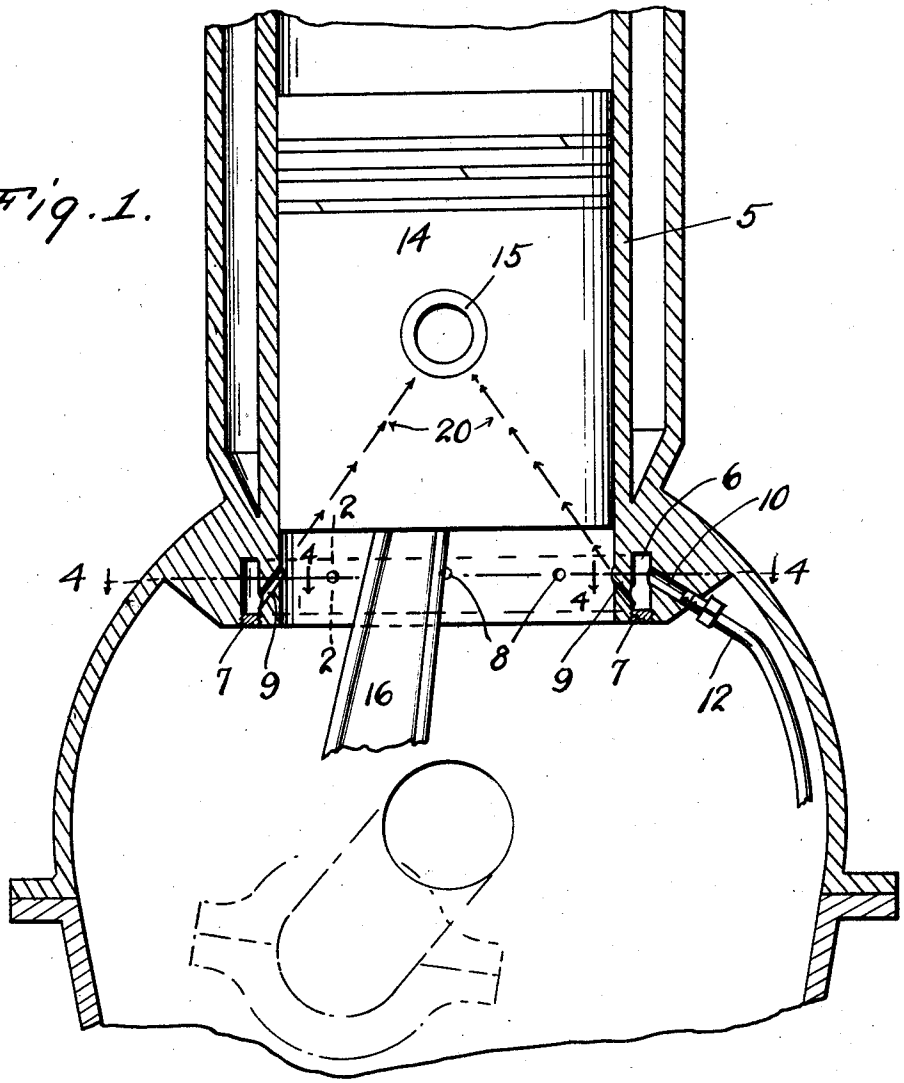
July 28, 1931. J. CLEMENT 1,816,516

PISTON AND CYLINDER OILING SYSTEM FOR INTERNAL COMBUSTION ENGINES

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Fig. 1.



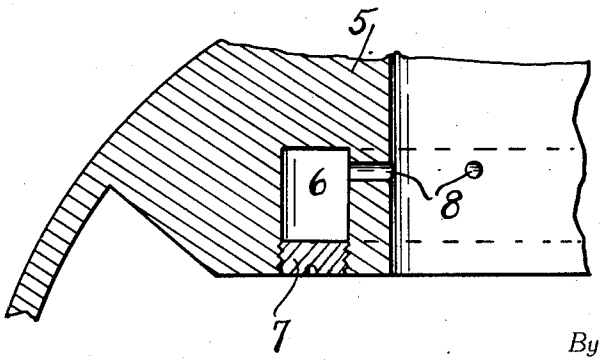


Fig. 2.

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Fig. 3.

