

(No Model.)

2 Sheets—Sheet 1.

L. W. LEEDS.
GAS STOVE.

No. 421,941.

Patented Feb. 25, 1890.

Fig. 2.

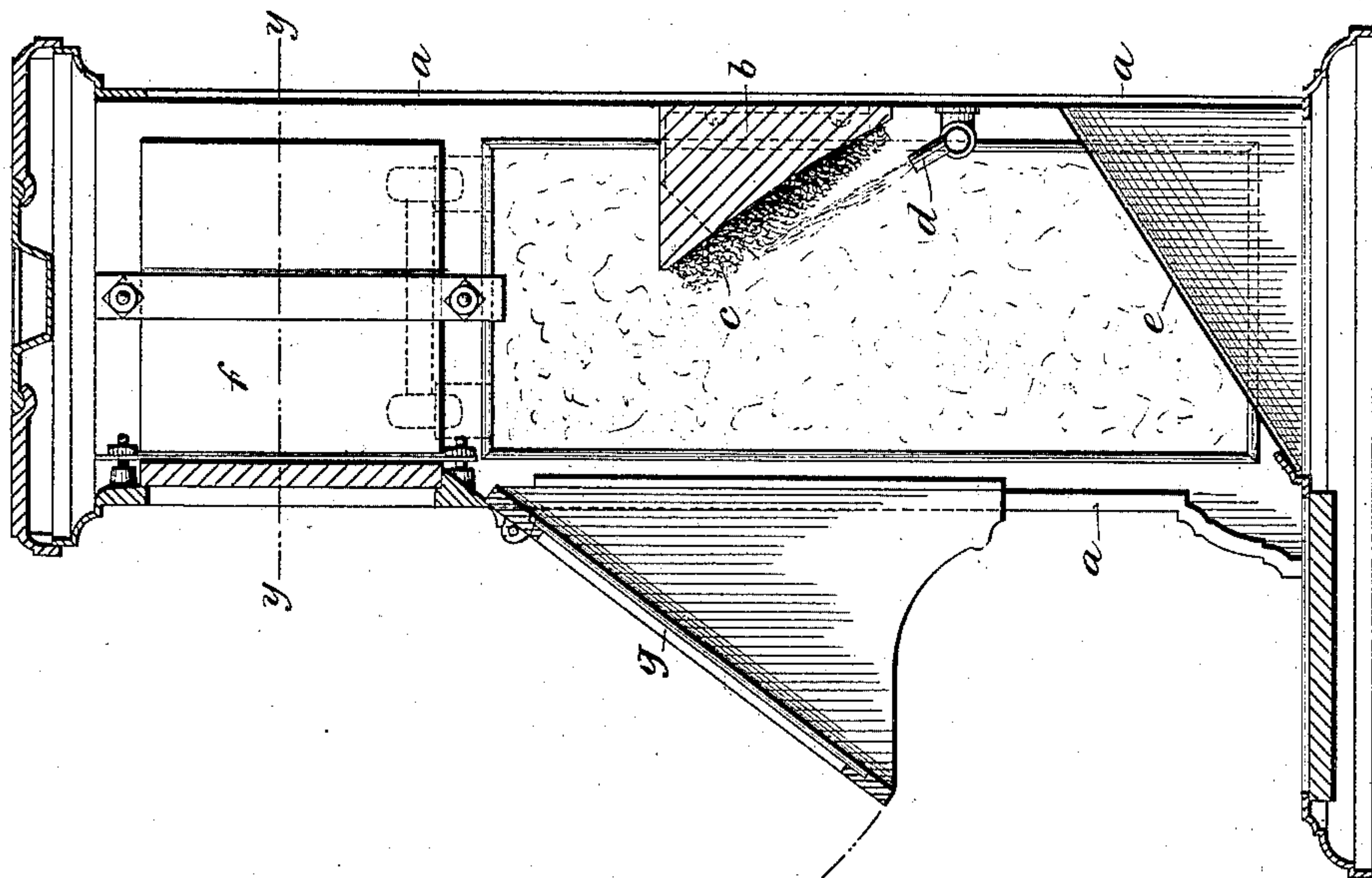
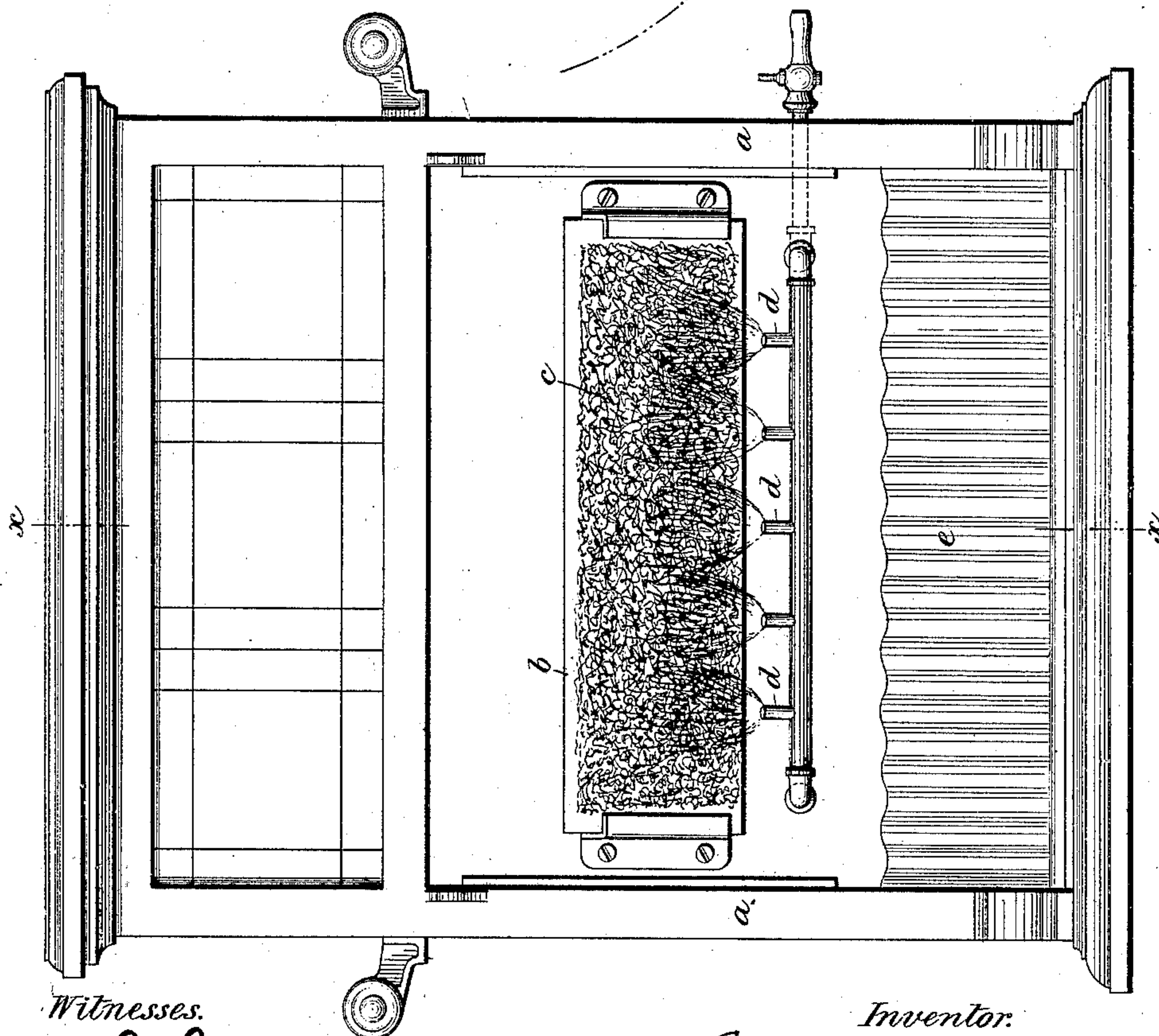


