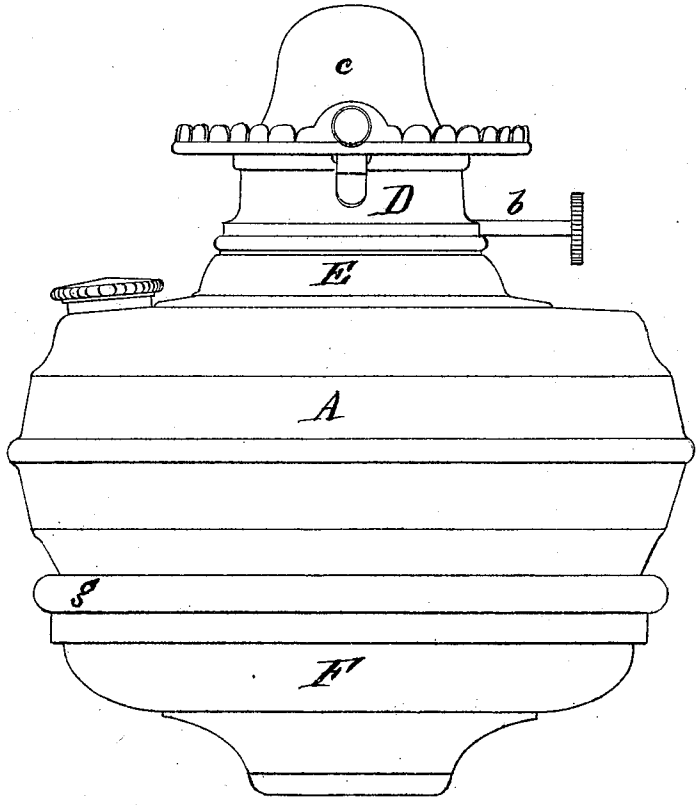
3 Sheets--Sheet 1.

W. J. GORDON & M. W. HOUSE.

Lamp.

No. 132,655. Patented Oct. 29, 1872.

Fig. 1.



Witnesses.
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Louis Seaman

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by their Attorney
C. S. Renwick

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Lamp.

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Fig. 2.

