

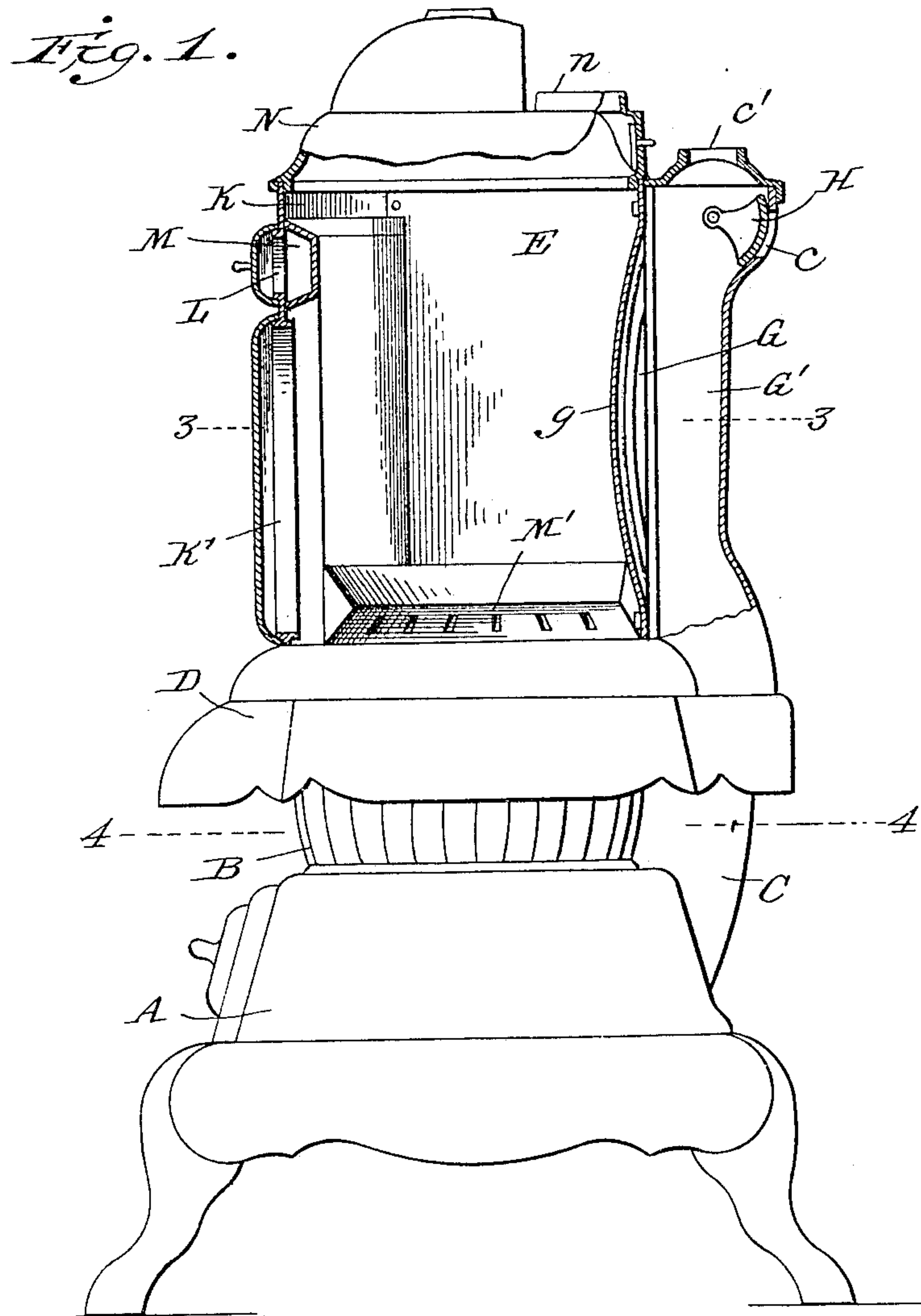
No. 818,617.

PATENTED APR. 24, 1906.

J. W. EMERY.
HEATING STOVE.

APPLICATION FILED JULY 10, 1905.

2 SHEETS—SHEET 1.



Witnesses

Edwin L. Jewell
Thomas Durant

Inventor

Joseph W. Emery.

