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PROVISIONAL SPECIFICATION.

Improvements in Pencil Cases.

We, S. MORDAN AND COMPANY, LIMITED, Manufacturers, and CHARLES EDWARD LITTLE, Silversmith, both of 41, City Road, in the County of London, do hereby declare the nature of this invention to be as follows:—

This invention relates to that class of pencil-case in which the lead is advanced 5 or retired by revolving the body of the case, and it has for its object to so construct these articles as to prevent the lead wobbling or shaking when being used, and also to permit of the ready removal of a stump of lead, and the insertion of a fresh length.

We attain these objects first, by so arranging the jaws of the tube, in which 10 the lead-carrier is located, that they project a short distance beyond the nozzle of the case and firmly grip the lead, when projected, and secondly, by causing the said lead-carrier to be propelled beyond said jaws, so as to permit of the lead stump being removed.

According to a convenient arrangement, the lead-carrier is fitted in a slotted 15 tube, whose outer end terminates in jaws, and the inner end of said carrier is provided with a heel piece, pin, or stud adapted to pass through the slot in the tube, and also through a slot in a second tube or sheath, which terminates at its rear or butt end in a knob or button, and is secured, at its upper end, to the nozzle of the pencil-case. Said heel piece, stud, or pin, works in a spiral groove 20 formed in the body of the pencil-case, so that by revolving this body (or the knob) the lead-carrier is caused to advance and so project the lead beyond the nozzle, when it is then gripped by the jaws and held steady while in use. By continuing the revolving action, the lead carrier is caused to further advance until it comes into contact with the jaws, which it then propels and forces apart, 25 and through which it finally projects, so enabling the stump of lead to be removed and a fresh length to be inserted. By revolving the body of the case, (or the knob) in the contrary direction, the lead-carrier, with its lead, is caused to retire within the jaws, and by further revolving, these retire into the nozzle and so close.

30 If desired, the spiral groove may be formed in a separate tube which may be fitted within the body of the pencil-case. In this instance the motion would be communicated solely by the knob or button.

Dated this 30th day of March 1901.

35 ERNEST DE PASS,  
Chartered Patent Agent,  
78, Fleet Street, London, & 5A, Market Street, Nottingham,  
Agent for the Applicants.

COMPLETE SPECIFICATION.

Improvements in Pencil Cases.

40 We, S. MORDAN AND COMPANY, LIMITED, Manufacturers, and CHARLES EDWARD LITTLE, Silversmith, both of 41, City Road, in the County of London, do hereby

[Price 8d.]



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declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, reference being had to the accompanying drawings and to the letters and figures marked thereon, that is to say:

This invention relates to that class of pencil-case in which the lead is advanced, 5 or retired, by revolving the body of the case, and it has for its object to so construct these articles as to prevent the lead wobbling or shaking, when being used, and also to permit the ready removal of a stump of lead, and the insertion of a fresh length.

We attain these objects by employing an additional slotted tube which is slid- 10 ably fitted within the ordinary fixed slotted tube in the body of the pencil case, and by so arranging these tubes that their slots coincide. The said additional slotted tube terminates, at its outer end, in jaws which normally project slightly beyond the nozzle of the pencil case, and in this slotted tube is located the lead 15 carrier, the heel of which projects through the slots in both the said tubes, and is capable of a rectilinear movement therein. The arrangement is such that when the pencil case is in use, the jaws grip the lead and prevent it from wobbling, but when the lead has been used until only a stump remains, the action of revolving the body of the case, in the usual manner, causes, first the 20 additional slotted tube to be propelled an appreciable distance beyond the nozzle, and then the lead carrier to be projected through the jaws, so exposing the stump of lead and thus permitting it to be readily removed and replaced by a fresh length.

And in order that our invention may be readily understood, we will describe 25 the same fully with reference to the accompanying drawings, wherein:

Fig 1 is an elevation partly in section of the improved pencil case in its normal condition ready for use.

Fig 2 is a similar view, but with the parts in the position they assume when the lead is propelled as far as it can be whilst still being gripped by the jaws.

Fig 3 is a similar view to Fig 2, but with the parts in the position they assume 30 when both the lead and the jaws have been partially advanced and the jaws have released their grip on the lead.

Fig 4 is also a similar view, but with the parts in the position they assume when the lead, the lead-carrier, and the jaws have all been advanced to their full 35 extent.

Fig 5 is a transverse section taken on the line *x, x*, of Fig 1.

Fig 6 is a detached elevation of the slotted tube or sheath in which, when the parts are assembled, the jawed tube slides.

Fig 7 is a detached elevation of the slotted jaw tube, and

Fig 8 is a detached elevation of the lead carrier. 40

Fig 9 is a fragmentary longitudinal elevation of a modified arrangement of the improved pencil-case.

