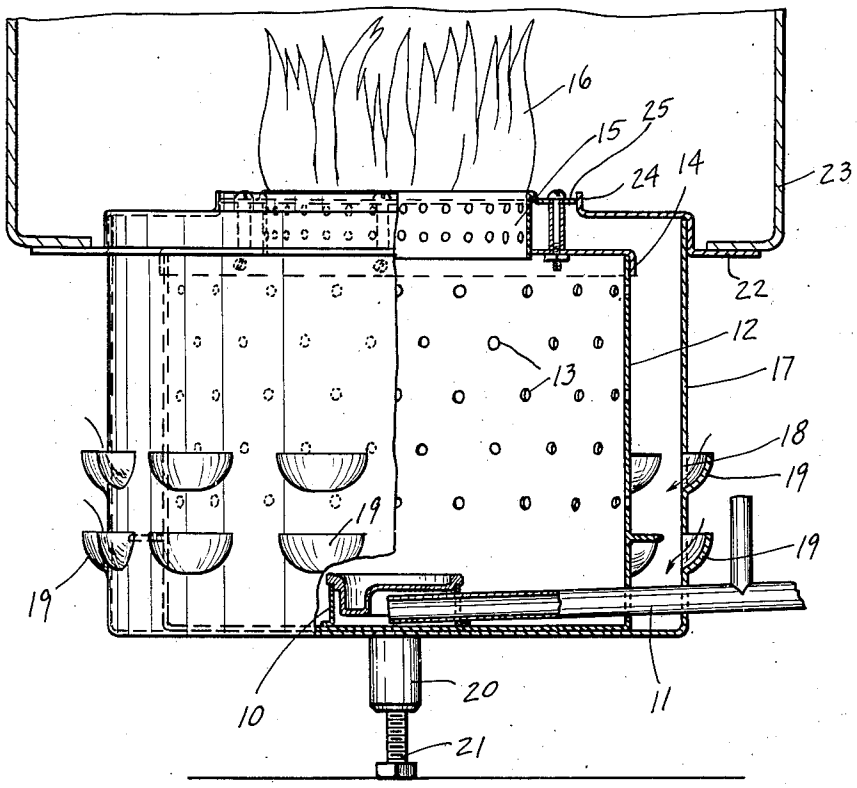
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BURNER FOR BROODER STOVES

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BURNER FOR BROODER STOVES

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1 Claim. (Cl. 158—91)

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This invention relates to an oil burner, and particularly of the character known as the "pot type" for use in connection with brooders in the rearing of young fowl.

Where oil burners of this character are employed in brooders, it has been found that the excessive amounts of dust and down in the air tend to clog the air inlet holes of the burner drum. This often occurs to a degree such as to interfere with the performance and efficiency of the burner. It is, therefore, the purpose of this invention to overcome this difficulty in pot type burners for brooders by providing a casing surrounding and enclosing the burner drum and spaced therefrom, such as to protect the air holes of the drum from clogging due to dust and down carried thereto by the air currents. For protection of the drum the casing is provided with apertures baffled by inverted louvres through which the air may pass in a downward direction such as to deposit the dust and down at the bottom of the casing and be freed therefrom before rising between the casing and drum for entering the air holes of the burner. In this manner such foreign material is released from the air before entering the air inlets to the burner.

The full nature of the invention will be understood from the accompanying drawing and the following description and claim.

The figure shows the burner with its drum and casing in central vertical section on the right-hand side thereof and in elevation on the left-hand side.

In the drawing there is shown an oil burner of the pot type having an oil distributing sleeve 10 to which fuel oil is introduced through an oil inlet pipe 11. Surrounding the oil distributing sleeve there is a mixing drum 12 having a series of air inlet holes 13 spaced about the cylindrical wall thereof. The drum 12 is provided with a top plate or cap 14 which supports and surrounds a perforated burner ring 15. In this pot type of burner the oil introduced into the oil distributing sleeve 10 is vaporized by air passing through the holes 13 of the drum, causing it to rise to the burner ring 15 for combustion, which results in the flame indicated at 16, reference being had to Hill Letters Patent No. 2,326,221, granted August 10, 1943, for Fuel oil burner.

Surrounding and supporting the drum 12 there is provided a casing 17 conforming thereto, with its walls spaced therefrom to provide an air trap. The casing is formed with a series of air inlet openings 18, each protected by an inlet louvre or baffle shield 19, the bottom portion thereof being closed and the upper portion open in communication with the air opening 18.

Said casing is provided with a downwardly extending supporting boss 20 for receiving an adjustable threaded supporting foot 21. The top of said casing is formed with an annular flange

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22 arranged to support the stove 23 enclosing the combustion chamber and flame 16. Above the flange 22 the casing is formed with a restrictive collar 24 having sealing engagement with an outwardly extending sealing flange 25 on the burner ring 15.

By means of the air control casing and its sealing relation with the burner ring, there is provided an air pocket surrounding the drum 12 in the form of a trap for foreign matter, such as dust and down.

In the operation of the burner, the air is drawn downwardly in the direction of the arrows, into the inverted louvres 19 and through the air openings 18 to the air trap. Within the trap such foreign matter is deposited at the bottom of the casing and the air relieved therefrom passes upwardly around the drum 12 to be drawn therein through the air inlet holes 13.

The invention claimed is:

In a burner for a brooder stove including a bowl for receiving in-flowing fuel and having an oil inlet pipe connected thereto, a mixing drum arising from and connected to said bowl provided with a series of air inlet holes in its wall, a centrally apertured top plate extending over said drum to partially enclose the space therein to provide a combustion chamber, a casing surrounding said drum having a vertical wall spaced therefrom, said casing being closed except for a series of air inlet openings substantially greater in area than the inlet holes of said drum, said air inlet openings being provided in the vertical wall of said casing and spaced about the periphery thereof in a substantially uniform pattern and so spaced vertically in relation to said air inlet holes of the drum as to lie below the upper half thereof, and a baffle shield secured to the outer peripheral wall of said casing about each of said air inlet openings closed below and at the sides thereof and open at the top for directing incoming air currents downwardly therethrough into the space between said drum and casing below said air inlet holes.

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