

(Model.)

C. W. BOMAN.
Lead and Crayon Holder.

No. 235,122.

Patented Dec. 7, 1880.

Fig. 1.

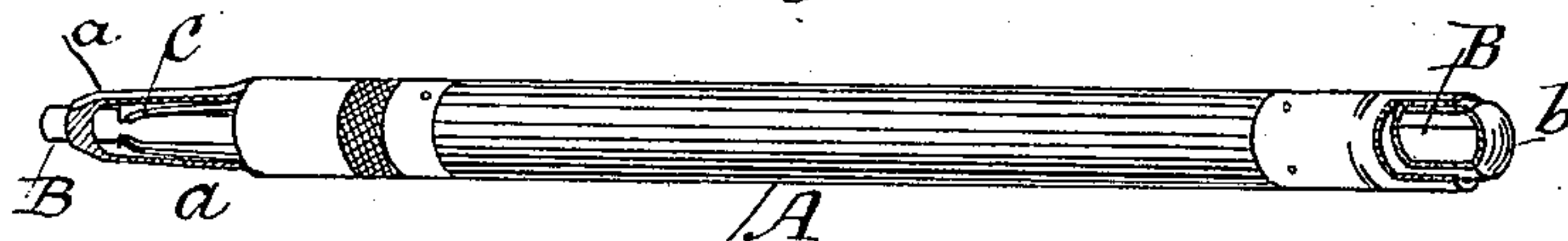


Fig. 2.

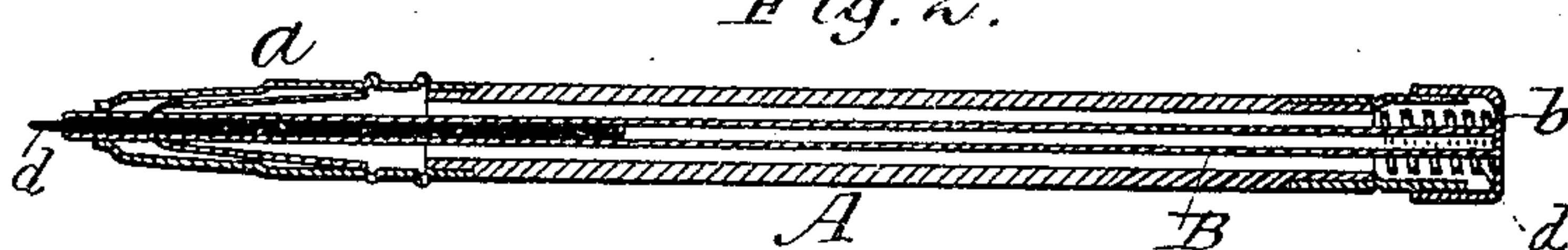


Fig. 3.

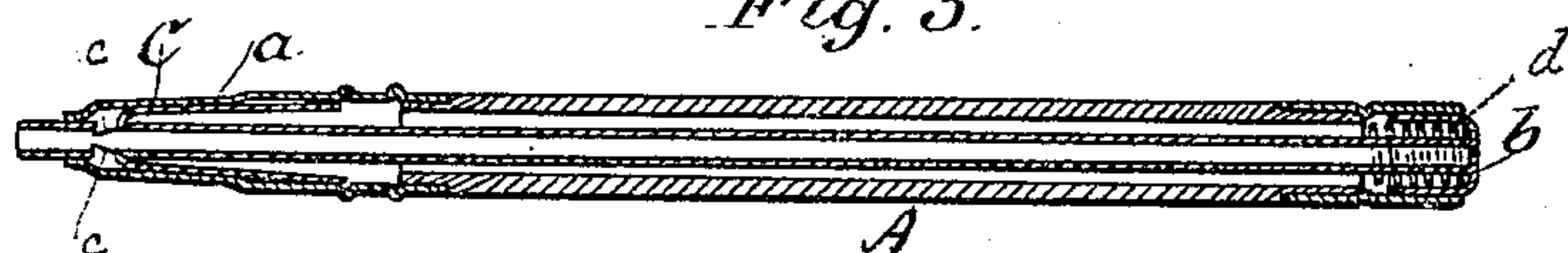


Fig. 4.

