(No Model.)

F. J. W. FISCHER.

PENCIL OR CRAYON HOLDER.

No. 335,908. Patented Feb. 9, 1886.

Fig. 1.

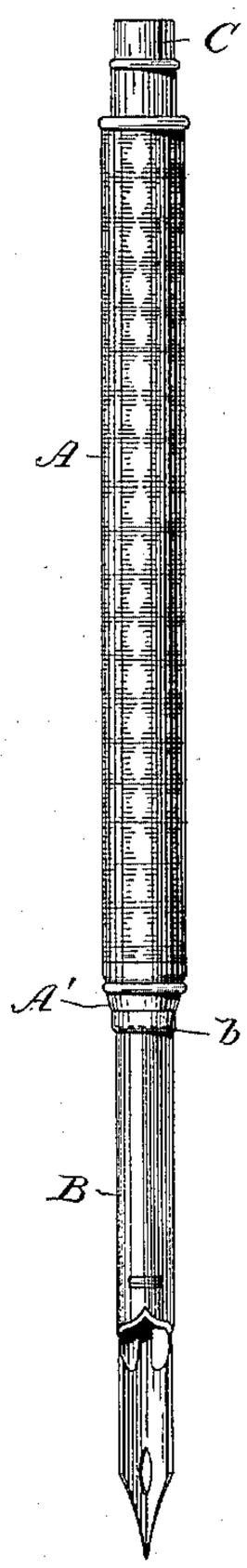


Fig. 2.

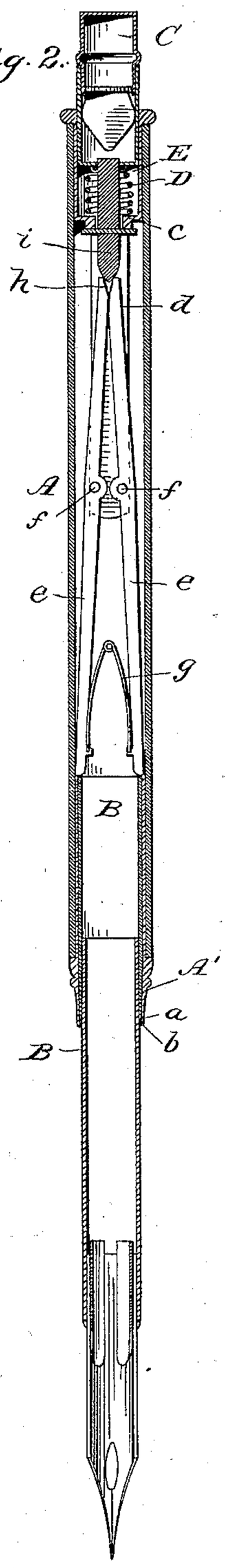


Fig. 3.

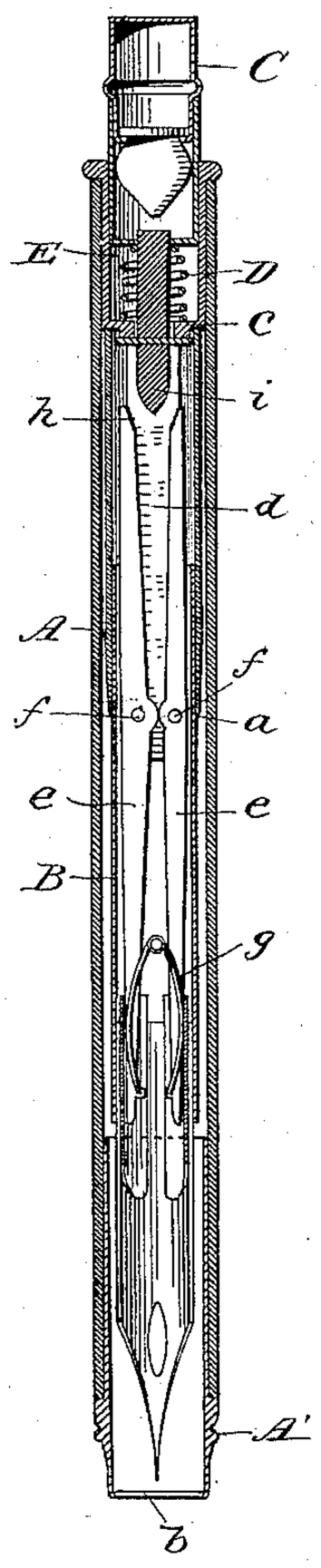
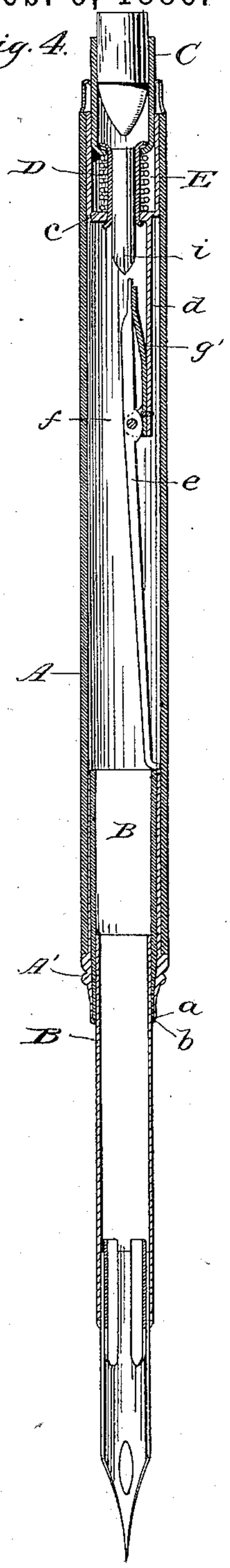