By

Church & Church
Attorneys

No. 818,617.

PATENTED APR. 24, 1906.

J. W. EMERY.
HEATING STOVE.

APPLICATION FILED JULY 10, 1905.

2 SHEETS—SHEET 2.

Fig. 2.

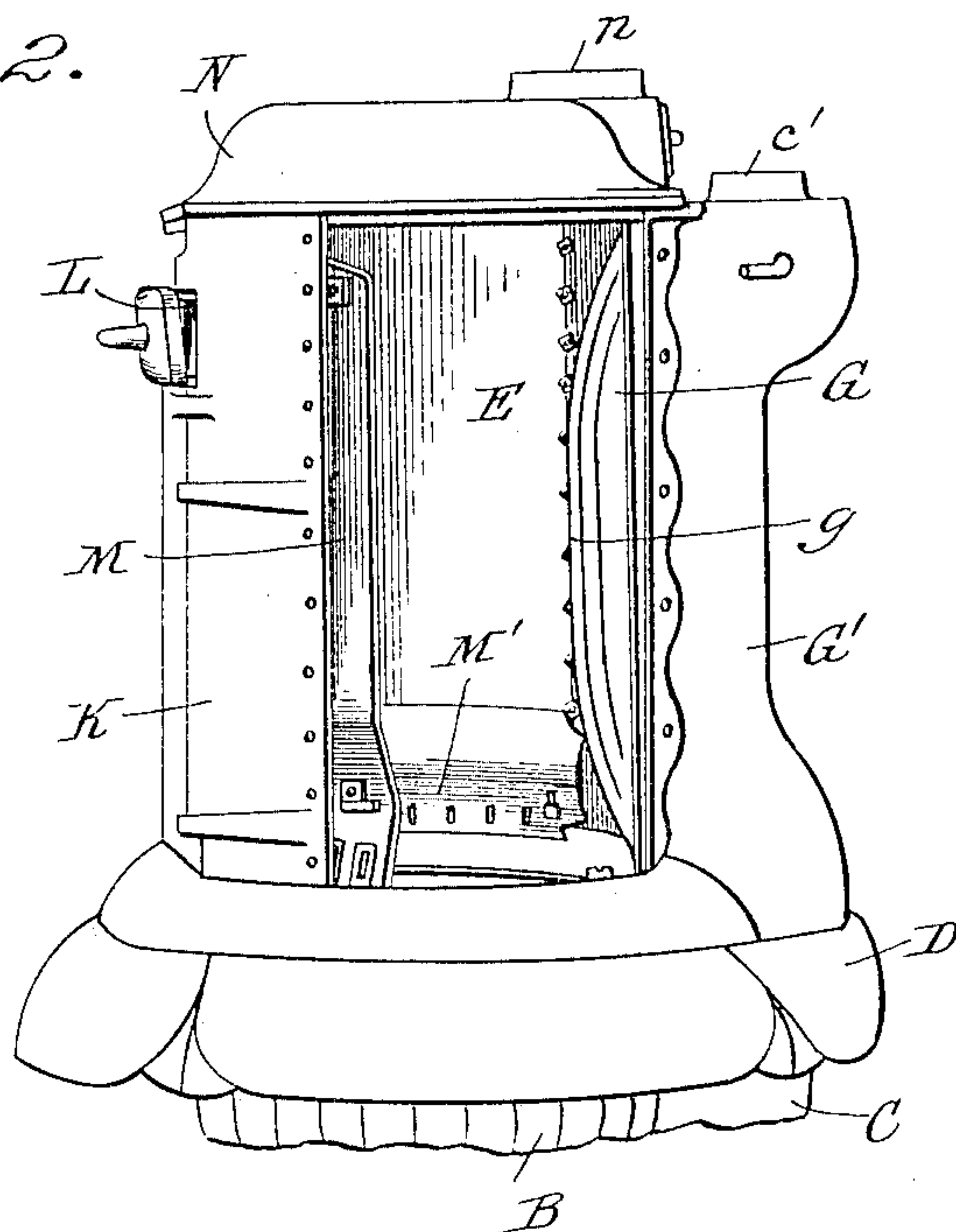


Fig. 3.

