April 1, 1924. 1,488,677

R. HOFFMAN

GAS BURNER

Filed May 19, 1920

Fig. 1

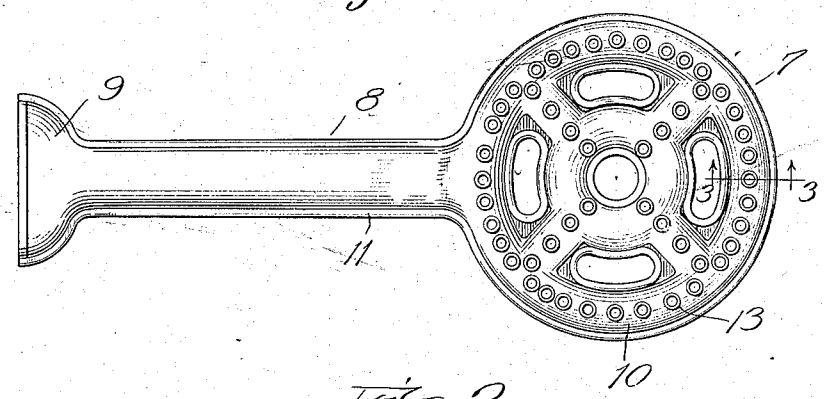


Fig. 2

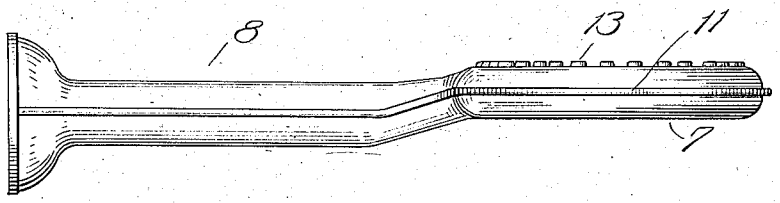
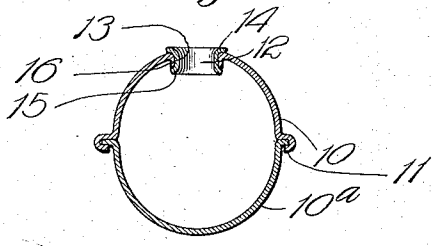


Fig. 3



INVENTOR.

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UNITED STATES PATENT OFFICE.

RUDOLPH HOFFMAN, OF KANKAKEE, ILLINOIS, ASSIGNOR TO SEARS, ROEBUCK AND CO., OF CHICAGO, ILLINOIS, A CORPORATION OF NEW YORK.

GAS BURNER.

Application filed May 19, 1920. Serial No. 382,523.

To all whom it may concern:

Be it known that I, RUDOLPH HOFFMAN, a citizen of the United States, residing at Kankakee, in the county of Kankakee and State of Illinois, have invented certain new and useful Improvements in Gas Burners, of which the following is a specification.

The invention relates to gas burners, and has for its aim the provision of means for rendering such burners more efficient and durable.

More specifically, the invention has reference to gas burners which are formed of sheet metal, and one object is to provide means for preventing corrosion of the metal around the discharge orifices for the gas.

A further object of the invention is to provide in a sheet metal burner elongated discharge apertures or orifices which increase the efficiency of the burner.

The aim of the invention, thus generally stated, may be attained by the construction and arrangement illustrated in the accompanying drawings forming part hereof in which Figure 1 is a top plan view of a gas burner provided with rust-resisting nipples in accordance with my invention. Fig. 2 is a side elevation of the burner. Fig. 3 is a sectional view through a portion of the burner, taken on line 3—3 of Fig. 1.

The burner comprises generally a base or body portion 7 and a neck 8. The latter is provided with the usual mixing chamber 9.

Preferably, the burner is constructed of sheet metal from two generally similar halves. Thus, it may comprise an upper section 10 and a lower section 10^a, the two sections being suitably joined together as at 11. Any suitable conformation of the parts forming the body 7 may be employed to provide intercommunicating annular and radial channels arranged to effect an even distribution of the mixture conducted thereto by the neck 8.

The body portion has in its upper side a plurality of apertures 12 formed in the upper section 10 and providing discharge openings for the gas. In order to provide an elongated orifice and at the same time a protective member for each of said apertures, a bushing or nipple 13 is mounted in each of the apertures. Said nipples are flanged outwardly at their upper and lower ends as shown at 14 and 15 (Fig. 3) and the apertures 12 are defined by an annular inturned flange 16 with the opposite ends of which the flanges 14 and 15 are adapted to engage. Said nipples 13 are preferably formed from spun copper or other suitable non-corrosive material. The nipples effectively prevent the corrosion of the metal and also provide elongated passageways or orifices which serve to prevent the flame from passing into the burner and causing the ignition and explosion of the gas therein.

It will be understood that by reason of the sectional construction of the body 7, the nipples 13 may be conveniently secured in position in the apertures 12, this being accomplished before the two halves of the burner are assembled.

It will be apparent that my invention has contributed materially to the practicability and efficiency of gas burners and especially those formed of sheet metal. The provision of means tending to prevent the objectionable "popping" or explosion of the gas within the burner is obviously an important advantage. Furthermore, by preventing the corrosion of the metal around the apertures, the latter are maintained at the proper sizes for effecting the efficient combustion of the gases, and by reason of the protection afforded by the nipples, the life of the burner is prolonged almost indefinitely. Moreover, the construction is such that the nipples may be very readily and effectively secured in position in the apertures of the burner.

I claim as my invention:

1. A gas burner having a plurality of openings provided with protective nipples of non-corrosive material extending wholly through the openings and forming discharge orifices.

2. A gas burner formed of sheet metal and having a plurality of annular flanges defining discharge apertures, each of said apertures being provided with a nipple made of non-corrosive material and shaped to coact with said annular flange and the aperture so as to be secured in position in the aperture.

3. A gas burner comprising a main or body portion having upper and lower sections formed from separate sheets of metal secured together, the upper section having a pluraity of discharge apertures, and a plurality of nipples made of copper or the

like entered through said apertures and secured upon opposite sides of the upper section.

4. A gas burner comprising a main or body portion having upper and lower sections formed from separate sheets of metal secured together, the upper section having a plurality of discharge apertures and a plurality of nipples made of copper or the like mounted in said apertures, said apertures each being defined by an inturned annular flange and each of said nipples having outturned flanges coacting with said inturned flange to secure the nipple in position.

5. A gas burner formed of sheet metal and having a plurality of annular flanges defining discharge apertures and a plurality of nipples each providing an elongated orifice and shaped to coact with said annular flange and the aperture so as to be secured in position in the aperture.

In testimony whereof, I have hereunto set my hand.

RUDOLPH HOFFMAN.