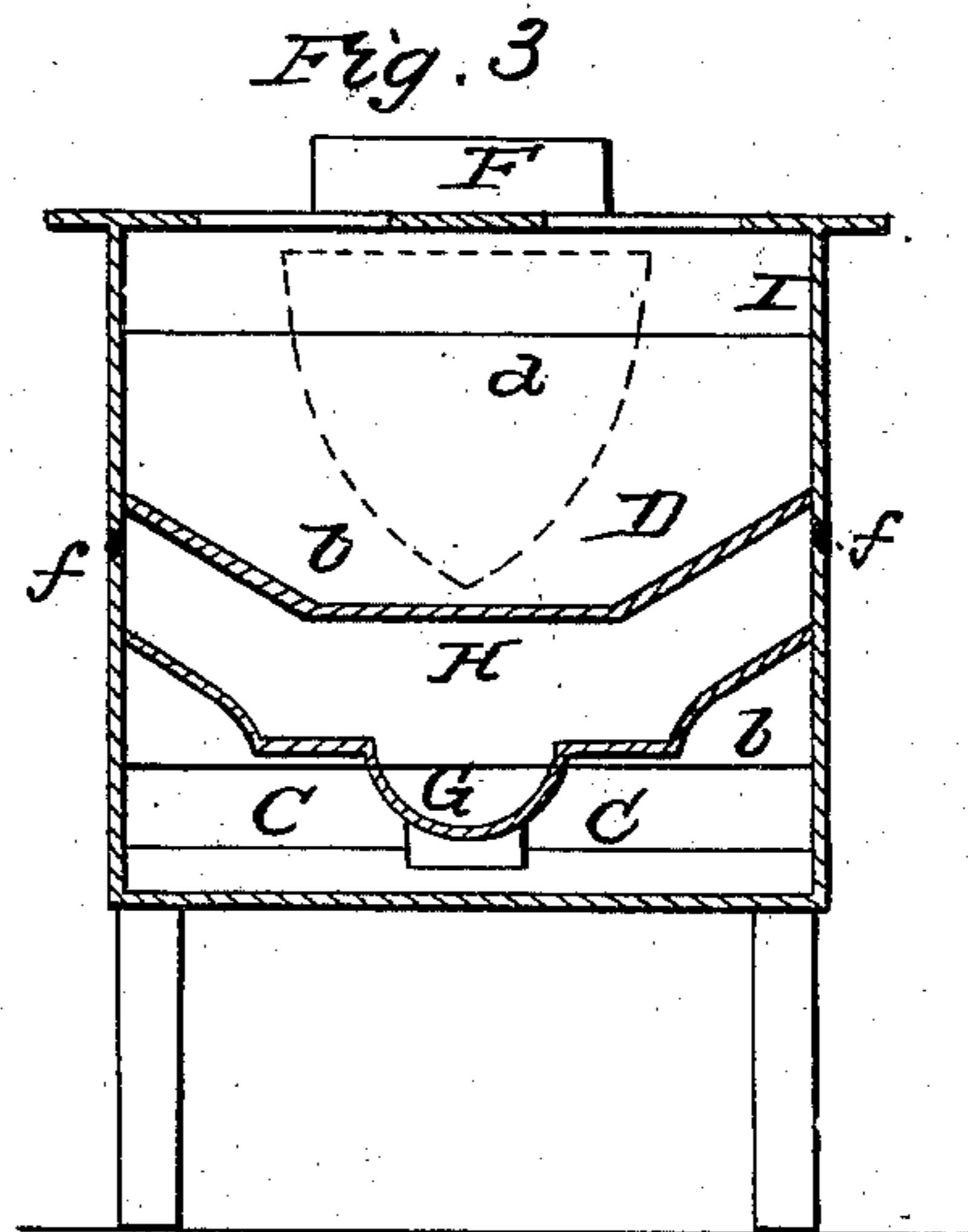
