W. S. BRIGGS.
Fountain-Pens.

No. 198,484. Patented Dec. 25, 1877.

Fig. 1.

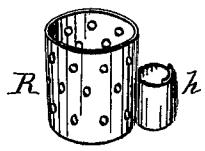


Fig. 2.

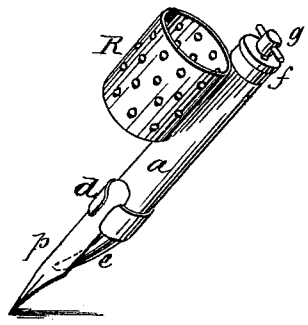
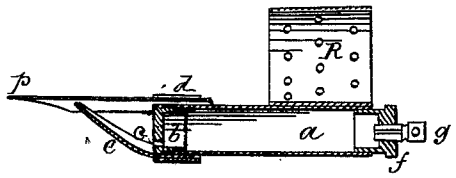


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

WELLINGTON S. BRIGGS, OF OTTUMWA, IOWA.

IMPROVEMENT IN FOUNTAIN-PENS.

Specification forming part of Letters Patent No. **198,484**, dated December 25, 1877; application filed June 20, 1877.

To all whom it may concern:

Be it known that I, WELLINGTON S. BRIGGS, of the city of Ottumwa, in the county of Wapello and the State of Iowa, have invented certain new and useful Improvements in Writing Implements, being a combined fountain-pen and holder, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, in which—

Figure 2 represents, in perspective view, an instrument made in accordance with my said invention; and Fig. 1 is a part of the same, modified or so constructed that it can be used in connection with an ordinary pen-holder or pencil, or brush or holder of any other writing, marking, or drawing implement.

Those whose business involves the more or less constant use of the pen have experienced a great deal of trouble, inconvenience, loss of time, and sometimes suffering from two causes:

First, the pen, unless it be a self-supplying or fountain pen, being capable of taking up but a very small quantity of ink, has to be frequently dipped in an inkstand, which is a serious interruption, sometimes a disturbance, and always a cause of loss of time, which, to long and short hand reporters and others, is a matter of great consequence.

Second, the usual mode of securing pens in their holders or sticks requires that the same should be held by the fingers of the writer in such a way as to cramp them, producing excessive fatigue, and not unfrequently nervous trouble, which sometimes results in partial paralysis, known by the name of "writer's palsy."

The object I have in view is to produce a writing implement which, while self-supplying, may be handled and used in such a way as to avoid the inconveniences and trouble hereinbefore referred to.

To this end my invention consists in the combination, with a fountain-pen, of a finger, sleeve, or thimble of a peculiar construction, as hereinafter more fully described.

The instrument may be said to consist of two parts in combination. I shall proceed to describe them separately, and show the manner in which the same are or may be united to constitute my improved writing implement.

The pen and its holder consist of a tubular ink-receptacle, *a*, which may be made of metal, hard rubber, glass, or any other suitable material. The lower end is closed by means of a cap or plug, *b*, having upon its periphery a capillary opening, *c*, so small that the ink-contents of the reservoir will not flow out unless impelled by internal pressure, or by the column of liquid superinduced by atmospheric pressure. To this cap is attached a spring-clasp, *d*, consisting of a piece of metal bent to embrace the holder or ink-reservoir, and forming jaws to hold the shank of a steel, gold, quill, rubber, or other pen. To the inside of the clasp, opposite the open jaws, is secured a trough-like channel, *e*, which is shaped or bent inwardly, so as to press its outer end with gentle pressure against the concave portion of the pen a convenient distance above the nibs thereof.

In the drawings, the conduit is shown attached to the cap *b*, and the clasp *d* is, in its turn, attached to the conduit *e;* but the arrangement may be inverted, as before explained.

The longitudinal center line of the trough-like channel or spring *e* corresponding with the capillary hole in the cap *b*, any ink which may be allowed to flow out of the receptacle will be conveyed to the nibs of the pen *p* by means of said trough-like projection.

