

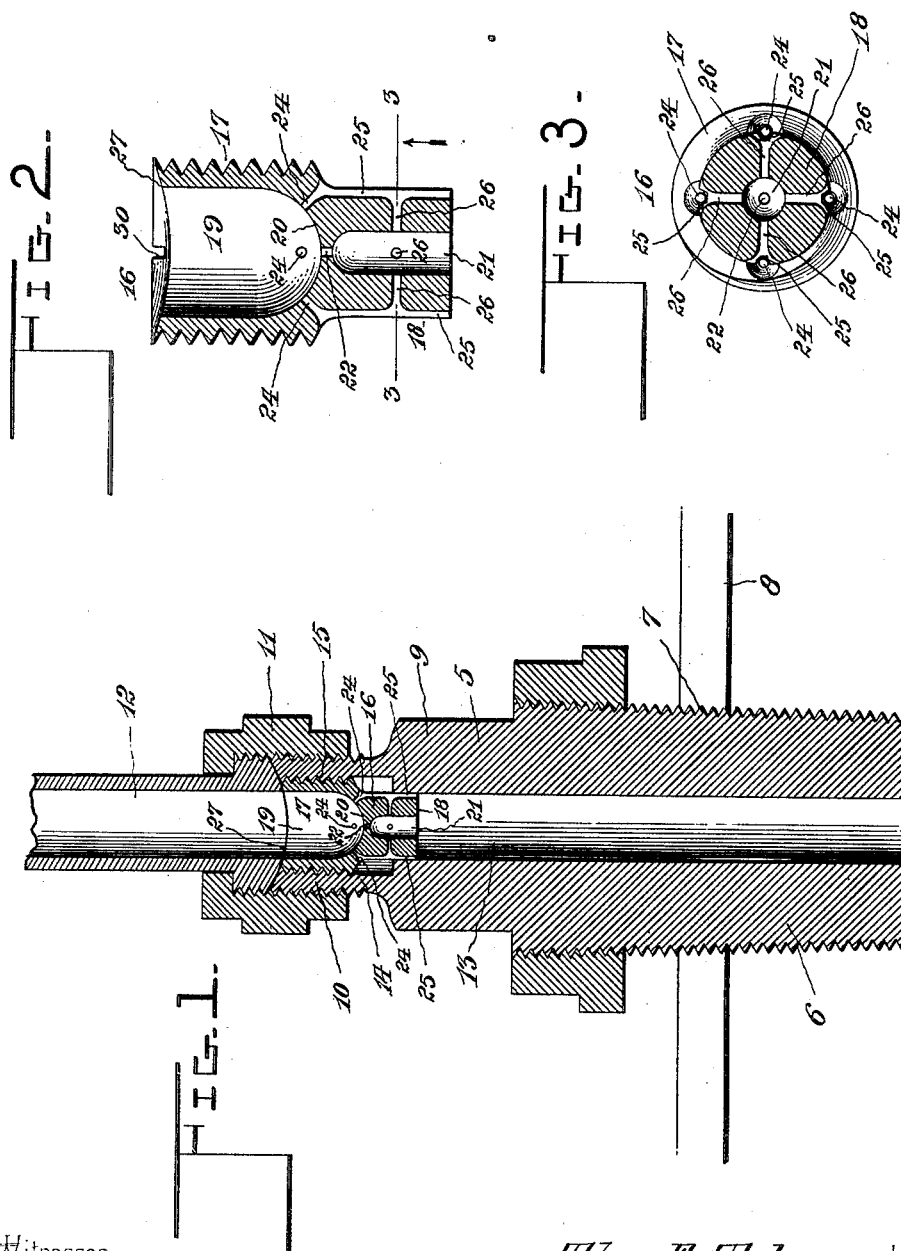
No. 649,779.

Patented May 15, 1900.

T. E. TYLER.  
STRAINER PLUG FOR LUBRICATORS.

(Application filed Nov. 20, 1899.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

THOMAS E. TYLER, OF GLADSTONE, VIRGINIA.

## STRAINER-PLUG FOR LUBRICATORS.

SPECIFICATION forming part of Letters Patent No. 649,779, dated May 15, 1900.

Application filed November 20, 1899. Serial No. 737,697. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS E. TYLER, a citizen of the United States, residing at Gladstone, in the county of Nelson and State of Virginia, have invented a new and useful Strainer-Plug for Lubricators, of which the following is a specification.

This invention relates to lubricators, and more particularly to that class employed in connection with the cylinders of locomotives; and it has specific reference to what is known as the "oil-plug," with which the feed-pipe from the lubricator connects and which plug is screwed into a threaded opening in the cap-plate or cover of the steam-chest.

One object of the invention is to provide a strainer-plug for the oil-plug which will permit the ready flow of the oil therethrough, which will not be so susceptible to stoppage as those ordinarily used, and in which this strainer-plug may be quickly and easily removed for cleansing and for other purposes without detaching the oil-plug and without recourse to the tools usually required in this operation.

