(No Model.)

G. H. PHILLIPS.

STOVE CASTING.

No. 299,007. Patented May 20, 1884.

Fig. 1.

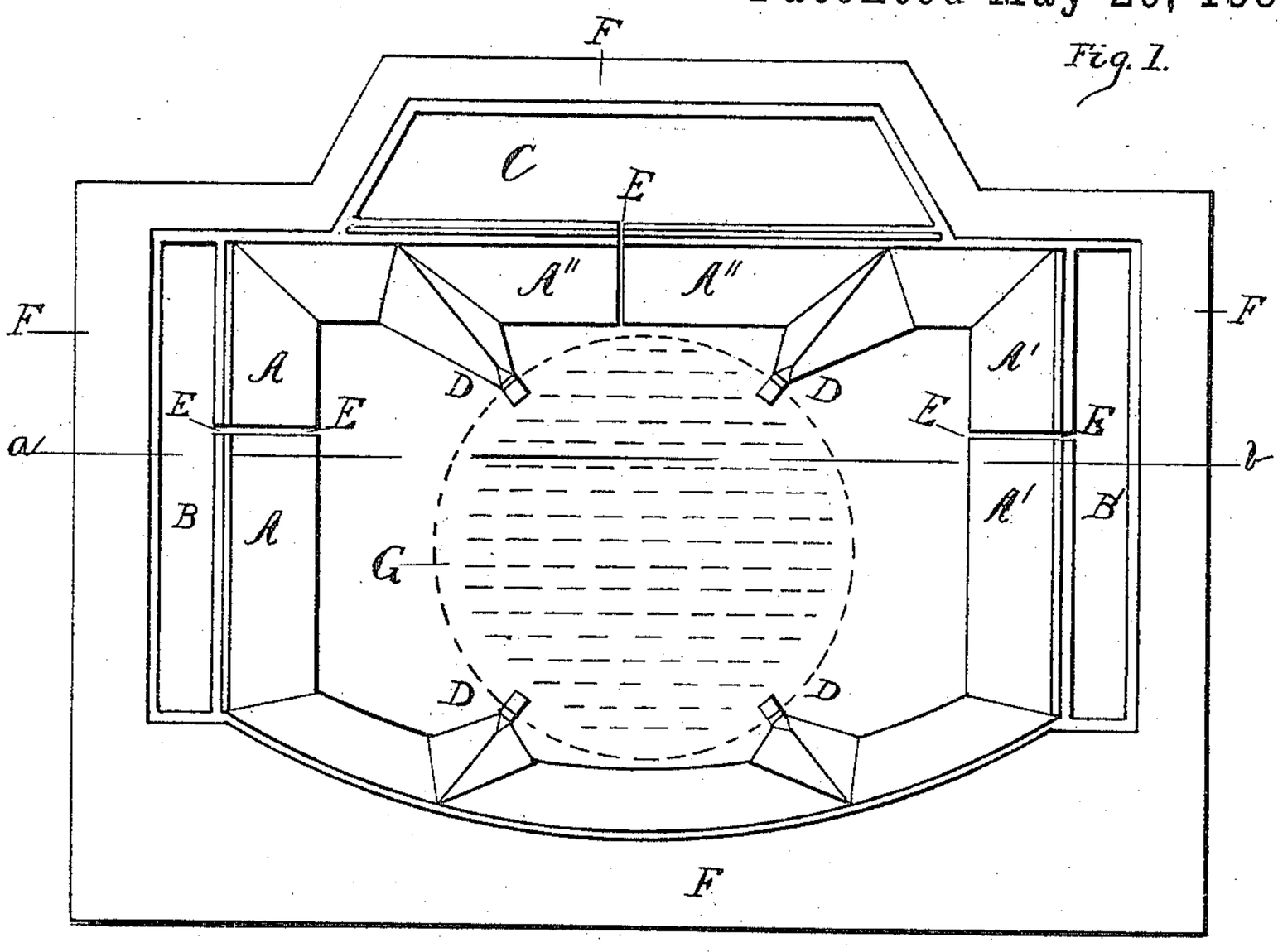


Fig. 2.

