

B. C. BIBB.

Magazine for Base Burning Stoves.

No. 97,026.

Patented Nov. 23, 1869.

Fig. 1

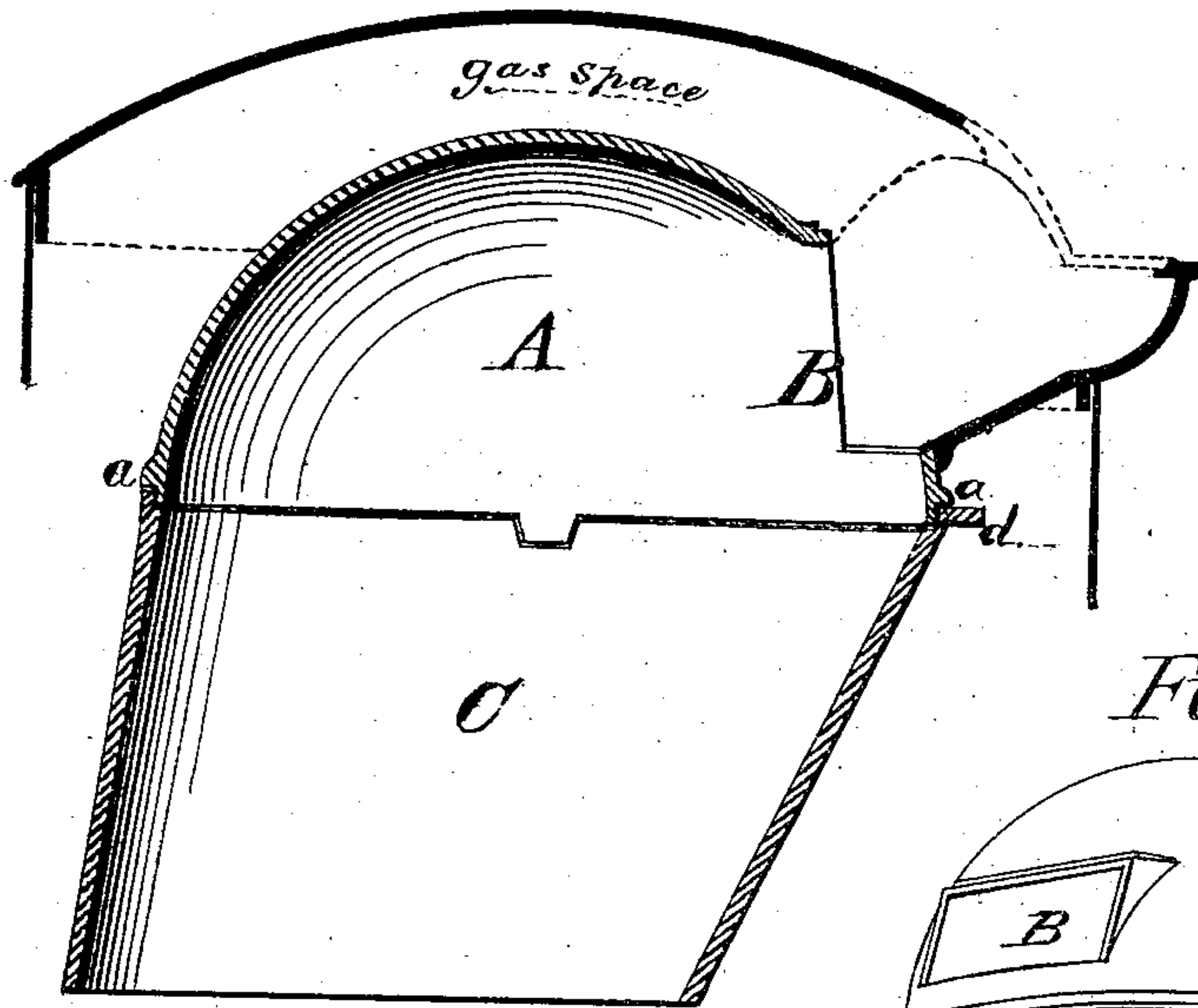


Fig. 3.

