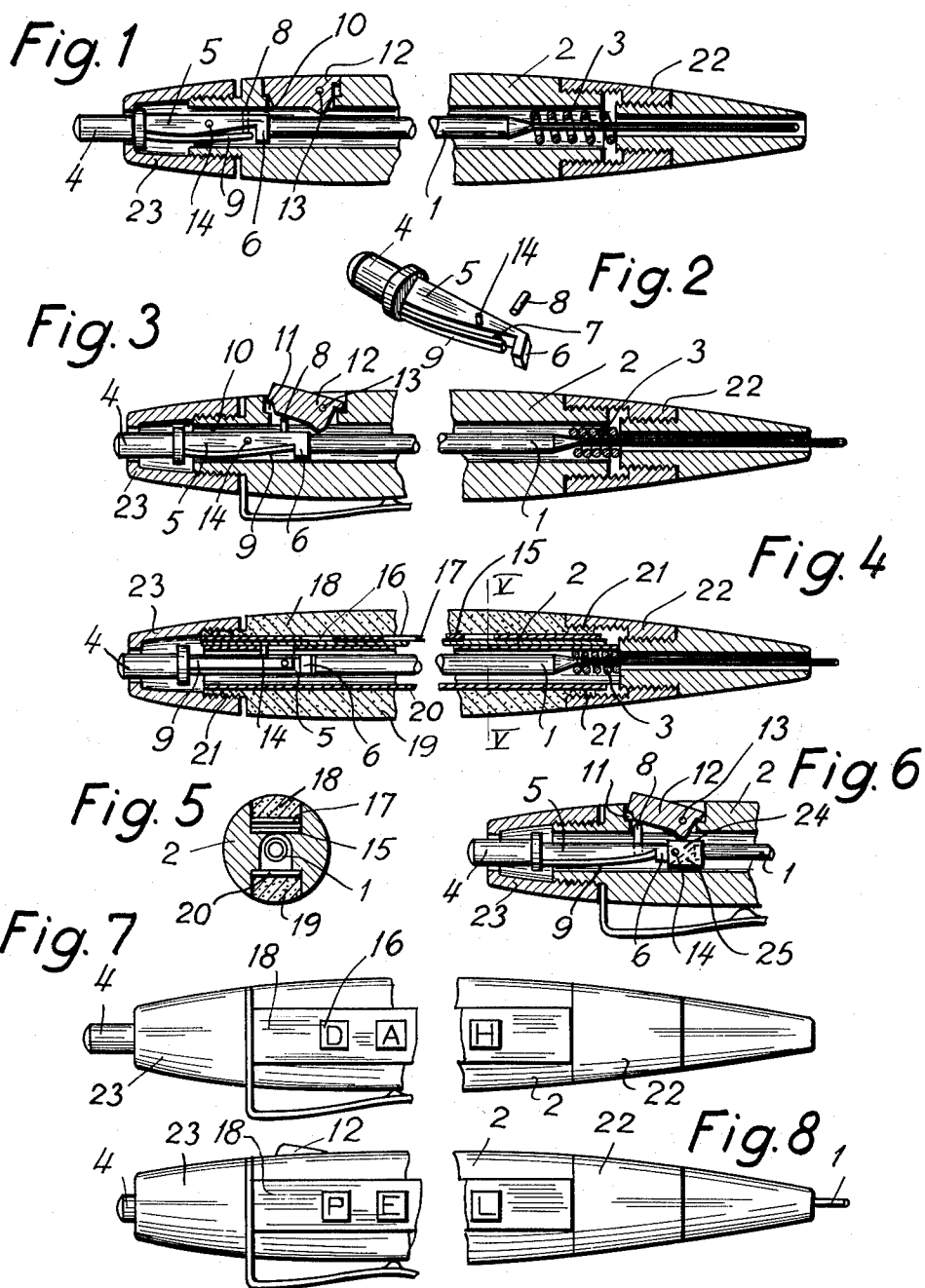


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WRITING INSTRUMENT WITH A HOLDER CONTAINING
A SHIFTABLE WRITING UNIT
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WRITING INSTRUMENT WITH A HOLDER CONTAINING A SHIFTABLE WRITING UNIT

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1 Claim. (Cl. 40—334)

This invention relates to writing instruments.

More particularly, this invention relates to a writing instrument of the type in which a writing unit is shiftable in a holder between operative and inoperative positions by a switching means which includes a push-button. The holder includes an element which is constituted in part by a transparent portion and an indicia element is provided in the holder so as to be visible through said transparent portion.

It is an object of the invention to vary the exposure of the indicia element through the transparent portion.

The indicia element may be an inscription, a picture, or some other suitable visual display means and a change in the exposed part of the indicia element is effected according to the invention in accordance with movement of the writing unit.

In accordance with the invention there is provided a writing instrument comprising a holder and a writing unit movably supported in the holder. There is further provided switching means coupled to the writing unit for moving the same between operative and inoperative positions. The switching means includes a movable push-button and an extension rigidly connected to the push-button and in engagement with the writing unit. There is further provided an indicia element in said holder, said holder including an element constituted in part by a transparent portion and associated with the indicia element to permit viewing thereof. In further accordance with the invention, there is provided means operatively associated with the switching means and said elements for moving the elements relative to one another in accordance with movement of the switching means for exposing different portions of the indicia element through the transparent portions. The last said means includes a transverse pin supported on the extension and engageable with one of the elements for moving the same with respect to the other of the elements.

