No. 637,441. Patented Nov. 21, 1899.

J. F. BARKER.

GAS BURNER.

(Application filed Mar. 3, 1899.)

(No Model.)

Fig. 1

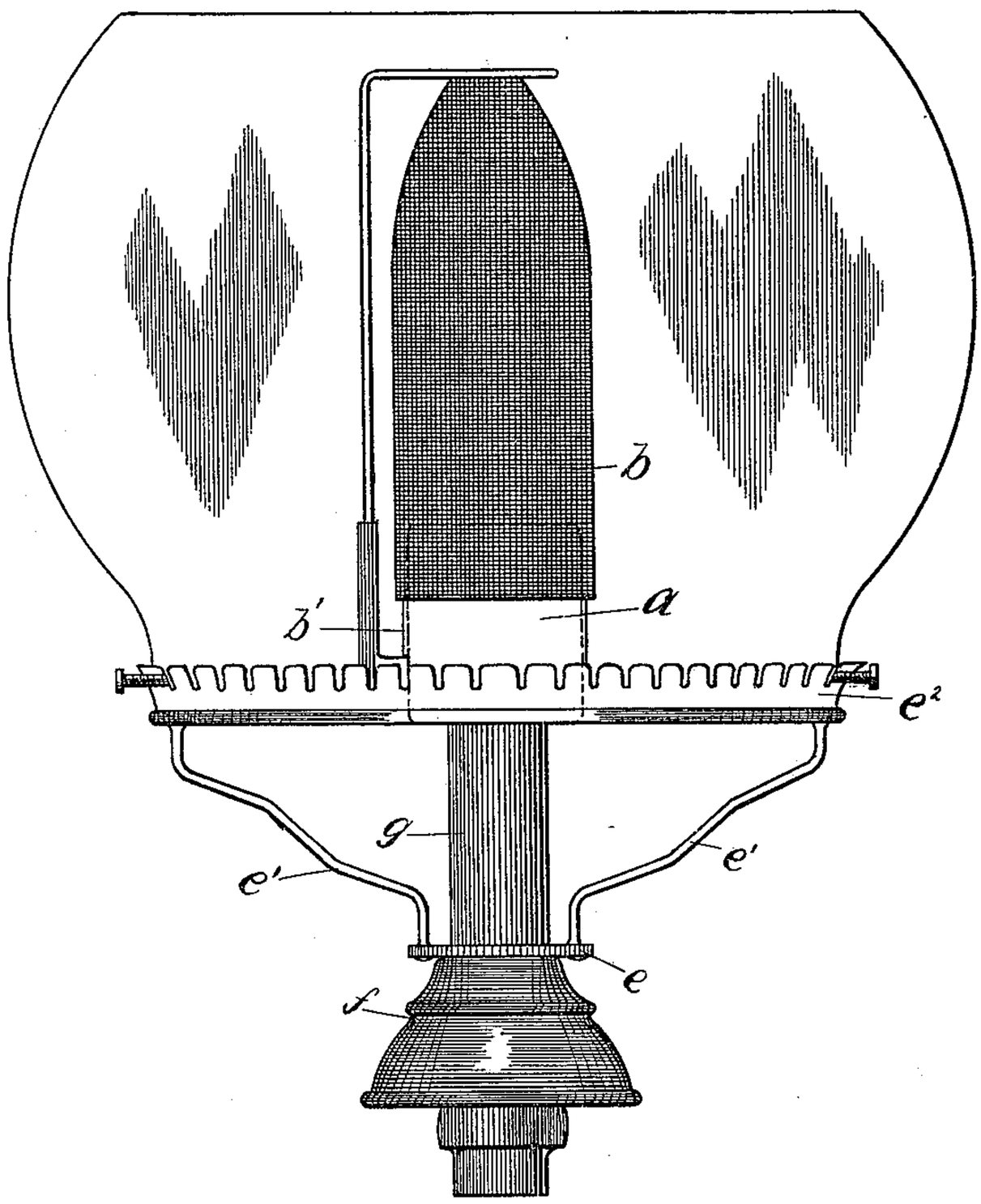


Fig. 2

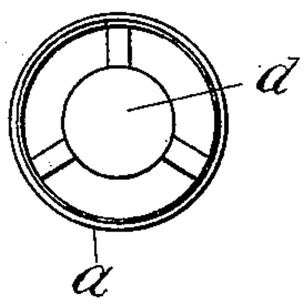
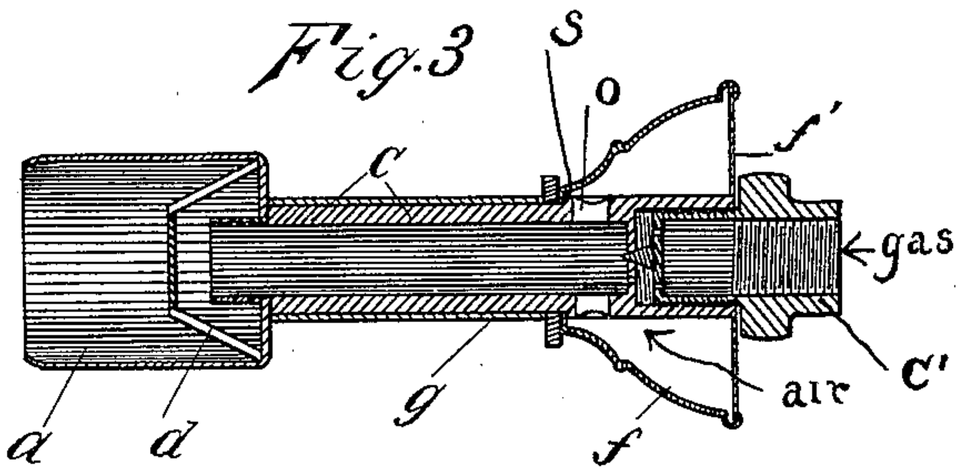


