

No. 704,828.

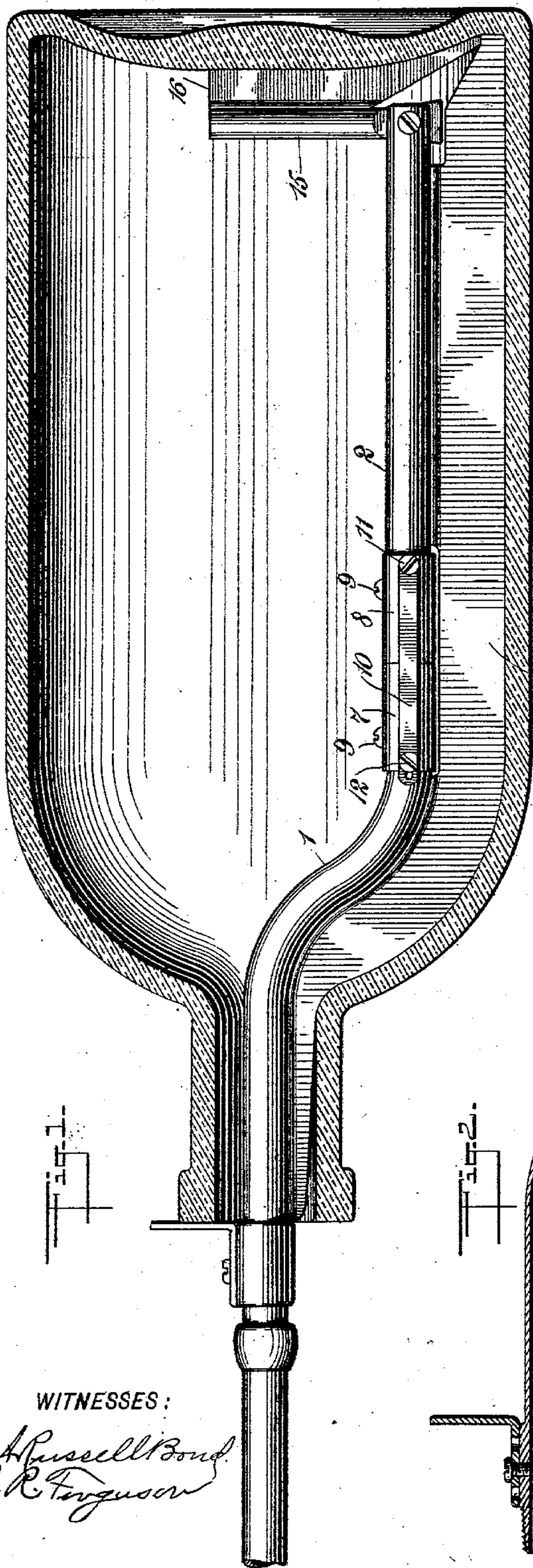
Patented July 15, 1902.

R. HOERNING.
BOTTLE WASHING BRUSH.

(Application filed Dec. 17, 1901.)

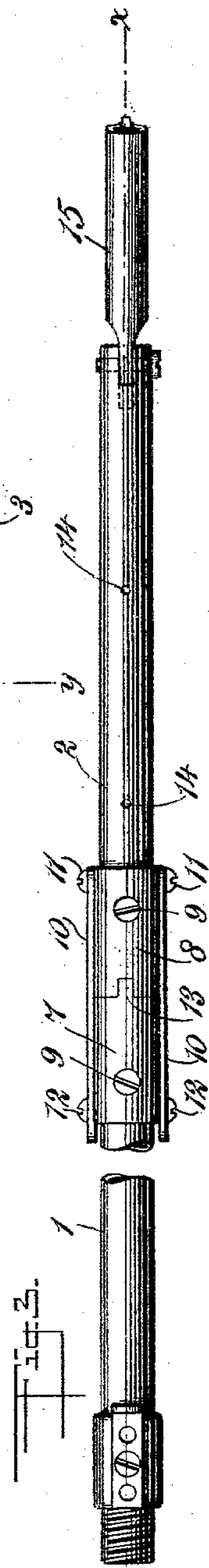
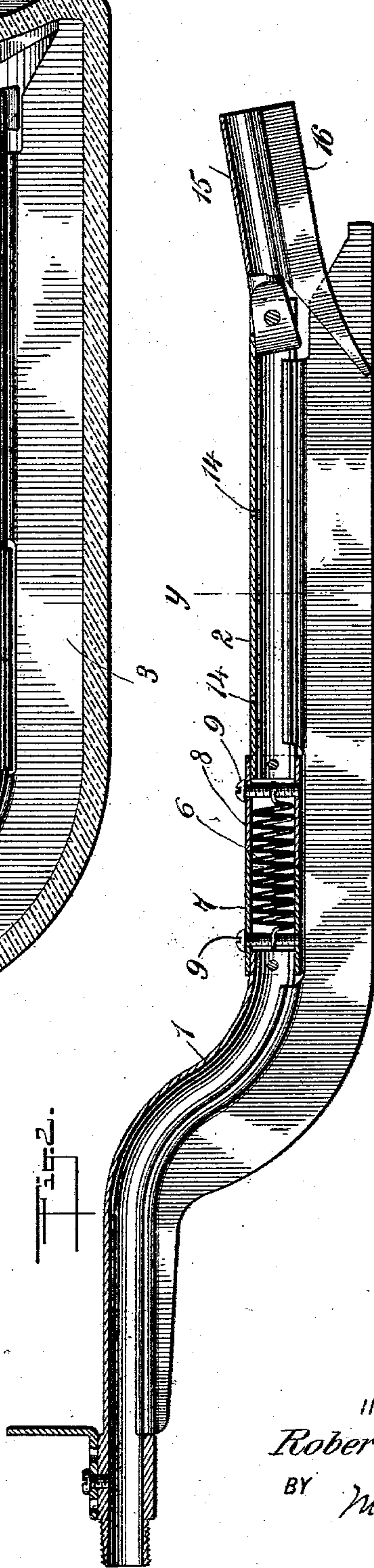
(No Model.)