In a special embodiment of the writing instrument according to the invention there may be inserted, between the transparent portions and the indicia element, a mask through which restricted parts of the plate are visible when the writing unit is in either of its positions.

In the drawing are shown several embodiments of the writing instrument according to the invention.

FIG. 1 is a diametrical section through a ballpoint pen with the writing unit in its inoperative position;

FIG. 2 shows, in perspective, a portion of the pen;

FIG. 3 is a diametrical section through the pen with the writing unit in its operative position;

FIG. 4 is a diametrical section at right angles to the section shown in FIG. 3;

FIG. 5 is a section on the line V—V of FIG. 4;

FIG. 6 is a diametrical section through a modified embodiment; and

FIGS. 7 and 8 are side views of the pen with the writing unit thereof respectively in the inoperative and operative positions.

In the writing instrument shown in FIGS. 1–5, the writing unit consists of a ballpoint pen cartridge 1 inserted in a case or holder 2 and held in position by a spring 3. Behind the cartridge is inserted an operating push button 4 having a leg 5 and a foot 6 pressing against the end of cartridge 1. In a transverse hole 7 is

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loosely inserted a shiftable transverse pin which is kept pressed, against the inner wall 10 of the case 2, by means of a leaf spring 9 extending along one side of the leg.

The writing unit is shifted to its operative or writing position by depressing the button 4 which retains the cartridge 1 in the writing position so that the pin 8 is urged, by the spring 9, into a recess 11 in the case 2 in which recess there is provided a pressure member 12 that is freely pivotable on the pivot 13. To withdraw the writing unit the member 12 is depressed into the case to the position shown in FIG. 1, whereby the pin 8 is displaced from the recess 11 against the action of spring 9, whereupon, the spring 3 presses both the cartridge 1 and the button 4 back into the inoperative position as shown in FIG. 1.

The leg 5 carries a fixed transverse pin 14 which engages an indicia element constituted by a plate or strip 15 through a hole therein. The outer side of the strip 15 contains pictures or writing or both, which is visible through apertures 16 in a fixed grid-shaped mask 17 located in front of the plate 15. The mask, in turn, is covered by a transparent portion or window 18 which is provided in the outer cylindrical surface of the case.

When the button 4 is depressed, the strip 15 will be shifted, and in this way it is possible e.g. to bring two sets of indicia alternately behind apertures 16 so that two different inscriptions will appear behind the window 18, as shown in FIGS. 7 and 8.

On the diametrically opposite side of the pencil there may be provided a similar mechanism with a different inscription or picture designation, the said mechanism being moved by a pin similar to pin 14. In the present case, however, only a non-moving strip 20 with a permanent picture or lettering is shown behind a window 19.

Windows 18 and 19 are provided at either end with tongues 21 which are threadably engaged with components 22 and 23 which are in turn threadably engaged with the case 2. In this way windows 18 and 19 are retained in position even if they are not themselves threaded.

In the ballpoint pen described, the strip 15 will move with the movement of the operating button 4.

However, by placing the transverse pin 14 on a shoe 24 which is located at the end of the cartridge 1, as shown in FIG. 6, the strip 15 will move together with the cartridge regardless whether the operating button 4, moves with the cartridge. In the shoe 24 is drilled an oblique pressure-equalizing channel 25 leading to the central part of the cartridge 1.

In writing instruments whose operating button 4 or operating member corresponding thereto has merely a single fixed position and hence does not take part in all the movements of the writing unit 1, more particularly not in its movement from the writing position to the inoperative position the movable plate 15 may if desired be caused to follow the writing unit 1, the operating member 4, or, if preferred, any other member of the switching mechanism.

Furthermore, according to the invention, the mask 17 may be moved instead of the strip 15, leaving the strip wedged beneath the tongues 21 while the transverse pin 14 passes through a slot in the strip 15 into a hole in the mask 17, which will consequently be moved by the pin 14.

Finally, both the strip and the mask 17 may be moved by the components of the switching mechanism, including the writing unit 1 and the operating member 4, in such manner, however, that each follows the movement of its separate component, and thus, when shifting, move in relation to each other, preferably in an opposite direction of movement.

The use of the term mask is to be understood to in-

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clude not only a plate with apertures in it, such as a grid as shown in FIGS. 7 and 8, but also a wing or set-piece movable with respect to a background for concealing different portions thereof.

What I claim and desire to secure by Letters Patent is:

A writing instrument comprising a holder, a writing unit movably supported in said holder, switching means coupled to said writing unit for moving the same between operative and inoperative position, said switching means including a movable push-button and an extension rigidly connected to said push-button and in engagement with said writing unit, an indicia element in said holder, said holder including an element constituted in part by a transparent portion and associated with said indicia element to permit viewing thereof, and means operatively asso-

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ciated with the switching means and said elements for moving the elements relative to one another in accordance with movement of the switching means for exposing different portions of the indicia element through the transparent portions, the last said means including a transverse pin supported on said extension and engageable with one of the elements for moving the same with respect to the other of the elements.

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