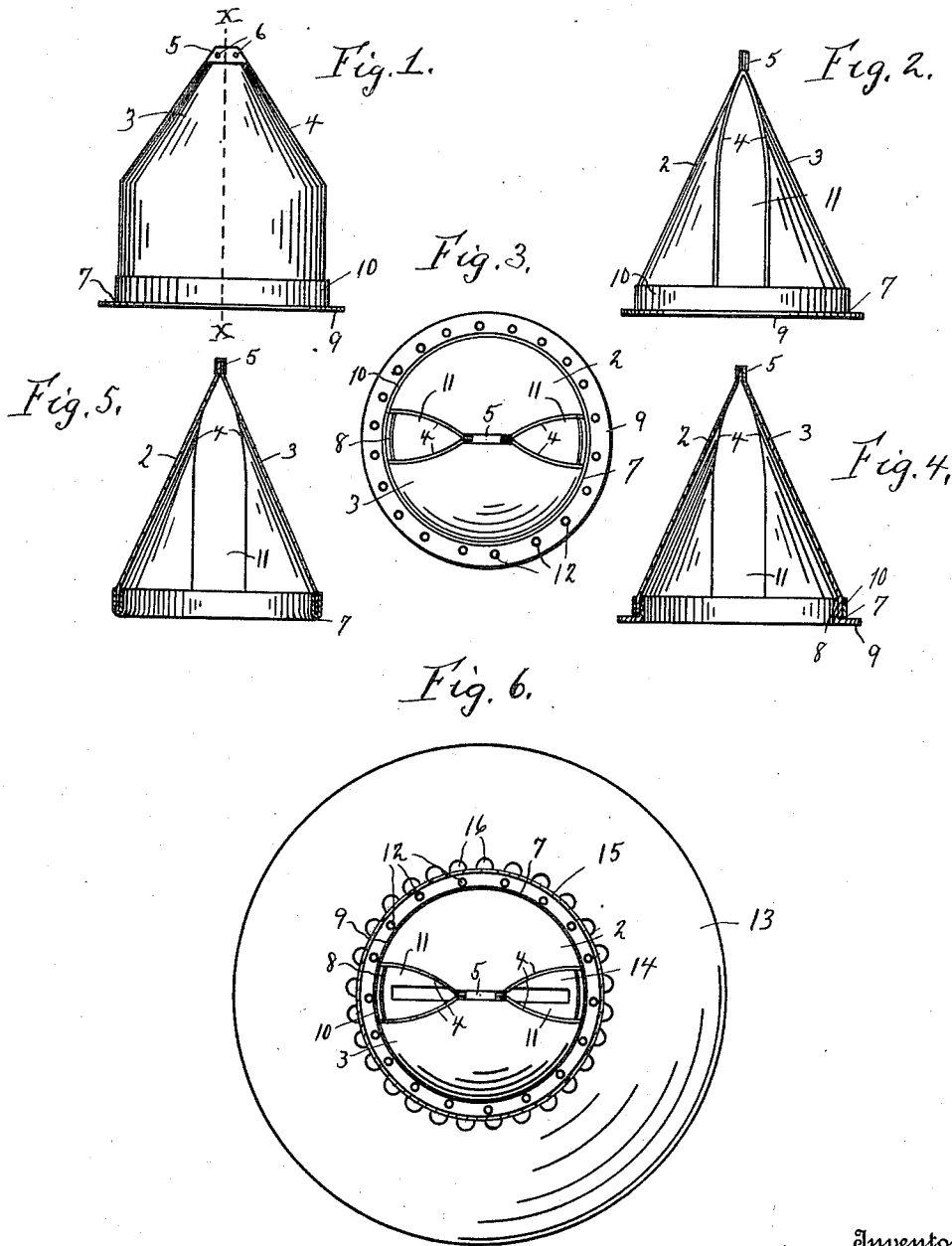


S. HEATH.
SMOKE AND CARBON CONSUMER.
APPLICATION FILED DEC. 16, 1911.

1,038,882.

Patented Sept. 17, 1912.



Witnesses
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SAMUEL HEATH, OF ROXBORO, PENNSYLVANIA.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SAMUEL HEATH, a citizen of the United States, residing at Roxboro, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Smoke and Carbon Consumers, of which the following is a specification.

My invention relates to new and useful improvements in smoke and carbon consumers, and has for its object to provide a device of this character which may be used in combination with oil, gas or other similar light whereby the carbon or unburnt gases will be retained in close proximity to the flame causing them to enter the flame after being raised to an enormous temperature at which time they will be burned, so that no residue clings to any part of the lamp and no odor is caused by the burning of the lamp.

