

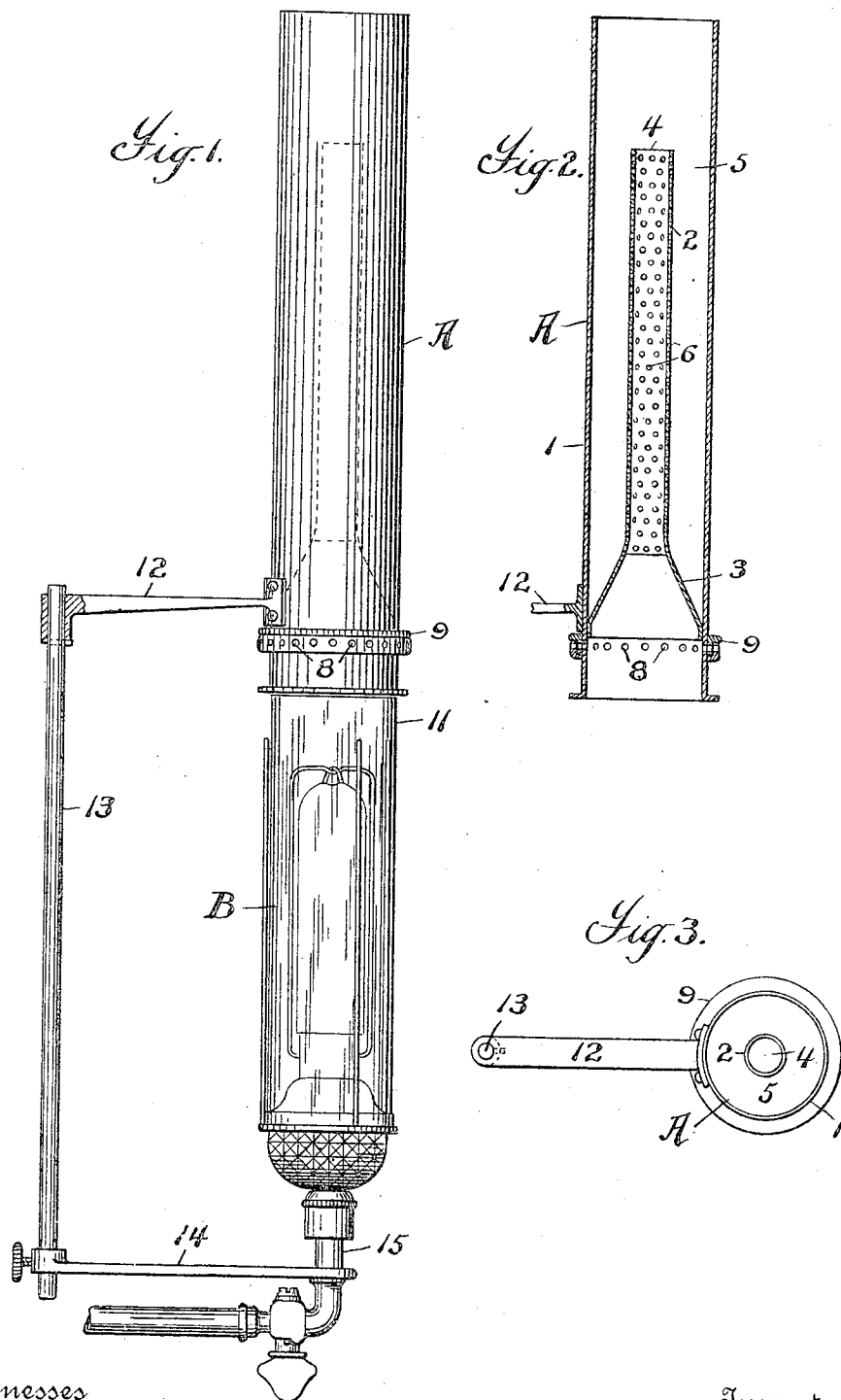
No. 808,215.

L. RABINOFF.

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FUEL SAVING ATTACHMENT FOR INCANDESCENT LAMPS.

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Witnesses

A. L. Kent
L. A. Adams

Inventor
Louis Rabinoff

By his Attorneys

Philip Sawyer, Rice & Kennedy

UNITED STATES PATENT OFFICE.

