A. A. WINTERMUTE.

CRUDE OIL BURNER.

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1,047,359.

Patented Dec. 17, 1912.

Fig. 1.

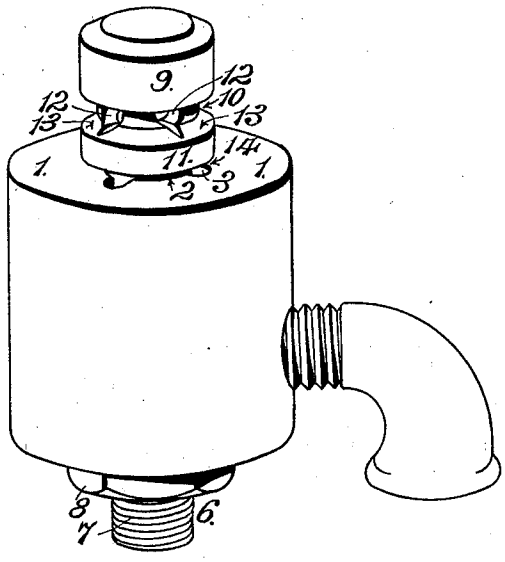


Fig. 2.

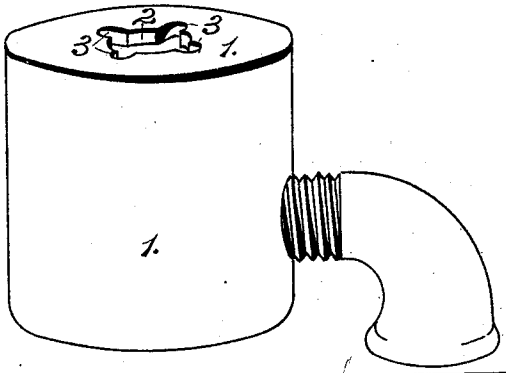


Fig. 3.

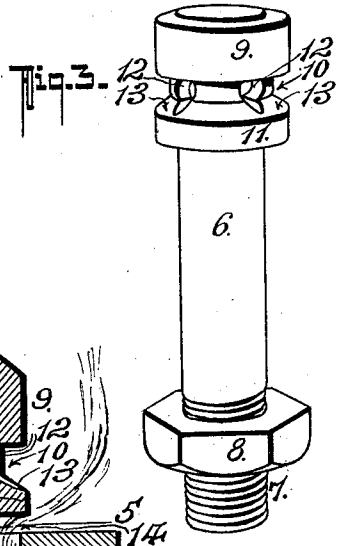
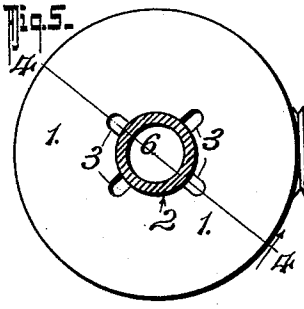


Fig. 5.



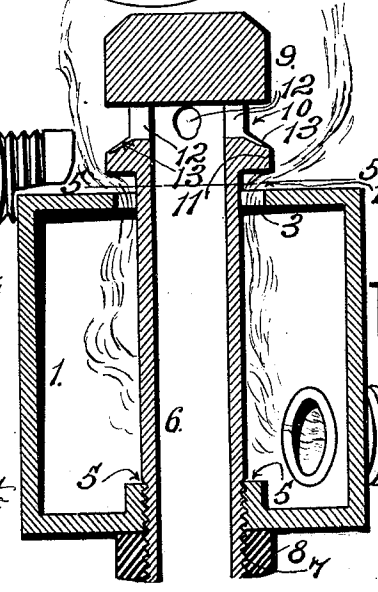


Fig. 4.

WITNESSES:

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AUGUSTUS A. WINTERMUTE, OF FRESNO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO ELMER E. COMSTOCK, OF FRESNO, CALIFORNIA.

