

(No Model.)

P. ABBOTT & C. C. PARSONS.

LEAD AND CRAYON HOLDER.

No. 265,730.

Patented Oct. 10, 1882.

Fig. 1.

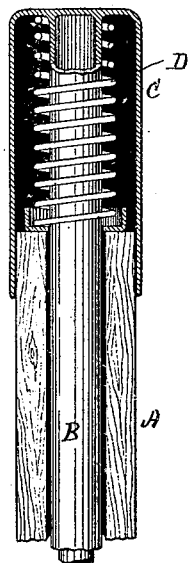


Fig. 3.

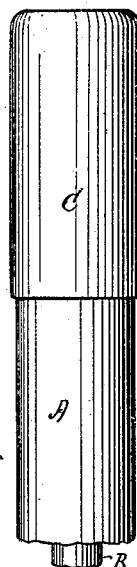
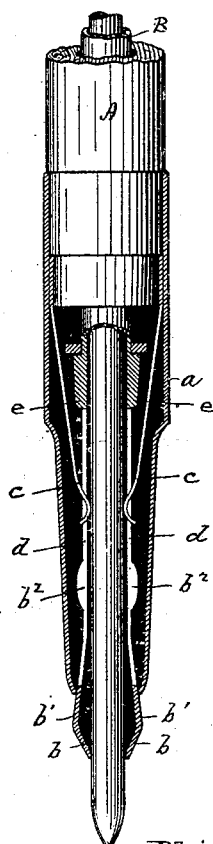
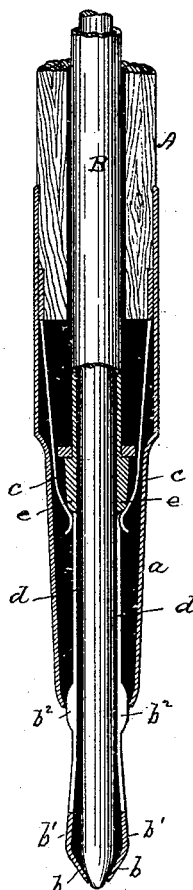
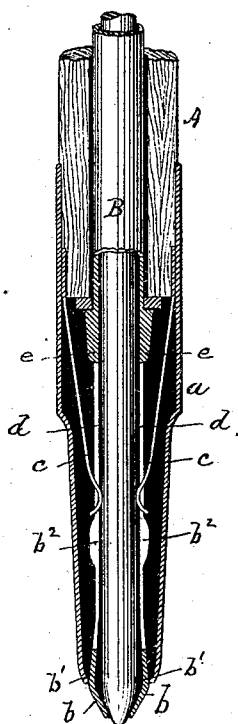


Fig. 2.



WITNESSES

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LEAD AND CRAYON HOLDER.

SPECIFICATION forming part of Letters Patent No. 265,730, dated October 10, 1882.

Application filed May 9, 1882. (No model.)

To all whom it may concern:

Be it known that we, PHILLIPS ABBOTT and CHARLES C. PARSONS, both of Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements in Lead and Crayon Holders, of which the following is a specification.

Our invention relates to that kind of pencil or lead and crayon holder in which the sheath or case and lead clamping or grasping and releasing mechanism are combined with a device which, for convenience sake, may be termed a "stop-gage," arranged and operating to limit the extent to which the lead, when released, can drop or protrude from the pencil. A lead or crayon holder embodying this feature is not broadly claimed by us. In all other holders, however, of which we have knowledge the part which constitutes the stop-gage is an additional device separate and distinct from the lead clamp or grasping device. In our improved pencil or holder the stop-gage is also the lead clamp or grasping device. In other words, the one device has the twofold function of gaging the extent to which the lead may drop and of grasping and holding the lead after it has dropped; and it is this feature which mainly characterizes our improvement.

The simplest and most effective way known to us of carrying out our improvement is represented in the accompanying drawings. The pencil is in the main similar to the well known "Automatic" pencil now in the market, having, like that pencil, jaws longitudinally movable with respect to the sheath. These jaws may have a somewhat greater range of lengthwise movement than those of the ordinary "Automatic," although this is not essential, and upon their supporting-stems are provided, in rear of the usual swells or inclines which are acted on by the tip of the sheath to cause the jaws to close on the lead, with a second set of swells or inclines, which, when the jaws are pushed far enough forward, are acted on by the sheath or tip to cause the jaws again to meet or approach one another. In conjunction with the parts thus arranged to operate, we employ a lead-detent, which acts, when the jaws move forward, to detain or hold the lead until the jaws are sufficiently closed or brought together by the second set of swells or inclines, and is

then removed from the lead sufficiently to permit the latter to drop until arrested by the jaws. This detent also acts to hold the lead in the latter position while the jaws move back to normal position and close on the lead in the usual way.

In the drawings, Figure 1 is a vertical central section of a holder embodying our invention in its preferred form, with the parts in normal position and the lead retracted. Fig. 2 is a like section of the front portion of the holder with the jaws fully protruded. Fig. 3 is a sectional elevation with the parts in substantially the same position as shown in Fig. 1, save that the lead projects from the sheath and is grasped by the jaws.

A is the sheath or case, terminating in the usual tip or nozzle, *a*, which virtually forms part of the sheath.

