

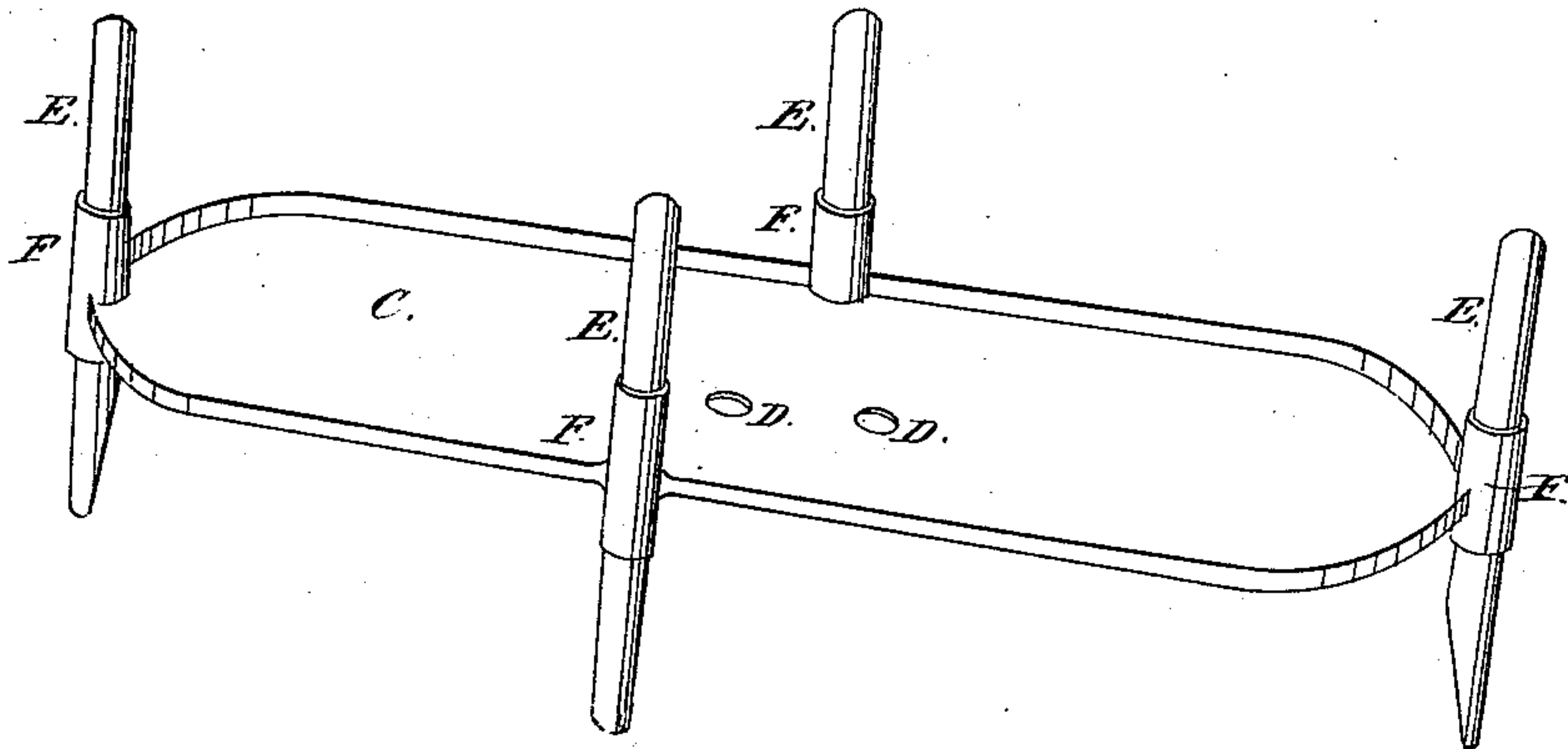
*S. Buynitzky,*

*Wash Boiler,*

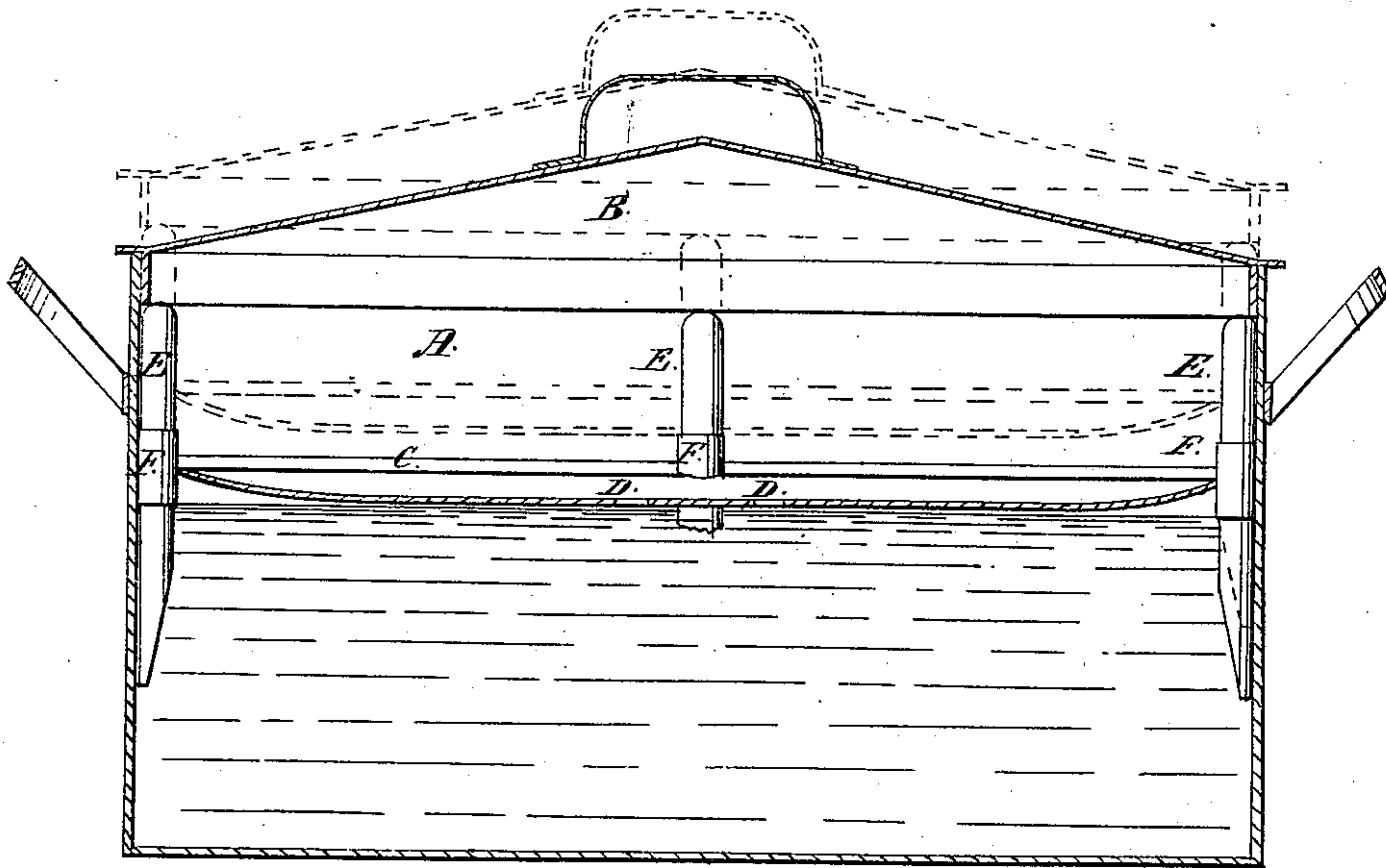
*N<sup>o</sup> 79,310.*

*Patented June 30, 1868.*

*Fig. 1.*



*Fig. 2.*



*Witnesses:*  
*R. S. Larrar.*  
*A. S. Van Vranken*

*Inventor:*  
*Stephen Buynitzky*  
*By his atty*  
*R. S. Larrar*

# United States Patent Office.

STEPHEN BUYNITZKY, OF ST. PETERSBURG, RUSSIA.

*Letters Patent No. 79,310, dated June 30, 1868.*

## IMPROVEMENT IN WASH-BOILERS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, STEPHEN BUYNITZKY, of St. Petersburg, in the Empire of Russia, have invented a new and useful Improvement in Wash-Boilers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents my invention detached from the boiler.

Figure 2 is a vertical longitudinal section through a wash-boiler, with my invention attached, the whole being in operation.

