

BENJAMIN HUNTER.

Back-Log Boiler for Ranges and other Cooking Apparatus.

No. 124,899.

Patented March 26, 1872.

FIG. 2

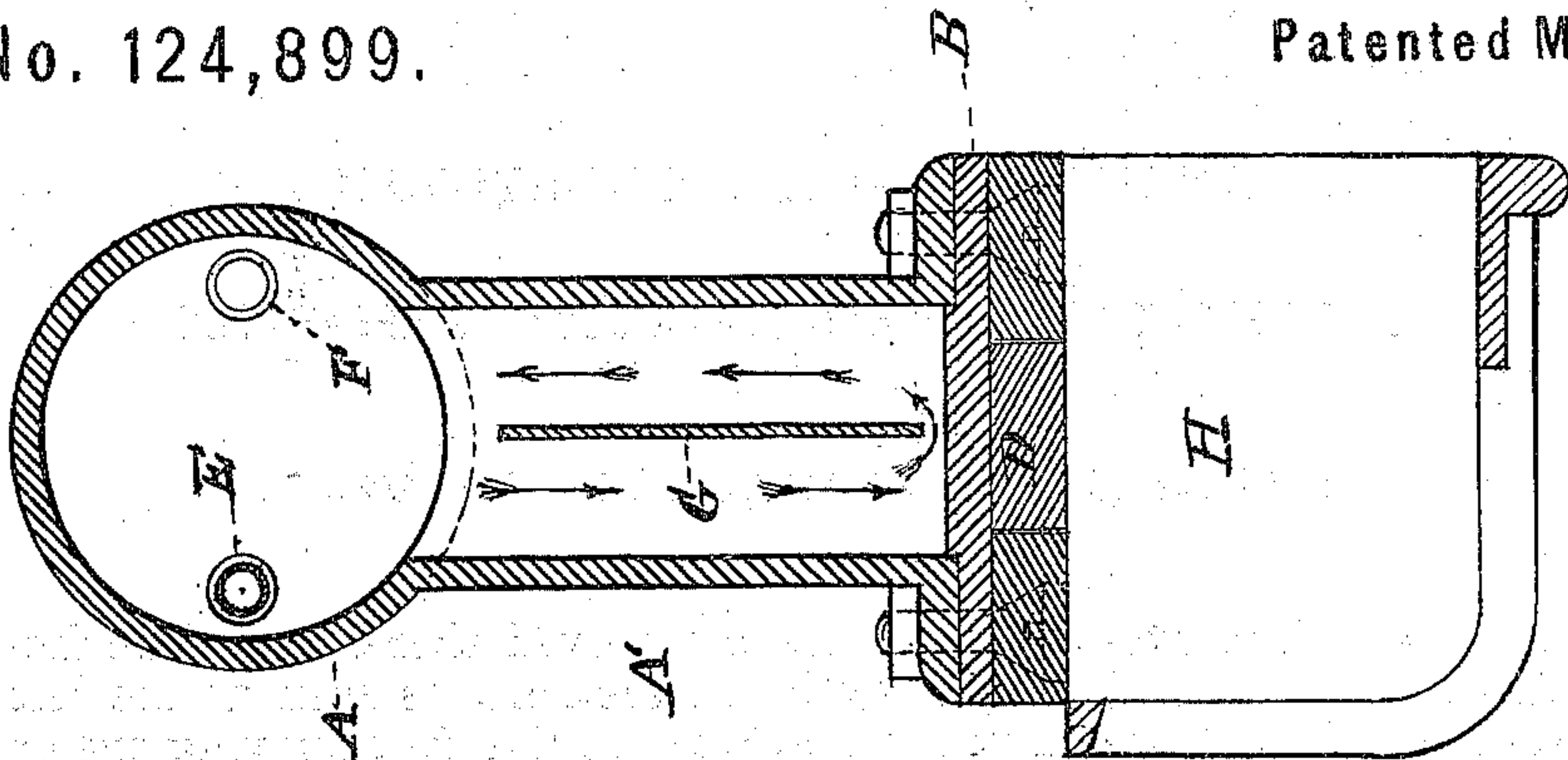


FIG. 1

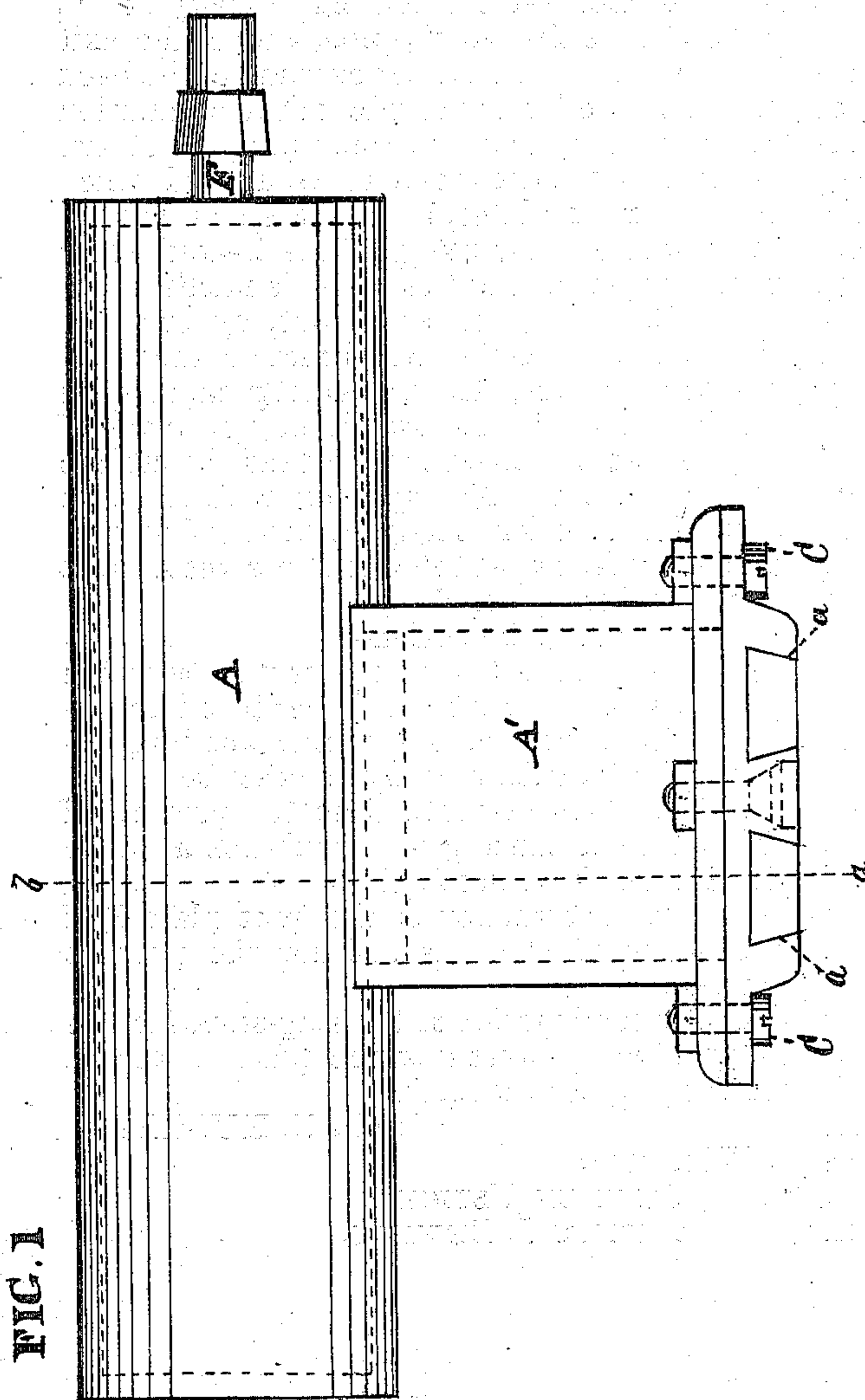
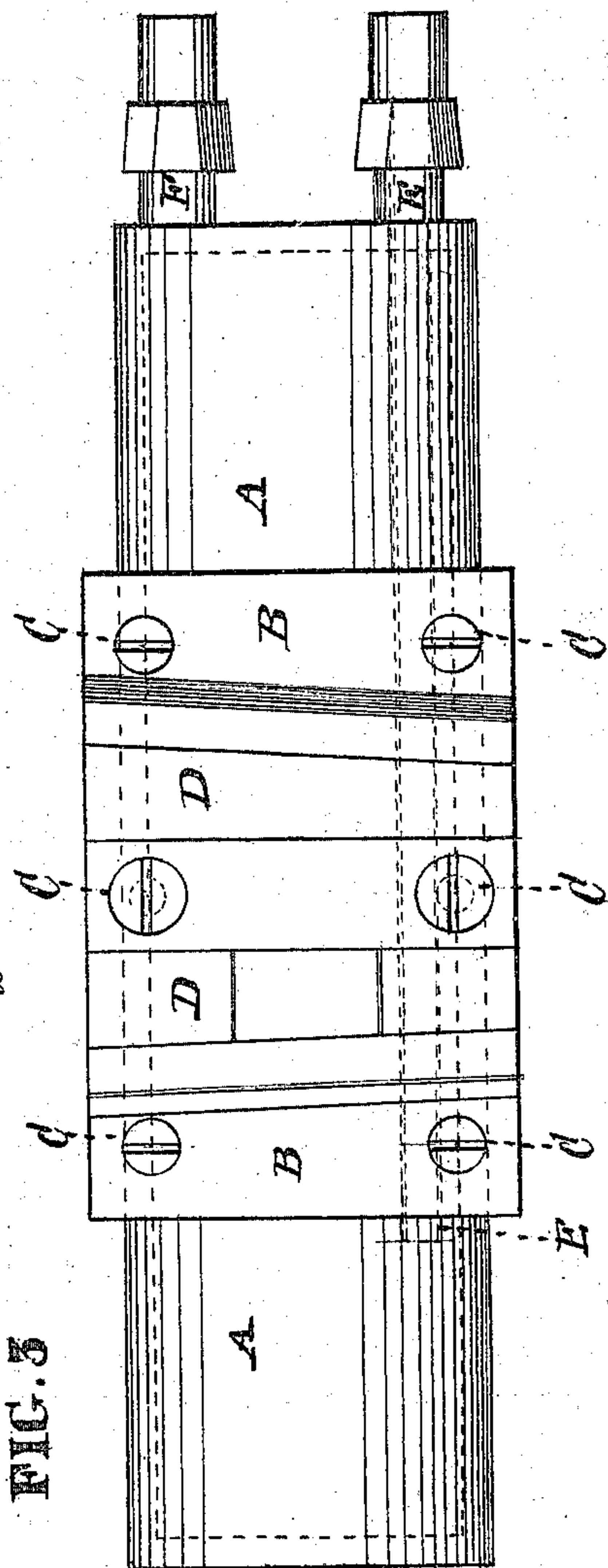


