

L. J. ATWOOD.

Lamp.

No. 80,111.

Patented July 21, 1868.

Fig. 1.

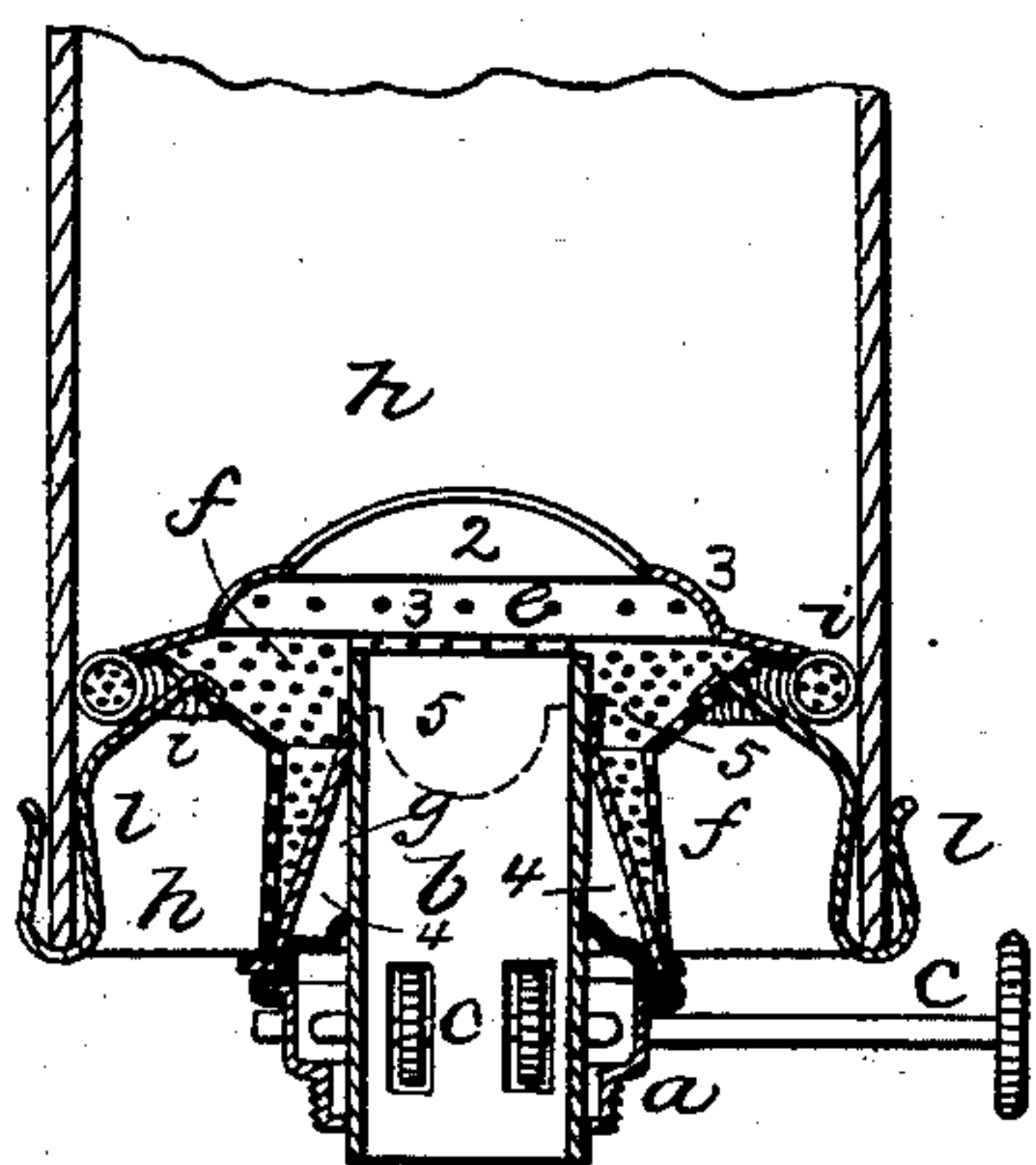


Fig. 3

