

(No Model.)

J. A. DUNN.

SYRINGE.

No. 388,029.

Patented Aug. 21, 1888.

Fig. 1.

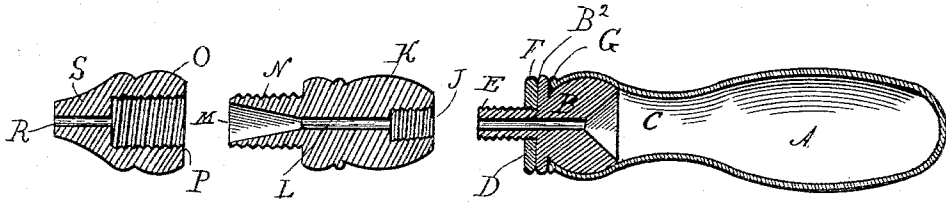


Fig. 3.



Fig. 4.

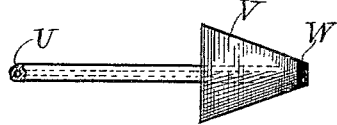
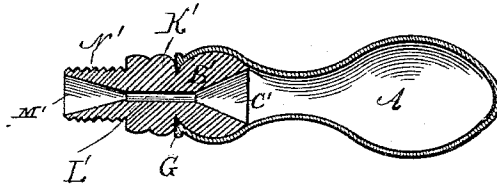


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

J. AUSTIN DUNN, OF CHICAGO, ILLINOIS.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 388,029, dated August 21, 1888.

Application filed October 22, 1887. Serial No. 253,154. (No model.)

To all whom it may concern:

Be it known that I, J. AUSTIN DUNN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Syringe, of which the following is a specification.

My invention relates to medicinal syringes, such as are used for introducing medicines into cavities in the body, particularly the cavities in the teeth, about the eyes, &c., and also such syringes as are used to introduce medicines into the flesh and under the skin and the like.

The object of my invention is to provide such a syringe with a convenient means for changing and adjusting the projecting needle or point at will. These objects I accomplish by means of the device illustrated in the accompanying drawings, wherein—

Figure 1 is a sectional view through my device with the parts separated from each other and the needle removed. Fig. 2 is a similar view of a modification. Fig. 3 is a side view of the needle with the packing-head. Fig. 4 is a modification of the same with part of the needle broken away.

Like parts are indicated by the same letter in all the figures.

A is a compression-bulb adapted to contain the medicine to be used.

B is a head, of metal or other suitable material, which is forced into the end of the compression-bulb. C is a conical cavity in the same, which terminates in the conduit D, which passes out through the screw-threaded projection E.

F is a packing-collar about E and bearing against the flange B.

G is a thickened edge about the mouth of the compression-bulb to more securely hold it on the head.

J is a screw-threaded cavity in the end of the connecting-piece K, and it is adapted to receive the screw-threaded portion E.

L is a channel through K, which registers with the channel D. It terminates in the funnel-shaped cavity M in the projecting portion N, the outer portion of which is screw-threaded to pass into the aperture P of the tip O. This tip may be terminated in the point S, and is provided with the channel R in a line with the channels L and D.

T is a hollow needle having the discharge-aperture U at one end and at the other the head V, adapted to be received into the funnel-shaped aperture M. This head V is shown also in Fig. 4, where it is combined with an elastic collar, W. The head V may be made of any desired material; but I prefer rubber or some elastic material. It has a central aperture through which the needle T passes.

The device is put together in the following manner: The screw-threaded projection E is screwed into the screw-threaded aperture J, where a tight joint is made by means of the washer F, or otherwise. The needle T is then passed through the channel R, the head V resting in the funnel-shaped cavity M. By then screwing the head N into the aperture P the parts of the device are all brought together to make a continuous syringe.

In Fig. 2 a modification is shown whereby the part K is substantially dispensed with. A is a compression-bulb for holding the medicine; B' K', the combined head-piece and connection; L', the channel; M', the funnel-shaped aperture; C', the conical aperture opening into the bulb A; N', the threaded projection on K'; G, the thickened edge of the bulb A.

The piece O and needle T are applied to the modification shown in Fig. 2, as above described.

The use and operation of my invention are as follows: The several parts having been securely screwed together by applying a little additional pressure to turn the part O on the part N, the elastic head V, or, if such head is not elastic, the elastic washer W, is pressed against the sides of the cavity M, and thus a tight joint or connection is made between the hollow needle and the channel L D, which leads into the interior of the compression-bulb A. The compression-bulb A is now filled with the medicine or chemical to be used in the ordinary manner, when the syringe is ready for operation. Its application is similar to that of other similar syringes. If, now, the needle should become corroded, broken, or damaged, it may be removed and another needle substituted without damage to the other portions of the syringe. Thus the part O may be unscrewed from the projection N, the needle broken or rendered unfit for use may now be

removed from the head V, and another needle substituted in its stead, whereupon the parts may be secured together in the described manner and the device be ready for operation. 5
 Of course it will be perfectly apparent that the head V may be greatly altered, as by making the greater part of it solid and combined with the compression-washer W; or it may be inverted or otherwise changed, the essential fea- 10
 ture being that the needle centers in line with the channel L D, and is secured in position of the elastic substance which surrounds it on account of the rotation of the piece O. By 15
 this means it is possible to easily adjust or re-move needles, thus permitting the operator without any serious difficulty to change so as to use needles of different size or shape or for 20
 different purposes without dispensing with any of the other parts of the syringe. This is a matter of some importance in localities re-
 moved from factories where instruments of this character can be easily made or mended, for

it permits the user to keep a supply of needles, which can be inserted without difficulty and without loss of time and without the expense of sending to the factory for repairs. 25

Having thus described my invention, what I claim, and desire to secure by means of Letters Patent, is as follows:

In a medicinal syringe, the combination of 30
 the body of a syringe with a compressible packing-piece, a needle which passes through said packing-piece, and a compression-piece which is connected with the body of the syringe and partially incloses the packing, the parts 35
 so constructed and related that the needle is secured to the syringe solely by the pressure of the compressible packing, substantially as described.

J. AUSTIN DUNN.

Witnesses:

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