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SLIDER FOR PROPELLING PENCILS WITH SEVERAL LEADS

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Fig. 1

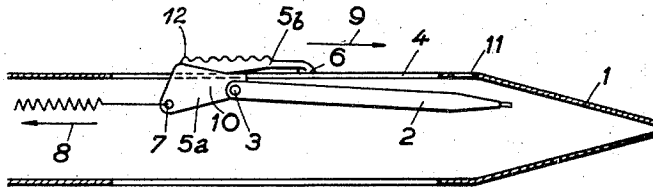


Fig. 2

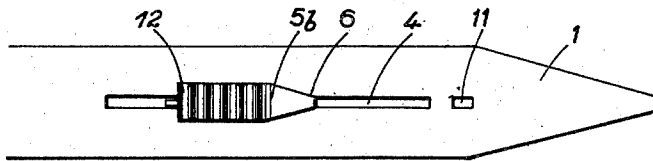


Fig. 3

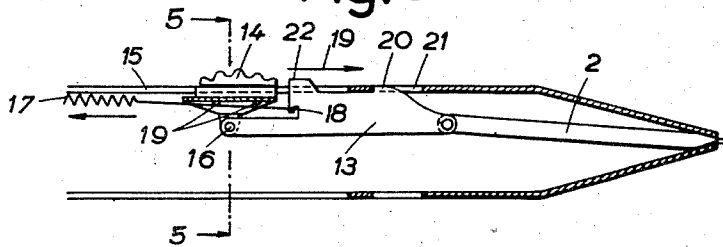


Fig. 4

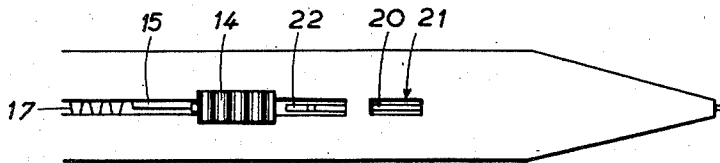
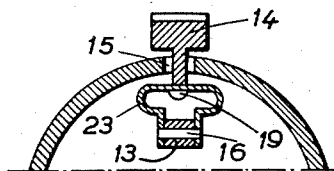


Fig. 5



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SLIDER FOR PROPELLING PENCILS WITH SEVERAL LEADS

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5 Claims. (Cl. 120--19)

1

In the known propelling pencils carrying several leads with springs returning the elementary lead holders back into their inoperative position, the slider that allows the operation of an elementary lead holder and which slides to this end inside a longitudinal slot of the body of the propelling pencil is generally secured by a spring catch or the like engaging means inside a lateral notch in the slot. Sometimes the elementary lead holder itself engages, when in its operative position, a hook acting as a spring.

My invention has for its object a simplification of such arrangements securing the elementary lead carriers of a multi-color lead carrier in their position of operation, said arrangements being made also thereby more reliable and stronger.

According to my invention, the slider to which is pivotally secured the elementary lead holder slides inside a slot following a generating line of the casing of the multi-color propelling pencil. The slider is pushed forward with the finger from its inoperative position into its operative position; when it arrives at the end of its stroke, it is released and it engages automatically a projection or recess provided to this purpose in the main body of the propelling pencil. This automatic engagement is obtained through the fact that the spring urging the elementary lead carrier into its inoperative position is secured to the slider in a manner such that on one hand its power and on the other hand the thrust exerted by the finger or even mere friction of the parts exerted on the slider or elementary lead carrier may form a torque adapted to make the slider rock in the desired direction so that it may automatically be engaged at the end of its stroke.

In order to allow my invention to be better understood I will now disclose by way of example and by no means in a binding sense, two forms of execution illustrated in accompanying drawings. In said drawings:

Fig. 1 illustrates a first form of execution in elevational view, partly sectional.

Fig. 2 is a top view of the device shown in Fig. 1.

Fig. 3 is a similar view of a second form of execution.

Fig. 4 is a top view of the device shown in Fig. 3.

Fig. 5 is a cross-section on line 5--5 of Fig. 3.

In Fig. 1, the body of the propelling pencil is illustrated at 1 and an elementary lead carrier 2 is shown as pivotally secured at 3 to its controlling slider adapted to slide in the groove 4 of the pencil body.

The member forming the slider shows a pro-

2

jection 5a engaging the inside of the body of the pencil and an outer part 5b which is too wide to enter the slot 4. A return spring acts at 7 in the direction of the arrow 8 on the member 5a. The point 7 at which the return spring acts on said member 5a is selected as far as possible from the outer wall of the main body of the lead carrier. When the user wishes to use an elementary lead carrier 2, he pushes with his finger the outer part 5b of the corresponding slider in the direction of the arrow 9. The slider slides in the slot 4 and during this displacement it is submitted on the one hand to the action of the finger of the user in the direction of the arrow 9 so as to overcome the frictional and the like resistances and it is submitted on the other hand to the return action exerted by the return spring 8. These two forces form a torque that urges the slider from outside to inside around the boss 10. This rocking is produced at the end of the slider stroke when the hook 6 lies above the recess 11 provided in the body of the pencil. This recess is wide enough to allow an engagement of the hook 6 therein. Consequently the slider will rock at the end of its stroke and its hook will engage the recess 11.

