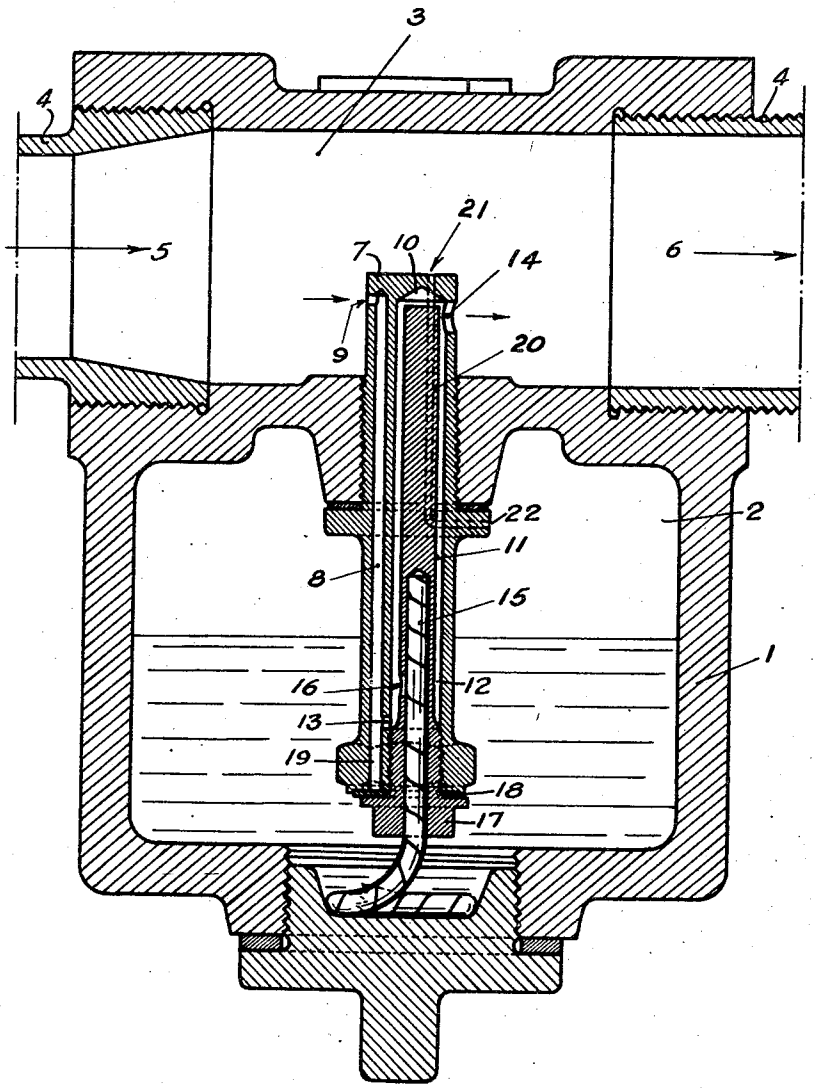
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LUBRICATOR FOR COMPRESSED AIR DRIVEN MACHINES

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LUBRICATOR FOR COMPRESSED AIR DRIVEN MACHINES

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1 Claim. (Cl. 184—55)

My invention relates to oilers and more particularly to improvements of oilers shown and described in my application Serial No. 284,920 filed April 29, 1952.

In the oiler disclosed in my above cited application the means to establish equality of static pressure in the air passageway and in the oil reservoir comprise a pipe or other conduit arranged in the oiler casing and connecting the upper portion of the oil reservoir with the upper part of the space within the air passageway.

The said arrangement had certain disadvantages. Primarily said conduit was not easily accessible and was difficult to clean.

To avoid the said and other disadvantages of the known oilers I arrange according to my invention said conduit in the removable oil dispensing member which is mounted in the oiler casing with its longitudinal axis at least substantially perpendicular to the axis of the air passageway and which reaches with its upper part high into the said air passageway and with its lower part close to the bottom of said oil reservoir.

The said and other objects of my invention will be more fully understood from the following specification taken with the accompanying drawing in which a sectional view of an embodiment of my new oiling device is shown.

