June 14, 1932. H. W. CHRISTIE 1,863,468

GAS BURNER

Filed Nov. 14, 1929

Fig. 1.

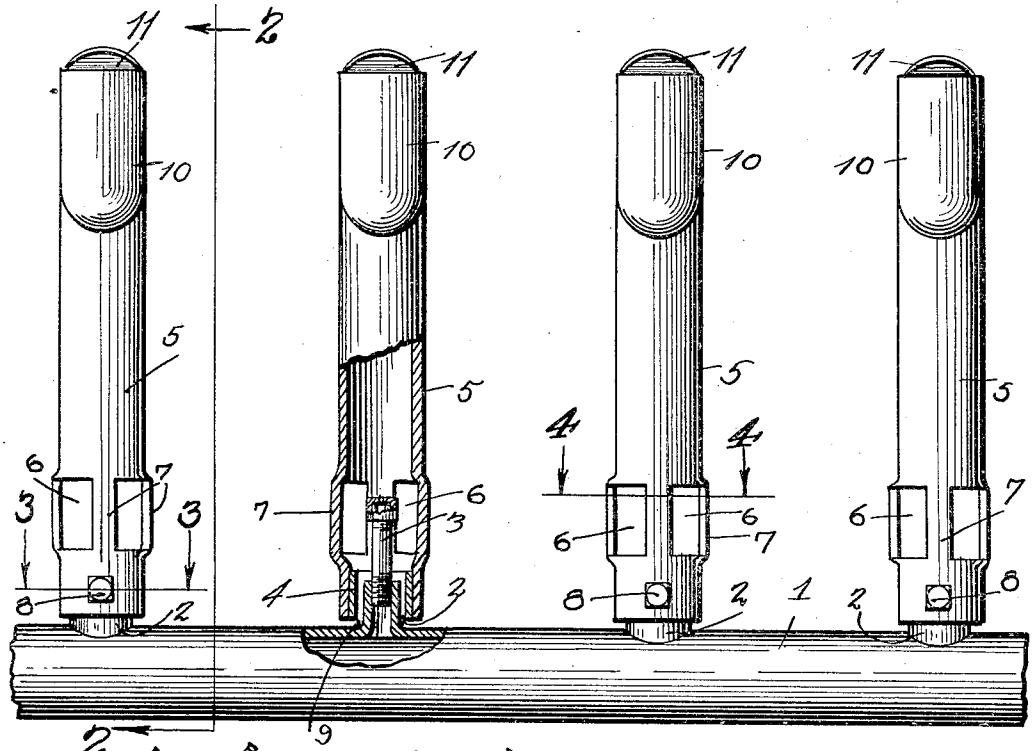


Fig. 2.

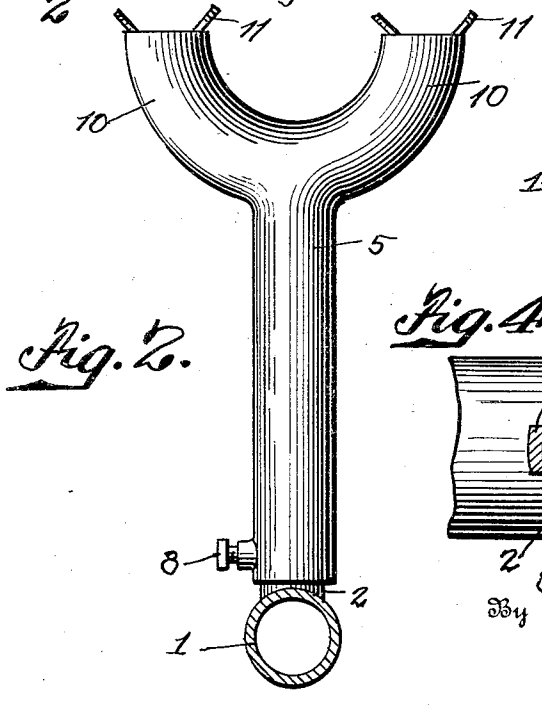


Fig. 3.

