

UNITED STATES PATENT OFFICE.

JOHN H. SWARTOUT AND ALBERT L. WHEDON, OF GEDDES, NEW YORK.

IMPROVEMENT IN COMPOSITIONS FOR LINING STOVES AND FURNACES.

Specification forming part of Letters Patent No. **149,266**, dated March 31, 1874; application filed December 15, 1873.

To all whom it may concern:

Be it known that we, JOHN H. SWARTOUT and ALBERT L. WHEDON, of Geddes, New York, have invented a certain Improvement in Lining the Fire-Chambers of Iron Stoves, Furnaces, &c., for Heating Buildings and Cooking, of which the following is a specification:

A great want has been experienced in the construction and fitting of fire-brick and the like into cast-iron fire-chambers of stoves, &c., in which there is a great variety in form and size, which necessitates the especial construction of different linings for every size of fire-chamber, and these are often very difficult and expensive to procure, especially for old stoves that require their linings renewed at a distance from the source of supply; and where the frames and castings are burned and warped out of shape it is almost impossible to repair the fire-chamber without new sets of castings, in order to have the fire-brick fit that are made for the stove.

To obviate these great inconveniences, and the cost that accrues therefrom, is the object of our invention, by which we can at once and in a few minutes line the fire-chamber of any heater, new or old, of any size or form, much cheaper, more expeditiously than by any former method, and with equal facility, whether the castings be whole or burned and warped, the lining being as solid and durable as fire-brick, and ready to be put into use as soon as the work is done.

Our process is as follows: Take equal parts

(by weight) of common brick-clay or fire-clay and pulverized saggers, or its equivalent, and about one-twenty-fifth the quantity of common salt. The above ingredients are to be mixed thoroughly with a sufficient quantity of water to make a stiff mortar, care being taken to use as little water as will make the ingredients adhesive and plastic enough to be worked into form with a very stout trowel. This compound is molded into the fire-chamber as a lining of usual thickness all around, taking any form and size required, and as soon as the lining is completed a fire can be made in the chamber without danger of cracking or shrinkage under any heat generated in such places.

We are thus enabled to line any stove, old or new, whether the plates are perfect or warped or broken, and this can be done in any place without the cost, trouble, or delay of having fire-bricks prepared therefor, the lining being more perfect and durable than ordinary fire-brick.

Having thus fully set forth our improved lining for stoves and other heaters, we claim—

The composition consisting of common brick or fire-clay, pulverized saggers, salt, and water, substantially in the proportions and for the purposes set forth, for lining for stove and other furnaces, substantially as herein described.

JOHN H. SWARTOUT.
ALBERT L. WHEDON.

Witnesses:

PETER CONWAYTON,
MYLES MCPADDEN.