Oct. 17, 1950 R. F. PERRAUD 2,526,268

PUSH BUTTON TYPE MECHANICAL PENCIL

Filed July 3, 1947

Fig.1

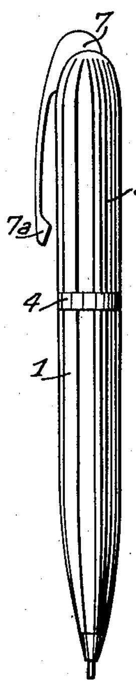


Fig.2

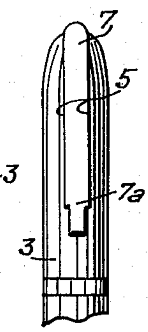


Fig. 3

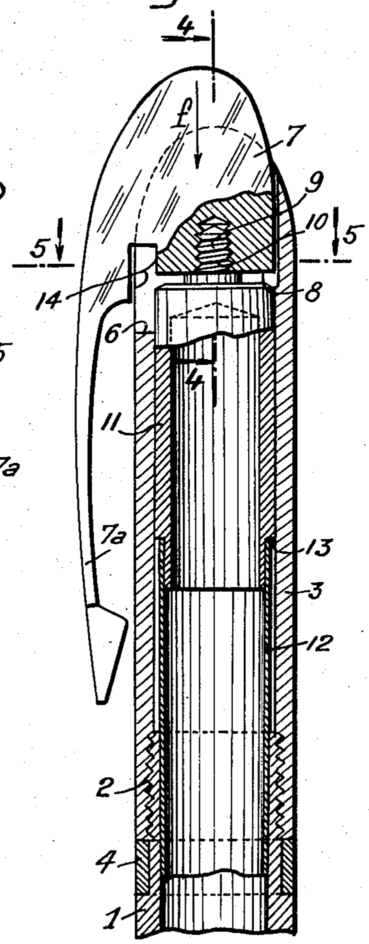


Fig. 4

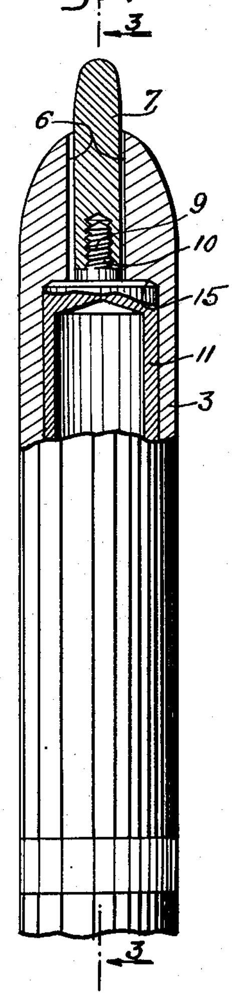
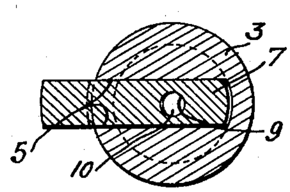


Fig.5



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by

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PUSH BUTTON TYPE MECHANICAL PENCIL

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Patent expires April 15, 1966

3 Claims. (Cl. 120—17)

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This invention relates to improvements in push button type mechanical pencil.

Chief object of the invention is the provision of an improved pencil in which the lead feeding mechanism is connected to a push-button constituting the body of the pencil clip, said clip being movable relatively to the pencil head and said head being stationary with respect to the pencil body.

In the accompanying drawings which are given solely by way of example.

Fig. 1 is an external side view of a pencil in accordance with the invention;

Fig. 2 is a fragmentary front view of the embodiment illustrated in Fig. 1;

Fig. 3 is a partial longitudinal sectional view on a larger scale taken along the line 3—3 of Fig. 2;

Fig. 4 is an elevational view, partly in section taken along the line 4—4 of Fig. 3.

Fig. 5 is a transverse section taken along the line 5—5 of Fig. 3.

As may be seen from the embodiment illustrated in the drawings, 1 is the body of the pencil having a head 3 fixed thereto at the upper or rear end by screwing or otherwise, as shown at 2 (Fig. 3), whereas in the ordinary mechanical pencil said head covers the body 1 and is slidably mounted thereon. In the form shown the threaded portion of the body is extended by an ornamented ring.

The upper or rear end of the head 3 is, for example, of ogival shape, it is of solid structure and provided with a longitudinal incision 5 having parallel faces opening at the top and laterally of said head at one side. Said incision opens also into the cylindrical cavity of said head. The incision 5 extends preferably at 6 (Fig. 3) beyond the solid portion to the tubular portion of the head 3 where said incision opens laterally.

