

(No Model.)

F. J. W. FISCHER.
LEAD OR CRAYON HOLDER.

No. 336,044.

Patented Feb. 9, 1886.

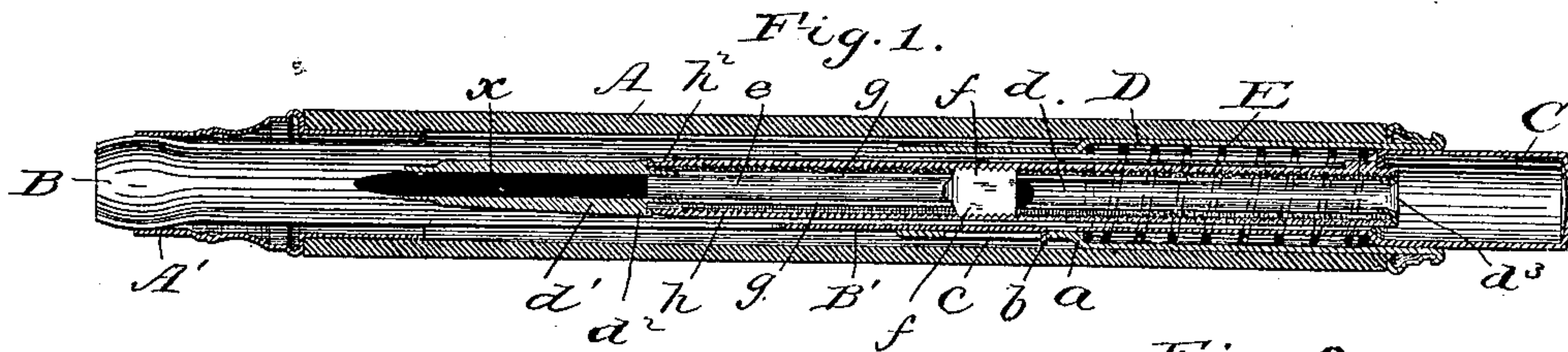
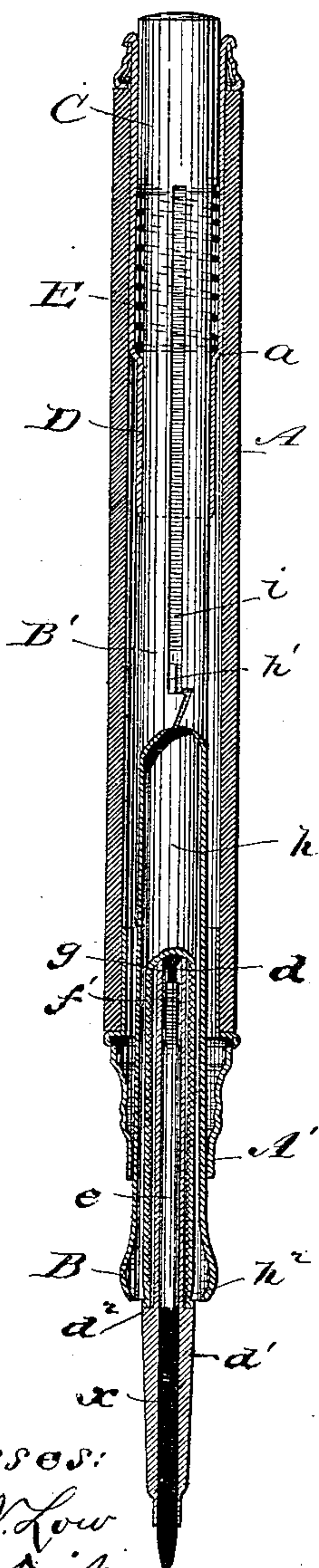


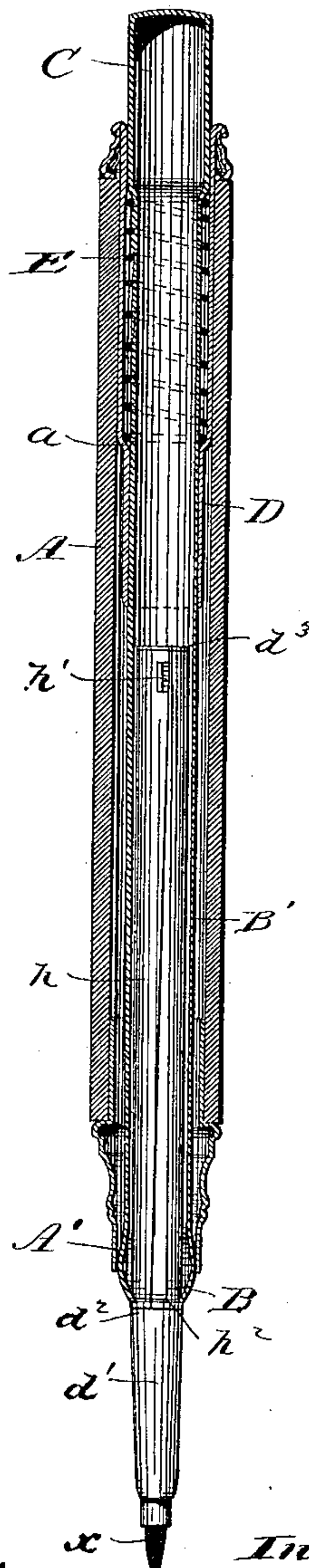
Fig. 2.