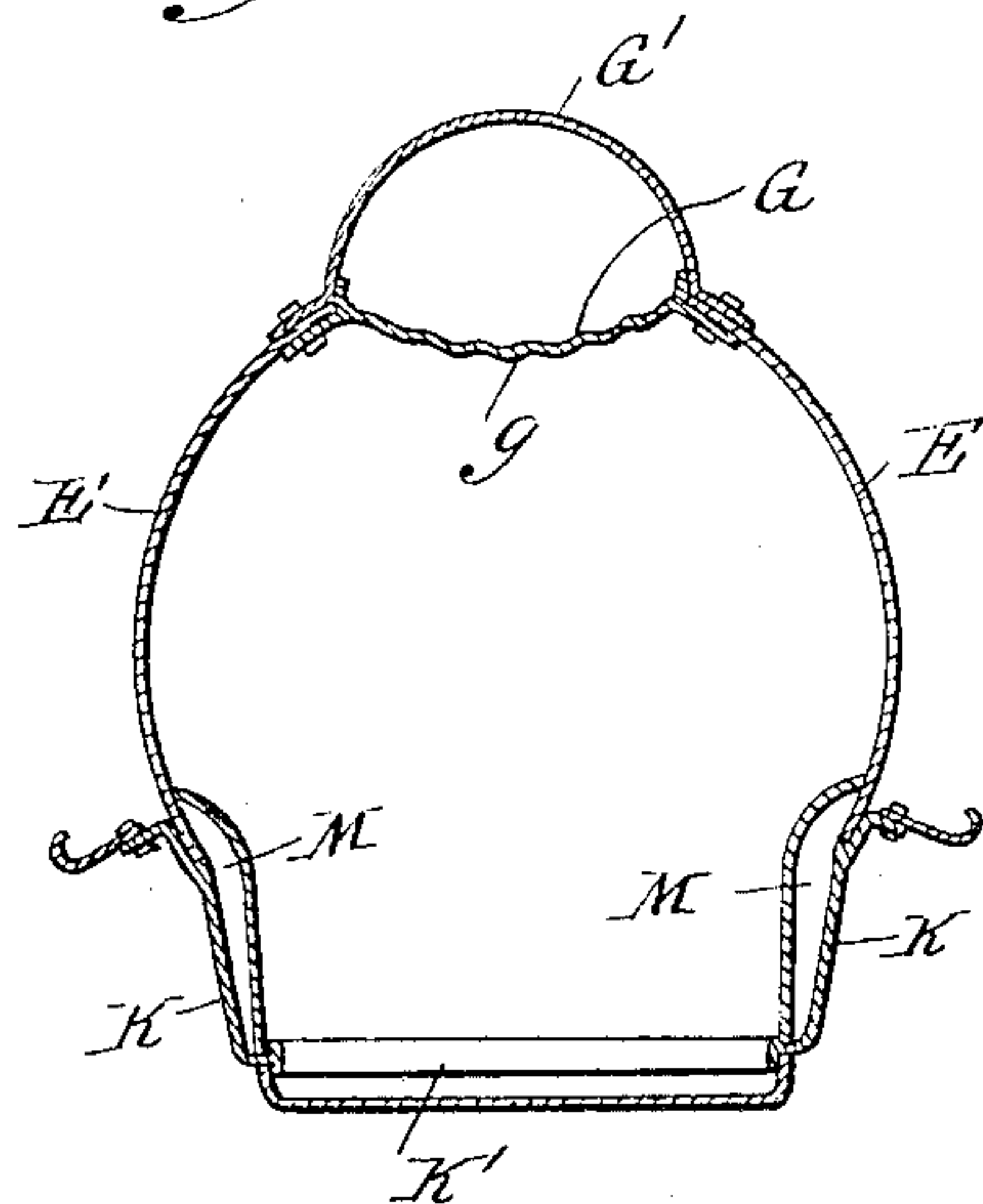
