

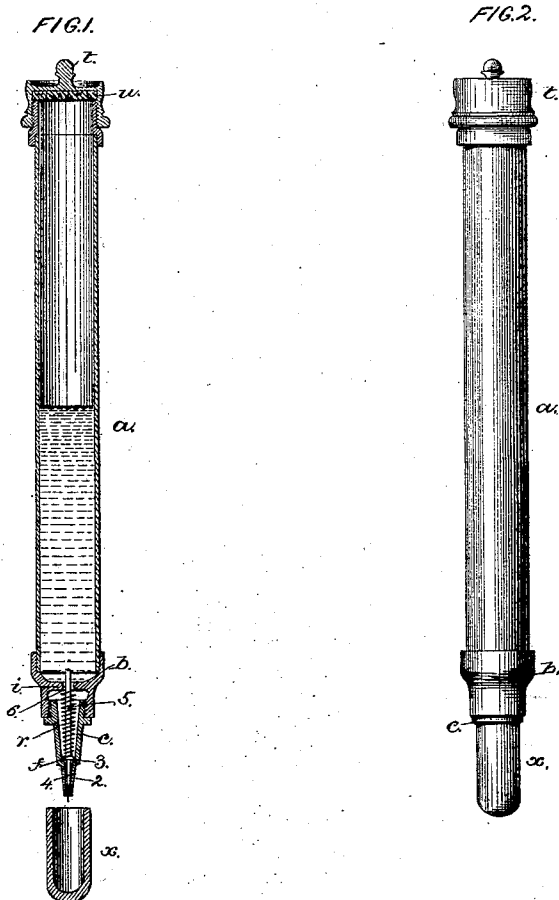
(Model.)

C. W. ELLIOTT.

OIL DROPPER.

No. 247,488.

Patented Sept. 27, 1881.



Witnesses.

John F. C. Weindler.
L. F. Connor

Inventor.

Charles W. Elliott.

by Crosby & Company
Attys

UNITED STATES PATENT OFFICE.

CHARLES W. ELLIOTT, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO AMELIA M. MORRILL, OF SAME PLACE.

OIL-DROPPER.

SPECIFICATION forming part of Letters Patent No. 247,488, dated September 27, 1881.

Application filed May 28, 1881. (Model.)

To all whom it may concern :

Be it known that I, CHARLES W. ELLIOTT, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Oil-Droppers, of which the following description, in connection with the accompanying drawings, is a specification.

My invention relates to an oil-dropper for lubricating watches, clocks, &c., and has for its object to enable the oil to be readily applied in the requisite quantity, and to keep the oil clean, and to prevent dirt and other impurities from collecting therein.

In lubricating the pivots of watches and clocks a very small amount of oil is needed, and this has commonly been applied by means of a pin dipped in a vessel containing the oil, the said pin collecting a minute drop, which is transferred from its point to the jewel-hole or pivot to be lubricated. The oil in the vessel has to be exposed to the atmosphere, and dust and impurities thus gradually collect therein, greatly injuring its usefulness.

In my invention I provide a tube, preferably of glass, for containing the oil, with a minute nozzle or tapering passage at one end, the said nozzle containing a valve having a stem projecting slightly outward from the end of the said nozzle, the said valve being pressed to its seat in the nozzle by a spring. When the projecting part of the stem of the said valve is pressed against the pivot-hole it operates the valve to open the passage in the nozzle and permit a minute drop of oil to pass out, thus readily applying the oil at the desired point and in the proper quantity. The opposite end of the tube is shown as provided with a removable cover, to enable it to be filled with oil. All dust is thus excluded from the body of the oil, which does not deteriorate in quality while being wholly used up.

Figure 1 is a longitudinal section of my improved oil-dropper, and Fig. 2 a side elevation thereof.

The tube *a*, preferably made of glass, is provided at one end with a metal tip, *b*, in which is screwed a nozzle-piece, *c*, having an exceedingly fine passage, 2, extending therethrough.

A valve, *f*, adapted to rest on a seat 3 in the nozzle *c*, is provided with a needle-like stem, 4, passing through the passage 2 and

projecting beyond the end of the said passage, while from the upper part of the valve a guide-rod, 5, extends through the opening 6 in an internal collar, *i*, formed in the metal tip *b*. A spring, *r*, surrounds the said guide-rod 5 of the valve, bearing at one end on the said collar *i*, and at its other end on the valve *f*, which is thereby pressed down upon the seat 4, to thus retain the nozzle closed and prevent the escape of the oil.

When desired to lubricate an arbor or pivot, the projecting end of the valve-stem 4 is placed at the point where the oil is to be applied, and the tube *a* gently pressed toward it, thus causing the spring *r* to yield and the valve *f* to be raised from the seat 4, thus permitting the oil to pass through the passage 2 of the nozzle. A minute drop of oil, its amount being proportioned to the size of the passage 2, will pass out by capillary action, and as a continuous flow of oil is not desired, there will be no necessity for providing means to permit air to enter the tube *a* to replace the oil, the force of capillary attraction being sufficient to withdraw all the oil needed. A removable cover, *t*, is placed at the other end of the tube *a*, to enable it to be readily filled with oil when desired, a washer, *u*, insuring a tight joint when the said cover is screwed on.

A cap, *x*, may be placed over the nozzle *c* when the dropper is not in use.

I claim—

In an oil-dropper for lubricating the pivots of clock-work, the tubular reservoir *a*, and its removable cap *t* and metal tip *b*, provided with the internal collar, *i*, and the nozzle *c*, with its internal seat, combined with the valve *f*, provided with a guide-rod and stem passing out through the said nozzle, and the spring *r*, surrounding the said guide-rod and interposed between the said valve and the internal collar of the tip *b*, the said parts being constructed and arranged substantially as described, and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHAS. W. ELLIOTT.

Witnesses:

JOS. P. LIVERMORE,
W. H. SIGSTON.