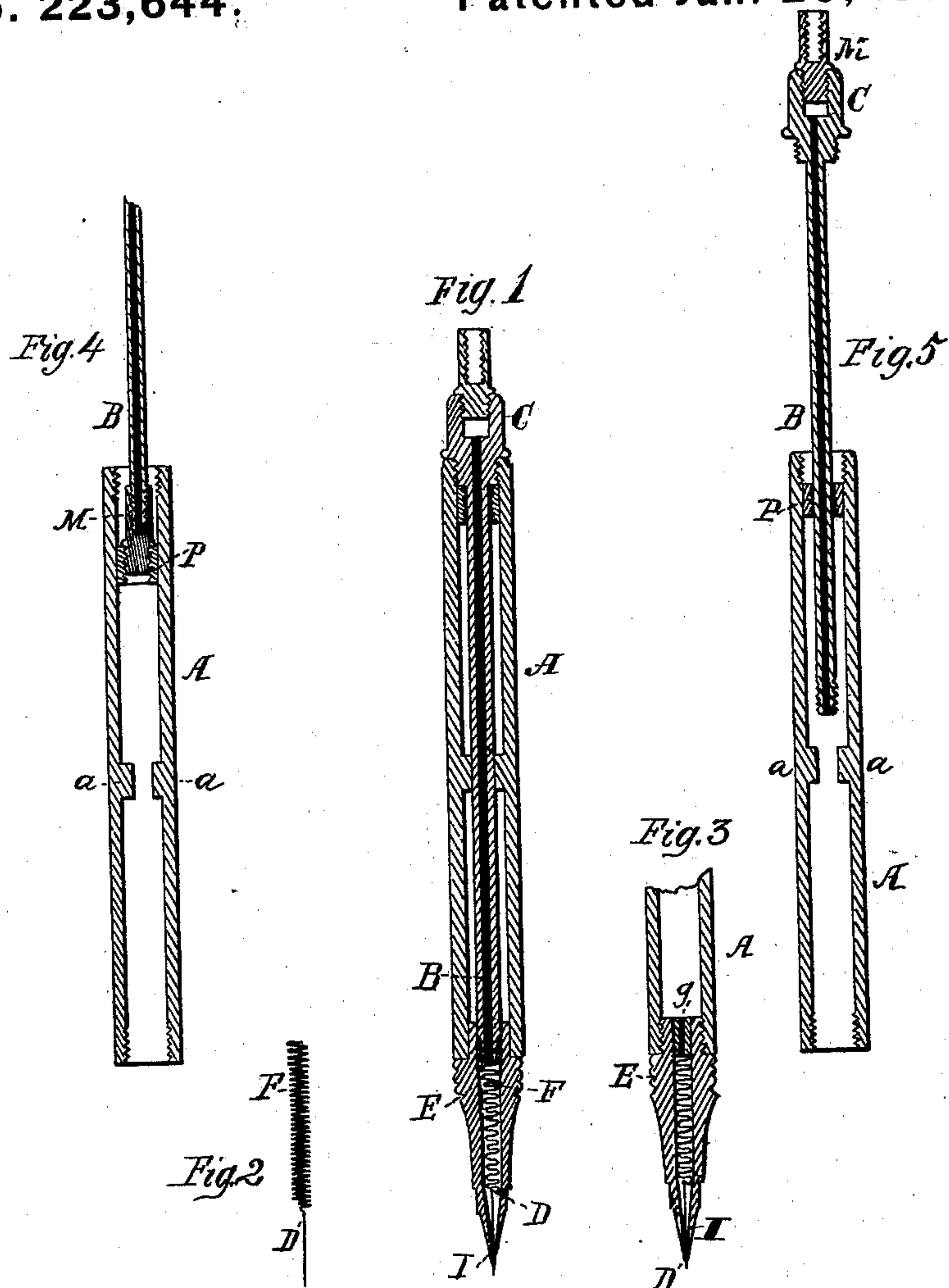


G. F. HAWKES & H. MADEHEIM.  
Stylographic Fountain-Pen.

No. 223,644.