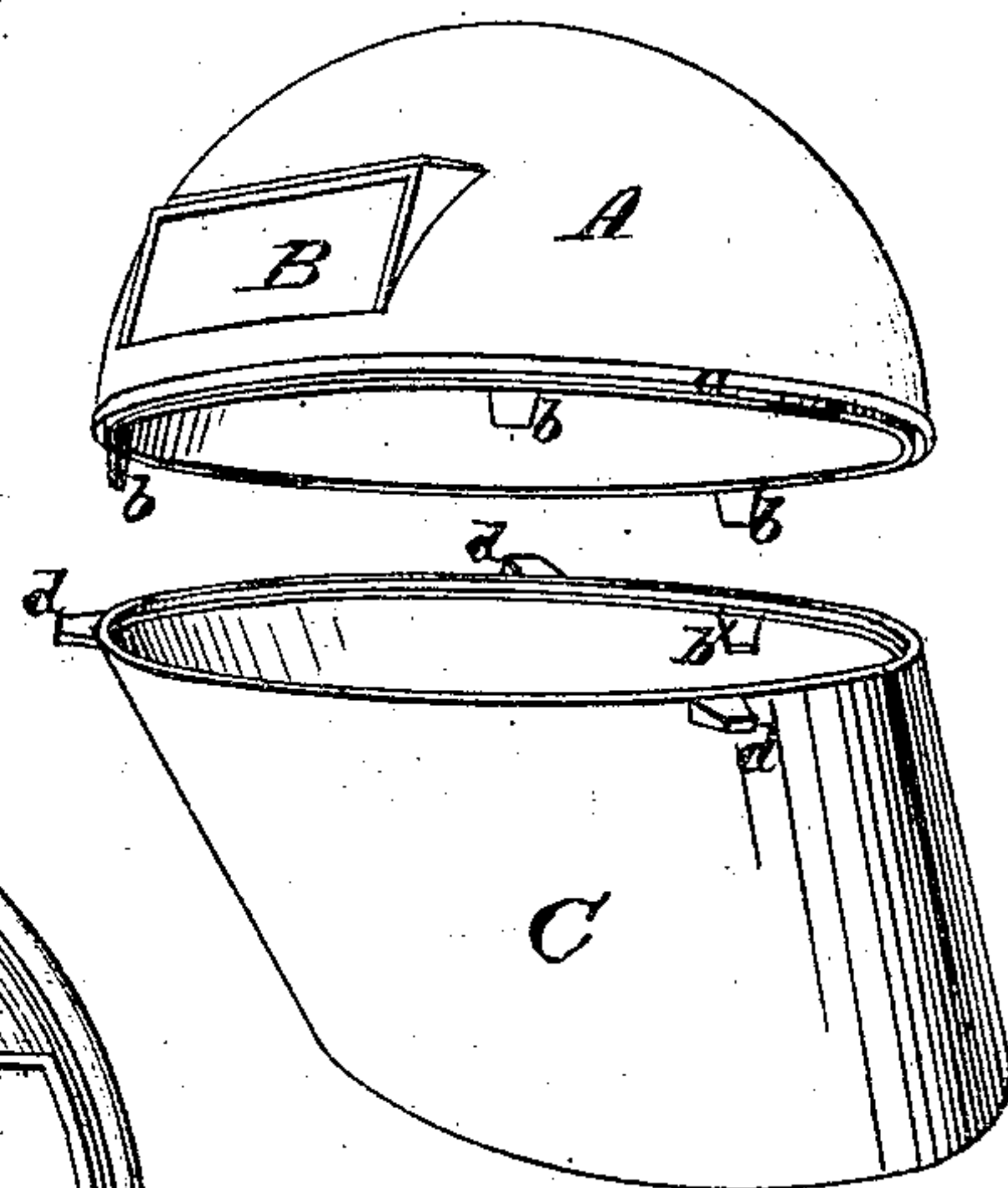
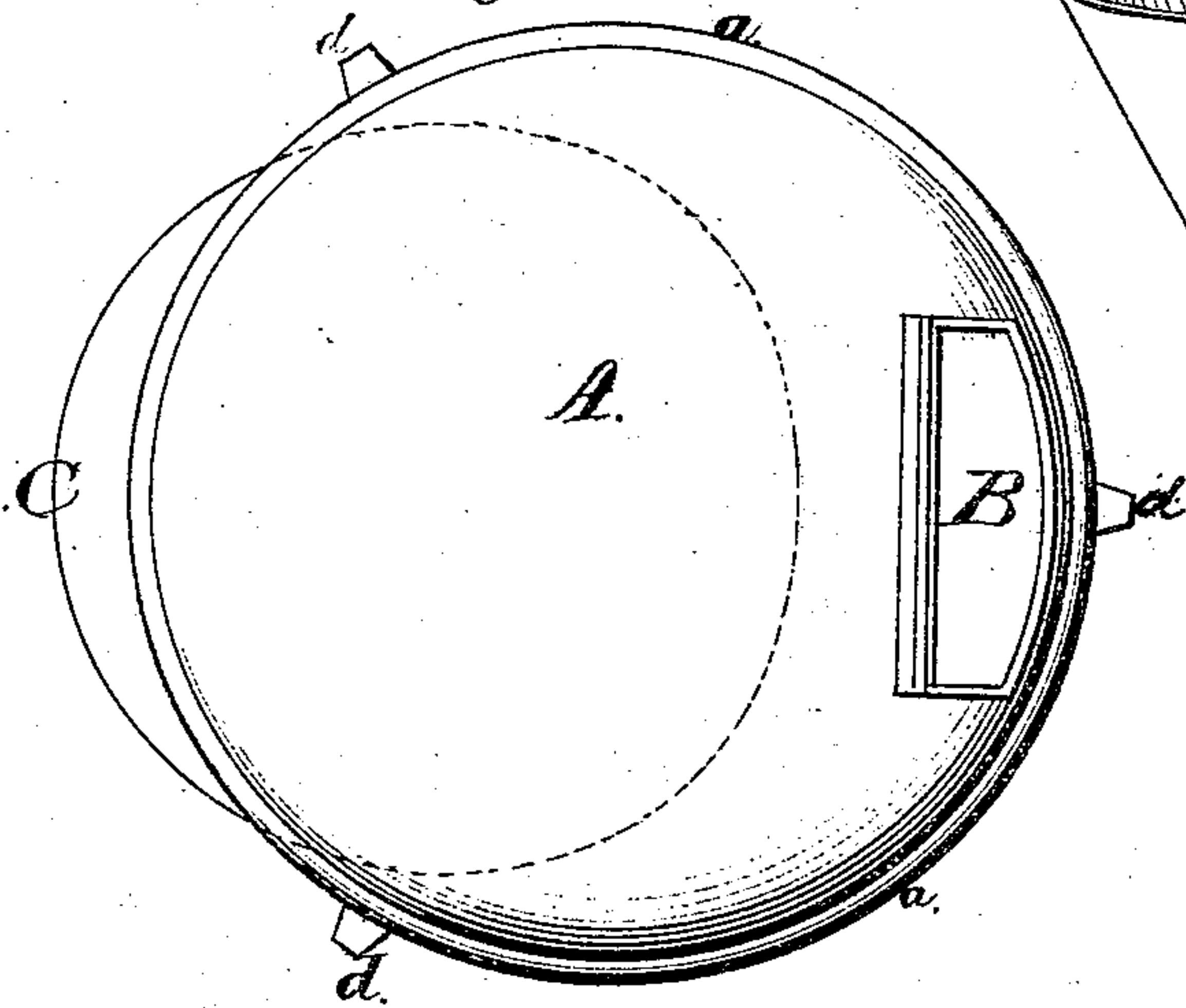


