

PATENT SPECIFICATION



Application Date: Dec. 11, 1923. No. 31,098/23.

228,672

Complete Left: Sept. 11, 1924.

Complete Accepted: Feb. 12, 1925.

PROVISIONAL SPECIFICATION.

Improvements in or relating to Fountain or Reservoir Pens.

I, WILLIAM LIVSEY, (British), of 13, Groveland Road, Wallasey, in the County of Chester, do hereby declare the nature of this invention to be as follows:—

This invention relates to fountain or reservoir pens of the "sac" self-filling type, that is, of the kind in which the ink is contained in an elastic bag or sac housed within the pen body or barrel, the ink-charging operation being effected by compressing or collapsing the sac to exclude air and/or residue ink, sealing the nib end of the pen in ink, and then permitting the sac to expand, and receive, by induction, a charge of ink.

The present invention has for its general objects to provide new or improved sac-actuating means, whereby the construction of the pen is simplified and substantially cheapened, and the ink charging operation more effectively performed; a distinguishing feature being that the complete assembly of the component parts may be effected rapidly by an unskilled person.

My invention is characterised by a sac-actuating structure which comprises, as a unit, a presser bar, and a pivotal lever adapted to engage said presser bar, there being no fulcrum connection or attachment with the pen body or barrel.

According to one mode of carrying out my invention, there is provided a strip of spring steel, brass, nickel, or other suitable material, which is so shaped or bent at its rear end that when slid longitudinally into the pen body or barrel, it holds in the rear portion thereof with a biting or friction fit. Pivotally—and also slidably, if desired—attached to said strip at or near its other end is a second strip which constitutes a presser bar, the point of pivoting of the two strips being at or near the centre of the presser bar and adjacent to the point occupied by or abutting against the toe of a sac-actuating lever, hereinafter referred to, when

the latter is in its raised or sac-compressing position.

There is also provided a third or fulcrum forming strip which—being appropriately shaped or bent—is secured in any suitable manner, as by clipping, to the rear end of said first mentioned strip; said sac-actuating lever being pivotally connected by means of a transverse pin at or near the free end of said third strip; said pivot pin projects on each side of the sac-actuating lever to prevent it from moving bodily outwards from its correct position in the customary slot provided in the pen or body barrel.

When actuated, said lever bears upon the presser bar before mentioned, thus compressing the sac in well known manner.

In a modified arrangement, there is provided a presser bar an end whereof is so shaped or bent that when inserted longitudinally in the pen body or barrel, it becomes sufficiently fixed as to hold in the rear portion thereof with a friction fit.

There is also provided a second strip—being appropriately shaped or bent—one end whereof is secured in any suitable manner, as by clipping, to the rear end of said presser bar; and at or near the free end of said second strip, there is pivotally connected a sac-actuating lever, the pivot being so positioned and the length of the sac being such that when the lever is actuated, the sac is fully compressed.

In a pen, constructed as before described, it is rendered unnecessary to bore the barrel for the reception of a sac-actuating lever fulcrum pin; nor is it requisite to provide an annular groove or cavity in the barrel with inserted ring to carry the sac actuating parts.

Dated this 10th day of December, 1923.

J. H. WALKER,
139, Dale Street, Liverpool.
Registered Patent Agent.

[Price 1/-]

COMPLETE SPECIFICATION.

Improvements in or relating to Fountain or Reservoir Pens.

I, WILLIAM LIVSEY, of 13, Groveland Road, Wallasey, in the County of Chester, (British), 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 "sac" self-filling fountain or reservoir pens of the type which includes a sac-actuating-lever carrying structure designed to obviate fulcrum connection or attachment of the lever with the pen body or barrel.

The present invention has for its object to provide a sac-actuating-lever carrying structure the use of which enables the manufacture of the pen to be simplified and substantially cheapened, and the ink-charging operation more effectively performed; a distinguishing feature being that the complete assembly of the component parts of the pen may be effected rapidly and by an unskilled person.

According to the present invention, a sac-actuating structure adapted to hold by friction in a pen body or barrel, comprises, in combination, and as a unit, a strip of spring material suitably shaped or bent; a presser-bar connected with said strip; a second strip of spring material connected with said first-mentioned strip; and a lever fulcrumed to said second strip and adapted to operate said presser-bar.

