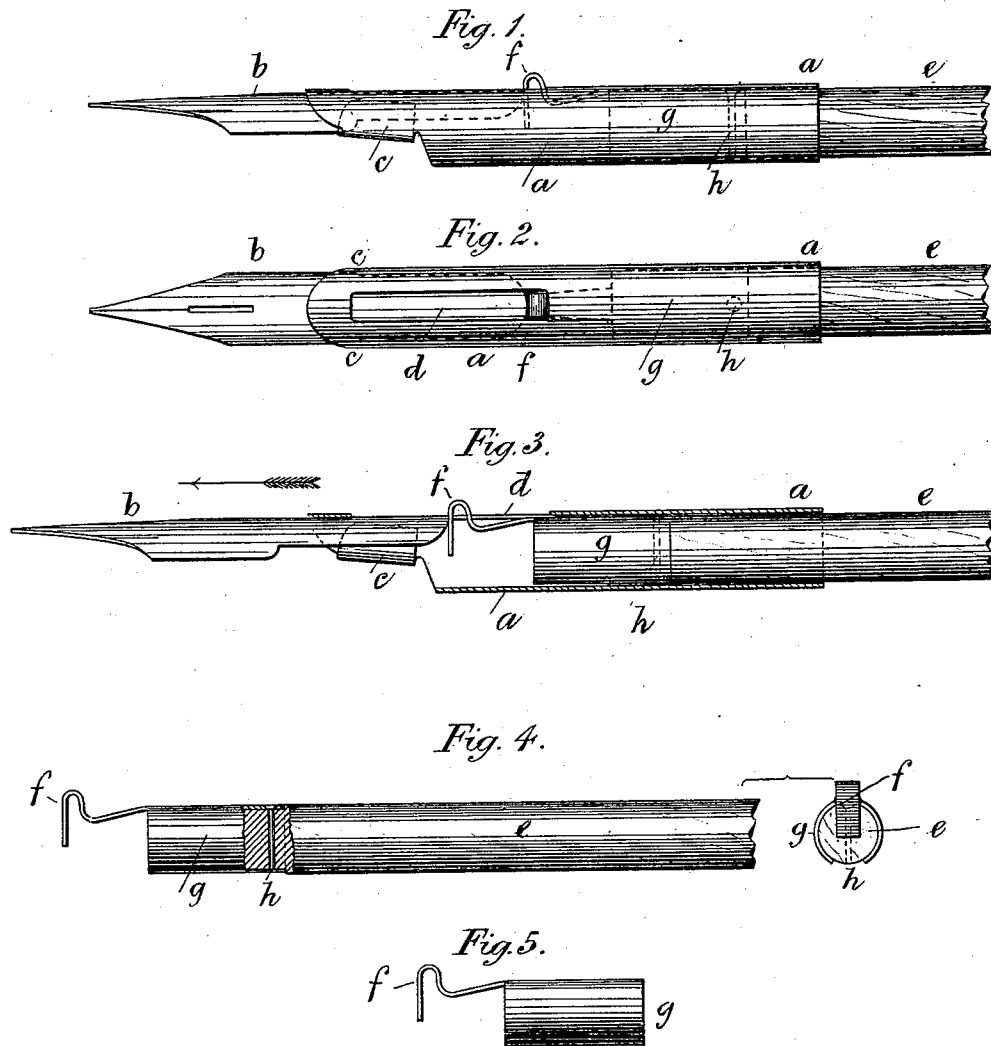


(No Model.)

T. HOOPER & S. G. MOORE.  
DISCHARGING PEN HOLDER.

No. 420,799.

Patented Feb. 4, 1890.



Witnesses:-  
George Shaw  
Richard Skerrett

Inventors:-  
Thomas Hooper  
Samuel George Moore

# UNITED STATES PATENT OFFICE.

THOMAS HOOPER AND SAMUEL GEORGE MOORE, OF BIRMINGHAM, COUNTY OF WARWICK, ENGLAND.

## DISCHARGING PEN-HOLDER.

SPECIFICATION forming part of Letters Patent No. 420,799, dated February 4, 1890.

Application filed November 13, 1889. Serial No. 330,164. (No model.)

