

(No Model.)

I. L. GREEN.
WATCH OILER.

No. 487,732.

Patented Dec. 13, 1892.

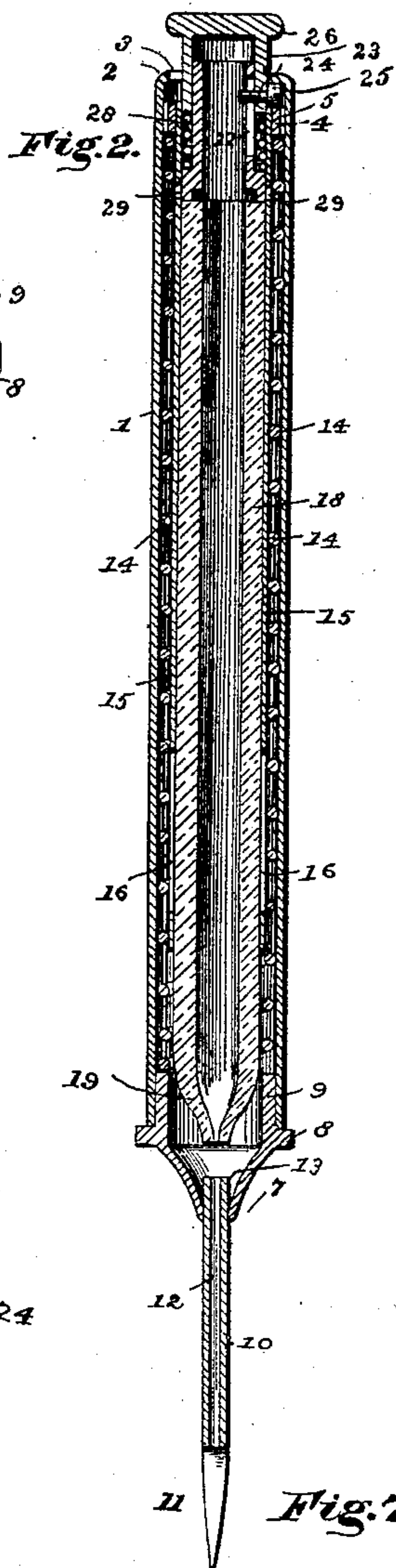
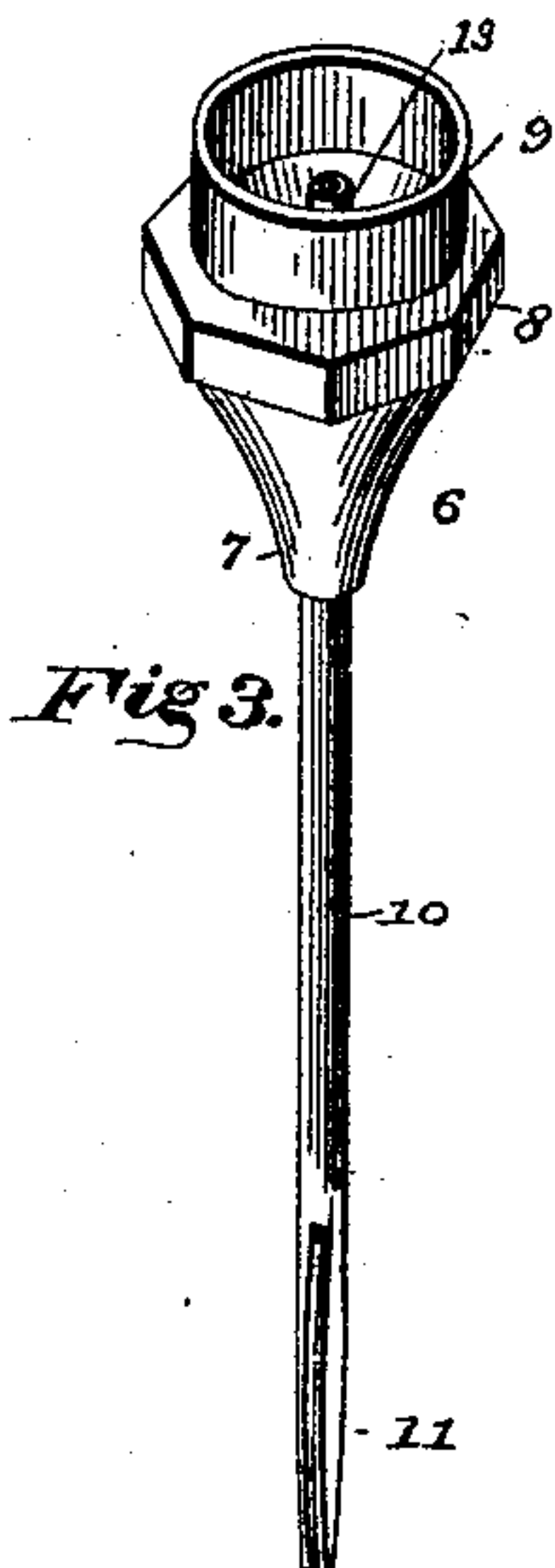
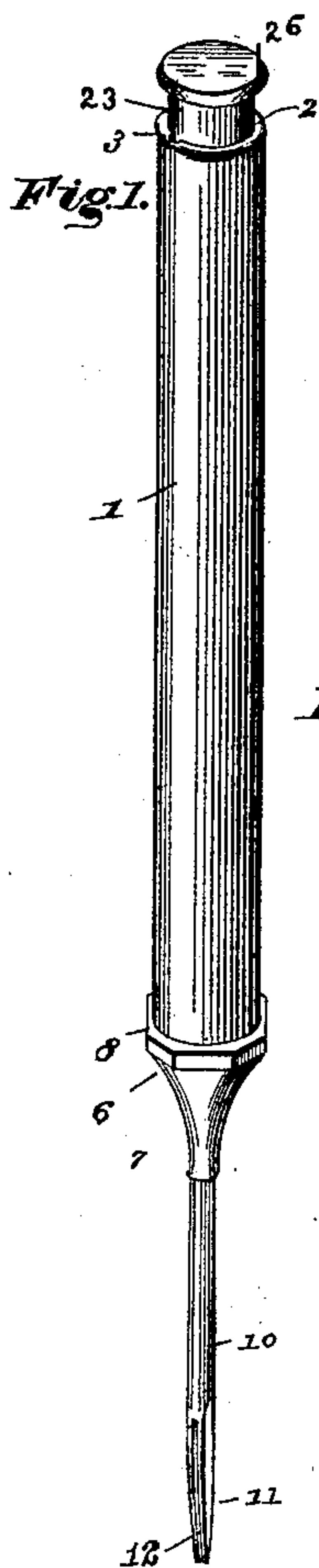


