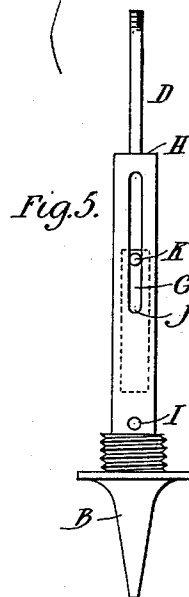
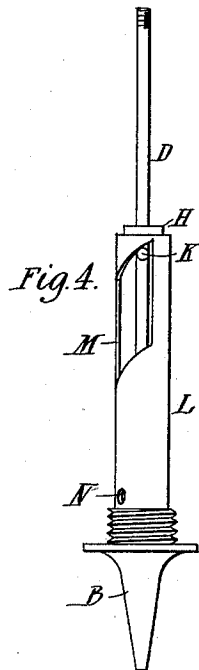
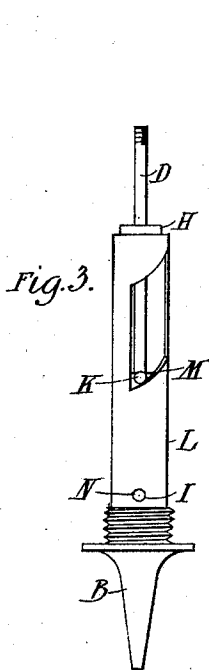
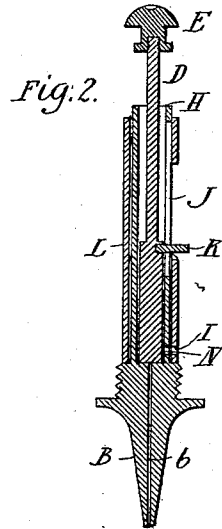
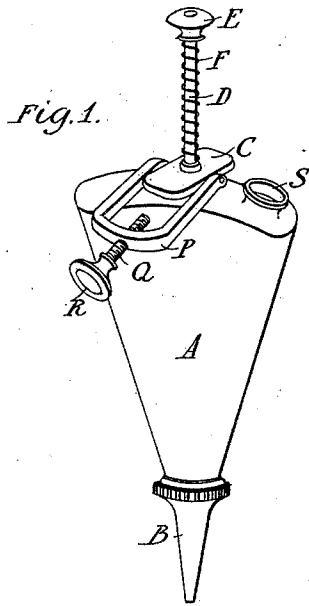


(No Model.)

S. IRVING.
LUBRICATOR.

No. 509,908.

Patented Dec. 5, 1893.



Witnesses

Wm. S. Norton
Geo. H. Wood.

Inventor

Samuel Irving
By J. L. Howard
his Attorney.

UNITED STATES PATENT OFFICE.

SAMUEL IRVING, OF ILKESTON, ASSIGNOR OF SEVEN-TENTHS TO JOHN TAYLOR, GEORGE WILLIAM HICKSON, AND JOHN WILLIAM RICHARD SMITH, OF NOTTINGHAM, ENGLAND.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 509,908, dated December 5, 1893.

Application filed May 7, 1892. Serial No. 432,225. (No model.) Patented in England May 12, 1890, No. 7,372.

To all whom it may concern:

Be it known that I, SAMUEL IRVING, a subject of the Queen of Great Britain, residing at Ilkeston, in the county of Derby, England, have invented certain new and useful Improvements in Appliances for Lubricating or Cleansing the Bearings of Machinery, (for which I have obtained a patent in Great Britain, No. 7,372, dated May 12, 1890;) 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.

The object of my invention is to provide an oiler and cleanser that will deliver oil or other lubricant directly and with a considerable amount of force into bearings or parts of machines and may also be used for the purpose of forcing a cleansing fluid such as paraffin into such bearings or parts of machines.

Referring to the accompanying sheet of drawings and to the letters of reference thereon I will proceed to describe my invention.

Figure 1. is a perspective view of my improved lubricating appliance the working parts being principally unseen and inclosed within the outer case or reservoir. Fig. 2. is a vertical section through inner surrounded tubes and working parts of the apparatus. Fig. 3. is a view of the internal tubes and working parts showing their relative positions when the plunger is at its lowest point and the lubricant free to enter the inner tube. Fig. 4. shows the same with the plunger raised, the entrance of the lubricant to the inner tube closed and the appliance ready for ejecting the lubricant on the head of the piston being forced downward. Fig. 5. is a view of the innermost tube into which the lubricant is drawn previous to its being forcibly ejected through the nozzle tube.

In carrying out my invention I provide a suitable case, reservoir or chamber such as A Fig. 1. to contain the lubricant in bulk and from which the successive charges may be drawn into the inner tube hereinafter described. The lower extremity of this case may be threaded or screwed to engage with a threaded or screwed nozzle or delivery tube

or point such as B and the upper portion of the case A may carry a tapped or threaded socket or orifice in which engages a screwed boss attached to or surmounted by a flat thumb piece C and through which as through a stuffing box passes a spindle or piston D terminating in a removable head or cap E and normally held up by a spiral spring such as F embracing said piston between the top of reservoir and cap E. This spindle or piston terminates in a plunger G hereinafter further described. Attached to or forming a portion of the nozzle B is a stationary tube H Figs. 2, 3 and 4, at the lower portion of which is a small orifice I through which may flow the oil or lubricant contained in the reservoir A and be forced thence through the small opening *b* of the nozzle or point B by the action of the plunger G and piston D. At the upper end of the tube is a vertical slot J in which a pin K screwed into the piston or plunger D may slide. This tube H is surrounded by a second movable tube L in which is a wider slot M with cam shaped ends and through this projects also the pin K which partially revolves the tube L round the tube H on the rising and falling of the piston. Near the bottom of the outer tube L is a hole or orifice N through which the oil or lubricant contained in the reservoir A may pass and thence through the hole I when the two orifices *i* and N become coincident by reason of the forcing down of the piston and plunger. The working of the piston causes a pumping action, the oil or lubricant being first drawn through the holes in the tubes and then ejected through the nozzle B.

When not in use the piston or plunger is kept firmly down by a holdfast formed as follows: On the boss or thumb piece C is provided a fork P through the head or cross head of which works a screw Q terminating in a milled head R. When it is desired to secure the piston the head of the fork P is brought over the cap E the piston being depressed and the screw Q is turned until the piston is firmly held home. When the holdfast is released the piston rises, the fluid is drawn from the chamber or reservoir A

through the holes I and N into the inner tube H and forced out through the nozzle opening b on the return of the plunger the tube being recharged on the withdrawal of the pressure. 5 Oil or other fluid is introduced into the reservoir through a capped orifice or other device such as S.

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

10 1. In a lubricator, the combination with a casing for containing the oil, a tube within the casing having an oil inlet and an oil outlet, a plunger, a movable tube surrounding the inner tube, and having an oil inlet normally 15 out of line with the inlet of the inner tube, the combination being and operating substantially as described.

2. In a lubricator, the combination with a casing for containing the oil, a tube within the casing having an oil inlet and outlet, a plunger 20 normally raised by the action of a spring, and having a pin extending through a slot in

the tube, a movable tube surrounding the inner tube having an oil inlet normally out of line with the inlet of the inner tube, and 25 having a vertical slot to receive the pin, the combination being and operating substantially as described.

3. In a lubricator, the combination with an outer casing, a tube within said casing having 30 an oil inlet and outlet, a plunger in said tube normally raised by the action of the spring, and means for holding the plunger in a lowered position comprising a pivoted fork and a set screw, all substantially as and for 35 the purposes set forth.

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

SAMUEL IRVING.

Witnesses:

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