Fig. 1.



Witnesses.

Philip M. Inshee
Allen Jones

Inventor.

Lewis W. Leeds

(No Model.)

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Fig. 3.

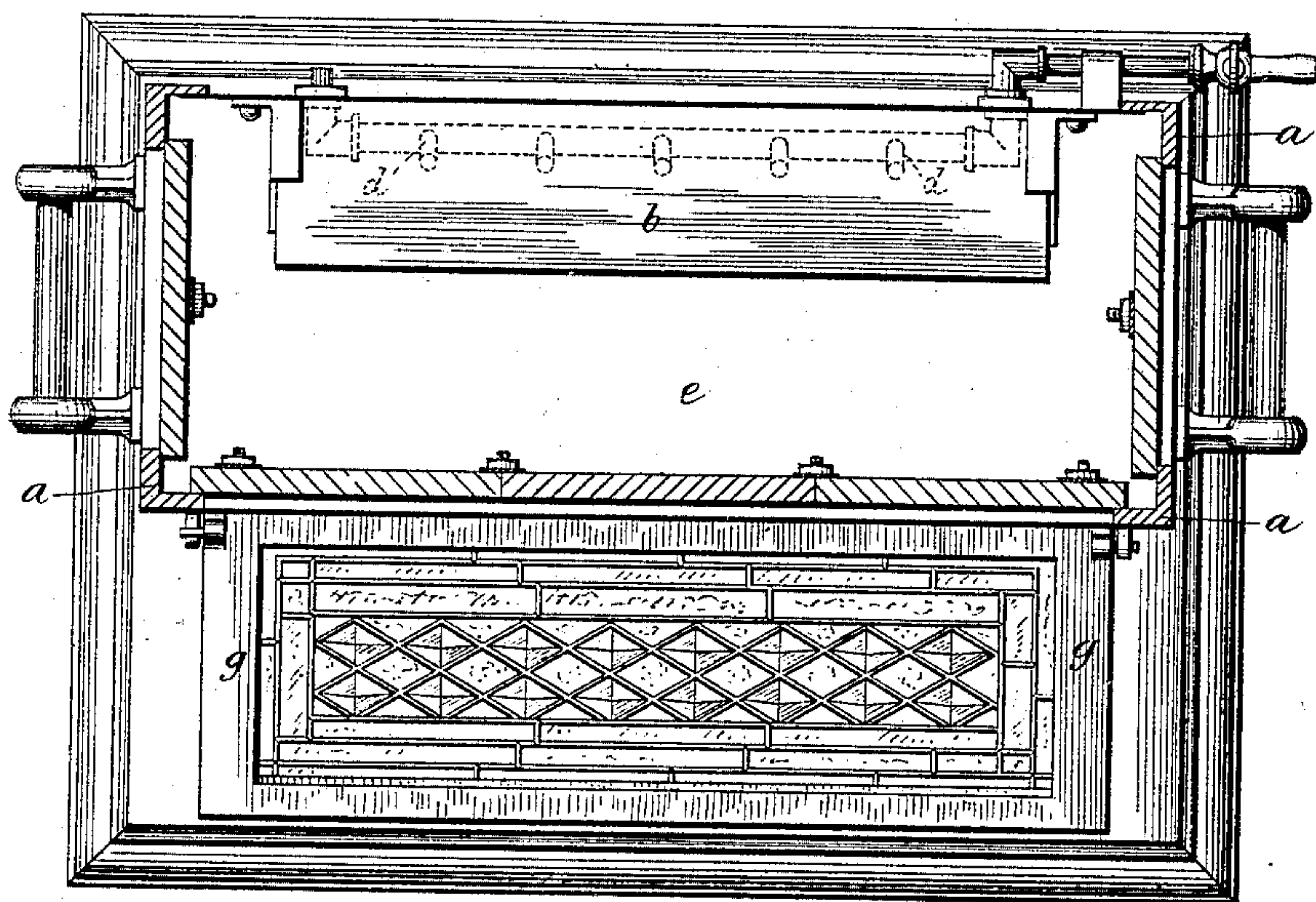
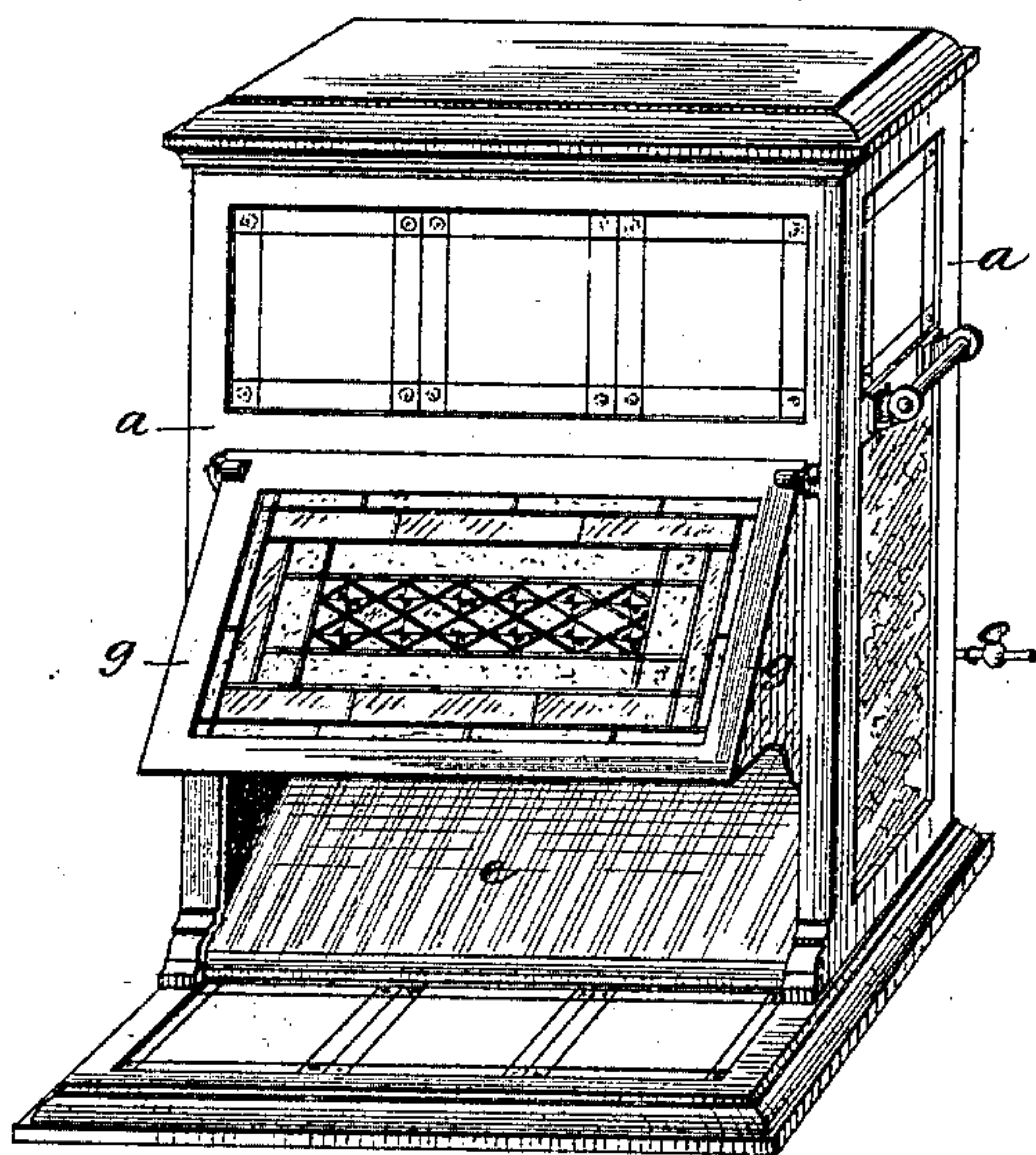


