

March 24, 1925.

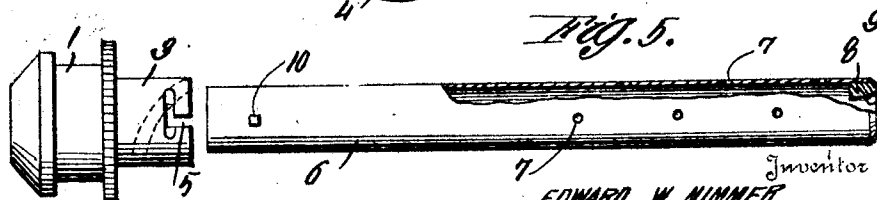
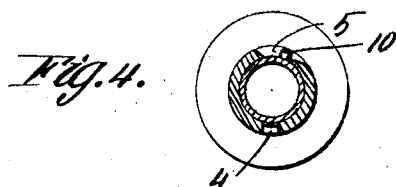
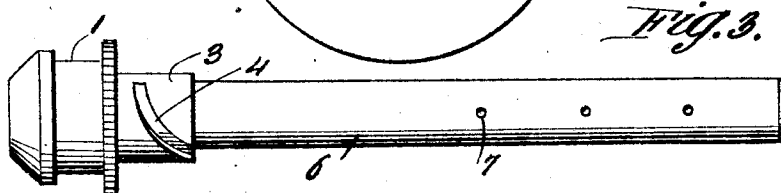
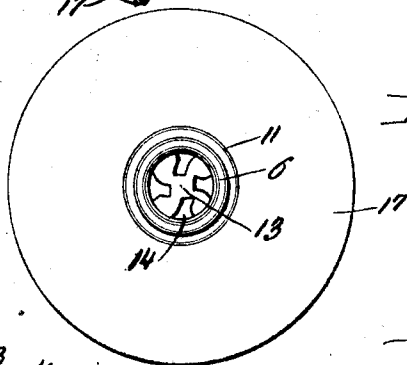
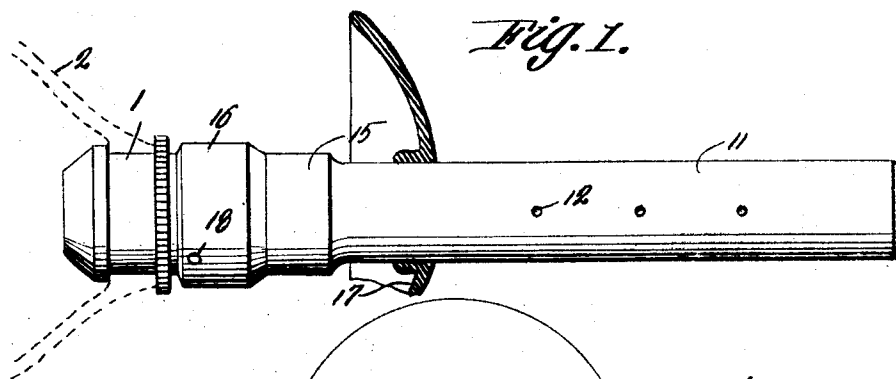
1,531,213

E. W. NIMMER

SYRINGE

Filed Jan. 25, 1921

2 Sheets-Sheet 1



WITNESSES

Emf McSpring
Chas. H. Smith

EDWARD W. NIMMER
Inventor

By *Richard B. Owen*
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March 24, 1925.

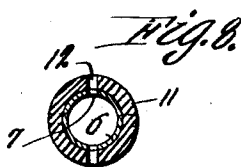
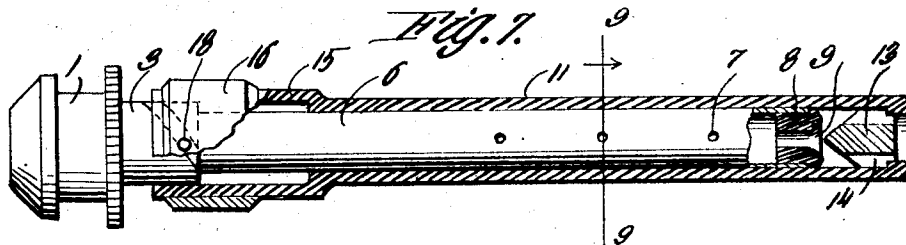
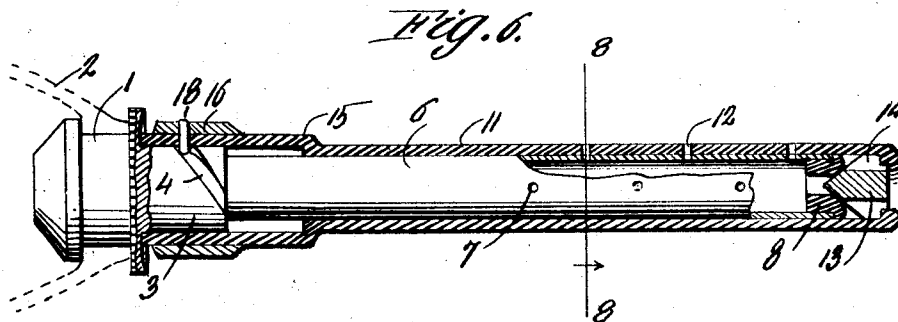
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E. W. NIMMER

SYRINGE

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2 Sheets-Sheet 2



WITNESSES

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Patented Mar. 24, 1925.

