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L. BRANDT, JR. & A. F. BRANDT.
AIR FEEDING APPARATUS FOR STOVES.

APPLICATION FILED APR. 9, 1903.

NO MODEL.

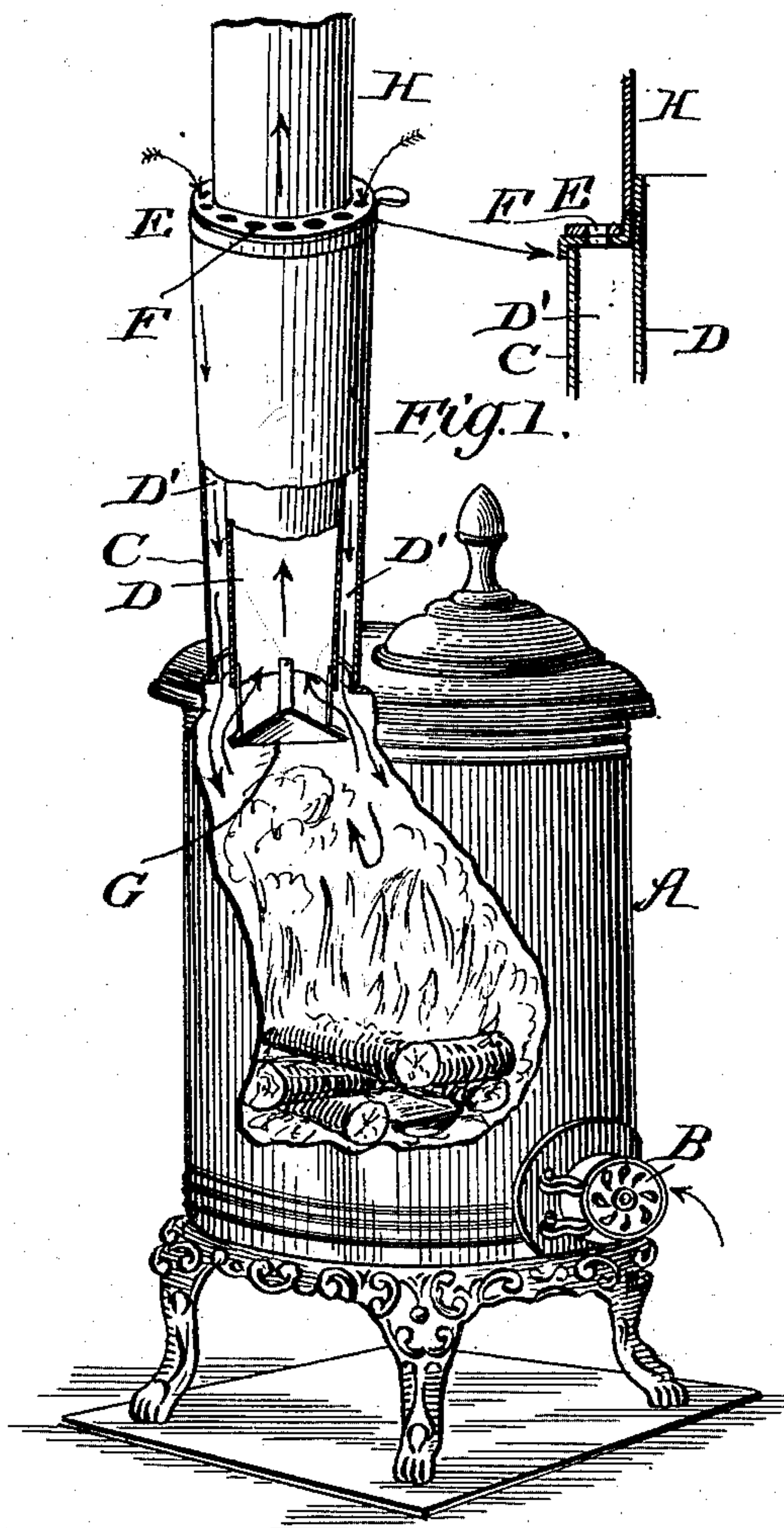
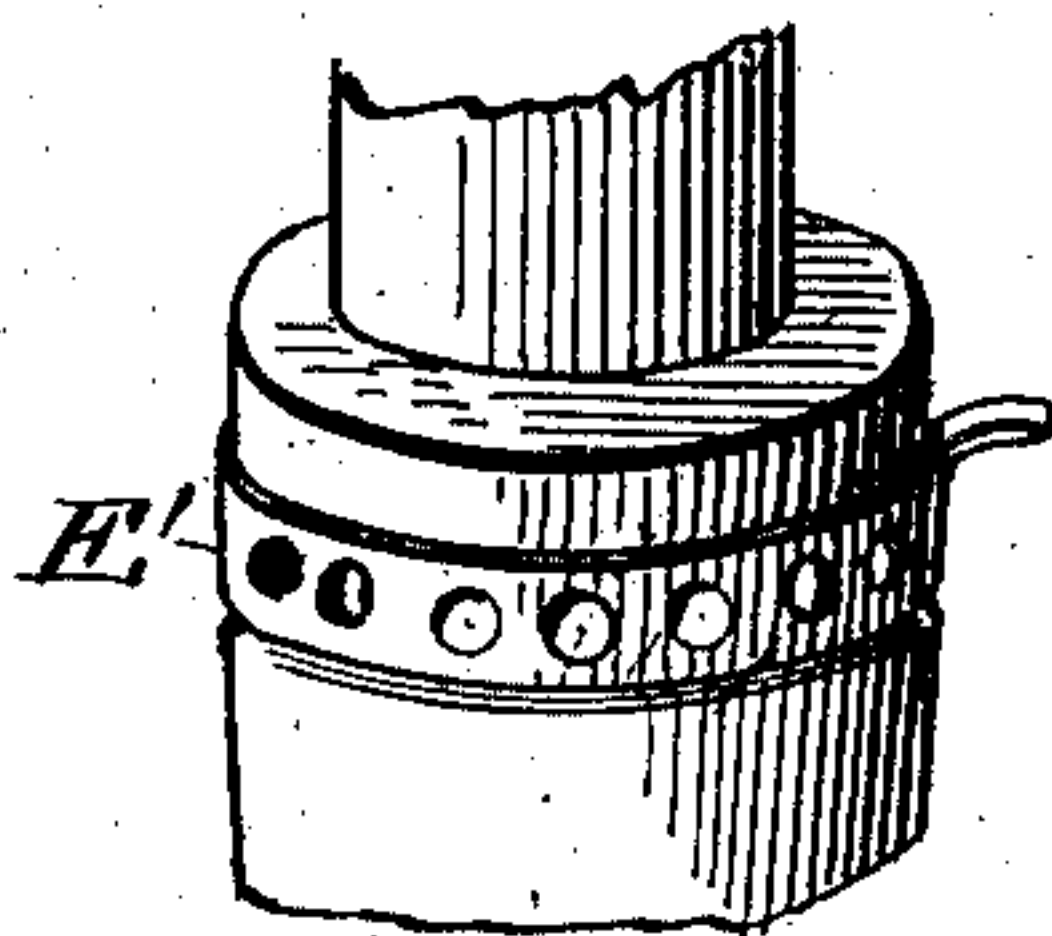


