

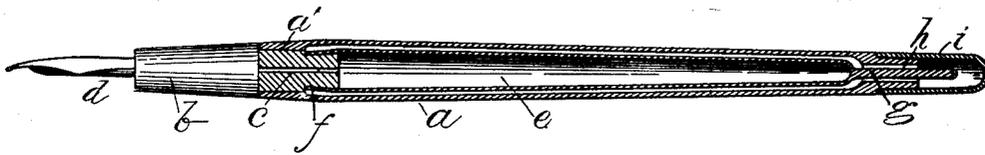
No. 732,117.

PATENTED JUNE 30, 1903.

A. E. SCHAAF.
FOUNTAIN PEN.

APPLICATION FILED MAR. 4, 1903.

NO MODEL.



Witnesses:

David C. Walter
S. A. Dorland.

Inventor.
A. E. SchAAF
By Howard Hall His Atty.

UNITED STATES PATENT OFFICE.

ALBERT E. SCHAAF, OF TOLEDO, OHIO.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 732,117, dated June 30, 1903.

Application filed March 4, 1903. Serial No. 146,035. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. SCHAAF, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful improvements in Fountain-Pens; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which forms a part of this specification.

My invention relates to and its object is to provide a fountain-pen in which the necessity for the use of any separate device for filling the ink-reservoir is obviated.

My invention is also designed to furnish an exceedingly cheap, simple, effective, and durable "self-filling" device for fountain-pens in which there shall be no screw-threads, which are objectionable owing to the expense of manufacture and from the fact that they very frequently leak.

My invention is also designed to furnish a construction in which the ink-reservoir may, when it is worn out or when it becomes imperfect, at the cost of a few pennies, be immediately replaced by a new one.

I attain these objects by means of the devices and arrangement of parts hereinafter described and shown and illustrated in the single figure of the accompanying drawing, which is a central longitudinal sectional elevation of my pen ready for use.

In the drawing, *a* is the barrel of a penholder, into the mouth of which fits by a slip-joint, as at *a'*, the reduced portion of the penholding head *b*. Axially through the head *b* is a restricted aperture *c*, which leads from the ink-reservoir to the pen *d*.

e is a flexible elastic tube open at one end and closed at its other end. This tube is composed, preferably, of india-rubber. The inner end of the head *b*, which projects into the cavity of the barrel *a*, is slightly conical, as shown, the larger end projecting away from the pen. The open end of the rubber tube *e* is stretched over this conical portion, as at *f*, and by its own resiliency retains itself in place. To accomplish this with greater certainty, the open end of the rubber tube

may be vulcanized to exactly the required extent. The closed end of the rubber tube *e* is extended to provide a stem *g*, which may be suitably vulcanized to any required degree of hardness. The stem *g* projects through an axial opening *h* through the end of the barrel opposite the pen.

i is a cap which fits with a close slip-joint upon the end of the barrel opposite the pen and which covers and protects the projecting extremity of the stem *g*.

The penholder is provided with the usual cap, (not shown in the drawing,) which may interchangeably be slipped over either the end of the pen-holding head or when the pen is in use over the opposite end of the penholder.

The operation of my device is as follows: The cap *i* is removed, and the stem *g* is turned axially, thus twisting the rubber tube and expelling the air therefrom. The end of the pen-holding head is now immersed in the ink, and the stem *i* is released. The resiliency of the rubber tube causes it to resume its normal shape, and by external atmospheric pressure the ink will be caused to flow into and to fill the cavity of the rubber tube. The convenience of the stem *e* for filling the ink-reservoir and for starting the flow of ink from the pen will be obvious.

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

1. In a fountain-pen, a barrel; a rubber tube therein open at one end and closed at the other, the cavity of the tube being in communication with the pen, and a projecting stem upon the closed end of the tube formed integral therewith.

2. In a fountain-pen, a barrel; a pen-holding head adapted to be connected with the barrel; a flexible elastic tube in the barrel, said tube having one end open and the other end closed and having its open end engaged with the pen-holding head; a stem formed integral with the closed end of the tube and projecting beyond the end of the barrel opposite the pen, and a cap which engages the end of said stem.

3. A fountain-pen comprising a barrel; a head adapted and arranged to receive at one

end a pen and at its other end to engage the
barrel, and having therethrough an aperture
in communication with the ink-reservoir of
the pen; a flexible elastic tube which forms
5 an ink-reservoir, said tube being open at one
end and closed at the other and having its
open end engaged with the inner end of the
head by means of its own resiliency; a stem
upon the opposite end of the tube by means
10 of which the tube may be twisted, said stem

projecting beyond the end of the barrel, and
a cap adapted to engage the end of the barrel
and to cover and to protect the stem.

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

ALBERT E. SCHAAF.

Witnesses:

CHAS. ROTBERT,
S. A. DORLAND.