Patented Jan. 20, 1880.



Witnesses  
Henry A. Morrison,  
Thomas Monroe.

Inventors  
G. F. Hawkes  
Herm. Madeheim.  
By F. C. Bowen  
Atty.



# UNITED STATES PATENT OFFICE.

GEORGE F. HAWKES AND HERM. MADEHEIM, OF NEW YORK, N. Y.

## STYLOGRAPHIC FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 223,644, dated January 20, 1880.

Application filed May 29, 1879.

*To all whom it may concern :*

Be it known that we, GEORGE F. HAWKES and HERM. MADEHEIM, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Stylographic Fountain-Pens; and we do hereby declare that the following is a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to that class of fountain-pens in which is employed a pin or spindle working in a tubular writing-point, and provided with a spring for imparting to it an elastic longitudinal reciprocating motion.

Our invention consists, essentially, in the combination, in a stylographic fountain-pen, of an outer case and an air-tube with a hollow piston or plunger and a detachable coupling adapted to operate as more fully hereinafter specified.

The accompanying drawings illustrate the manner of carrying out our invention.

Figure 1 is a sectional view of a pen provided with our improvement. Fig. 2 is a detailed view of the combined spring and pin or spindle. Fig. 3 is a modification of the tubular writing-point. Figs. 4 and 5 are sectional views of the pen as provided with the piston or plunger for supplying the fountain by suction.

The outer case, A, air-tube B, vent-cap C, and tube E may be of the usual or any suitable description. The writing-point I may be connected with the outer case, A, simply by a telescopic sliding joint, as shown in Fig. 1, or by a screw-threaded joint, as shown in Fig. 3.

The pin or spindle D has its upper end elongated and coiled into a spring, F, so that said spindle and spring are in one single piece, as shown clearly in Fig. 2. By this means the construction is cheapened and simplified and the necessity for making a head or shoulder on the pin is obviated.

The pin and spring thus constructed may be applied to the air-tubes in any suitable manner.

The upper end of the spring may be made to encircle the lower end of the air-tube, or it can bear directly on the lower end of the

same, or be held in place by any suitable means, such as a shoulder or stud, against which the upper end of the spring can bear, instead of bearing against the air-tube.

As shown in Fig. 3, the pin is dropped into the tube E, and is there held in place by means of a hollow plug, g, inserted in the upper end of the tube, so as to bear against and serve as an abutment for the upper end of the spring.

When made in the form shown in Figs. 4 and 5 the air-tube B is screw-threaded at both ends, and the outer case, A, is formed with shoulders *a a* on the inside, about midway of its length. Above these shoulders a piston or plunger, P, is arranged to work in the case A. This piston or plunger is hollow, and is internally threaded for the reception of one end of a coupling, M, the other end of which is threaded for connection with the lower end of the air-tube B.

When it is desired to supply the fountain by suction, the coupling M is screwed to the lower end of the air-tube B, and then connected to the plunger P, and said plunger is pushed down until it is arrested by the shoulders *a a*. The lower end of the case A is then inserted in the ink, and the plunger is drawn up, so as to fill the fountain with ink by suction. The case A is then inverted and the tube E, carrying the writing-point, is placed in position. The case A is then again reversed, the coupling M is disconnected from the plunger P and the lower end of the air-tube B, and is screwed on or into the upper end of the said air-tube, as shown in Fig. 5. The air-tube is then passed through the hollow piston or plunger P, and is secured in place by the vent-cap C at the upper end of the air-tube.

We claim as new and desire to secure by Letters Patent—

In a stylographic fountain-pen, the combination, with the outer case, A, and air-tube B, of a hollow piston or plunger, P, and a detachable coupling, M, as shown and described, for the purpose specified.

In testimony that we claim the foregoing we have hereunto set our hands this 21st day of May, 1879.

GEORGE F. HAWKES.  
HERM. MADEHEIM.

Witnesses:

CHARLES NETTLETON,  
CHAS. EDGAR MILLS.