FIG. 3



WITNESSES.

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## UNITED STATES PATENT OFFICE.

BENJAMIN HUNTER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BACK-LOG BOILERS FOR RANGES AND OTHER COOKING APPARATUS.

Specification forming part of Letters Patent No. 124,899, dated March 26, 1872.

Specification describing certain Improvements in Back-Log Boilers for Range and other Cooking Apparatus, invented by BENJAMIN HUNTER, of the city of Philadelphia and State of Pennsylvania.

My invention consists of the following particulars: The boiler has a projection in front which connects immediately with the fire-chamber, and thereby increases the heating capacity of the boiler and dispenses with the flues passing around the boiler, as in the old mode, and which has always been destructive to it. The projecting part of the boiler is provided with a division-plate, to give circulation to the water, in combination with the supply and exit pipes, as hereinafter described. The front part of the boiler is provided with a steel plate, which has soap-stone facings that are inserted in dovetail grooves of the plate for their expeditious connection with and removal from the same. The facings are in sections, so that, by removing any desired number, the heating capacity of the boiler may be regulated. The object of making the face of steel is to give it the capacity of withstanding the intense heat of the fire without cracking or warping.

Figure 1 is a plan view of the improved boiler. Fig. 2 is a cross-section at the line *a b* of Fig. 1. Fig. 3 is a front view.

Like letters in all the figures indicate the same parts.

A is the main portion of the boiler, and A' a projecting part of the same, with which is connected the plate B by means of the screw-bolts C. The said plate is cast of steel, with dovetail grooves *a a*, as seen in Fig. 1, for the insertion of soap-stone facings D. The grooves are diminished in width to their lower ends, whereby the facings are quickly inserted in

their places or removed therefrom. The facings may be in sections, as seen at the left hand in Fig. 3, to provide for removing one or more, to increase the heating capacity of the boiler. E is the supply-pipe, and F the exit or draw pipe. The former extends to the back end of the boiler, to provide for the circulation of the water; and the front part A' of the boiler has a partition-plate, G, around which the water circulates, as indicated by the arrows, whereby the rising of the heated water to the upper part of the boiler is facilitated.

It will readily be seen that, by bringing the face of the boiler into direct contact with the fire-chamber H, its heating capacity is much increased; and that it may be made of any desired thickness to withstand the intense heat of the fire. By dispensing with the flues around the boiler it may be made of any required thickness, as the water receives its heat from the front plate B.

I claim as my invention—

1. The combination of the part A' with the part A so as to bring the boiler into immediate contact with the fire, to increase its heating capacity, substantially as described.
2. The division-plate G in the part A' of the boiler, for causing the circulation of water therein, as above set forth.
3. The construction of the front plate B of the boiler of steel, as and for the purpose specified.
4. The combination of the soap-stone facings D with the grooves *a* of the plate B, as and for the purpose set forth.

BENJN. HUNTER.

Witnesses:

STEPHEN USTICK,  
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