I will further describe my invention with the aid of the accompanying sheet of explanatory drawings which illustrate, by way of example only, two modes of embodying same.

In said drawings:—

Fig. 1 is a longitudinal section of a fountain pen with sac-actuating mechanism, the parts being shown in the normal position of use; and Fig. 2 is a longitudinal section of the pen with the sac collapsed preparatory to filling.

Figs. 3 and 4 are views, taken at right angles to each other, of the sac-actuating mechanism detached.

Fig. 5 illustrates a modified mode of attachment of lever fulcrum pin.

In the several views like characters of reference denote like or equivalent parts wherever they occur.

Referring now to the drawings, but first more particularly to Figs. 1 to 4:—

a generally designates the body or barrel of a fountain or reservoir pen

wherein is cut the customary longitudinal slot *a*¹ for the accomodation of a sac-actuating lever.

b is a strip of spring steel, or other suitable material, one end of which is so shaped or bent at *b*¹, that when slid longitudinally into the barrel *a*, it holds in the rear portion thereof with a biting or friction fit.

Pivotally connected at *e* to the strip *b* at its other end *b*² is a presser bar *c* for compressing the sac *d*, the point *e* of pivoting being at or near the centre of the presser bar *c*. *f* is a second or fulcrum-forming strip which is appropriately shaped or bent at *f*¹, and is secured to the rear end *b*¹ of the strip *b* by means of clips *f*² formed on strip *f*; a sac-actuating lever *g* is pivotally connected or fulcrumed by means of a transverse pin *h* to the free end of the said strip *f*. Said transverse pin *h* may project on each side of the lever *g* to prevent it from moving bodily outward through slot *a*¹ of barrel *a*.

When actuated, lever *g* bears upon the presser bar *c*, thus compressing the sac, as shown in Fig. 2, the toe *g*¹ of lever *g* abutting against the pivot *e* which constitutes a stop.

In the modification illustrated in Fig. 5, the end of strip *f* is bent so that the lever fulcrum pin *h*—which, in this case, does not project on each side of the lever *g*—is raised, thus increasing the accessibility of the said lever *g*.

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. In or for application to a sac self-filling fountain or reservoir pen, a sac-actuating structure adapted to hold by friction in a pen body or barrel, comprising, in combination, and as a unit, a strip of spring material suitably shaped or bent; a presser-bar connected with said strip; a second strip of spring material connected with said first-mentioned strip; and a lever fulcrumed to said second strip and adapted to operate said presser-bar.

2. In means for compressing the sac of a sac self-filling fountain or reservoir pen as claimed in the preceding claim, an arrangement in which a fulcrum pin projects on either side of the sac-actuating lever, for the purpose specified.

3. A sac self-filling fountain or reser-

65

70

75

80

85

90

95

100

105

110

115

120

voir pen, complete with sac-actuating structure, substantially as hereinbefore described, and illustrated in the accompanying drawings. 10

5 4. In or for application to a sac self-filling fountain or reservoir pen, a sac-compressing unit, substantially as here-

inbefore described and illustrated in Figs. 3 and 4, or Fig. 5, of the accompanying drawings.

Dated this 10th day of September, 1924.

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

Fig. 1.