*a* is the lead-carrier, which is fitted slidably in a slotted tube *b* whose outer end terminates in jaws *c*. The said carrier which has a rectilineal movement in the tube *b*, is provided, at its inner end, with a pin, stud, or heel *d*, adapted to 45 project through a slot *e* extending from top to bottom of the jawed tube *b*, and also through a slot *f* in a plain tube or sheath *g* (seen detached in Fig 6) which surrounds said tube *b*. The tube or sheath *g* is fixed, at its upper end, by soldering or brazing to the nozzle *i* of the pencil case, and is provided, at its lower or butt end, with a knob or button *j* which is also fixed thereto. The heel *d* of 50 the lead carrier *a* is preferably of the shape shewn in side view in Fig 8, that is to say flat, and is formed with two small projections *d'*. It works in a spiral path or groove *k* in the body *l* of the case, and by making said heel broad and flat, and providing it with two projections *d'*, a double bearing is obtained. each of the projections engaging in one or two adjacent convolutions of the path 55 or groove *k* at once, thus effectually preventing any shaking or looseness of the parts and causing them to work smoothly.

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When the jawed tube *b* is within the tube or sheath *g* (as seen in Figs 1 to 5), the slot *e* in the former tube, and the slot *f* in the latter coincide, so that the heel *d* when the lead carrier is inserted in the jawed tube *b* can pass down to the bottom of the slots in said tubes.

5 To permit the jaws *c* to close towards each other, so as to grip the lead, and to open or spring apart, when released, as shewn in Figs 3 and 4, the jawed tube *b* is provided with a second slot *m* extending only a short distance along said tube, and cut diametrically opposite to the slot *f*.

The working is as follows: it being assumed that from the position shewn in  
10 Fig. 1 to that shewn in Fig 2, the lead has been exhausted in the ordinary course of use. Normally, the relative positions of the parts are as in Fig 1, the jaws projecting slightly beyond the nozzle *i* and gripping the lead *h*, while the lead-carrier *a* is in its rearmost position with its heel *d* resting at the bottom of the slot *e* in the jawed tube *b*. By holding the nozzle immovably with one hand and  
15 revolving the body *l* of the case with the other hand, from time to time, as occasion may require, the lead carrier *a* and lead *h* are advanced together, by reason of the travel of the heel *d* of the said lead-carrier, in the spiral path or groove *k* in the body, said carrier being guided, in its rectilinear movement, by the slots in the tubes *b* and *g*. By this means the lead-carrier is advanced until its outer  
20 end comes against the interior of the jaws *c* near to where they grip the lead, when the parts will now be in the position shewn in Fig 2, and the heel *d* nearer to the nozzle than to the rear end. On continuing the revolving action, the jaws will be partially projected beyond the nozzle, as seen in Fig. 3, they being pushed out by and carried along bodily, with the lead-carrier, but the relative position  
25 of the lead carrier to the jaws does not alter, because the said carrier is held back by its outer end coming against the interior of the jaws which are contracted at their extremity to grip the lead, and cannot, in this position, yield or open apart, owing to their being confined by the contracted extremity of the nozzle. As soon, however, as the jaws have advanced to the position shewn in Fig 3,  
30 the spring apart and release their grip on the lead. On further continuing the revolving action, the jaws will become fully extended and open, as seen in Fig 4, and finally, the lead carrier, itself, will emerge through them to a short distance beyond their extremity, as shewn, so exposing the stump of lead and enabling it to be removed with facility, and a fresh length to be inserted. When the lead  
35 carrier has reached its extreme limit of forward travel, it is arrested by its heel *d* striking against the base of the nozzle, as seen in Fig 4,

By revolving the body of the case in the contrary direction, the lead carrier, with its lead, is first caused to retire, the jaws remaining stationary until the lead is entirely retracted, whereupon they also retire, and the parts regain their  
40 normal position, as seen in Fig 1.

If desired, the tube *l* in which is formed the spiral path or groove above mentioned, may be surrounded by an outer and separate tube *n* (as shewn in Fig 9) which may be plain, or of octagonal, or other suitable form. In this figure the  
45 projection or heel *d* is also shewn engaging in two adjacent convolutions of the tube *l*. The motion is, in this arrangement, communicated by the knob or button *j*, or by gripping the nozzle and revolving the body, as before, the outer tube *n* being here attached to the tube *l* by soldering. If the movement is imparted by the knob *j*, said knob is revolved in the opposite direction to that described in the other arrangement.

50 Having now particularly described and ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that what we claim is:—

1. In a pencil case of the kind referred to, a slotted tube containing the lead-carrier and provided with jaws adapted to normally extend beyond the nozzle  
55 and grip the lead, and so that on the revolving motion being imparted, after the lead has been protruded until only a stump remains, first the jaws become

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extended beyond the nozzle, and then the lead-carrier beyond the jaws, substantially as and for the purposes described.

