

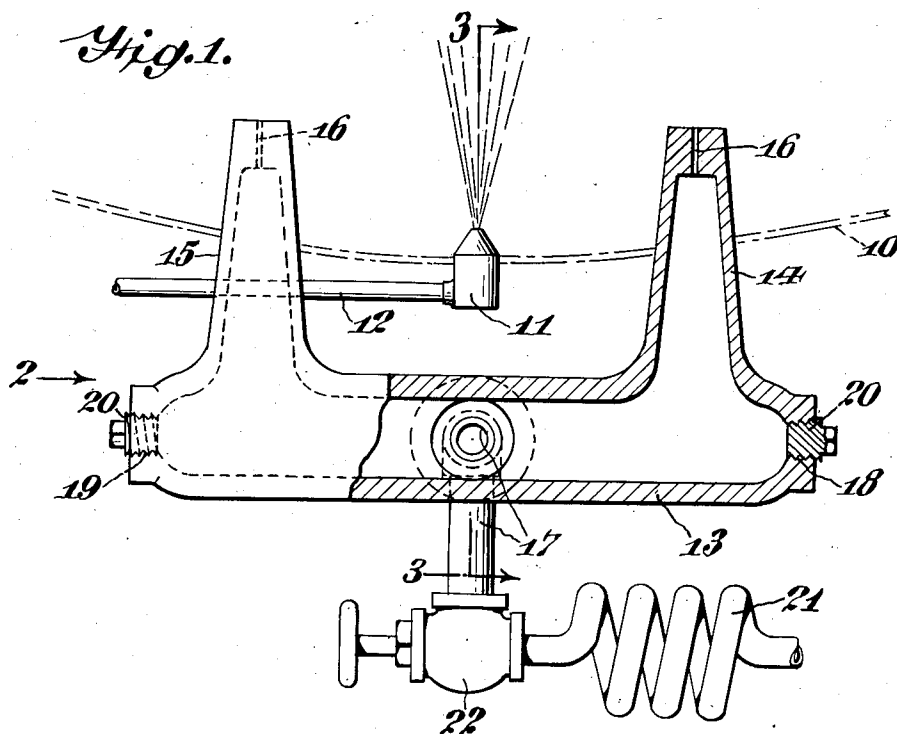
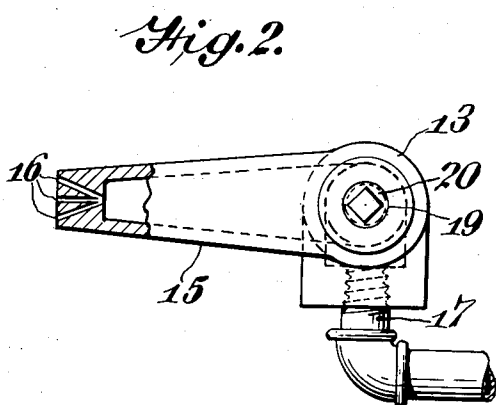
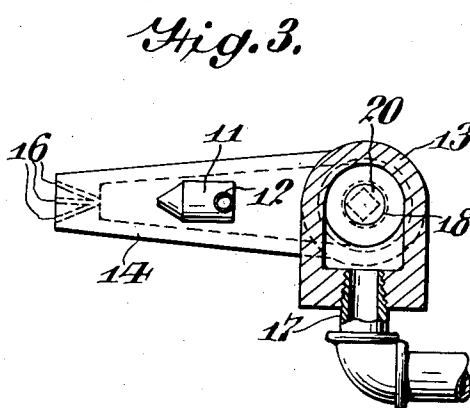
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J. S. MEXIS

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STEAM JET DEVICE

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Inventor

Witnesses:
 Emma D. Brown
 Anna M. Ford

John S. Mexis,
 By *Joshua R. Horne*
 Attorney

UNITED STATES PATENT OFFICE

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STEAM JET DEVICE

John S. Mexis, Philadelphia, Pa., assignor of one-half to James R. Herron, Audubon, N. J.