Fig. 4.

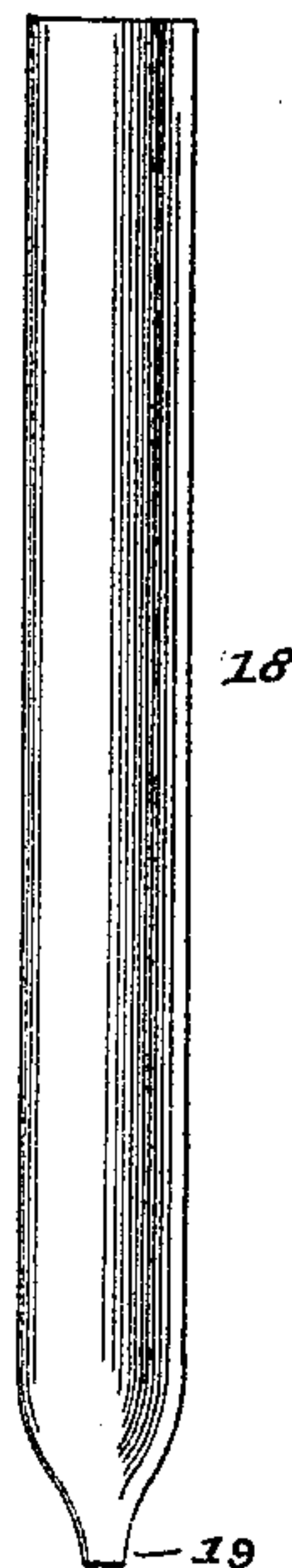


Fig. 5.