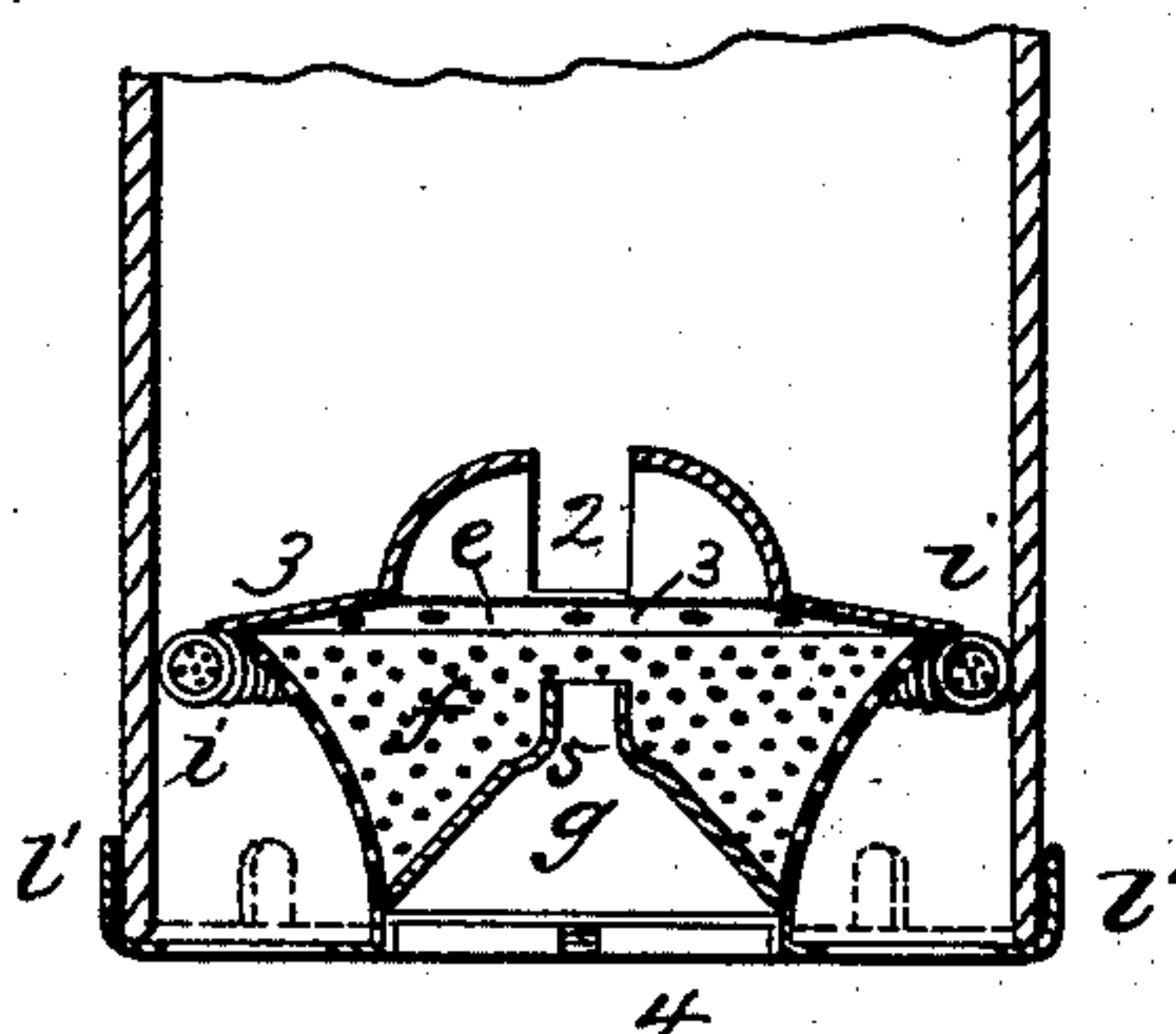
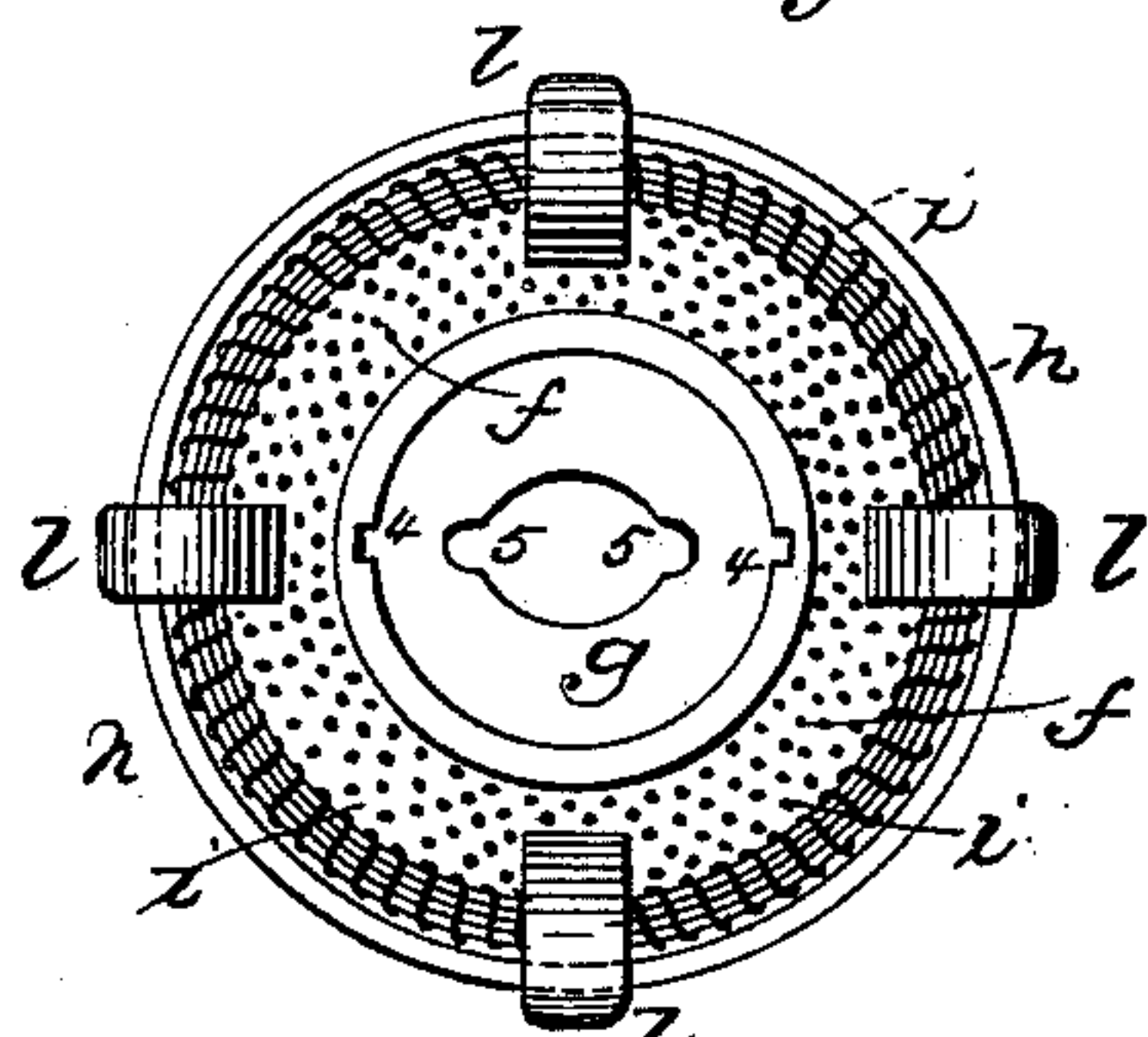


