No. 878,073. PATENTED FEB. 4, 1908.

V. LANCIA.

LUBRICANT DISTRIBUTER FOR ENGINES.

APPLICATION FILED MAY 13, 1907.

Fig. 1

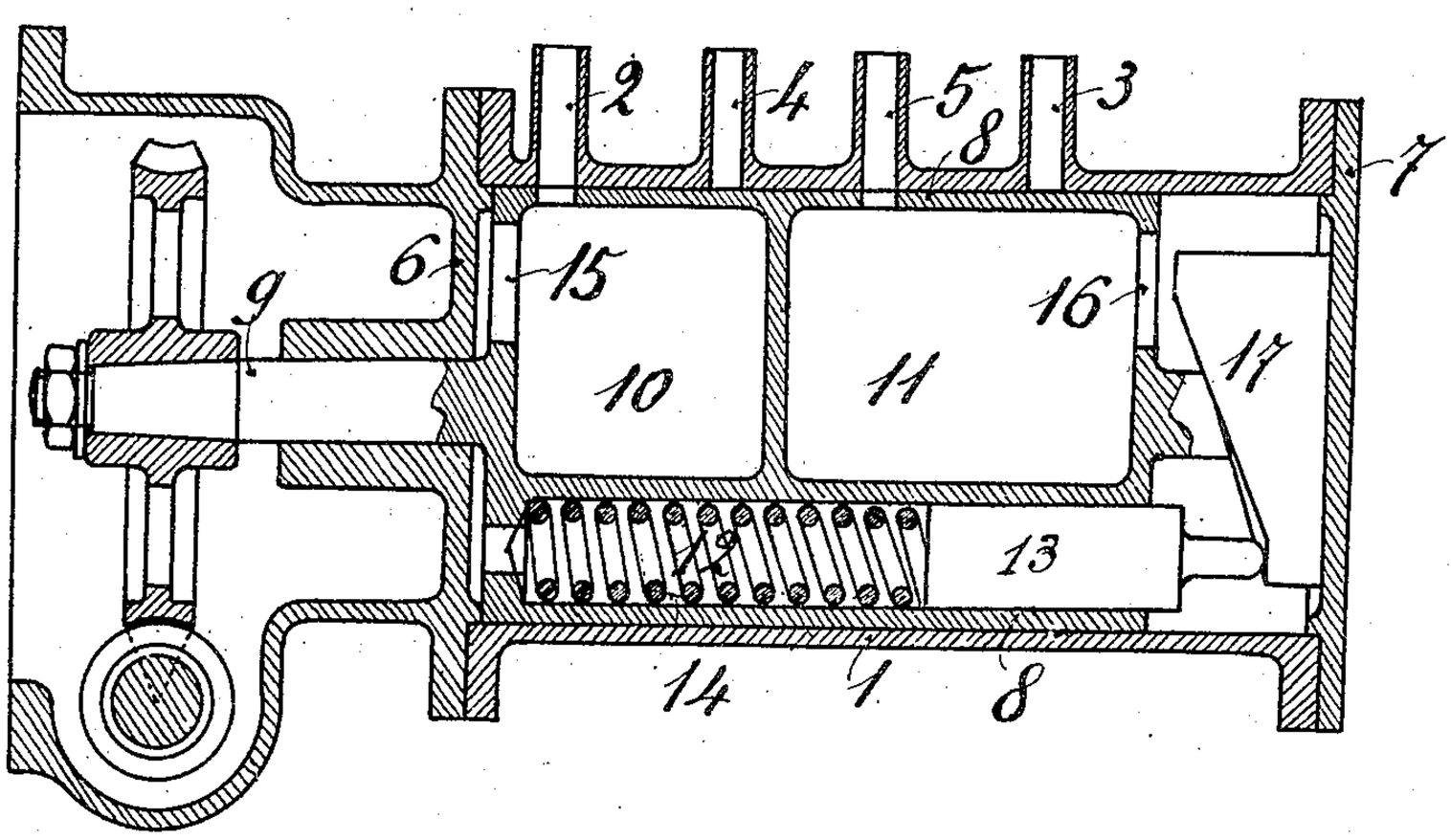
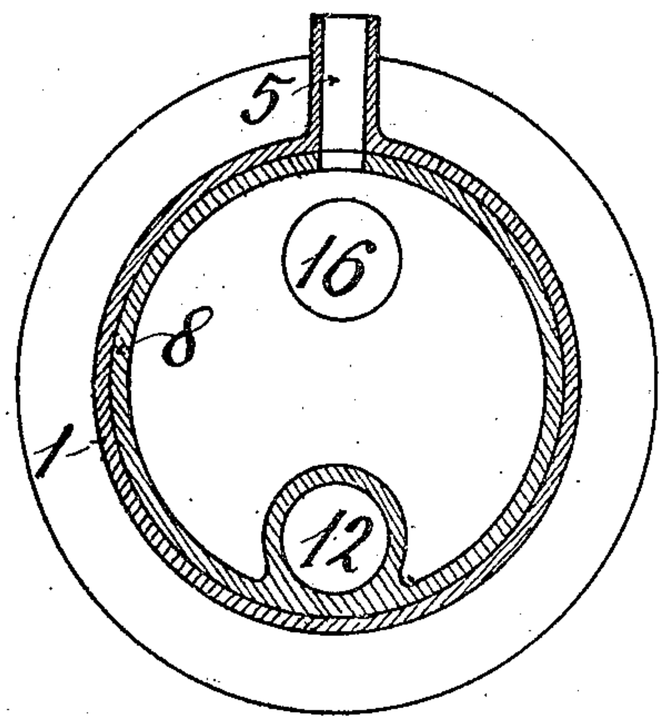


