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3,328,981

BURNER FOR GAS LAMP

Filed Aug. 18, 1965

FIG. 1

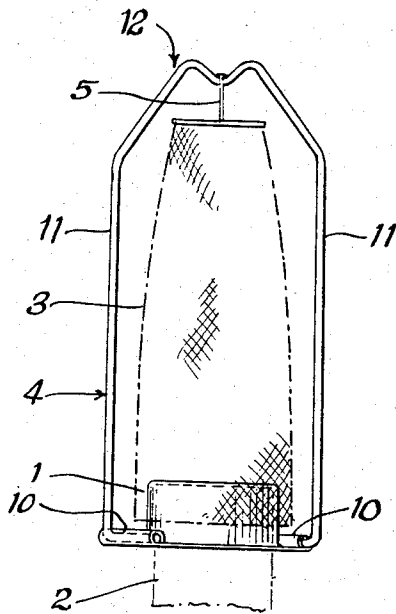


FIG. 2

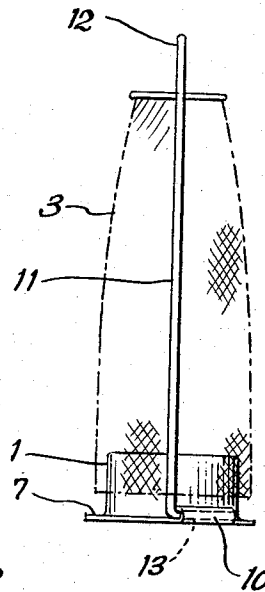


FIG. 3

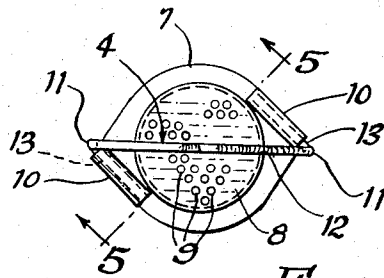


FIG. 4

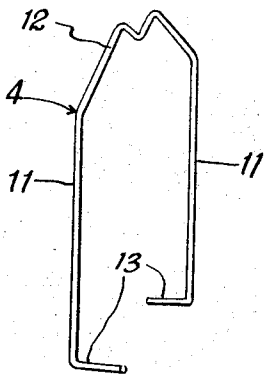
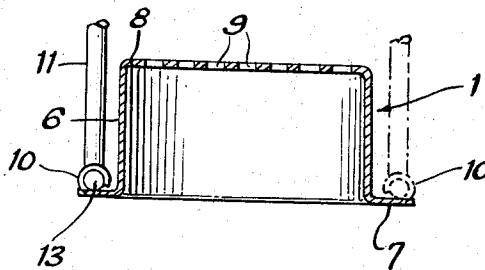


FIG. 5



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BURNER FOR GAS LAMP

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1 Claim. (Cl. 67-101)

This invention relates to burners for use with various gaseous or vapor fuels.

One object of the present invention is to provide a new and improved burner which is especially well adapted for use with a gas lamp of the mantle type.

A further object of the present invention is to provide a gas lamp burner having new and improved means for supporting the mantle.

It is a further object to provide a burner having a new and improved construction whereby the burner and the mounting for the mantle support are formed in one piece from sheet metal.

Another object is to provide a gas burner having a new and improved mounting for the mantle supporting wire or loop, whereby the loop is securely and rigidly supported and is afforded a high degree of protection from the heat of the flame.

A further object is to provide a gas burner having a new and improved arrangement for holding the mantle supporting loop whereby the loop may readily be removed and replaced, yet is securely and rigidly supported.

It is a further object to provide such a new and improved gas lamp burner which is sturdy and efficient, yet is extremely economical and easy to manufacture.

Further objects and advantages of the present invention will appear from the following description, taken with the accompanying drawings, in which:

FIG. 1 is a general front elevational view of a gas lamp burner to be described as an illustrative embodiment of the present invention.

FIG. 2 is a side elevation of the burner.

FIG. 3 is a top view with the mantle detached.

FIG. 4 is a perspective view of the mantle supporting loop or mounting wire for the burner.

FIG. 5 is an enlarged fragmentary section taken generally along the line 5-5 in FIG. 3.

It will be seen that FIG. 1 illustrates a gas lamp burner 1 which is adapted to be mounted on the upper end of a mixing tube 2. It will be understood that the mixing tube supplies a mixture of gas and air to the burner 1. While gas is being referred to as the usual fuel, it will be understood that the burner may also be employed with various vapor fuels.