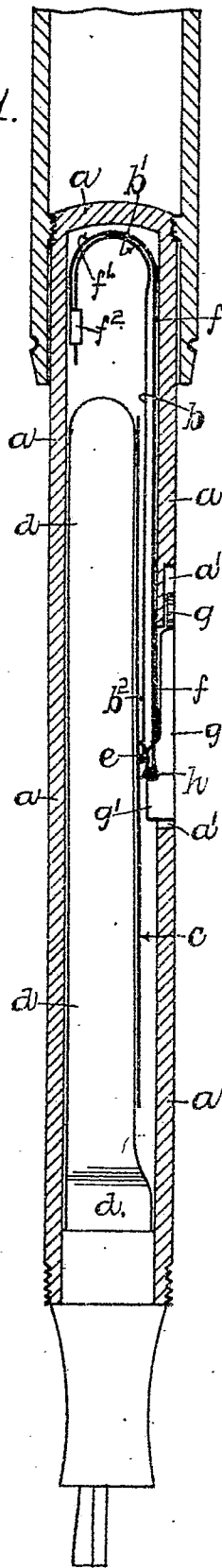
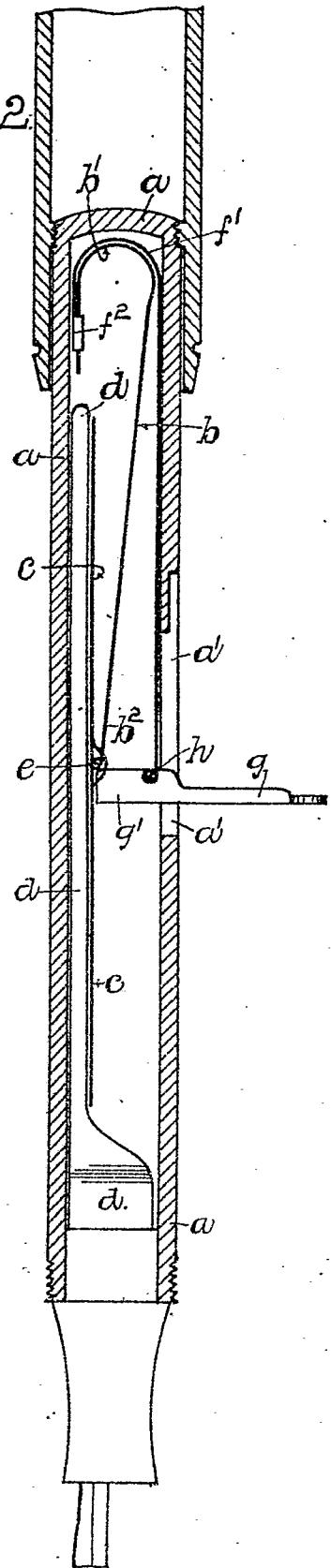


Fig. 2.



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

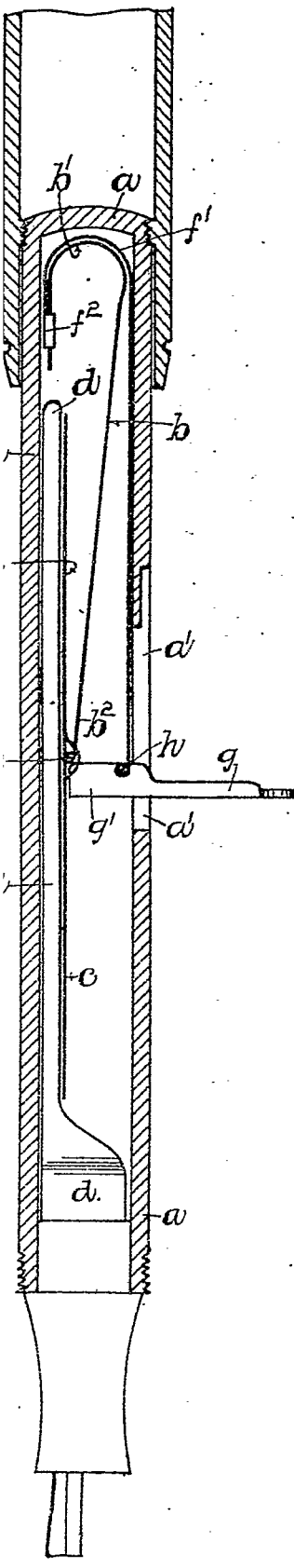


Fig. 3.

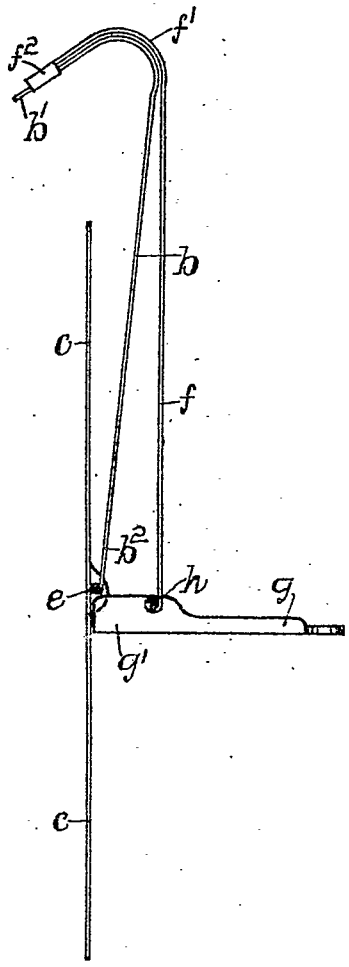


Fig. 4.