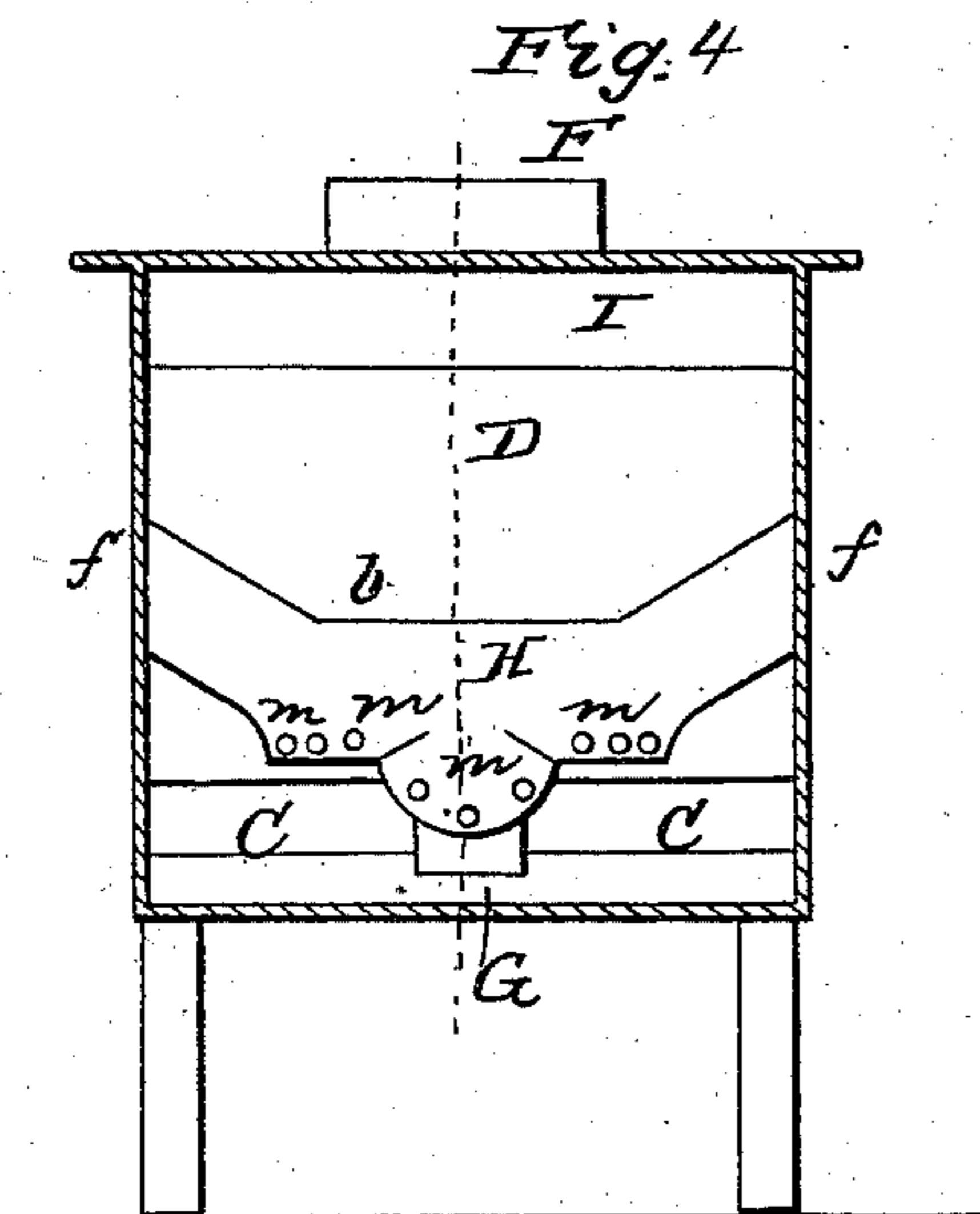
