

F. ELL.  
Lamp for Stoves, &c.

No. 227,156.

Patented May 4, 1880.

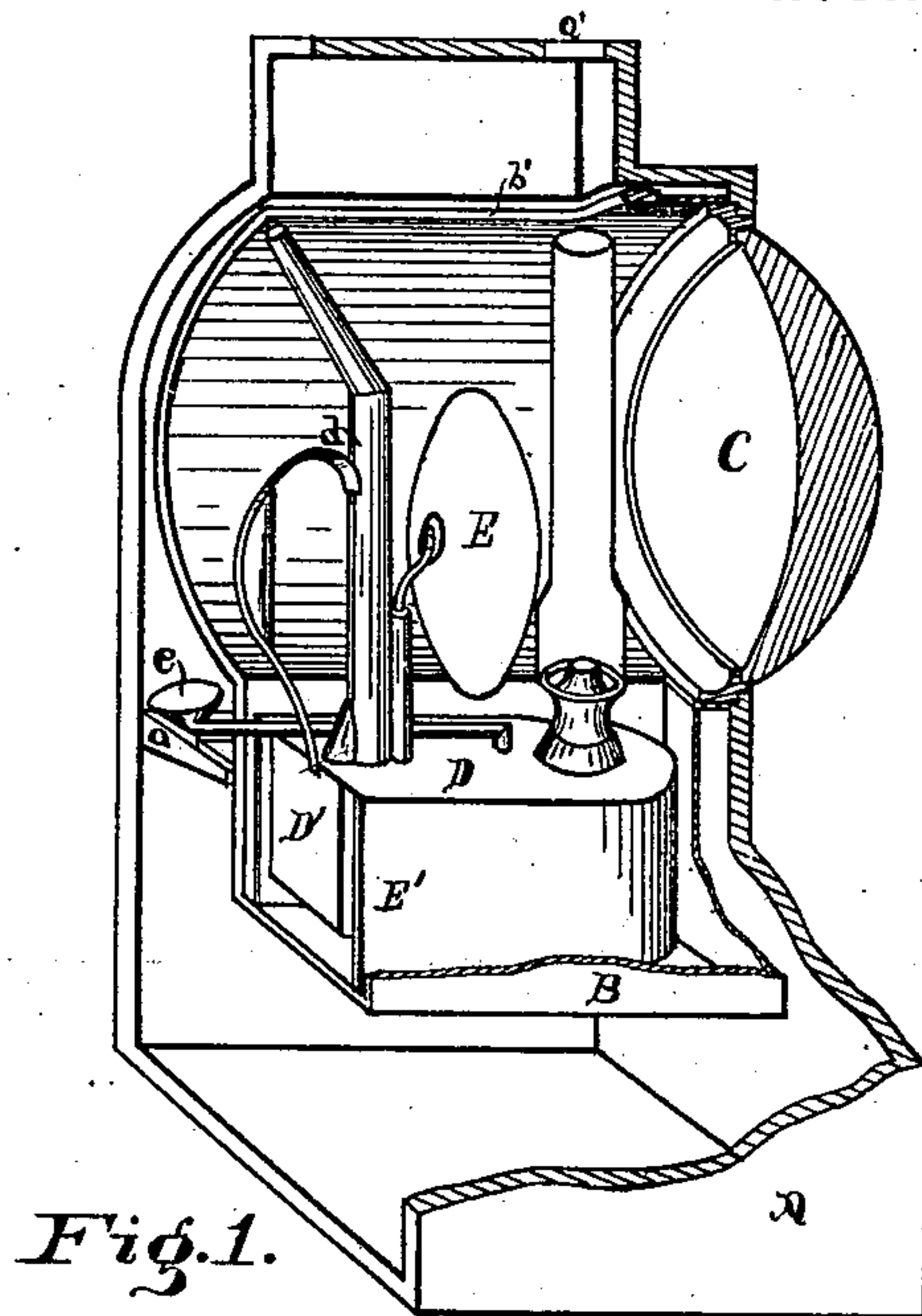


Fig. 1.