Fig. 2.



Witnesses
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BENTLEY C. BIBB, OF BALTIMORE, MARYLAND.

Letters Patent No. 97,026, dated November 23, 1869.

MAGAZINE FOR BASE-BURNING STOVES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, BENTLEY C. BIBB, of Baltimore, in the State of Maryland, have invented an Improvement in Magazines or Coal-Supply Reservoirs for Base-Burning Fire-Place Stoves; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a section, taken vertically through the improved magazine.

Figure 2 is a top view of the magazine.

Figure 3 shows the two parts of the magazine detached from one another, in perspective.

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

The improved magazine is to be applied within a fire-place stove, which has its feed-door at the top in front of the frame of the mantel-piece, and when applied, there is a gas-escape space between its top and the top of the stove, such space being in communication with the draught-flue, and serving to conduct any "pent up" gases, which may seek to escape when the feed-door is opened, off into the chimney, instead of allowing them to pass into the sitting-room.

The invention which I have made does not consist in the top feed-door or passage for fire-place base-burning stoves, nor in the gas-escape passage for stoves of this class; but

The nature of my invention consists in the combination of a lower backwardly-slanting or inclining section of magazine, open at top and bottom, with an upper section, which has its vertical axis perpendicular with the top of the stove, and which has its lower end open and its top closed, except at the point where the feed-passage is formed in it, the said two sections of magazine being loosely connected together at a point near the top of the combustion-chamber of the stove.