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WITNESSES:

A. Russell Bond
C. R. Ferguson



INVENTOR

Robert Hoerning

BY

Munn
ATTORNEYS.

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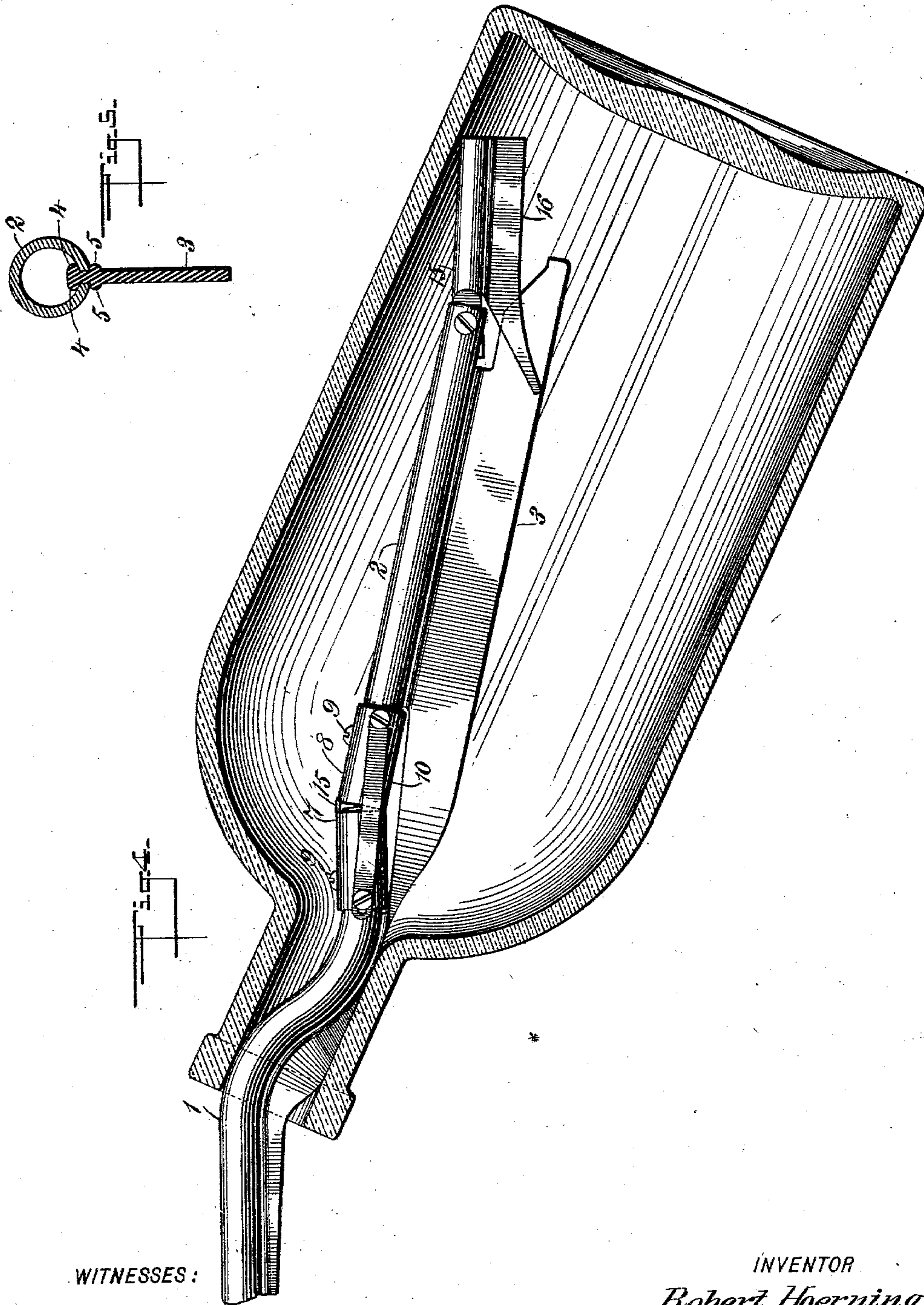
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UNITED STATES PATENT OFFICE.

