

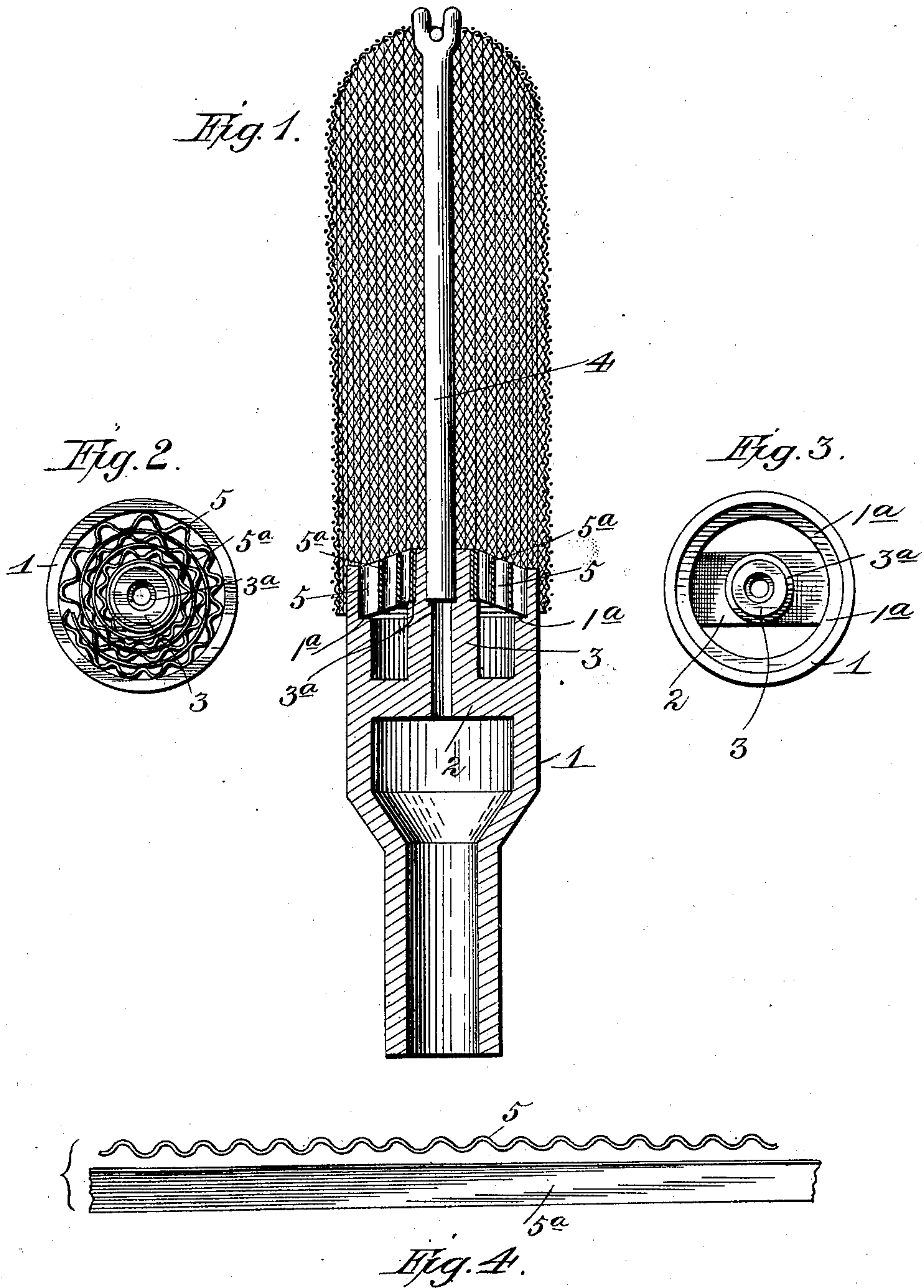
No. 671,115.

Patented Apr. 2, 1901.

J. M. NAUGHTON.
GAS BURNER.

(Application filed May 7, 1900.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES MARK NAUGHTON, OF COLUMBUS, OHIO.

GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 671,115, dated April 2, 1901.

Application filed May 7, 1900. Serial No. 15,780. (No model.)