*To all whom it may concern:*

Be it known that we, THOMAS HOOPER and SAMUEL GEORGE MOORE, (trading as Hinks, Wells & Co.,) of Birmingham, in the county of Warwick, England, subjects of the Queen of Great Britain, have invented certain new and useful Improvements in Discharging Pen-Holders, of which the following is a specification.

Our new or improved discharging pen-holder consists of three parts—namely, a stick or holder, a light metallic tube sliding on one end of the stick or holder, and a spring fixed to that end of the stick or holder carrying the light metallic tube. The light metallic tube resembles, generally, the so-called “barrel” of an ordinary pen-holder having two turned-in sides or flaps or other equivalent parts for the reception of the side edges of the slip-pen. The spring on the end of the stick consists of a narrow strip of thin sheet-steel or other elastic metal or alloy, the free end of the said spring being raised into a convex shape. The light metallic tube or barrel of the pen-holder has a longitudinal slot extending through nearly one-half its length, in which slot, when the said tube or barrel is placed upon the stick or holder, the convex end of the spring engages.

The action of the parts is as follows: The metallic tube or barrel is placed upon the stick in the usual way, the end of the spring occupying the rear end of the slot, and about one-half of the length of the said tube or barrel being occupied by the stick. The pen is then inserted in the holder in the usual way. When it is wished to discharge the pen, the light metallic tube or barrel carrying the pen is held between the thumb and finger and the stick is pushed downward—that is, toward the point of the pen. The stick is thereby made to advance in the said tube or barrel, and the end of the spring pressing against the top end of the pen pushes it forward and discharges it from the holder.

Figure 1 of the accompanying drawings represents in side elevation, and Fig. 2 in plan drawn to a large scale, a discharging pen-holder constructed according to our invention, a portion of the stick or holder being omitted. Fig. 3 represents the holder in

longitudinal section, the stick being represented pushed inward and the pen in the act of being discharged. Fig. 4 represents in side elevation and end elevation the stick or holder detached, and Fig. 5 represents the spring and its carrying-tube detached from the stick.

*a* is the barrel of the pen-holder, and *b* is the slip-pen inserted and held in the ordinary turned-in sides or flaps *c* of the barrel.

*d* is the longitudinal slot in the upper side of the barrel *a*, the said slot extending through about one-half the length of the said barrel.

*e* is the stick or holder having on its end the spring *f*, the free end of which has the bent and convex form represented. This spring consists of a strip of thin sheet-steel or other elastic metal or alloy, and is made, preferably, in one piece with the short tube *g*, which is pinned at *h* to the end of the non-metallic stick or holder *e*; but the spring *f* may be made without a short tube and attached directly to the stick. The convex end of the spring *f* works in the longitudinal slot *d* in the barrel *a*.

The engagement of the spring *f* with the slot *d* is effected by sliding the barrel on the end of the stick, the spring being depressed inward by the barrel. When the barrel has reached its proper position on the stick, the spring rises and snaps into the longitudinal slot *d*. When the stick and barrel are thus engaged together, the said stick is capable of sliding toward the tip or holding end of the barrel, the sliding motion of the stick being limited by the engagement of the end of the spring *f* with the slot *d*. When the convex end of the spring *f* occupies the rear end of the slot *d*, as represented in Figs. 1 and 2, the slip-pen *b* can be inserted in the holder in the usual way.

In order to discharge the pen, the metallic tube or barrel *a* is held between the thumb and finger, and the stick *e* is pushed downward or toward the point of the pen. The stick *e* is thereby made to advance in the tube or barrel *a*, and the end of the spring *f*, pressing against the heel of the pen *e*, pushes it forward and discharges it from the barrel, as illustrated in Fig. 3. By returning the stick to the position represented in Figs. 1

and 2 the pen-holder is ready to receive another pen.

Having now particularly described and ascertained the nature of our invention and the manner in which the same is to be performed, we declare that we claim as our invention—

In a discharging pen-holder, the combination of an ejecting or discharging spring fixed on the inner end of the sliding stick or holder with a longitudinal slot in the barrel

of the pen-holder, the several parts being arranged with respect to one another, and operating substantially as hereinbefore described and illustrated.

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SAMUEL GEORGE MOORE. [L. S.]

Witnesses;

GEORGE SHAW,

RICHARD SKERRETT.