Fig. 4.



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UNITED STATES PATENT OFFICE.

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PENCIL OR CRAYON HOLDER.

SPECIFICATION forming part of Letters Patent No. 335,908, dated February 9, 1886.

Application filed December 28, 1885. Serial No. 186,955. (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 certain new and useful Improvements in Holders for Pens, Pencils, and other Articles, of which the following is a specification.

This invention relates to what is known as a "gravity" or "drop" holder—that is to say, a holder in which the pen, pencil, or other article is combined with a sheath or case in which it can move freely back and forth within prescribed limits, and with spring-controlled locking or retaining mechanism, whereby it is held in either its protruded or its retracted position.

An article possessing the foregoing general characteristics is not of my invention, but is the subject of reissued Letters Patent No. 10,335, dated June 5, 1883.

My improvement, while applicable to various articles that may be used to advantage in a gravity or drop holder, has been designed with more particular reference to the production of a pen-holder of this type, and its object is to obtain, with a case or sheath of given length and diameter, a longer and larger pen-holding barrel and a capacity for a greater length or range of movement of the same than has been practicable or convenient hitherto.

The feature that characterizes my invention resides in this, that while I use, as in other constructions hitherto patented, one or more vibratory spring-controlled retaining-jaws, I make the stem or barrel of the sliding pen-holder proper or other article hollow, and I so combine these two instrumentalities that when the retaining-jaws are in position to release the holder they will be in a position to enter the interior of the barrel, or, in other words, the barrel can surround them. In this way I can readily make the barrel of large diameter, and I can give it a very considerable range of movement.

In the accompanying drawings, Figure 1 is a view of the gravity holder with the pen protruding. Fig. 2 is a longitudinal central section, on a larger scale, of the device with the parts in the position represented in Fig. 1. Fig. 3 is a like section with the parts in the position they assume when the pen is in its retracted position. Fig. 4 is a view of a modification hereinafter referred to.

In the drawings, A is a case or sheath, of hard rubber or other suitable material, containing the sliding pen-holder B, which fits snugly within the sheath, but not too snugly to prevent it from being capable of freely sliding in the same. In a device of this kind it is requisite that the article should be capable of this sliding movement within prescribed limits—that is to say, should be capable of moving forward far enough to protrude the proper distance beyond the front end of the sheath, and of moving in the opposite direction far enough to be wholly contained within the sheath. It therefore becomes necessary to provide a "stop" by which its movement may be arrested at the desired point or points. This stop may be formed or provided in various ways.

In the present instance the forward movement of the part B is arrested by a shoulder, *a*, on it, which, at the point where the forward movement should terminate, brings up against the contraction *b* of the metal ferrule A′, which is fixed to the front end of the sheath. In its rearward movement the part B brings up against any suitable stop—as, for instance, the closed rear end of the sheath.

The pen-holder B is formed at its front end in any usual or convenient manner to receive and hold a pen; and it consists, in the main, as shown in the sectional figures, of a tubular stem or barrel open at the rear end.

