

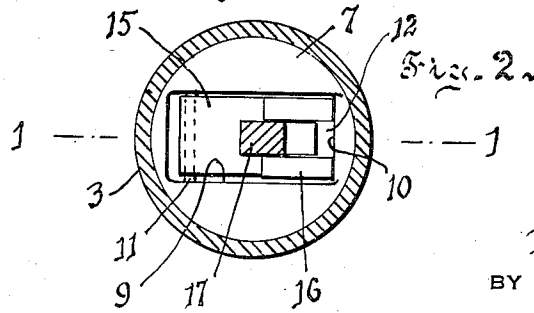
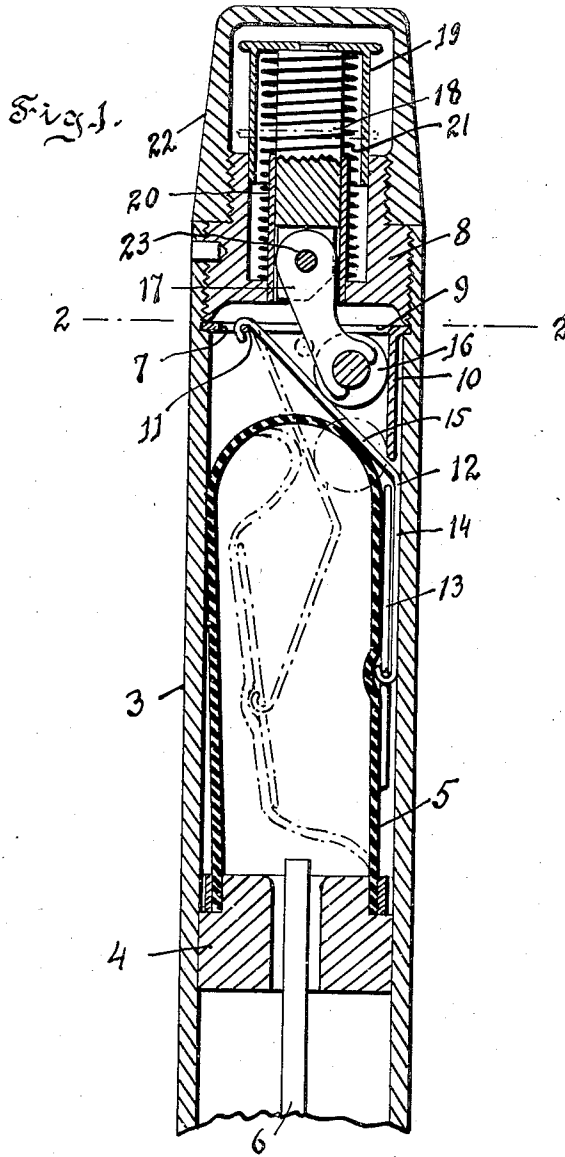
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FOUNTAIN PEN

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FOUNTAIN PEN

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2 Claims. (Cl. 120—46)

My invention relates to a bag collapsing mechanism for fountain pens, and has reference more particularly to a mechanism adaptable for what is known in the trade as the nipple type of fountain pen.

An object of the invention is to provide an efficient and simple mechanism for the purpose mentioned.

In the appended drawing forming part of this application, Figure 1 is a fragmentary vertical section on line 1—1, Figure 2, of a nipple type of pen embodying my invention, and

Figure 2 is a cross-section on line 2—2, Figure 1. Referring to the drawing, a barrel 3 is provided with a suitable apertured plug 4 to which the nipple 5 is attached in any suitable way. A tube 6 extends to the plug from the feed end of the pen, not shown, and through which ink is delivered to the barrel when the nipple 5 is manipulated.

The barrel 3 is provided with a shoulder above the nipple to accommodate a washer 7 which is retained against the shoulder of the barrel by a plug 8. The washer 7 has an aperture 9 formed by depressing a portion of said member 10 to lie against the side of the barrel, the purpose of which will appear hereinafter.

The washer has also a cross bar or pivot 11 on which is hooked a lever 12, to which in turn is hinged a presser bar 13.

The lever 12 in normal position under the normal expansion of the nipple 5 has a leg 14 thereof against the side of the barrel, and a leg 15 diagonally inclined to the washer to form with the stationary portion 10 of the washer, a V. One branch of said V may be moved, that is, the leg 15 of the lever, through the medium of a roller 16 engaging the leg 15 on the portion 10 of the washer 7.

The roller 16 is carried by an arm 17, pivotally mounted at 23 in the recess of a plunger 18. The plunger is secured to a thimble 19 which is free to slide in a recess provided in the plug 8. The plug 8 carries also a sleeve 20 in which the plunger is free to slide. A spring 21 on the plunger, interposed between the thimble 19 and the plug

8, normally tends to move the plunger and therefore the arm 17 with the roller 16 away from the angle formed by the leg 15 of the arm 12 and the portion 10 of the washer 7. Normally, the thimble is covered by a cap 22 secured to a threaded reduction of the plug.

By unscrewing the cap 22, the thimble 19 is exposed and by applying pressure thereto, the pivoted or articulated arm 17 is caused to travel with the plunger. Since the roller 16 bears on one side against the stationary portion 10 of the washer 7, it forces the leg 15 of the arm 12, also engaged by the roller, to swing on the pivot 11, thereby causing the presser bar 13 to move in turn on its hinge with the leg 14 of the said arm 12, thus collapsing the bag as indicated in dash and dot lines in Figure 1. The position of the arm and plunger is indicated by the dash and dot line of the roller, pivot and thimble head when the bag is collapsed.

When pressure is relieved on the thimble, the parts are restored to their normal position by the united restituting forces of the nipple and the spring.

From the above description, it will be seen that the nipple collapsing mechanism consists of an articulated arm operated by a plunger, the arm engaging a V having a stationary and a movable branch.

I claim

1. In a fountain pen, a nipple, means for collapsing said nipple comprising a fixed member, a lever for collapsing the nipple pivotally mounted on said member and forming therewith a V, a plunger, an arm pivotally connected in the plunger, and a roller on said arm engaging the V.

2. In a fountain pen, a nipple, means for collapsing said nipple, comprising a stationary member, a lever for collapsing the nipple pivotally mounted in the stationary member, said lever having a leg extending diagonally from said stationary member and forming therewith a V, a plunger, an arm pivotally mounted in said plunger, and a roller on said arm engaging the leg and the stationary member.

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