaning boilers and preventing the formation of scale therein; and it consists of a compound made up of chicory, ashes of kelp, cotton-seed oil and carbolic acid.

In the preparation of the compound I take forty-eight parts of powdered chicory, a similar quantity of ashes made from barilla or kelp, four and three-fourths parts of cotton-seed oil and one part of carbolic acid in five hundred parts of water. The compound made up of the aforesaid ingredients, with the exception of the water, is mixed together in any suitable manner. The chicory is powdered and assists in preventing the formation of scale and also serves to keep the ashes. The chicory and ashes, with the acid will neutralize and soften the water and the chicory will remain in the boiler or steam vessel without dissolving for a considerable length of time, so that the acid is given off slowly as the compound is dissolving. The cotton-seed oil is

used primarily as a binding for the chicory and ashes and holds them in a compact mass and assists in resisting the dissolving of the compound. The carbolic acid serves to prevent vegetable growth or mold.

The compound may not only be used for cleaning boilers and preventing scale from forming therein, but may also be used in such vats as are employed by brewers, distillers, &c.

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

1. A compound for preventing incrustation in steam boilers, made up of chicory, ashes of barilla or kelp, cotton-seed oil and carbolic acid.

2. The compound herein described made up of forty-eight parts of powdered chicory, forty-eight parts of ashes of kelp, four and three-fourths parts of cotton-seed oil as a binding for the aforesaid ingredients, and a sufficient quantity of carbolic acid to preserve the same and prevent mold or vegetable growth, the composition being adapted to be placed in steam boilers for the purpose of preventing the formation of scale.

In testimony whereof I affix my signature in presence of two witnesses.

FRIEDRICH BERGER.

Witnesses:

A. STRAHLE,
W. W. YOUNG.