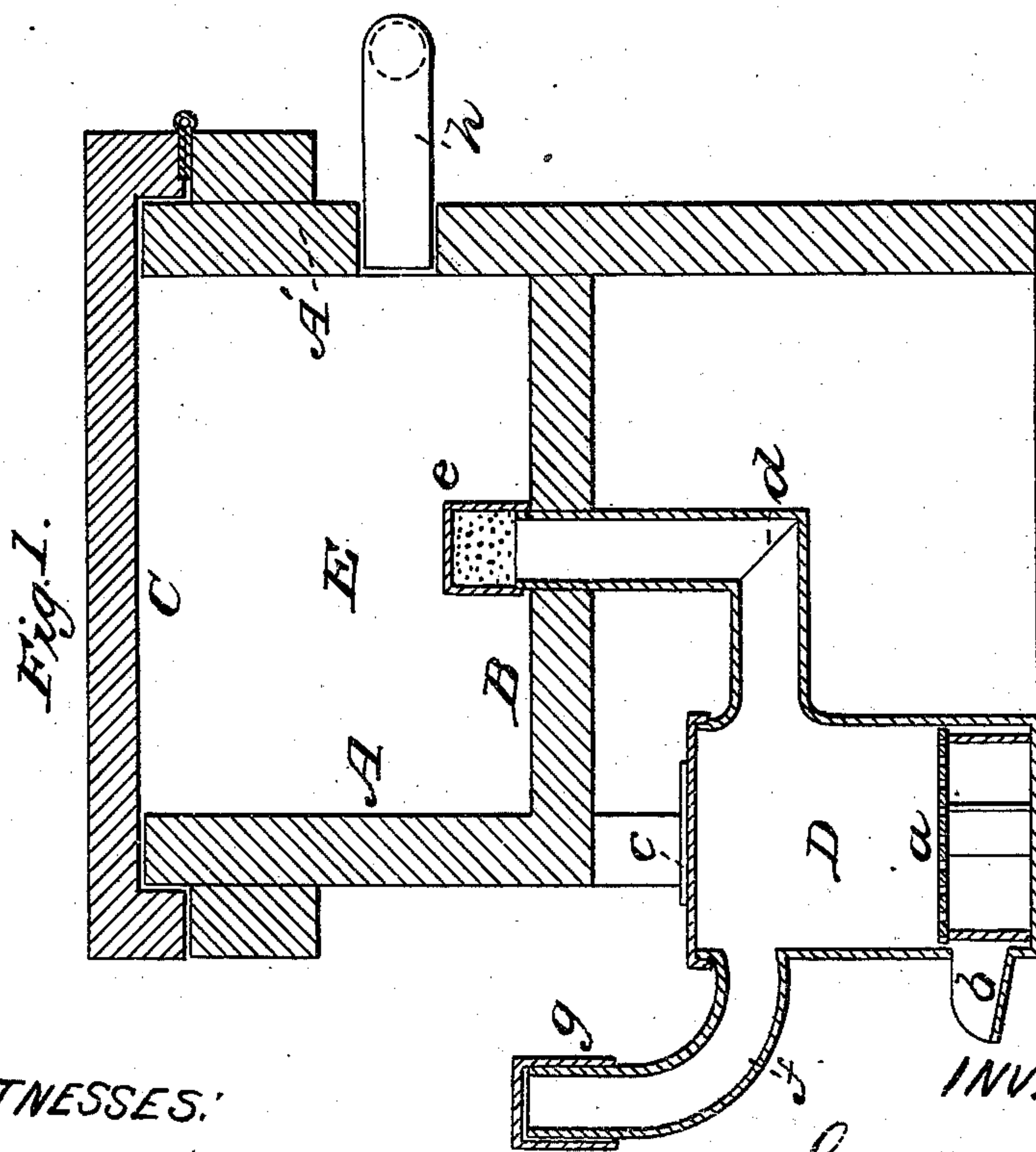
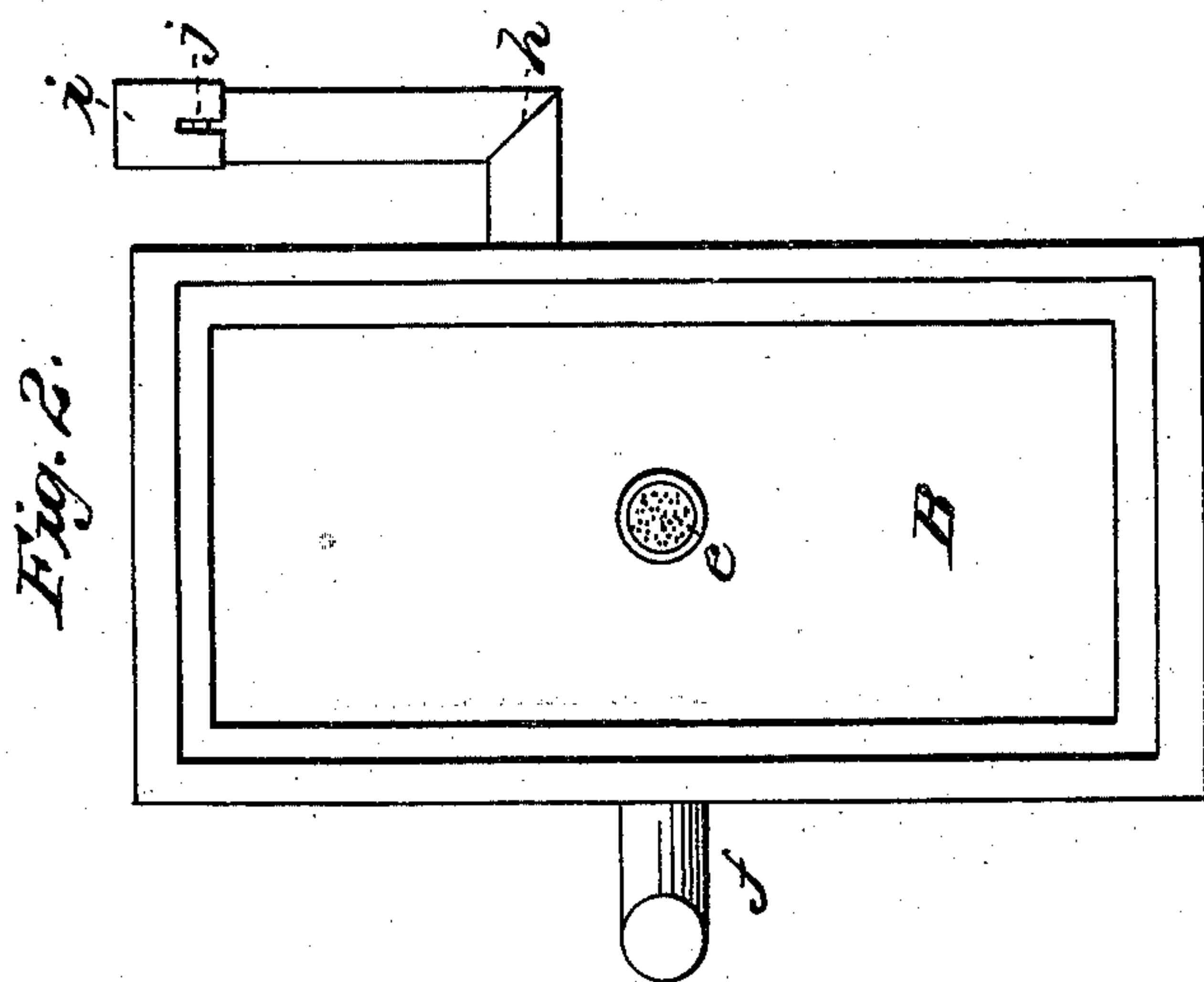


