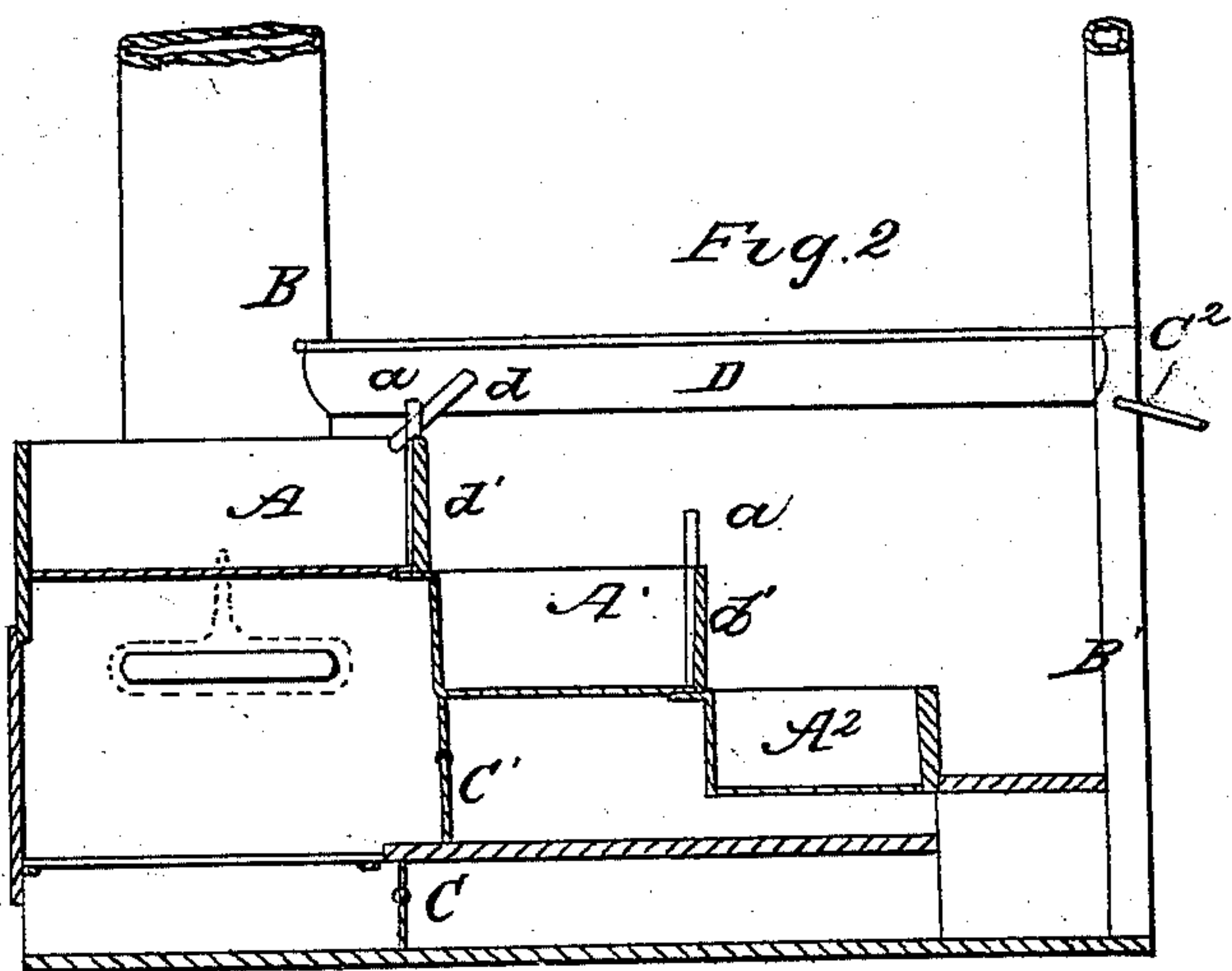
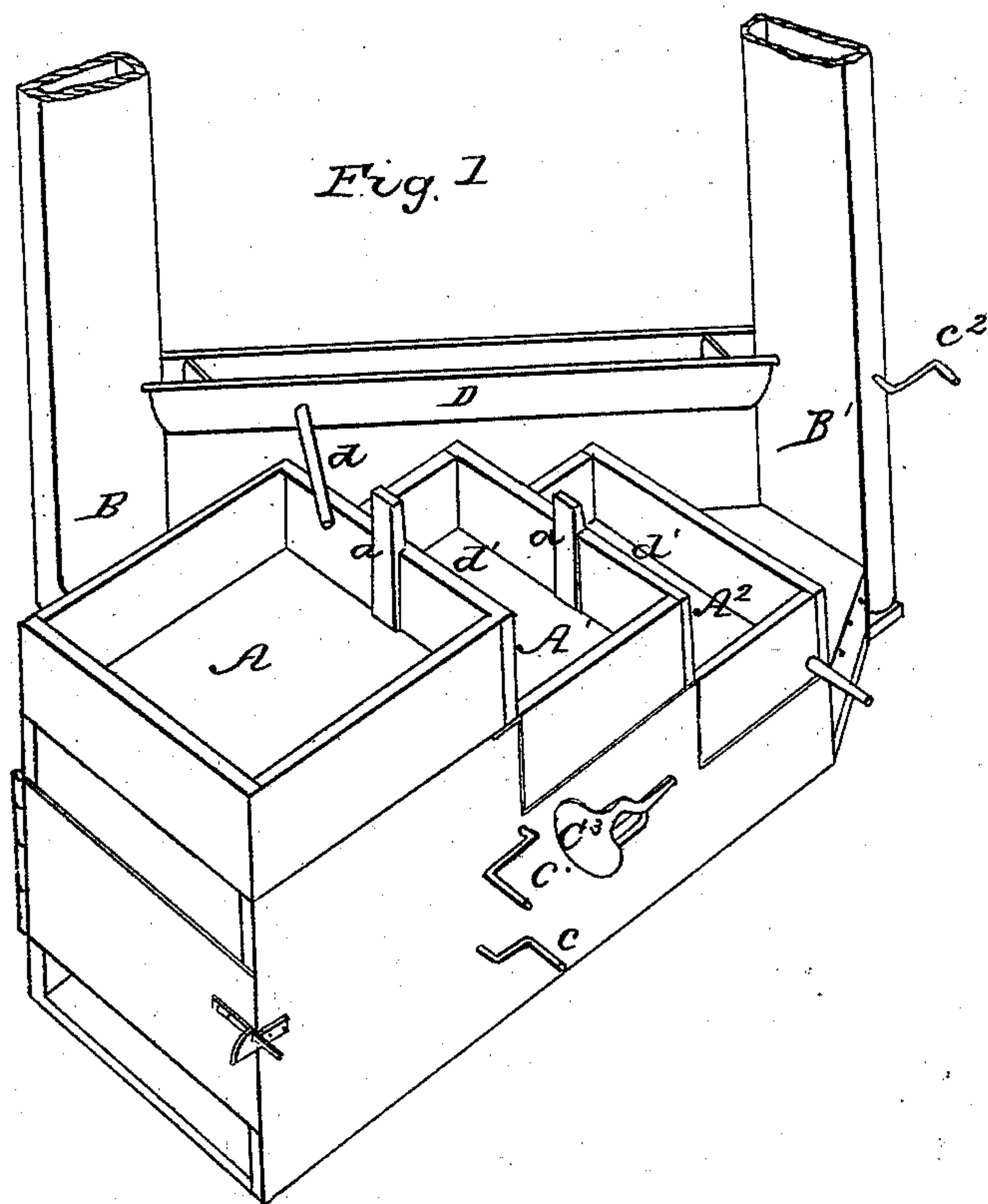


