(No Model.)

A. T. CROSS.

CRAYON HOLDER.

No. 296,538. Patented Apr. 8, 1884.

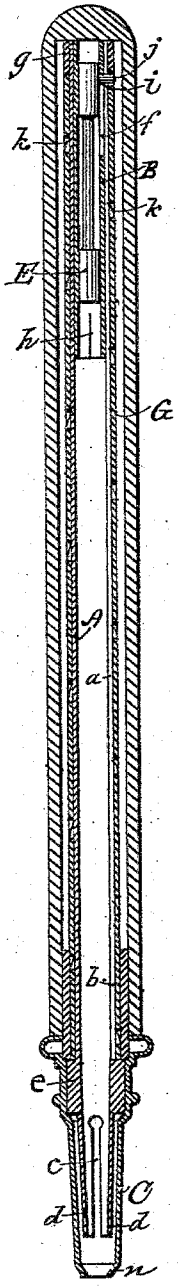


FIG. 1.

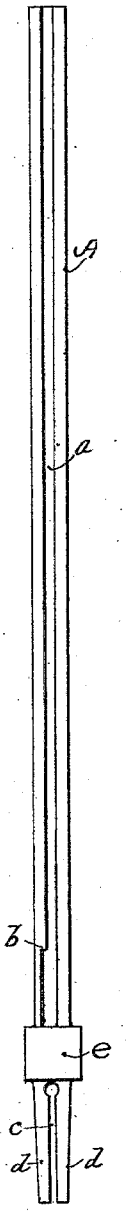


FIG. 2.

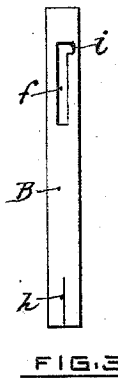


FIG. 3.

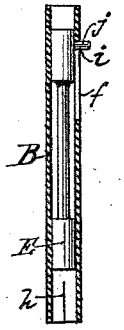


FIG. 6.

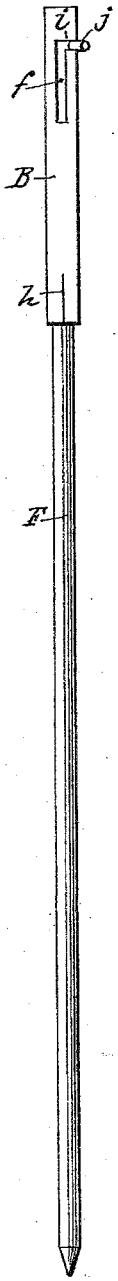


FIG. 4.

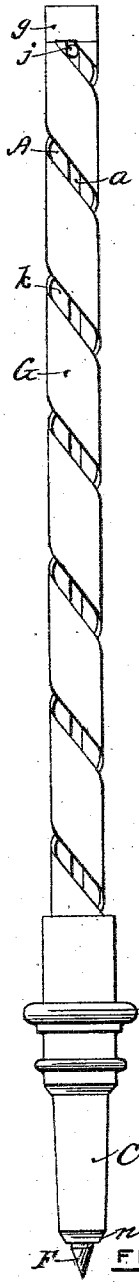


FIG. 5.

WITNESSES:

Alba R. Abbott

Socrates Scholfield

INVENTOR:

Alonzo T. Cross

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

ALONZO T. CROSS, OF PROVIDENCE, RHODE ISLAND.

CRAYON-HOLDER.

SPECIFICATION forming part of Letters Patent No. 296,538, dated April 8, 1884.

Application filed August 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALONZO T. CROSS, of Providence, in the State of Rhode Island, have invented an Improvement in Crayon-Holders, of which the following is a specification.

My invention relates to that class of crayon-holders in which the crayon is projected from the point-tube of the holder or retracted within its bore by means of screw mechanism; and it consists in the improved construction of the crayon-carrier and the slotted screw-holding tube, whereby the holding-stub of a used-up crayon may be automatically expelled from the carrier and a fresh crayon be readily inserted therein for continued use; and the invention herein described, which relates to the improved construction and movement of the crayon carrier and forcer, is also described, but not claimed, in my application No. 103,773, of even date herewith, which refers specifically to the combination of a spring with the forcer of a crayon-carrier, whereby the crayon-stub will, upon its ejection, be thrown to a considerable distance from the point of the holder.

Figure 1 represents an axial section of the holder. Fig. 2 represents an elevation of the slotted screw-holding tube. Fig. 3 represents an elevation of the carrier-tube. Fig. 4 represents an elevation of the carrier with an inserted crayon. Fig. 5 represents an elevation of the several parts of the screw mechanism as secured to each other preparatory to the final attachment of the case of the holder. Fig. 6 represents an axial section of the carrier.