Lengthwise slidable within said incision 5, which allows a minute play, is a flat metallic push-button 7 and a clip 7a formed integrally with or secured to said member.

The push-button 7 is provided on its edge 8 located in the bottom of the incision 5 with a tapped hole 9 for receiving a threaded pin 10. Said pin is integral with or fixed to the bottom of an inner tube 11 slidably mounted inside the head 3. Said tube 11 covers the usual tube 12 forming a lead-reservoir which controls the feed mechanism by means of its longitudinal displacements. Tube 11 bears against tube 12 through a shoulder 13.

As may be seen the connection between the

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tubes 11 and 12 is arranged so as not to impede the separation, through unscrewing at 2, of the body 1, with its tube 12 and, on the other hand, of the whole head assembly with the devices above described.

The clip body or push-button 7 preferably has its edge 8 provided with a slot 14 for engagement with the bottom of slot 6 of the head 3 upon completion of the displacement of push-button 7 and clip 7a towards the tip of the pencil, that is, in the direction of arrow *f* (Fig. 3) relatively to the head 3.

Operation is as follows:

Refilling of the lead-storage tube is effected by unscrewing the head section 3. Upon restoring of said head in position, tube 11 will cap the storage-tube 12. Hence, to cause the lead to move forward, while holding the pencil in one hand, it is only necessary to exert pressure in the known manner not on the head 3 but on the push-button 7 projecting from said head. The forward movement of said push-button 7 together with said clip 7a with respect to the head 3 and the body 1 causes the front end of the storage-tube 12 through the medium of tube 11 to move in relation to said body 1 and thus effects the feeding of the lead in the known fashion.

Upon releasing the push-button 7 under the action of the usual resilient device the lead-storage tube 12 is returned to the rear thereby restoring tube 11 by means of the shoulder 13 towards the bottom 15 (Fig. 4) of the cylindrical cavity of the head section 3 and consequently the push-button 7 projecting from said head to its inoperative position.

It will be evident, that in carrying the invention into practice, modifications may be introduced with regard to certain details of construction and shape of the instrument without departing from the scope of the invention as clearly set forth in the appended claims.

Having now described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a pencil with lead feeding mechanism, a tubular body open and threaded at its upper portion, a lead storage tube open at its upper end and slidably mounted in said body, a tubular element whose lower end is rotatably and removably fitted in said upper end of said lead storage tube, said tubular element comprising a shoulder adapted to coact with the upper end of said lead storage tube, a bottom integral with said tubular element and closing the upper end of said tubular element, a push-button rigidly secured on said

bottom, a pocket-clip rigidly fixed on said push-button, and a tubular head section adapted to cap said tubular element and to be screwed on said threaded upper portion of said body, said head section being formed with an aperture adapted for the passage and reciprocation of said push-button and pocket-clip and with a shoulder to abut on said bottom, whereby said pocket-clip, rigidly connected with the bottom of said head section can reciprocate together with said tubular element and storage tube.

2. In a pencil with lead feeding mechanism, a tubular body open and threaded at its upper portion, a lead storage tube open at its upper end and slidably mounted in said body, a tubular element whose lower end is rotatably and removably fitted in said upper end of said lead storage tube, said tubular element comprising a shoulder adapted to coact with the upper end of said lead storage tube, a bottom integral with said tubular element and closing the upper end of said tubular element, a push-button screwed on said bottom, a pocket-clip integral with said push-button, and a tubular head section adapted to cap said tubular element and to be screwed on said threaded upper portion of said body, said head section being formed with an aperture adapted for the passage and reciprocation of said push-button and pocket-clip and with a shoulder to abut on said bottom, whereby said pocket-clip, rigidly connected with the bottom of said head section can reciprocate together with said tubular element and storage tube.

3. In a pencil with lead feeding mechanism, a

tubular body open and threaded at its upper portion, a lead storage tube open at its upper end and slidably mounted in said body, a tubular element whose lower end is rotatably and removably fitted in said upper end of said lead storage tube, said tubular element comprising a shoulder adapted to coact with the upper end of said lead storage tube, a bottom integral with said tubular element and closing the upper end of said tubular element, a vertical flat push-button screwed by its lower edge on said bottom, a pocket clip integral with said flat push-button, projecting from the lateral edge of said push-button, and a tubular head section adapted to cap said tubular element and to be screwed on said threaded upper portion of said body, said head section being formed with a slot adapted for the passage and reciprocating motion of said flat push-button and pocket clip, and with a shoulder to abut on said bottom, whereby said pocket clip, rigidly connected with the bottom of said head section can reciprocate together with said tubular element and storage tube.

ROGER FRANÇOIS PERRAUD.

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