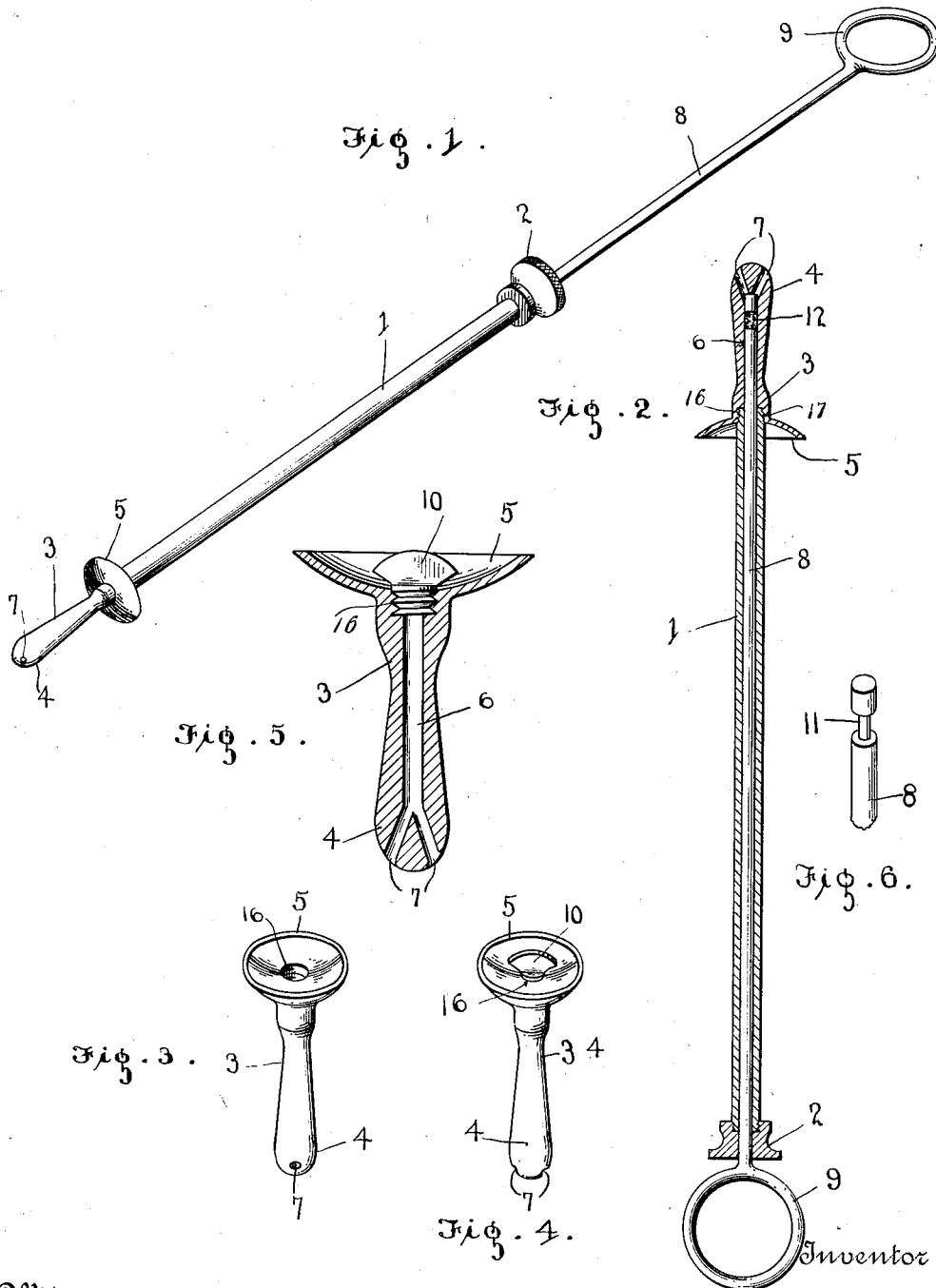


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 COMBINED MEDICAL APPLICATOR AND DILATOR.
 APPLICATION FILED APR. 6, 1911.

1,050,591.

Patented Jan. 14, 1913.



Witnesses
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UNITED STATES PATENT OFFICE.

RALPH W. AMMONS, OF LOS ANGELES, CALIFORNIA.

COMBINED MEDICAL APPLICATOR AND DILATOR.

1,050,591.

Specification of Letters Patent.

Patented Jan. 14, 1913.

Application filed April 6, 1911. Serial No. 619,283.

To all whom it may concern:

Be it known that I, RALPH W. AMMONS, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Combined Medical Applicators and Dilators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in combined medical applicators and dilators. One object of the invention is to provide a medical applicator in which the medicine holder may be disconnected and permitted to remain inserted thus forming a dilator.

