

PATENT SPECIFICATION



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182,620

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PROVISIONAL SPECIFICATION.

Improvements in or relating to Fountain or Reservoir Pens.

I, ERIC ERNEST SAMUEL WADE, of 65, Cavendish Drive, Rock Ferry, in the County of Chester, British subject, do hereby declare the nature of this invention to be as follows:—

This invention relates to fountain or reservoir pens of either the nib or stylographic type, which embody or include revoluble head-pieces, or the like; and has for its object to provide an improved mode of securing a head-piece, or the like, to the reservoir body or barrel of the pen.

According to my invention, there is formed in the pen body or barrel at the end remote from the writing nib or stylus an internal annular groove or recess, and in the head-piece there is provided a generally reduced portion but on which is formed a ring or annular shoulder the external diameter whereof is, however,

greater than the normal diameter of the bore of the pen body or barrel at the end adjacent to said head-piece.

In fitting said head-piece to the end of the body or barrel remote from the writing nib or stylus is heated and on expansion thereof said reduced portion of the head-piece, including the ring or shoulder thereof, is pushed into same, said ring or shoulder "taking" into the annular internal groove or recess of the reservoir body or barrel.

Said body or barrel is now allowed to cool so that the end adjacent to the revoluble head-piece reassumes its original dimensions.

Dated this 3rd day of May, 1921.

JOHN HINDLEY WALKER,
139, Dale Street, Liverpool,
Registered Patent Agent.

COMPLETE SPECIFICATION.

Improvements in or relating to Fountain or Reservoir Pens.

I, ERIC ERNEST SAMUEL WADE of "Dunluce", 65, Cavendish Drive, Rock Ferry, in the County of Chester, British subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a fountain or reservoir pen of either nib or stylographic type, or pencil, or the like, which embodies or includes a head-piece, or the like, which is disposed and may be

revoluble, on a body or barrel constructed of vulcanite, or the like, the bore of which as it nears the one end thereof is slightly increased in diameter in a groove formation of suitable conformity, the furthestmost wall being brought to approximately the same diametrical bore as the remainder of the body bore and is then on its further approach to the body end progressively increased in diameter forming a conical bore.

According to my invention, a portion of the head piece, or the like, is reduced,

[Price 1/-]

and on said reduced part there is formed a projection or flange the external width or diameter whereof is, however, greater than the normal width or diameter of the bore of a body or barrel at its upper or outer end; and in said body or barrel there is formed a groove or recess which receives said flange of the head-piece, or the like. Preferably the mouth of said body or barrel is chamfered in order to facilitate the insertion of the reduced portion of the head-piece, or the like.

In fitting said head-piece, or the like, to the body or barrel the upper or outer portion of the latter is heated and on expansion said reduced portion of the head-piece, including its flange, is pushed into same; the body or barrel is then allowed to cool so that the outer end resumes its original dimensions when its grooved portion engages with or embraces the flange of the head-piece, or the like.

I will further describe my invention with the aid of the accompanying sheet of explanatory drawings which illustrate, by way of example only, the application of the invention to a self-filling fountain or reservoir pen of plunger type, Fig. 1 being a longitudinal section and Fig. 2 an enlarged view of the upper portion of the pen.

a represents the pen body or barrel, b the nib, and c the cap which when the pen is not in use, is placed over the nib end of the barrel a . d is a piston or plunger secured to the lower end of a tubular member e the bore whereof is screw-tapped to receive a screw threaded spindle f ; the upper end of said spindle is secured to the head-piece, generally designated g .

a^1 denotes an annular groove or recess formed in the upper end of the reservoir barrel a , and a^2 is a chamfered portion of the mouth of the bore.

Said head-piece g includes a reduced portion g^1 and an annular flange g^2 which is revoluble in the barrel groove a^1 , so that by revolving said head-piece g in one direction or the other, said tubular member e and the plunger d are projected or retracted within the barrel to effect the ink filling or charging operation in well known manner.

In fitting the head-piece and barrel together, the upper end of the latter is heated to produce expansion; then the flanged reduced end g^1 of the head-piece g is inserted in the chamfered mouth a^2 of the barrel a , and is arrested when flange g^2 thereof is in register with the groove or recess a^1 of the barrel.

On the contraction of barrel a in cooling, it returns to its original conformity and grooved portion a^1 embraces flange g^2 of head-piece g .

Groove a^1 and the raised flanged portion g^2 on the reduced part g^1 of the head-piece g are so spaced as to cause the face or shoulder g^3 of the head-piece to abut without undue pressure with the face of the upper end of barrel a in order to permit of the head-piece being turned freely and at the same time avoid undue looseness at the joint line between the top of the barrel and the shoulder g^3 of the head-piece.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A fountain or reservoir pen, or a pencil, or the like, in which a projection or flange, formed on a reduced portion of a head-piece, or the like, and being of greater external width or diameter than the normal width or diameter of the outer or upper portion of the bore of the body or barrel, is disposed in an internal groove or recess formed on a body or barrel constructed of vulcanite, or the like, the engagement of the grooved portion of the body or barrel with the projection, or flange of said head-piece, or the like, having been effected through the heating with consequent expansion, and cooling with consequent contraction, of the required portion of said body or barrel.