The elementary lead-carrier is preferably secured at a point 3 nearer the outer wall of the pencil than the point 7 on which the spring exerts its action, so that the inertia of the lead carrier and its frictional action may increase the rocking torque.

To return the lead carrier from its operative position into its inoperative position, the user has merely to depress at 12 the rear outer end of the slider and as he overcomes thus the engaging torque the hook 6 will be released. The return spring will then return the elementary lead carrier into its inoperative position.

In the examples of Figs. 2 and 3 the operating slide comprises two parts pivotally secured together, to wit: the inner member 13a forming a pawl and to which is pivotally secured the elementary lead carrier 2, and the pusher member 13b projecting partly to the outside of the pencil and subjected to the action of the user's finger. These two members slide inside the slot 4 and are pivotally secured together at 14.

The member 13a is subjected to the action of the return spring 15 secured to a point 16 nearer the outer wall of the main body of the pencil than the pivoting point 14. When the user urges the slider 13b forward with his finger for setting the elementary lead carrier 2 into its operative position he exerts in the direction of the arrow 9

3

a force that is transmitted through the pivotal point 14 to the member 13a.

The latter is therefore subjected to a torque which urges it to rock from the inside to the outside. This rocking motion is provided at a moment when the projection 17 arrives in front of the recess 11 inside which it may be engaged and held fast. To release said projection 17, it is sufficient to depress the part 20 on the member 13a. The pivotal connection between the latter and member 13b may be executed as illustrated in the cross-section of Fig. 3. The member 13a is pivotally secured through the axis 14 as shown to the inner lining 18 of the body of the pencil, that is secured to the inner member 13b by means of two rivets 19 passing through the slideway slot 4.

What I claim is:

1. In a propelling pencil, the combination of a slotted and recessed casing, at least one lead carrier, a slider with an outer projection for finger actuation adapted to carry the corresponding lead carrying element and to slide in the corresponding slot of the casing and ending with a tip adapted to engage a casing recess and spring means urging the slider away from its forward operative position and acting on the slider through a point located at some distance from the casing wall for forming with the manual power exerted on the outer projection on the slider for propelling same forwards, a torque urging the slider tip into its position of engagement with a casing recess when the lead-carrier is in its operative position.

2. In a propelling pencil, the combination of a slotted and recessed casing, at least one lead carrier, a slider for finger actuation adapted to carry the corresponding lead carrying element and to slide in the corresponding slot of the casing and a boss rigid with the slider projecting outwardly from the casing for hand operation for releasing the engagement between the slider and the casing when in its operative position and spring means urging the slider away from its forward operative position and acting on the slider through a point located at some distance from the casing wall for forming with the manual power exerted on the outer projection on the slider for propelling same forwards, a torque urging the slider tip into its position of engagement with a casing recess when the lead-carrier is in its operative position.

3. In a propelling pencil, the combination of a slotted and recessed casing, at least one lead carrier, a slider with an outer projection for finger actuation adapted to carry the corresponding slot of the casing and a tip on the outside of the casing that is too wide to engage the slot in the

4

casing and is adapted to engage in the operative position of the slider a recess in the casing through an inward rocking and spring means urging the slider away from its forward operative position and acting on the slider through a point located at some distance from the casing wall for forming with the manual power exerted on the outer projection on the slider for propelling same forwards, a torque urging the slider tip into its position of engagement with a casing recess when the lead-carrier is in its operative position.

4. In a propelling pencil, the combination of a slotted and recessed casing, at least one lead carrier, a slider with an outer projection for finger actuation adapted to carry the corresponding lead carrying element and to slide in the corresponding slot of the casing and a pawl with a tip secured to the main body of the slider on the inside of the pencil casing and adapted to engage a recess in the main body through an outward rocking and spring means urging the slider away from its forward operative position and acting on the slider through a point located at some distance from the casing wall for forming with the manual power exerted on the outer projection on the slider for propelling same forwards, a torque urging the slider tip into its position of engagement with a casing recess when the lead-carrier is in its operative position.

5. In a multi lead carrier propelling pencil provided with at least one longitudinal slot and recessed to the front thereof, a slider for each lead carrier adapted to slide inside the corresponding slot and provided with a terminal hook adapted to engage through the inside of the casing the recess therein when the slider is in its foremost operative position, the corresponding slider and lead carrier being pivotally secured together, a thumb piece pivotally secured to the rear of the slider and adapted to slide in the slot and a spring for urging the slider back into its inoperative position, the points of attachment of the spring and thumb piece being located so that the cooperating actions of the operator on the thumb piece and of the spring urge the slider to rock for engaging its hook into the cooperating recess when arriving in front thereof for the operative position of the lead carrier.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,140,653	Rohm et al.	Dec. 28, 1938