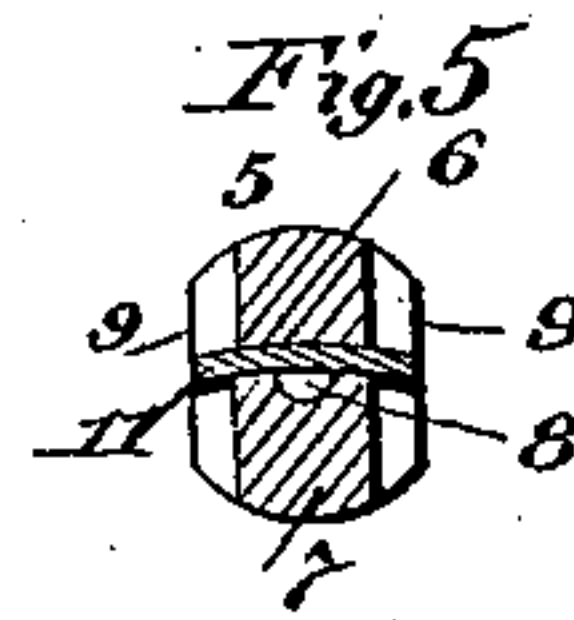
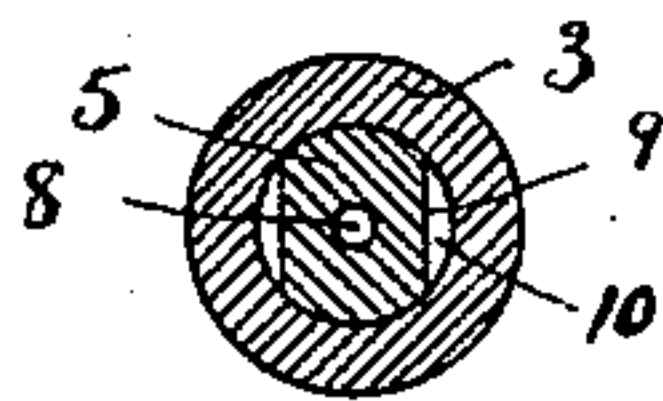
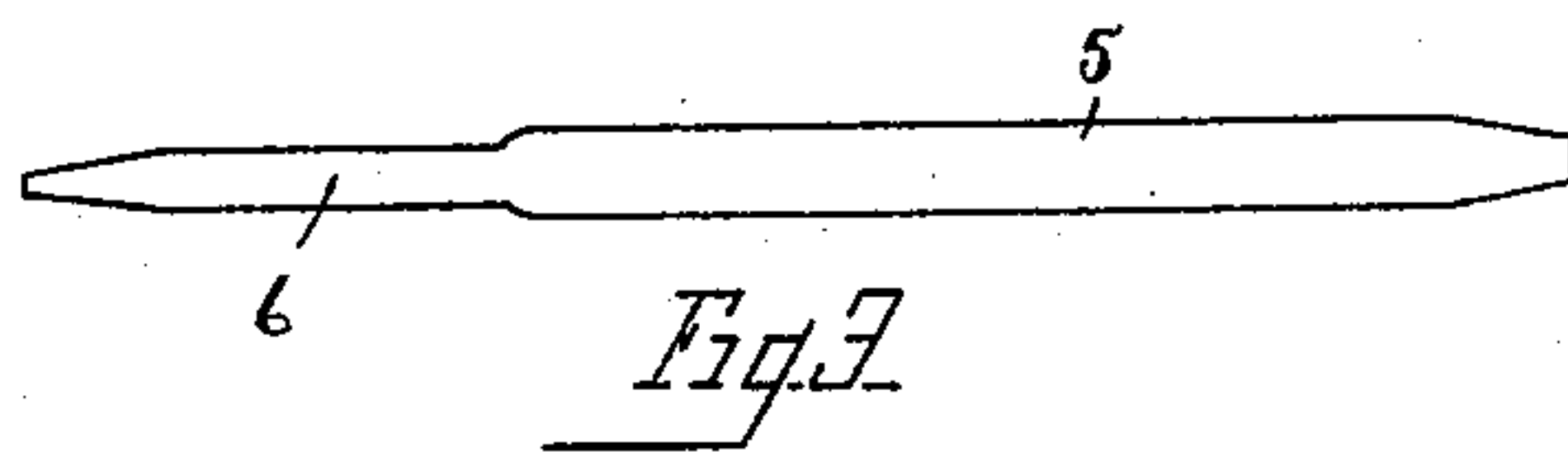
