

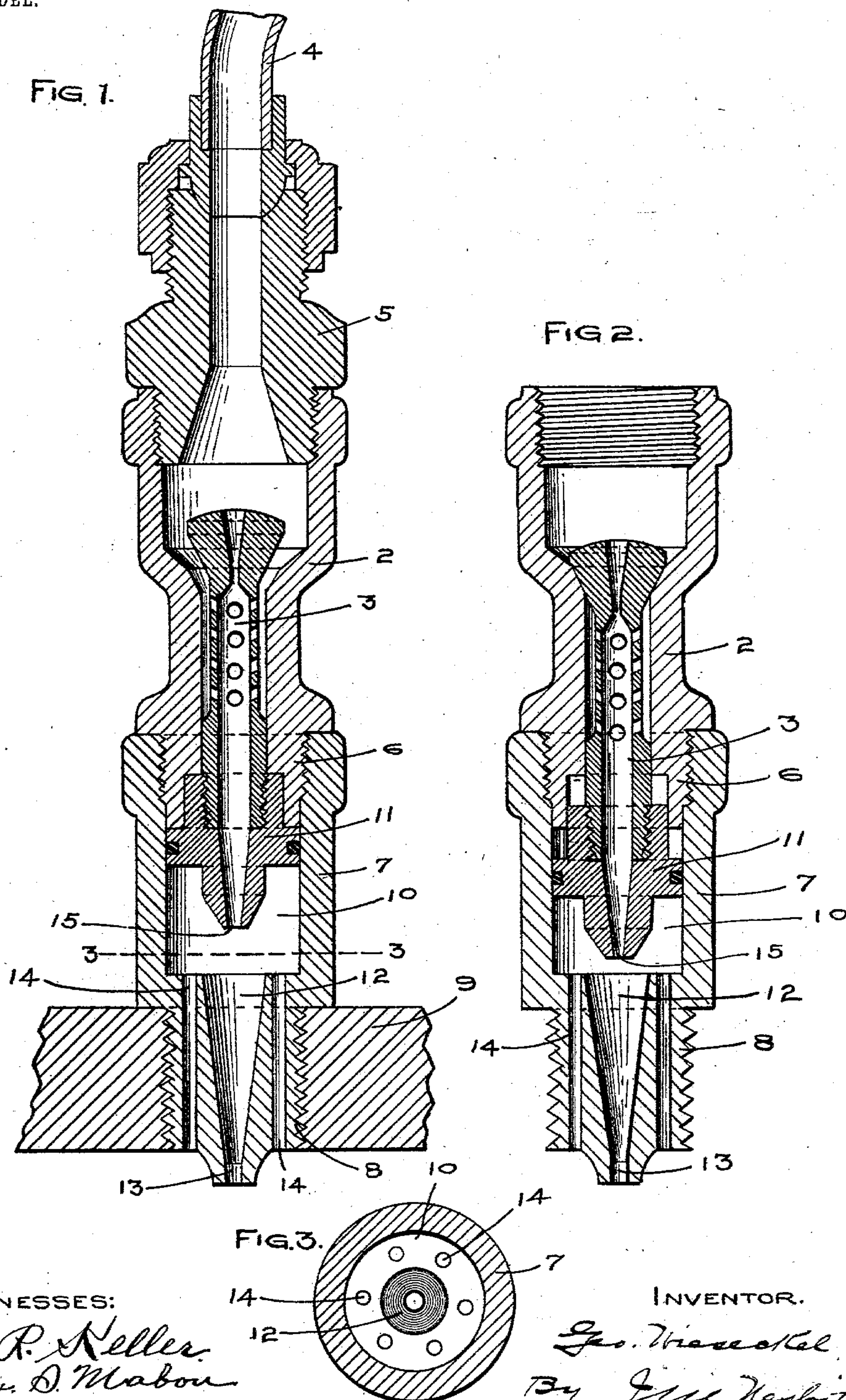
No. 720,767.

PATENTED FEB. 17, 1903.

G. WIESECKEL.  
LUBRICATOR.

APPLICATION FILED AUG. 15, 1902.

NO MODEL.





# UNITED STATES PATENT OFFICE.

GEORGE WIESECKEL, OF ALLEGHENY, PENNSYLVANIA.

## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 720,767, dated February 17, 1903.

Application filed August 15, 1902. Serial No. 119,760. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE WIESECKEL, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Lubricators, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to lubricators, and has particular reference to certain improvements in the lubricating apparatus for which Letters Patent No. 708,108 were granted to me September 2, 1902. In that the lower detachable end of the choke plug or valve is shown depending into the steam-chest, and if said end should become detached from the body of the valve and drop into the chest great damage would likely result to the slide-valve and cylinder-ports.