1,531,213

UNITED STATES PATENT OFFICE.

EDWARD W. NIMMER, OF MILWAUKEE, WISCONSIN.

SYRINGE.

Application filed January 25, 1921. Serial No. 439,768.

To all whom it may concern:

Be it known that I, EDWARD W. NIMMER, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in a Syringe, of which the following is a specification.

This invention relates to a syringe and has for its principal object to generally improve upon syringes by providing a device of this nature which will be extremely simple, durable and inexpensive in construction, one which is efficient and reliable in operation, and well adapted to the purpose for which it is designed.

With the above and numerous other objects in view, the invention resides in certain novel features of construction, and the combination and arrangement of parts as will be hereinafter fully described.

In the drawing:—

Figure 1 is an elevational view of the device,

Figure 2 is a front elevation of the device,

Figure 3 is an elevational view of the device with the outer sleeve removed,

Figure 4 is a transverse sectional view of the device,

Figure 5 is an elevational view of the device with the outer sleeve removed showing the various parts separated.

Figure 6 is a longitudinal section through the device in a contracted position,

Figure 7 is a longitudinal section through the device in an extended position.

Figure 8 is a section taken on the line 8—8 of Figure 6 looking in the direction of the arrows, and

Figure 9 is a section taken on the line 9—9 of Figure 7 looking in the direction of the arrow.

Referring to the drawing in detail it will be seen that 1 designates the body member of the device which is provided with an annular recess for receiving any suitable bulb 2. A sleeve 3 extends from the body member 1 and is provided upon its periphery with the spiral groove 4, and the bayonet slot 5. The nozzle of the device consists of the tube 6 provided with a plurality of openings 7 arranged in series extending transversely therethrough and the forward end of the tube 6 is also open. In the forward end there is situated a plug 8 having a central opening and a conical seat 9. On the rear end of the tube a pin 10 is situated and

is adapted to fit in the slot 5 for holding the tube 6 in locked engagement with the sleeve 3.

A sleeve 11 is slidably mounted on the tube 6, and is provided with a plurality of openings 12 arranged in series. The forward end of the sleeve is closed and provided with a central opening in which is situated a plug 13 having its rear end pointed so as to fit in the seat 9 of the plug 8 provided in the tube 6 and thus act as a valve. A plurality of spirally formed grooves 14 are arranged in the plug 13 around the center thereof so that liquid passing therethrough will be delivered forwardly of the nozzle mechanism in a whirl. The rear end of the sleeve 11 is slightly enlarged as is shown at 15 so as to fit over the sleeve 3 of the body member 1 and a reinforcing collar 16 is arranged on the rear portion of the enlarged portion 15. A pin 18 passes through the collar 16 and enlarged portion 15 so as to engage the spiral groove 4 and thus it will be seen that by rotating the sleeve 11 in a counter-clockwise direction this sleeve will be moved forwardly on the tube 6. When the sleeve 11 is moved forwardly on the tube 6 liquid may pass through the forward end of the nozzle by passing through the aperture in the plug 8 and through the spiral grooves 14 in the plug 13. When the device is in this extended position as shown in Figure 7 by rotating the sleeve 11 in a clockwise direction the sleeve 11 will be pushed rearwardly on the tube so as to close the forward opening in the nozzle and when in this position the transverse openings 12 register with the transverse openings 7 so that the liquid will pass through these openings transversely of the nozzle.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the device will be readily understood without a more extended explanation. As numerous changes in form, proportion, and in the minor details of construction may be resorted to without departing from the spirit of this invention, I do not wish to be limited to the construction herein shown and described other than as claimed.

Having thus described my invention what I claim as new is:—

1. A device of the class described comprising a body member, a tube extending therefrom, a sleeve slidable on the tube,

- means provided for sliding the sleeve on the tube, said sleeve and said tube provided with transverse openings adapted to register when the sleeve is in a contracted position and
5 provided with end apertures, and means provided in the ends of the tube and sleeve for preventing liquid from passing there-through when the device is in a contracted position.
- 10 2. A device of the class described comprising a body member, a tube attached thereto, a sleeve slidable on the tube, means for sliding the sleeve longitudinally on the tube, said sleeve and said tube provided with
end openings, a plug situated in the forward 15 opening in the tube and provided with an aperture, and a plug situated in the opening of the sleeve and having openings arranged eccentrically therein, said second plug adapted to close the opening in the first 20 mentioned plug when the sleeve is in a contracted position upon the tube.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD W. NIMMER.

Witnesses:

EDW. B. BURD,

ARTHUR C. SANGER.