U. S. GREER.

LUBRICATOR FOR ENGINES.

APPLICATION FILED JULY 25, 1910.

996,922. Patented July 4, 1911.

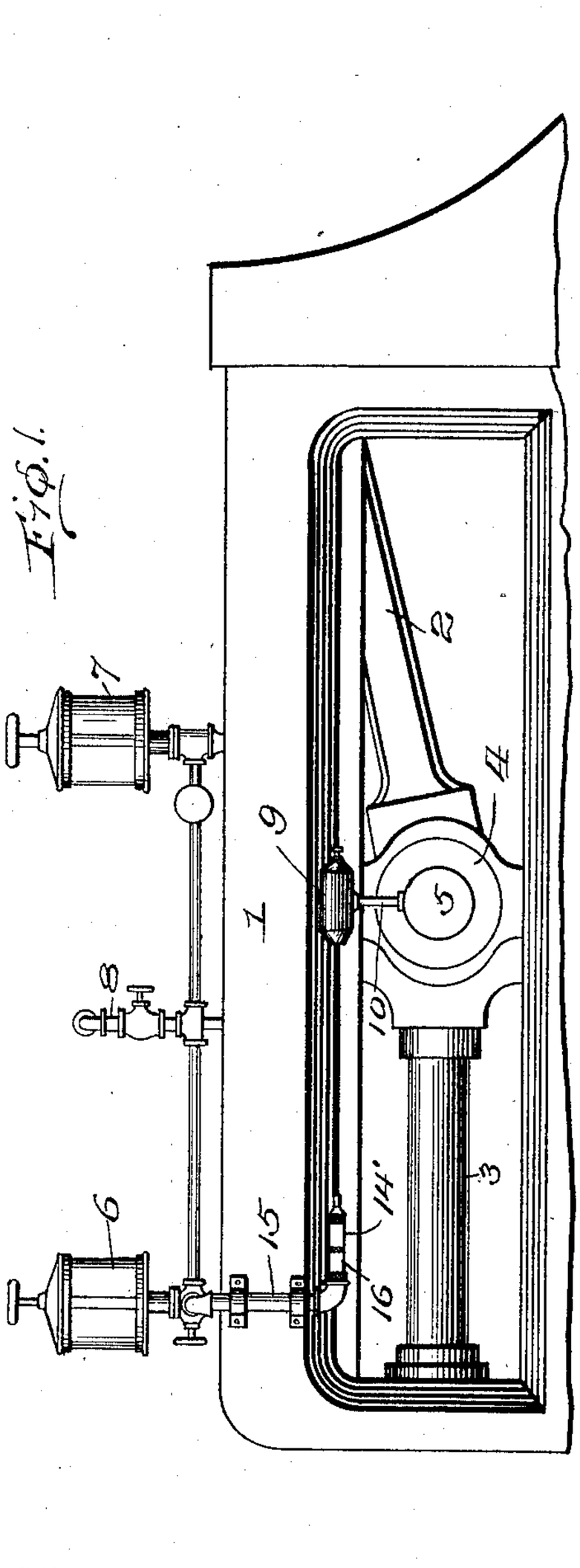

Fig. 1.

