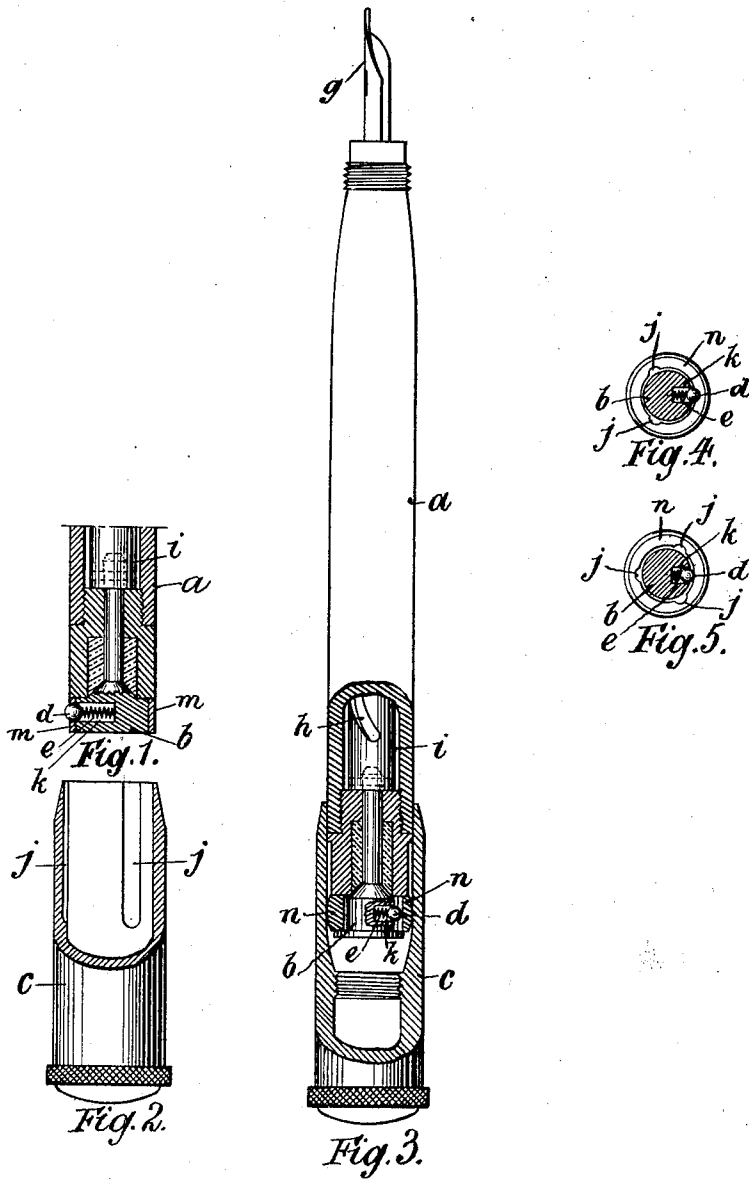


April 15, 1924.

1,490,681

H. A. STEVENS
RESERVOIR PEN AND THE LIKE

Filed June 6, 1922



INVENTOR:
Harold A. Stevens
By Wm Wallace White
ATTY.

UNITED STATES PATENT OFFICE.

HAROLD ASHLEY STEVENS, OF LONDON, ENGLAND.

RESERVOIR PEN AND THE LIKE.

Application filed June 6, 1922. Serial No. 566,241.

To all whom it may concern:

Be it known that I, HAROLD ASHLEY STEVENS, subject of the King of Great Britain, residing at No. 388 Clapham Road, London, S. W. 9, England, have invented new and useful Improvements in Reservoir Pens and the like, of which the following is a specification.

This invention relates to propelling reservoir pens and the like, and its object is to provide clutch means for preventing breakage of a fountain pen of the propelling type, when the rotary effort applied thereto is continued beyond what is necessary to bring the parts into their respective end positions.

For the above purpose, a reservoir pen of the propelling type is, according to the invention, provided at the end piece with a rounded spring-pressed laterally acting plunger, which engages with longitudinal grooves of a sleeve which may be the cap of the pen itself, to provide an eventually yielding clutch to avoid the effects of over-rotation.

A suitable spring-pressed plunger is a metal or other rigid ball partially protruded by a spring from a recess or socket of a configuration such as to prevent complete ejection of the ball.

Examples of the application of the invention are shown on the accompanying drawing, in which:—

Fig. 1 is a sectional elevation of the rear end of a propelling fountain pen, and

Fig. 2 is an elevation partly in section of its cap.

Fig. 3 is an elevation partly in section of a propelling fountain pen with its cap in position on the rear end thereof, showing a modification,

Fig. 4 is a transverse view partly in section of the pen of Fig. 3, and

Fig. 5 is a similar view with the parts in a different relative position.

a is the barrel of a fountain pen and b is the end piece thereof. c is the removable cap. d is a ball pressed outwards by a spring e located in the end piece b to protrude laterally into contact with the inner surface of the cap c when the latter is fitted over the end piece.

The propelling fountain pen, mentioned above, is the well known one wherein the nib

g is retracted into and protruded from the barrel by being mounted in a cup having a stem displaced longitudinally by a transverse pin on the stem engaged in a helical slotway or slotways h in a rotary sleeve i rotated by the end piece b of the pen.

With such a propelling pen, as shown in Fig. 1, the ball d protruded by the spring e from the rotary end piece b , by coacting with one or more longitudinal internal grooves j in the cap c fitted as usual on the end piece b , acts as a yielding feather or clutch permitting the cap c to rotate idly over the end piece b when rotated beyond the extent necessary for protruding or retracting the nib g . The ball d in such event snaps from groove to groove in the cap.

The ball d and spring e are mounted in a transverse bore k . The bore k extends only part way through the end piece b and the ball d and spring e are retained (Fig. 1) by a metal sleeve ring m , fitted over the end piece b and having a hole of less diameter than the bore k , through which hole the ball d can merely partially protrude.

Figs. 3, 4, and 5 show how the longitudinal grooves j for the clutch engagement of the ball d by the cap b , can be provided on the inner periphery of a rotary sleeve ring n , permanently surrounding the end piece b and gripped frictionally by the cap c removably placed thereon in the usual manner. Fig. 4 shows the ball d engaged in a driving groove j whereas Fig. 5 shows such ball d midway between two such grooves j , in snapping from one groove to another after the nib g has been fully protruded or retracted.

The sleeve ring n , being permanently on the end piece b serves also to retain the ball d and spring e in their bore k .

The invention is obviously applicable to propelling pocket pencils or pencil holders, provided with removable caps.

I claim:

1. In a propelling reservoir pen and the like having an end piece, an internally longitudinally grooved separable cap, a rounded plunger in said end piece and a spring in said end piece pressing said plunger laterally outwards into a position to engage a groove of said cap.

2. In a propelling reservoir pen and the like having an end piece, an internally longitudinally grooved separable cap, a ball in said end piece and a spring in said end
5 piece pressing said ball laterally outwards into a position to engage a groove of said cap.

3. In a propelling reservoir pen and the like having an end piece, an internally
10 longitudinally grooved sleeve surrounding said end piece, a rounded plunger in said end piece and a spring in said end piece pressing said plunger laterally outwards in-

to a position to engage a groove of said sleeve.

4. In a propelling reservoir pen and the like having an end piece, an internally longitudinally grooved sleeve surrounding
said end piece, a ball in said end piece and
a spring in said end piece pressing said ball
laterally outwards into a position to en-
20 gage a groove of said sleeve.

In testimony whereof I have signed my name to this specification.

HAROLD ASHLEY STEVENS.