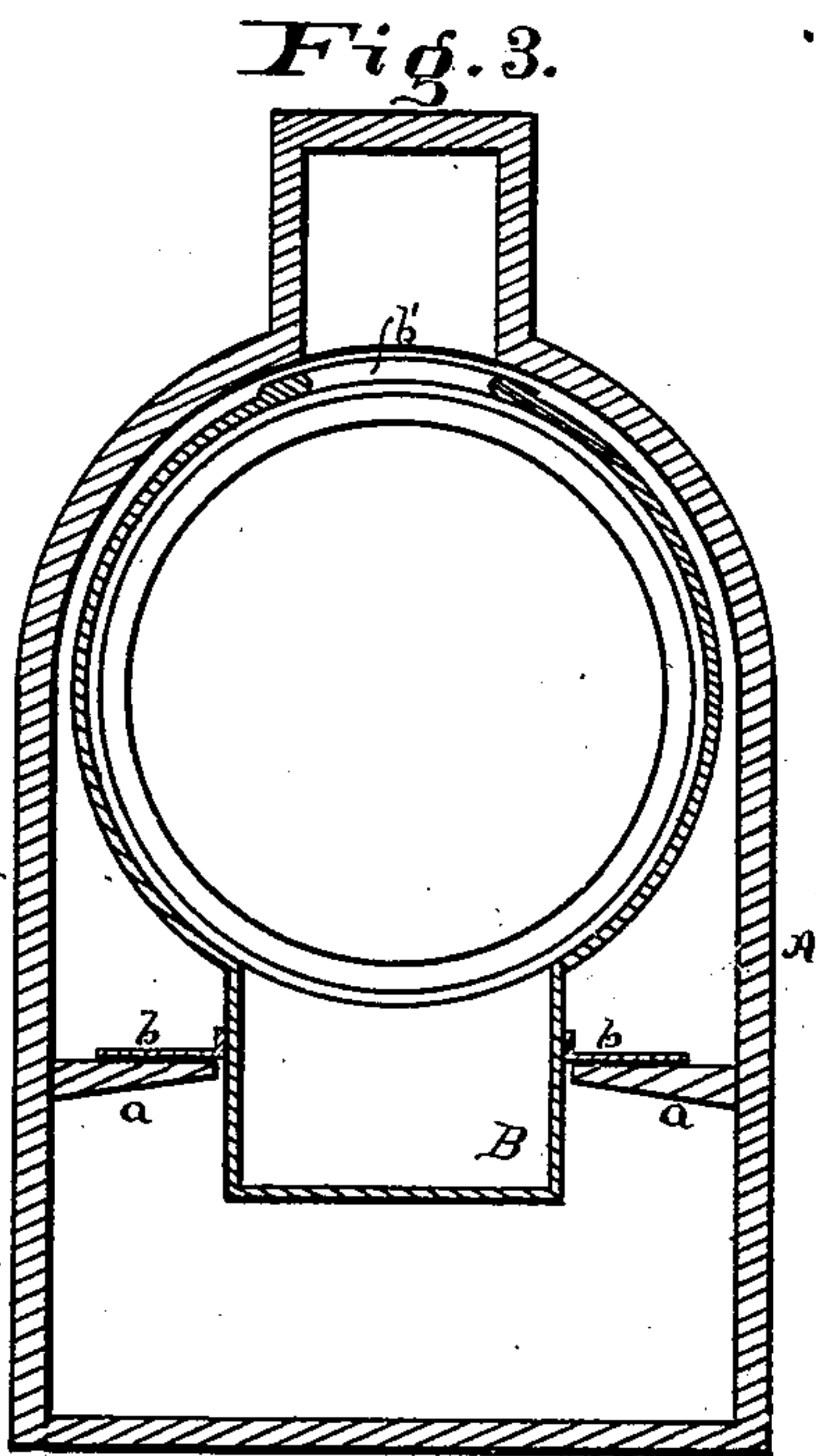


Fig. 3.