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2 Claims. (Cl. 158—73)

This invention relates to steam jet devices, and has for an object to provide a device ejecting steam jets in proper relation to an oil jet to commingle the oil and steam for combustion purposes.

A further object of the invention is to provide a steam jet device comprising spaced horns with jet orifices in the ends of said horns, the horns being spaced apart a proper distance to accommodate an oil jet therebetween and to properly commingle the steam from the orifices with the oil from the oil jet.

A further object of the invention is to provide a steam jet device having spaced horns with jet orifices at the ends of said horns, and with a plurality of inlets whereby a steam conduit may be connected with the device at any of various inlet positions, other such inlets being plugged.

The invention therefore comprises a body having a plurality of inlets, some of which are plugged with laterally extending horns and with diverging orifices in the ends of the horns.

The drawing illustrates an embodiment of the invention and the views therein are as follows:
Figure 1 is a view partly in top plan and partly in horizontal section of the improved steam jet device,

Figure 2 is a view of the steam jet in end elevation, as indicated by arrow 2 at Figure 1, with parts broken away, and

Figure 3 is a sectional view, taken on line 3—3 of Figure 1.

Like characters of reference indicate corresponding parts throughout the several views.

The improved steam jet device, which forms the subject matter of this application, is adapted to be associated with any type of heating installation. At 10 in Figure 1, a dotted indication of a heating plant is shown. An oil jet is adapted to supply fuel to this installation. At 11 in Figures 1 and 3, a conventional oil jet fed from a line 12 is shown. No attempt has been made to show any particular type of oil jet or any oil jet which would actually function, but merely to show the position and relation of the oil jet to the steam jet device.

The invention itself comprises a hollow body 13 having hollow arms 14 and 15 laterally offset therefrom. At the ends, these arms 14 and 15 have diverging orifices 16.

Communicating with the body at some point is the steam inlet pipe 17. As shown in the drawing, this steam pipe communicates with the body intermediate its ends, but other tapped openings 18 and 19 are provided in the ends of the

body which are plugged as by the plugs 20. Either of these tapped openings 18 or 19 may be employed to connect with the pipe 17 in which case, the other two of the three tapped openings are plugged.

With steam admitted to the pipe 17 through the coil 21 controlled by the valve 22, and oil ejected from the jet 11, the steam will form a fan-like spray in a substantially vertical plane upon opposite sides of the oil jet and will commingle with the flame at a point removed from the position of initial combustion and after the lighter constituents of the oil have been consumed and commingle with the flame only, supported by the heavy constituents. The coil 21 is employed in installations when the boiler pressure is such that the steam is "dry steam". As "wet steam" is necessary for the perfect functioning of the device, the coil 20 is employed of such dimension as to cool the steam to the wet stage before it enters the jet device, whereby carbon is largely eliminated and more nearly perfect combustion attained.

Of course, the steam jet device herein illustrated may be modified and changed in various ways without departing from the invention herein set forth and hereinafter claimed.

The invention is hereby claimed as follows:

1. The combination with an oil burner spray nozzle, of a steam jet device comprising a hollow body, hollow offset arms extending laterally from said body, with diverging orifices formed in the ends of said arms and communicating with the interior, said orifices being so related as to emit fluid from each arm with the plane of both arms substantially parallel and upon opposite sides of the nozzle, and a steam connection communicating with the hollow body.

2. The combination with an oil burner spray nozzle, of a steam jet device comprising a hollow body, hollow arms offset laterally from the body and spaced apart to accommodate the nozzle therebetween, said hollow arms having terminal orifices spaced upon opposite sides of the oil jet and directed to discharge fluid in planes substantially parallel to each other and with the axes of the jet, and means to make a steam connection with a hollow body.

JOHN S. MEXIS.

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