A further object of the invention is to produce a construction of strainer-plug in which in the event of breakage of the lubricator-glass the lubricant may be contributed directly from the oil-can or tallow-pot and an even and effective feed will be insured, the lubricant being then drawn through by the suction of the cylinders when the throttle is closed.

In the drawings forming a portion of this specification, and in which similar numerals of reference designate like and corresponding parts in the several views, Figure 1 is a vertical central section taken through an oil-plug and showing the application of the strainer-plug and the attachment of the union carried by the oil-pipe. Fig. 2 is a detail vertical central section of the strainer-plug. Fig. 3 is a section on line 3 3 of Fig. 2 looking upwardly.

Referring now to the drawings, 5 represents an oil-plug comprising an exteriorly-threaded and tapered lower portion 6, adapted to engage the threads in an opening 7 in the cover or cap-plate 8 of the steam-chest or other portion to which the oil is to be sup-

plied. This plug has a central cylindrical portion 9 and an upper reduced and exteriorly-threaded portion 10, the threads of which are adapted to receive the threads upon the inner surface of a coupling member 11 of the usual construction and rotatably mounted on the lower end of the oil-pipe 12.

Longitudinally and centrally of the plug 5 is a cylindrical bore 13, the upper portion of which is increased in diameter, as shown at 14, and is interiorly threaded, as shown at 15.

In the upper portion of the bore 13 and lying in both the minor and major portions thereof is the strainer-plug 16, comprising an upper major portion 17 and a lower minor portion 18, the major portion having threads adapted to engage the threads 15 and the minor portion 18 fitting snugly within the contracted part of the bore of the plug 5.

In the upper or major portion of the strainer-plug 17 is a cylindrical recess 19, having a hemispherical bottom 20, a similar and smaller recess 21 being formed upwardly in the minor portion 18, these depressions or recesses lying in axial alinement and having a communicating oil-duct 22 of very small diameter and of the size usually employed for conducting the oil from the oil-plug. In addition to this duct 22 are formed ducts 24, which are disposed radially downwardly and outwardly from the base of the recess 19 and open outwardly of the plug at the inner edge of the shoulder formed between the major and minor portions of the strainer-plug. There are shown four of these ducts 24, which are spaced equally about the periphery of the strainer-plug, and these ducts communicate at their outer ends with longitudinal grooves or passages 25, formed in the outer surface of the minor portion 18 of the strainer-plug. These passages 25 lead downwardly and through the lower end of the strainer-plug and communicate with additional oil-ducts 26, formed radially of the minor portion 18 of the strainer-plug in a common plane and opening into the recess 21. As above mentioned and as shown in the drawings, this strainer-plug is seated in the upper end of the oil-plug instead of in the lower end, as is usual, and the upper edge of the strainer-plug is concaved, as shown at 27, to correspond with the concavity of the

upper end of the oil-plug, so as to receive and snugly fit the lower curved end of the oil-pipe 12 under the influence of the coupling members 11.

5 With the above construction when the lubricator is filled and is opened the oil passes downwardly through the pipe 12 and into the recess 19, from which it passes outwardly through the several ducts and downwardly  
10 through the passage 25 into the bore 13 and thence to the part to be lubricated, the oil being normally forced under the influence of the steam-pressure through the lubricator, the plug having a strainer-like action to arrest  
15 the impurities and hold them in the recess 19. In this arrangement the back pressure of steam through the bore 13 and which normally tends to retard the passage of the oil is overcome and the flow of oil from the oil-  
20 plug is constant and plentiful.

Should the lubricator-glass become broken or the lubricator otherwise be rendered useless, the oil can be contributed to the oil tube or pipe directly from the can or pot and will  
25 pass into the recess 19, from which it will be drawn under the influence of suction in the cylinders when the locomotive is running without steam. Moreover, it will be seen that the strainer-plug is located at the upper end  
30 of the oil-plug instead of at the lower end interiorly of the steam-chest, and thus if the strainer-plug becomes clogged the union or coupling may be easily disengaged and the strainer-plug removed for cleansing, slots  
35 being formed in the upper edge of the strainer-

plug to receive a screw-driver when it is desired to insert or remove the plug.

What is claimed is—

1. A strainer-plug for lubricators, comprising a body having coaxial recesses of different diameters, an oil-duct connecting the recesses, additional oil-ducts passing outwardly of the plug, and oil-passages in the outer face of the plug and communicating with the last-named ducts. 45

2. A strainer-plug for lubricators, comprising a body having coaxial recesses of different diameters, an oil-duct connecting the recesses, additional oil-ducts leading from each of the recesses outwardly through the plug, and oil-passages communicating with the last-named ducts and extending through the end of the plug. 50

3. A strainer-plug for lubricators, adapted to receive and feed the lubricant under pressure, said plug comprising an upper major portion and a narrowed lower portion, a recess in the upper portion, openings in the recess through the base of the major portion and exteriorly of the minor portion, a recess in the minor portion of lesser diameter than that in the major portion, and a passage connecting the recesses. 55

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses. 65

THOMAS E. TYLER.

Witnesses:

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