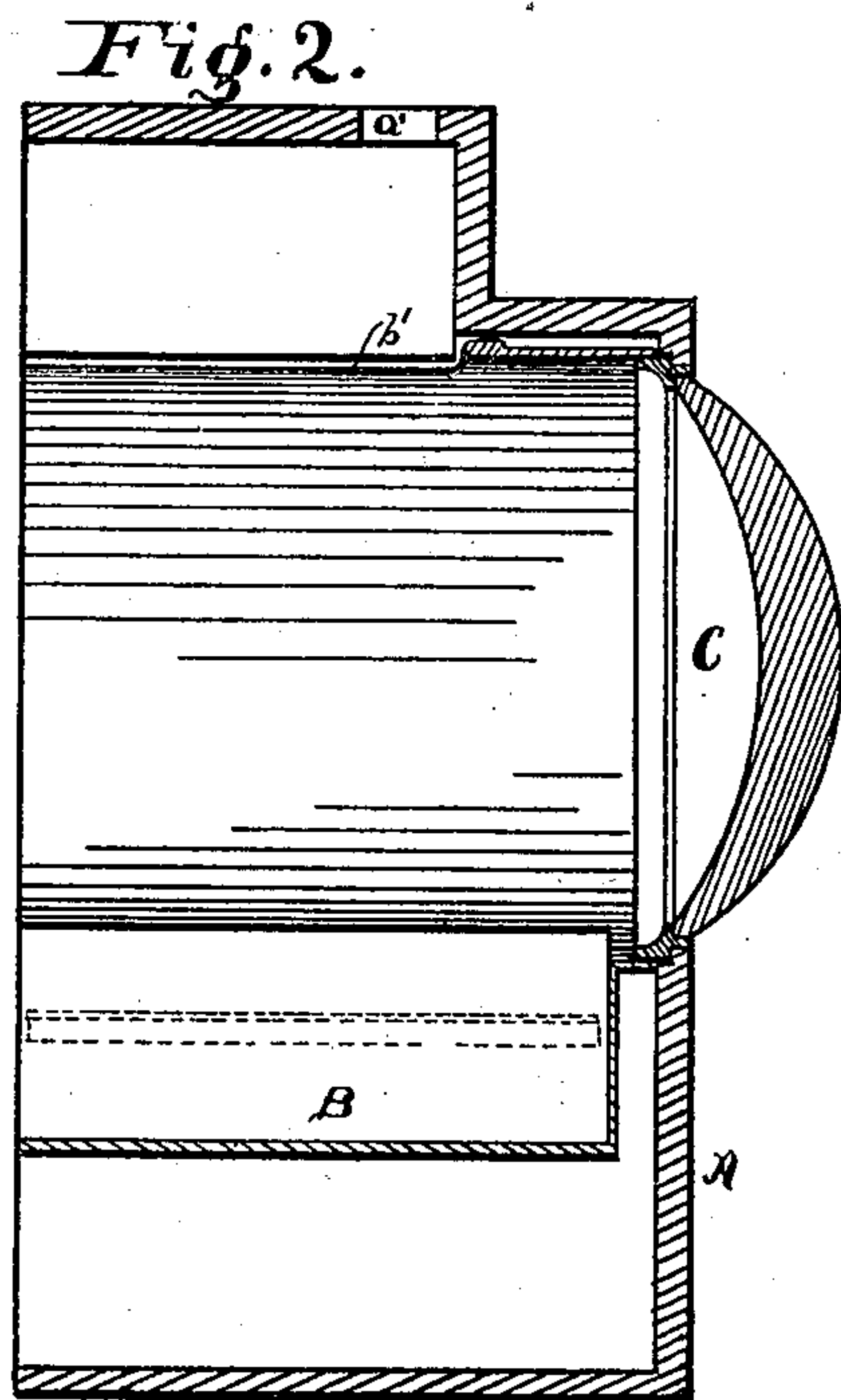


Fig. 2.

Attest.  
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# UNITED STATES PATENT OFFICE.

FREDERIC ELL, OF CINCINNATI, OHIO, ASSIGNOR TO HUGO WENDRINER, OF SAME PLACE; SAID WENDRINER ASSIGNOR OF ONE-FOURTH OF HIS RIGHT TO GEORGE MASON AND ONE-HALF OF HIS RIGHT TO CINCINNATI TIN AND JAPAN COMPANY, OF SAME PLACE.

## LAMP FOR STOVES, &c.

SPECIFICATION forming part of Letters Patent No. 227,156, dated May 4, 1880.

Application filed January 2, 1880.

*To all whom it may concern:*

Be it known that I, FREDERIC ELL, of Cincinnati, Hamilton county, Ohio, have invented certain new and useful Improvements in Lamps for Bakers' Ovens, Stoves, &c., of which the following is a specification.