2. In a fountain or reservoir pen, or a pencil, or the like, as specified in the preceding claim, a body or barrel the mouth whereof is chamfered for the purpose specified.

3. In a fountain or reservoir pen, or a pencil, or the like, the method of positioning a projection or flange, formed on a reduced portion of a head-piece, or the like—and being of greater external width or diameter than the normal width or diameter of the outer or upper portion of the bore of the body or barrel—in an internal groove or recess formed in a body or barrel constructed of vulcanite, or the like, which consists in heating to expand said outer or upper portion of the body or barrel, inserting the flanged portion of the head-piece, or the like, in the body or barrel in alignment with the groove or recess therein, and then cooling or permitting said body to cool and by contraction effect engagement between the grooved or recessed portion of the body

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or barrel and flanged portion of the head-piece, or the like.

4. A fountain or reservoir pen, or a pencil, or the like, in which a head-piece, or the like, and outer or upper portion of a body or barrel are constructed and assembled together, substantially as here-

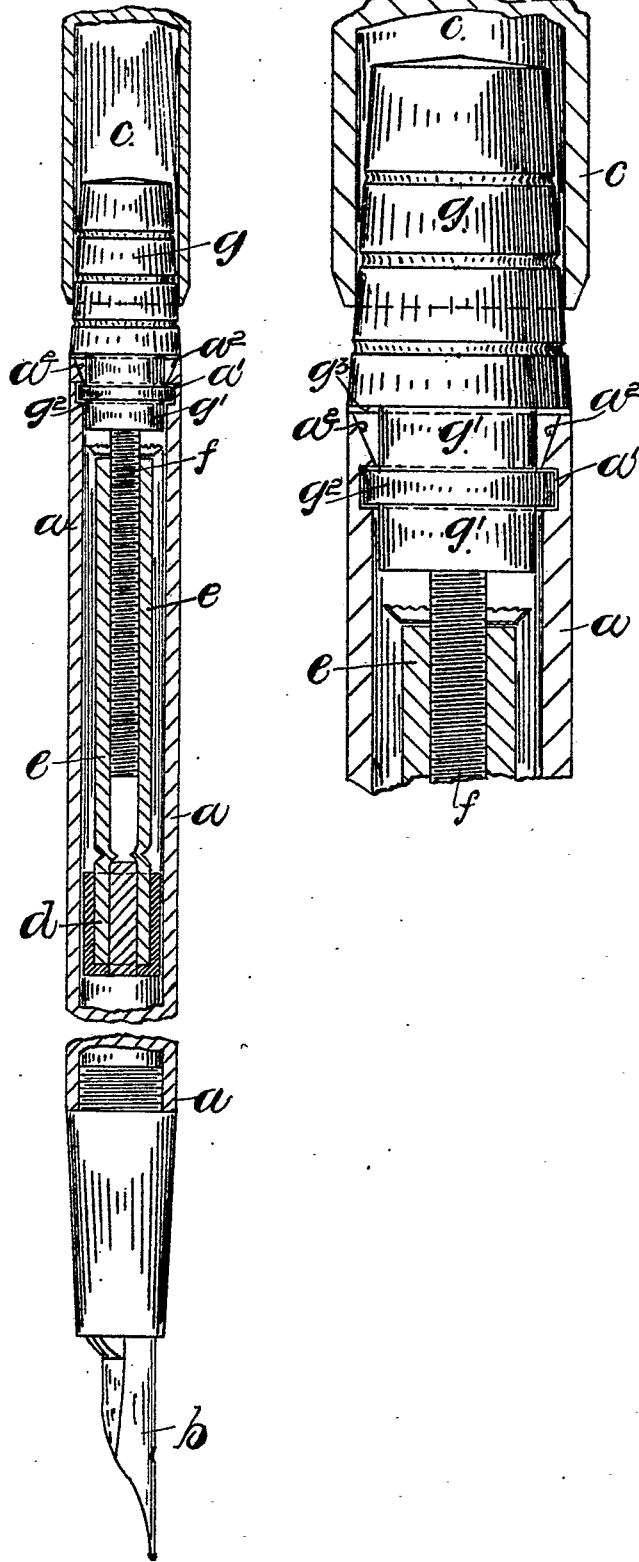
inbefore described, and illustrated in the drawing annexed hereto.

Dated this 3rd day of February, 1922. 10

JOHN HINDLEY WALKER,
139, Dale Street, Liverpool,
Registered Patent Agent.

Fig. 1.

Fig. 2.



[This Drawing is a reproduction of the Original on a reduced scale.]