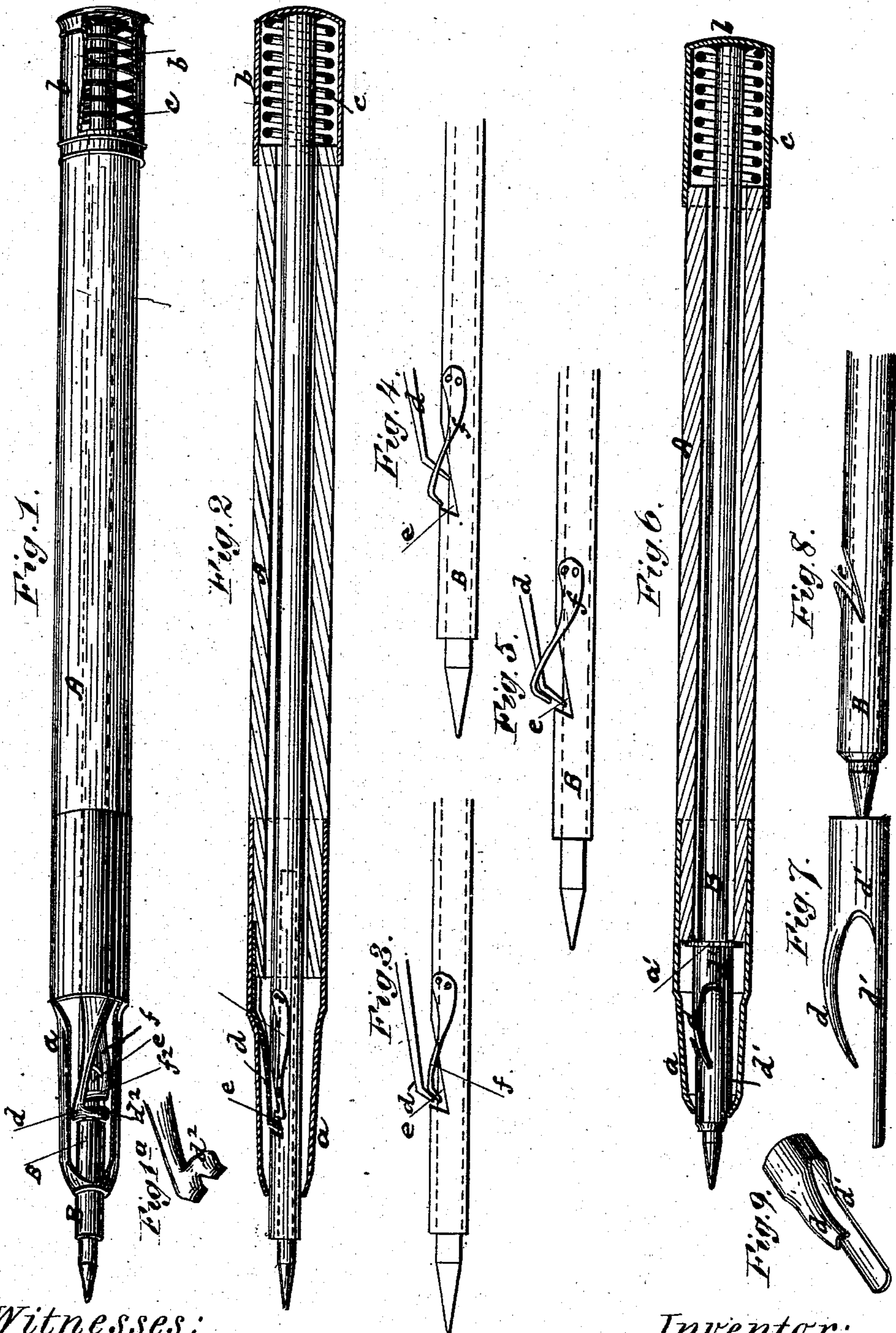


(Model.)

C. W. BOMAN.  
LEAD OR CRAYON HOLDER.

No. 267,643.

Patented Nov. 14, 1882.



Witnesses:

*E. H. Dick*  
*Per Page*

Inventor:

*Claus W. Boman*  
by *W. Bailey*  
his Atty.

# UNITED STATES PATENT OFFICE.

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

## LEAD OR CRAYON HOLDER.

SPECIFICATION forming part of Letters Patent No. 267,643, dated November 14, 1882.

Application filed September 27, 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 lead or crayon holders in which are combined a sheath or handle, a lead tube or receiver in said handle, and one or more lead-grasping jaws, said jaw or jaws and lead-tube being made longitudinally movable with respect to one another, so that the jaws may be removed from or brought in contact with the lead, according to the direction in which they are moved with respect to the lead-holding tube.

