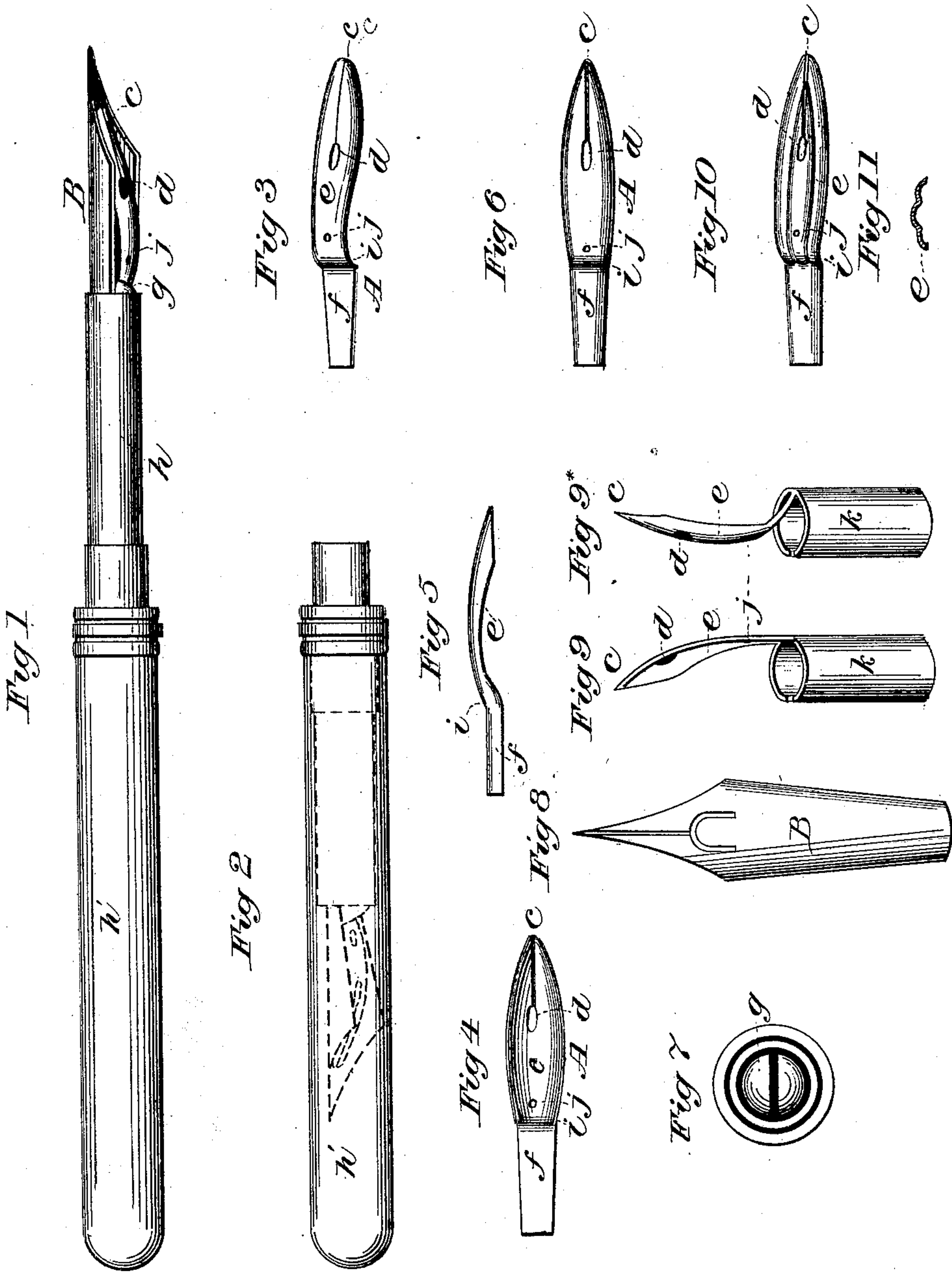


J. G. CROSS.
Fountain-Pen.

No. 210,404.

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UNITED STATES PATENT OFFICE.

JESSE G. CROSS, OF AURORA, ILLINOIS.

IMPROVEMENT IN FOUNTAIN-PENS.

Specification forming part of Letters Patent No. **210,404**, dated December 3, 1878; application filed November 9, 1878.

To all whom it may concern:

Be it known that I, JESSE G. CROSS, of Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Pen-Fountains; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 letters of reference marked thereon, which form a part of this specification.

My invention belongs to that class of pen-fountains which may be used with the ordinary steel or gold pens now in the market, and it has the additional advantages that it is not only adapted to be quickly applied to ordinary pen-holders without any change whatever in their construction, but that it may easily be removed therefrom as readily as the pen itself, and each independently of the other, for the purpose of cleaning, and that it will last much longer than many pens, and that it is adapted to be attached to any form and to any size either of pen or holder.

