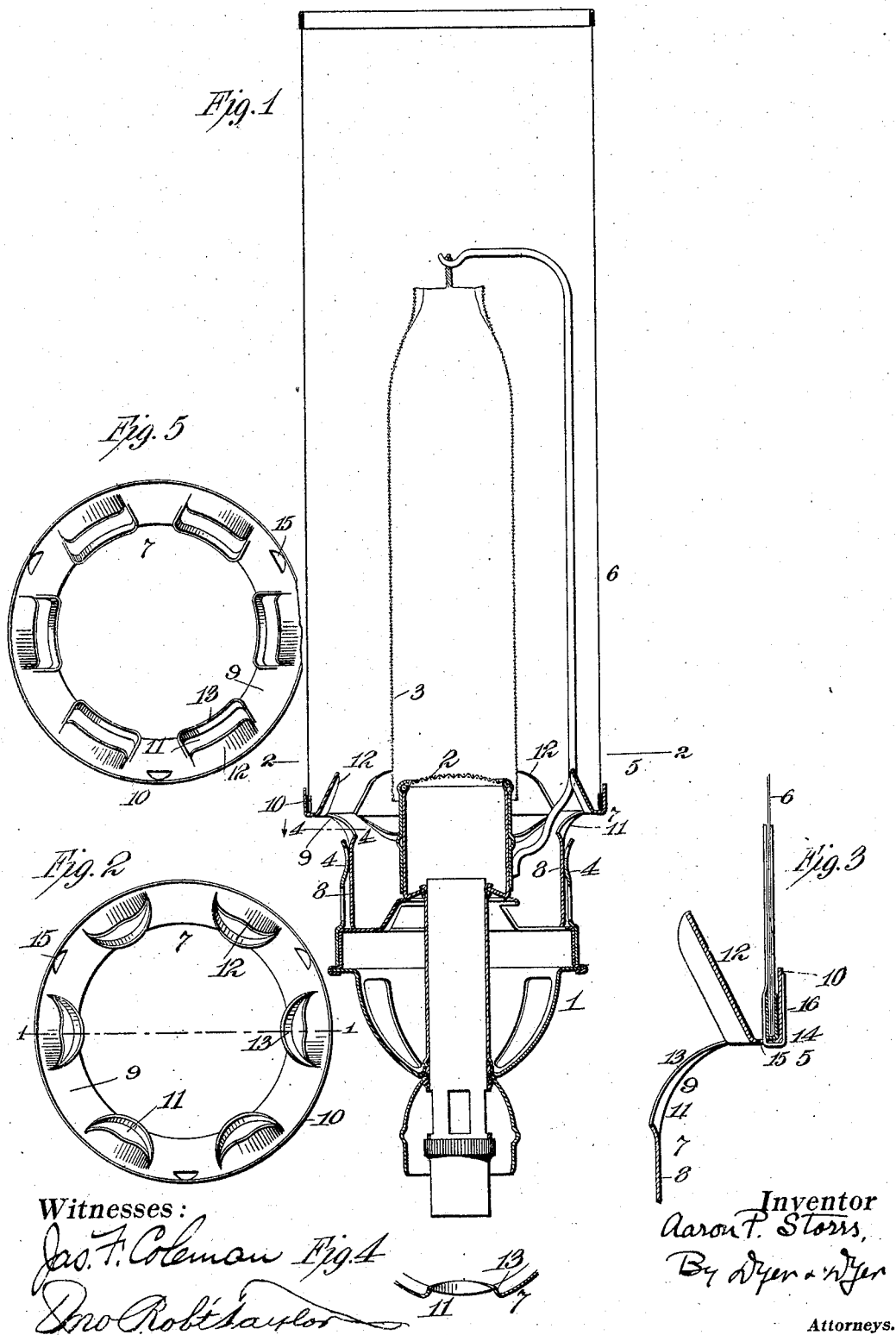


No. 800,336.

PATENTED SEPT. 26, 1905.

A. P. STORRS.
CHIMNEY FOR INCANDESCENT GAS BURNERS.
APPLICATION FILED MAR. 19, 1904.



Witnesses:

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UNITED STATES PATENT OFFICE.

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CHIMNEY FOR INCANDESCENT GAS-BURNERS.

No. 800,336.

Specification of Letters Patent.

Patented Sept. 26, 1905

Application filed March 19, 1904. Serial No. 198,968.