E. A. COMBS.  
Bleaching Apparatus.

No. 79,955.

Patented July 14, 1868.



WITNESSES:

*Geo E Bayler  
& S. Bond.*

INVENTOR:

*Elizabeth A Combs  
By Messrs Bond Atty.*

# UNITED STATES PATENT OFFICE.

ELIZABETH A. COMBS, OF MONROE, WISCONSIN.

## IMPROVED BLEACHING APPARATUS.

Specification forming part of Letters Patent No. 79,955, dated July 14, 1868.

*To all whom it may concern:*

Be it known that I, ELIZABETH A. COMBS, of the village of Monroe, Green county, Wisconsin, have invented a new and useful Bleaching Apparatus; and I do declare that the following is a full, clear, and exact description of the same, sufficient to enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a sectional view, Fig. 2 a top view with the cover C removed.

The object of my invention is to provide a bleaching apparatus which can be used in the house or shop without injury or inconvenience from the detrimental and offensive vapors and odors generated, one which can be conveniently and economically used, and will utilize the greatest possible amount of the bleaching material used.

My apparatus is specially adapted to the use of milliners.

I construct a tight box, about five feet long, three feet wide, and three feet deep. The box is provided with a tightly-fitting cover, C. The back A' and the ends of this box may extend below the bottom B, as shown. The front, below the bottom B, may be wholly open, or an open place may be left at the central portion to receive the fire-pot D. This fire-pot D has a grate, *a*, a short distance from its bottom, and a hearth and opening, *b*. The hearth receives scattering ashes, and through the opening air passes to the fire.

*d* is a tube passing from the fire-pot into the box through a hole in the bottom B.

*e* is a perforated cap placed over the tube *d*, to prevent ashes from passing up into the box, where the articles are placed for bleaching. The fire-pot is provided with a cover, *c*, and also with a tube, *f*, through which brimstone may be poured onto the fire. This tube is provided with a cap, *g*.

A pipe, *h*, passes from the chamber E, which

may be carried into a chimney or out of a window, and through which the surplus gas, vapor, and smoke can pass off. I provide this pipe with a cap, *i*, and damper *j*. The cap can be used when but a small quantity of smoke is made, and the draft can be regulated by means of the damper.

It is not necessary that the ends and sides of the box extend below the bottom B, as shown. Instead thereof the box may be provided with permanent legs, or it may be placed on temporary supports raised from the floor or ground enough to allow the furnace D to be placed under the box.

The furnace may be well under the box, or outside thereof, as may be desired, the pipe *d* being made of proper length. Hooks may be placed on the inside of the cover, on which to hang articles to be bleached, or the box may be provided with slats.

In use the articles to be bleached are placed in the box or chamber E. A suitable fire is made in the pot or furnace D. Brimstone is then added at the proper time. The pipe *d* is inserted into the opening in the bottom B, and through this pipe the smoke from the bleaching material will be all carried into the chamber E. The box being made tight no fumes will escape into the room, but the same will be carried off through the pipe *h*.

This apparatus may also be used for smoking meat, suspending the meat in the chamber E, and using suitable material in the fire-pot D.

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

The fire-pot or furnace D, in combination with the box described, all constructed substantially as and for the purposes specified.

ELIZABETH A. COMBS.

In presence of—

S. W. ABBOTT,  
E. S. ABBOTT.