(No Model.)

R. W. UHLIG.

LEAD AND CRAYON HOLDER.

No. 261,500. Patented July 18, 1882.

Fig. 1,

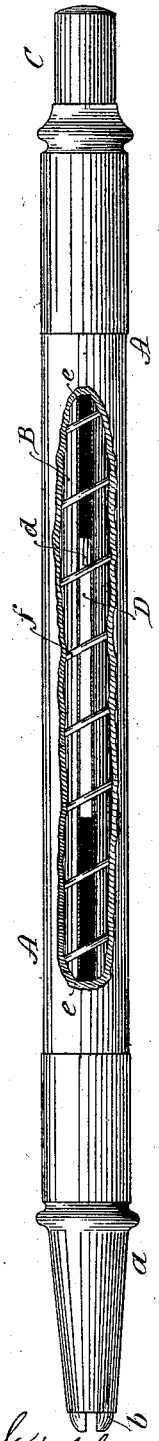


Fig. 3,

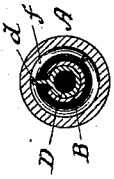
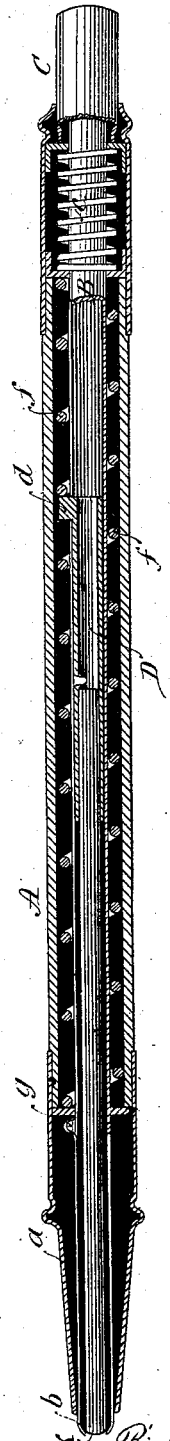


Fig. 2,



WITNESSES

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LEAD AND CRAYON HOLDER.

SPECIFICATION forming part of Letters Patent No. 261,500, dated July 18, 1882.

Application filed March 28, 1882. (No model.)

To all whom it may concern:

Be it known that I, RICHARD W. UHLIG, of the city, county, and State of New York, have invented certain new and useful Improvements in Lead and Crayon Holders, of which the following is a specification.

My invention is an improvement upon that kind of lead and crayon holder in which a stop-gage is employed, which, when the lead-clamping device is caused to release its hold on the lead and the lead is free to drop, will limit the extent of the forward movement of the latter and arrest it at the time when its point projects far enough beyond the end of the pencil for writing purposes. A pencil possessing these characteristics is not, broadly considered, of my invention.

My invention resides in stop-gage mechanism substantially such as hereinafter described, whereby I am enabled to obtain the result above referred to.

Under my improvement I employ a lead-carrier which is loose in the sense that it can move freely longitudinally when the lead is released. The carrier is provided with a projection which constitutes one member of the stop-gage mechanism, and the other member of that mechanism is a shoulder or rib within the pencil-case, so placed that when the carrier drops forward the projection on it will bring up against the shoulder or rib at the time the point of the lead projects the proper distance from the pencil. In practice I prefer to make the rib or shoulder in the form of a continuous spiral, whose folds or coils are so placed that the distance between them, which is the distance that the carrier can drop, will be just sufficient to permit the lead held by the carrier to protrude from the pencil to the proper extent. I also combine with the carrier means by which it may, when desired, be rotated, the projection and the spiral rib under these conditions constituting, also, a propelling mechanism, by which the carrier may be adjusted to a certain definite position in the case, determined by the length of the lead held by the carrier.

The nature of my improvement and the manner in which the same is or may be carried into effect can best be explained and understood by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of a pencil embodying said improvement, with the sheath or case partly broken away. Fig. 2 is a longitudinal central section, and Fig. 3 is a cross-section, of the same.

The pencil for the most part resembles the "automatic" pencil now well known and in general use.