My invention consists in combining with the sheath or handle and the lead-holding tube one or more jaws which extend into one or more jaw-admitting openings on or in the line of said tube, so as to grasp the lead, said jaw or jaws and lead-containing tube being longitudinally movable with respect to one another, so that the lead may be grasped or released according to the position which said parts occupy relatively to one another, substantially as hereinafter set forth.

It further consists in combining with the said lead-holding jaw or jaws a clamp or retaining-jaw carried by and moving with the tube and operating to intermittently clamp the lead in the tube, its clamping action taking place when the lead-holding jaw is raised from the lead, the effect, when the tube is longitudinally reciprocated, being to produce a regular forward feed of the lead; and I further so arrange said parts that by moving the tube sufficiently far forward both jaws or sets of jaws will be raised from the lead, leaving the latter free to move in the lead-receiving tube as though there were no clamp or retaining-jaw.

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

Figure 1 is a perspective view, on an enlarged scale, of the holder, a portion of the case being broken away to expose the interior parts. Fig. 2 is a longitudinal central section of the holder, with the lead-receiving tube in elevation. Figs. 3, 4, and 5 are views representing

the jaws in the different positions they assume with respect to the lead-holding tube and to one another at different times during the forward and back movement of said tube. Figs. 6, 7, 8, and 9 are views of a modification hereinafter referred to. All the figures are on an enlarged scale.

The handle or case A is tubular and of the usual construction, being provided with the contracted nozzle or tip *a*.

B is the longitudinally-movable lead-containing tube or receiver, extending at the front into the front opening of the tip and attached at the rear to the cap *b*. The spring *c*, confined between the cap and the end of the handle, serves to retract the tube, and by pressing on the cap the tube can be moved forward against the stress of the retracting-spring.

Inside of and connected with the sheath or handle so as to move therewith is a lead-grasping jaw, *d*. This jaw at its front end enters an opening, *e*, in the lead-containing tube, so as to bear on the lead therein. For this purpose the jaw is preferably made of spring metal, and so constructed and arranged as normally to press inwardly or toward the tube. When the parts are in normal position the jaw is in the opening *e* and bears on the lead with sufficient force to hold it. By pressing on the cap, and thus moving the lead-holding tube forward against the stress of the retracting-spring, the opening *e* will be carried forward beyond the jaw, and the latter will be lifted by the solid part of the tube, the rear edges of the opening *e* being preferably beveled or inclined, as shown, so that the jaw can ride up on them easily. When pressure on the cap is removed the retracting-spring draws the tube back and the jaw once more enters the opening *e* and resumes its hold on the lead.

One or more lead-grasping jaws may be used, as desired, and it or they may be variously arranged to accomplish the object I have in view. For instance, it is not necessary that the jaw should be positively fastened to the sheath, as indicated in Figs. 6 to 9, inclusive, in which the jaw *d* is carried by a sleeve, *d'*, mounted loosely on the lead-tube B, between the front of the tip *a* and a loose washer, *a'*, at the front end of the handle A, on which the tip is fastened. The sleeve is held between these two points so as to be incapable of appreciable

longitudinal movement independently of the handle, and consequently its jaw  $d$  will be admitted to or raised out of the opening  $e$  according to the position of the longitudinally-movable lead-containing tube B. The opening  $e$  in this figure is shown undercut at its front end, in order that the jaw may thereby be forced down or inwardly upon the lead when the tube is retracted. This feature, however, I do not here claim, inasmuch as I have made it the subject in part of separate application for Letters Patent.

The arrangement of the jaw shown in Fig. 6 is advantageous, inasmuch as it permits the jaw to turn with the tube should the latter be twisted or rotated by means of the cap.