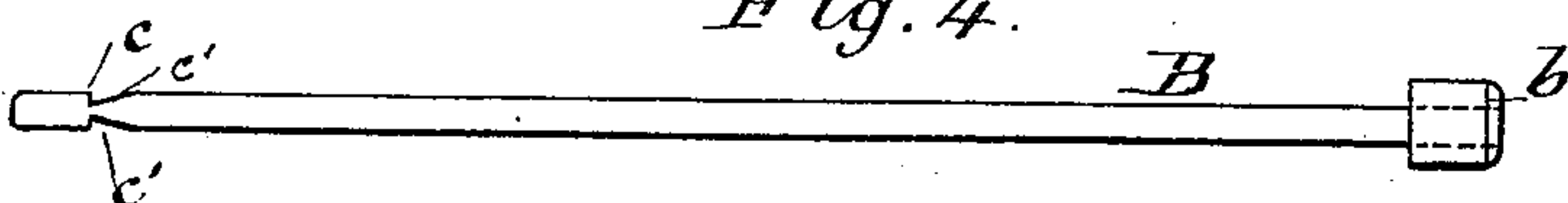


Fig. 5.

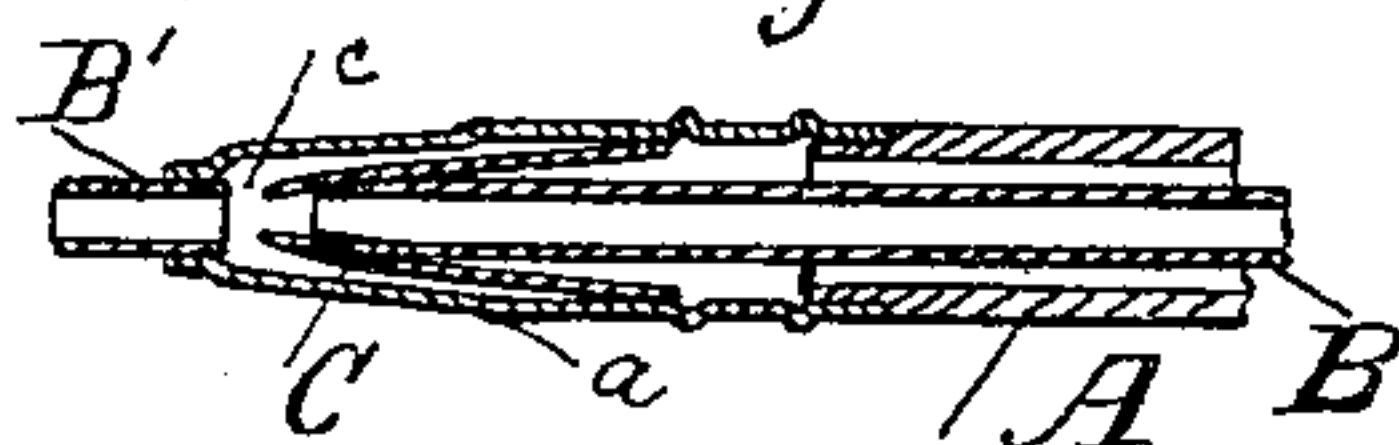
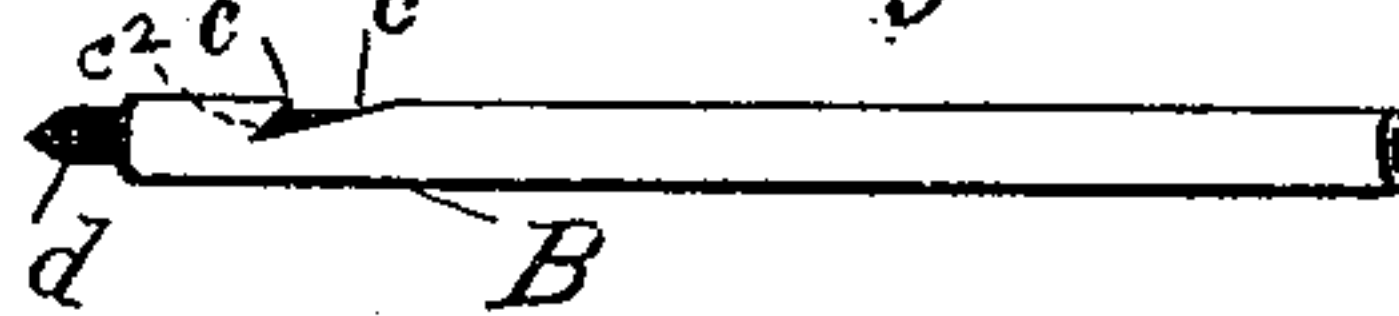


Fig. 6.