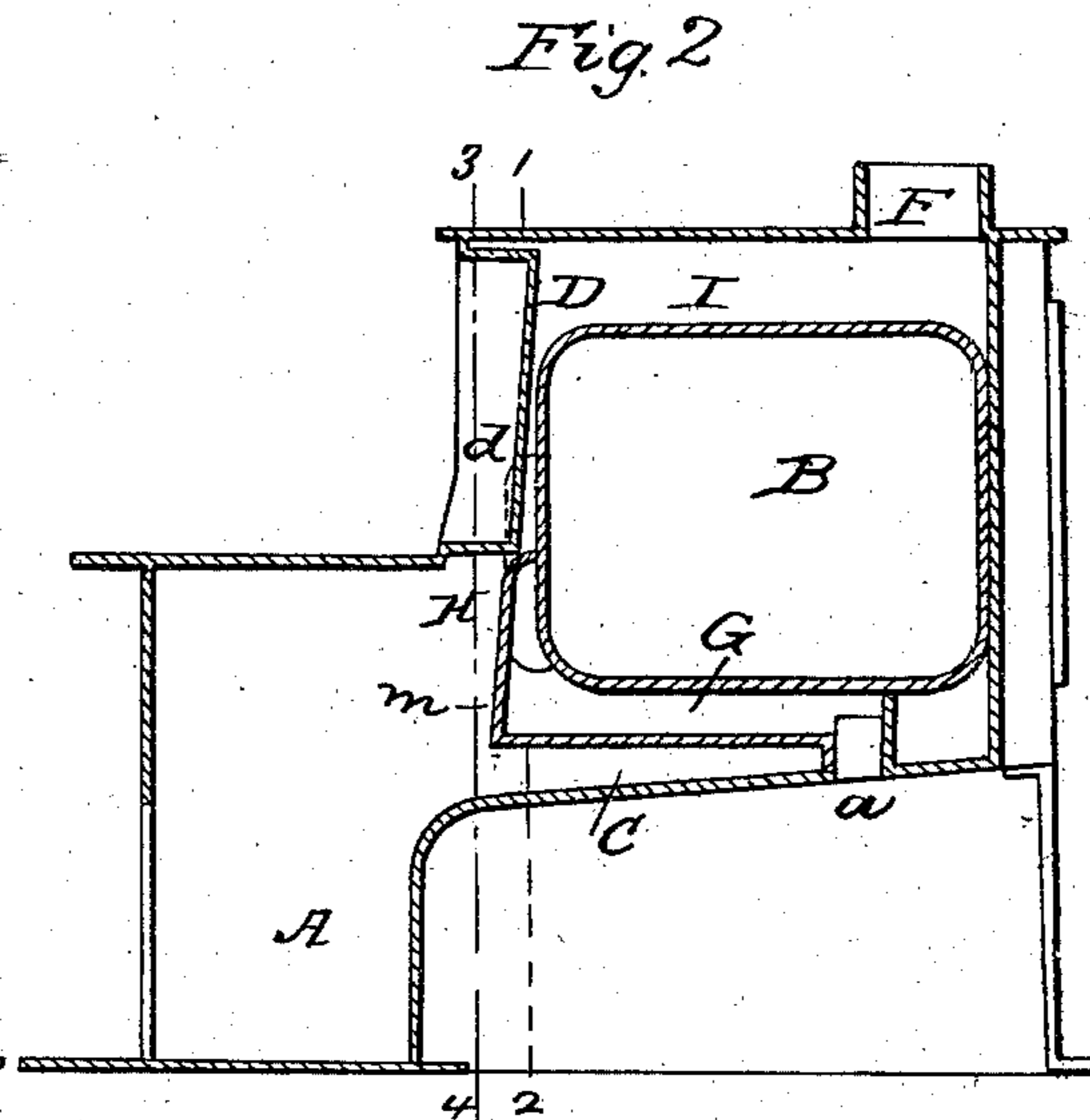