Another object is to provide means whereby the outer end of the medicine holder may be closed when used as a dilator to retain the medicine therein and opened to receive a fresh supply of medicine without removing the holder from the parts or which may be left open and thus serve as a drain.

Briefly stated the invention consists of a dilator adapted to contain medicine, and provided with a longitudinal passage terminating in diverging discharge openings, a concaved annular flange forming a part of the dilator and provided with a centrally disposed screw threaded opening communicating with the longitudinal passage and of larger area, a hollow stem having a screw threaded end for detachable engagement with the screw threaded enlarged end of the said longitudinal passage, the concaved flange serving to properly direct the screw threaded end of the stem to its receiving opening when the parts are desired to be connected without removing or changing the position of the dilator, a plunger slidably located in the stem, and adapted to move in the longitudinal passage of the dilator and close the discharge openings therein, and means for temporarily and hermetically sealing the dilator after the stem has been removed therefrom.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings:—Figure 1 is a perspective view of my improved ap-

plicator and dilator; Fig. 2 is a central longitudinal sectional view of the same; Fig. 3 is a detail perspective view of the medicine holder of the applicator removed from the stem; Fig. 4 is a similar view showing the manner in which the applicator is arranged for use as a dilator; Fig. 5 is an enlarged vertical section of the same; Fig. 6 is a perspective detail of the outer end of the plunger.

My improved applicator and dilator comprises a tubular stem or shank 1 having on its inner end a milled head 2. The outer end of the stem 1 is threaded exteriorly as at 17 and on said threaded end is adapted to be screwed a medicine holder 3 said holder also forming a dilator when detached from the stem as will be hereinafter more fully described. The holder or dilator 3 has an enlarged substantially elliptical shaped outer end 4 and has on its inner end a guard flange 5 which serves as a stop to prevent the instrument from being inserted too far. The flange 5 may be of any suitable shape and size to fit the parts to which the same is applied and is here shown as of circular contour and convex on its outer face.

In the holder is formed a central longitudinal passage 6 adapted to contain the medicine to be applied, which passage is of the same size as the bore of the stem 1 and at its extreme inner end is enlarged and threaded as 16 to engage the threads 17 at the outer extremity of the stem so that when these two parts are connected the bore of the stem and the passage in the holder will be continuous. The medicine may be in the form of a salve, ointment, powder or liquid. In the outer end of the holder at diametrically opposite points are formed discharge passages 7 which are spaced apart and diverge to the end of the holder and communicate at their inner ends with the passage 6 whereby the medicine will be discharged from opposite sides of the holder.

In order to force the medicine from the holder I provide a plunger 8 in the form of a rod which is slidably mounted in the tubular shank and holder and is provided on its outer end with an operating ring 9 whereby the plunger may be reciprocated in said tube and thus force the medicine out of the holder through the discharge passages 7—directly onto the parts to be treated.

By preference I form a groove 11 around the plunger 8 near its outer end as best seen

in Fig. 6, and within said groove may be placed some soft packing 12 as indicated in Fig. 2, although the close fit of the plunger within the bore of the shank and the passage through the holder renders this usually unnecessary. Still it might be desirable where an extremely thin liquid medicine is to be applied. At other times the ointment or salve is placed within the passage 6 in the holder 3, the threaded portion 16 of said passage is engaged upon the threaded end 17 of the shank 1, the holder inserted into the part to be treated, and the plunger 8 run up through the shank so as to eject the medicament from the outlets; or if preferred the plunger might be put in before inserting the holder into the opening to be treated.

By removing the holder 3 from the shank the former may be employed as a dilator and permitted to remain inserted. When used as a dilator the outer end of the same may be closed by a screw plug 10 whereby medicine may be retained in the passage 6 of the dilator and thus kept constantly applied to the parts through the discharges 7. By removing the plug 10 more medicine may be inserted in the holder without removing the same. The dilator when thus arranged may be employed as a drain by simply removing the plug thus permitting any discharge to pass out.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the inven-

tion will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, as defined in the appended claims.

Having thus described my invention what I claim is:—

In a medical applicator and dilator the combination with a stem having a screw threaded upper end, of a medicine container and dilator having a passage way and provided on one end with an enlargement having a plurality of inclined bores communicating with said passage way, said passage way being screw threaded at one end so as to be connected to the stem, said dilator having a dished stop flange communicating with said passage way and a plunger movably mounted in said stem and of a length to extend through the combined passage ways of said stem and dilator, said container being detachable from the stem and adapted to have a plug connected to the screw threads of the way so as to close the same.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

RALPH W. AMMONS.

Witnesses:

C. H. CASE,

WM. HARDCASTLE.