LOUIS RABINOFF, OF NEW YORK, N. Y.

FUEL-SAVING ATTACHMENT FOR INCANDESCENT LAMPS.

No. 808,215.

Specification of Letters Patent.

Patented Dec. 26, 1905.

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To all whom it may concern:

Be it known that I, LOUIS RABINOFF, a citizen of the United States, residing at New York city, county of New York, and State of New York, have invented certain new and useful Improvements in Fuel-Saving Attachments for Incandescent Lamps, fully described and represented in the following specification and the accompanying drawings, forming a part 10 of the same.

This invention relates to incandescent burners or lamps for gas or oil of that class in which light is produced by incandescence of a refractory body placed over the burner and 15 known generally as "incandescent" lamps, and especially to lamps of this class of the Welsbach type, in which the refractory body is in the form of a mantle or hood formed of refractory filaments suspended over the 20 burner-opening.

The object of the invention is to provide an attachment for such incandescent lamps whereby the desired incandescence of the mantle or other refractory body is secured with 25 a smaller consumption of fuel than is otherwise possible. In the case of Welsbach gas-lamps, for example, without my improved attachment, a certain flow of gas is required in order that the whole of the mantle shall be 30 incandescent. If the gas-cock be turned so as to lessen the flow of gas to the burner below such normal supply as is required for full incandescence of the mantle, then the mantle will no longer be incandescent throughout its 35 extent, but the upper part will become dull. By the use of my improved attachment I am enabled to secure full incandescence of the mantle with a flow of gas considerably less than that required for securing this result 40 without my attachment. I find by actual practice with attachments which I have so far made that I can secure this result with the consumption of about two-thirds of the amount of gas required for securing full incandescence 45 of the mantle without my attachment.

A full understanding of the invention can best be given by a detail description of a preferred form of attachment embodying the same, and such a description will now be given 50 in connection with the accompanying drawings, showing such a preferred construction.

In said drawings, Figure 1 shows an eleva-

tion of a gas-lamp of the Welsbach type provided with an attachment embodying the invention. Fig. 2 is a vertical section of the 55 attachment. Fig. 3 is a plan view of the same.

Referring to the drawings, the attachment A, as shown, comprises an open-ended tubular shell or casing 1, which may be of sheet metal or other suitable material and which is 60 preferably of cylindrical form and of a diameter corresponding to that of the chimney of the lamp with which it is to be used. The length of this shell may be varied to suit particular circumstances; but I have found a 65 shell of about the proportionate length shown to be very satisfactory. Arranged within the shell 1 and extending longitudinally therein is an inner tube 2 of considerably smaller size than the shell 1 and connected at its lower 70 end with the walls of the shell 1 by a partition-wall 3, so as to form within the shell 1 a central passage 4, open at each end, and a surrounding passage 5, open at the top, but closed at its lower end by the partition-wall 3. The 75 length of the inner tube 2 is preferably such that it terminates at its upper end a short distance below the top of the shell 1, and it is perforated throughout the upper and greater portion of its length, as shown, to provide 80 passages 6 for the hot products of combustion to pass into the outer passage 5. The inner tube 2 may be formed of sheet metal or other suitable material and is preferably of a form 85 in cross-section corresponding to the form of the outer shell 1 and preferably has parallel sides throughout the greater portion of its length and flares outwardly at its lower end to engage the walls of the shell 1, such outwardly-flaring portion of the tube forming the 90 partition-wall 3 above referred to and assisting in directing the upwardly-passing hot gases into the passage 6. It is sometimes desirable to provide additional means of escape 95 for the hot gases of combustion, and for this purpose the shell 1 is provided below the lower end of the inner tube 2 with a row or ring of perforations 8, which may be opened to the outer air or closed by means of a sliding perforated ring or band 9. 100

In use the attachment A is mounted on or supported above the chimney 11 of the incandescent lamp or burner B with which it is to be used in the position shown in Fig. 1. Any

suitable means may be provided for so supporting and positioning the attachment. In the drawings there is shown a preferred supporting means, which permits of adjustment for use with chimneys of different heights and also permits the attachment to be readily swung out of line with the chimney when the lamp is to be lighted. Such means comprises a bracket-arm 12, by which the attachment is carried and which bracket is pivotally mounted on a vertical rod 13, carried by and vertically adjustable in an arm 14, which is shown as secured to the neck 15 of the lamp.

