Dec. 25, 1951 J. A. VIERLING 2,579,887

SELECTIVE WRITING INSTRUMENT

Filed March 19, 1947

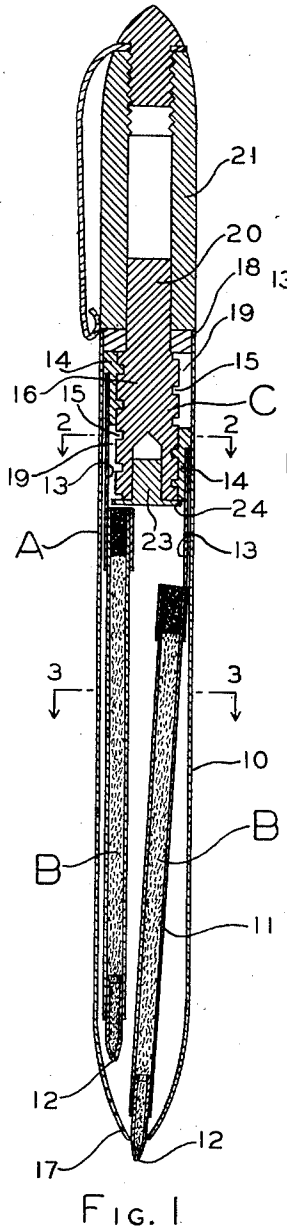


FIG. 1

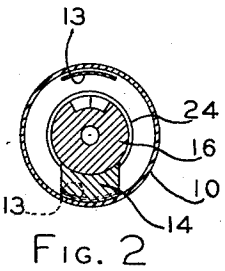


FIG. 2

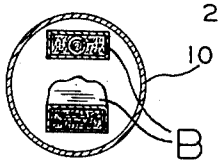


FIG. 3

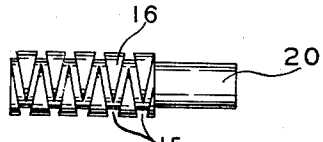


FIG. 4

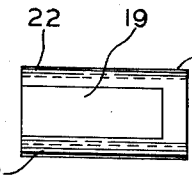


FIG. 5

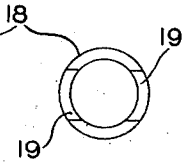


FIG. 6

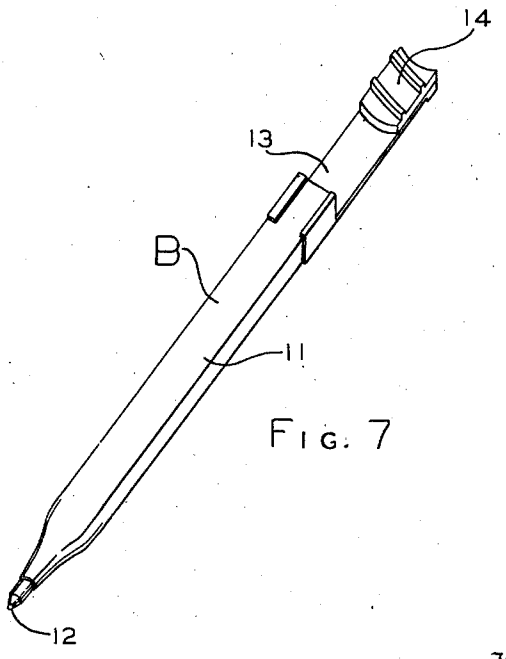


FIG. 7

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SELECTIVE WRITING INSTRUMENT

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Application March 19, 1947, Serial No. 735,594

1 Claim. (Cl. 120—42.13)

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My invention relates to a writing instrument wherein ink is held within a reservoir and is carried to the surface of the paper, on which it is desired to write, by means of a steel ball. The ink used in my writing instrument is contained within operable tubular magazines, and the ball attracts the ink when in writing position so as to carry the ink onto the surface when writing.

A primary feature of my writing instrument resides in providing a series of movable ink reservoirs, each having individual writing ball points mounted thereon, which reservoirs are adapted to be moved into and out of writing position, as may be desired. Thus, if a person wishes to write with one color ink, the magazine carrying that color ink may be projected into writing position readily for use. If a different color ink is desired, the reservoirs are adjusted in the barrel so that the color of ink which the person wishes to use may be put into operative writing position with a writing ball end projecting from the forward end of the writing instrument.

It is also a feature to provide a writing instrument wherein the several ink reservoirs may be retracted into the casing and held in this position with the writing ends on the reservoirs covered by the casing of the instrument to conceal the same when not desired for use. My writing instrument does not require a cap for covering the writing end thereof like the ordinary fountain pen.

Two or more ink reservoir units may be employed in my writing instrument which provides a means of virtually instantly selecting the colored ink desired and in a simple manner changing to a different color.

The ink reservoirs may be rather small where a number of colors are desired, so that the barrel of the pen or writing instrument will not be too large for convenient use. The barrel of the pen may be round, square, hexagonal, triangular or any desired shape to accommodate the ink reservoirs which are slidably positioned within the casing.