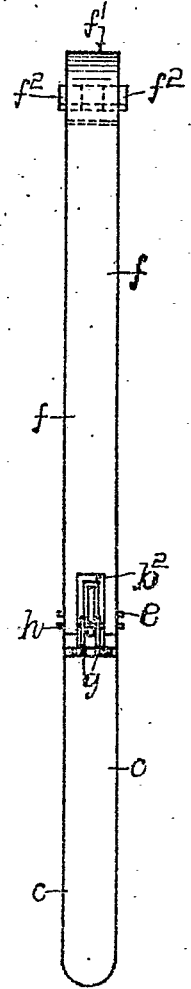
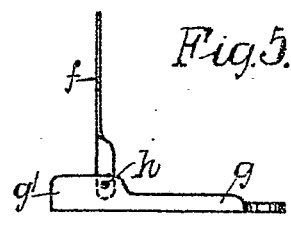


Fig. 5.



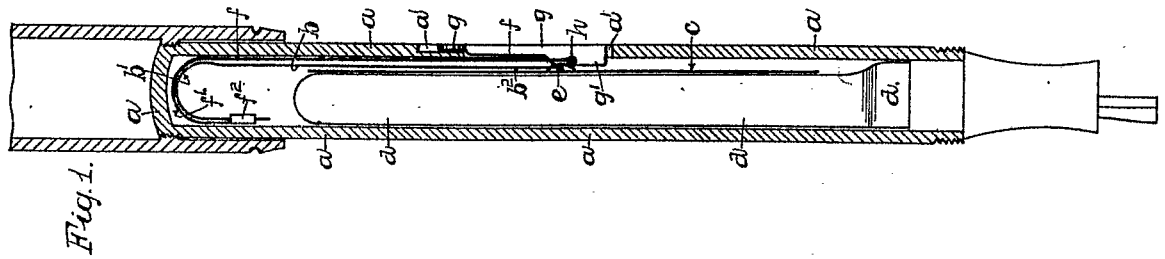


Fig. 1.

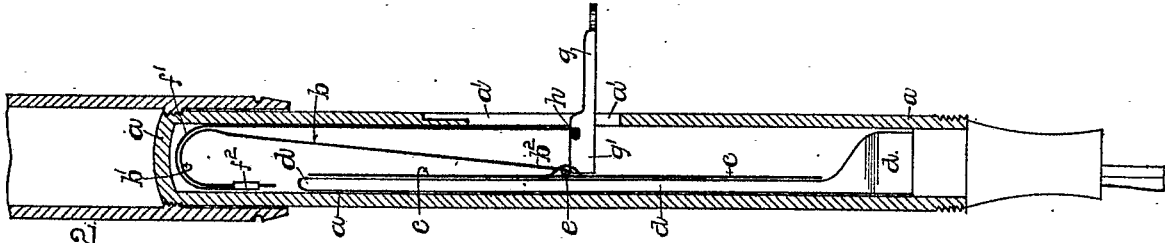


Fig. 2.

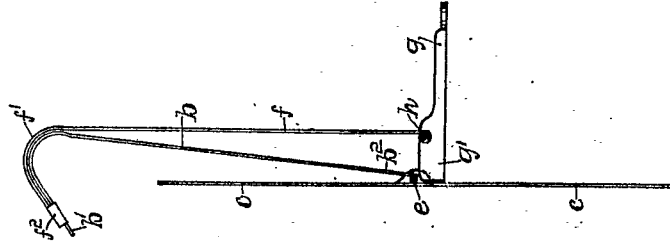


Fig. 3.

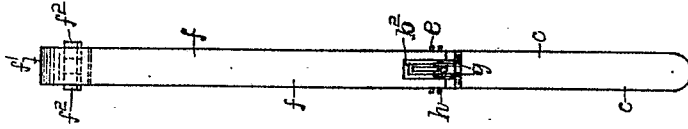


Fig. 4.

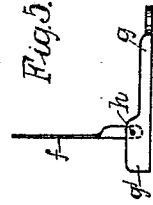


Fig. 5.

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