A is the case or sheath, terminating in the usual tapering tip or nozzle, *a*.

B is a longitudinally-movable tube, (answering to the lead-containing tube of the "automatic,") provided at its front end with lead-grasping jaws *b*, and having on its rear end the pressure-cap C, between the head of which and the rear end of the case is confined the retracting-spring *c*.

Thus far the pencil is not essentially different from the "automatic pencil."

The tube B contains a lead-carrier, D, which is loose within the tube, and is provided with a lateral lip or projection, *d*, which extends out through a longitudinal slot, *e*, in the tube. In the front end of the carrier is fitted a lead, *x*. The projection *d* constitutes one member of the stop-gage mechanism, and the rib or shoulder hereinbefore referred to as constituting the other member of the same is in this instance composed of a spirally-coiled wire, *f*, fitting closely the interior of the tubular sheath A, and constituting a stationary spiral rib or flange. The spiral is made fast to the sheath by any suitable means, and the projection *d* on the carrier extends out so as to be between the folds of the spiral. When the carrier is free to move lengthwise it will be seen that it can move a distance equal to the distance between any two of the folds of the spiral between which the projection *d* may be. The folds are consequently so placed as to be separated from one another by intervals equal to the distance which the carrier and its lead must drop in order to obtain the needed protrusion of the lead from the pencil.

When the parts are in the position shown in Fig. 2 the lead is entirely within the case, the jaws are closed, and the projection *d* is back against, or nearly against, the rear one of the two folds of the spiral rib between which it may happen to be placed. If, now, the pencil be held in the air point downward and the

pressure-cap be pressed forward, the effect will be to move the lead-containing tube B and to permit the spring-expanding lead-grasping jaws to open. As soon as this occurs the carrier and its lead will drop until the stop or projection *d* brings up against the front one of the two folds of the spiral, as indicated in Fig. 1, and, pressure being then removed from the cap, the retracting-spring will draw back the jaws within the nozzle or tip and cause them to close on the lead, which will have its point projected beyond the pencil far enough for writing purposes.

Inasmuch as the lead will become gradually shorter by reason of continued use, it is necessary to provide means by which the carrier may be brought nearer to the front of the pencil whenever this becomes desirable. For this purpose the tube B is arranged so that it may be rotated. It is at front and rear supported in bearings in which it may rotate, and at the front is provided with a lip, *g*, which brings up against the front end of the sheath, so as to prevent it from being drawn back more than a predetermined distance by the retracting-spring. In rotating the tube it should at the same time be pressed forward a little, so as to prevent frictional contact between its jaws, and also its lip *g* and the sheath. It will be seen that the tube, when rotated, will, owing to the carrier-projection *d*, which extends out through the slot *e*, carry with it the carrier, and that the latter, owing to the engagement of the projection with the spiral *f*, will be caused to advance or recede according to the direction of rotation. In this way the carrier can be brought to such part of the spiral as may be required by the length of the lead.

Having described my improvement and the best way known to me of carrying the same into practical effect, what I claim as new and of my invention is—

1. The combination, with the sheath and the lead clamping and releasing mechanism of a lead and crayon holder, of a lead-carrier loose within the sheath, and stop-gage mechanism arranged and operating to arrest the forward movement of the carrier, at the time and in the manner substantially as and for the purposes hereinbefore described.

2. The combination of the sheath, the longitudinally-movable lead-containing tube, the lead clamping or grasping device, the carrier loose within the lead-containing tube, and provided with a finger or projection extending through a slot in the said tube, and a rib or shoulder within the sheath adapted to coact with the projection on the carrier, substantially as and for the purposes hereinbefore set forth.

3. The combination of the sheath, the longitudinally-movable and rotary lead-containing tube, the carrier loose within said tube, and provided with a finger or projection extending through said tube, and the spiral rib or shoulder within the sheath, adapted to coact with the projection on the carrier, substantially as and for the purposes hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 14th day of March, A. D. 1882.

RRD. W. UHLIG.

Witnesses:
JOSEPH HOFFMAN,
JOE W. SWAINE.