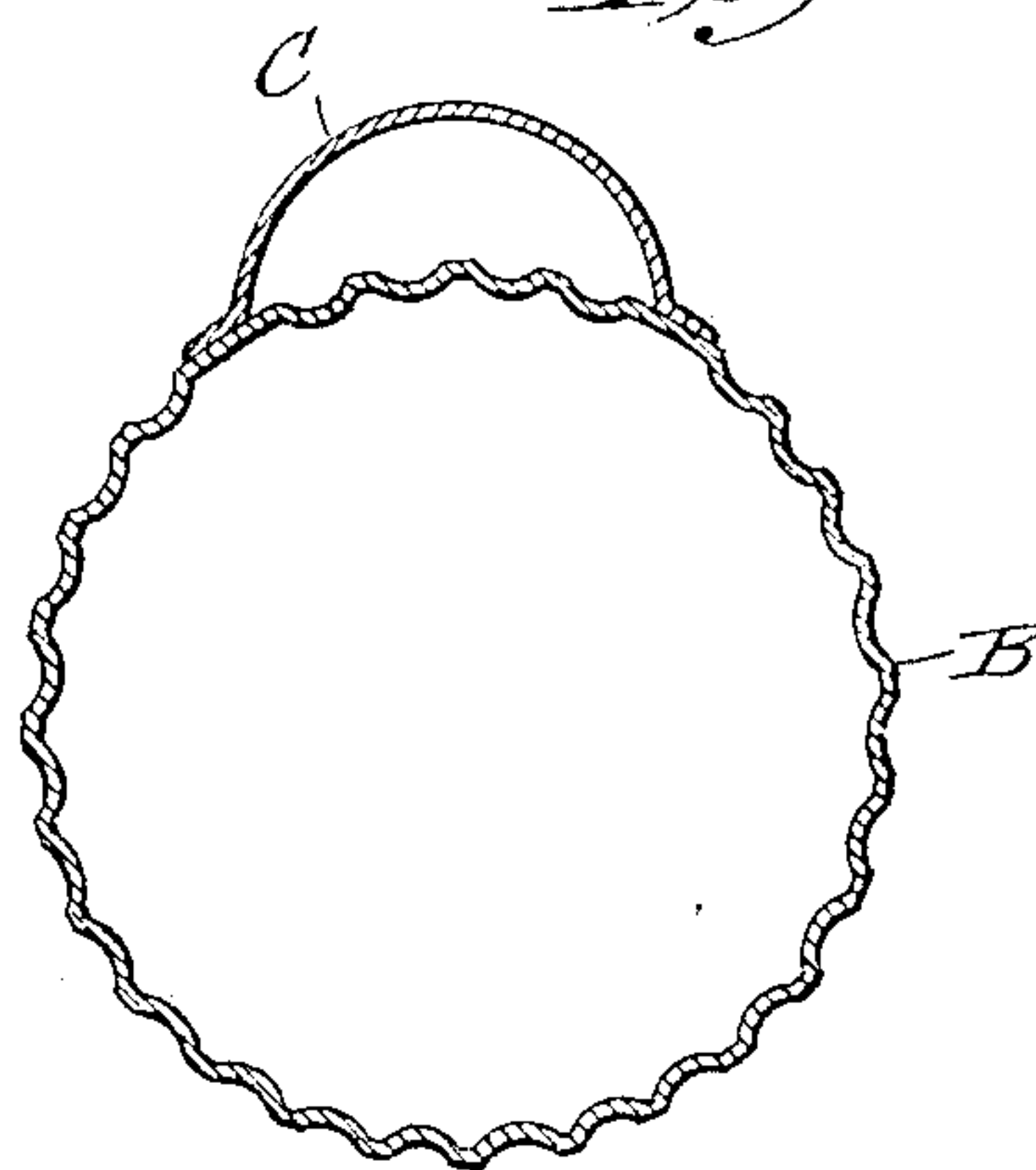


