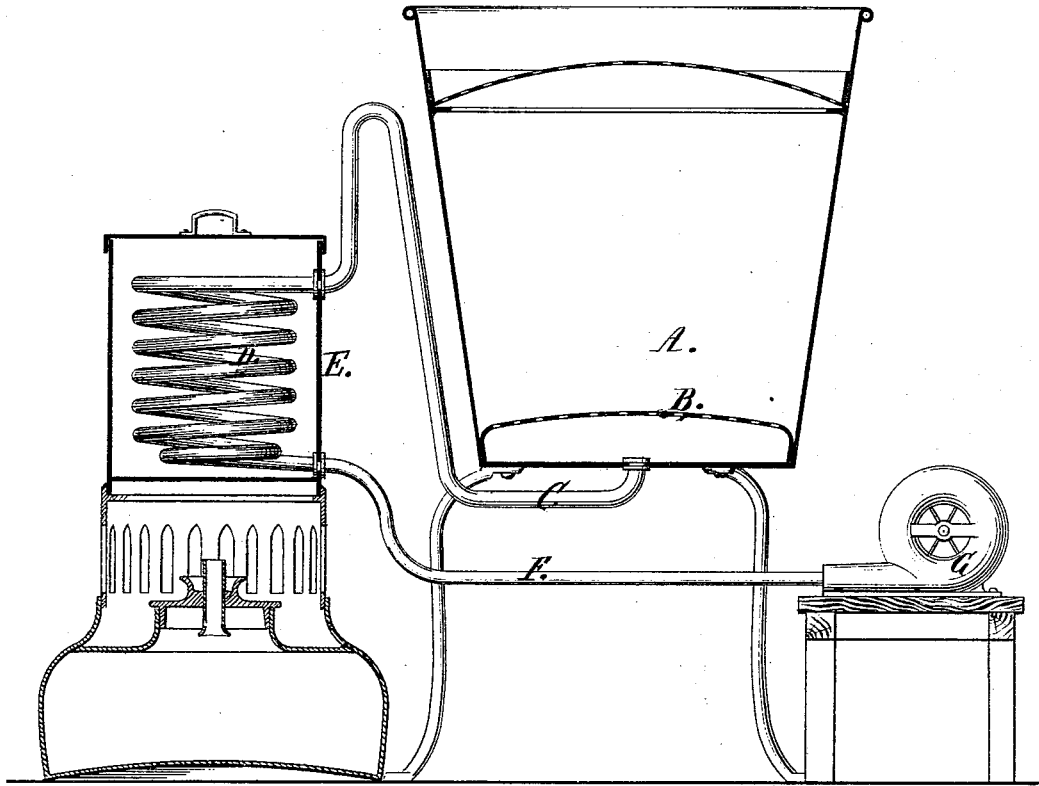


H. E. SMITH.
Clothes-Washer.

No. 166,646.

Patented Aug. 10, 1875.



Witnesses.
Ernest P. Hilliker.
Chas. W. Ahlers.

Inventor.
Hamilton E. Smith
By
Van Santvoord & Huff
Attors

UNITED STATES PATENT OFFICE.

HAMILTON E. SMITH, OF NEW YORK, N. Y.

IMPROVEMENT IN CLOTHES-WASHERS.

Specification forming part of Letters Patent No. **166,646**, dated August 10, 1875; application filed February 24, 1875.

To all whom it may concern:

Be it known that I, HAMILTON E. SMITH, of the city, county, and State of New York, have invented a certain new and useful Improvement in Washing Clothes and other articles, of which the following is a specification:

This invention is illustrated in the accompanying drawing, which represents a longitudinal vertical section of the apparatus which I use in carrying out my invention.

This invention consists in the combination, in an apparatus for washing clothes or other articles, of a tank having an open mouth and a false bottom for holding and supporting the articles to be washed, with an air-forcing apparatus and an air-heating pipe, one end of which communicates with the tank at its bottom below the false bottom, while the other end communicates with the air-forcing apparatus in such a manner that the articles to be washed, after the same have been soaked in water, can be exposed to a current of atmospheric air, either the water or the air, or both, being heated. Said current of air is passed up through the liquid, so that the latter and the articles to be washed are agitated, and at the same time the oxygen of the air is brought in intimate contact with the articles to be washed, and thereby the washing process is materially promoted.

In the drawing, the letter A designates a tank or vat, by preference made of sheet metal or any other suitable material which can be exposed to a fire or heated by any suitable means, if desired. This tank is provided with a perforated false bottom, B, and from the space beneath this false bottom extends a pipe, C, which connects with the upper end of a coil, D. This coil is inclosed in a jacket, E, and it is exposed to the action of the flame of a lamp or gas-burner, or, if the apparatus is of great capacity, said jacket may be placed over a grate, and the coil can then be heated by the action of a fire. The bottom end of said coil connects, by means of a pipe, F, with a fan-blower or other air-forcing apparatus, G, so that a current of atmospheric air may be forced through the coil D into the tank A. The pipe C, which connects the coil with the tank, is bent upward, so that the liquid contents of said tank cannot pass down into the coil and air-pipe F.

The clothes or other articles to be washed are placed into the tank and soaked with water, which may be hot or cold. If hot water is used, or if the water, after having been poured into the tank, is heated, a current of cold atmospheric air may be injected by means of the air-forcing apparatus G; but, whether the water in the tank be hot or cold, I use, by preference, a current of air which is heated by being passed through the coil D. By the action of the current of air the liquid and the articles contained in the tank are agitated, and thereby said articles are rapidly freed from dirt, and at the same time the oxygen contained in the atmospheric air exerts a bleaching action, so that the operation of washing is materially promoted.

I am aware that steam has been injected into a tank or boiler containing clothes or other articles to be washed; but steam, on coming in contact with the contents of the tank, rapidly condenses, and thereby its ability to produce agitation is lost; and, furthermore, by the action of steam, many articles, such as linen or white cotton goods, are liable to turn yellow, and thereby the washing process is impeded.

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

The combination, in an apparatus for washing clothes or other articles, of a tank having an open mouth and a false bottom for supporting the articles to be washed, with an air-forcing apparatus and an air-heating pipe, one end of which communicates with the tank at its bottom below the false bottom, while the other end communicates with the air-forcing apparatus, substantially as described, whereby the articles to be washed, after the same have been soaked in water, can be exposed to a current of atmospheric air, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of February, 1875.

HAMILTON E. SMITH.

Witnesses:

W. HAUFF,
JAMES L. NORRIS.