Nov. 23, 1937. H. H. CHANDLER 2,100,157

SWAB

Filed July 9, 1937

Fig. 1.

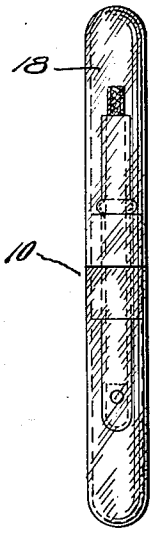


Fig. 2.

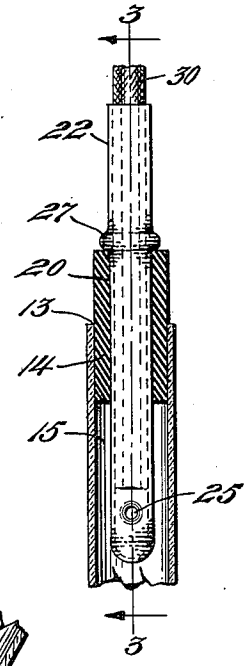


Fig. 3.

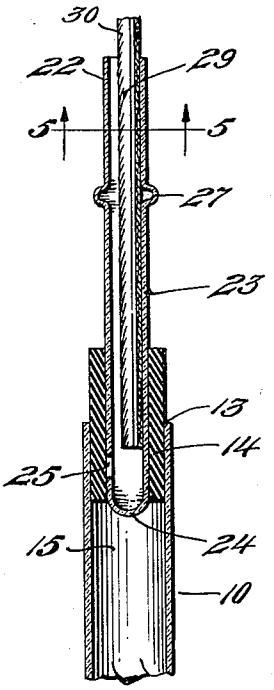


Fig. 4.

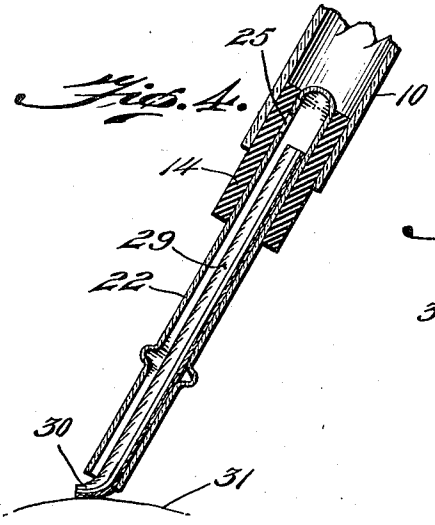


Fig. 5.

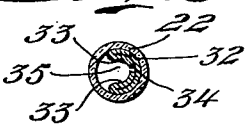
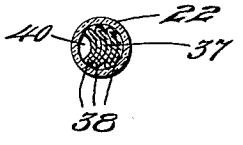


Fig. 6.



Inventor.
Harry H. Chandler.
By Horatio E. Bellows
Attorney

Patented Nov. 23, 1937

2,100,157

UNITED STATES PATENT OFFICE

2,100,157

SWAB

Harry H. Chandler, New Ipswich, N. H.

Application July 9, 1937, Serial No. 152,717

3 Claims. (Cl. 128—269)

My invention relates to portable therapeutic devices adapted to discharge and apply from an internal reservoir iodine or other medicinal liquids to the affected portions of the body.

An object of my invention is to provide a conducting member for the liquid which shall perform also the function of a spreader.

A further object is to insure continued moisture of the operative or spreading portion of the conductor after periods of disuse whereby stiffness of the latter is avoided.

Still further objects are to afford longitudinal adjustment of the conductor relatively to the tube by which it is carried whenever circumstances make a change of length of the former by cutting or otherwise advantageous or necessary, and to facilitate the refilling of the reservoir by enabling the complete removal of the conductor carrier from the plug in which it is mounted.

Additional objects are to effect the above ends in an inexpensive structure having a minimum of parts, and facile to operate.

Other objects and advantages will be hereinafter adverted to.

My invention consists, therefore, in the means and mechanism for effecting the above recited objects and producing the results above specified, substantially as hereinafter claimed.

The invention will be best understood by reference to the following description when taken in connection with the accompanying drawing illustrating a preferred embodiment thereof.