Fig. 4.



Witnesses

Edwin L. Jewell

Thomas Durant

Inventor

Joseph W. Emery.

By

Church & Church

Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH W. EMERY, OF QUINCY, ILLINOIS.

HEATING-STOVE.

No. 818,617.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed July 10, 1905. Serial No. 269,107.

To all whom it may concern:

Be it known that I, JOSEPH W. EMERY, a citizen of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Heating-Stoves; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

This invention relates to that class of heating-stoves embodying a hot-air flue through which air is caused to circulate from the base to the top of the stove, where it may be discharged into the apartment where the stove is located or into a duct leading to another apartment, thus forming what is known in the art as a "double" heater.

The objects of the invention are to improve the construction and arrangement of the body-section and air-flue, whereby the air will be more thoroughly and economically heated, the durability of the parts increased, and the cost of production or manufacture reduced.

In the accompanying drawings, Figure 1 is a side elevation with the upper portion in section of a stove embodying the present improvements. Fig. 2 is a perspective view of the upper portion of the stove with one of the side panels removed. Fig. 3 is a horizontal section on the line 3 3, Fig. 1. Fig. 4 is a similar section on the line 4 4, Fig. 1.

Similar letters of reference in the several figures indicate like parts.

The base A and fire-pot B, together with the part C of the hot-air flue leading through or past these parts, are of any usual or preferred construction and need no detail description. As shown, the base is substantially square, while the fire-pot is circular and corrugated, as usual, to give an extended surface and prevent cracking. The fire-pot is surmounted by an intermediate section D, which conforms in style to the base, and above the intermediate section is the body portion or barrel of the stove, which in the present instance is built up and is partly of castings and partly of sheet metal.

The two side panels E E are of sheet metal curved outwardly in horizontal section and united at their front and rear edges to the castings forming the front of the body and air-flue at the back of the stove, respectively. Castings to form the air-flue at the back of

the stove are provided to give increased durability and heating capacity. Thus the inner wall of the flue is formed by a plate G, which bulges at *g* inwardly or into the combustion-chamber and is preferably corrugated, as shown, while the outer wall of the air-flue is formed by a trough-shaped duct-section G', the lower end of which registers with the air-flue section C. The upper end of the air-flue is formed with openings, such as *c*, for the discharge of air into the apartment and with an opening *c'* for connection with a pipe or duct, whereby the air may be conducted to another apartment. A damper, such as indicated at H, is preferably provided for closing one or the other of the openings, and this damper, as well as that portion of the flue in which it works, may conveniently be somewhat spherical in form, although any well-known damper arrangement may be substituted. The rear edges of the sheet-metal panels are preferably bolted between the forward edges of the flue-sections G and G', as shown clearly in Fig. 3, while their forward edges are bolted to the rear edges of the front casting K.

The front casting K has the usual door-openings and doors K' and in addition a hot-blast-draft opening and damper L above the doors. The hot-blast-draft opening leads into ducts M, extending down along each edge of the front casting to an air-distributing ring M', located at the base of the body section or just above the fire-pot in position to supply heated air to the gases from the fuel to effect complete combustion in the body of the stove. The body of the stove is surmounted by the cap-section N, having a smoke-pipe opening and connection *n*, as usual.

The construction of the air-flue is such that its inner wall bulges in over the fire in position to be most effectively heated, and at the same time the desired flue capacity may be secured without the necessity of an excessively large exterior section.

By the construction described not only is the efficiency of the stove increased, but the symmetry is preserved, and as only castings are exposed to the fire at points where burning-out is liable to occur the life of the stove is greatly prolonged.

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

1. In a stove, the combination with the

base-section and fire-pot, of the body-section embodying an air-flue at the rear formed of separate castings connected at their edges, and sheet-metal side portions secured along
5 their rear edges to the side edges of the flue-sections; substantially as described.

2. In a stove the combination with the base-section and fire-pot, of the body-section embodying an air-flue at the rear formed of
10 separate castings connected at their edges, sheet-metal side portions having their rear edges clamped between the flue-sections and a front section uniting the front edges of the side portions; substantially as described.

15 3. In a stove, the combination with the

base-section and fire-pot, of the body-section embodying an air-flue at the rear formed of separate castings connected at their edges, the inner casting being bowed inwardly over the fire-pot, sheet-metal side portions having
20 their rear edges connected with the flue at the meeting edges of the castings, a cast front portion having door-openings, hot-blast flues at each side of said door-openings and a dampered entrance opening to said hot-
25 blast flue; substantially as described.

JOSEPH W. EMERY.

Witnesses:

L. E. EMMONS, Jr.,

L. E. EMMONS.