

N<sup>o</sup> 4840



A.D. 1908

*Date of Application, 3rd Mar., 1908*

*Complete Specification Left, 3rd Sept., 1908—Accepted, 14th Jan., 1909*

**PROVISIONAL SPECIFICATION.**

**Improvements in Stylographic Pens.**

We, FRANCIS CHARLES JARVIS and THOMAS HOWARD GARNER trading as Conway Stewart & Co. 34, Paternoster Row in the City of London, Fountain Pen Manufacturers, do hereby declare the nature of this invention to be as follows:—

5 The object of this invention is to adapt a stylographic pen for a self-filling device; hitherto there has been a difficulty in the way of this, owing to the absence of a sufficiently large inlet for the ink to the reservoir.

10 In a pen made according to our invention, a sheath is fitted on the taper portion of the stylo. section, and one or more holes drilled at right angles or other angle, through both sheath and stylo. section into the ink duct, so as to form an inlet for the ink when filling and a shut off when the filling is completed, by revolving the sheath a short distance on its axis or by sliding it longitudinally so that the holes in the sheath and the holes in the stylo. section do not coincide. Instead of holes in the sheath, we sometimes longitudinally groove the inside of the sheath, from the position of the holes in the stylo. section towards the point; 15 by these means, in emptying the pen, the ink is directed into the inkstand instead of being jutted outside. A suitable stop or mark can be provided to show when the inlets are open. Instead of drilling or grooving the sheath, we sometimes simply take the sheath off to fill the reservoir or we screw the sheath on, and unscrew it a little in filling. We prefer to use a plunger for filling, with the 20 air tube, or ink trap passing longitudinally through its centre, and rendered ink-tight by a stuffing box on the outside end of the plunger, the cover of the stuffing box forming a projection by which the plunger can be pushed back and forth. One end of the air tube, or ink trap, is fixed to the stylo. section, the other end, where it passes out of the plunger, is fitted with a cap which is usually 25 left unscrewed to admit air to the ink trap, and screwed up to prevent ink flowing out in filling. To direct the outflowing ink away from the operator in case of depressing the plunger without screwing up the cap, the air inlet is formed by longitudinally grooving the inside screw of the cap.

30 Dated this Third day of March 1908.

FRANCIS CHARLES JARVIS,  
THOMAS HOWARD GARNER,

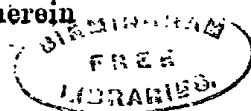
**COMPLETE SPECIFICATION.**

**“Improvements in Stylographic Pens”.**

35 We, FRANCIS CHARLES JARVIS and THOMAS HOWARD GARNER, trading as Conway Stewart & Co., of 34, Paternoster Row, in the City of London, Fountain Pen Manufacturers, 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 self-filling stylographic pens of the kind wherein

[Price 8d.]



*Jurvis and Garner's Improvements in Stylographic Pens.*

the ink is drawn into the reservoir of the pen, through holes formed in the stylographic portion thereof, by means of a hollow plunger slidably mounted in the said reservoir. Our invention has for object to provide an improved pen of this class.

Difficulty has been hitherto experienced in producing a self-filling stylographic pen of this kind owing to the absence of a sufficiently large inlet for the ink to the reservoir of the pen. 5

Now, our invention has for its object to overcome these difficulties and to this end we proceed as follows; that is to say, we form the stylographic section, preferably at its tapered portion, with one or more holes which extend through the same into the ink duct and we enclose the said stylographic section in a sheath, the arrangement being such that the aforementioned holes in the stylographic section can be opened when the pen is to be filled and closed by the sheath when the operation of filling the pen has been completed. To fill the pen we make use of a plunger which is tubular in form and has extending completely through it the air-tube or ink-trap, the joint between the plunger stem and the air-tube or ink-trap being rendered air-tight by means of a stuffing-box on the end of the latter, the cover of the said stuffing box preferably forming a grip by means of which the plunger can be reciprocated within the reservoir of the pen. 10 15