My invention consists in a plate, or its equivalent, to be placed within the boiler, and upon the clothes contained therein, and constructed so that, as the clothes are raised up by the accumulation of steam within their folds, said plate will be raised up with the clothes, and will raise the cover from the sides of the boiler, so as to admit a current of cold air to enter.

The advantages secured are, first, to make the boiling uniform throughout the boiler; second, to cause a more thorough penetration of the fabrics by the boiling suds; third, to effectually prevent the "boiling over" of the water within the boiler.

That others may fully understand my invention, I will particularly describe it.

A is a common wash-boiler, with a cover, B, fitted with an internally-projecting flange in the usual way.

C is a plate of metal, or other suitable material, corresponding in shape to the horizontal section of the boiler, but of such comparative size that when in place within the boiler, a space of from one-half of one inch to one inch will exist between the edge of said plate and the side of the boiler all around. In order to secure sufficient stiffness of the plate C, to enable it to withstand the amount of handling to which it will be subjected, I make it with a surrounding flange when it is constructed of metal, and such other corrugations as may be found to be necessary to attain the end specified. If the plate should be made of thick metal, or of wood or other material which may be light and stiff, the flange may be dispensed with. I think it advantageous, however, that the top surface of the plate C should be made concave, and the bottom surface correspondingly convex, so that the boiling water rising below may be deflected towards the sides, and as it passes over the edge and upon the top of plate C, it may then run down to the centre thereof, and descend through the orifices D to the lower part of the boiler.

I think, however, that no material change in the operation of my invention occurs when the position of my plate is reversed and the convex side is placed uppermost, so that the streams ascend through the orifices D, or their equivalents, and again descend over the edges of the plate.

The guides E E are preferably made of wood, and are inserted through loops F F, soldered to the edge of the plate C. The guides E are of sufficient length, and fit against the sides of the boiler with sufficient accuracy to cause the plate to rise or fall uniformly at all points of its surface, and their lower ends are bevelled, as shown, so that when the plate is placed in position, the lower ends of the guides will pass easily down between the clothes and the sides of the boiler.

The mode of operation is as follows: When energetic boiling begins in the wash-boiler, as ordinarily used, the steam generated is more or less confined by the clothing in the boiler, and is thereby caused to rise up, until the boiler is full and the streams of water are enabled to pass over the side of the boiler. If, however, the cover B is raised so as to admit a stream of cool air to the surface of the boiling mass, the energy of the ebullition will be so far checked as to prevent the boiling over of the water. Hence it is a common practice to remove the cover as soon as any boiling over has occurred.

With my invention all necessity for watchfulness on the part of the attendant is obviated by making my apparatus self-acting to the extent of removing the cover when the boiling has become very energetic, and this is accomplished as follows: When the water begins to boil it is forced upward by the steam confined among the folds of the clothes, and being deflected, passes over the surface of the plate and descends again, to be returned in the same manner, there being always descending streams to supply the place of the ascending ones, and in



my apparatus these streams are in a measure divided, and therefore they act more rapidly and efficiently, but the accumulation of steam will increase, and the mass of the clothes will be expanded as the ebullition increases in intensity, and the plate C will thereby be raised up and the upper ends of the guides E E will come in contact with the cover B, and raise that up also, and as soon as the said cover has been raised sufficiently to admit a current of cold air to the surface of the boiling water, the energy of ebullition will be checked and the plate C will rise no further.

If it is desired that the clothes should be subjected to energetic boiling for a longer time, the attendant may, with the hand, depress the cover and plate to their original position, and the same phenomena will again take place.

I am aware of the patent granted to M. W. Staples, and do not claim any such device, the cover in that case being secured so that it cannot be raised by the raising of the clothes as the boiling progresses.

It is evident that the construction of my invention may be changed very greatly without impairing the principles of its operation, as, for instance, if a grate be employed instead of a continuous plate, and I therefore do not wish to confine myself to the exact details of construction shown and herein described.

Having described my invention, what I claim as new, is—

A loose plate, C, provided with the guides E, or their equivalents, substantially as described, to be placed on the top of the clothes in the wash-boiler, for the purposes set-forth.

STEPHEN BUYNITZKY.

Witnesses:

R. S. TURNER,

R. D. O. SMITH.