Fig. 2



Witnesses  
Geo D Walker  
Chas Smith

Inventor  
Lewis J Atwood  
Per L M Russell  
Atty



# UNITED STATES PATENT OFFICE.

L. J. ATWOOD, OF WATERBURY, CONNECTICUT, ASSIGNOR TO HIMSELF AND HOLMES, BOOTH & HAYDENS, OF SAME PLACE.

## IMPROVEMENT IN LAMPS. *REISSUED*

Specification forming part of Letters Patent No. 80,111, dated July 21, 1868.

*To all whom it may concern:*

Be it known that I, LEWIS J. ATWOOD, of Waterbury, in the State of Connecticut, have invented, made, and applied to use a certain new and useful Improvement in Lamps; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a vertical section of the said improved lamp. Fig. 2 is an inverted plan of the removable chimney-holder and draft-regulator, and Fig. 3 is a section of a modification in the shape of the foraminous portion of the draft-regulator and in the chimney-holder.

Similar marks of reference denote the same parts.

I make use of a draft-plate within the glass chimney, of a character corresponding generally with that shown in Letters Patent granted to me January 21, 1868, and October 13, 1863.

My present improvement consists in a draft-regulator sitting within the lower end of the glass chimney, said draft-regulator consisting of a draft-plate with a flame-slot and springs around its edges, in combination with a foraminous inclosure below the draft-plate and within the chimney, and I employ a peculiar coupling to connect the chimney-holder and ratchet-cap, and combine with the draft-plate spring chimney-clamps acting inside and outside the chimney. The foraminous inclosure regulates the supply of air to the flame. The lower part of the glass chimney shields the same from sudden currents of air, and the said glass chimney, being exposed at its base to the action of air and but little acted upon by heat, can be freely handled in removing the draft-regulator from the wick-tube to give access to the wick in lighting or taking a light from said wick.

In the drawings, *a* is the screw for attaching to the reservoir. *b* is the wick-tube; *c*, the wick-raiser; and *d*, a cap surrounding the wick-tube, and, with the portion *a*, forming an inclosure for the ratchet or wick-raiser *c*.

The draft-regulator is formed of the draft-plate *e*, in which is a flame-slot, 2, and the edge of said draft-plate is provided with a helix, *i*, of wire, as in my aforesaid patent of January, 21,

1868; or any other desired internal spring chimney-clamp might take the place of this helix, if desired. I also perforate the draft-plate *e* with air-holes at 3 to admit an external draft to the flame above the flame-slot.

The foraminous casing or inclosure *f*, extending from the draft-plate *e* to the burner-coupling *g*, may be conical or flaring or other suitable shape to allow the necessary air-space between the same and the interior of the lower part of the chimney *h*. I have shown different shapes to this casing *f* in Figs. 1 and 3.

The burner-coupling *g* is made of a diameter at its base to set upon the cap *d*, at which point I form one or more notches in the said coupling *g* as at 4, taking corresponding projections upon said cap *d* or the reverse, the object of these being to prevent strain coming upon the wick-tube to twist the same if the draft-regulator is taken hold of in screwing in or unscrewing the burner from the reservoir. The coupling *g* is tapered sufficiently to direct the draft-regulator to the right point relatively to the wick-tube when said draft-regulator is placed thereon, and at the sides of the aperture in this tapering coupling through which the wick-tube passes I form the concave clips 5 5 to take the edges of the wick-tube and form a sufficient friction to hold said draft-regulator in place upon the wick-tube or burner while being transported. The chimney passes down outside the draft-plate and surrounds the entire draft-regulator, and is supported at its lower end by the hooks *l l*, Figs. 1 and 2, suspended from the under side of the draft-plate or from the foraminous casing, or formed as a ring chimney-holder, *v*, as in Fig. 3. The hooks *l l* form a spring chimney-holder that clamps the chimney both inside and outside, and hence secures the same very reliably, accommodating slight variations. The lower part of the chimney being exposed on both sides to the free action of air does not become heated, as in burners where the chimney rests upon the deflector or upon a perforated draft-regulator, or other partially-closed support.

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

1. The draft-plate *e*, formed with a flame-slot and springs around its edges, in combination with a foraminous casing that extends from

said draft-plate to the coupling *g* or ratchet-cap *d*, substantially as set forth.

2. The coupling *g*, removable from the wick-tube *b* and ratchet-cap *d*, in combination with the foraminous casing *f*, draft-plate *e*, spring *i*, and chimney-holder *l*, substantially as set forth, whereby the entire draft-regulator and chimney can be removed from the wick-tube or ratchet-cap and replaced, as specified.

3. The coupling *g*, concave clips 5, and notch 4, in combination with the wick-tube *b* and ratchet-cap *d*, substantially as and for the purposes set forth.

4. The spring-hooks *l*, Figs. 1 and 2, receiving and sustaining the chimney and clamping said chimney both inside and outside, in combination with the draft-plate *e* and spring *i*, as and for the purposes specified.

In witness whereof I have hereunto set my signature this 21st day of March, A. D. 1868.

L. J. ATWOOD.

Witnesses:

JOSIAH McWHINNIE,  
JOSEPH A. BUNNELL.