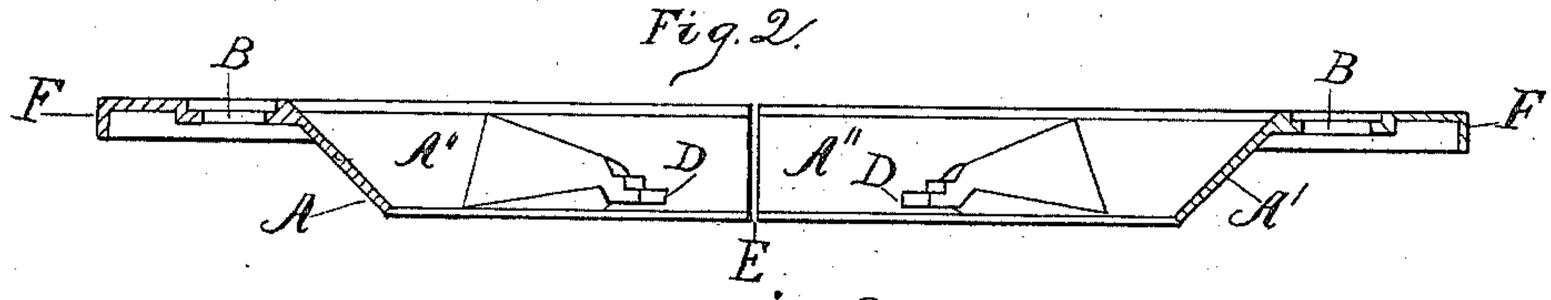
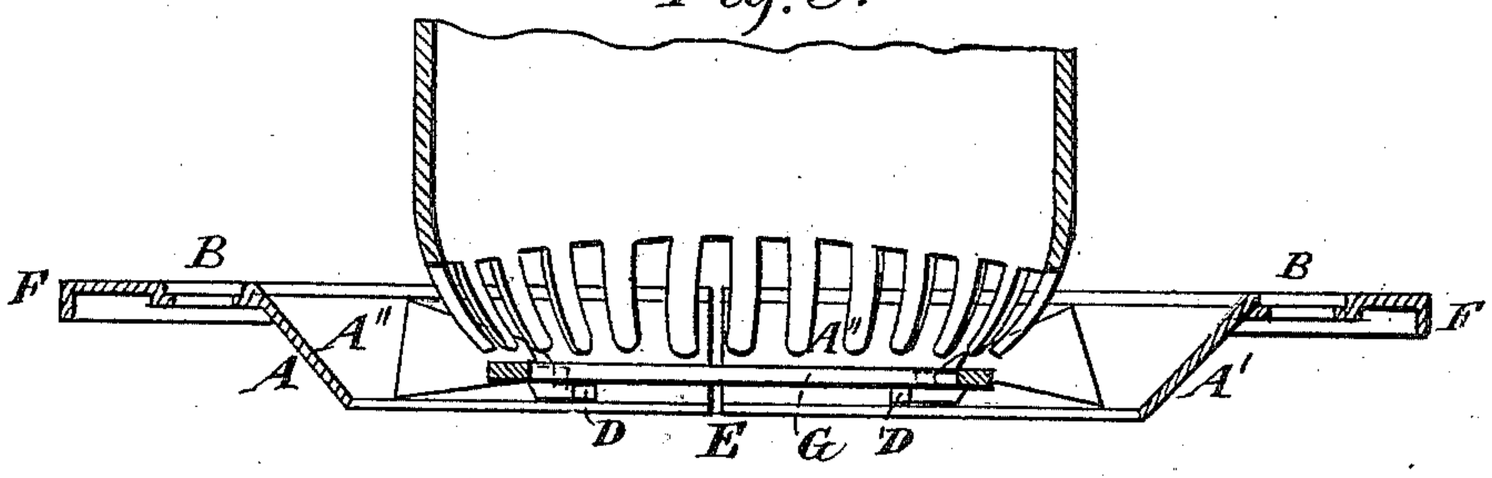


Fig. 3.



Witnesses.

O. M. Hollister Jr.

John V. Brooks

Inventor.

G. H. Phillips

by Geo. A. Mosher

Atty.

UNITED STATES PATENT OFFICE.

GEORGE H. PHILLIPS, OF TROY, NEW YORK, ASSIGNOR TO GEORGE H. PHILLIPS & CO., OF SAME PLACE.

STOVE-CASTING.

SPECIFICATION forming part of Letters Patent No. 299,007, dated May 20, 1884.

Application filed October 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. PHILLIPS, a resident of the city of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Stove-Castings; and I do hereby declare that the following is a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

My invention relates to improvements in rectangular base-burning stoves; and it consists in dividing the slope or chute plates when made a part of the base-top casting.

The object of my invention is to prevent the breaking or undue warping caused by the unequal temperature and expansion of the different parts when in use.

Figure 1 represents a plan view of my improved base-top casting. Fig. 2 represents a vertical section taken at the broken line *a b* in Fig. 1. Fig. 3 is a view in elevation, showing the position of the basket-grate with respect to the chute-plates.

F represents the outer rim of the base-top casting.

B and B′ are two flues, down which the hot air passes, coming up the flue C.

A, A′, and A″ are sloping plates or ash-chutes, passing down beneath the fire-box, for the purpose of directing coals and ashes falling from the fire-box toward and into the underlying ash-pan.

The projecting rests D are designed and used to support the fire-grate G, shown in broken lines, which rests immediately beneath the fire-box. It will be readily seen, therefore, that the immediate juxtaposition of the chute-plate to the grate and mouth of the fire-box subjects it to intense heat radiated therefrom, while the outer portions or rim, F, of the casting are much farther removed from the source of heat, and are exposed to the outer atmosphere, into which the heat is rapidly conducted and radiated.

It is well known that metals expand when heated, and directly as the temperature increases. The plates A, A′, and A″ would, therefore, expand much more and faster than the rim F, and as the rim is rectangular in form it would necessarily break if the chute-plates were cast integral with it and not divided. I therefore divide the chute-plates, as at E. The plates may be cast whole and afterward divided, or cast partly divided, with a connecting-link to be afterward broken out. The space E, by which the plates are divided, may be very small, it being required only that sufficient room be given the plate to fully expand, when heated to the highest required degree, without causing the contiguous divided ends to press together with sufficient power to warp or break the casting.

I am aware that it is not new to make plates intended for exposure to great heat in sections, so as to prevent cracking and warping; but

What I do claim as new and of my invention is—

The top base-plate of a stove, having the chute-plates integral with the rim-plate, but divided at E, as and for the purpose specified.

In testimony whereof I have hereunto set my hand this 8th day of October, 1883.

G. H. PHILLIPS.

Witnesses:
GEO. A. MOSHER,
JOHN T. BOOTH.