

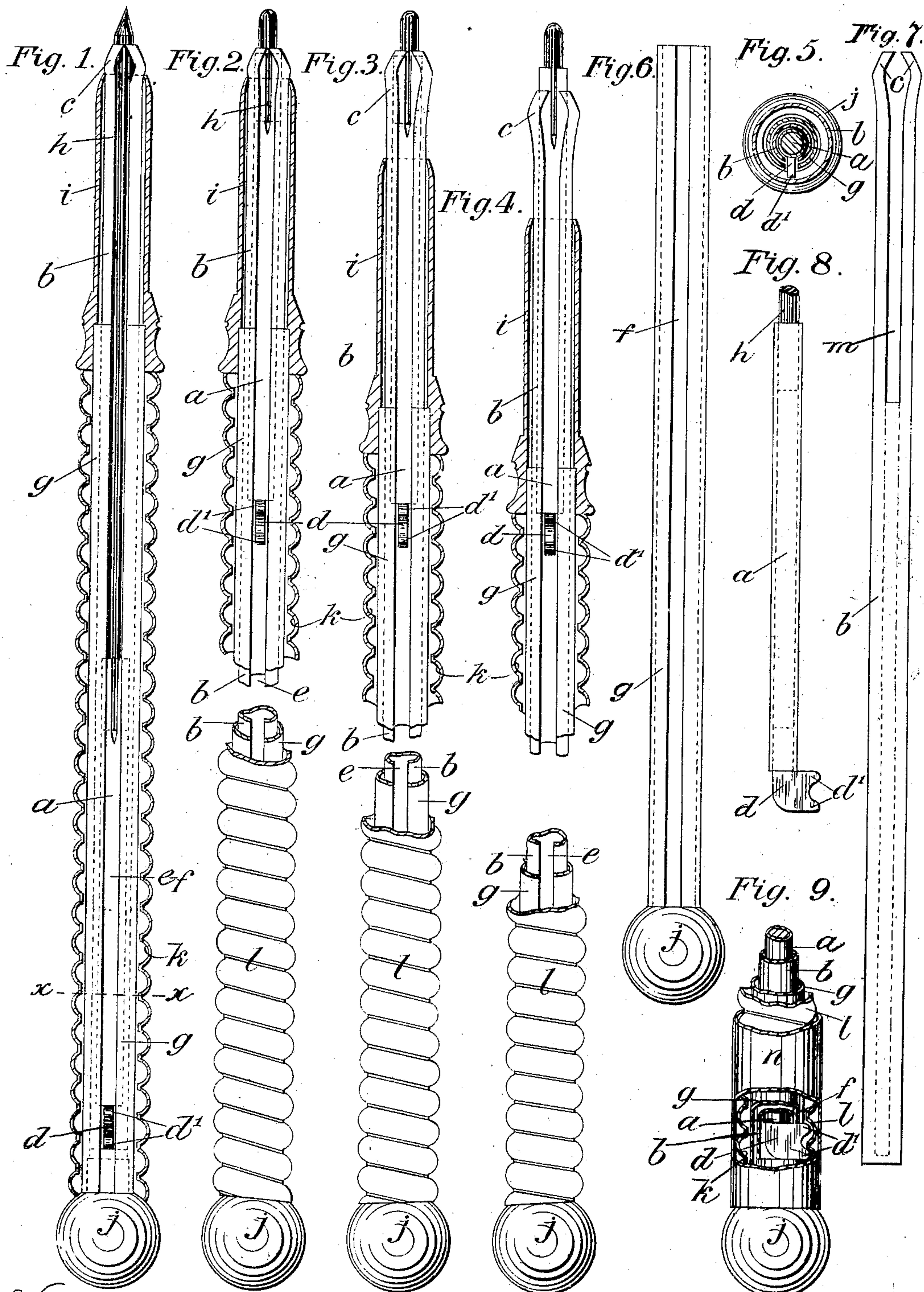
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Patented June 24, 1902.

C. E. LITTLE.
PENCIL CASE.

(Application filed Oct. 11, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

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PENCIL-CASE.

SPECIFICATION forming part of Letters Patent No. 703,142, dated June 24, 1902.

Application filed October 11, 1901. Serial No. 78,305. (No model.)