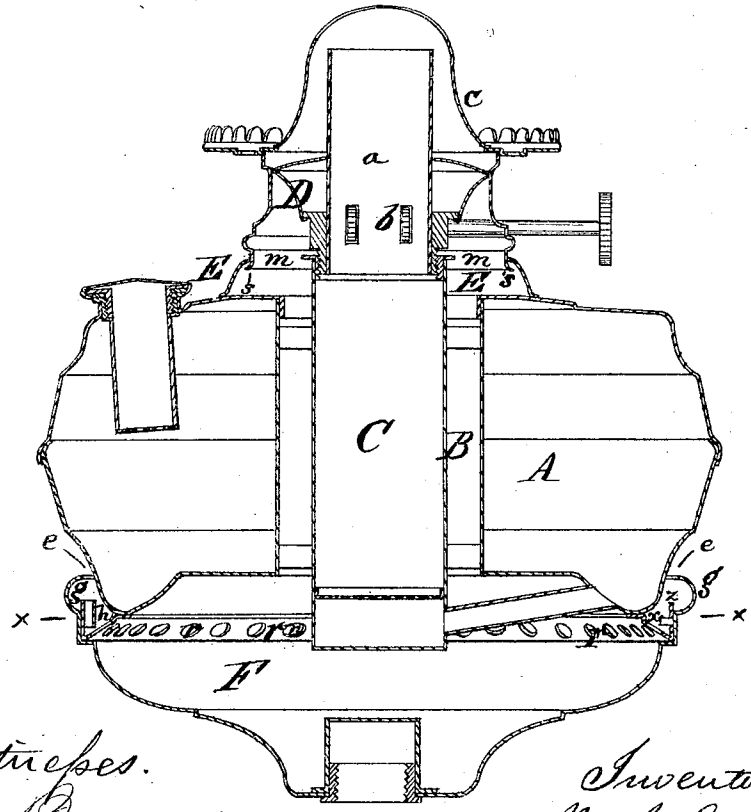

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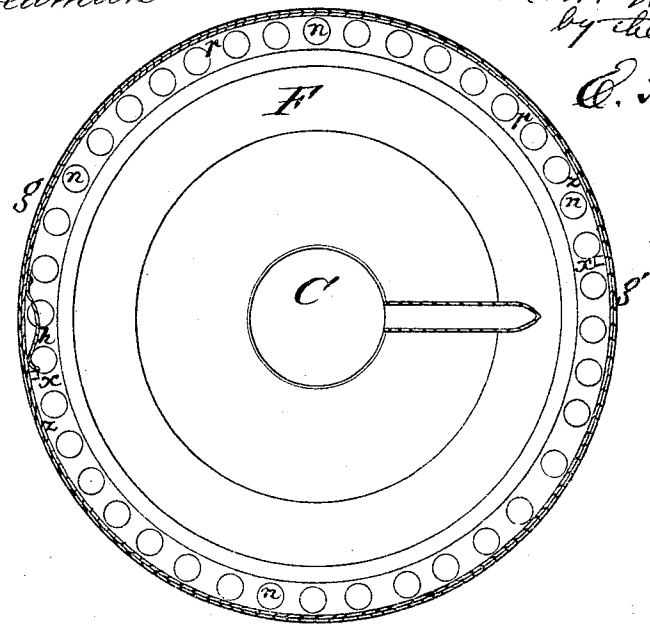
Fig. 3.



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3 Sheets--Sheet 3.

W. J. GORDON & M. W. HOUSE.

Lamp.

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Fig. 4.

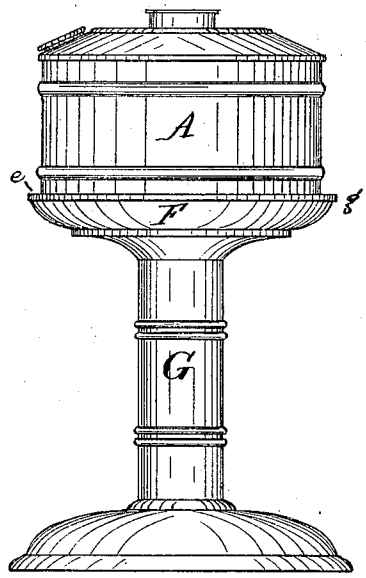


Fig. 5.

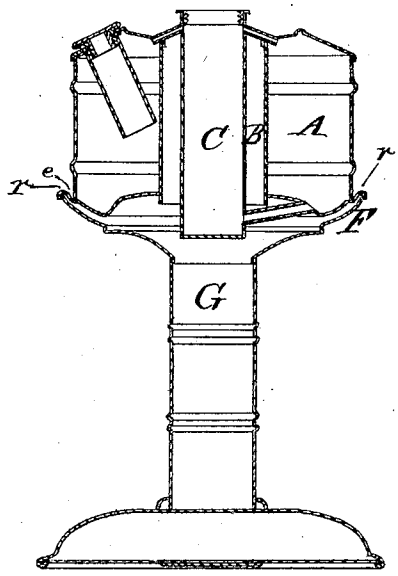
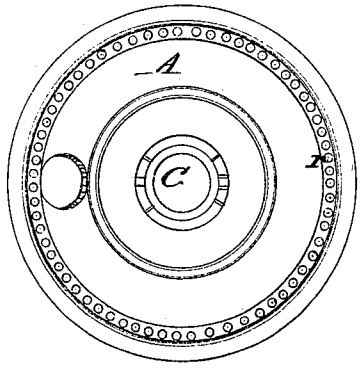


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM J. GORDON AND MARK W. HOUSE, OF CLEVELAND, OHIO.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **132,655**, dated October 29, 1872.

To all whom it may concern:

Be it known that we, WILLIAM J. GORDON and MARK WIGGINS HOUSE, both of Cleveland, in the county of Cuyahoga and State of Ohio, have made an invention of certain new and useful Improvements in Lamps; and that the following is a full, clear, and exact description and specification of the same.

Our invention relates to lamps having a central passage for air from beneath the oil font or reservoir to the wick; and its objects are to prevent the access of air laterally to this passage at the upper side of the font, notwithstanding variations in the fitting of the burner to the font. To these ends our improvement consists of the combination of the burner of the lamp with an adjustable air-screen, which closes the space between the top of the oil-font and the bottom of the burner, and adapts itself to the position of the burner relatively to the oil-font.

In order that our invention may be fully understood, we have represented in the accompanying drawing two forms of lamp, one containing the entire invention, and the other containing the second part of it.