ROBERT HOERNING, OF BROOKLYN, NEW YORK.

BOTTLE-WASHING BRUSH.

SPECIFICATION forming part of Letters Patent No. 704,828, dated July 15, 1902.

Application filed December 17, 1901. Serial No. 86,236. (No model.)

To all whom it may concern:

Be it known that I, ROBERT HOERNING, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Bottle-Washing Brush, of which the following is a full, clear, and exact description.

This invention relates to brushes for washing the interior of bottles.

In bottle-washing brushes of the class having a curved tubular body it is impossible to insert the brush into a bottle having a small neck portion.

It is the object of my invention to provide a curved brush so constructed that it may be readily passed through the small neck of a large bottle.

I will describe a bottle-washing brush embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a bottle-washing brush embodying my invention and showing the same in position in a bottle. Fig. 2 is a longitudinal section on the line $x x$ of Fig. 3. Fig. 3 is a back view of the brush. Fig. 4 shows the position of the brush while inserting it in a bottle, and Fig. 5 is a section on the line $y y$ of Fig. 2.

The body portion of the brush consists of two tubular sections 1 2, the section 1 being longitudinally curved, so that when the device is in a bottle the brush material 3 will engage with the inner surface of the bottle. This brush material consists, as here shown, of rubber, and it is held in the body portion consisting of the sections 1 2, the said sections being longitudinally split on the under side to receive the edge of the brush, and to prevent an accidental displacement of the brush material it is provided, as clearly shown in Fig. 4, with shoulders 4, which engage against the inner surfaces of the body, and shoulders 5, which engage against the outer surfaces. The sections 1 and 2 have yielding connection, which, as here shown, consists of a helical spring 6, one end of which

is attached to the section 1, while the other end is attached to the section 2. As a means for securing the spring I may provide, as clearly shown in Fig. 2, ferrules 7 8 on the ends of the sections 1 and 2. These ferrules may be secured by means of screws, and screws 9 pass through the ferrules and through rings at the ends of the spring. To hold the sections 1 and 2 in alignment, I employ metal straps 10, mounted at one end to swing on the screws 11, which secure the ferrule to the section 2, and having slots at the opposite ends, through which the fastening-screws 12 pass. To prevent a lateral movement of one section relatively to the other section, I provide one of the ferrules with a projection 13, designed to engage in a recess or notch formed in the ferrule 8. The section 2 of the body or back portion of the brush is provided with perforations 14, through which water may pass to the interior of the bottle, and on the end of this section is a swinging section 15, carrying a brush material 16 for washing the bottom of the bottle.

In inserting the brush in a bottle, or, rather, in passing a bottle over the brush, the two sections will assume substantially the position indicated in Fig. 4, which is permitted by the yielding connection, and when wholly inserted the spring will cause the sections to assume normal position, as indicated in Fig. 1. The outer end of the tube is designed to be connected with a water-supply in a bottle-washing machine, and the bottle is to be rotated relatively to the brush in the usual manner.

It is to be understood that I do not confine my invention to the particular form of flexible connection shown and described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A bottle-washing brush comprising a brush portion, and a curved tubular and perforated body or back adapted to move to a position out of normal while entering it in a bottle, and to move to normal position when inserted, to engage the brush material against the inner surface of the bottle-body, substantially as specified.

2. A bottle-washing brush having a tubular

curved back or body portion consisting of two sections, and a flexible connection between the sections, substantially as specified.

3. A bottle-washing brush having a tubular
5 and perforated curved back or body portion, consisting of two sections, and a spring arranged within the sections and having one end connected to one section and the other end connected to the other section, substantially as specified.
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4. A bottle-washing brush having a tubular perforated back or body portion, consisting of two sections, ferrules secured to the sections, and a spring arranged within the ferrule portions and secured thereto, substantially as specified.
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5. A bottle-washing brush having a tubular perforated back or body portion, consisting of two sections, a flexible connection between

the sections, and metal straps having swinging connection with one of the sections and sliding and swinging connection with the other of the sections, substantially as specified.
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6. A bottle-washing brush comprising a tubular body portion open at one side, and a rubber brush seated in said opening and having shoulders for engaging against the inner surface of the body and shoulders for engaging against the outer surface of the body, substantially as specified.
25
30

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

ROBERT HOERNING.

Witnesses:

JNO. M. RITTER,

C. R. FERGUSON.