O. O. AUNE.

FOUNTAIN OILER.

APPLICATION FILED MAR. 11, 1909.

925,794. Patented June 22, 1909.

Fig. 1.

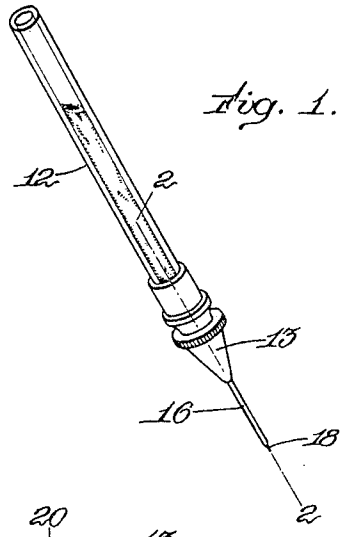


Fig. 2.

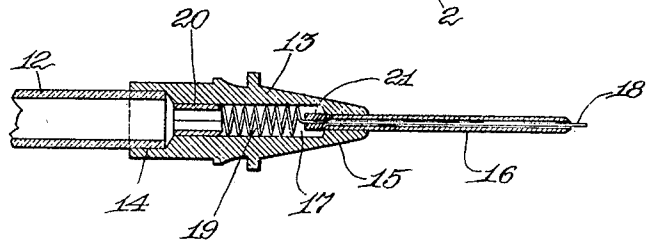


Fig. 3.



Witnesses:
P. J. Tazzetti
E. Batchelder

Inventor:
Ole O. Aune
by Wright Brown Quinby & May.
Attorneys.

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

OLE O. AUNE, OF WALTHAM, MASSACHUSETTS.

FOUNTAIN-OILER.

No. 925,794. Specification of Letters Patent. Patented June 22, 1909.

Application filed March 11, 1909. Serial No. 482,727.

To all whom it may concern:

Be it known that I, OLE O. AUNE, of Waltham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Fountain-Oilers, of which the following is a specification.

This invention relates to fountain oilers which are used by watchmakers and repairers in oiling small and delicate bearings in watches, the oiler comprising a reservoir having a slender outlet tube, a needle longitudinally movable therein, a spring which automatically projects the outer end of the needle from the outer end of the tube, and a valve which accompanies the needle and is pressed by the spring against the outlet to automatically close the same, the needle being adapted to engage the bearing to be oiled and pressed backwardly by pressure of the oiler toward the bearing, thus removing the valve from the outlet and permitting oil to flow through the tube around the needle to the bearing.

The invention has for its object to provide a simple and durable construction whereby the needle, spring and valve are detachably mounted in the delivering end portion of the reservoir so that they may be readily removed and replaced.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, Figure 1 represents a perspective view of a fountain oiler embodying my invention. Fig. 2 represents a section on line 2—2 of Fig. 1 on an enlarged scale. Fig. 3 represents a perspective view of the spring abutment shown in Fig. 2.

The same reference characters indicate the same parts wherever they occur.

In the drawings 12 represents the body portion of my improved fountain oiler, the same being preferably a glass tube.

13 represents a tubular metal end piece which is affixed to one end of the body 12, the bore of the end piece constituting a continuation of the bore of the body 12, said bores being adapted to contain a charge of oil. The bore of the end piece 13 is graduated and has an end portion 14 of relatively large diameter which receives one end of the body 12 and closely fits the same, an end portion 15 of relatively small diameter which receives and closely fits one end portion of an outlet tube 16, and a central portion 17 of intermediate diameter which is less than the internal diameter of the body 12. The body 12 is permanently fixed to the end piece 13 by a suitable cement, and the outlet tube 16 is brazed or otherwise permanently secured to the end piece 13, the said tube constituting a contracted elongated outlet adapted to conduct oil from the reservoir to the bearing to be lubricated.

18 represents a needle which is made of fine wire and passes loosely through the tube 16, the inner end portion of the wire of which the needle is made being helically coiled to form a spring 19 which is located in the central portion 17 of the bore of the end piece 13.

20 represents an abutment for the spring 19, said abutment being detachably engaged with the internal surface of the end piece 13 and of smaller diameter than the bore of the body portion 12 so that it may be readily inserted and removed through the said body portion. The abutment 20 is preferably a split tube or collet of spring steel adapted to expand into frictional engagement with the interior of the end piece 13.

21 represents a valve which is formed as a collar surrounding and closely fitting the inner end portion of the needle 18, one end of the collar being formed to bear closely upon the inner end of the tube 16 and thus close the outlet of the reservoir, the spring 19 acting to press the valve automatically against its seat.

The user of the device engages the point of the needle, which is normally projected from the tube 16, with the bearing to be oiled and presses the device downwardly thus causing the retraction of the needle and the opening of the valve, so that a limited quantity of oil flows through the tube to the bearing. When the device is removed from the bearing, the spring closes the valve.

The body portion 12 is open at its upper end when in use, and closed when not in use by any suitable means, such as the head of a tubular case adapted to receive the body 12. It will be seen that the removability of the abutment 12 enables a suitable slender grappling tool to be inserted in the open end of the body 12 to engage the abutment and withdraw the same together with the spring, needle and valve, when repairs, adjustment or renewal are required.

I claim:—

A fountain oiler comprising a tubular

reservoir body, a tubular end piece, a slender outlet tube attached thereto, the bore of said end piece being graduated to provide an end portion of relatively large diameter receiving one end of the reservoir body, an end portion of relatively small diameter receiving one end of the outlet tube, and a central portion of intermediate diameter which is less than that of the interior of the reservoir body and constitutes a valve chamber, a needle movable longitudinally in the outlet tube, a helical spring integral with the needle and located in the valve chamber, an abutment for said spring within the valve chamber, and a valve formed as a collar surrounding and affixed to the needle within the valve chamber, said valve being adapted to be pressed by the spring against the inner end of the outlet tube and close the latter, the abutment being movably engaged with the wall of the valve chamber and adapted to be withdrawn therefrom through the reservoir body to permit the withdrawal of the spring, valve and needle.

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

OLE O. AUNE.

Witnesses:
C. F. BROWN,
P. W. PEZZETI.