Fig 2



Witnesses:
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LUBRICANT-DISTRIBUTER FOR ENGINES.

No. 878,073. Specification of Letters Patent. Patented Feb. 4, 1908.

Application filed May 13, 1907. Serial No. 373,486.

To all whom it may concern:

Be it known that I, VINCENZO LANCIA, a subject of the King of Italy, and residing at Turin, in Italy, have invented certain new and useful Improvements in Lubricant-Distributers for Engines, of which the following is a specification.

This invention relates to an automatic distributing device for the lubrication of engines.

A construction according to this invention is illustrated by way of example in the accompanying drawing, in which

Figure 1 is a longitudinal section, and Fig. 2 a cross section.

As will be seen from the drawing the apparatus comprises a cylindrical casing or box 1 provided with two suction branches 2 3 and two discharge branches 4 5 and closed by two covers 6 and 7.

In the interior of the box a rotatable cylinder 8 is mounted concentric with the said box and receiving its movement from a spindle 9, driven by the engine by means of any desired gearing.

The cylinder 8 is divided into three chambers, two of which, 10 and 11, are provided with holes arranged so as to establish during the rotation of the cylinder alternate communication of the said chambers with the suction branch 2 and discharge conduit 5, or with the suction conduit 3 and discharge conduit 4, while in the third chamber 12 of circular cross-section is mounted a piston 13 which a helical spring 14 has the tendency to keep in the position shown in Fig. 1. The chambers 10 and 11 communicate with the interior of the casing through openings 15 and 16, and consequently communicate with the chamber 12 which is open at both ends. The piston 13 is provided with an axial extension resting against the cam face of a cylindrical part 17 secured to the cover 7 of the box 1.

Taking as a starting point the position of the piston shown in Fig. 1, if the cylinder 8 is rotated, the chamber 12 will move round the axis of the shaft 9 and the piston 13, moving with its extension against the cam face of the part 17, will be pushed into the interior of the chamber 12 against the action of the helical spring 14. Owing to this movement of the piston 13, the total capacity of the chamber 11 and the adjoining part of the box 1 is increased, and at the same time the total capacity of the chamber 10 and the cylindrical chamber 12 reduced. In this way, by suitably causing the openings in the surface of the cylinder 8 to coincide with the openings of the branches 2 3 4 and 5, suction is produced in the chamber 11, and discharge in the chamber 10, and vice versa when the cylinder 8 makes a half revolution during which, the height of the cam surface of the cylindrical part 17 decreases, the helical spring 14 becomes operative and drives the piston 13 out of the chamber 12. Thus the working is that of a double acting pump which could be, however made a single-acting one, by doing away with the branches 3 and 4 and establishing communication between the conduit 2 and the oil tank, and the branch 5 and the engine. It is obvious that the discharge branches for oil could be four or six in number if it were desired to lubricate four or six cylinders.

What I claim as my invention and desire to secure by Letters Patent is:—

1. An engine lubricant distributer comprising a cylindrical casing closed at its ends a rotatable cylinder provided with two chambers communicating respectively with the ends of the casing, suction and discharge branches on the casing communicating with corresponding openings in the said chambers, a third chamber in said cylinder communicating at its ends with the two chambers, a displacer piston in said third chamber and means within the casing for reciprocating the piston in the cylinder chamber substantially as described.

2. An engine lubricant distributer comprising a cylindrical casing closed at its ends a rotatable cylinder provided with two chambers communicating respectively with the ends of the casing, suction and discharge branches on the casing communicating with corresponding openings in the said chambers, a third chamber in said cylinder communicating at its ends with the two chambers, a displacer piston in said third chamber, a spring in said cylinder chamber for operating the piston in one direction and a cam for operating it in the other direction substantially as described.

3. In an engine lubricant distributer of

the kind described a casing, a compartmented cylinder within said casing, comprising two chambers with a separating wall and a third chamber forming an open-ended cylinder below the two chambers, a piston in said third chamber, and means for operating the same, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

VINCENZO LANCIA.

Witnesses:

LOUIS ALLAN,

CARLO CORTA ING.