Fig. 4.



Witnesses.

Philip M. Justice
Alfred Jones

Inventor.

Lewis W. Leeds

UNITED STATES PATENT OFFICE.

LEWIS WALKER LEEDS, OF LONDON, ENGLAND.

GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 421,941, dated February 25, 1890.

Application filed April 9, 1889. Serial No. 306,580. (No model.) Patented in England April 29, 1886, No. 5,841, September 20, 1886, No. 11,930, and January 15, 1887, No. 668; in Belgium May 8, 1886, No. 73,038, and September 29, 1886, No. 74,668; in France May 6, 1886, No. 175,951; in Canada April 26, 1888, No. 29,016, and in Luxemburg December 18, 1888, No. 1,065.

To all whom it may concern:

Be it known that I, LEWIS WALKER LEEDS, a citizen of the United States, residing at Old Jewry, in the city of London, England, have
5 invented a certain new and useful Improvement in Gas-Stoves, (for which I have obtained Letters Patent in Great Britain, No. 5,841, dated April 29, 1886, No. 11,930, dated September 20, 1886, and No. 668, dated January
10 15, 1887; in Belgium, No. 73,038, dated May 8, 1886, and No. 74,668, dated September 29, 1886; patent of addition in France, No. 175,951, dated May 6, 1886, No. 175,951, dated September 28, 1886; patent of addition in Canada,
15 No. 29,016, dated April 26, 1888, and in Luxemburg, No. 1,065, dated December 18, 1888,) of which the following is a specification.

This invention relates to what are known as "gas-stoves" which are employed for heating
20 purposes.

The invention consists of the arrangement and combination of parts hereinafter more fully set forth, whereby the luminous flame from an ordinary burner may be employed.

25 Prior to my invention the Bunsen or atmospheric burner had been universally employed for the practical heating of any solid object, as it has been deemed impossible to use the ordinary luminous flame for this purpose,
30 owing to the rapid formation and deposit of carbon upon any solid body placed in the path of the flame. For this reason where luminous flame has heretofore been used for heating purposes it has generally been employed with a simple reflector which will catch
35 and reflect a certain part of the heat and light. Now by my invention not only is the heat and light reflected, but the heat is also radiated in a downward direction, and thus
40 it is obtained at the floor or level where it is most needed; and in order that others skilled in the art may be able to practice my invention reference is made to the accompanying drawings, which form part of this specification, and in which—
45

Figure 1 is a front elevation of a stove with the hood removed. Fig. 2 is an elevation on the line $x x$ of Fig. 1. Fig. 3 is a plan view

on the line $y y$ of Fig. 2; and Fig. 4 is a perspective view, on a smaller scale, of a complete
50 stove.

Attached to the frame-work a is a refractory block b , of asbestos, fire-brick, or like material, carrying on its face floss or fibrous asbestos c , beneath which are a series of ordinary
55 gas-burners d , arranged at such an angle and distance from the face of block b that when the gas is ignited the luminous flame will travel or "lick" up the asbestos and heat it practically to incandescence. The blue or
60 center part of the flame should not impinge on the fibrous facing, or carbon will be deposited. Much of the heat will be radiated from said block in a downward direction to the floor or to the reflector e , which radi-
65 ates and reflects both heat and light into the apartment. The balance of the heat and the products of combustion pass up into the top or chamber f , the walls of which act as radiating-surfaces.
70

No exhaust or discharge pipe is necessary for such a stove, as there is approximately perfect combustion and no more smell than that caused by other ordinary gas-lights burning in the open air. When, however, it is de-
75 sired to have a special discharge for the products of combustion, as is sometimes the case with the ordinary gas-lights of a room, a discharge may be provided.

By using the ordinary luminous flame I am
80 able to obtain the value of the direct illumination, and consequently may employ various colored or figured glass in the hood g , and also at the sides and in the top chamber; but where top illumination is desired I sus-
85 pend the asbestos and give it a glass or transparent backing, as described in another application for Letters Patent, Serial No. 256,553, filed November 30, 1887.

What I claim, and desire to secure by Let-
90 ters Patent, is—

1. In a gas-stove, the combination of a refractory block having a facing of finely-divided refractory material and an ordinary gas-burner adapted to give a luminous flame,
95 the relation of the burner to refractory back

being such that the luminous portion of the flame, but not the blue or central portion thereof, shall be caught by the refractory block, substantially as and for the purpose set forth.

5 2. In a gas-stove, the combination, with a refractory block having a facing of finely-divided refractory material, of an ordinary gas-burner adapted to give a luminous flame, the relation of the burner to the refractory block
10 being such that the luminous portion of the flame, but not the blue or central part thereof, shall be caught by the refractory block, and a heat-chamber closed at the top and adapted to receive the products of combustion,
15 substantially as and for the purposes set forth.

3. In a gas-stove, the refractory block, an ordinary gas-burner adapted to give a luminous flame and arranged, as described, below the said block, and the chamber surrounding the flame having translucent sides, substantially as set forth. 20

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LEWIS WALKER LEEDS.

Witnesses:

HERBERT E. DALE,
T. F. BARNES.