Nov. 8, 1960 S. LINGIS 2,959,361

NOZZLE FOR OIL BURNER

Filed March 6, 1959

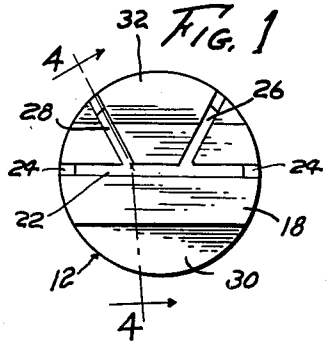


FIG. 1

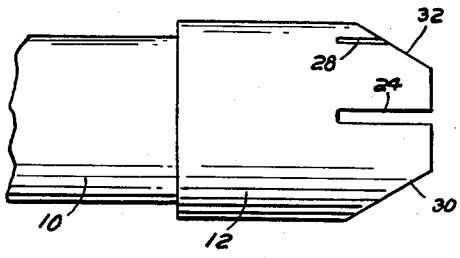


FIG. 2

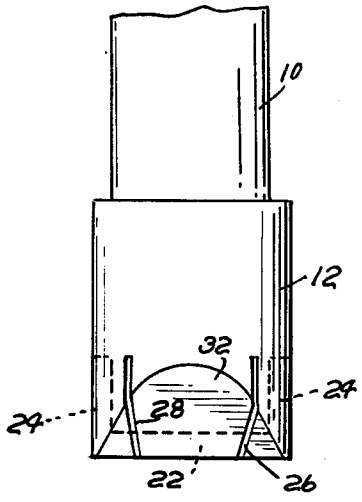


FIG. 3

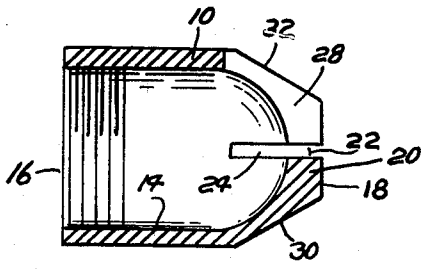


FIG. 4

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NOZZLE FOR OIL BURNER

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1 Claim. (Cl. 239—568)

This invention relates to a new and improved nozzle for oil burners, and the principal object of the invention resides in the provision of a greatly simplified device of the class described which is non-carbon forming and particularly one in which the flame is directed laterally forwardly and upwardly with relation to the horizontal plane of the nozzle so that no carbon can fall downwardly into the firebox and in which no carbon is actually formed or is burned by reason of the formation of the flame issuing from the novel nozzle as will appear more fully hereinafter.

The invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly set forth in the appended claim.

Reference is to be had to the accompanying drawings, in which:

Fig. 1 is a view in front elevation of the new nozzle;

Fig. 2 is a view in side elevation thereof;

Fig. 3 is a top plan view; and

Fig. 4 is a section on line 4—4 of Fig. 1.

In carrying out the present invention, the reference numeral **10** represents a pipe or tube through which the fuel flows under pressure as for instance by steam pressure or by means of a pump. On the end of this pipe, the novel nozzle generally indicated at **12** is attached.

The nozzle may be made simply from a cylindrical piece of metal and is provided with an interior hollow portion **14** which extends from the rear end at **16** thereof to the forward or flame-producing end **18**.

There is a front wall indicated at **20** in Fig. 4 and this is provided with a horizontal slot from side-to-side thereof as at **22**. This slot is very narrow and extends along the sides of the nozzle **12** as clearly shown in Fig. 2 at **24**, it being understood that the slots shown at **24** are continuations along the sides of the nozzle, of the slit at **22** at the front of the nozzle.

Intersecting the elongated horizontal slit **22**, there are a pair of inclined slits or slots at **26**, **28** which extend from the sides of the nozzle **12** as seen in Fig. 2

toward the front thereof through the front wall **20** of the nozzle and intersect with the transverse slit or slot **22**. The effect of these slits is that they extend toward each other in a kind of truncated inverted V configuration (see Fig. 3), and the flame will issue from these slits in an inclined upward direction while the flame issues at the same time through slit **22** in a forward direction in a horizontal plane. There is no flame extending downwardly as shown in my prior Patent No. 2,758,880 issued August 14, 1956.

If desired, the forward portion of the nozzle **12** may be beveled off as at **30** and **32** and this renders the front wall in the area of all of the slots substantially uniform, so that the flame will extend from these slots in substantially uniform lengths.

It will be seen that this invention provides a very simple oil burner nozzle which may use steam or air under pressure to atomize the oil, said nozzle being exceptionally free from carbon, so that the device may be used in operation for a long time without the necessity of cleaning the orifices. The nozzle is extremely economical in operation and prevents the formation of carbon and particularly prevents any carbon from falling downwardly to the bottom of the firebox as is the case with the usual prior art oil burning nozzle.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claim, but what I claim is:

A nozzle for an oil burner, said nozzle comprising a generally cylindrical hollow member closed at the front end by an end wall and open at the rear end, means adjacent the rear end for attaching said member to a fuel pipe, a transverse horizontal main slit in said end wall, said main slit extending rearwardly from said end wall and through the side wall of said member at diametrically opposite locations and a pair of spaced secondary slits in said front wall intersecting said main slit and diverging upwardly into said side wall, said secondary slits terminating at their rear ends in substantially the same transverse plane as the rear ends of said main slit, the lower portion of said front and side walls being imperforate.

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