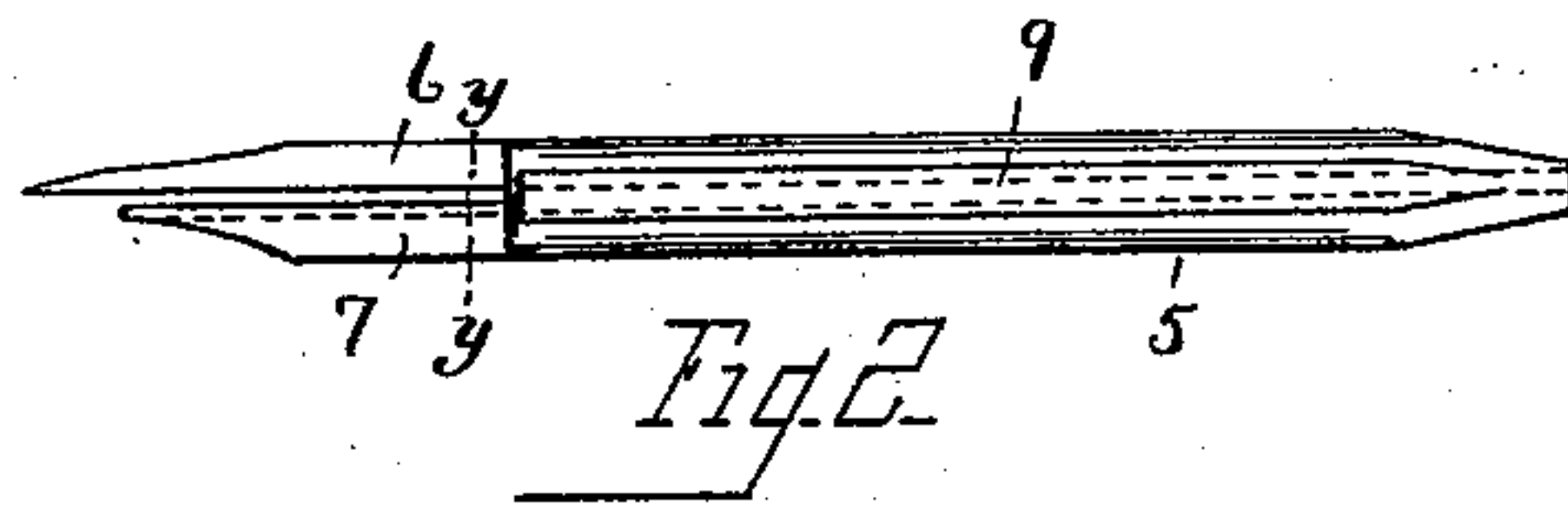
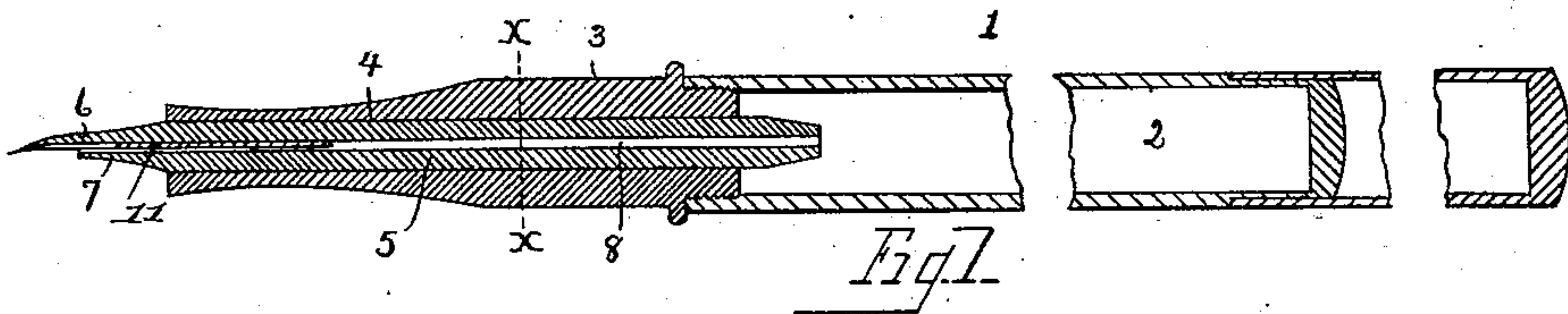