B is the lead-containing tube, terminating at the front end in spring clamping or grasping jaws *b*, which normally stand apart, and when the lead-tube is retracted are caused to close together by the pressure of the tip or nozzle upon their swells or inclines *b'*.

C is the pressure-cap, and D is retracting-spring. The parts thus far described, in so far as they co-operate for the purpose of grasping and releasing the lead, do not differ materially from the like parts of the Automatic pencil.

Upon the jaws or the jaw-stems, in rear of the first set of swells or inclines, *b'*, is a second set, *b''*, inside the tip *a*, and separated from the first set by an interval about corresponding to the extent to which the lead should protrude from the end of the pencil; and the range of movement of the lead-tube is such that it can be pressed forward far enough to bring the swells *b''* against the contracted portion of the tip, as indicated in Fig. 2. The result of this is that when the lead-tube is pressed forward from the position shown in Fig. 1 to that shown in Fig. 2 the jaws *b*, as soon as their swells *b'* are removed from contact with the tip, expand or spread apart, and there remain until again closed by the pressure of the second set of swells or inclines, *b''*, against the interior contracted part of the tip. When the parts are in this position it will be seen that the point of the lead can drop a certain distance beyond the end of the tip *a*, and will then bring up

against the jaws, which thus act as a stop-gage. Pressure being removed from the cap C, the retracting-spring D will draw back the tube, and during this movement the jaws will first spread apart as the swells b^2 retire from the contracted part of the tip, thus having no injurious contact with the lead during their rearward movement, and will then close upon and grasp the lead in the usual way, when their swells b' are drawn into contact with the tip.

It is of course necessary to provide a detent or retaining device which, during the forward movement of the jaws, will act as a check on the lead until the jaws are being closed by the swells b^2 , and during the rearward movement of the jaws will retain the lead in the advanced position to which it may have dropped until grasped by the jaws. One convenient means for this purpose is one or more spring pads or fingers, c , attached to the sheath and bearing at their free ends upon the lead through longitudinal slots d in the lead-tube. These fingers or pads bear with yielding pressure upon the lead, except when removed or lifted therefrom by the action of a cam or rise, e , on the lead-tube, which latter is so positioned that when the tube is pushed forward it will be brought in contact with and lift the spring checks or detents c from the lead at the time the jaws have been closed sufficiently by the second set of swells, b^2 , to intercept the lead as it drops from the pencil, as indicated in Fig. 2. The instant the jaws move back from this position the rise e recedes from the spring-detents, and the latter at once bear upon and hold the lead in its advanced position until the jaws can again close on the lead, as indicated in Fig. 3. By pushing forward the pressure-cap far enough and holding the pencil-point uppermost the lead will drop back into the sheath, as in the ordinary "Automatic."

Having now described our improvement and the best way known to us of carrying the same into effect, we state in conclusion that we do not restrict ourselves to the special instrumentalities herein shown and described, inasmuch as the same may be considerably varied in construction and arrangement without departure from our invention, the characteristic feature of which, as hereinbefore stated, resides in the employment of the same device by which the lead is held or clamped as a stop-gage for limiting the extent to which the loose lead may drop from the sheath. This feature we believe to be entirely new with us. While, therefore, we do not claim broadly a lead or crayon holder provided with a stop-gage which limits and determines the extent to which the lead may protrude from the pencil,

What we do claim as of our invention is—
1. The combination, with the lead clamp or

grasping device of a lead or crayon holder, of means, substantially as described, whereby said clamp or grasping device, at or near the conclusion of its movement in the direction necessary to release the lead, is caused to again close sufficiently to intercept or stop the lead, substantially as hereinbefore set forth.

2. The combination, with the sheath or case and the longitudinally-movable lead-grasping device, of means, substantially as hereinbefore described, whereby the lead-grasping device is operated, at or near the conclusion of its forward movement, to close sufficiently to intercept the lead at a predetermined distance beyond the tip or end of the sheath, substantially as and for the purpose set forth.

3. The combination, with the sheath or case, the longitudinally-movable lead-grasping device, and means, substantially as described, whereby the lead-grasping device is caused, at or near the conclusion of its forward movement, to close sufficiently to intercept the lead, of a lead detent or retaining device operated to release its hold on the lead at the time and in the manner substantially as hereinbefore set forth.

4. The combination of the sheath or case and the longitudinally-movable expanding lead-grasping jaws, provided with two sets of swells or inclines, arranged and adapted to operate in connection with the sheath, substantially as and for the purpose hereinbefore set forth.

5. The combination, substantially as described, of the sheath, the longitudinally-movable expanding lead-grasping jaws, provided with two sets of swells or inclines, means, substantially as described, for moving said jaws, a lead detent or retaining device carried by the sheath, and a cam or rise carried by the jaws or some part moving in unison therewith and operating to lift the detent from the lead at the time and in the manner substantially as set forth.

6. The combination, with the sheath, the longitudinally-movable lead-tube, the pressure-cap, and the retracting-spring, of the expanding lead-grasping jaws provided with two sets of inclines, the lead detent or retaining device carried by the sheath, and the detent-operating cam or rise formed on or carried by the jaws or the lead-tube, substantially as and for the purposes hereinbefore set forth.

In testimony whereof we have hereunto set our hands this 26th day of April, 1882.

PHILLIPS ABBOTT.
CHARLES C. PARSONS.

Witnesses:

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JOHN J. CAULDWELL.