(No Model.)

D. R. STILES.

MEANS FOR SUPPLYING OIL TO MOVING PARTS OF ENGINES.

No. 446,798. Patented Feb. 17, 1891.

Fig. 1.

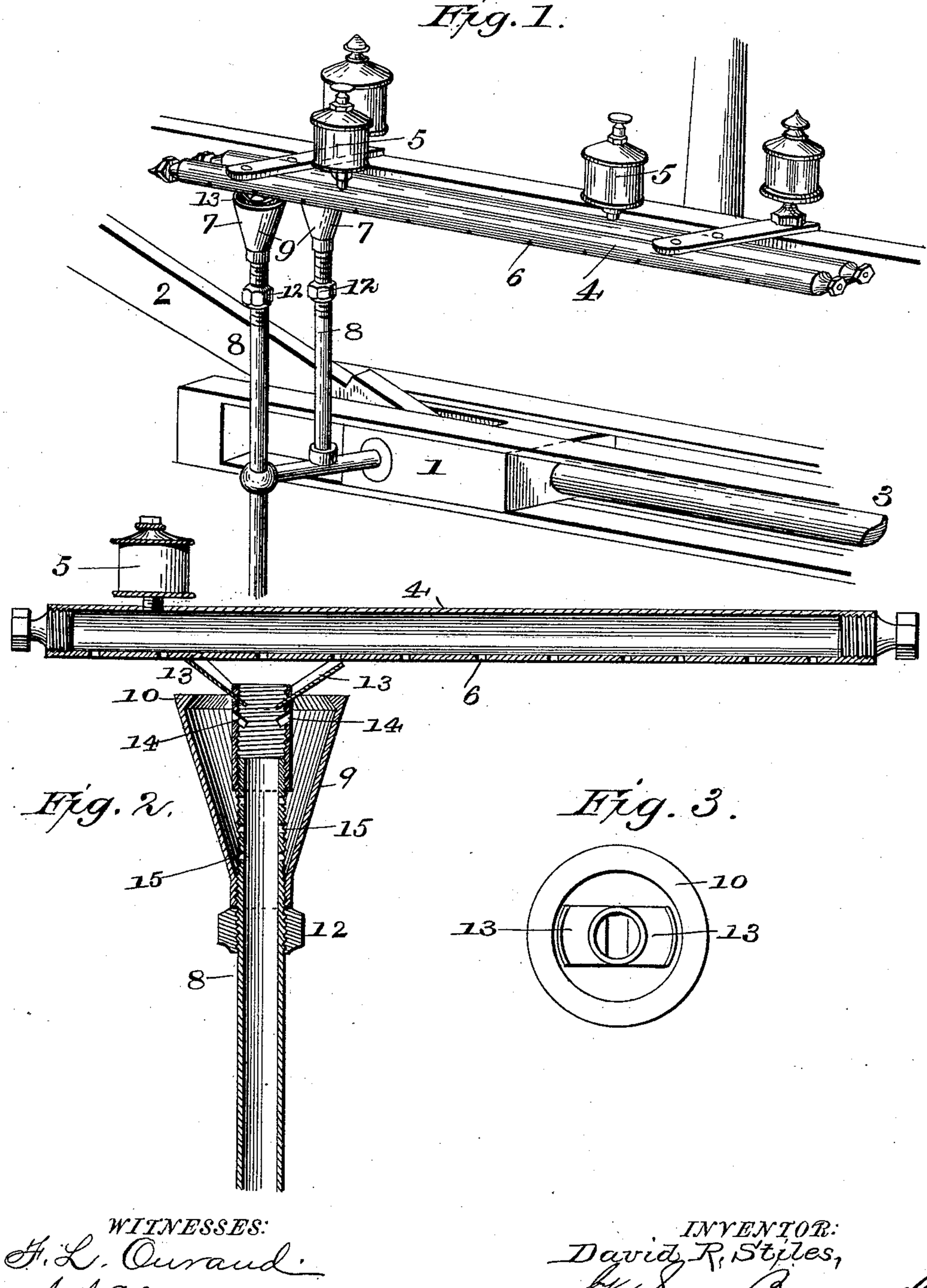

Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

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MEANS FOR SUPPLYING OIL TO MOVING PARTS OF ENGINES.

