

(No Model.)

C. W. LIVERMORE.
LEAD AND CRAYON HOLDER.

No. 246,961.

Patented Sept. 13, 1881.

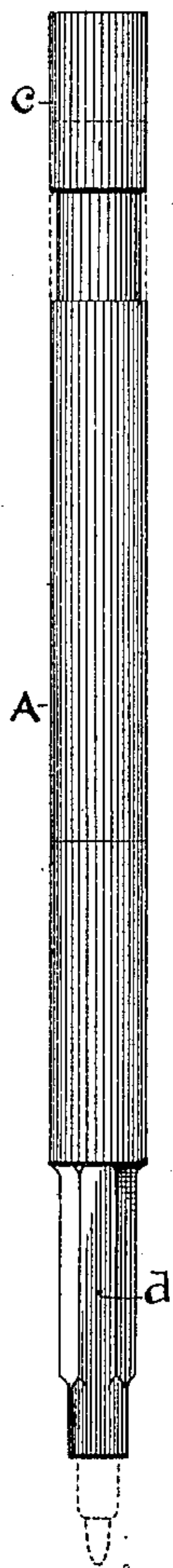


FIG. 1.

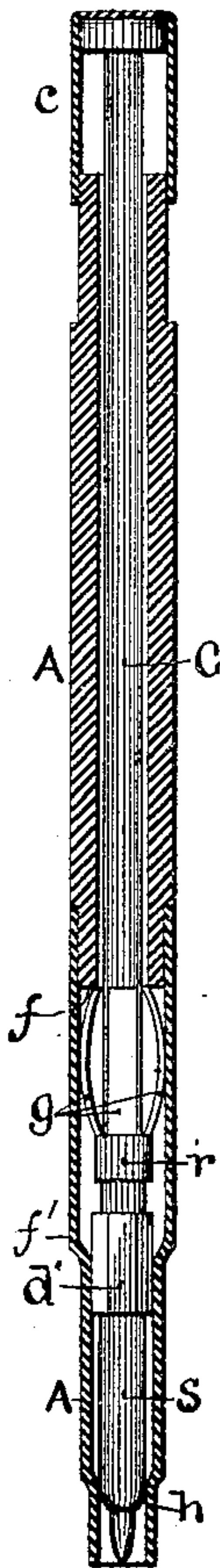


FIG. 2.

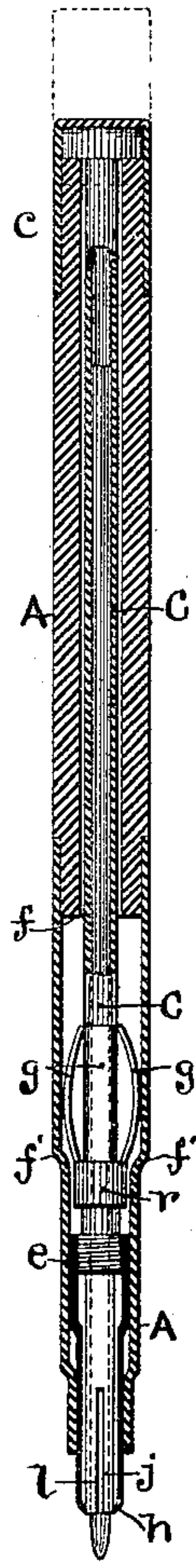


FIG. 3.