The ink reservoirs are adapted to be operated in one form of my writing instrument by a screw propelling mechanism within the barrel which may be in the form of a formed or cut screw or a tubing with the thread rolled therein, or in the form where slots are cut in the tube which projects or retracts the writing points. The mechanism includes a right and left-hand thread which operates to project one point when the other writing point is withdrawn. Further, all of the writing points may be moved into a neutral position concealed within the casing of the writing instrument.

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These features, together with other details, objects and variations, will be fully and clearly hereinafter set forth.

In the drawings forming part of the specification:

Figure 1 is a longitudinal cross section of my writing instrument showing one form thereof.

Figure 2 is an enlarged cross section on the line 2—2 of Figure 1 the slotted sleeve member, however, being omitted.

Figure 3 is an enlarged cross section on the line 3—3 of Figure 1.

Figure 4 is a detail of the thread used in the instrument in Figure 1.

Figure 5 is a side view of the slotted guide sleeve which surrounds the thread of the unit shown in Figure 4 and which is adapted to guide the threaded crossheads which are attached to each unit by a connecting spring arm.

Figure 6 is an end view of the sleeve shown in Figure 5.

Figure 7 is a perspective detail of one of the ink units showing the spring arm connecting the threaded crosshead to the ink unit.

The writing instrument A illustrated in Figure 1 shows a pair of ink units B selectively positioned within the casing 10.

The ink units B are hollow tubing and provide reservoirs for a supply of ink such as is used for a ball writing point. The body 11 of the unit B supports the ink therein. On the forward end of the unit B, I provide a writing ball 12 which is adapted to carry the ink from the chamber of the body 11. Each unit B is supported by the spring arm 13 projecting from the rear thereof to the threaded crosshead 14 which engages the threads 15 formed in the core member 16. The threads 15 are cut in a right and left-hand direction, and the threads on the crossheads 14 are formed accordingly, so that when the core member 16 is rotated, the ink units B may be selectively moved into writing position with the writing ball 12 projecting out of the writing tip 17 of the instrument A.

The crossheads 14 are held against rotation by the slotted sleeve 18 which is formed with longitudinal slots 19.

The threaded core member 16 is part of the end 20 which is adapted to be rotated by the rear end 21 of the writing instrument A. The guide sleeve 18 is rotatably mounted on the end 20 and interposed between the end member 21 and the threaded core member 16. The sides 22 of the

sleeve 18 form spring arms for engaging in the rear end of the casing 10 and which act to hold the propelling mechanism C removable from the casing 10, when a backward pull is exerted against the rear end 21 of the writing instrument A. A plug 23 is fixed in the inner end of the core member 20 and is formed with an annular shoulder 24 which keeps the threaded sleeve 16 assembled on the end 20 and permits it to rotate freely between the inner end of the sleeve 18 and the annular shoulder 24.

In operation the writing instrument A provides a propelling and repelling mechanism C which frictionally operates the respective ink units B into or out of writing position in relation to the casing 10. Figure 1 illustrates the right-hand ink unit B moved into writing position with the ball 12 projecting from the writing tip 17.

It is obvious that a neutral position of the writing units B may be assumed by rotating the end 21 of the writing instrument A to withdraw the writing balls 12 into the casing 10 where they are maintained out of writing position when not desired for use. Thus, the writing instrument A requires no cap. The ink units B are virtually identical, and one of the units may carry a blue or dark colored ink while the other unit may carry a supply of red ink. In the pen A, there are just two units B. Thus, this pen is equipped with selective ink units B, either of which may be put into operation by rotating the operating head 21 in either a right-hand or left-hand direction, or both of the units B may be drawn into virtually a parallel position within the casing 10 to conceal the writing balls 12.

Heretofore it was necessary to have several pens to write in different colors, or it was necessary to change the cartridge in the pen to a different color. I have overcome these objections by providing a fountain pen of the character where the ink is applied with a writing ball. I have also eliminated the cap for covering the writing end of the pen or instrument. Furthermore, the advantage of a writing instrument as heretofore set forth is apparent because it provides a means of selecting the color of ink desired to be used. This selection may be made virtually

instantly by the operator of the writing instrument. It will also be apparent that I have provided within the size of an ordinary pencil or fountain pen a selection of writing ink units, which are ever ready to the user of this instrument by selecting the unit desired and moving it into writing position.

I claim:

In a capless selective writing instrument, a partial casing portion, a sleeve having slots formed therein and a shoulder formed at the rear end of each of said slots, said sleeve secured in the upper end of said casing portion, a threaded core member rotatable within said sleeve, a rear end casing portion secured to the upper end of said core member adapted to rotate said core member within said slotted sleeve, threaded cross heads adapted to engage with said threaded core member and move in said slots of said sleeve between said core member and said casing and to contact said shoulders when said cross heads are moved rearwardly in said slots, spring arms secured to said cross head, ink containers having writing ends formed thereon and secured to said spring arms adapted to be alternately extended or withdrawn through an opening formed in the lower end of said casing by rotating said rear end casing portion.

JOHN A. VIERLING.

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