To all whom it may concern:

Be it known that I, CHARLES EDWARD LITTLE, a subject of the King of Great Britain and Ireland, residing at London, county of Middlesex, England, have invented new and useful Improvements in Pencil-Cases, of which the following is a specification.

This invention relates to that class of pencil-case in which the lead or other marking material is advanced 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 (or other marking material) 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. I attain these objects first by so constructing and arranging the jaws of the tube in which the lead-carrier is located that normally they project a short distance beyond the nozzle of the case and firmly grip the lead when protruded, thus preventing it moving while in use, and, secondly, by so constructing and arranging the lead-carrier and the body of the case that the said carrier can be propelled beyond the jaws by simply revolving the body of the case, so as to allow of the easy removal of the stump of lead.

The following is a full description of my invention, reference being had to the accompanying drawings, illustrating the same, and in which—

Figure 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 projected as far as it can be while still being gripped by the jaws. Fig. 3 is a similar view to Fig. 2, but with the parts in the position they assume 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 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

jawed tube, and Fig. 8 is a detached elevation of the lead-carrier. Fig. 9 is a fragmentary longitudinal sectional elevation of a modified arrangement of the pencil-case.

a is the lead-carrier, which is fitted slidably in a slotted tube *b*, whose outer ends terminate in jaws *c*. The said carrier, which has a rectilinear movement in the tube *b*, is provided at its inner end with a pin, stud, or heel *d*, adapted to 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*, (shown 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 the lead-carrier *a* is preferably of the shape shown 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 of two adjacent convolutions of the path or groove *k* at once, thus effectually preventing any shaking or looseness of the parts and causing them to work smoothly. 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.

To permit the jaws *c* to close toward each other so as to grip the lead and to open or spring apart when released, as shown 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 shown in Fig. 1 to that shown 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 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 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 shown in Fig. 2, and the heel *d* nearer to the nozzle than to the rear end. On continuing the revolving action the jaws will now be partially projected beyond the nozzle, as seen in Fig. 3, they being carried along bodily with the lead-carrier; but the relative position 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 shown in Fig. 3 they 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 the lead-carrier will itself then emerge through them to a short distance beyond their extremity, as shown, so exposing the stump of lead and enabling it to be removed with facility and a fresh length to be inserted. When the lead-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 normal position, as seen in Fig. 1.

In some cases the tube *l*, in which is the spiral path or groove above mentioned, may be surrounded by and fixed to a separate tube *n*, as seen in Fig. 9, and said tube *n* may be plain or of octagonal or other suitable form. In this figure is also shown the projection or heel *d*, engaging in two adjacent convolutions of the tube *l*. The motion is in this arrange-

ment communicated by the knob or button *j* or by gripping the nozzle and revolving the casing, as before. If the movement be imparted by the knob *j*, said knob is revolved in the opposite direction to that described in the previous arrangement.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the slotted case or tube carrying the nozzle, the movable jawed tube fitting slidably therein and having a longitudinal slot extending from the jaws to the opposite end, said slot coinciding with that in the slotted case or tube, and the lead-carrier contained within said jawed tube and having its heel-piece projecting through both said slots.

2. In a pencil-case of the kind referred to, the combination with a fixed slotted tube carrying the nozzle, of the movable slotted jawed tube fitting slidably within said tube so that their slots coincide, and containing a lead-carrier having a heel-piece projecting through both slots, and means for moving said carrier longitudinally of the case so as to first protrude the jawed tube beyond the nozzle and then the carrier beyond the jawed tube.

3. A pencil-case composed of the following instrumentalities; an internally-screw-threaded casing, a longitudinally-slotted tube secured to the nozzle at one end and to a knob at the other, and arranged within said casing, a tube within said tube having also a longitudinal slot and so arranged that both said slots coincide, and having spring-jaws normally extending beyond the nozzle, and a lead-carrier slidably fitting within the said jawed tube and having a lateral projection passing through both said slots and engaging the screw-threads of the casing, whereby on a revolving motion being imparted to the pencil-case, first the lead is propelled beyond the jaws, then the jaws beyond the nozzle, and finally the outer end of the lead-carrier beyond the jaws, as and for the purposes set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES EDWARD LITTLE.

Witnesses:

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