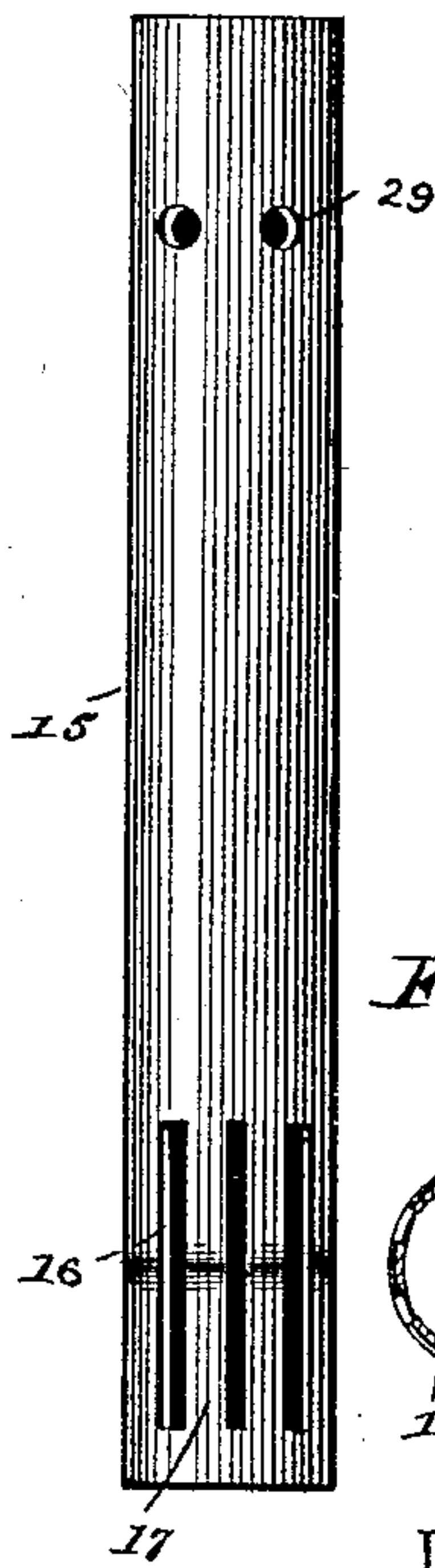


Fig. 6.