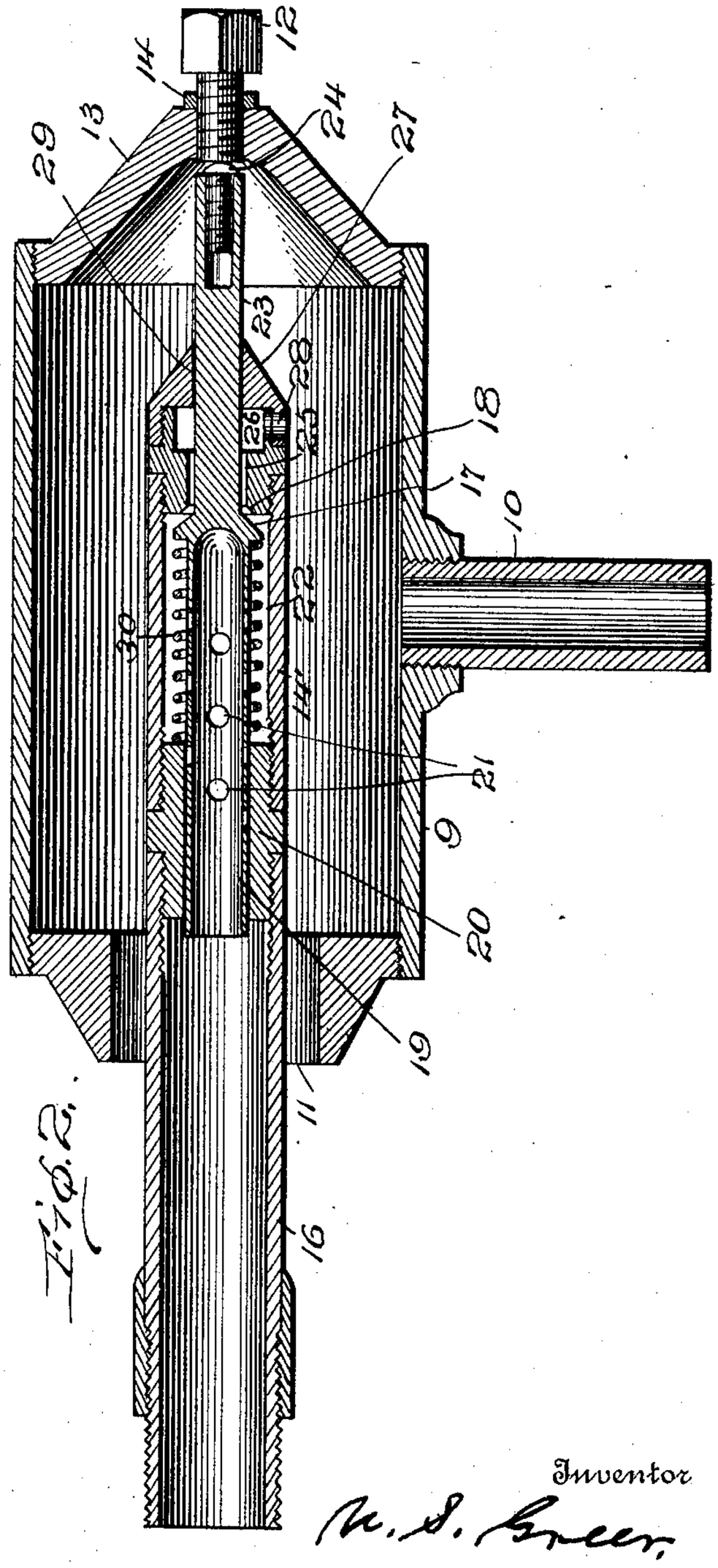

Fig. 2.

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LUBRICATOR FOR ENGINES.

996,922. Specification of Letters Patent. Patented July 4, 1911.

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To all whom it may concern:

Be it known that I, ULYSSES S. GREER, a citizen of the United States, residing at Greensboro, in the county of Guilford and State of North Carolina, have invented certain new and useful Improvements in Lubricators for Engines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to lubricators for engines, has especial reference to such apparatus designed to lubricate cross-heads, slide-valves or other movable parts of an engine, and has for its object economy and cleanliness in the use of oil.

The invention consists in certain improvements in construction, which will be fully described in the following specification and claims.

In the accompanying drawings, which form part of this specification:—Figure 1 represents a side elevation of the application of my invention, and Fig. 2 a vertical longitudinal section of the parts in operative position and on an enlarged scale.

Reference being had to the drawings and the designating characters thereon, 1 indicates the engine frame, 2 the pitman rod, 3 the piston-rod, 4 the cross-head, 5 the wrist-pin, and 6 and 7 oil cups, and 8 the oil supply pipe, all of which are of conventional form and constitute no part of my present invention.

