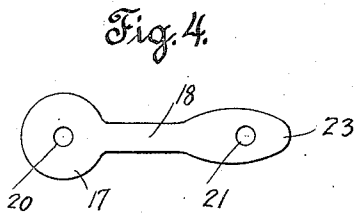
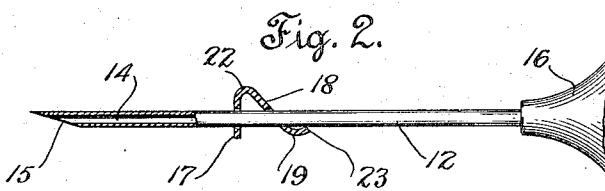
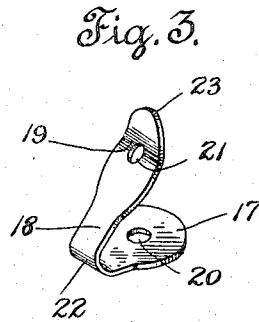
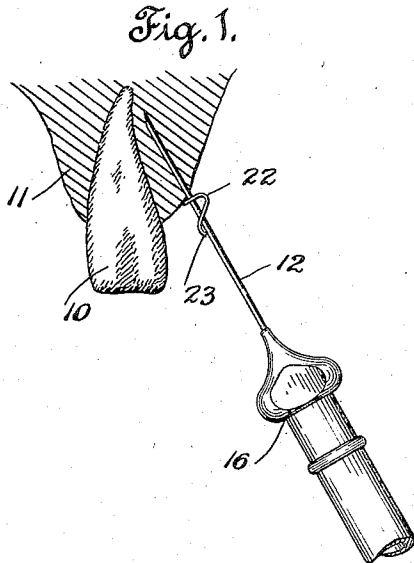


G. GASCHKE,
 ADJUSTABLE AND SAFETY REGULATING DEVICE FOR HYPODERMIC NEEDLES.
 APPLICATION FILED AUG. 10, 1921.

1,436,707.

Patented Nov. 28, 1922.



Inventor
 George Gaschke
 By his Attorney,
 Fred C. Fischer.

UNITED STATES PATENT OFFICE.

GEORGE GASCHKE, OF NEWARK, NEW JERSEY, ASSIGNOR TO AMERICAN PLATINUM WORKS, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

ADJUSTABLE AND SAFETY REGULATING DEVICE FOR HYPODERMIC NEEDLES.

Application filed August 10, 1921. Serial No. 491,081.

To all whom it may concern:

Be it known that I, GEORGE GASCHKE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Adjustable and Safety Regulating Devices for Hypodermic Needles, of which the following is a specification.

The principal object of this invention is to provide an adjustable limiting stop for hypodermic needles as used in injecting liquid medicaments into the tissues of the body by dentists, physicians and surgeons, in producing local anesthesia and like purposes.

Another object is to provide means for withdrawing the needle should it become broken or separated from its holder.

A further object is to produce such limiting devices in a form which is readily engageable from needles as commonly constructed without change in the same.

Needles of the class mentioned are in reality hollow steel tubes having a sharply bevelled entrance end and held in a holder comprising a shank formed at the end of a syringe barrel having a piston adapted for manual operation, the entire instrument being grasped in the hand.

In operating such needles it is desirable to predetermine the depth of the insertion and prevent over intrusions; also due to the fragility of the needle structure, it is not unusual to have the needle break, generally at a point close to the holder, such breakage being caused by inadvertent movement, either of the patient or operator, frequently necessitating a surgical operation for its removal.

To overcome these defects is thus another object, which, together with the others, is attained by the novel construction and operation of the device hereinafter described and illustrated by the annexed drawing, forming an essential part of this disclosure, and in which:—

Figure 1 is a side elevational view indicating a conventional type of hypodermic needle in operation and showing the application of the invention.

Figure 2 is an enlarged side elevational view of the needle, the device being shown in section.

Figure 3 is a greatly enlarged perspective view of the regulating device in detail.

Figure 4 is a plan view of the blank before bending.

In Figure 1, a dental application has been shown, in which a tooth 10 is shown as set in the gum 11, into which the needle 12 is inserted.

The needle has a longitudinal bored passage 14 extending throughout its entire length, its outer end 15 being cut diagonally to present a sharp piercing point to enter the flesh, and is firmly held at its opposite end in a holder 16 of any common type.

The gauging stop is formed from thin resilient sheet metal, one of its ends 17 being disc shaped and blended into a neck 18 of parallel width, leading to an enlarged oval shaped head 19.

When in the flat blank form as shown in Fig. 4, a perforation 20 is made in the center of the disc 17 and a similar but slightly larger perforation 21 is formed through the head 19.

The blank is then bent to produce a curve 22 at about the juncture of the neck 18 and the neck disposed at an angle to the disc in such manner as to bring the perforations 20 and 21 substantially into alignment, the head 19 being so curved as to present its tip portion 23 into position to slightly overhang the edge of the perforation 21.

The opening 20 is adapted to neatly fit the exterior of the needle 12 and due to the bending of the head and neck elements the opening 21 becomes slightly flattened so as to tightly receive the needle body and the tip 23 is pressed tightly against it.

Thus due to the shape of the finished guard or stop it will, when entered over the body of the needle, interpose a firm resistance to moving by pressure applied to the disc portion, but may be readily adjusted by manipulating its curved end, thus affording a simple but efficient adjustable stop.

It is also to be remarked that the head 19 presents a flat surface that can conveniently be engaged by pliers in removing the needle should a break occur, thus affording a safety device of practical merit.

As changes of construction could be made within the scope of the invention, it is intended that all matter contained in the foregoing description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I

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

- 5 1. A stop guard for needles comprising a flat disc, a head substantially at a right angle to said disc and an angularly disposed neck extending between said disc and head, said disc and neck having perforations suited to engage the body of the needle.
- 10 2. A stop guard for needles comprising a flat disc, having a central perforation fitting the needle, an obliquely disposed neck extending from the periphery of said disc, said neck having an opening suited to engage the needle, a head at the opposite end
15 of said neck and a curved tip on said head, said tip being normally in spring contact with the needle.
- 20 3. A stop guard for needles comprising a flat perforate disc disposed transversely on the needle body, an attenuated spring neck bent at an angle from said disc and apertured to permit the passage of the needle body, a flat head extending from said neck adjacent the needle, and an inwardly curved tip at the extremity of said head impinging
25 against the needle body.
4. A stop guard for needles comprising a sheet metal spring element shaped and perforated to engage a needle at three distinct points, said element being adjustable along
30 the needle by pressure applied at one end and adapted to resist pressure applied at its opposite end.

This specification signed and witnessed this first day of August, 1921.

GEORGE GASCHKE.

Witnesses:

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F. NOLL.