(No Model.)

C. E. BROWNING.
FOUNTAIN PEN.

No. 477,854.

Patented June 28, 1892.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES E. BROWNING, OF TOLEDO, OHIO.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 477,854, dated June 28, 1892.

Application filed May 14, 1890. Serial No. 351,747. No specimens.)

To all whom it may concern:

Be it known that I, CHARLES E. BROWNING, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Fountain-Pens; and I do hereby declare that the following is a full, clear, and exact description of the invention, 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 the figures of reference marked thereon, which form part of this specification.

This invention relates to fountain-pens.

The object of the invention is to produce a fountain-pen having a feed-plug of such construction that the flow of ink to the pen-point will be regular at all times, whether the writing is heavy or light; furthermore, to produce a fountain-pen in which "skipping" or "flooding" will be prevented; furthermore, to produce a fountain-pen which will combine simplicity, durability, and cheapness of construction with ease, convenience, and efficiency in operation.

With these objects in view the invention consists in producing a fountain-pen having an upper and lower feed, an air-duct intermediate the two, and an ink-channel or ink-channels adjacent to the pen.

The invention further consists in the various novel details of construction of a fountain-pen, as will be hereinafter fully described in the specification, illustrated in the drawings, and more particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, and in which like numerals of reference indicate corresponding parts, Figure 1 is a longitudinal sectional view of the complete pen. Fig. 2 is an elevation of the feed-plug. Fig. 3 is a top plan view of the same, showing its peculiar contour; and Fig. 4 is a transverse sectional view of the nozzle or mouth-piece, taken on the line *x x*, Fig. 1. Fig. 5 is an exaggerated cross-section of the tongues with the pen in place, taken on the line *y y* of Fig. 2, clearly illustrating the duct in the lower tongue.

Referring to the drawings, 1 designates the handle of the pen, having the usual ink-reservoir 2 formed in its interior. Within the handle is secured, preferably by a screw-connec-

tion, the nozzle 3, the outer end of which is slightly tapered, so as to form a convenient finger-hold. This nozzle is provided with a bore 4, which is preferably of the same diameter throughout its entire length, and in this bore fits the feed-plug 5, which is constructed of a single piece of gutta-percha, rubber, or other suitable material which will not be corroded by the ink within the handle. One end of this plug is formed with an upper tongue 6 and a lower tongue 7, the upper one being the longer, as will be seen by reference to the drawings, and these tongues are of less width than the remaining length of the plug. Extending through the center of the said plug and throughout its entire length to the end of the lower tongue 7 is an air-duct 8, which is so arranged that when the pen is in operative position, as shown in Fig. 1, the duct will be below the pen-point. Each side of the plug is cut away or flattened, as shown at 9, which flattened portions, when the plug is within the nozzle, form, in conjunction with the sides of the same, the channels 10, through which the ink is fed to the pen 11.

In operation the pen is placed within the feed-plug and between the tongues 6 and 7 and the plug inserted within the nozzle, the pressure of the pen against the sides of the same being sufficient to hold it in place therein. When the reservoir has been filled with ink, the air passes under the pen and through the air-duct to the interior of the handle, and forces the ink out through the channels 10 and over the top of and under the pen, and feeds sufficient ink to meet the requirements either of heavy or light writing. In case of very heavy writing, where the pen is pressed against the upper tongue, the supply of air to the interior of the handle is increased in proportion to the increased consumption of ink, thus causing it to flow more freely; but as soon as the pen resumes its normal position—that is, bears equally upon the upper and lower tongue—the extra supply of air is cut off, and thus reduces the flow of ink. Another advantage of this feed-plug is that the supply of air is requisite to cause the ink to flow freely at all times, thus preventing skipping, and does not increase as the bulk of ink diminishes, thus preventing flooding.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. In a fountain-pen, the combination, with the nozzle, of a feed-plug having flat sides, 5 upper and lower feed-tongues formed integral with the plug, and an air-duct extending throughout the length of the said plug and lower tongue.

2. As an article of manufacture, a feed-plug 10 for fountain-pens, consisting of a single piece of hard rubber having flattened sides, upper

and lower feed-tongues formed integral with the plug, and an air-duct extending throughout the length of the said plug and lower tongue. 15

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

CHARLES E. BROWNING.

Witnesses:

WILLIAM WEBSTER,
ROBERT M. ELLIOTT.