To provide for locking, retaining, and releasing the pen-holder, I make use of the following instrumentalities: The sheath A at its rear end is provided with a pressure-cap, C, and a retracting-spring, D, similar to the like instrumentalities usually employed in the gravity or drop pencil, or in the well-known "automatic" lead and crayon holder. The spring is confined between the head of the pressure-cap and the base or diaphragm *c* of the ferrule E, in which the pressure-cap moves, said ferrule being fitted firmly in the rear end of the sheath A. Extending inwardly from this ferrule toward the front of the sheath is an arm or strip, *d*, on which is pivoted at *f* the two lever-jaws *e*. Their front ends normally are

spread apart by a spring, *g*, attached to and interposed between them, and their rear ends come together, and at their extreme rear are beveled at *h*, as shown, to permit the introduction between them of some device calculated to spread them apart, and consequently to cause a corresponding approach of the front ends. This device consists in the present instance of a pin or rod, *i*, attached to the pressure-cap and extending inwardly through the closed base *c* of the ferrule E. The jaws are so arranged that when normally spread apart their front ends will be in position to abut against the edge of the rear end of the tubular barrel or stem of the holder B when the latter is in its protruded position, and when, on the contrary, these front ends are contracted or caused to approach one another they occupy so contracted a space that they can enter freely the tubular interior of the holder B.

When the pen-holder is retracted within the sheath, the parts occupy the position indicated in Fig. 3. In this position the jaws are entirely within the tubular pen-holder, and are by their spring pressed outwardly against the inner walls of the same. This pressure is amply sufficient to hold the pen-holder in its retracted position, although some positive lock might be employed for the purpose. For instance, the jaws might have outwardly-protruding points to enter holes in the barrel of the pen-holder. In this event the pen-holder should of course be guided in its sliding movement in such manner as to be prevented from any rotary movement, or at least any such rotary movement as would tend to carry the holes in it out of register with the outwardly-protruding points on the jaws.

In order to permit the pen-holder to drop, the holder or sheath A is held point downward and the pressure-cap is pushed forward. This causes the pin or rod *i* to advance between and to spread apart the beveled rear ends, *h*, of the stems of the jaws, thus bringing together the jaws and releasing the holder, which, being free to drop, slides forward until its shoulder *a* brings up against the contraction *b*, at which point the rear end of the pen-holder is just in advance of the front ends of the jaws. Pressure upon the cap is now removed, and the retracting-spring forces it rearwardly, carrying back the pin *a* and permitting the jaws to spread apart. In so doing they come opposite the solid edge of the rear end of the barrel of the holder, and thus lock the latter firmly in position, as shown in Fig. 2. To bring the pen-holder back to its retracted position, all that is necessary is to hold the instrument point upward and then to press on the pressure-cap.

Two jaws are not indispensable. Obviously more than two can be employed, and, indeed, one only could be used, in which event the jaw-controlling spring should be arranged as seen at *g'*, Fig. 4. This single jaw acts just as the two jaws to hold the pen-holder in retracted position by frictional spring-pressure and to hold or lock it in protruded position by coming just behind the rear end of the pen-holder.

I am aware that a pusher has before been employed to enter between the retaining-jaws of a drop or gravity holder. This feature is exemplified in Letters Patent No. 297,060, of April 15, 1884; but in said patented structure the pusher effects not the closing but the opening of the acting ends of the jaws, and the sliding holder and jaws are not so combined that the jaws may be received within the said holder.

I have described the jaws as locking the sliding holder in the protruded position by coming just behind its rear end; but they may, if desired, positively engage the holder. I have also, for the sake of convenience, designated the retaining device by the term "jaws;" but manifestly they need not be jaws in the strict acceptation of the term.

Having now described my improvements and the best way known to me of carrying the same into effect, what I claim herein as new and of my own invention is as follows:

The combination of the sheath, the sliding tubular stem or holder, the stop for arresting the forward movement of the holder, the vibratory spring-controlled jaw or jaws arranged so that their acting end or ends stand normally outward or apart in position to meet or engage the said holder, the pressure-cap, the pusher connected to or actuated by said pressure-cap, and the retracting-spring, these elements being combined and having the mode of operation substantially as hereinbefore shown and set forth.

In testimony whereof I have hereunto set my hand this 12th day of December, 1885.

FREDERICK J. W. FISCHER.

Witnesses:

SAMUEL KRAUS,

W. H. BENSON, Jr.