Figure 1 represents a side view of a lamp suitable for connection with an ornamental standard, or with a bracket. Fig. 2 represents a central vertical section of the same. Fig. 3 represents a horizontal section of the same at the line *x x* of Fig. 2. Fig. 4 represents a side view of a low-priced standard lamp. Fig. 5 represents a central vertical section of the same. Fig. 6 represents a plan of the lamp.

The lamp represented at Figs. 1, 2, and 3 has an annular font or reservoir, A, surrounding a central air-passage, B, and provided with a wick-feeder, C, to the upper end of which the burner D is screwed. The burner is provided with a flat wick tube, *a*, with wick-raising mechanism, *b*, and with a cone, *c*. As the screws which connect the burner with the font are rarely of exactly the same size in all particulars, the screw will often be too large to enter entirely into the screwed ring at the head of the wick-feeder C, while in other cases the screw will readily enter to its full extent. In order to prevent the access of external air at the top of the font, under these different circumstances, the adjustable air-screen E is provided. This instrument is a ring of sheet metal fitted to move upon the periphery of the lower part *m* of the burner, so that it can move thereon and permit the burner to approach more or less closely to the font, and will nevertheless close the ring space between the burner and the font. In practice we find it expedient to connect this screen to the burner by means of a lip, *s*, which prevents the screen from dropping off when the burner is removed from the font; but such connection is not essential. The oil-font A is supported upon a drip-cup, F. This drip-cup extends across the bottom of the font and projects at its periphery, so that it may receive both the oil which runs down the internal passage B, and that which runs down the exterior of the font. The rim *g* of the drip-cup is of larger diameter than the adjacent bottom of the annular font A, so that an annular space, *e*, is left between the two, in which space the air-passages *n* are arranged. These air-passages *n* (by which air is permitted to enter the drip-cup and pass to the internal passage) are formed in a flange, *r*, which, in this case, is secured permanently to the font. They open in an upward direction, and are protected from lateral currents by the rim *g* of the drip-cup. Consequently lateral currents of air and also vertically-upward currents are prevented from entering the drip-cup, except as drawn in to supply the upward current of hot air at the chimney of the lamp. On the other hand, if the lamp be exposed to a vertically-downward current of air, inasmuch as the air-passage *e* to the drip-cup opens in an upward direction, the current tends to enter the air-passages *n* just as forcibly as it does the chimney of the lamp; hence the tendency to enter at one place is counteracted by the tendency to enter at the other, and the practical result is that the current does not injuriously affect the flame. In this example of the invention, the flange *r* is permanently secured to the oil-font, and the font is connected with the drip-cup by a duplex bayonet-clutch, the pins *x x* being secured to the drip-cup at its opposite sides, and the slots being formed in a rim, *z*, of the flange *r*. The engagement of the pins in the slots is insured by a frictional spring-catch, *h*. In the form of lamp represented at Figs. 4, 5, and 6, the flange *r*, in which the openings are made, is secured permanently by soldering to both

the font A and to the drip-cup F, which last is extended into the stand G of the lamp. These figures represent a lamp which can be constructed, at a low price, of tin plates, and it may be fitted with a burner the same as that represented at Figs. 1 and 2.

We are aware that lamp-fonts have been combined with exterior cases which inclose the upright sides of the font, extending upward to the top thereof, so that air entering the case can enter only at the periphery of the top of the font, the sides of the case preventing the access of air at any other place. The said construction renders it practically impossible to apply the case to a font having an ornamental profile, such as that of the lamp-font represented at Figs. 1 and 2. It also requires the use of more material for the construction of the cylindrical sides of the case than for the construction of the cylindrical sides of the font. According to our invention the drip-cup is shallow as compared with the height of the font, and does not constitute a case which inCloses the upright cylindrical sides of the font, consequently the font being exposed and uninclosed may have any desirable form, and the drip-cup being shallow requires but a small amount of material for its construction.

We claim as the invention, to be secured by Letters Patent—

1. The combination of the burner of the lamp with an adjustable air-screen to close the space between the lower part of the burner and the font, substantially as before set forth.

2. Also, the combination of the annular oil-font of the lamp, the burner, and the adjustable air-screen, substantially as before set forth.

Witness our hands this 30th day of June, A. D. 1871.

W. J. GORDON.
M. W. HOUSE.

Witnesses:
M. R. KEITH,
F. M. KEITH, Jr.