By constructing the magazine for a fire-place base-burning stove in the manner I shall hereinafter particularly describe, the following advantages over other fire-place stove-magazines are secured.

First, a large grate-surface for the coal to spread upon in front of the lower end of the magazine. This results from the backward slant given to the lower section of the magazine. By thus having the coal to spread, it burns with much greater freedom, and as a larger space for the circulation of the flame in front of said section of the magazine is afforded, a much more perfect combustion, a greater amount of heat, and a better illumination will be secured.

Second, facility for renewing the lower section without the expense of furnishing an upper section, when said lower section burns out, is afforded. The upper

and lower sections are allowed freedom to expand and contract independently of one another, and hence there is less inconvenience from warping and twisting of the magazine under the influence of great heat. These advantages result from the magazine being made in two sections. In addition to the practical advantages named, there is also an important advantage in the casting of the magazine with a lower slanting section in two parts, for by making it in two parts, no inconvenience in moulding or "drawing" is experienced from the slant given to the lower section.

Third, the upper section of magazine, by being made concentric with the cylinder of the stove, affords a uniform circulation-space around it, and at the same time permits the feed-door to be arranged at one side of its vertical axis, and also allows a free escape of gas over its top to the draught-flue.

To enable others skilled in the art to make and use my invention, I will describe minutely its construction and operation.

In the accompanying drawings—

A represents the cap or upper section of the magazine, which is preferably made of a hemispherical form, as shown, with its bottom edge rabbeted at *a*, and constructed with three or more lips, *b*.

This cap or top section A has an opening, B, through it, which is surrounded with a rectangular border for receiving and forming a joint with the edges of a short chute or inclined feed-way, which is usually formed on or applied to the top of the stove, or the upper portion of the body of the stove, within which the magazine is enclosed.

The lower section C has its upper edge rabbeted, for receiving the tongue and shouldered portion of the bottom edge of section A. This lower section has its axis oblique to the axis of section A, as shown. Its sides may be made tapering downward, or its sides may be straight; but in all cases the section should slant backward from the front of the stove.

In horizontal section, the form of section C may be circular, elliptical, rectangular, or of any other suitable shape.

It will be seen, by reference to the drawings, that the interior surface of section C is recessed, as at *b'*, at several points. These recesses receive the lips *b* on the lower edge of the section A, when said section is in place on section C, and by this means any lateral displacement is prevented.

It will also be seen that section C is constructed with three lugs, *d d d*, at or near its upper edge, which extend outwardly, and rest upon supports on the interior surface of the body of the stove, these lugs serving as a means of suspending section C, and its superstructure A, within the stove.

Instead of these lugs, a continuous ring flange may

be employed as a suspension-device for the magazine, but in such case the products of combustion pass out of the fire-chamber below this ring or flange.

The lower section of the magazine, when suspended as described, is inclined backward within the combustion-chamber from a vertical line. This is done for the purpose of delivering the coal from the magazine upon the grate in rear of the vertical centre thereof, so that a much larger area of grate-surface shall be afforded in front of the lower end of the lower section of the magazine than would be afforded in fire-place stoves having their magazines in vertical lines.

The inclination of section C may be effected by inclining backward the front portion of its wall to a greater extent than its back portion, as shown in fig. 1. This will leave a very large chamber of combustion in front of said section C, and a large incandescent area will be exposed, and in consequence thereof, a free burning and circulation of gases, and a bright illumination secured.

The improved reservoir or magazine herein described may be used in any of the "top-feeder" fire-place base-burning stoves, whether the flame passes up between the upper and lower sections of the magazine and the surrounding wall or casing of the stove,

or whether the products of combustion are carried downward before escaping over said magazine.

I do not claim, broadly, a magazine which is inclined, as this is common in outstanding stoves; that is, a single perforated tube inclined and extending from the top plate of an outstanding stove down to the point where it rests, was known before my invention; but having described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The section A, constructed with a closed top, in which is the feed-door B, said section being adapted to fit loosely upon and be held in place by a lower section, C, substantially in the manner and for the purpose herein set forth.

2. The top-feeder magazine, for a fire-place stove, made of two independent sections, A C; the lower section slanting back, and both sections constructed and adapted for use, substantially in the manner and for the purpose described.

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Witnesses:

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