If desired, I can combine with the lead-grasping jaw or jaws an instrumentality for feeding forward the lead when desired, and this additional feature is shown embodied in the holder illustrated in Figs. 1 to 5, inclusive. The additional device required for this purpose consists of an intermittently-acting clamp or retaining-jaw, lettered  $f$ , which is attached to and moves with the tube B, and is preferably of spring metal, with its free end extending over or into the opening  $e$ , but normally out of contact with the lead. The clamp-jaw is formed, as shown in the drawings, with its acting end projecting laterally from its shank toward the shank of the grasping-jaw  $d$ . The grasping-jaw is similarly formed, as shown in Fig. 1<sup>a</sup>, and the laterally-projecting portions  $f^2$   $d^2$  of the two jaws are in line with one another, as shown, so as to lie in the same path. The parts  $f^2$   $d^2$  slope upwardly to the rear. When the parts are in normal position the clamp-jaw is out of contact with the lead and in rear of the grasping-jaw, as indicated in Figs. 1 and 2. When the tube B is pushed forward the clamp-jaw  $f^2$  passes under the grasping-jaw  $d^2$ , with the effect of raising the latter from the lead and depressing the former (the clamp) upon the lead, which is thereby clamped in and compelled to move forward with the tube so long as the clamp-jaw is beneath the grasping-jaw, as indicated in Fig. 3. As soon as the tube moves far enough forward to clear the clamp-jaw from the grasping-jaw the former will rise from the lead and the latter will descend upon the lead or into the rear portion of the opening  $e$ , as indicated in Fig. 4, so that when pressure is removed from the cap and the tube is retracted the lead carried forward with the tube by the action of the clamp will now be held by the grasping-jaw and prevented from moving back with the tube, while the clamp-jaw in its rearward movement rides over the grasping-jaw, as indicated in Fig. 5, and returns to its normal position. Thus each forward and backward movement of the tube will cause the lead to advance a definite distance, determined by the extent of said movement and the length of that portion of the movement during which the clamp-jaw is held down by the grasping-jaw on the lead. By moving the tube forward the full distance needed to bring the grasping-

jaw upon the rear portion of the beveled edges bounding the rear of opening  $e$ , the jaw will be raised far enough to entirely release the lead, so as to permit it to freely be moved out of or into the tube to any extent desired.

I do not desire to restrict myself to the use of the clamp and grasping jaws conjointly, for it is manifest, as hereinbefore described, that the grasping jaw or jaws alone may be used, the clamp-jaw being an accessory, which can be employed in case it is desired to have a definite regular feed for the lead.

It is manifest, of course, that the clamp-jaw can also be employed, if desired, with a grasping-jaw arranged as shown in Fig. 6. The said grasping-jaw in that case should have the shape of the jaw  $d$   $d^2$  shown in the preceding figures.

It is evident that the construction and arrangement of the grasping device may be varied to a considerable extent without departure from my invention, the essential feature being a grasping-jaw whose movement is controlled by the sheath or handle, so 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. I therefore do not restrict myself to the details herein shown and described in illustration of my invention; but

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

1. The combination, with the sheath or handle and the longitudinally-movable lead-containing tube, of a lead-grasping jaw inside of and connected with the sheath, extending into the interior of the tube through an opening therein, so as to have contact with the lead, and operated by the tube, according to the direction of its movement, to clamp and release the lead, substantially as hereinbefore set forth.

2. In a lead or crayon holder, the combination of a sheath or handle, a lead tube or receiver within said handle, a lead-grasping jaw longitudinally movable with respect to said tube and adapted to enter an opening therein, a spring for moving said parts to the position in which the jaw clamps the lead, and a pressure-cap by which the parts are moved with respect to one another against the stress of the spring to release the lead, substantially as hereinbefore set forth.

3. The combination, substantially as hereinbefore set forth, of the sheath or handle, the longitudinally-movable lead-containing tube, the pressure-cap, the retracting-spring, and a grasping-jaw inside of and connected with the sheath, arranged to enter an opening in the tube so as to grasp the lead therein when the tube is retracted and to be removed from the opening out of contact with the lead when the tube is moved forward, as described.

4. The combination, with the sheath or handle and the longitudinally-movable lead-containing tube, formed with a jaw-admitting opening, as described, of the grasping-jaw, attached to

and carried by a sleeve which encircles the tube and is held between the nozzle or tip and a shoulder on the handle, as shown and described.

5 5. The combination of the handle or sheath, the longitudinally-moving lead-containing tube, formed with jaw-admitting opening, as described, the grasping-jaw, and an intermit-  
10 tently-operating clamp or retaining-jaw carried by the tube, these parts being combined and arranged to operate jointly, substantially as and for the purposes hereinbefore set forth.

15 6. The combination, with the longitudinally-movable lead-carrying tube, of a lead-grasping jaw carried by the sheath and provided with a projection that alternately passes under and rides over a projection carried by and moving with the said tube, whereby said jaw is caused to release the lead when the tube moves for-

ward, together with the lead, and to grasp and 20 retain the lead in its advanced position when the tube recedes, substantially as and for the purposes hereinbefore set forth.

7. The sheath, the longitudinally-movable lead-carrying tube, the pressure-cap, and the 25 retracting-spring, in combination with a lead-grasping jaw carried by the sheath and provided with a projection that alternately passes under and rides over a projection carried by and 30 moving with said tube, substantially as and for the purposes hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 23d day of September, 1880.

CLAES W. BOMAN.

Witnesses:

LEOPOLD AUSBACHER,  
JOE W. SWAINE.