My invention consists of a certain construction and arrangement of parts, to be hereinafter fully described, whereby I am enabled to throw a brilliant and constant light into a baker's oven while bread or other articles are being baked, without allowing any of the heat to escape from the oven; and the construction of the various parts of my invention is such that the oil in the lamp which I use does not become heated, and therefore liable to explosion.

Heretofore it has been a difficult matter to construct any apparatus for lighting the interior of an oven that would not be in danger of exploding when the oven was heated, as the oil in the lamp would become heated and the gas formed would be liable to cause an explosion. Gas has been used, but has not been made a success, inasmuch as the steam and moisture arising and emanating from the oven cause the light to grow dim or even to put it entirely out.

My invention is perfectly free from all these objections, as the light is entirely separated from the oven, and the reservoir containing the oil is so surrounded by air-chambers and provided with vent and draft pipes that the oil does not become heated.

Referring to the drawings forming part of this specification, Figure 1 is a perspective view of the lamp and the various casings in position. Fig. 2 is a vertical longitudinal section through the casings, and Fig. 3 a vertical cross-section through the same.

A is the outer case, which is made preferably of cast-iron and permanently set in the wall of the oven. B is a removable or inner casing, preferably made of tin or like material, and sufficiently less in size to slide into the casing A and leave an air-space between the two casings.

The casing A is provided with the inwardly-

projecting flanges or ways *a*, upon which rest the outwardly-projecting wings *b* on the casing B, thus holding the bottom of said casing B at some distance above the bottom of casing A.

The inner end of the casing B is provided with a bull's-eye glass, C. The inner end of the casing A is closed excepting at the upper portion, through which is an opening of just sufficient size to admit the bull's-eye at the end of casing B. The upper portion of casing B is partly cut away, as shown at *b'*, to allow the heated air and gases from the lamp to escape through the opening *a'* in casing A.

D is the lamp which I use to produce the light. This lamp is provided with any of the ordinary burners, at the back of which is placed a reflector, E, which is so supported that it can be turned to the right or left to reflect the light to any desired part of the oven.

The reservoir D' of the lamp is surrounded (except on the outer side) by the casing or apron E', leaving an air-space between itself and the reservoir. The casing E' extends below the bottom of the reservoir D' a short distance, so that when the lamp is placed within the casing B the reservoir D' will be held up from the bottom of said casing, leaving an air-space between it and the reservoir.

The reservoir D' is provided with a draft or vent pipe, *d*, which conducts off any gas which may arise from the oil in the reservoir. The reservoir is also provided with the ordinary aperture for filling, and also with a funnel-mouthed tube, *e*, through which latter tube cold air is admitted to the interior of the reservoir, thus ventilating it and causing a more perfect draft for the burner.

The manner in which my invention is operated and employed is as follows: When the oven is being heated the casing B is removed from the casing A and a stopper or lid placed in or over the opening in said casing A, which is occupied by the bull's-eye when the casing B is within the casing A. When the oven is heated, the stopper or lid is removed and the casing B placed within the casing A and the lamp D placed within the casing B. A brilliant and constant light will now be thrown

into the interior of the oven; and it will be seen from the arrangement of the various parts when in position that the oil in the reservoir cannot become heated, as it is so completely removed from the heat, one air-space being provided between the reservoir and its casing or apron E', another between this casing and the casing B, and another between the casing B and the casing A, which latter casing is the only one which can be heated to any considerable extent, as it is the only one that is directly in contact with the heat.

The vent and draft tubes *d* and *e* conduct off any slight amount of gas which may form in the reservoir, and are preferably always used.

What I claim as new and of my invention is as follows:

1. The combination of the lamp D and the casings A and B, constructed and arranged as described, to leave air-spaces between the lamp and casings and between the casings,

said casings being open at the end opposite the oven, substantially as and for the purposes specified.

2. The combination of the casing A, permanently secured in the wall of an oven, and the removable casing B, said casings being open at the side opposite to the oven, and the latter being provided with the bull's-eye glass C, substantially as and for the purposes specified.

3. A lamp for lighting the interior of an oven, consisting of the reservoir D', said reservoir being provided with the vent and draft tubes *d* and *e*, and being surrounded by an apron or casing, E', in the manner described, to leave an air-space between said apron and the reservoir, substantially as and for the purposes specified.

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Attest:

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