Witnesses:

W. B. Masson

L. A. Forick

Inventor:

Charles W. Boman

by atty W. Bailey

UNITED STATES PATENT OFFICE.

CLAES W. BOMAN, OF NEW YORK, N. Y., ASSIGNOR TO JOSEPH RECKENDORFER, OF SAME PLACE.

LEAD AND CRAYON HOLDER.

SPECIFICATION forming part of Letters Patent No. 235,122, dated December 7, 1880.

Application filed August 28, 1880. (Model.)

To all whom it may concern:

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

My invention relates to that kind of holder for leads or crayons in which a tubular case or handle and an inclosed lead-containing tube or receiver, movable longitudinally with respect to one another, are combined with jaws which operate to grasp or release the lead according to the position to which the said tube and handle are moved relatively to one another, the jaws being caused by spring-action to normally occupy a position in which they will grasp the lead, and being brought from that position to one in which they will release the lead by the lengthwise movement of the tube and handle with respect to one another.

To produce a holder possessing the foregoing characteristic I have devised a certain novel combination and arrangement of instrumentalities, which will first be described by reference to the accompanying drawings, and will then be specifically pointed out in the claims.

In the drawings, Figure 1 is a perspective view of the complete holder, with the case or handle broken away at front and rear to uncover the interior working parts. Fig. 2 is a longitudinal central section of the same, the plane of section being centrally through the jaws, which are closed. Fig. 3 is a like section with the jaws open. Fig. 4 is a view of the lead-containing tube or receiver detached, to show more plainly the openings therein through which the jaws act on the lead.

A is the tubular case or handle, of any ordinary or suitable construction, made, in this instance, in the main of wood with a sheet-metal tapering nozzle or front end, *a*.

Within the case is the lead-containing tube or receiver, which, unlike the automatic holder now in general use, does not terminate at the front in spring-jaws, but is a plain sheet-metal tube throughout of a size to easily receive the lead.

The front end of the tube is centered in 50 and preferably projects beyond the nozzle *a*,

and said tube is made capable of sliding lengthwise a certain distance in the handle A. To this end it is, in the present instance, provided with a head or cap, *b*, which projects beyond the rear end of the handle, and may either fit within or upon the same. The latter arrangement is shown in Fig. 2, and the former in Fig. 3. In either case the tube may, by means of the cap or head, be moved back and forth in the handle, its movement beyond the desired point in either direction being restrained by any suitable and well-known means.

Attached to the interior of the handle, on opposite sides of the lead tube or receiver, are jaws C, whose free front ends, by spring-action, are caused to close toward one another. The spring action is obtained, in this instance, by forming the jaws of steel or other suitable spring metal, and making them self-closing upon the tube. At those points on the tube with which, when the tube is in its normal position, the gripping ends of the jaws are in contact, are formed openings *c*, through which the jaws have access to the interior of the tube and close upon and grasp the lead *d*, contained therein, as indicated in Figs. 1 and 2. When the parts are in this position the lead will be held firmly in any desired position by the jaws.

On the other hand, to release the jaws the cap *b* is pressed forward. This moves the tube B forward, and the jaws which are fixed to the handle are consequently withdrawn from the openings *c* and caused to ride up on the solid part of the tube, as indicated in Fig. 3. Their hold on the lead is thus released, and the latter, so long as the cap is pressed forward, is free to be moved back and forth in the tube. If the tube be now drawn in the opposite direction the jaws will again drop into the openings *c* and again project into the interior of the tube. This last-named movement of the tube may be effected automatically by slanting or beveling the edges of the openings *c* toward the rear, as indicated at *c'*, Fig. 4, thus forming inclines over which the jaws travel. When the tube is pushed forward the jaws ride up on these gentle inclines, and their spring force will suffice, when pressure on the cap *b* is relaxed, to draw back the tube and

permit them to again enter the openings. In lieu of or in addition to this arrangement a spiral spring, *d*, of sufficient capacity, may be interposed between the cap and the handle, as shown in Figs. 2 and 3, which spring, compressed by the forward movement of the cap, will, by its recoil when pressure on the cap ceases, bring the parts back to their normal position.