Witnesses:

H. N. Low
E. T. Dick

Fig. 3.



Inventor:

Federick J. W. Fischer
by Marcus Bailey
his attorney

UNITED STATES PATENT OFFICE.

FREDERICK J. W. FISCHER, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO
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LEAD OR CRAYON HOLDER.

SPECIFICATION forming part of Letters Patent No. 336,044, dated February 9, 1886.

Application filed April 29, 1885. Serial No. 163,832. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK J. W. FISCHER, of Jersey City, in the State of New Jersey, have invented a certain new and useful Improvement in Lead and Crayon Holders, of which the following is a specification.

My improvement has reference to that kind of pencil or lead and crayon holder now known to the trade as the "Automatic-Drop Pencil," of which the holder set forth in Reissued Letters Patent No. 10,335, of June 5, 1883, and in British Letters Patent No. 1,046, of A. D. 1883, for the same invention, may be considered the type.

The object of the present improvement is to obtain a holder of this kind in which the drop device containing the lead is combined with a propelling mechanism, by which the lead or crayon contained in said device may be moved therein as required. In other words, the object is to combine in a convenient, simple, and effective way in one device the characteristics of a "propeller" and an "automatic-drop" pencil.

To this end I combine, with the sheath or holder and the jaws for holding the drop device in its projected position, a drop device embracing the essential characteristics of a propeller-pencil—that is to say, an inner tube containing the lead and follower for propelling the same, and an outer tube capable of rotary movement on said inner tube, the propeller being engaged by the outer tube through the medium of a screw-thread or its equivalent in such manner that when the one tube is rotated longitudinally with respect to the other the propeller will be moved forward or backward in the lead-containing tube, according to the direction of rotation. The combination of these parts—to wit, the sheath, grasping mechanism, and propeller drop device—is such that one of the tubes of the propeller drop device is connected to the grasping mechanism or external holder in such manner as to be incapable of rotary movement with respect thereto, while the other one of said tubes is left free to revolve, the result being that when the drop device is projected from the holder the lead can readily be adjusted by taking hold of the projecting end of the drop device and rotating it with respect to the sheath, such rotary movement effecting

the longitudinal movement of the follower in one direction or the other, according to the direction of rotation. The grasping-jaws which hold the pencil project beyond the end of the holder like the jaws of the ordinary "Automatic" pencil, and they are arranged to take hold of the propeller drop-pencil when the latter is in its projected position at a point near and in rear of the propeller-tip, thus holding and steadying the pencil at a point near its tip, without, however, interfering in any way with the manipulation of the propeller-tip requisite for the purpose of adjusting the lead.

In the accompanying drawings is represented the preferred embodiment of the invention.

Figure 1 is a longitudinal central section of the holder with the drop device entirely within said holder. Fig. 2 is a longitudinal central section of the same, partly in elevation, the line of section being at right angles to that in Fig. 1, and the parts being in the position they assume when the jaws are pushed forward and expanded, and the drop device protrudes from the holder. Fig. 3 is a like section, partly in elevation, with the parts in the position they occupy when the jaws have closed upon the protruding drop device.

A is the external sheath or handle, provided with a contracted tip or front end, A', from which project the grasping-jaws B, which have a spring action and are set to normally stand apart. The jaws are carried by a tubular stem, B', longitudinally movable within the sheath, and terminating at the rear end in a pressure-cap, C, which projects from the rear of the sheath. Between the pressure-cap and a shoulder, a, on the interior of the sheath is the retracting-spring E. A lug, b, on the stem B' projects into a slot, c, in the lining D, for the purpose of limiting the longitudinal movement of the stem. Thus the jaws and their stem can move lengthwise with respect to the sheath, but cannot rotate independently of the same. The retracting-spring normally draws back the jaws into the contracted nozzle A', which causes the jaws to close.

Thus far the holder differs in no essential respect from the well-known "Automatic" pencil now in the market.