As shown in the drawing my oiling device comprises a casing **1** which includes an oil reservoir **2** and above the same an air passageway **3** adapted to be interposed in an air line **4**, the air passing therethrough from the frontal inlet opening **5** to the rear outlet opening **6** as indicated by the arrows.

An oil dispensing member is mounted in the casing **1** with its longitudinal axis at least substantially perpendicular to the axis of said air passageway **3**. Said dispensing member **7** extends with its upper portion into said passageway **3** to be exposed to the air stream passing therethrough and with its lower portion close to the bottom of the oil reservoir **2**. It contains a longitudinal boring **8** having at its upper end a lateral orifice **9** which faces the air intake opening **5** of the passageway **3**, and a second longitudinal boring **10** which houses a cylindrical wick holder **11** of smaller diameter leaving an annular channel **12**. The said boring **8** and the said annular channel **12** are connected by a transverse opening **13** which is arranged below the expected lowest level of oil in the reservoir **2** and thus the said boring **8** and channel **12** form a substantially U-shaped duct. At its upper end the said annular channel **12** is provided with a lateral orifice **14** which faces the rear outlet opening **6** of the air passageway **3**. It will be understood that air from the passageway **3** will enter through the orifice **9** the boring **8** forming one arm of said U-shaped duct and will pass through the transverse opening **13** into the channel **12** which forms the second arm of said U-shaped duct to leave the same through the orifice **14**. The boring **8** conducting air downward may customarily be called a downcomer duct and the channel **12** conducting air upward a riser duct.

The said wick holder **11** which is screwed into the lower position of the boring **10** below the transverse opening **13** houses and holds in an axial boring thereof the upper end of a wick **15** which draws oil from the reservoir **2**. One or more orifices **16** in the wick holder **11** expose the wick **15** to the air flowing in the channel **12** in upward direction. Said orifices **16** are arranged below the expected lowest oil level in the reservoir **2**.

In the shown embodiment the head **17** of the wick holder **11** presses a gasket **18** against the lower face of the dispensing member **7** and closes tightly the lower open end of the boring **8**. The portion **19** thereof below the opening **13** serves as a chamber to collect any dust carried by the air flowing downward through the boring **8**.

The pressure in the air passageway **3** and that in the oil reservoir **2** are balanced by means of a conduit **20** arranged in the oil dispensing member **7**. Said conduit consists of a boring which extends in the oil dispensing member **7** in axial direction from the top thereof leaving an inlet orifice **21** and which opens laterally into the oil reservoir **2** at **22** above the expected highest oil level therein.

Although only one specific embodiment of my invention has been shown and described in detail to illustrate the application of the principles of my invention, it will be well understood that the same may otherwise be embodied without departing from such principles.

What I claim as my invention is:

An oiling device for interposition in an air line, comprising in combination a casing; an oil reservoir therein; an air passageway traversing said casing above said oil reservoir and having a frontal air inlet opening and a rear air outlet opening; an oil dispensing member mounted in said casing with its longitudinal axis at least substantially perpendicular to the axis of said air passageway; said oil dispensing member reaching with its upper part into said passageway and with its lower part close to the bottom of said reservoir; an essentially U-shaped air duct including a downcomer duct arm and a riser duct arm extending within said dispensing member in longitudinal axial direction thereof; the bend of said U-shaped duct being close to the lower end of the dispensing member; an air intake orifice in the upper part of said downcomer arm, said intake orifice facing the frontal air inlet opening of the passageway; an air outlet orifice in the upper part of said riser arm, said outlet orifice facing the rear air outlet opening of the passageway; an oil wick within the reservoir; a longitudinal bore in the lower portion of said dispensing member reaching above the bend of said duct and receiving and holding the upper end portion of the wick; at least one opening connecting said bore and said riser arm within the dispensing member to expose a portion of the surface of the wick to the air passing upwards through said riser arm; said opening arranged below the expected lowest oil level in the reservoir during the operation of the device; and a boring in the oil dispensing member extending in axial direction from the top thereof and opening at its lower end in lateral direction into the oil reservoir above the expected highest oil level therein.

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