CRUDE-OIL BURNER.

1,047,359. Specification of Letters Patent. Patented Dec. 17, 1912.

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To all whom it may concern:

Be it known that I, AUGUSTUS A. WINTERMUTE, residing at Fresno, in the county of Fresno and State of California, have invented certain new and useful Improvements in Crude-Oil Burners, of which the following is a specification.

My invention is an improved crude oil burner, especially designed and adapted for use in connection with vertical boilers and the like, although it is not to be considered as limited in use thereto.

In its general nature, the invention provides a superheating drum which also acts as the supporting element for a burner oil pipe that passes through the drum from top to bottom and is secured to the bottom of the drum by an adjustable securing device whereby the head of the burner pipe, which is provided with a baffling surface, may have its baffling surface adjusted toward or from the drum to vary or change the nature of the escaping steam sheet, the drum having ports or grooves around the burner pipe to permit the escape of steam beneath the baffle. The burner pipe above the baffle has a spreading surface onto which oil is delivered through ports in the burner pipe head.

The invention also includes those novel details of construction, combination and arrangement of parts, all of which will be first fully described, and then be specifically pointed out in the appended claim, reference being had to the accompanying drawing, in which:—

Figure 1 is a perspective view of the burner complete. Fig. 2 is a perspective view of the drum. Fig. 3 is a perspective view of the burner oil pipe. Fig. 4 is a central vertical longitudinal section on the line 4—4 of Fig. 5. Fig. 5 is a horizontal section on the line 5—5 of Fig. 4.

Referring now to the accompanying drawings in which like numerals and letters of reference indicate like parts in all the figures, 1 is the burner drum into which steam is admitted through the inlet pipe 4. The drum 1 is bored at the top and bottom to receive the burner oil pipe 6, which passes through the drum and is threaded at 7 to screw into the lower tapped aperture of the drum 1. The pipe 6 is adjustably held in position by the jam nut 8. The pipe 6 has a head 9 which is provided with an annular groove 10, the lower wall 13 of which, is downwardly and outwardly inclined and coniform to serve as an oil distributing baffle, onto which oil passes from the oil holes 12 in the head 9. The head 9 also includes a steam baffle or flange 11 that fits over the steam discharge grooves or openings 3, that radiate from the upper bore 2 of the drum 1. By adjusting the pipe 6 in the threaded hole 5, of the drum 1, the baffle flange 11 may be brought closer to or moved farther from the drum 1, and thereby diminish or increase the space 14 between the flange 11 and the upper surface of the drum 1 to vary the steam sheet around the burner head 9.

In operation the oil passes up through the pipe 6 and is discharged through the ports 12 onto the coniform oil distributing surface 13, where it flows outwardly and meets the sheet of escaping steam that envelops the burner 9, it being understood that when the oil is ignited, the combustion of the same is assisted by the steam which acts as an atomizer of the oil.

From the foregoing description taken in connection with the accompanying drawings, it is thought the complete construction, operation and advantages of the invention will be clear to those skilled in the art.

It should be understood that the oil supply pipe should be attached to the pipe 6 beneath the nut 8 in any desired way while steam is admitted to the drum 1 through any suitable connection 4.

What I claim is:—

A drum, an oil burner pipe projecting through said drum, one end of said pipe being threaded into said drum, a jam nut on said threaded end outside of said drum, the other end of said pipe extending above the drum and terminating in an integrally formed head having an annular peripheral grove, the under face of said groove being normal to the axis of said pipe and the upper face of said groove being coniform, said pipe having radial oil outlet apertures

discharging into said groove, the drum aperture adjacent to said head being of a diameter to contact the oil pipe, said drum having steam passages radiating from said pipe aperture, the under face of said pipe head lying in a plane normal to the axis of said pipe and parallel to the adjacent end face of said drum, and means for passing steam into said drum substantially as shown and for the purposes described.

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Witnesses:

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