The propeller drop device which is com-

bined with said holder consists of an inner
 tube, d , provided with a tip or nozzle, d' , a
 propeller or follower consisting of a stem,
 e , fitting snugly within tube d , and provided
 5 on opposite sides with lugs f , which project
 through longitudinal slots g in said tube, and
 are cut on their exterior faces with screw-
 threads f' , and an external tube, h , which fits
 and is adapted to rotate on the inner tube, and
 10 is held thereon between the shoulder d^2 and a
 flange, d^3 , on the rear end of the tube, usually
 formed by upsetting said end, said external
 tube being internally screw-threaded to en-
 15 gage the screw-threaded lugs f of the follower
 or propeller. The two tubes thus are capable
 of rotary movement only with respect to each
 other, and consequently by rotating the outer
 tube the propeller f will be caused to move
 lengthwise in the inner tube, thus advancing
 20 the lead x , to compensate for wearing away of
 the latter. The propeller drop device thus or-
 ganized is placed within the jaws B and their
 tubular stem B', and one of the tubes—in this
 instance the outer tube, h —is caused to engage
 25 the tubular stem B' by a lug, h' , on it, which
 enters a longitudinal slot, i , in the said stem.
 The tube h is thus capable of longitudinal
 movement with respect to the stem and han-
 dle, but is incapable of rotary movement with
 30 respect thereto. Said tube h at its outer end
 is scored or indented, as seen at h^2 , to form an
 annular recess to be entered by the grasping-
 jaws, and the slot i is of such length that the
 propeller drop device at one extreme of its
 35 movement will be contained entirely within
 the sheath, while at the other extreme of its
 movement—viz., when the stop-lug h' brings
 up against the front end of slot i —the drop
 device will project just far enough to bring
 40 the groove h^2 to a position where the jaws B
 in closing will enter it.

The groove or recess h^2 , while formed in that
 tube, h , which has no rotary movement with
 respect to the grasping-jaws, is located at or
 45 just in rear of the point where this tube meets
 the propeller-tip d' , which is secured to or
 forms part of the inner rotatable tube, d . Thus
 the pencil when projected is grasped firmly
 and steadied at a point near its outer end,
 50 while at the same time the jaws which per-
 form this office do not at all interfere with the
 operation of rotating the propeller-tip for the
 purpose of adjusting the lead, and, further-
 more, the pencil when released from the grasp-
 55 ing-jaws, is entirely loose and free to move
 back and forth in the holder without impedi-
 ment. Thus when the parts are in the posi-
 tion shown in Fig. 1, and it is desired to pro-
 ject the drop-pencil for use, the holder is held
 60 point downward and the pressure-cap is de-

pressed, thus pushing forward and opening
 the jaws B. The drop-pencil, being free to
 drop, falls until the lug h' brings up against
 the front end of slot i . Pressure is now re-
 moved from the pressure-cap, and the retract- 65
 ing-spring at once pulls back the jaws (and
 the propeller-pencil also) until said jaws
 are caused to close upon the propeller-pencil
 and enter the groove h^2 , as seen in Fig. 3. In
 this position the pencil is ready for use, and 70
 if the lead x does not protrude far enough, all
 that is needed is to hold the sheath in one hand
 and to rotate the tube d by its nozzle d' in the
 proper direction to cause the propeller or fol- 75
 lower e to advance and push or carry forward
 the lead. In this way I combine in one pencil
 the useful characteristics of a "propeller"
 and an "automatic-drop" pencil.

What I claim herein as new and of my own
 invention is— 80

1. The combination, with the sheath, the
 pressure-cap, the retracting-spring, the grasp-
 ing-jaws extending beyond the front end of
 the sheath, and a stop for limiting the extent
 to which the pencil can protrude from the 85
 sheath, of a propeller drop-pencil longitudi-
 nally movable as a whole in said sheath, hav-
 ing the inner one of the tubes of which it is
 composed free to revolve independently of the
 sheath, and terminating at the front in a pro- 90
 peller-tip, and the other of said tubes con-
 nected to said sheath, so as to be incapable of
 rotation independently thereof, and provided
 at or near the point where it meets the pro-
 peller-tip with a recess or groove for reception 95
 of the acting ends of the grasping-jaws, sub-
 stantially as and for the purposes hereinbefore
 set forth.

2. The combination, with the sheath, the
 pressure-cap, the retracting-spring, the jaw- 100
 carrying stem, and the grasping-jaws project-
 ing beyond the sheath, of the tube h , inter-
 nally screw-threaded and provided with a lug
 to enter a longitudinal slot in the jaw-carrying
 stem, and with a groove or recess, h^2 , for the 105
 jaws, the inner rotatable longitudinally-slotted
 lead-tube d , provided with a propeller-tip, d' ,
 projecting beyond the front end of tube h , and
 the follower or propeller contained in said
 tube d , and screw-threaded to engage the 110
 tube h , intending to claim none of these parts
 separately, but only the combination of all of
 them, when constructed, arranged, and operat-
 ing as hereinbefore set forth.

In testimony whereof I have hereunto set : 115
 my hand this 16th day of April, 1885.

FREDERICK J. W. FISCHER.

Witnesses:

SAMUEL KRAUS,
 JOE W. SWAINE.