One end of the air-tube or ink-trap is secured to the stylographic section in the usual way and the other end, as above described, projects through the plunger stem, its open projecting end being provided with a screw cap having an internal longitudinal groove to permit of access of air to the air-tube when the said cap is partially unscrewed. When the pen is not required for use, or if being filled, the cap is screwed tight upon the end of the air-tube, thus preventing the inlet of air to the pen. 20 25

To enable the invention to be fully understood we will describe it by reference to the accompanying drawing in which:—

Figure 1 is a sectional elevation drawn to an exaggerated scale of a self-filling stylographic pen made according to our invention. 30

Figure 2 is a section on the line 2—2, Figure 1,

Figure 3 is a section on the line 3—3, Figure 1, and

Figures 4 and 5 are views of details hereinafter described.

*a* represents the reservoir of the pen and *b* the end section thereof, *c, c* being two holes which are formed in the tapered portion of the same so as to place the interior of the reservoir *a* in communication with the outside. The section *b* shewing one of the holes *c* is shewn in elevation in Figure 4. 35

*d*, Figures 1 and 5 is the sheath which is screwed upon the section *b* and which, when in position, covers the aforesaid holes *c, c* so that the interior of the reservoir is no longer in communication with the outside through the holes *c, c*. *e* is the air-tube or ink-trap the lower end of which is secured in the usual way to the section *b* and the upper end of which is fitted with the screw-cap *f*. The said cap is formed with an internal longitudinal groove *g* by means of which air can be admitted to the air-tube *e* when the cap *f* is slightly loosened. 40

*h* is the piston or plunger and *h'* the stem thereof both plunger *h* and stem *h'* being made tubular so as to permit of the passage therethrough of the air-tube or ink-trap *e*. The upper end of the stem *h'* of the plunger is fitted with a stuffing-box *i* which provides a tight joint between the plunger stem and the air-tube. The outer end *i'* of the stuffing-box is advantageously made as shewn to serve as a grip by means of which the plunger can be reciprocated within the reservoir for filling the pen as hereinafter described. 45 50

When it is required to fill our improved pen the sheath *d* is partly unscrewed so as to open communication between the exterior and the reservoir *a* through the holes *c, c* the screw-cap *f* is tightened upon the end of the air-tube *e* and the plunger *h* pushed down until it occupies its innermost position in the reservoir *a*. The point of the pen is then immersed in the supply of ink until the holes *c, c* are below the level thereof. The plunger *h* is then drawn slowly upwards 55

*Jarvis and Garner's Improvements in Stylographic Pens.*

whereby a quantity of ink is drawn through the holes *c, c* into the reservoir. The pen is then removed from the ink supply and the sheath *d* screwed tightly into place so as to hermetically close the holes *c, c* in the section *b*. The cap *f* is finally slightly loosened so as to open the air-tube *e* and the pen is then ready  
5 for use.

The holes *c, c* may be closed and opened by the sheath *d* in other ways than that above described. For example, the sheath may itself be formed with holes which correspond to the holes *c, c* in the tapered portion of the section *b*, the said sheath being adapted to be partially rotated so as to bring the holes in it  
10 either into coincidence with the holes in the section or into such a position that they do not coincide. Or, in lieu of forming holes in the sheath we may form longitudinal grooves on the inside thereof, these grooves being adapted to be brought into coincidence with the holes in the section. This latter arrangement has the advantage that when emptying the pen any ink which may remain  
15 therein is directed downwardly towards the point of the pen, that is to say, into the inkstand or other receptacle instead of being spurted outwardly.

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

20 1. In a stylographic pen of the kind described, the combination with the reservoir, of an air tube or ink-trap and of a tubular plunger fitting within the said reservoir and through which the air tube completely passes, of filling holes in the stylographic section of the pen and of means for covering and uncovering the said holes, substantially as hereinbefore described.

25 2. In a stylographic pen of the kind claimed in Claim 1, the provision of a sheath for covering and uncovering the filling holes formed in the stylographic section thereof, substantially as hereinbefore described.

30 3. In a stylographic pen of the kind described in the preceding claiming clause the arrangement wherein the sheath is in the form of a conical casing which fits the section to which it is screwed, substantially as hereinbefore described.