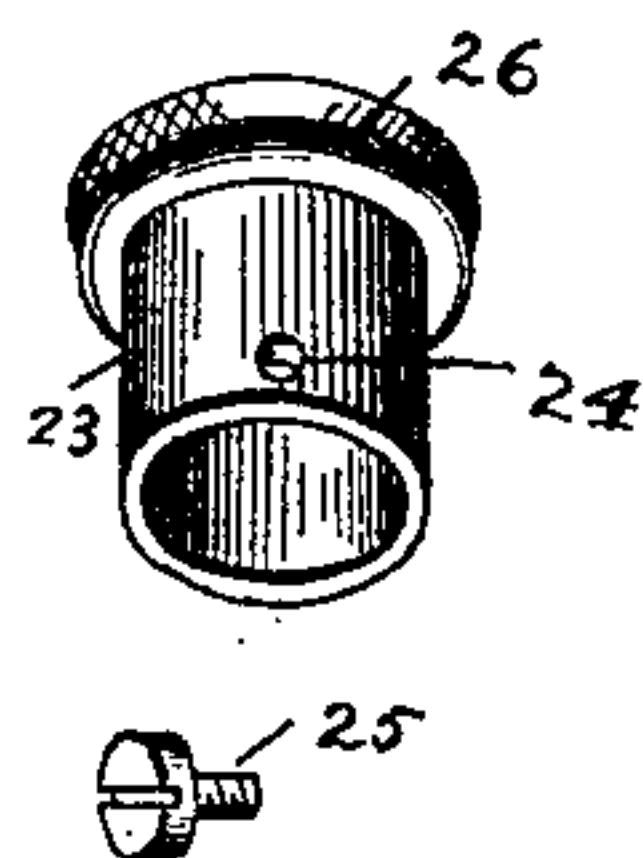


Fig. 7.

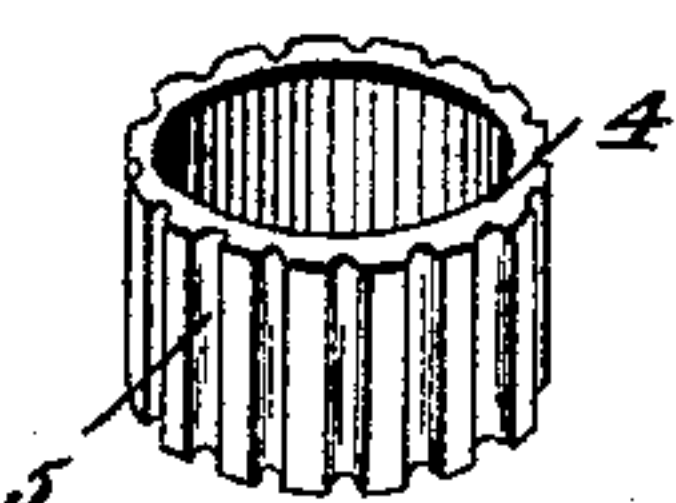
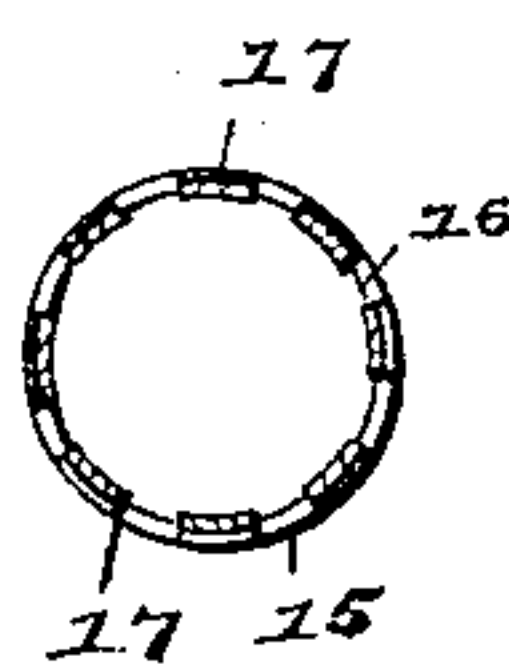


Fig. 8.



Witnesses

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WATCH-OILER.

SPECIFICATION forming part of Letters Patent No. 487,732, dated December 13, 1892.

Application filed April 5, 1892. Serial No. 427,893. (No model.)

To all whom it may concern:

Be it known that I, IRA L. GREEN, a citizen of the United States, residing at St. Regis Falls, in the county of Franklin and State of New York, have invented a new and useful Watch-Oiler, of which the following is a specification.

My invention relates to improvements in oilers to be used in lubricating the wearing parts in the movements of watches and other delicate mechanisms.