Generally, the burner 1 is of the type adapted to be used with a luminous or incandescent mantle 3 which glows brightly, when heated by the flame of the burner, so as to produce an abundance of white light. The burner 1 is adapted to hold a mounting wire or loop 4 which supports the mantle 3. It will be seen that the mantle 3 is suspended by means of a wire or strand 5 from the upper portion of the mounting wire 4. The lower margin or skirt of the mantle 3 is loosely received around the burner 1.

In this case, the burner 1 is formed in one piece from metal, preferably sheet metal. The burner 1 has a cylindrical wall 6 which fits over the upper end of the mixing tube 2. An annular flange or base 7 projects outwardly from the lower end of the cylindrical wall 6. A circular top wall 8 extends across the upper end of the cylindrical wall 6. It will be seen that the top wall 8 is formed with a plurality of apertures or ports 9, through which the mixture of fuel and air is discharged into the flame, which has its base just above the top wall 8. In the illustrated construction, the ports 9 are quite numerous.

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The cylindrical side wall 6, along with the base flange 7 and the top wall 8, may be formed from a flat sheet metal blank by a die forming operation. The perforations 9 may be formed simultaneously or separately.

The base flange 7 is formed with a pair of sleeves or socket members 10 for holding the mounting wire 4. Each of the sleeves 10 is generally cylindrical in cross section and is formed by curling or rolling a portion of the base flange 7 into a cylindrical form. The sleeves 10 are oriented horizontally, with their axes parallel to the base flange 7. The axes of the sleeves 10 are also parallel to each other, but the sleeves are staggered and angled relative to the cylindrical side wall 6 of the burner. Thus, one of the sleeves 10 is offset in one direction from the axis of the cylindrical side wall 6, while the other sleeve is offset in the other direction. One end of each sleeve is more remote than the other end from the cylindrical side wall 6.

The mounting wire or loop 4 for supporting the mantle 3 is specially constructed so that it may be removably mounted in the offset sleeves 10. Thus, the mounting loop 4 comprises one continuous piece of wire, having a pair of vertical side legs 11, with an upper portion 12 arching therebetween. The lower ends of the parallel side legs 11 are bent at right angles thereto to form horizontal prongs 13 adapted to be received in the sleeves 10. It will be seen that the prongs 13 are parallel to each other but extend obliquely at acute angles in opposite directions from the plane of the side legs 11. It will be evident from FIG. 3 that the mounting wire 4 has a Z-shaped appearance as viewed from the top. The prongs 13 are inserted into the remote or outwardly disposed ends of the sleeve 10. In this way, the side legs 11 are spaced outwardly to the maximum extent from the heat of the flame.

The mounting wire 4 may be removed from the burner 1 by springing the side legs 11 and the upper portion 12 sufficiently to permit the withdrawal of the prongs 13 from the sleeves 10. Generally, a new mounting wire 4 is supplied with each new mantle. The new mounting wire may be mounted on the burner by springing the wire sufficiently to permit the insertion of the prongs 13 into the sleeves 10. When the mounting wire has been installed it is held rigidly and securely by the telescopic engagement between the sleeves 10 and the prongs 13. The resilience or springiness of the mounting wire 4 prevents the mounting wire from becoming loosened or dislodged from the burner. The sleeves 10 and the side legs 11 are spaced to a maximum extent from the flame so that they are not subject to being damaged by the heat of the flame.

Because the burner 11 is made in one piece, it is extremely low in cost. Moreover, it is unusually sturdy and serviceable. The burner is easy to manufacture from sheet metal by die forming operations.

Various other modifications, alternative constructions and equivalents may be employed without departing from the true spirit and scope of the invention, as exemplified in the foregoing description and defined in the following claim.

I claim:

In a mantle lamp, the combination comprising a burner having a generally cylindrical side wall, an end wall extending across one end of said side wall and formed in one piece therewith, said end wall being formed with a plurality of ports therein, a flange extending outwardly from the other end of said side wall and formed in one piece therewith, and a pair of horizontal sleeves curled into generally cylindrical form from portions of said flange and formed in one piece therewith,

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said sleeves being parallel to each other but angled
 and offset relative to said side wall,
 one end of each sleeve being more remote than the
 other end thereof from said side wall,
 and a mounting wire formed in one piece and having 5
 a pair of vertical side legs and a portion arching
 therebetween,
 said mounting wire having a pair of prongs bent hori-
 zontally from the ends of said side legs and extend-
 ing obliquely at opposite acute angles to the plane 10
 of said side legs,
 said prongs being removably received in the more re-
 mote ends of said sleeves to hold said mounting wire

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securely and rigidly on said burner with said side
 legs remote from said burner.

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