I. SIMMONS.

Gas-Burners.

No. 139,828. Patented June 10, 1873.

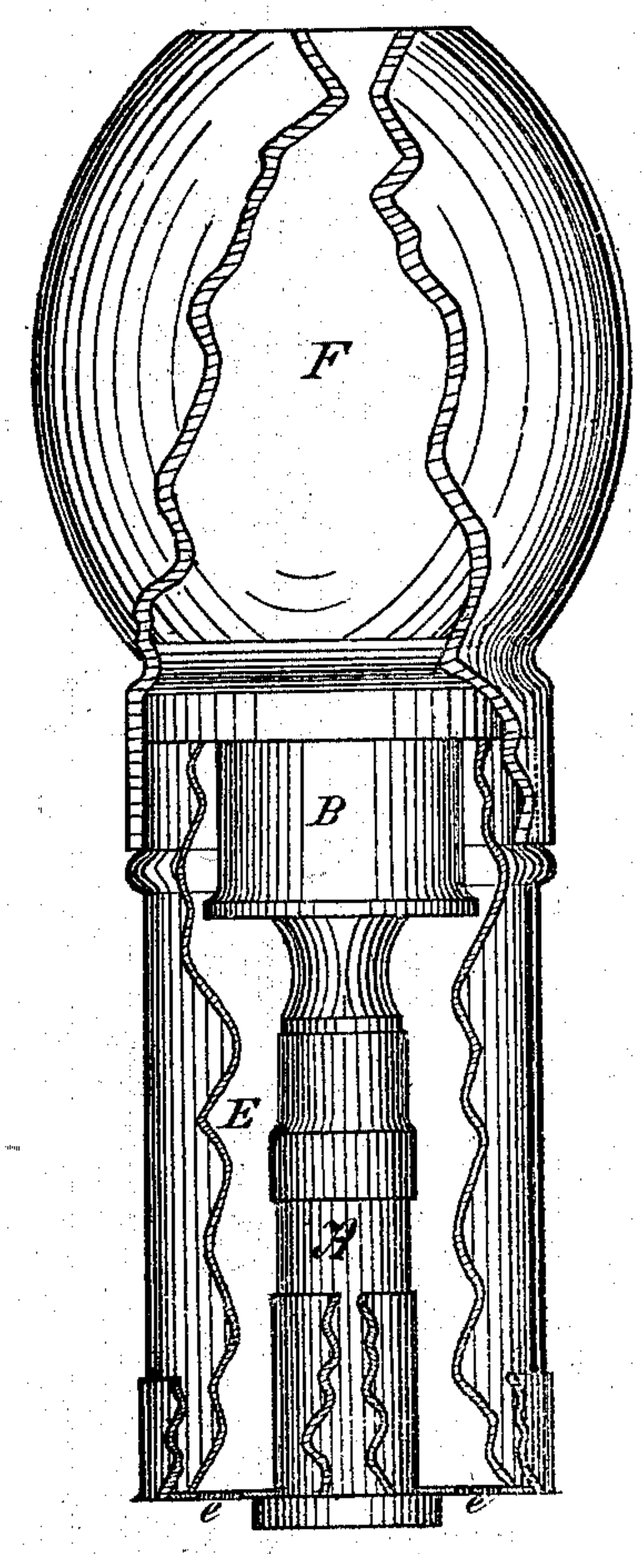

Fig. 1.

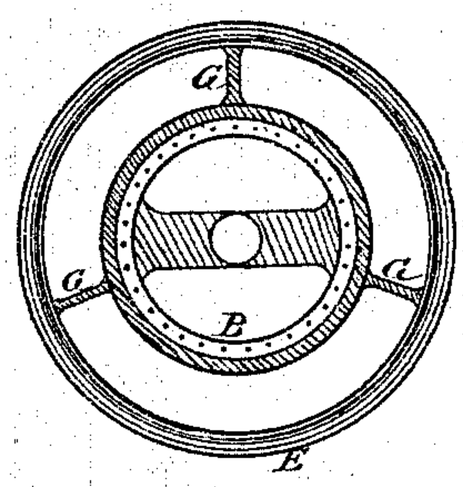

Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ISAAC SIMMONS, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. **139,828**, dated June 10, 1873; application filed March 3, 1873.

To all whom it may concern:

Be it known that I, ISAAC SIMMONS, of the city of Baltimore, in the State of Maryland, have invented an Improvement in Gas-Burners, of which the following is a specification:

This invention consists in the combination of a metallic tube adapted to reach to about the level of the burner-tip, and a glass chimney proper applied to the top of said tube, the whole forming a combined chimney adapted for use with an Argand or other burner.

In the accompanying drawings, Figure 1 is a sectional elevation, representing the complete device. Fig. 2 is a top view, with the chimney omitted.

A represents a tube which may be made in one or more pieces, to convey the gas to the burner-tip B. This tip I prefer to make of the Argand form, shown in Fig. 1. It may, however, be a fish-tail or other ordinary burner. Within the tube A I may apply one or more perforated or gauze diaphragms, but these do not constitute any essential part of the invention, and may be omitted or modified, if preferred. E represents my improved tubular jacket, supported at its lower end on a collar surrounding the tube A. The top of the said jacket is open and is about on the level of the burner-tip B, and the entire inlet of air is through one or more apertures, *e e*, at or near the lower end. The jacket is surmounted by a transparent or semi-transparent chimney, F, which may be made of much less height than is required with an Argand burner without the jacket E. The jacket E may be varied in form. Instead of being made in cylindrical shape, of two or more pieces of metal, as here represented, it may be spun up from a single piece of sheet-brass or other metal, with either a round or a flat bottom, and the openings may be either in the bottom or near the bottom around the sides; or it may consist of a bottomless tube supported from the tube A by means of a collar and radial arms, or in any suitable manner.

In order to regulate the supply of air to the jacket I propose to employ, if necessary, a register formed of a perforated disk if the openings be in the bottom of the jacket, or a perforated band, if in the sides thereof.

I have made the chimney F of various sizes, and in form either cylindrical, spheroidal, or elliptical. The form and proportions represented in Fig. 1 of the drawings are believed to be as good as any for an Argand burner, but I have tried with good results a bulged chimney of larger size in proportion to the burner, and also a cylindrical chimney of about the same height as the bulged chimney F, Fig. 1.

My improved burner is adapted for use with ordinary coal-gas, or with carbureted air or gas produced by any of the various appliances in common use. It effects a a perfect combustion of gas without smoke, and with a superior illuminating effect, and actually causes a considerable saving of gas. G G are radial arms, which may be employed to retain the upper part of the jacket E in concentric position.

The following is claimed as new:

The chimney herein described—that is, to say, the metallic jacket E, combined with the glass F—constructed and adapted to operate as set forth.

ISAAC SIMMONS.

Witnesses:

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