W. H. HENDERSON.  
Sorghum Evaporator.

No. 66,708.

Patented July 16, 1867.



WITNESSES  
S. M. Randolph  
Chas. H. Doyle

INVENTOR  
W. H. Henderson  
Per. S. M. Randolph Atty

# United States Patent Office.

W. H. HENDERSON, OF LITCHFIELD, ILLINOIS.

*Letters Patent No. 66,708, dated July 16, 1867*

## IMPROVED SORGHUM-EVAPORATOR.

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, W. H. HENDERSON, of Litchfield, in the county of Montgomery, and State of Illinois, have invented a new and useful Improvement in Sorghum-Evaporators; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention is for the purpose of economizing fuel, and regulating the heat under each of the boilers, so as to adapt the evaporator to the purpose for which it is intended, and relates to the arrangement of smoke-flues and chimneys and dampers, and to a heating-trough between the chimneys, wherein the fluid is first heated.

To enable those skilled in the art to make and use my improved evaporator, I will proceed to describe its construction and operation.

Figure 1, of the drawings, is a perspective view of the improved evaporator, and

Figure 2 is a sectional elevation of it

In this evaporator there are several boilers or pans, much in the usual form. They consist of the primary boiler A, the defecator A<sup>1</sup>, and the finishing-pan A<sup>2</sup>. There is a chimney, B, leading up from the furnace under the primary boiler, and also another one, B', rising from the farther end of the finishing-pan. Dampers C C<sup>1</sup> C<sup>2</sup>, operated by the cranks c c<sup>1</sup> c<sup>2</sup>, control the currents of heated air and smoke, so as to send them up either B or B', and thus expose either of the pans A, A<sup>1</sup>, or A<sup>2</sup> to the most direct action of the heat, as may be required. A damper, C<sup>3</sup>, in the side of the smoke-chamber, may be used to admit cold air to the bottom of the defecator and finishing-pan. A trough, D, placed between the chimneys B and B', has a hollow bottom, through which the smoke and hot air pass from one chimney to the other, and in their passage heat the raw fluid, which is first placed therein, and conveyed thence to the primary boiler through pipe d. This trough, being of considerable length, acts as a defecator, and the partitions d' remove the scum. There are partition gates a for letting the sirup from one pan to the other.

Having described my invention, what I claim is—

1. The combination and arrangement of the chimneys B B' and their connecting trough D, with reference to the boilers A A<sup>1</sup> A<sup>2</sup>, as described and set forth.

2. The arrangement of the dampers C C<sup>1</sup> C<sup>2</sup> C<sup>3</sup> as described and set forth.

W. H. HENDERSON.

Witnesses:

M. RANDOLPH,  
C. R. PRATT.