M. C. MEIGS.

LENS-ATTACHMENT TO GAS-BURNERS, &c.

No. 169,366. Patented Nov. 2, 1875.

Fig. 1.

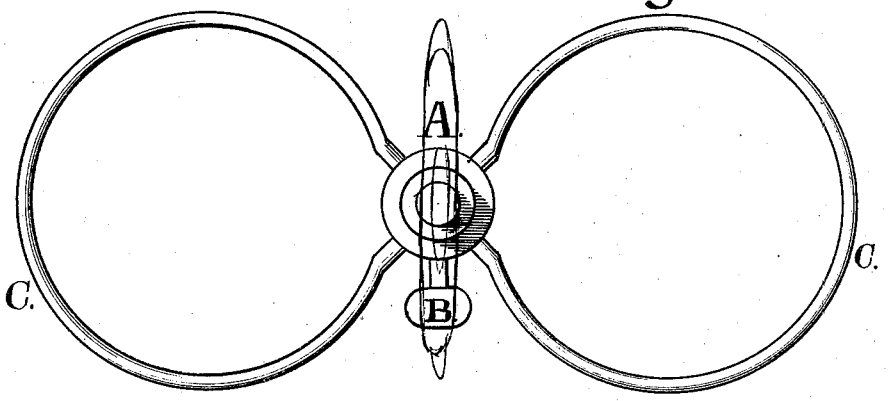
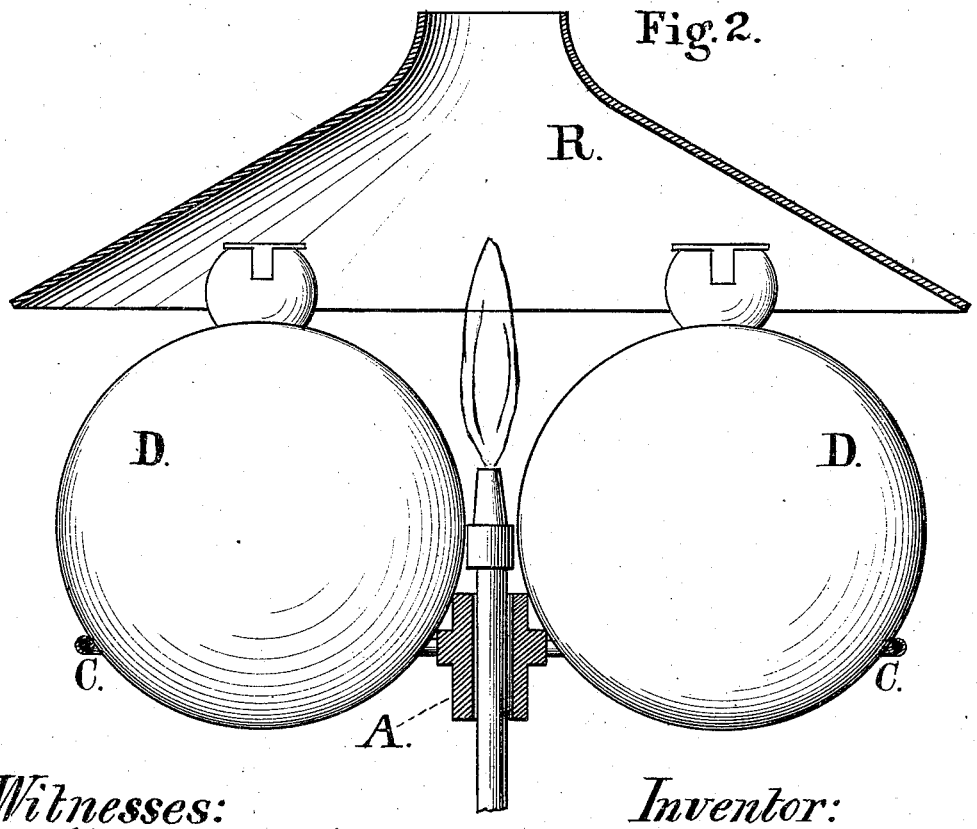


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE

MONTGOMERY C. MEIGS, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN LENS ATTACHMENTS TO GAS-BURNERS, &c.

Specification forming part of Letters Patent No. **169,366**, dated November 2, 1875; application filed April 22, 1875.

To all whom it may concern:

Be it known that I, MONTGOMERY C. MEIGS, of Washington, District of Columbia, have invented an Improvement in Lens Attachments to Gas-Burners and other lights, of which the following is a specification:

The object of my invention is to make one light, whether gas-jet, candle, or lamp flame, do the work of two in lighting up the cases and copy of compositors in printing-houses, the tables and desks and papers in reading-rooms, the tools or machines in workshops, and for other purposes, thus saving the cost of a large portion of the gas or other illuminating material now generally consumed in the composing-rooms of printing-houses, and in shops and rooms where work goes on by artificial illumination, and also avoiding much of the heat resulting from the large quantity of gas usually consumed in such places. This economy may in some cases amount to one-half the whole.

The apparatus is figured in the accompanying drawings.

Figure 1 is a horizontal plan, and Fig. 2 is a vertical section, of the apparatus.

It consists of a central sleeve, to which are firmly attached two rings of metal to support two globes of glass, hollow, and adapted to be filled with a transparent liquid, in such position as to receive the rays of light from a flame, and to refract and condense them into two beams of light, which descend at an angle with the horizon, but in vertical planes, nearly opposite to each other in direction, so as to fall upon and illuminate strongly two objects at some distance from each other. In a printing-house these two objects may be the copy and cases of two printers standing near each other, for each of whom, as now generally practiced, a separate light is used.

Like letters designate like parts in the figures.

A is a sleeve, which is slipped over the gas-pipe carrying a burner, and may be secured by the set-screw B at the proper height below this burner. C C are rings of metal, which are firmly attached to the sleeve and support; D D, two hollow glass globes filled with water or some other transparent liquid. They are preferably of about six inches in diameter. E is the flame, the source of light. When arranged as represented in the figures the two beams of light will pass downward in opposite directions at an angle of about forty-five degrees with the horizon, and about one hundred and eighty degrees with each other horizontally. When the light is a fish-tail burner, consuming five feet of standard sixteen-candle gas per hour, each beam will have an illuminating power of from one hundred to one hundred and thirty candles; R, a reflector, of ordinary form, is also used, when desired, placed above the flame and globes, to collect and throw downward the rays radiated upward toward the ceiling of the room.

For the sleeve open at both ends may be substituted a socket, to fit over a burner or to screw upon a gas-pipe, this socket supporting a burner on its upper end, as also the rings for supporting the globes. This allows the whole apparatus—flat flame, globes, and rings—to be turned around a vertical axis. This last arrangement is sometimes convenient in reading-rooms.

I claim as my invention—

1. The combination of two hollow glass lens-shaped bottles, adapted to be filled with transparent liquid, a support therefor attached to and located upon a gas-pipe, with its jet between the compound glass and liquid lenses, these members arranged, constructed, and operating substantially as and for the purpose set forth.

2. The combination of two hollow glass lens-shaped bottles, adapted to be filled with transparent liquid, a support therefor on different sides of an illuminating-flame, a reflector, and an illuminating-flame, these members arranged, constructed, and operating substantially as and for the purpose set forth.

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