Mar. 6, 1923. 1,447,790.

T. KOVÀCS.

FILLING DEVICE WITH RUBBER CAP FOR FOUNTAIN PENS.

FILED APR. 30, 1921.

Fig. 1

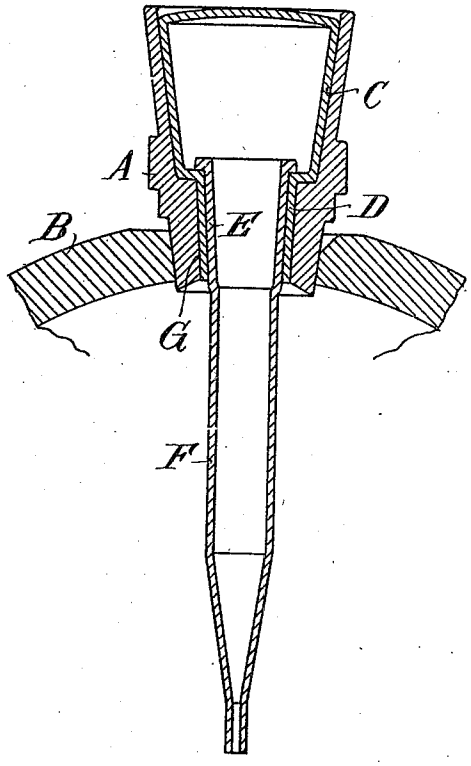
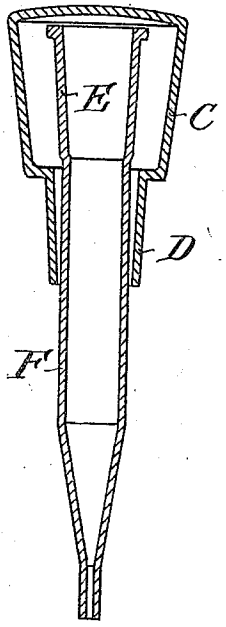


Fig. 2



Witnesses:
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Patented Mar. 6, 1923. 1,447,790

UNITED STATES PATENT OFFICE.

THEODOR KOVÀCS, OF BERLIN, GERMANY.

FILLING DEVICE WITH RUBBER CAP FOR FOUNTAIN PENS.

Application filed April 30, 1921. Serial No. 465,764.

To all whom it may concern:

Be it known that I, THEODOR KOVÀCS, a citizen of the Hungarian Republic, residing at Berlin, Germany, have invented certain new and useful Improvements in Filling Devices with Rubber Caps for Fountain Pens, of which the following is a specification.

With the generally known rubber fillers for fountain pens it can easily happen that the ink flows out of the filler owing to an accidental compression of the rubber cap. The fillers are, after use, moist and dirty and they must be stored very carefully. The ink dries up in them very rapidly.

This invention relates to a filling device for fountain pens in which the accidental compression of the filler is prevented by the arrangement that the cap is enclosed in an envelope. According to this invention the envelope serves as stopper for the ink bottle. The filling tube proper has a conical upper end. The envelope as well as the rubber cap are narrowed at the lower ends so that the filling tube when it is in the working position wedges with its upper conical part the narrowing of the rubber cap against the narrowing of the envelope.

In order that the invention may be clearly understood I shall proceed to describe the same with reference to the form of construction shown by way of example in the accompanying drawing, wherein:—

Fig. 1 is a section.

Fig. 2 shows the filling tube and the cap removed from the receptacle.

The rubber cap is mounted in the envelope A which leaves the top part of the cap freely accessible. When the filler is to be used the envelope A is gripped with the hand. As the envelope is made of solid material it does not act in any way upon the filler when it is being gripped by the hand. When the rubber cap is composed of an upper large part C and of a narrow lower part D (as shown by Fig. 2) and if the envelope A is made of the same shape, the filling tube F can be used for locking together the two parts of the filling device. When the filling tube F is pulled from the position shown by Fig. 2 into the position shown by Fig. 1, its upper conical part E wedges the narrow part D of the rubber cap in the narrow part G of the envelope A. When this narrow part G of the envelope is formed like a stopper, the receptacle A can be used as a stopper for the ink bottle B.

As can be seen from Fig. 1 the joints between E and G and between G, D and E are absolutely airtight, so that the ink in the bottle E is prevented from drying up.

I claim:—

1. A filling device for fountain pens, comprising in combination, a filling tube, a compressible bulb communicating with the upper end thereof, and a substantially rigid envelope entirely surrounding the bulb and open at the top.

2. A filling device for fountain pens comprising in combination, a filling tube, a rubber bulb communicating with the upper end thereof, and a substantially rigid envelope entirely enclosing the bulb except at the upper surface thereof, whereby said bulb is prevented from accidental compression by lateral pressure.

3. A filling device for fountain pens comprising in combination, a filling tube, a compressible bulb attached to the upper end thereof, and a substantially rigid envelop entirely enclosing the bulb except the top surface thereof, the lower part of said envelop having a conical form to serve as a bottle stopper.

4. A combined filling device and bottle stopper, comprising in combination, a substantially rigid envelop open at its upper and lower ends and having the exterior and interior surfaces of its lower end defined by conic frustums, a rubber bulb fitting in said envelop, and a filling tube having a conical upper end fitting in the lower end of said bulb and wedging the same against said envelop.

5. A combined filling device and bottle stopper, comprising in combination, a substantially rigid envelop open at its upper and lower ends and having the exterior and interior surfaces of its lower ends defined by

conic frustums, the upper interior of said envelop being enlarged and forming an annular shoulder at its junction with the lower interior, a rubber bulb fitting in said envelop with its top substantially flush with the top of said envelop, and a filling tube having a conical upper end terminating in an annular flange fitting in the lower end of said bulb and wedging the same against said envelop.

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

THEODOR KOVÀCS.

Witnesses:
ARTHUR SCHOLY,
ROBERT SCHAPER.