

(No Model.)

J. LAMB.  
STOVE.

No. 495,555.

Patented Apr. 18, 1893.

Fig. 2.

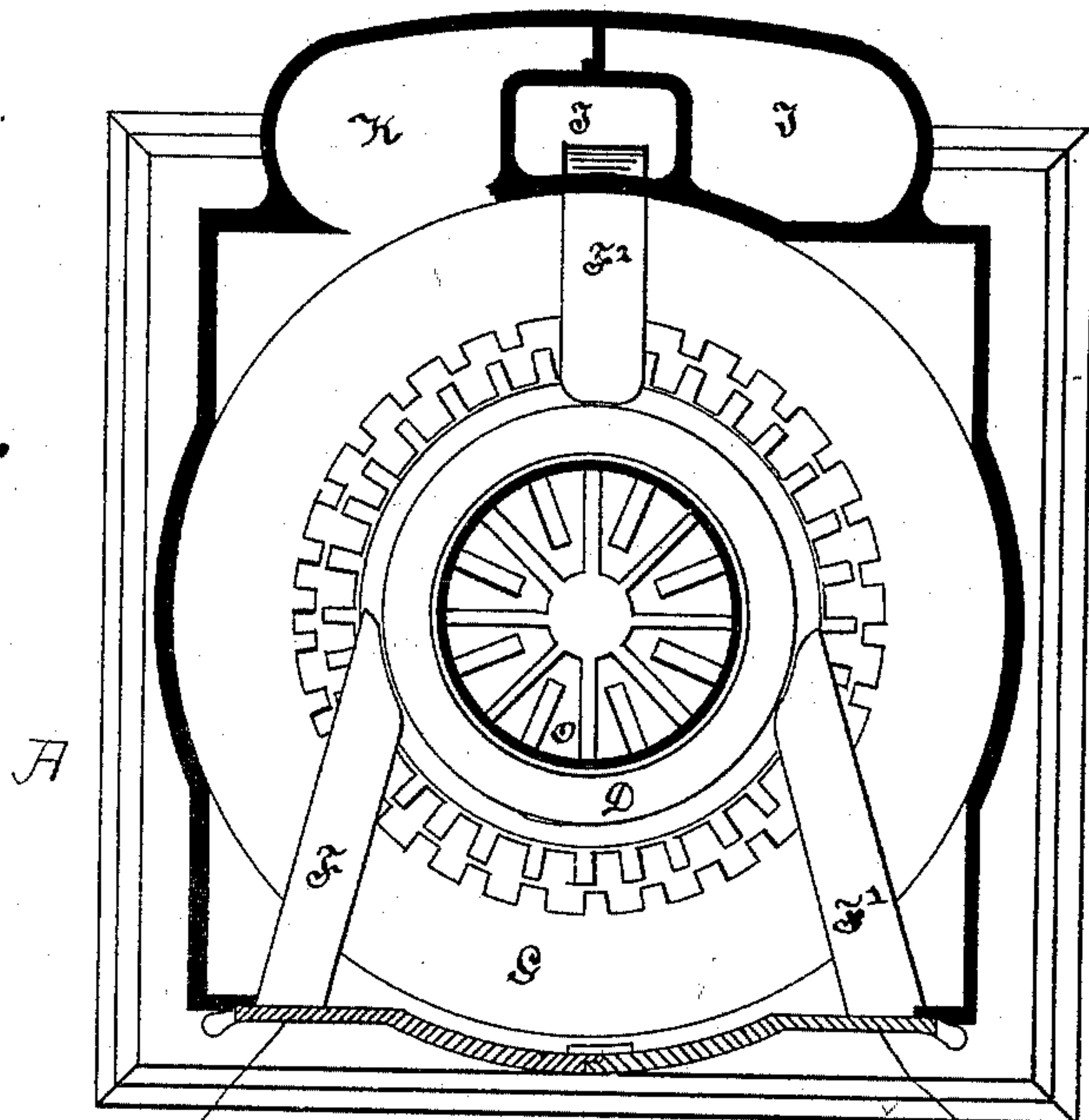
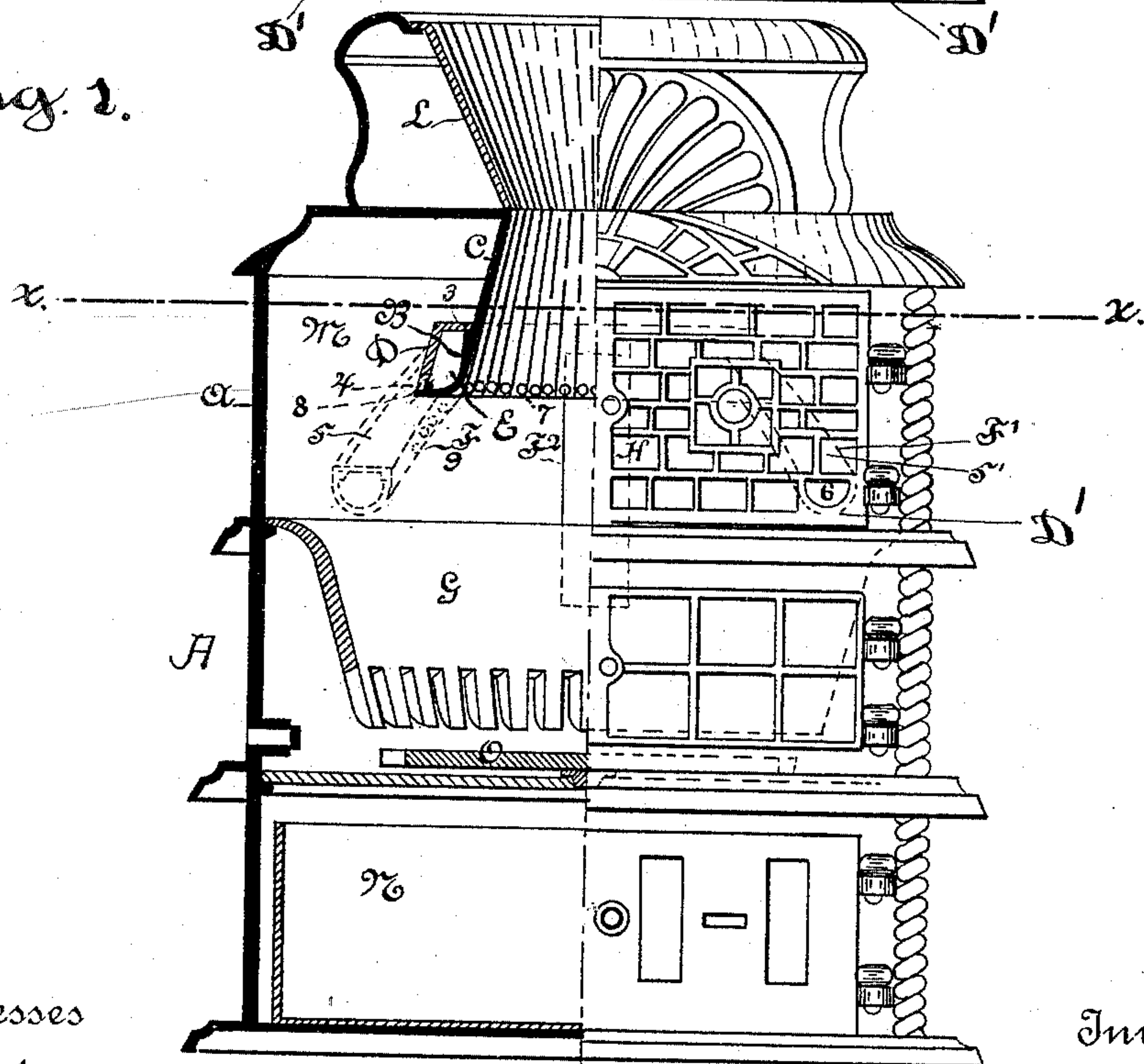