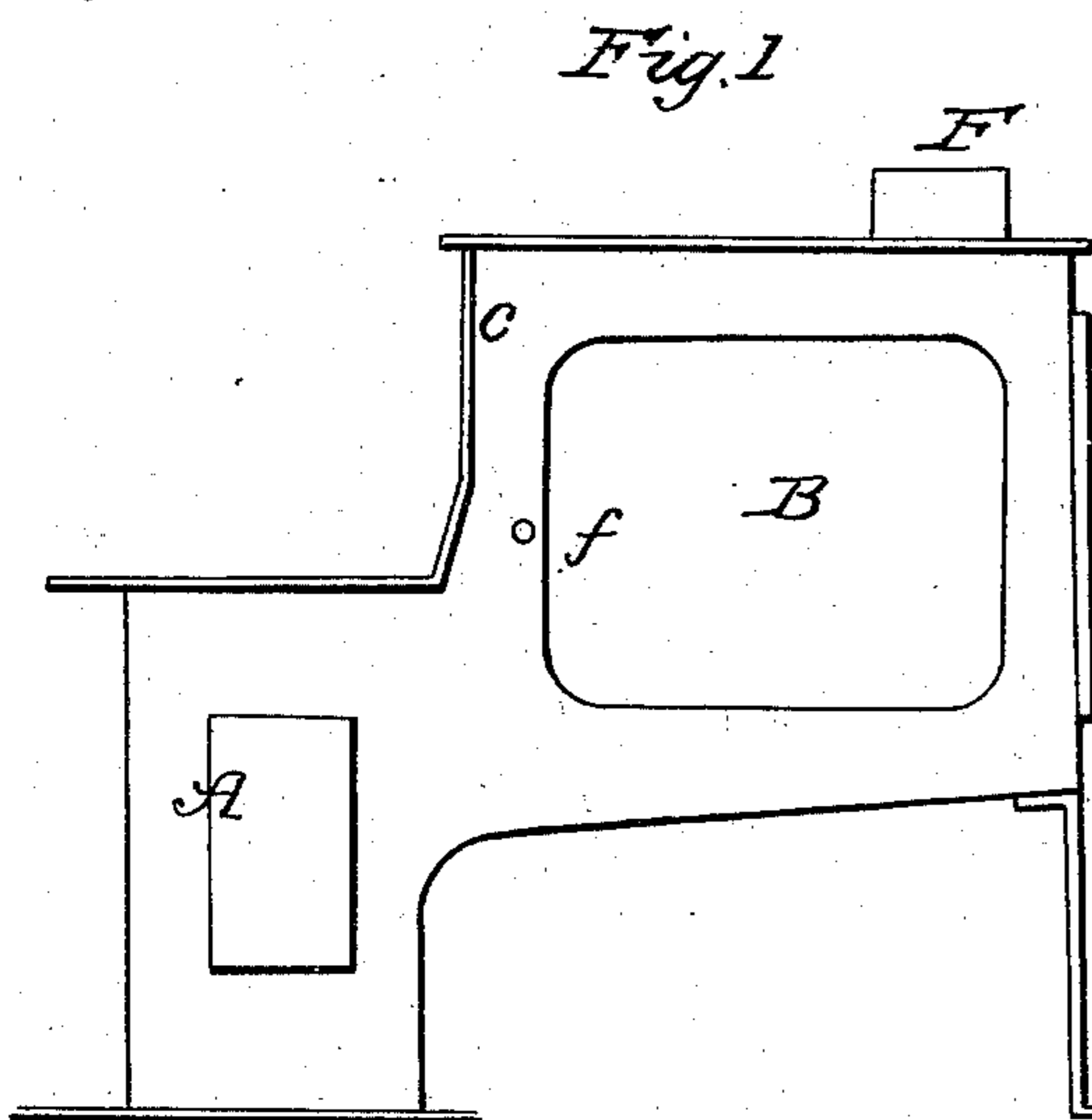