In the drawing,

Figure 1 is a side elevation of my novel device,

Figure 2, a central vertical section of the same in open position and with the cap removed,

Figure 3, a section on line 3—3 of Figure 2 in closed position,

Figure 4, a section of the same in open position, but showing the device reversed and inclined,

Figure 5, a transverse section taken on line 5—5 of Figure 3, and

Figure 6, a similar section of a modified form of conductor or wick.

Similar characters of reference indicate similar parts throughout the views.

As herein illustrated my invention is embodied in an oblong container or receptacle 10, in this instance of glass, substantially cylindrical, closed at one end and provided at its opposite end with a mouth 13. In the open end of the container is fixed by friction the lower portion of a tubular plug 14 of soft rubber or other resilient material, which defines a reservoir 15 for a liquid such as iodine. An extended portion of the plug is slidably embraced by an elongated removable cap 18.

In the central opening 20 of the plug is slidably mounted with a moderate degree of friction a tubular carrier 22 comprising a straight non-tapering side wall 23, and a closed inner end 24. Near its inner end the wall 23 is provided with a lateral opening 25 normally below the plug, and with an external annular stop shoulder 27 above the plug.

A textile conductor, or wick 29 is longitudinally adjustable in the carrier 22. Its normal length and position is such as to extend inwardly to a point adjacent the feed opening 25, while its outer end 30 projects some distance beyond the outer end of the carrier, and constitutes a pliable spreading portion for the application of the liquid. The member 29 engages the wall of the carrier 22 with sufficient friction to prevent accidental longitudinal movement while the member is performing its strokes upon the flesh 31, but is sufficiently loose to be manually slidable longitudinally in either direction when desired. This capacity for longitudinal movement also makes it possible to cut off the end of the spreading portion 30 after using if desired, and permits the conductor to be manually advanced preparatory to the next application of the spreading portion.

The member 29 is a textile strip and therefore has capacity for saturation which is more prolonged by the capillary attraction inherent in a textile strip or wick. This preserves flexibility in the spreading portion after periods of disuse, and maintains the entire conductor in a condition for prompt use, which is particularly important in case of accidents.

The conductor 29 is composed, as indicated in Figure 5, of an elongated strip 32 of textile material with its lateral margins 33 inwardly folded over upon its central portion 34 throughout their lengths, and, the whole is transversely curved which affords a resultant adjacent longitudinal channel, as at 35, for admitting the liquid through the carrier in contact with the strip throughout the length of the latter, when the device is reversed or in operation position.

In Figure 6 is shown a modified form of conductor 37 comprising a plurality of strips 38 superposed upon each other or nested together, and transversely bent, each strip being composed of a flattened textile tube. These strips also leave a longitudinal channel 40.

The construction, form, material, and disposition of the strips 32 and 37 within the tubular

carrier also contribute to the discharge of the liquid and the thoroughness and permanency of saturation of the conductor or wick.

When the device is idle the carrier **22** is maintained in retracted position, as shown in Figures 1 and 2, where the feed opening or perforation **25** is exposed. When the device is in operating position the carrier may be so slidably moved that the opening is closed by the plug, as shown in Figure 4. It is obvious that the extent of discharge through the carrier may be increased or diminished by so positioning the carrier that the opening **25** is only partially occluded by the inner end portion of the plug.

The best results are attained when the length of the conductor is such that its inner end extends to a point adjacent the opening **25**, as shown, since the liquid in the reservoir reaches the conductor end more quickly when my device is reversed for use.

The substantially uniform diameter or thickness of the carrier **22** permits its complete withdrawal from the plug **14** and allows refilling of the reservoir **15** through the opening **20** of the plug.

I claim:—

1. In a device of the character described, a receptacle for liquid, a plug in the upper portion of said receptacle, a tube having an aperture slidably mounted in said plug and receptacle acting as a valve for the liquid, and a pliable conductor in said tube adjacent said aperture.

2. In a device of the character described, a receptacle for liquid, a plug having an opening in the upper end of said receptacle, a tube slidably mounted in said plug opening, said tube having an aperture near its bottom to be selectively opened and closed by said plug, and a pliable conductor in said tube terminating adjacent said aperture and extending beyond said tube.

3. In a device of the character described, a receptacle, a plug having an opening in said receptacle, a tube having an aperture, and a pliable conductor in said tube, said tube aperture adapted to be opened and closed by said plug.

HARRY H. CHANDLER.