The objects in view are to provide an oiler that may be readily filled, which will preserve the oil from its accidental escape or from contact with dust, and which is so constructed as to especially adapt it to deposit small particles of oil into the oil-cups of the jewels and other places of friction.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of an oiler embodying my invention. Fig. 2 is an exaggerated longitudinal sectional view. Fig. 3 is an enlarged detail in perspective of the oil-distributing point. Fig. 4 is a detail of the glass reservoir. Fig. 5 is a similar view of the tube for receiving the reservoir. Fig. 6 is a separated view of the three elements composing the reservoir-operating device. Fig. 7 is a detail in perspective of the corrugated air-admitting washer. Fig. 8 is a transverse section through the tube shown in Fig. 5, said section being taken through the spring-tongues.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing my invention I employ a preferably-cylindrical outer metal tube or casing 1, the upper end of which is inwardly turned to form an annular shallow flange 2, which at one side I provide with a notch or recess 3. Located within this tube is a washer 4, and the same is fluted or corrugated, forming a series of air spaces or passages 5.

In the lower end of the tube or casing 1 is fitted a removable cap 6, and the same comprises, in addition to a central teat 7, a surrounding polygonal flange 8 and an annular flange or collar 9, the latter fitting snugly, though removably, into the lower end of the

tube. The flange 9 may be threaded exteriorly, if desired, and in this manner secured in position in the tube, though such is not necessary, and I prefer that the flange be plain, in order that the parts may be readily separated for cleaning, &c. When the device is at rest or lying upon a bench, the polygonal flange prevents the same from rolling from the bench, and, extending slightly beyond the exterior surface of the cylinder casing or tube 1, forms a support and maintains the discharge-point, hereinafter described, out of contact with the bench and the minute particles of foreign matter thereon.

To the teat of the lower cap above described and extending through the same is the discharge-point 10, and this point is preferably formed of gold and hammered out to give the same a fine temper. The lower end of the point is slit, forming opposite terminals 11, and the intermediate discharge 12 and the terminals are flattened, as before mentioned, to improve their temper and give the requisite thickness. The upper end of the discharge-point is within the cap and forms a seat 13.

14 designates a finely-coiled spring, fitting somewhat snugly within the cylindrical tube or casing 1 and having its lower end bearing on the lower cap, just above described. A thin metal tube 15 fits somewhat snugly within the spring, and near its lower end is provided at intervals with narrow slits 16, forming intermediate spring detents or portions 17, which are very slightly converged. Into this metal tube, which I will term a "reservoir-tube," there is inserted a glass reservoir 18. This glass reservoir may be slid into and out of the reservoir-tube and will be held in any of its positions by means of frictional contact with the aforesaid spring detents or portions 17. The lower end of the reservoir is drawn out to form a point 19, which is directly above or in line with and a short distance from the seat at the upper end of the discharge-point.

In the upper end of the tube or casing 1 a plunger is fitted, and the same consists of a tubular body portion 20, provided at its lower end with an enlarged boss or head 21 and above the same with a slot 22. A cap 23 fits over the upper end of the tubular body portion, and has a perforation 24, threaded and regis-

tering with the aforesaid slot. A screw 25 passes through the perforation of the cap and slot of the plunger and serves to connect the two against longitudinal separation. The head of the screw projects from the cap and forms a lug, as it were, the purpose of which will be hereinafter explained. The upper end of the cap is provided with a milled head 26, and between the lower end of the cap and the boss at the lower end of the plunger, a light coiled spring 28 encircles the body portion of the plunger. The lower end of the plunger takes within the upper end of the reservoir-tube, and the head of the screw of the plunger projecting from the latter, in addition to serving its function as a screw, also serves to engage with the flange 2 of the casing 1, thus interlocking with the flange. It will be seen that by a slight rotation of the plunger—namely, until the head of the screw arrives opposite the notch or recess in the upper end of the casing 1 or its flange 2—the said plunger may be removed from its interlocking position.

In operation in order to fill the reservoir with oil the plunger is disconnected and withdrawn from the tube 1 and with it is removed the reservoir and its tube. Now by pressing the plunger the reservoir is extended or longitudinally slid from its tube and its lower end is immersed into the bottle of oil, which oil rises in the reservoir, filling the same. It now requires but the work of an instant to return the parts to their former position, and in order to place the oiler in condition for operation the plunger is now pressed by the forefinger of the operator until the lower end of the glass reservoir is in contact with the seat at the upper end of the discharge-point. Such connection being made, the oil will run from the reservoir to the discharge-point, the connection being maintained until the point is filled or enough has flowed from the reservoir into the point to meet the requirements of the occasion. The plunger is now released. The connection between the reservoir and point being broken or destroyed, the flow of oil is arrested and the discharge-point is ready to be applied to the jewels or other wearing portions of watches and various fine machinery.