SPECIFICATION forming part of Letters Patent No. 446,798, dated February 17, 1891.

Application filed September 1, 1890. Serial No. 363,728. (No model.)

To all whom it may concern:

Be it known that I, DAVID R. STILES, a citizen of the United States, and a resident of Ottawa, in the county of Franklin and State of Kansas, have invented certain new and useful Improvements in Means for Supplying Oil to the Moving Parts of Engines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in means for supplying oil to the cross-heads and other moving parts of steam and other similar engines.

The object of the invention is to provide economical and simple devices for accomplishing the above purpose, whereby the oil or other lubricating material is fed positively in a reliable and efficient manner.

The invention consists in the novel construction and combination of parts hereinafter fully described, and definitely pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a portion of a steam-engine with my improvements applied thereto. Fig. 2 is a plan view of the same. Fig. 3 is a central sectional view of the oil-gatherers and connecting-tube.

In the said drawings, the reference-numeral 1 designates the cross-head of the engine, 2 the pitman, and 3 the piston-rod, all which may be of any ordinary construction.

Located above the cross-head and parallel with the line of travel thereof is located one or more oil-tubes 4, in the present instance two being shown. These tubes are provided with oil-cups 5, and each has a series of escape-openings 6 at one side or about the horizontal center thereof, so that the oil escaping through said openings will form in drops on the under side of the pipes.

The numeral 7 designates the oil-gatherers, each consisting of a conducting-tube 8, connected and communicating with the parts to be lubricated. At the upper end each gatherer is provided with a funnel 9, having an inwardly-projecting annular flange 10 at the upper edge to prevent the escape of any oil therefrom when the parts are moving with great velocity. Each funnel is screw-threaded at its lower end and engages with corresponding threads on the tubes 8, which are also provided with jam-nuts 12. It will thus be seen that said funnels are adjustable upon the tubes. The upper ends of the conducting-tubes are provided with oppositely-projecting curved gathering-knives 13. These knives project slightly above the top of the funnel and are so arranged with respect to the oil-tubes 4 as to barely touch the bottoms thereof in their movements. Immediately below these knives are openings 14, communicating with the interior of the tubes 8 for the passage of the oil detached by the knives. There are also openings 15 in said tube for the escape of any oil which may collect in the funnel.

The operation is as follows: The oil-tubes 4 being supplied with the requisite quantity of oil from the oil-cups, the same will escape through the openings 6 and form in drops on the under side of the tubes. The gatherers in their reciprocation will detach the drops by means of the knives 13, which will trickle down the lower sides thereof and escape into the conducting-tubes through the openings 14 and be conveyed to the parts to be lubricated. Any excess of oil which may run down the outside of the tubes will be collected by means of the funnel and conducted to the interior of the tubes through the openings 15. By locating the escape-openings 6 in the sides of the oil-tubes the latter also acts as a settling-chamber, allowing any sediments to collect therein which can afterward be removed.

Having thus described my invention, what I claim is—

1. The combination, with a stationary oil-tube provided with a series of perforations on the under side thereof, of a conducting-tube located on the reciprocating part of an engine, said tube having gathering-knives, and a funnel, and openings for the passage of the oil to the interior of said tube, substantially as described.

2. The combination, with a stationary oil-tube provided with a series of perforations on the under side thereof, of a conducting-tube located on the reciprocating part of an engine,

said tube having gathering-knives, a funnel with an inwardly-projecting annular flange, and openings for the passage of oil to the interior of said tube, substantially as described.

3. The combination, with a stationary oil-tube having a series of perforations on the under side thereof, of a conveying-tube located on the reciprocating part of an engine, said tube having oppositely-projecting gathering-knives, an adjustable funnel with an inwardly-projecting annular flange, and openings for the passage of the oil to the interior of said tube, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

DAVID R. STILES.

Witnesses:
GEO. W. LAWRENCE,
H. W. GILLEY.