

S. S. Fitch,
Apparatus for Cooking, Washing, &c
N^o 51,164. Patented Nov. 28, 1865.

Fig 1.

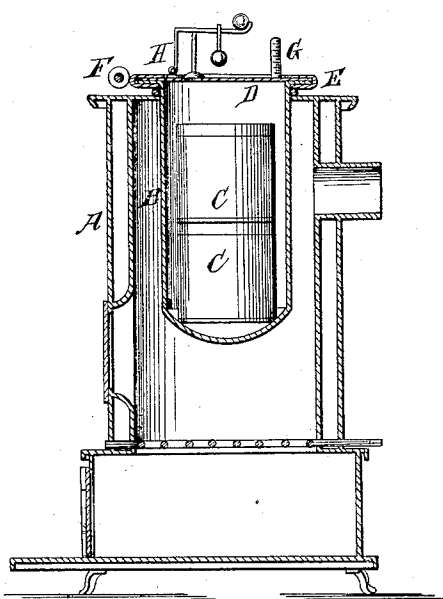
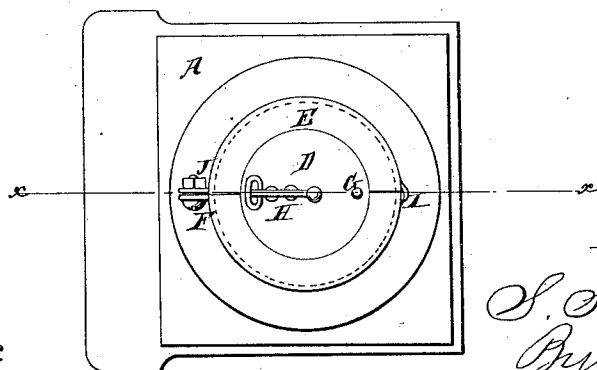


Fig 2.



Witnesses:
Thos. Tusch
Wm H. Conington

Inventor.
S. S. Fitch
By [Signature]

UNITED STATES PATENT OFFICE.

SAMUEL S. FITCH, OF NEW YORK, N. Y.

APPARATUS FOR COOKING, WASHING, &c.

Specification forming part of Letters Patent No. 51,164, dated November 28, 1865.

To all whom it may concern:

Be it known that I, SAMUEL SHELDON FITCH, M. D., of the city, county, and State of New York, have invented a new and useful Improvement in Apparatus for Cooking, Washing, and Bleaching; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional elevation of a stove and a cooking apparatus by means of which I propose to illustrate my invention, the line *x*, Fig. 2, indicating the plane of section. Fig. 2 is a plan.

Similar letters of reference indicate like parts.

This invention consists in a new apparatus for cooking food, washing, or bleaching, where in the substances to be cooked, washed, or bleached are inclosed within cans or vessels and treated in a steam-tight vessel or boiler under a heat exceeding that which marks the boiling of water in the open air, and in such a way as to shut off the access of atmospheric air and the escape of vapor or volatile matter and aroma, in cooking, from such substances.

A designates a stove, through an opening in whose top I insert a boiler, B. The boiler hangs suspended on the top plate of the stove by means of a flange on the upper part of the boiler.

The cover D of the boiler is secured thereon by means of a clamp, E, formed in two semi-circular parts, which parts are hinged at I on one side and united to each other at the opposite side by means of a screw-bolt, F, and nut J. The clamp E, when closed, constitutes an annulus made with two parallel rings whose outer circumferences are united, but whose inner edges are open. The clamp can therefore be made to embrace the flange of the boiler and also its cover, and when it is properly drawn together and secured by the bolt F and its nut, or by other suitable fastenings, the cover D is not only held in place and confined against the pressure caused by the heat in the boiler, but the escape of the hot water, &c., is also prevented. If, however, the contact of the cover

D with the flange of the boiler and the closure of both their edges within the clamp are not perfect enough to make the joint steam-tight packing may be used for that purpose, as well between the cover and the flange as in the interior of the clamp itself.

The cover D is provided with a safety-valve, H, and also with a tube for a gage of temperature, the place of the tube being indicated at G. These appliances—to wit, means of securing the cover of the boiler and of making it tight, and of fitting a temperature-gage and safety-valve to the boiler—may be of any proper form; and since they are well known and within the skill of competent mechanics, it is not necessary that I describe them any further.

C C designate cans, each with its proper cover, which are placed within the boiler when I wish to use them. These cans are intended to contain the articles to be cooked when they are to be kept from contact with the sides of the boiler or from contact with the water and steam in it.

The manner of proceeding to use the apparatus above described is as follows: The articles to be cooked or otherwise treated are placed in the cans, (one or more,) which are then placed in the boiler B, which is then filled full with water, or as nearly full as I choose. The cover D is then secured by means of the clamp, or by other suitable devices, whose strength must be more than equal to the pressure which may be attained in the boiler. Heat is now applied to the boiler, and the water therein is heated up to any temperature I choose above 212° of Fahrenheit's thermometer.

The boiler and its appurtenances should be made of strength sufficient to resist any pressure to which it may be subjected—say four hundred pounds to the square inch, more or less. It may be made of copper, wrought-iron, or cast-iron, or of any other suitable material.

The cans need not be supplied with water, nor with any other liquid, unless it be for the purpose of supplying a lack of moisture to the article under treatment, and their covers need not be fastened thereon, because the pressure of the liquid in which they are immersed will keep their covers in place. The safety-valve and temperature-gage will indicate both the

degree of heat attained in the boiler and the pressure, and the furnace or stove can be regulated accordingly.

In order to cook different substances after this process it is necessary to subject them to a heat varying from 213° Fahrenheit to 400°, or over, according to the toughness of the fiber and the character of the article; but I have found that a few minutes only are required in the process—as, for instance, in cooking poultry which has attained a considerable age, fifteen minutes are enough to cook it perfectly at a heat, say, of 350°, more or less.

It is evident that any kind of stove or furnace may be used in carrying out my invention, and it is not necessary that the boiler be set within a combustion-chamber or a fire-chamber; but it may be exposed to the action of heat in any other manner.

It will be observed that articles treated after this process are sealed up, as it were, by the pressure of the liquid in which they or their inclosing-cans are immersed during the process, so that the atmospheric air has not access to them, neither has the liquid or steam of the boiler access to them, nor are the volatile matters contained in them allowed to escape.

In using my process for cooking food the aroma and the nutritious and volatile parts of the several articles are therefore retained while they are under treatment.

It will also be observed that although this treatment brings the articles to be cooked into a proper condition as food in a shorter time than by any other process now known, yet if the treatment is kept up longer than is necessary they are not injured thereby.

The length of time required for articles of different characters, organic and inorganic, will be determined by the experience and judgment of the operator.

In the process of washing or bleaching clothes I prepare them by the addition of alkaline, saponaceous, or other suitable substances, when required, and place them in cans, and subject them for a suitable length of time to the same heat in water as I do in cooking food, heretofore described.

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

The combination, with the steam-tight boiler B, of the can or cans C therein, for containing the food or other matter under treatment, substantially as and for the purpose described.

The above specification of my invention signed by me this 7th day of August, 1865.

SAMUEL SHELDON FITCH.

Witnesses:

M. M. LIVINGSTON,
J. VAN SANTVOORD.