From the foregoing description, in connection with the accompanying drawings, it will be seen that I have provided an oiler which is not complicated in construction and is practically dust-proof, thus preserving the oil against contact with the same and preventing in this manner the introduction of foreign bodies into the movements of watches, that the oiler may be readily separated and cleaned and its supply may be regulated by the operator in accordance with the demand. By reason of the fluted or corrugated washer 4 air is admitted between it and the tubular casing and through minute perforations 29, with which the reservoir-tube is provided immediately above the upper end of the glass reservoir.

Having described my invention, what I claim is—

1. In a watch-oiler, the combination, with a reservoir, of a discharge-point located at the lower end of the reservoir, a casing for the reservoir which is adapted at its lower end to communicate with the discharge-point, and means for supporting the reservoir out of communicating contact with the discharge-point, substantially as specified.

2. In a watch-oiler, the combination, with a casing terminating at its lower end in a bifurcated discharge-point, of a reservoir having its lower end open and adapted to contact and communicate with the upper end of the discharge-point, and means for normally supporting said reservoir out of communicating contact with said point, substantially as specified.

3. In a watch-oiler, the combination, with an outer tube terminating at its lower end in a discharge-point, the same having its upper end extended within the tube to form a seat, of a reservoir mounted in said tube and open at its lower end and means for reciprocating the same into and out of contact with the seat, substantially as specified.

4. In a watch-oiler, the combination, with an outer tube, a lower cap comprising an annular flange removably fitted in the lower end of the tube and a central teat and surrounding polygonal flange, and a discharge-point extending through the teat and terminating above the same in a seat, of a glass reservoir mounted in the outer tube and means for reciprocating the same into and out of contact with the upper end of the discharge-point, substantially as specified.

5. In a watch-oiler, the combination, with the outer tube terminating at its lower end in a discharge-point and continued into the tube to form a seat, of a reservoir-receiving tube mounted in the outer tube, a tubular reservoir mounted in said receiving-tube, a plunger mounted in the upper end of the receiving-tube, means for retaining the plunger removably in the outer tube, and a spring encircling the inner tube and supporting the plunger, substantially as specified.

6. In a watch-oiler, the combination, with the outer tube having its upper end bent to form an annular flange and notched and terminating at its lower end in a discharge-point, a coiled spring located within the outer tube, and a fluted washer located between the flange of the outer tube and the upper end of the coiled spring, of a reservoir-receiving tube having perforations near its upper end, a glass reservoir mounted in said tube and having its lower end terminating in a point in line with the discharge-point and adapted to contact therewith, the tubular plunger terminating at its lower end in an enlarged boss fitting the reservoir-receiving tube and provided above the boss with a slot, a cap fitting the upper tubular end of the plunger and provided with a threaded perforation, a screw passed through

the perforation and into the plunger and adapted to pass through the notch and engage with the flange of the outer tube, and the coiled spring encircling the plunger between its boss and the cap, substantially as specified.

7. In a watch-oiler, the combination, with the outer tube terminating at its lower end in a discharge-point, of a corrugated washer located in the upper end of the tube, means for locking the same in the tube, a reservoir-receiving tube fitting the corrugated washer and below the same provided with perforations, a coiled spring encircling the receiving-

tube and bearing against the under side of the washer, a glass reservoir located in the receiving-tube and terminating at its lower end in a point in line with the discharge-point of the outer tube, and a plunger mounted in the upper end of the receiving-tube, substantially as specified.

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

IRA L. GREEN.

Witnesses:

H. L. WOOD,

FRANK S. YOUNG.