Fig. 3



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UNITED STATES PATENT OFFICE.

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GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 637,441, dated November 21, 1899.

Application filed March 3, 1899. Serial No. 707,598. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. BARKER, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented a certain new and useful Improvement in Gas-Burners for Illuminating Purposes, of which the following is a description, reference being had to the accompanying drawings, wherein—

Figure 1 is a side elevational view of an apparatus embodying said improvement. Fig. 2 is a top or plan view of the upper open end of the cup, which acts as a base for the mantle-support and mantle. Fig. 3 is a view in central vertical section of what is shown in Fig. 1, omitting the mantle and its support, also omitting the globe and its support.

The improvement pertains to that class of gas-burners for illuminating purposes which have obtained in general the name of the "incandescent."

In the accompanying drawings the letter *a* denotes what may be termed a "cup." It has a cylindrical body open at the top and provided with a broad flat base and serves as a support for the mantle *b* and the mantle-support *b'*, which latter surrounds the cup.

The letter *c* denotes a pipe of lesser diameter than the cup, into whose bottom it is screwed. The mingled gas and air flow through it into the cup *a*, being delivered in the lower part thereof.

The letter *d* denotes what may be termed a "spreader," as shown in the drawings. It consists of a disk with three short legs, a sort of tripod. The disk is interposed in the path of the flow of the mingled air and gas, and it has the effect and function of diverting or spreading the current and obstructing it somewhat and causing the constituent parts to more thoroughly commingle. When a spreader like this is interposed, as described, in the path of the mingled air and gas, it tends to prevent the roaring sound which is otherwise not rarely present in burners of this type, and it also aids in giving the flame and mantle a stability which permits the ordinary chimney to be dispensed with.

f designates the air-hood, having a perforated bottom or floor *f'*. The hood is preferably of about the shape shown, and its body surrounds the upper section *c* of the gas-pipe above a shoulder *s* thereon, with its floor *f'* standing about flush with the lower end of said upper section and above the lower section *c'*, which is adjustable within or screwed into the lower end of the upper section, as seen in Fig. 3. In said pipe and within the hood are openings *o*, and the air entering through the perforated floor *f'* is directed through these openings into the pipe *c*, where it mingles with the gas, as usual.

Users of lamps of this general type heretofore readily understand the desirability of being able to omit the chimney, for in all matters of accident the chimney and the mantle interact upon each other disastrously. Notwithstanding the omission of a chimney it is, however, desirable both for appearance sake and to ward off strong currents of air from the mantle and flame that there should be a shade or globe. A globe is shown in the drawings.

The gallery or support for the globe is composed of the spider, made up of the spider-plate *e*, arms *e'*, and ring e^2. The plate *e* surrounds the pipe *c* just above the hood *f*, and a loose sleeve *g* surrounds said pipe above this plate and clamps the latter tightly against the hood by reason of the fact that the cup *a* screws onto the upper end of the pipe and presses the sleeve downward. By this means all parts are held rigid, and yet they are detachable when desirable.

I claim as my improvement—

1. In an incandescent gas-burner having no chimney, the combination with the gas and air pipe having a shoulder, the air-hood surrounding the same and resting on the shoulder, and a cup screwed on the upper end of said pipe and having a broad flat base; of the mantle supported by the cup, a separator within said cup located in the path of the fluid passing out said pipe, a globe, and a support therefor surrounding the pipe next above said hood, as and for the purpose set forth.

2. In an incandescent gas-burner having no chimney, the combination with the sectional pipe for supplying mingled air and gas, the mantle, and the mantle-support; of a cup screwed onto the upper section of said pipe and having a broad flat base, a globe, a gallery therefor whose spider-plate surrounds the upper section of said pipe and is supported

by a shoulder, and a loose sleeve around such pipe between the plate and the base of the cup, as and for the purpose set forth.

3. In an incandescent gas-burner having no chimney, the combination with the gas-pipe having a shoulder, the air-hood surrounding the same and resting on the shoulder, and a cup screwed on the upper end of said pipe and having a broad flat base; of the mantle supported by the cup, a globe, a support therefor surrounding the pipe next above said hood, and a sleeve loosely surrounding the pipe between said support and the base of the cup, whereby the latter may be screwed on its threads to tighten the parts, as and for the purpose set forth.

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