The tubular reservoir is closed on top by another stopper or cap, *f*, which is provided with a central opening, into which is fitted a vent, screw, or pin, *g*, having a capillary opening, through which air from without may be allowed to enter the reservoir in requisite quantity to cause, when necessary, the ink to flow out at the bottom. Other devices may be used, however, as mechanical equivalents to effect the same end; but I deem the plug with its capillary vent-hole the cheapest, and perhaps the most effective, device, and it is certainly less liable to get out of order than any other I know of.

The fountain-pen thus constructed need not exceed in length, including the pen, two inches. Indeed, I deem it of advantage for

easy writing that the ink reservoir or holder should not exceed in length one inch and a half.

To the upper end of the reservoir is attached, by solder or by means of a spring-clasp, or by other means, a sleeve, R, consisting of a metallic, rubber, or other thin but stiff, yet somewhat elastic, band, formed into a ring, preferably tapering, or shaped slightly conically, and perforated, as shown in the drawings.

This sleeve is about the length, or somewhat smaller than, the last articulated member of the finger, and it may be of a diameter to fit this part of the finger, and is therefore variable in size, according to the person using the same. It may, however, be constructed open, in the shape of the spring-clasp, to adapt itself to various-sized fingers. I deem it important, however, that the same should be made with perforations, or in skeleton form, so that inconvenience attending excessive heat, perspiration, &c., may be avoided.

The attachment of this sleeve may, as before stated, be made in a permanent manner—that is, by solder or by means of a spring-clasp, as shown in Fig. 1 at *h*—which affords the additional advantage that the reservoir or holder may be adjusted by rotation within the clasp *h*, so as to present the nibs of the pen on the paper to suit the habit of the writer or construction of the pen, or the style of writing to be executed. This is, however, of less importance if the cap *b* itself, with its pen-holding device and ink-conducting trough, be so constructed as to be capable of rotation upon its axis for the same purpose.

On the other hand, if the clasp be used instead of the solder attachment, then the pen could be removed altogether; and, in lieu thereof, a pencil or other writing or marking instrument could be slipped in and held in the clasp, in like manner and with the same result as to convenience.

From the above description the operation will be understood to be as follows: The sleeve being selected with reference to the finger or thumb with which it is intended to be used, and the pen being properly adjusted in relation to the sleeve, the ink-reservoir being also filled and closed, the writer adjusts the sleeve on the end of his finger or thumb, and a slight rotation being given to the capillary air-valve or pin *g*, the pressure on the ink within will now allow it to flow out of the tubular reservoir in quantities regulated by the opening in the said air-valve, which is made to admit more or less air according to its position.

The writer is now enabled to continue to write without stopping to dip the pen in ink, and without having his fingers cramped, as he is no longer obliged to grasp the pen with that firmness that is necessary in connection with the pen-holder in order to impart to the pen quick movements on the paper.

In the drawing I have shown the finger-sleeve secured to the upper part of the holder, so that the pen with its holder shall occupy a position immediately underneath, in line with the under side of the finger. This is the best arrangement when the sleeve is to be used on the index-finger; but if the sleeve is to be placed on the thumb, or if the user of the pen have habits of writing which are inconsistent with such position of the pen with respect to the index-finger, then the sleeve may be put on in any other manner to suit the convenience of the writer, and so as to place the pen on any side of the finger to which it is applied, the pen or holder admitting of being rotated for adjustment, as before described.

Having thus described my said invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the pen-holding stick or fountain, the pen-holding ferrule or clasp, and the finger-sleeve, substantially as shown and set forth.

2. The combination of the finger-sleeve with the ink-supplying cylinder or reservoir and the rotating cap, carrying both a pen ferrule or clasp and an ink-conduit, substantially as shown and set forth.

3. The combination of a perforated finger-sleeve with a spring-clasp, substantially as shown and set forth.

4. A pen or pencil holding attachment, consisting of a perforated or otherwise equivalently-formed finger-sleeve, substantially as shown and set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WELLINGTON S. BRIGGS.

Witnesses:
D. W. STEWART,
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