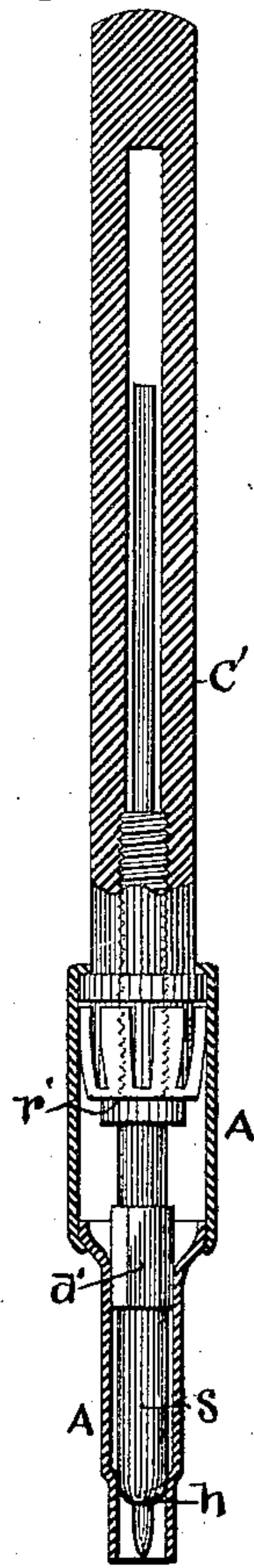


FIG. 4.

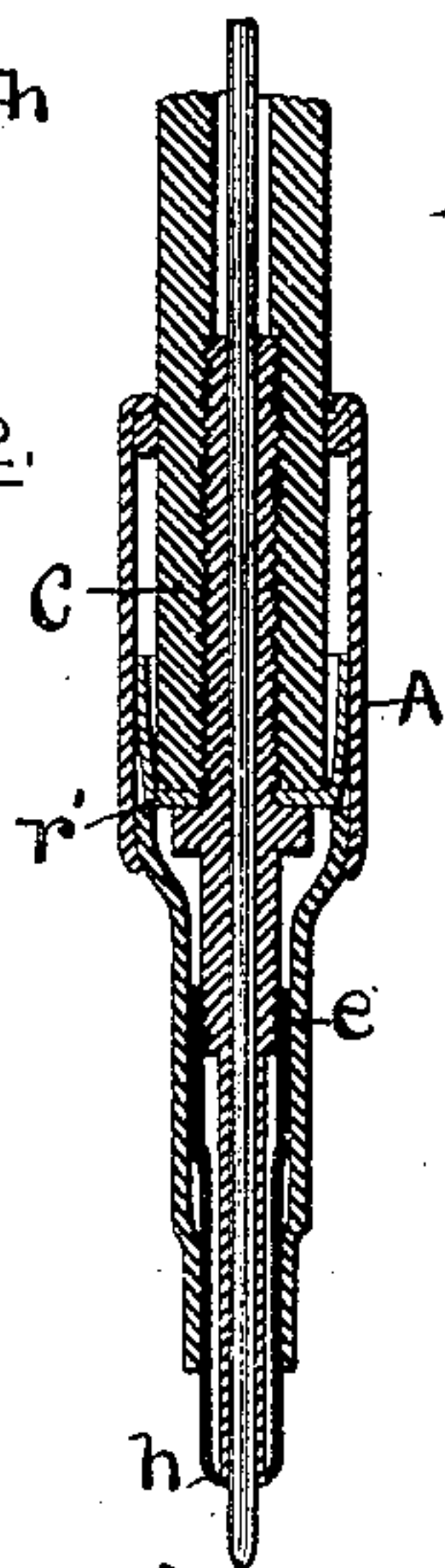


FIG. 5.



FIG. 6.

WITNESSES.

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LEAD AND CRAYON HOLDER.

SPECIFICATION forming part of Letters Patent No. 246,961, dated September 13, 1881.

Application filed March 21, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. LIVERMORE, of the city and county of Providence, and State of Rhode Island, have invented certain new and useful Improvements in Lead and Crayon Holders, of which the following is a specification.

Pencils have heretofore been made and are in common use having crayon-holding tubes slotted for a short distance at the lower end, so as to form elastic fingers or jaws, and provided with a clamping-sleeve incasing said jaws. The clamping-sleeve is made to move longitudinally by means of a screw, thereby contracting or releasing the jaws as desired.