2. In a pencil-case of the kind referred to, the slotted jawed-tube adapted to contain the lead carrier and grip the lead, and to be extended beyond the nozzle of the case, as and for the purposes described. 5

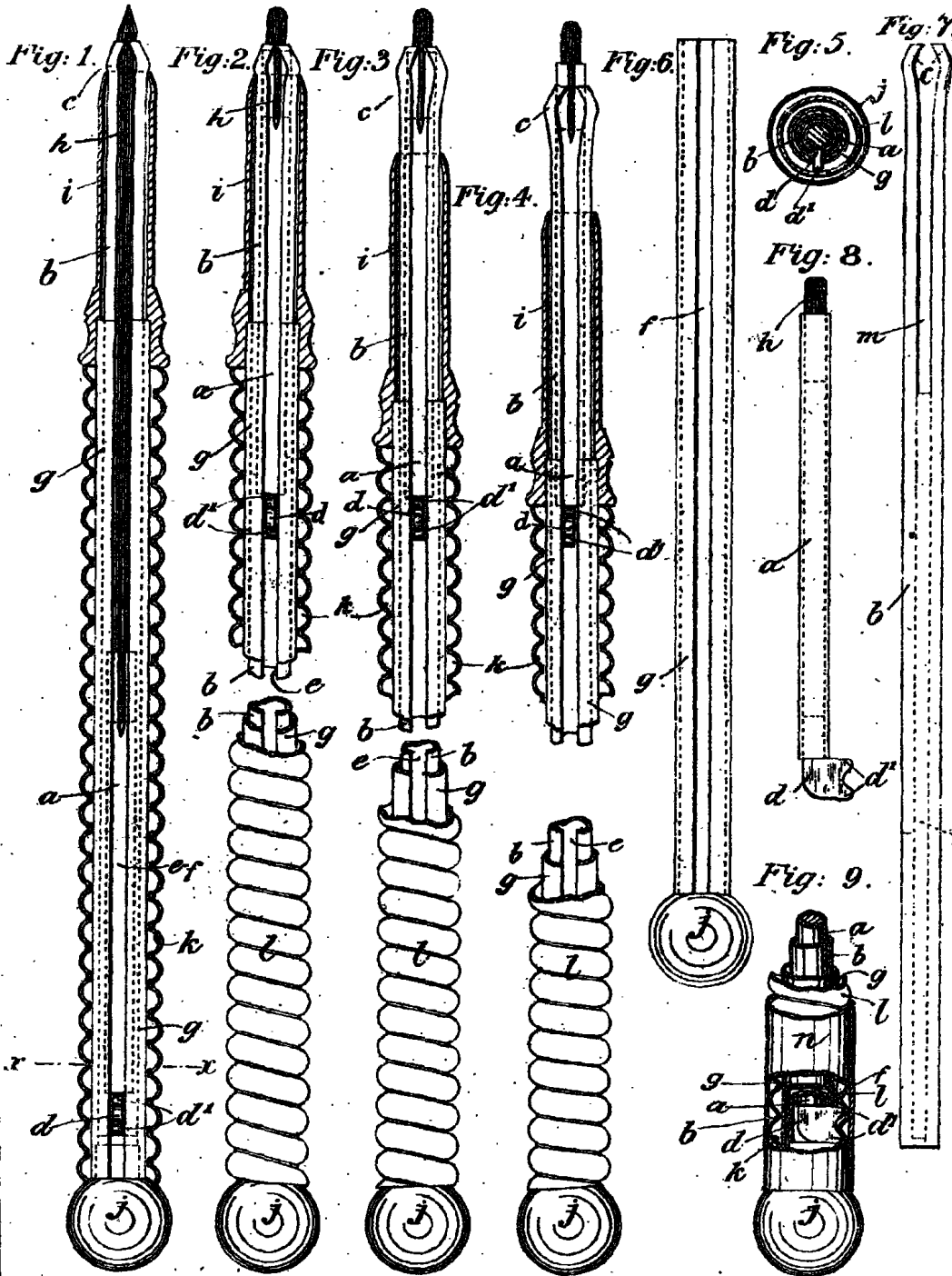
3. The combination with a pencil-case of the kind referred to, of the jawed tube adapted to slide within said case, to contain the lead-carrier, and to grip the lead, and having a longitudinal slot for the reception of the heel of the lead-carrier, as and for the purpose described.

4. The improved pencil case having its parts arranged and combined to be operated as hereinbefore described, and as shewn in Figs 1 to 8 of the annexed drawings. 10

5. The modified arrangement as described with reference to Fig 9 of the annexed drawings.

Dated this 23rd day of December 1901. 15

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[This Drawing is a reproduction of the Original on a reduced scale.]

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