To all whom it may concern:

Be it known that I, AARON P. STORRS, a citizen of the United States, residing in Owego, in the county of Tioga and State of New York, have invented a certain new and useful Improvement in Chimneys for Incandescent Gas-Burners, of which the following is a description.

The present invention relates to improvements in chimneys for incandescent gas-burners of that type in which air is admitted into the chimney outside of the mantle.

The objects of the invention are to produce a chimney which may be used in connection with a burner of the well-known type and will increase the efficiency of the burner.

Another object is to reduce the cost of the chimney.

I attain these objects by the device illustrated in the accompanying drawings, in which—

Figure 1 is a view in section of an ordinary form of incandescent gas-burner, showing my improved chimney in place. Fig. 2 is a horizontal section taken on the lines 2 2 of Fig. 1 and looking downward. Fig. 3 is a fragment of Fig. 1 drawn on an enlarged scale. Fig. 4 is a section of the chimney-base, taken on the lines 4 4 of Fig. 1. Fig. 5 is a horizontal section, similar to Fig. 2, of a modification.

In all of the views like parts are designated by the same figures of reference.

In the drawings, 1 is a well-known type of burner, having a burner-cap 2 and mantle 3 thereon. Ordinary chimney-supporting clips 4 are provided on the gallery.

The chimney 5 is formed of a transparent area 6 and a base 7, the latter being preferably formed of metal. The transparent portion may be formed of glass or of mica, that illustrated being of the latter material. The metal base is preferably made of one piece of thin sheet metal stamped or spun to the desired shape, and comprises the cylindrical portion 8, adapted to rest upon the gallery and being retained in place by the clips 4. Above the upper end of the clips the base expands, forming a curved portion 9, and is then bent at right angles to form a ledge 10 to engage with the lower portion of the transparent portion of the chimney. Openings for the admission of air to the outside of the mantle are formed on the curved part 9 of the chimney-base and are indicated on the

drawings by the numeral 11. The openings are preferably made by slitting the metal to form tongues 12, which are bent inward at the proper angle. The edges of the opening are bent up inward at 13, so as to form, in conjunction with the tongue 12, a converging nozzle of funnel shape, which will direct the air upon a certain definite portion of the outside of the mantle. I prefer to form the tongues 12 of curved cross-section, as is more clearly shown in Fig. 3, making the upper portion of the openings curved, so that the openings will not be distorted, as would be the case if the tongues were not curved. The other edges of the opening may be curved, as shown in Fig. 2, or square, as shown in Fig. 5. When mica is used, it is preferably formed of separate sheets and connected together by strips of metal of S shape, the mica sheets being inserted within the bends of the strips and the latter closed upon them, forming a rigid structure. These metal strips are provided with extensions 14, which pass through openings 15 in the chimney-base and are bent upward outside thereof at 16, whereby the mica portion is strongly held in engagement with the base. The air drawn in through the openings 11 will be converged and will impinge upon a certain definite area of the outside of the mantle. I find that in practice the efficiency of the burner is greatly increased by the use of such converging walled or funnel-shaped openings just described. These openings concentrate the currents of air which pass through the openings and cause them to impinge upon a restricted amount of surface of the mantle; but it is to be understood that all of the different currents of air strike the mantle on the same horizontal plane. I do not know at this time which portion of the mantle should receive the blast of air to secure the greatest efficiency, as the point upon which the blast of air impinges varies according to the circumstances and depends upon the position of the parts; but I find by experiment that this point seems to coincide with the point of maximum illumination of the mantle.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An improved chimney having a transparent portion and a metal base, the said metal base having a contracted portion for engagement with the gallery of the burner, and open-

ings within the base between such contracted portion and the transparent portion, the said openings being provided with surrounding means for directing the incoming jets of air
5 upon a definite area of the outside of the mantle.

2. An improved chimney having a transparent portion and a metal base, the said metal base having a contracted portion for engagement with the gallery of the burner and walled
10 openings within the base between such contracted portion and the transparent portion, substantially as described.

3. An improved chimney having a transparent portion and a metal base, the said metal
15 base having a contracted portion for engagement with the gallery of the burner, and funnel-shaped nozzle-openings within the base between such contracted portion and the transparent portion, substantially as set forth. 20

This specification signed and witnessed this 12th day of March, 1904.

AARON P. STORRS.

Witnesses:

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