My improvement consists in combining this crayon-holding tube, provided with its jaws and clamping-sleeve, with an outer case or incasing-tube in such a manner that the two tubes may have a longitudinal movement with respect to each other within certain limits, and also so that the crayon-holding tube may be turned or rotated within the incasing-tube. This combination is so adjusted that in the longitudinal movement the clamping-sleeve moves with the crayon-holding tube; but in the rotary movement the clamping-sleeve is prevented from turning with the crayon-holding tube, being held by the outer case. Consequently by turning the crayon-holding tube, the clamping-tube is screwed forward or back and the jaws of the crayon-tube relaxed or closed upon the crayon, as may be desired.

The longitudinal movement of the crayon-tube is limited by stops, and is designed to allow the forward end of the crayon-tube to be drawn within the case far enough to cover the projecting end of the crayon and protect the same when not in use.

Proper friction is provided between the inner and outer tubes to retain them in the relative positions in which they may at any time be placed, but which at the same time allows of the sliding motion when required. Thus the crayon-tube, being supplied with a crayon projecting a proper distance from its jaws for writing or marking, is thrust out at the forward end of the case till it meets a stop, where it remains held by the constant friction and ready for use. When the pencil is to be laid

aside or placed in the pocket the inner or crayon tube is drawn back till the end of the crayon is within the case, where it meets the stop. There is thus no occasion for operating the jaws which gripe the crayon until the crayon becomes worn sufficiently to require it to be set forward. This resetting of the crayon is effected with the utmost convenience and accuracy.

The distance from the forward end of the crayon-tube, when retracted to its limit or stop within the case to the end of the outer case, is the exact measure or gage for the crayon to project from its holder. To reset the crayon, therefore, the crayon-tube is retracted to the stop, the pencil is placed vertically, with the forward end of the case resting upon some plane surface—as the top of a desk or table—and the clamping-tube being incapable of rotation in the case, the latter is held by one hand while the crayon-tube is turned by the other in the direction to open the jaws and free the lead, which immediately falls until it is flush with the end of the case. The jaws are then closed by a reverse movement, and the lead is secured in its new position with respect to the jaws or crayon-tube, where it remains till further wear requires the repetition of the operation.

I have illustrated my invention in the accompanying drawings, in which Figure 1 is a view of my improved pencil in elevation. Fig. 2 shows the outer case in longitudinal central section with the crayon-holding tube and other parts in elevation, the crayon-tube being drawn back and the point of the lead wholly within the outer case. Fig. 3 represents the outer case in longitudinal central section and the crayon-tube partly in section and partly in elevation, the crayon-tube being pushed out to its advanced position. Fig. 4 shows a modification of construction, partly in section and partly in elevation, the outer case being much shortened and not extending the whole length of the crayon-tube. The crayon-point is retracted within the case. Fig. 5 is an enlarged representation of the lower portion of Fig. 4 in longitudinal central section, the crayon-point being pushed forward in position for writing. Fig. 6 is an example of a friction-ferrule placed

on the crayon-tube and acting against the inner surface of the case.

The crayon-tube *U* extends beyond the top or rear end of the case *A*, and is provided with a cap, *c*, rigidly attached thereto. The cap in the example shown slides over a portion of the upper end of the case *A*, and is merely for the purpose of preserving symmetry of appearance and for convenience in moving the crayon-tube within the case.

The case *A*, near the lower end, is contracted and formed with several plane surfaces, (seen at *d*,) the interior corresponding therewith, and these faces embrace and fit similar faces, *d'*, on a raised portion of the clamping-sleeve *S*. The purpose of this construction is to hold the clamping-sleeve and prevent it from turning with the crayon-tube *U* when the latter is rotated within the case *A*, and the effect is that when the crayon-tube is thus rotated the clamping-sleeve is made to advance or recede upon the crayon-tube, according to the direction of the rotation, the two being connected together by means of a screw, (seen at *e*.) At the same time this construction of these parts as described and shown allows of the free longitudinal movement of the crayon-tube and clamping-sleeve within the outer case without disturbing the relative positions of the crayon-tube and sleeve.