To all whom it may concern:

Be it known that I, JAMES MARK NAUGHTON, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Gas-Burners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention aims more especially to provide an improved burner for use in connection with a Welsbach mantle. Heretofore these mantles have been supported or hung on a metallic rod and in some instances upon a rod of refractory material set centrally in a metallic socket riveted or seated in a gauze tip. In both cases the support after a short time loses its perpendicularity and the mantle drops over and falls to pieces. In cases where groups of mantles are used in one lamp the trouble is aggravated because of the increased heat.

In the accompanying drawings, Figure 1 is a central vertical sectional view of the burner with my improved tip. Fig. 2 is a top plan view of the body of the burner with the mantle and its support removed. Fig. 3 is a top plan view with the improved tip removed. Fig. 4 is an edge view of the pieces out of which the tip is formed.

Like characters of reference in the several views designate corresponding parts.

1 designates the body proper, which is of enlarged size or cup shape at its upper end. A bridge 2 subtends the inner sides of the cup-shaped portion, and extending upwardly from this is a socket portion 3. The interior wall of the cup-shaped portion is made with a shoulder 1^a, and the exterior of the socketed portion is also made with a shoulder 3^a, the latter located in a horizontal plane above the plane of the shoulder on the cup-shaped portion to receive the outer and inner coils, respectively, of the burner-tip. It will be noted that these shoulders 1^a and 3^a are located at the top of the cup-shaped portion and somewhat above the bridge, so that the latter shall not in any wise impede the flow of gas through all parts of the tip. The socketed portion 3 is shown to be made with a

clear opening from end to end through the bridge; but this opening is enlarged at its upper end and is furnished with a shoulder against which the lower end of the mantle-supporting rod 4 is sustained. In event the mantle-supporting rod breaks off close to the upper end of the socket-piece and it becomes difficult to pick out the fragment with the fingers such fragment can be pushed out with a slender rod or wire inserted from below.

The tip portion of the burner is formed of two strips of sheet metal, one corrugated, 5, and the other plain, 5^a, as indicated in Fig. 4. These two strips are folded together and then wound or coiled, as seen in Fig. 2. When pieces of proper length are so folded and coiled, they fit compactly in the upper end of the cup-shaped portion of the burner proper, the outer coil resting on the shoulder 1^a and the inner coil resting on the shoulder 3^a. The corrugated strip in the coils alternates with the plain, and hence numerous passages for the flow of the gas are provided.

The mantle-supporting rod is formed of burnt clay or other refractory material and does not soften and bend under any heat to which it can be subjected in the kind of lamps to which this invention relates. The socket-piece has its support in the bridge 2, and hence cannot be affected by any change in the burner-tip. The tip, however, when of the construction shown is not liable to bend or get out of order because of the considerable width of the strips forming it.

It will be understood, of course, that my drawings herewith show one embodiment only of my improvements and that the several parts thereof can be changed to some extent without departing from the scope of my invention. For example, the bridge 2 need not necessarily span entirely the bore of the cup-shaped portion, but can be connected with one side only. Further, the two strips composing the tip are not necessarily wound spirally, but can be folded and bent in any way to form the tip so that it shall fit the end of the cup-shaped portion.

What I claim, and desire to secure by Letters Patent, is—

1. A gas-burner comprising a cup-shaped portion, a bridge standing between the sides thereof, a socket portion extending upwardly

from said bridge, and shoulders formed on the interior of the cup-shaped portion and on the exterior of the socketed portion, substantially as described.

5 2. A gas-burner comprising a cup-shaped portion, a bridge standing between the sides thereof, a socket portion extending upwardly from said bridge, a shoulder on the interior side of the cup-shaped portion and a shoulder on the exterior of the socket portion located in a horizontal plane above the shoulder of the cup-shaped portion, substantially as shown.

10 3. A gas-burner comprising a cup-shaped

portion, a shoulder on the interior side thereof, a bridge standing between the sides of said cup-shaped portion, combined with a removable tip supported at its center on the socket portion and at its rim on the shoulder of the cup-shaped portion, substantially as described. 15 20

In testimony whereof I affix my signature in presence of two witnesses.

JAMES MARK NAUGHTON.

Witnesses:

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