Fig. 2.



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AIR-FEEDING APPARATUS FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 748,472, dated December 29, 1903.

Application filed April 9, 1903. Serial No. 151,801. (No model.)

To all whom it may concern:

Be it known that we, LOUIS BRANDT, Jr., and AUGUST F. BRANDT, citizens of the United States, and residents of Spokane, in the county of Spokane and State of Washington, have made certain new and useful Improvements in Apparatus for the Consumption of Smoke, Burning of Gases, and the Saving of Fuel in Stoves, Furnaces, and Hot-Water Heaters, of which the following is a specification.

Our invention relates to new and improved draft means for stoves.

It consists of special draft means whereby combustion in the stove is so thoroughly completed that not much more than a vapor can be seen escaping through the uptake.

The invention, more definitely stated, involves peculiar means whereby a draft of air is fed into the stove at the combustion-exit therefrom through the uptake. With our special draft devices the products of combustion are retarded and forced back into the fire-chamber and more thoroughly consumed than is now effected in any stove or furnace or hot-water heater known to us.

The invention comprehends in its specific form special details of construction, which will be hereinafter fully described, and the novel features pointed out in the claims.

In order to enable others to make and use our invention, we will now proceed to describe it in detail with reference to the accompanying drawings, which form a part of this specification.

In the drawings, Figure 1 is a perspective view, partly broken away, illustrating our invention; and Fig. 2 is a modified detail view of the damper.

Our invention comprehends peculiar draft means adapted for use with any character of stove. In our drawings we have shown a wood-burning stove A, having at its base a draft-opening B of common form. In carrying out our invention we employ a smoke-uptake consisting of an outer pipe C and an inner pipe D. The lower end of the pipe C is adapted to fit the ordinary collar of a stove smoke-exit. Between the inner pipe D and the pipe C a space D' is provided, which leads

down from the damper E into the fire-space of the stove, as shown.

The damper E is formed of two collars having therethrough a series of perforations F. The lowermost said collar may be seamed or otherwise suitably secured to the pipes C D, and the uppermost said collar is adapted to be turned, whereby the perforations F are opened or closed for regulating the supply of cold air down through the space D'. From the lower end of the pipe D we suspend a cone-shaped deflector G, whose outer edge is spaced from and projects beyond the lower end of the pipe D. The uptake member H provides simple exit connection with the chimney from the stove, as will be fully understood. The pipe D may be covered with lining 4' to insulate radiation of heat.

The above description in connection with our drawings will render the construction of our invention fully understood.

In starting a fire the damper E should be closed and the damper B be opened. After the fire has burned sufficiently damper E should be opened. Now it is apparent that when the damper E is open, as stated, natural draft through the pipes D H will draw in cold air through the perforations F and down the space D'. At the lower end of the space D' the cold-air draft will mingle with and retard escape of the gas and smoke from the fire. The air drawn down through the space D' will force the smoke and gases downward into the fire-space of the stove.

Obviously the damper E may be modified by arranging it on the side of the outer pipe C, as indicated at E', Fig. 2.

By proper regulation of the damper E air may be fed into the stove, effecting to consume the smoke and gases, and thereby gaining heat that is lost in allowing the unconsumed gases to escape through the uptake.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In an uptake for stoves, inner and outer spaced pipes, a damper at the upper end of the space between the said pipes, the lower end of the said outer pipe being adapted for

direct coupling with the stovepipe-collar, and the lower end of the space between the pipes providing an annular opening in direct communication with the stove fire-box substantially as described.

5 2. In an uptake for furnaces, hot-water heaters, and stoves, and in combination, inner and outer spaced pipes, an inlet-damper at the upper end of the space between the said

pipes, direct open communication into the stove, from the lower end of said space, and a deflector at the lower end of the said inner pipe, substantially as described.

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