4. In a stylographic pen of the kind described in Claim 2 the arrangement wherein the sheath is formed with holes corresponding to the holes in the section, substantially as hereinbefore described.

35 5. In a stylographic pen of the kind described in Claim 2, the arrangement wherein the sheath is provided with internal longitudinal grooves corresponding to the holes in the section, substantially as hereinbefore described.

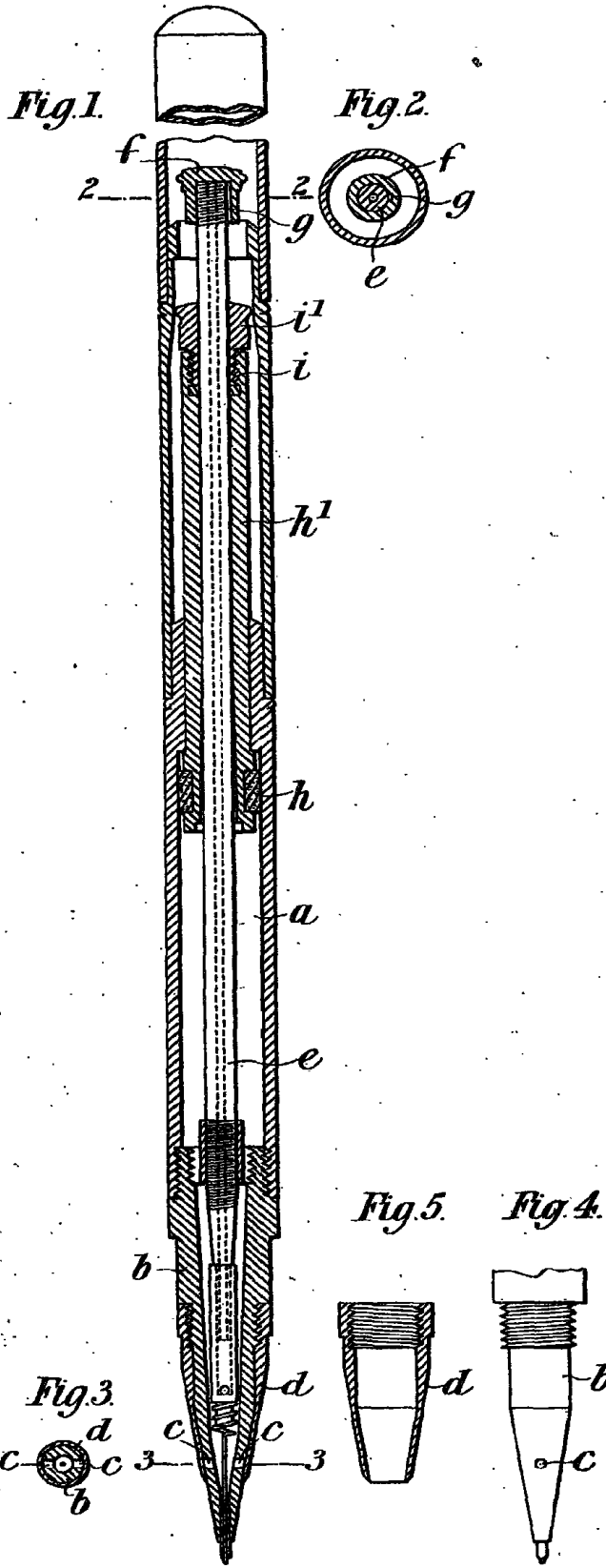
6. In a stylographic pen of the kind described, fitting the free end of the air-tube with a screw-cap having an internal groove, substantially as hereinbefore described.

40 7. Self-filling stylographic pens consisting of the parts constructed and arranged substantially as hereinbefore described, and illustrated in the accompanying drawing.

Dated the 3rd. day of September 1908.

45 G. F. REDFERN & Co.,  
4, South Street, Finsbury, E.C. and  
21 Southampton Buildings, W.C.  
Agents for the Applicants.

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



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