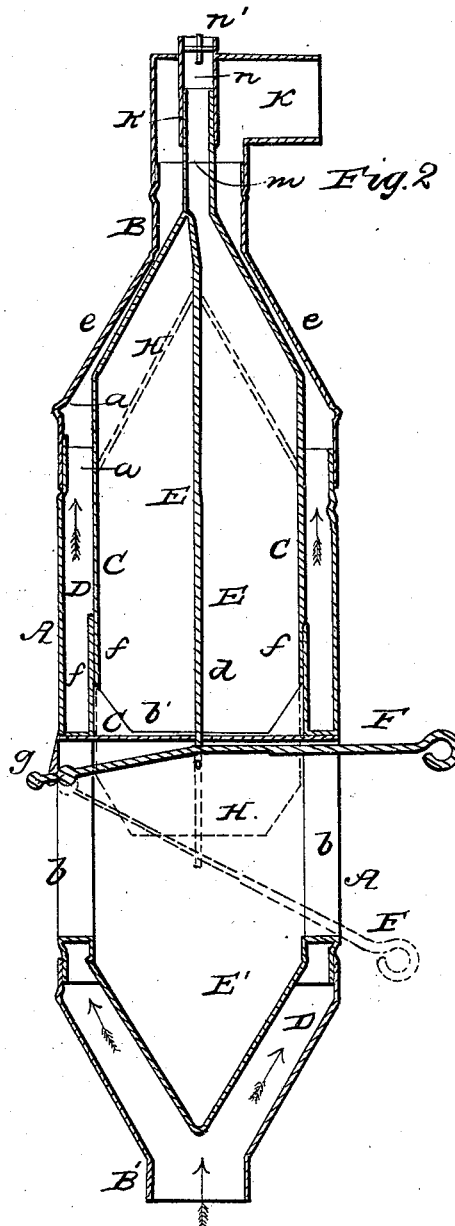
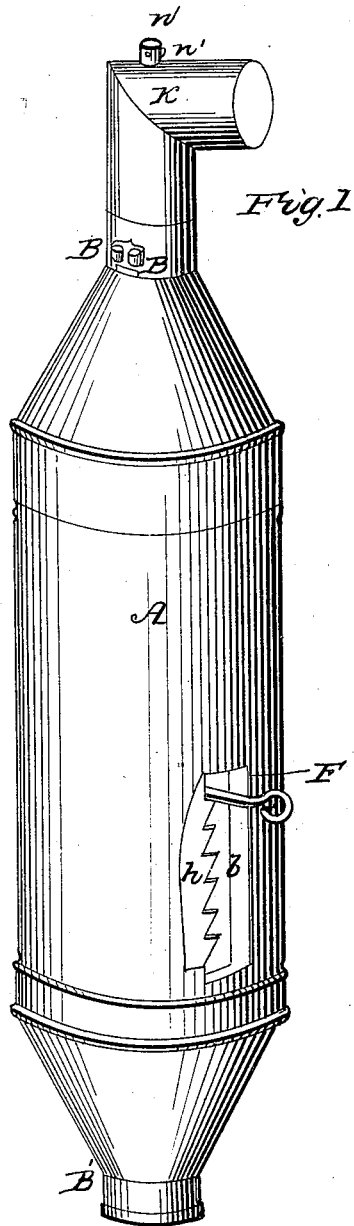


T. ROBERTS.  
Stove Drum.

No. 46,499.

Patented Feb. 21, 1865.



witnesses  
W. H. Burdette  
A. W. M. Clelland

Inventor  
T. Roberts

# UNITED STATES PATENT OFFICE.

THOMAS ROBERTS, OF SHELBY, OHIO.

## IMPROVED STOVE-DRUM.

Specification forming part of Letters Patent No. **46,499**, dated February 21, 1865.

*To all whom it may concern:*

Be it known that I, THOMAS ROBERTS, of Shelby, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Stove-Drums; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the drum. Fig. 2 is a vertical section.

Like letters of reference refer to like parts in the two views.

My improvement relates to a stove-drum constructed with an annular chamber and cone-shaped ends, so arranged that the inner casing can be extended or contracted, increasing or decreasing the radiating-surface, and by which also the draft is regulated.

A represents the outer casing of the drum; B B', the ends with which the stove-pipe is designed to be connected.

C, Fig. 2, is the inner casing, between which and the outside casing there is an annular chamber, D. The inside casing incloses a chamber, E E', with cone-shaped ends, as shown in Fig. 2. Into this chamber, at one end of the drum, are openings *b b*, through the depth of the annular chamber, where the sides and ends of the openings are inclosed. These openings are opposite each other, and between them at the inner ends extends a plate, *b'*, through which the rod *d* passes, forming a guide for the rod as it is moved either way. The inner chamber is formed of two sections E E', the section E sliding into the section, E', as shown at *f f*, the section E' being stationary. The rod *d* extends from the cone end of the section E through the center of that end of the chamber, and is connected to a handle or lever, F, that passes out through the openings *b b*, one end being attached or jointed to a loop, *g*, on one side, and the other end forms a handle, by which it is moved either way, as shown and indicated by the dotted lines F', which moves the end E of the inner chamber, as shown and indicated by the dotted lines H'. The casing of this end or section of the chamber slides inside of the other, as before stated. When the lever is in the position indicated at F', the chamber E E' is contracted, as indicated by

the dotted lines H', and as the lever is moved in the opposite direction the chamber is extended at the end E, narrowing the space at the cone end between the outside and inside casings, as seen at *e e*, until the draft is nearly shut off, and which increases the radiating-surface of the inner chamber the circular area of the distance from *a* to *a'*. The lever F is retained in any desired position, opening or closing the draft more or less by means of the rack *h*. The draft is through the annular chamber D in the direction of the arrows in Fig. 2.

K is an elbow-joint on the end of the pipe B, through the center of the upright part of which extends a tube, *m*, from the upper cone-end of the inner casing, as seen in Fig. 2, that slides into a tube, *n*, which forms a sleeve. This tube is secured to the top of the pipe, and in it is a damper, *n'*, that can be turned from the outside. This arrangement is for the purpose of conveying heat from the inner chamber, E, into a room above, if desired, by having the tube *n* of sufficient length, and the heat can at any time be shut off by the damper *n'*.

B'' is a damper in the pipe B, by which air can be admitted into the pipe for the purpose of driving out all the smoke and gas that may be in the pipe when the draft is shut off, as before described.

The practical advantages of this drum consist in the great amount of heat obtained from it by means of the annular chamber D, together with the outside and inside casings, that form so much surface from which heat is radiated, coming out from the inner chamber through the openings *b* as well as from the outside, and also to the manner of conveying heat into a room above through the tube *n*.

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

The cone end chambers or sections E and E', annular chamber D, and the lever F, in combination with the tubes or pipes *m* and *n*, damper B'', and drum, when arranged and operating conjointly, substantially as and for the purpose set forth.

THOS. ROBERTS.

Witnesses:

W. H. BURRIDGE,  
A. W. McCLELLAND.