In lieu of two jaws, one jaw only, or even three or more of small size, entering the tube at various points, may be employed; but I prefer to use two jaws, as shown in the drawings.

The construction and arrangement of the lead-receiving tube B may be varied considerably, as indicated, for instance, in Fig. 5, which is a longitudinal central section of the front part of a holder. In this arrangement the tube consists of two parts, B B', the former, B, longitudinally movable, as before, and the latter, B', fixed to or formed on the nozzle *a*. A space is left between the adjoining ends of the two parts, which is the opening through which the jaws C act on the lead. When the tube B is pushed forward its front end advances between and spreads apart the jaws.

It will be found of advantage to make the slits or openings *c* undercut, as shown in Fig. 6 at *c*². With an opening of this shape the jaw that works in the opening will, when the tube moves back, be forced by the inclined front edge, *c*², to take hold of the lead.

With respect to the arrangement shown in Fig. 5, I would further remark that it is feasible to dispense entirely with the front portion, B', the nozzle A, if used to cover the jaws, being provided with an opening at the front of sufficient size to allow the lead to pass through it. It is also entirely feasible to dispense with the nozzle *a*, the jaws in this case being preferably formed so as to encircle the lead when they are closed, forming, as it were, a split nozzle composed of spring-strips, the grasping ends of which will be caused to release the lead by a forward movement of the tube, whose front end will in this case enter between and spread apart the jaws.

In conclusion, I state that I do not here claim, broadly, the employment, within the sheath and in connection with the longitudinally-movable lead-containing tube, of a grasping-jaw whose movement is controlled by the sheath in such manner that the jaw, when the tube is moved in one direction, will enter the opening therein far enough to grasp the lead, and when the tube is moved in the opposite direction will be removed from the opening far enough to release the lead. This feature I have made the subject of separate application for Letters Patent filed in the United

States Patent Office on or about September 27, 1880.

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

1. The combination, substantially as hereinbefore set forth, of the tubular case or handle, the longitudinally-movable lead-receiving tube, and the lead-grasping jaws attached to the handle and expanded or spread apart by the said tube when the latter is moved forward.

2. The combination, substantially as hereinbefore set forth, of the tubular case or handle, the longitudinally-movable lead-receiving tube, the lead-grasping jaws attached to the handle and expanded or spread apart by said tube when the latter is moved forward, and the tube-retracting spring.

3. The combination of the tubular case or handle, the longitudinally-movable lead-containing tube or receiver, and the lead-holding jaws within and attached to the case, with their gripping ends arranged to enter jaw-admitting openings on or in the line of the said tube, substantially as and for the purposes hereinbefore set forth.

4. The combination, substantially as hereinbefore set forth, of the tubular case or handle, the longitudinally-movable lead-containing tube or receiver provided with jaw-admitting openings, and the spring-closing jaws within and attached to the case.

5. In combination with the handle and the spring-closing jaws within and attached to the same, the longitudinally-movable lead tube or receiver brought and held by spring-action to a position within said handle in which the gripping ends of said jaws will be opposite to and enter its jaw-admitting openings and provided with a cap or head projecting from the rear of the handle, by which it may be moved against the stress of the spring, substantially as hereinbefore set forth.

6. The longitudinally-movable lead tube or receiver having jaw-admitting openings with side edges beveled or inclined to the rear, as set forth, in combination with the handle and the lead-grasping jaws within and attached to said handle, substantially as hereinbefore described.

7. The longitudinally-movable lead tube or receiver having undercut jaw-admitting slots or openings, in combination with the handle and the jaws attached to said handle, substantially as hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 20th day of August, A. D. 1880.

CLAES W. BOMAN.

Witnesses:

C. S. BRAISTED,
JOE W. SWAINE.