It is to be understood that the invention is not to be limited to the exact construction shown and to which the foregoing description has been mainly confined, but that it includes changes and modifications thereof within the claims.

What is claimed is—

1. An attachment for incandescent lamps, comprising an outer tubular shell adapted to be positioned over the lamp-chimney, and an inner tube arranged within the shell and connected at its lower end with the shell so as to form within the shell a central passage open at both ends and an outer passage between the inner tube and the shell open only at its upper end, the walls of the inner tube being perforated to provide openings from said central passage to said outer passage, substantially as described.

2. An attachment for incandescent lamps, comprising an outer tubular shell adapted to be positioned over the lamp-chimney, and an inner tube arranged within the shell and connected at its lower end with the shell by an imperforate partition so as to form within the casing a central passage open at both ends and an outer passage between the inner tube and the shell open only at its upper end, the walls of the upper portion of the inner tube being perforated to provide openings from said central passage to said outer passage, substantially as described.

3. An attachment for incandescent lamps, comprising an outer tubular shell adapted to be positioned over the lamp-chimney, and an inner tube arranged within the shell and connected at its lower end with the shell so as to form within the shell a central passage open at both ends and an outer passage between the inner tube and the shell open only at its upper end, the inner tube terminating below the top of the shell and its walls being perforated to provide openings from said central passage to said outer passage, substantially as described.

4. An attachment for incandescent lamps, comprising an outer tubular shell adapted to be positioned over the lamp-chimney and an inner tube within the shell having its lower end flared outwardly to constitute an outwardly

and downwardly inclined partition connecting the tube with the walls of the shell so as to form within the shell a central passage open at both ends and an outer passage between the inner tube and the shell open only at its upper end, the walls of the inner tube being perforated to provide openings from said central passage to said outer passage, substantially as described.

5. An attachment for incandescent lamps, comprising an outer tubular shell adapted to be positioned over the lamp-chimney, and an inner tube arranged within the shell and connected at its lower end with the shell so as to form within the shell a central passage open at both ends and an outer passage between the inner tube and the shell open only at its upper end, the walls of the inner tube being perforated to provide openings from said central passage to said outer passage, and the shell being formed with perforations below the lower end of the inner tube, substantially as described.

6. An attachment for incandescent lamps, comprising an outer tubular shell adapted to be positioned over the lamp-chimney, and an inner tube arranged within the shell and connected at its lower end with the shell so as to form within the shell a central passage open at both ends and an outer passage between the inner tube and the shell open only at its upper end, the walls of the inner tube being perforated to provide openings from said central passage to said outer passage, and the shell being formed with perforations below the lower end of the inner tube and provided with means for opening and closing said perforations, substantially as described.

7. The combination with an incandescent lamp; of an attachment comprising an outer tubular shell adapted to be positioned over the lamp-chimney and an inner tube arranged within the shell and connected at its lower end with the shell so as to form within the shell a central passage open at both ends and an outer passage between the inner tube and the shell open only at its upper end, the walls of the inner tube being perforated to provide openings from said central passage to said outer passage; and a support for said attachment, said support comprising means for adjusting the attachment vertically for chimneys of different heights, substantially as described.

8. The combination with an incandescent lamp; of an attachment comprising an outer tubular shell adapted to be positioned over the lamp-chimney and an inner tube arranged within the shell and connected at its lower end with the shell so as to form within the shell a central passage open at both ends and an outer passage between the inner tube and the shell open only at its upper end, the walls of the inner tube being perforated to provide

openings from said central passage to said
outer passage; and a support for said attach-
ment, said support being constructed to per-
mit the attachment to be swung out of oper-
5 ative position over the lamp-chimney, sub-
stantially as described.

In testimony whereof I have hereunto set

my hand in the presence of two subscribing
witnesses.

LOUIS RABINOFF.

Witnesses:

J. A. GRAVES,

A. L. KENT.