20 The primary object of the present invention is to obviate this possibility of accident by providing means whereby if said valve end should loosen it could not reach the chest.

25 A further object is to so construct the apparatus that when the choke plug or valve is being held in elevated or open position by pressure of steam from the chest the steam, thus acting on the plug or valve is maintained in constant circulation, thereby preventing accumulation of water of condensation at the lower end of the valve, which, if permitted to collect, would have a tendency to work up around the valve and detract from the efficiency thereof.

30 With these objects in view the invention consists in certain novel structural details and combination of parts, hereinafter fully described and claimed, and illustrated by the accompanying drawings, wherein—

35 Figure 1 is a vertical sectional view of a lubricating valve and casing constructed in accordance with my invention, the valve being shown raised as when under steam-chest pressure. Fig. 2 is a similar view, the valve being in lowered position, as when the chest is without steam. Fig. 3 is a sectional plan view on line 3 3 of Fig. 1.

40 Referring to the drawings, 2 designates the valve-case, and 3 the longitudinally-movable choke-plug or piston-valve operative therein.

4 is the tallow-pipe leading from the condensation-displacement lubricating apparatus (not shown) located in the locomotive-cab and uniting with the upper end of case 2 by means of connection 5. The choke-plug or valve and valve-case are fully shown and described in my above-recited patent, in which is also fully described the operation whereby a substantially uniform feed of the lubricant is maintained regardless of the presence or absence of steam in the chest, so that repetition is here unnecessary. Suffice it to say that with steam in the chest the valve is held raised, as in Fig. 1, and when without steam, as when the throttle is closed, the valve is in lowered position and seated, as in Fig. 2.

55 The lower end of valve-case 2 is reduced and threaded exteriorly at 6, where it unites with the upper end of casing or fitting 7, which in turn is reduced and threaded exteriorly at its lower end at 8 to unite with lid or top 9 of a steam-chest. The upper portion of this casing forms the cylindrical chamber 10, in which fits and operates as a piston the lower detachable extremity 11 of valve 3.

60 Through the center of the lower portion of casing 7 from the bottom of chamber 10 to the casing extremity is formed the downwardly-tapering passage or nozzle 12, which aligns axially with valve 3 and through which the lubricant is discharged into the steam-chest. The lower extremity of passage or nozzle 12 is preferably straight or untapered for a short distance, as indicated at 13, to prevent enlargement of its discharging-orifice, which, if tapered clear through, might have such tendency through wear incident to the constant passage or flow of steam and oil therethrough.

65 Outside of and surrounding nozzle 12 and inclosing the same is a series of ducts 14, extending from the bottom of chamber 10 to the lower extremity of the casing, and hence communicating with the steam-chest.

70 In operation when the engine is running without steam, the throttle being closed, the choke plug or valve is seated, as in Fig. 2. As soon, however, as steam is admitted to the chest it enters chamber 10 and, acting on valve-piston 11, raises and holds the valve in



the position seen in Fig. 1. The discharging-orifice 15 of valve 3 being concentric with nozzle 12 and immediately thereabove, the jet of steam and oil issuing therefrom discharges  
5 into the nozzle and therethrough into the steam-chest, the wide upper end of the nozzle insuring this operation. The forwardly-moving jet of lubricant draws with it, as by suction, the steam in chamber 10, which creates  
10 a constant inward flow of steam from the chest through ducts 14. Thus while the steam-chest pressure is constant within chamber 10 the steam is continually circulating therein, passing thereinto through ducts 14 and there-  
15 from through nozzle 12 along with the lubricant. The head of steam acting to hold the valve elevated is constantly changing, and there is no opportunity for condensation nor for the collection of water of condensation ad-  
20 jacent the piston 11. If the construction and operation were such that the head of steam acting on the piston were practically still or unchanging, the water of condensation there collected would have a tendency to work up  
25 around the valve and detract from the efficiency of the apparatus.

If from any cause piston member 11 should become detached from the valve-body, it would simply lodge in chamber 10, passage thereof to the steam-chest being obviously im- 30 possible.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In lubricating apparatus, the combination 35 of casing adapted to communicate with a lubricator and with a steam-chest, communication with the steam-chest being through a plurality of ducts in the steam-chest extremity of the casing, a lubricant-feed-regulating 40 valve operative in the casing, one of said casing-ducts being in line with the valve-discharge and relatively large at its end adjacent the latter and tapered toward its steam-chest end. 45

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

GEORGE WIESECKEL.

Witnesses:

J. M. NESBIT,  
ALEX. S. MABON.