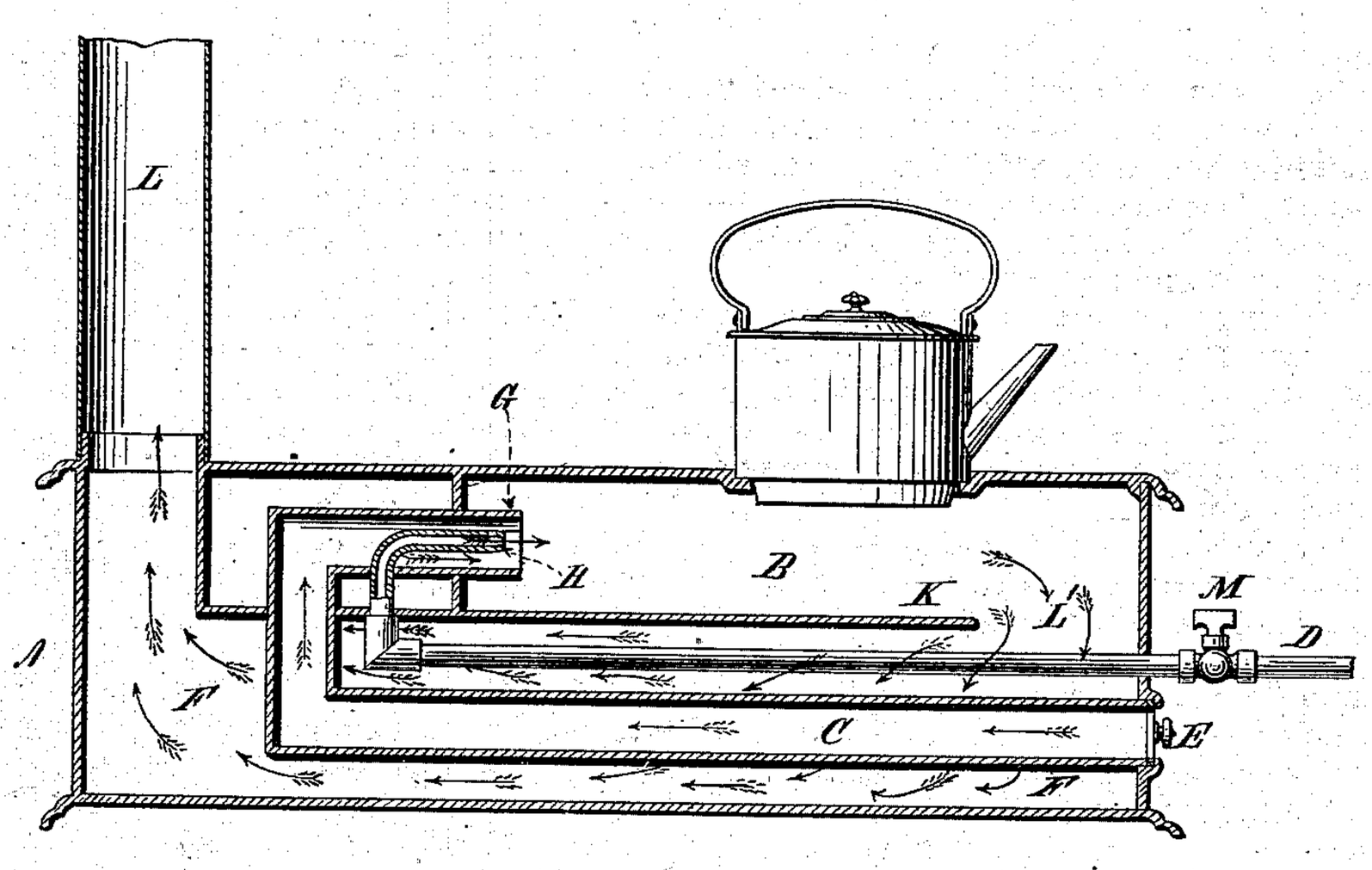
(No Model.)

E. STERN.

GAS STOVE.

No. 276,302. Patented Apr. 24, 1883.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWARD STERN, OF NEW YORK, N. Y.

GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 276,302, dated April 24, 1883.

Application filed April 18, 1881. (No model.)

To all whom it may concern:

Be it known that I, EDWARD STERN, of the city, county, and State of New York, have invented a new and useful Improvement in Gas-Stoves, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

My invention relates to an improvement in gas-stoves, in which the heat produced by the burning gas is increased by heating the gas and the air with which it is to burn by the products of combustion before they enter the combustion-chamber.

My invention will be clearly understood from the accompanying drawing, in which A represents generally an inclosed casing containing the operative parts of my apparatus. The casing is divided generally into two chambers, B and F, which are separated from each other by a horizontal partition, K, extending almost to the forward end of the chamber. The two chambers, B and F, communicate with each other by the passage L′ at the end of the partition K. The combustion occurs in the chamber B, the gas to be burned in said chamber being supplied by the pipe D, which passes in through the chamber F, and then returns and enters the chamber B by the nozzle H, as is clearly shown. The air to support said combustion enters by the pipe C, which also passes through the chamber F and enters the combustion-chamber B by the nozzle G, as is clearly shown. The lower chamber, F, communicates directly with the chimney L. By means of this chimney the products of combustion are drawn off and a draft is secured.

The operation of my apparatus can now be readily understood. Gas having been admitted to the pipe D by means of the stop-cock M escapes into the combustion-chamber B, as before described. The air to support this combustion, which may be regulated by a damper, E, meets the gas at the orifice G, and the combustion occurs in the chamber B. The products of combustion by the draft in the chimney L are returned through the lower chamber, F, and passed over the pipes D and C, thereby thoroughly heating the same. As a result of this preliminary heating of the gas and air before they arrive at the point of combustion, a much more thorough burning of the gas is effected, and a much higher temperature is produced, while at the same time the injurious products of combustion are removed from the chamber where the apparatus is placed.

The apparatus as shown is simple in construction and very inexpensive to make, and its advantages will be apparent on inspection.

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

In a gas-stove, the combination of the combustion-chamber B, located above and separated by a horizontal partition from the chamber F, through which the products of combustion pass to the chimney L, and the pipes D and C, for supplying gas and air to the combustion-chamber B, which pass horizontally through the chamber F, and then return and deliver into the combustion-chamber B, substantially as described.

E. STERN.

Witnesses:

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