A further object of my invention is to produce a smoke and carbon consumer, which will be light in weight, simple in construction and inexpensive in the cost of manufacture, and to accomplish these objects I form the device from mica and small parts of inexpensive sheet metal which hold the mica in the proper shape and size.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by numeral to the accompanying drawing forming a part of this specification, in which—

Figure 1, is a side elevation of my improved smoke and carbon consumer. Fig. 2, a similar view at right angles to Fig. 1. Fig. 3, a plan view thereof. Fig. 4, a section at the line $x-x$ of Fig. 1. Fig. 5, a similar view, showing a slightly modified form of my invention, and Fig. 6, a plan view of a lamp having my device applied thereto, the chimney of the lamp being shown in section.

In carrying out my invention as here embodied, I employ a pair of oppositely disposed leaves 2 and 3, formed of mica, either separately or from a single sheet. The upper portion of the edges of each of these

leaves diverge as indicated at 4, their apexes being securely held together by a small metallic clip 5, which is indented as at 6 in order that the parts may be firmly held in place. The lower edges of the leaves are held in place both as to the shape and size, by an annular collar 7, comprising an interior ring 8, having an exterior flange 9 produced from its lower edge, and an exterior ring 10. Said exterior ring being of sufficient size to fit over the interior ring and snugly hold the lower edges of the leaves in place between the rings. When the leaves are fastened to the collar they form a conical housing open at two opposite sides as indicated by the reference numeral 11.

The flange 9, when the device is in use, rests upon a portion of the burner of the lamp, and in order that the draft may not be shut off, I provide said flange with draft perforations 12.

In practice, the device is placed over the burner of a lamp, as plainly shown in Fig. 6, in which, 13, denotes the lamp the burner, and 15 the chimney. The device is placed upon the lamp, so that it rests between the burner 14, and the chimney holding prongs 16, the leaves 2 and 3 over-lying the burner with the open spaces 11 in alignment with the wick opening in the burner. The draft passes upward through the burner, around the consumer, the heat from the flame drawing the air into the consumer through the open spaces 11, where it is deflected from the surfaces of the leaves because of their curvature, causing the air to flow around the flame gradually rising as it becomes heated, until it passes above the flame where it is mixed with the carbon and unburnt gases, thus adding sufficient oxygen thereto to cause said carbon and gases to burn, so that any residue is carried off which would form smoke, soot or odor.

In Fig. 5, I have shown a slightly modified form of my invention in which I produce the collar from a single piece of metal bent upon itself to form two flanges 17, one of which lies against the inside of the leaves, the other against the outside thereof. This form of device accomplishes the same result, with the use of a smaller amount of metal since no flange is required, having draft perforations.

Of course, I do not wish to be limited to the exact details of construction as here shown, as these may be varied within the

limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful, is,—

- 5 1. As a new article of manufacture, a smoke and carbon consumer comprising two leaves of mica, fastened together at their upper ends and diverging toward their lower ends and means for holding their lower ends
10 in a predetermined shape and size.
2. A new article of manufacture consisting of a shaping and sizing collar, and two mica leaves carried by the collar and fastened together at their upper ends to form
15 a conical housing open at two opposite sides.
3. In a smoke and carbon consumer, an annular collar made in a certain predetermined size, adapted to surround the burner of a lamp, a pair of oppositely disposed mica
20 leaves secured to the collar and having a portion of their edges diverging, and means for fastening the upper ends of the leaves together.
4. In a smoke and carbon consumer, an
25 annular collar made in a certain predetermined size, adapted to surround the burner of a lamp, a pair of oppositely disposed mica

leaves secured to the collar and having a portion of their edges diverging, and a metallic clip for fastening the upper edges of the leaves together, said clip having indents therein for firmly holding the parts in place.

5. In a smoke and carbon consumer, a collar consisting of an interior ring having an exterior projecting flange formed from its
35 lower edge, said flange having draft perforations therein, an exterior ring of greater size than the interior ring, a pair of oppositely disposed mica leaves secured between the rings the width of said leaves at their
40 lower edges being less than one-half the circumference of the rings, whereby a pair of oppositely disposed openings are produced between the side edges of the leaves, and a metallic clip for fastening the upper
45 ends of said leaves together thereby producing a conical housing.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

SAMUEL HEATH.

Witnesses:

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