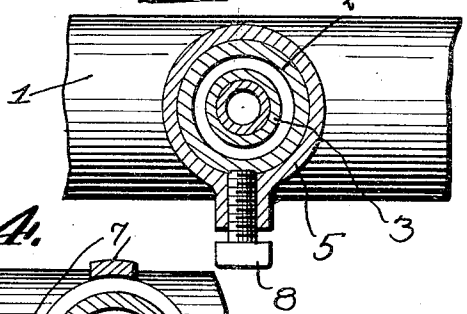
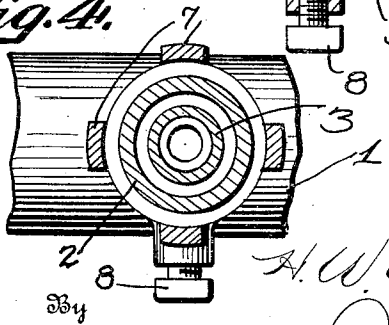


Fig. 4.



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UNITED STATES PATENT OFFICE

HUGH W. CHRISTIE, OF TULSA, OKLAHOMA

GAS BURNER

Application filed November 14, 1929. Serial No. 407,161.

This invention has relation to gas burners of the type shown and described in Letters Patent of the United States No. 1,679,298 granted the 31st day of July, 1928, and has for its object, the provision of certain improvements whereby the burner is rendered more efficient, these improvements consisting chiefly in the constructive features whereby the flow of gas is more freely promoted by the elimination of angles and pockets wherein dead gas may accumulate and impair the purity and inflammability of the fresh mixture.

The precise character of the invention will be hereinafter described in the preferred embodiment of the invention illustrated in the accompanying drawing wherein,

Figure 1 is a side view of an equipment comprising a supply pipe and a series of burners mounted thereon;

Figure 2 is a transverse section on the line 2—2 of Figure 1;

Figure 3 is a sectional view on the line 3—3 of Figure 1; and

Figure 4 is a similar sectional view on the line 4—4 of Figure 1.

For the purposes of the invention, the supply pipe 1 is formed with a series of nipples 2, 2 integral therewith and screw threaded interiorly for the connection thereto of the needle tubes 3, through which the gas flows to the burners.

The pipe 1 is also provided with the collars 4, spaced circumferentially from the nipples 2.

The burners being of the Bunsen type, the tubes 5 are formed near their lower ends with air openings 6, made in the walls of the widened sections 7, which are of greater width than the bodies of the burner tubes thus affording an enlarged passage for the air around the needle tubes. The burner tubes are secured to the collars 4 by the set screws 8. These collars may have openings 9 at their bases for the passage of air.

The burners or burner tubes 5 are formed at their outer ends with the integrally cast diverging arcuate branches 10, 10 branched in opposite directions to form a semi-circle which eliminates all angles and corners in which dead gases might lodge and offer an unobstructed flow for the inflammable mixture generated in the tubes and the outlets or tips are provided with the divergent deflectors 11 as shown, these being anchored at their ends to opposite sides of the burner tips, and being so disposed as to overlie the side openings of the tips so as to cause the flames issuing therefrom to spread, the inner ends of such deflecting plates being spaced apart to provide for the issuing of a central flame.

The arcuate branches 10 are disposed with their axis in the same plane as the axes of the burner tubes and perpendicular to the axis of the supply pipe 1, and may be used in series or singly, according to requirements.

I claim:—

A gas burner of the character described comprising a gas and air mixing section constituting a burner tube, having its lower portion of enlarged diameter and formed with spaced apart air openings in combination with a supply tube formed with a collar to which said burner tube is attached and with a concentric nipple for the attachment of a gas jet tube, said collar being formed with spaces at its base for the admission of air.

In testimony whereof I affix my signature.

HUGH W. CHRISTIE.