Figure 1 illustrates my invention as applied to an ordinary hard-rubber holder carrying an ordinary gold pen; Fig. 2, the same, with the fountain, pen, and their holder inside the tubular part of the handle, so as to be carried in the pocket; Fig. 3, an inner perspective view, Fig. 4 an inner plan, Fig. 5 an edge view, and Fig. 6, an upper plan, of the fountain; Fig. 7, an end view of the holder and its case; Fig. 8, the pen detached; Figs. 9, 9*, and 10, modifications of the fountain-piece. Fig. 11 is a cross-section of Fig. 10.

A represents my improved piece or appliance, which serves as the fountain for any ordinary steel, gold, or other metallic pen, B. This fountain is made of a single piece, having a split tip, as seen at *c*, this slit terminating in a hole or opening, *d*, like that of many pens, whereby it may not only sustain a larger quantity of ink, but also, by means of its slit, the better lead the ink down to the point of the pen. It has a long curved portion, *e*, somewhat of a bill or spoon shape, adapted to hold a considerable body of ink between itself and the concave part of the pen when the

two are applied to their holder, this portion at its tip being shaped to conform nearly to the concave form of the pen at their nearest point of contact, or, rather, where the ink is to be let down from the fountain to supply the pen.

The other or upper extremity of the fountain, in order to adapt it for use with the style of pen-holder illustrated in the drawings, is a mere tongue, *f*, suitable for entering the customary split end of the core or plug *g* of a hard-rubber pen-holder, the pen itself being, as usual, inserted between the exterior of such plug and the holder *h* of the case or handle *h'*. The insertion of the fountain thus also serving to tighten the hold or gripe of the holder upon the pen, and vice versa. A shoulder or bend, *i*, on the fountain serves to limit the distance that the same may be inserted in the plug *g*, and thus aids in fixing it in its true position relative to point of the pen.

A small pin-hole, *j*, in the fountain serves for the ready removal of the fountain at any time by simply placing the point of a pin or needle in such hole, and thereby pulling the fountain-piece out of its holder.

The slit *c* affords a yield or elasticity to the fountain similar to that of a pen, thus assisting in urging forward the ink, as required, toward the point of the pen, and avoiding any undue stiffness or rigidity of the parts, while from the whole construction and action the ink is more evenly distributed than it would be if the slit were not there, and at the same time the ink is restrained from too free a flow; and it is found in practice with my improvement that the flow is so well regulated that the use of a blotter is less needed than ordinarily.

It will now be seen that this simple device is in its form and size adapted to all classes of pens, and may be made of various materials—as, for instance, of steel, for use with steel pens, or of gold, for use with gold pens, &c., as may be desired; and that no extraneous device is used or needed to connect it permanently to a handle, or to connect it with a pen, and consequently it is free from the objection which attaches to many kinds of fountain-pens of becoming clogged and useless when the ink

dries on or between the pen and fountain, for the fountain in my construction can be pulled out, cleaned, and replaced at any time as readily as the pen itself. I also avoid all complex or concealed mechanism of any sort belonging to that class of fountain-pens or pen-holders in which the holder or handle contains the supply of ink, to be pressed forward mechanically, as needed.

My detachable fountain being placed at the inside of the ordinary pen, its position does not in the least interfere with the movement of the pen when attached to ordinary extension-holders or to telescopic holders, and both the pen and fountain, after being used, can be drawn into the telescopic holder, or incased with the holder within the ordinary tubular case or handle, as seen in Fig. 2, with the same facility as if the pen alone were in its holder.

To adapt my removable fountain to the ordinary tube or barrel of steel-pen holders, I connect it with a short tube or barrel, *k*, split or otherwise, (see Figs. 9 and 9*,) instead of to the tongue *f*, this tube being adapted to fit in-

side the barrel of the pen-holder, the fountain itself being constructed the same as hereinbefore described.

The fountain may have one or more corrugations lengthwise of the same, the convex part of the corrugation being outward or raised above its outer surface, as seen in Figs. 10 and 11. Such corrugations not only permit the fountain to hold more ink by their capillary action, as well as by reason of the increased holding-space which they afford, but at the same time they aid in carrying the last portions of the ink to the point of the pen.

I claim—

The detachable pen-fountain, substantially as described, having the curved portion *e*, longitudinally slitted, as shown, and an end piece or shank, adapting it to be readily applied to and used with ordinary pen-holders and ordinary metallic pens.

JESSE G. CROSS.

Witnesses:

A. A. SMITH,

N. C. KNICKERBOCKER.