A slot in the lower end of the crayon-tube is shown at *l*. A sufficient number of these slots are made to allow the jaws *j* to be compressed by the contracted end *h* of the clamping-sleeve when the latter is drawn up as above described. The jaws are made of such material as to have sufficient spring to open and resume their former position when released from the pressure of the clamping-sleeve. Sufficient friction between the crayon-tube and outer case to retain them in any given position for practical purposes may be secured in a variety of ways. The two may be made to fit sufficiently snug over a greater or less portion of their length, or some special device may be used for the purpose. I have shown springs *g* in a curved form, an end of the same being secured by a ferrule, *r*. I have also shown a ferrule, *r'*, with flaring springs.

The longitudinal movement of the crayon-tube within the case may be limited by various means. As represented in Figs. 2 and 3, the rearward movement is checked by the contact of the springs *g* with a shoulder, *f*, on the interior of the case, and the forward movement by contact of the same spring with a shoulder, *f'*. Where the cap *c* is used, this, being rigidly attached to the crayon-tube, may easily be constructed to travel between shoulders on the exterior of the case and to be limited in its travel thereby, such construction being too obvious to require detailed description. In all cases the rearward stop should be so placed as to arrest the crayon-tube when the point of the crayon, having a proper degree of projection from the jaws, is flush with the end of the

case, for the reason, as above stated, that when the crayon is to be set forward to compensate for wear the pencil is placed vertically upon a plane surface, the crayon released and allowed to fall upon the supporting-surface, and is again secured, the lower part of the case thus forming a gage or measure for setting the crayon and avoiding the necessity of adjusting the same by the hand—an inconvenience which attends many constructions now in use.

It is obvious that my said invention may be carried into effect with various modifications of the construction hereinbefore particularly described.

I have shown in Fig. 4 a crayon-tube screwed into a hollow wooden handle, *U'*, the bore of which, above the crayon-tube, is but an extension of the latter and forms a part of it. The case *A* covers only the lower portion of the tube, and is made in two parts for convenience of manufacture. The second form of ferrule with flaring springs is employed, but all the essential features of the invention are preserved.

It will be readily perceived that the portion above the case *A* in Fig. 4 is only an elongated cap, affording room for the crayon and sliding inside instead of over the case.

I do not intend to be understood that the particular form of jaws and clamping-sleeve shown is alone adapted to my construction of a pencil, as many constructions and combinations of those parts whereby the jaws are compressed and relaxed by a sleeve which may be advanced and retracted by a screw work equally well with the specified example shown. The said case *A* may also be applied to a crayon-holder or crayon-holding tube provided with a clamping-sleeve operating jaws, by a longitudinal movement of the clamping-sleeve and crayon-tube, in opposite directions, the said longitudinal movement being effected by the aid of a spring or other device. The stops being provided, as already described, the crayon-point may be protected by retracting the crayon-tube without releasing and withdrawing the crayon wholly within the jaws, and a gage is likewise furnished for setting the crayon, as before shown.

It may be remarked that the terms "lead" and "crayon" have been used interchangeably, and also that portions of the outer case may be made of wood, or the whole may be of metal.

What I claim, and desire to secure by Letters Patent, is—

1. A lead or crayon pencil consisting of an outer case and inner crayon-holding tube adapted to slide between stops, as specified, the said crayon-holding tube being provided with grasping-jaws, and also with a clamping-sleeve, combined with said crayon-holding tube and said outer case, in the manner described.

2. A crayon-holding tube with spring-jaws for grasping the crayon, and longitudinally movable with respect to a clamping-sleeve for

closing and releasing said jaws, in combination
with an outer case adapted to slide longitudi-
nally within fixed limits upon such holding-
tube and cover and uncover the point of the
5 crayon, as desired, said outer case being ar-
ranged, as described, to gage or measure the
projection of the crayon from its holder when

requiring to be set forward, substantially as
described.

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Witnesses:

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