Fig. 1.



Witnesses

A. Goodfellow—  
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# UNITED STATES PATENT OFFICE.

JAMES LAMB, OF DETROIT, MICHIGAN.

## STOVE.

SPECIFICATION forming part of Letters Patent No. 495,555, dated April 18, 1893.

Application filed March 21, 1892. Serial No. 425,663. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES LAMB, a citizen of the United States, residing at Detroit, Wayne county, and State of Michigan, have invented certain new and useful Improvements in Stoves, fully set forth in the following description and represented in the accompanying drawings.

My invention relates to heating stoves, ranges, &c., and the object I have in view is to provide a means by which heated air may be conducted about the center portion and above the fire, whereby the arising hydrogen gases from the burning fuel proceeding from combustion may be thoroughly mingled, and a more perfect combustion obtained than heretofore in other construction of stoves now in use.

My invention consists of an annular chamber arranged in close proximity to the mouth of the feeder, or forming a part of the same, and provided with one or more air supply pipes constructed to receive air from the room through the walls of the stove, or air-chambers embodied therein. The annular chamber is provided with jets for discharging the air toward the burning fuel, and such other details of construction and operation herein-after described and set forth in the claims.

In the drawings Figure 1. is a front elevation of a heating stove, partially in section, embodying my invention, and illustrating the air supply pipes arranged to receive air through apertures in the mica frames in the doors and with a hot-air flue in the rear of the fire-chamber. Fig. 2. is a top plan view of Fig. 1 taken at the line X X.

Like letters and figures of reference represent corresponding parts of the drawings.

"A." represents a magazine heating stove of an ordinary pattern, within which is arranged my improvement. "B," forms the mouth of the magazine "C," the lower part of which is curved outward, and an annular ring "D." of a larger diameter is constructed to fit over the same so as to form its flange joints with the magazine at 3 and 4, thereby forming the air-chamber "E." therein. To the outer wall of the chamber "E." are cast or attached the "U" shaped supply pipes, "F." and "F'." The plates 5 and 5' are closely fitted and secured to the upper portions of said pipes to

serve to complete them, the outer ends of which pipes are so mounted as to have connection through the wall of the stove, or as shown resting up on the fire-pot "G." The mouths of the pipes "F. and F'." are arranged to make connection with the inner side of the mica doors "H." when closed, in which is provided an aperture or opening 6, through which air may readily enter to the chamber "E."

"F." is a third pipe similarly constructed and arranged with relation to the fire-pot "G." and chamber "E.," but extending rearward and downward, and makes connection with a hot-air flue "I," located between the ascending flue "J" and the descending flue "K."

7 are jet holes drilled through the mouth of the magazine about its lower inner portion, and 8 are similar jets through the outer wall and 9 are similar jets through the wall of the "U" shaped pipes.

"L" is the upper portion of the magazine.

"M" is a combustion chamber, and "N" is the ash-pit, and "O" is the grate.

The operation of the foregoing is as follows: Assuming that a coal fire is in process of combustion in the fire-chamber "G," receiving its air from beneath the grate O and the fire supplied with coal through the magazine "C" and "L" to keep up combustion; the rising gases from the burning fuel ascend into the chamber "M," and in doing so it is necessary that they should pass the mouth of the magazine "C" and the chamber "E" and pipes "F." Air is admitted through the opening 6 to the pipes "F" and "F'" and from the hot-air flue "I" into the pipe "F'," and thence into the air chamber "E," through which passage the air is intensely heated and passes from the jets 7, 8, and 9. As the air issues from these points in passing to the chamber "M," it meets with the ascending gases from the fire-pot and causes them to become ignited by furnishing an additional supply of oxygen, thereby effecting a more perfect combustion, and consuming the arising gases and effecting a saving of fuel, and increase of heat.

In illustrating my invention I have shown my improved gas burner constructed in part from the walls of the feeder, and it may be readily seen the gist of my invention lies in a means which is calculated to distribute heated air in jets about the center portions of the fire



chamber above the fire, with a view to more effectually create a perfect combustion. It is well understood that the said gas burner may be formed independent of the magazine proper, and in any convenient form or shape of suitable metals calculated to stand the action of combustion, while air is passing through them, and that the means of connecting with air external of the stove may be effected through any convenient wall of the stove other than through apertures in the mica door frame, or hot-air flues in the stove. It is also observed that it is not necessary that my improved gas burner should be combined with a magazine as the coal may be supplied through the fire-door of the stove, by which means the same result may be obtained.

Although I have described a method of putting the several parts together to construct the device, any means of construction known to the art is fully contemplated.

Having thus described my invention, what I claim as new is—

1. In combination with a fire chamber, an exit flue and a magazine, of an annular air chamber formed about the mouth of the maga-

zine, and provided with air pipes arranged to receive air from outside the stove, and an air pipe having connection with a hot-air flue, the chamber furnished with apertures to discharge heated air to the products of combustion, as and for the purpose set forth.

2. In combination with a fire chamber, a magazine and an exit flue, of an annular chamber constructed in sections about the mouth of the magazine, and having an air pipe or pipes connecting with the suitable apertures in the door frame of the stove, and a pipe or pipes receiving their air from a hot-air flue; and communicating with the annular chamber the said chamber and pipes provided with apertures to supply air to the ascending gases from the fire, substantially as and for the purpose set forth.

In testimony whereof I have set my hand, this 18th day of March, A. D. 1892, in the presence of two subscribing witnesses.

JAMES LAMB.

Witnesses:

C. R. SAVILLE,

JOHN F. GOODFELLOW.