In the accompanying drawings, A is the screw-holding tube, provided longitudinally with a slot, *a*, the lower end of which is made wider than its upper portion to form the shoulder *b*. The lower end of the tube A is provided with the opposite slots *c*, and the two jaws *d d* so formed are arranged to spring toward each other, in order to clasp the crayon, and also to frictionally hold the lower end of the carrier-tube B whenever the carrier is brought down to expel the unused stub of the crayon, and upon the tube A, between the inner ends of the slots *a* and *c*, is secured the collar *e*, by means of which the point-tube C is secured to the tube A.

The carrier for the crayon is formed of a tube, B, made to fit loosely within the bore of the tube A, and provided longitudinally at its upper end with a slot, *f*, the upper portion of which is laterally deflected to form a holding-notch, *i*, for the pin *j* of the forcer, and the lower end of the carrier-tube B is provided with a split, *h*, for a short distance, in order to adapt the same for receiving crayons of slightly-different diameters.

Within the carrier-tube B is placed the loosely-moving forcer E, provided with the pin *j*, which enters the slot *f* in the carrier-tube, and, passing through the slot *a* of the tube A, enters the groove *k* of the hollow screw G, which is loosely held upon the tube A by means of the fixed collar *g*. The middle portion of the forcer E is made smaller than its two ends, in order to diminish the friction within the bore of the carrier-tube.

The operation of the holder will be as follows: Upon turning the screw G in the proper direction the crayon will be fed downward to the point *n*, and when the crayon has become nearly used up the forward end of the carrier will strike the inner side of the conical end *n* of the point-tube C, and also encounter the resistance caused by the spring action of the jaws *d d*, which will serve to prevent the carrier-tube B from rotating within the bore of the tube A under the continued movement of the screw, which movement will cause the pin *j* to move laterally to a position below the shoulder *b* in the slot of the tube A, and also at the same time out of its retaining-notch *i* in the slot *f* of the carrier-tube, and then the continued action of the screw will force the pin *j* along the slot *f*, and this outward movement of the forcer will cause the stub of the crayon F to be suitably ejected from the split end of the carrier-tube B. In order to insert a fresh crayon, the movement of the screw G is to be reversed, thus bringing the pin *j* back to the upper end of the slot *f* preparatory to the insertion of the crayon, and as soon as the pin *j* strikes the upper end of the slot *f* the lateral thrust of the revolving screw will cause the movement of the pin *j* into the holding-notch *i*, and also to contact with the straight side of the slot of the tube A, the carrier-tube at this time being prevented from rotation by

means of the friction produced by the spring-jaws *d d*. The continued movement of the screw will now draw the carrier-tube and the inserted crayon back within the bore of the holder.

My above-described improvement differs from all other crayon-holders of this class in employing but one pin to enter the slot of the tube A, whereas in all others two pins are necessarily employed.

The notch *i*, made at the upper end of the slot *f* of the carrier-tube, serves to prevent the carrier-tube from being forced backward by the act of inserting the lead or crayon, and unless the pin *j* is first held in the notch *i* the lead or crayon cannot be inserted into the carrier-tube except when the carrier-tube is at its extreme backward position in the holder, and with leads or crayons of ordinary and proper lengths such insertion would be wholly impracticable. The retaining-notch of the carrier-tube is therefore the gist of my present improvement, and I am aware that the combination otherwise of a carrier-tube and forcer is old and well known.

I claim as my invention—

1. In a crayon-holder, the combination of the hollow screw and screw-holding tube provided with a slot, the lower end of which is enlarged at one side to form a shoulder, with the carrier-tube provided longitudinally with a slot having a pin-holding notch at its upper end, and the forcer provided with a pin adapted to pass through the slot in the carrier-tube and enter the groove of the hollow screw, for operation substantially as described.

2. In a crayon-holder, the combination of the hollow screw and screw-holding tube provided with a slot, the lower end of which is enlarged at one side to form a shoulder, with the carrier-tube provided longitudinally with a slot having a pin-holding notch at its upper end, and the forcer provided with a pin adapted to pass through the slot of the carrier-tube and enter the groove of the hollow screw, and the spring-jaws arranged within the point-tube and adapted to prevent the rotation of the carrier-tube when the pin of the forcer has arrived at the shoulder in the slot of the screw-holding tube, substantially as described.

3. In a lead or crayon holder, the combination of the carrier-tube, provided longitudinally with a slot having a lateral notch at its upper end, with a forcer arranged within the carrier-tube, and provided with a guiding-pin passing through the slot of the carrier-tube and adapted to enter the lateral notch, whereby the carrier-tube will be prevented from backward movement upon the introduction of the lead or crayon, substantially as described.

Witnesses: ALONZO T. CROSS.
IRA O. SEAMANS,
SOCRATES SCHOLFIELD.