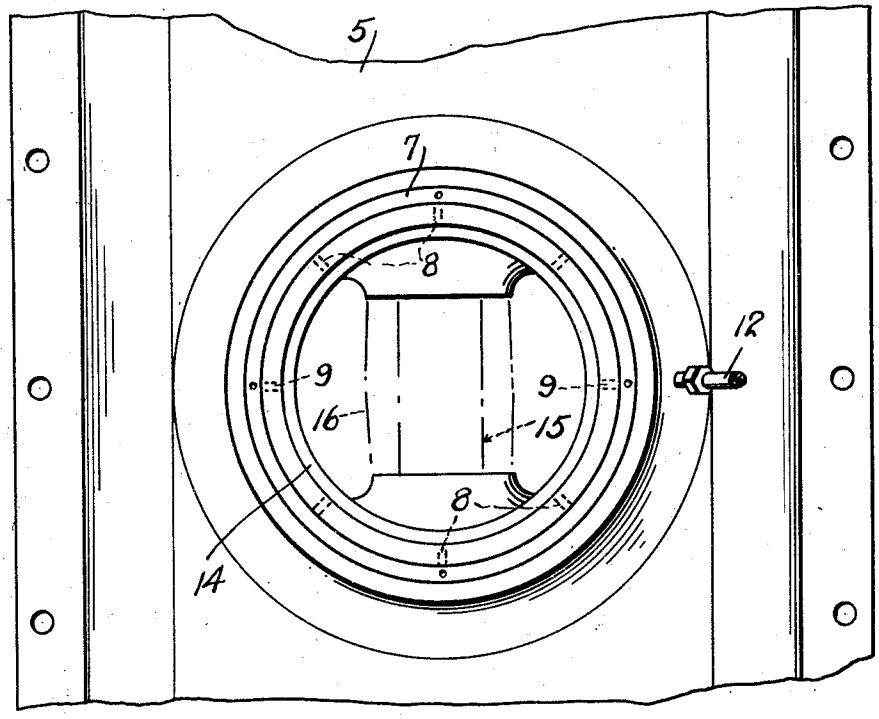
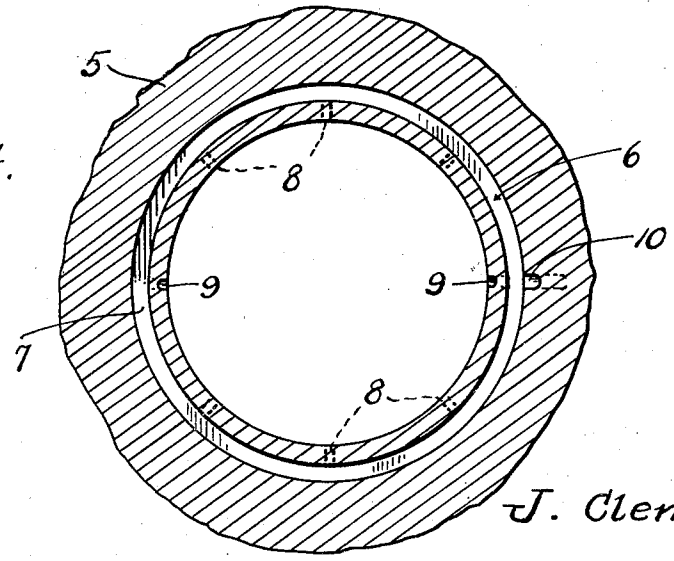


Fig. 4.



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UNITED STATES PATENT OFFICE

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PISTON AND CYLINDER OILING SYSTEM FOR INTERNAL COMBUSTION ENGINES

Application filed June 24, 1929. Serial No. 373,292.

The present invention relates to an oiling system, particularly for the cylinders and pistons of internal combustion engines and has for its prime object to provide means for effectively oiling the cylinder and piston walls and for properly oiling the wrist pins.

Another very important object of the invention resides in the provision of a structure of this nature which is simple, inexpensive to manufacture, and thoroughly efficient and reliable in use.

With the above and numerous other objects in view as will appear as the description proceeds, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawings:

Figure 1 is a vertical section through a cylinder showing my improved features incorporated therein,

Figure 2 is an enlarged section taken substantially on the line 2—2 of Figure 1,

Figure 3 is a bottom plan view of the cylinder, and

Figure 4 is a sectional view taken substantially on the line 4—4 of Figure 1.

Referring to the drawings in detail it will be seen that the numeral 5 denotes a cylinder, the bottom edge of which is formed with an annular groove 6 closed at the bottom by means of a ring 7 threaded therein. The bottom of the cylinder is formed with a plurality of radial openings 8 leading from the interior of the cylinder into the groove 6, and with a pair of diagonal openings 9 leading from the interior of the cylinder to the channel 6 and inclining upwardly and inwardly. A passage 10 is formed in the bottom edge of the cylinder leading into the channel 6 on the outside for receiving an oil conduit 12 which is coupled thereto.

The numeral 14 denotes the piston in the cylinder 5 and connected by means of wrist pins 15 to connecting rod 16.

The oil is forced into the channel 6 through the passage 10 and conduit 12, and is sprayed through the openings 8 inwardly, and the openings 9 shoot the oil in the direction of the arrows 20 so as to properly lubricate the wrist pin 15.

This oiling system may be used on an internal combustion engine and is an improvement over oiling systems now in common use. The systems now in use do not lubricate the pistons or cylinder walls properly under certain conditions. When the engine is first started up and when the oil is cold, as in winter weather, or running at slow speed. Also the present oil systems throw the oil on one side of the cylinder only. It will be noted that my improved system delivers oil to all sides of the piston and cylinder walls evenly, and under all conditions and when the pump is properly primed, this takes place almost immediately. It will also be seen that a proper spray of oil is delivered to the wrist pin which is very important.

It is thought that the construction, operation, utility and advantages of this invention will now be quite apparent to those skilled in this art without a more detailed description thereof.

The present embodiment of the invention has been disclosed in considerable detail merely for the purposes of exemplification since in actual practice it attains the features of advantage enumerated as desirable in the statement of the invention and the above description.

It will be apparent that changes in the details of construction and in the combination and arrangement of parts may be resorted to without departing from the spirit or scope of the appended claim and invention without sacrificing any of its advantages.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent is:—

An oiling device for an internal combustion engine comprising, in combination, a piston, a cylinder in which said piston is operable, said cylinder having its lower edge formed with an annular passage, said passage having circumferentially spaced oil ports extending through its internal walls of the cylinder for lubricating the contact-

ing walls of the cylinder and piston, the ports being uncovered by the piston when the piston is above its lowest limit of movement, certain of said ports radiating inwardly at right angles to the axis of the cylinder and certain other ports slanting upwardly and inwardly for directing cross streams of oil in the path of the piston and intersecting in the line of and at right angles to the vertical travel of the wrist pin of the piston for feeding oil to the said pin, and a closure ring threadedly engaged in the open bottom of the said passage.

In testimony whereof I affix my signature.

JOHN CLEMENT.