R. PETERSON.

Cooking Stove.

No. 23,191.

Patented March 8, 1859.



WITNESSES
Henry Hovson
Henry Odison

INVENTOR
Richard Peterson

UNITED STATES PATENT OFFICE.

RICHARD PETERSON, OF PHILADELPHIA, PENNSYLVANIA.

COOKING-STOVE.

Specification of Letters Patent No. 23,191, dated March 8, 1859.

To all whom it may concern:

Be it known that I, RICHARD PETERSON, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Cooking-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 drawing and to the letters of reference marked thereon.

My invention relates to an improvement in that class of cooking stoves, in which the oven is situated at the rear but above the level of the fire; and my improvement consists in a protecting plate with perforations described hereafter, when the said plate is so arranged, in respect to the oven, fire-place, and flues of the above mentioned class of cooking stoves that the products of combustion may be met, at the point where they impinge against the plate and are dispersed prior to passing over or under the oven, with jets of heated air, which effectually ignite the unconsumed gases at a point most advantageous for imparting the heat, caused by their ignition to the oven.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to accompanying drawing, which forms a part of this specification; Figure 1, is an exterior view of the elevated oven stove, to which my improvement is applied. Fig. 2, a sectional elevation. Fig. 3, a transverse section, on the line 1, 2 (Fig. 2). Fig. 4, a transverse section, on the line 3, 4 (Fig. 2).

Similar letters refer to similar parts throughout the several views.

A is the fire place of the stove, B the elevated oven, C the passage for the products of combustion underneath the oven, D the vertical passage in front communicating with the passage I over the oven, and F the opening communicating with the chimney.

G is the cold air passage underneath the oven, communicating, through an opening *a*, with the external air, and in the opposite direction with a chamber H, which is formed by the projecting plate *b*, attached to the front plate and near the lower corner of the oven. This chamber H also communicates, through openings *f*, *f*, on the opposite sides of the stove, with the external air, so that a free circulation of air is constantly maintained through this chamber, and the part of

the oven most exposed to the injurious action of the fire effectually protected.

In the front plate C of the stove and above the fire-place is a recess of the form represented in dotted lines (Fig. 3), and this recess forms a projection into the vertical passage D, which serves to divide and to disperse laterally, the products of combustion, prior to their passage over the top of the oven.

The above described stove is, in its general features, similar to what is known as the elevated oven stove, manufactured by Messrs. Stuart & Peterson, of Philadelphia.

It will be observed, on reference to Fig. 4, that the plate *b*, which forms the chamber H, is perforated with a number of holes *m*, *m*, and that these holes are situated at or very near the point where the products of combustion must impinge, in their attempt to pass to the chimney, and before they separate, some to pass up the vertical flue D and over the oven, and others through the horizontal flue D under the oven. It will be evident therefore, that the unconsumed gases from the fuel will be met directly by jets of heated air, passing through the perforations *m*, which will consequently ignite the gases and cause them to pass off in the form of a flame, whether their direction be under or over the oven.

I am aware that jets of air have been heretofore introduced at the rear of the fire in cooking stoves. The perforations, through which they pass, however, have been situated either at a point below or near the surface of the fuel, so that the greater portion of the gases pass off unconsumed, through the passages around the oven, to the chimney.

I have found by practical experiment, that, in order to insure a thorough ignition of the gases, they should be met by jets of air after they have risen a short distance above the fuel in the fireplace. This is the case in my improvement, for the fuel is always below the perforations *m*. The products of combustion impinge, in the first instance, against the plate *b* of the chamber H, and become, as it were, spread out and expanded, while the jets of air through the perforations, intermixing with the expanded products of combustion, are brought into contact with and disseminated among the unconsumed gases, none of which can escape either through the upper or lower passage

of the oven, without being effectually ignited.

I do not claim broadly introducing jets of air at the rear of the fire in cooking stoves, 5 various devices for accomplishing this end having been heretofore used, but I claim and desire to secure by Letters Patent:

The protecting plate H with its perforations *m*, when arranged in respect to the 10 oven, the fireplace and the flues of an elevated oven cooking stove in the manner herein set forth, so that the products of combustion, after passing from the body

of the fuel, and at the point where they impinge against and are dispersed by the 15 said protecting plate, prior to passing some over and others under the oven, may be met by and intermixed with jets of heated air, for the purpose specified.

In testimony whereof, I have signed my 20 name to this specification in the presence of two subscribing witnesses.

RICHARD PETERSON.

Witnesses:

HENRY HOWSON,
HENRY ODIORNE.