9 indicates an oil receiver and distributer, which is attached to the cross-head 4 in any preferred manner, travels therewith in its reciprocations and is provided with a pipe 10 which conducts the oil to the bearing surfaces to be lubricated. The receiver or distributer consists of a receptacle, of convenient form, preferably cylindrical, and made of metal or other suitable material, and is provided with an aperture or opening 11 at its front end and an adjustable member, such as a set screw 12, at its rear end, which projects through the wall 13 and is secured in position by a lock-nut 14. The screw is adjustable for the purpose of regulating the quantity of oil delivered at each instroke of the piston.

14′ indicates an automatic gravity feed member which is connected to the oil cup 6 by pipe 15, properly secured to the engine frame and in alinement with the distributer 9, which it enters through the opening 11 in the front end thereof. The feed member comprises a section of tubing 16, by which it is secured to the pipe 15, a valve 17, engaging a valve seat 18, a tubular stem 19 supported in a bearing 20 and provided with perforations 21 through which oil is discharged into a chamber 22, a stem 23 which is preferably provided with a buffer 24 of hard wood to prevent noise and battering of the end of said stem. The stem extends through an opening 25, of slightly greater diameter than the stem 23, to allow the passage of oil around it from the chamber 22, into a chamber 26, in a cap 27, from which the oil is discharged through an aperture 28 into the interior of the distributer 9, from which it flows through pipe 10 to the bearings to be lubricated.

The outer end of stem 23 is supported in a bearing 29 in the cap 27, and the valve is closed by a spring 30 as soon as the valve stem 23 leaves the member 12 on the return stroke of the piston.

The operation of the device is obvious; as the cross-head 4 with the distributer 9 attached thereto moves forward on the instroke of the piston of the engine, the feed member 14′ enters the opening 11, and at the end of the instroke of the piston the outer end of the valve stem 23 engages the member 12 and pushes the valve 17 from its seat 18, allowing oil to flow from the chamber 22 into the chamber 26 and into the distributer through the aperture 28; and is then conducted through pipe 10 to the bearings.

From the foregoing description and the construction shown it is evident that no waste of oil can occur, that the parts of the engine are kept comparatively free from excess of oil running over them, and that the operation of the lubricator is automatic and reliable, requiring no attention from the engineer.

Having thus fully described my invention, what I claim is—

1. A lubricator comprising an oil distributer, and a feed member provided with an internal automatically operated valve and adapted to enter one end of the distributer and discharge its contents therein by impact of said valve at the opposite end of the distributer.

2. A lubricator comprising an oil distribu-

ter, a feed member provided with an internal valve having a protruding stem, adapted to enter one end of the distributer and discharge its contents therein by impact of the valve stem against the opposite end of the distributer.

3. A lubricator comprising a tubular oil distributer adapted to be moved longitudinally, and a fixed tubular feed member of less diameter than the distributer, provided with an internal valve and adapted to enter one end of said distributer and discharge its contents therein by impact of said valve at the opposite end of the distributer.

4. A lubricator comprising an oil distributer provided with an adjustable member extending through one end thereof, and an automatic feed member adapted to enter the distributer, and provided with a longtudinally movable valve adapted to engage said adjustable member.

5. A lubricator comprising an oil distributer, a tubular feed member provided with an oil chamber, adapted to enter the distributer and discharge its contents therein, a longitudinally movable valve within said chamber adapted to engage one end of said distributer to open the valve, and means for closing the valve.

6. A lubricator comprising a tubular oil distributer, a tubular feed member provided with an oil chamber, a longitudinally movable valve having a hollow and perforated stem at one end, a spring encircling said stem, and a stem at the opposite end of the valve, said feed member being adapted to enter the distributer and open the valve by impact therewith.

7. A lubricator comprising a tubular oil distributer having an opening at one end, and an adjustable member at the opposite end, a tubular feed member having an oil chamber, a perforated stem in said chamber, an opening in the end of the chamber, and a valve on said stem, controlling said opening and adapted to be opened by impact against said adjustable member.

8. A lubricator comprising an oil distributer, a tubular feed member adapted to enter one end of said distributer and provided with an oil chamber, an opening at one end of said chamber, a chamber adjacent to said opening, a valve between said chambers, means for opening said valve within the distributer, and means for automatically closing the valve.

In testimony whereof I affix my signature, in presence of two witnesses.

ULYSSES S. GREER.

Witnesses:
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