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SCARIFIER

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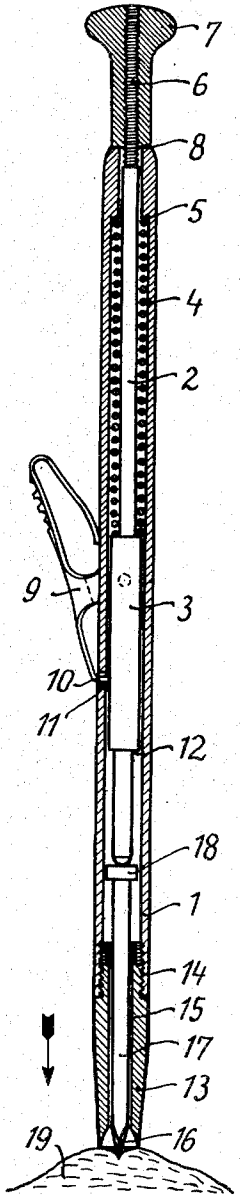

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SCARIFIER

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1 Claim. (Cl. 128—333)

The present invention relates to a scarifier. Instruments of this kind commonly consist of a shell or tube respectively provided with a plunger slidably arranged therein. Said plunger has a sharp point at its front part and is controlled by a spring adapted to cause the sharp point to be driven out of the shell. A locking mechanism normally keeps the plunger in position against the action of the spring.

When, after the instrument has been brought into contact with a finger for instance, said locking mechanism is released the spring will shoot said plunger point out of the shell and makes it penetrate into the skin of the finger, thereby drawing blood, which is thereupon transferred by a pipette.

In practice, it has been noticed that infections are easily transmitted by said instrument. For this reason and in order not to be compelled to clean the whole mechanism after operation it has been proposed to construct the lancet bearing said sharp point not as an integral part of the plunger but as an interchangeable needle piece.

It is the main object of the present invention to bring about a combination of the pricking needle and the other component parts of the instrument so as to enable quick interchangeability of said needle.

Another object of the invention consists in arranging the pricking needle, although being interchangeable, in such a way that it is reliably kept in position and cannot get lost while in operation.

A further object of the invention consists in arranging the pricking needle in such a way that it need not be connected with the plunger but is in loose contact therewith.

According to the present invention the forward end of the shell is detachably provided with an extension furnished with a longitudinal bore adapted to serve as a sliding bearing for said needle, the latter being in loose contact with the forward end of the plunger.

A special feature of the invention consists in providing the upper end of said pricking needle with a flange, having a larger diameter than the needle itself, the said flange being adapted to slide within the shell and to prevent said pricking needle from sliding out of said extension by being stopped by a shoulder at the upper end of said extension.

By way of example, a preferred embodiment of the invention is shown in the accompanying drawings which represent a longitudinal sectional view thereof.

The scarifier consists of a shell **1** provided with a plunger **2** therein the middle part **3** of which has a larger diameter than the two end parts. Said middle part **3** serves as a base for a pressure spring **4**, the upper end of which abuts upon a shoulder **5** of shell **1**. The threaded upper end **6** of plunger **2** is provided with a cap **7** which rests upon face **8** of shell **1**.

At the side of shell **1** there is provided a pawl **9**, hook **10** of which fits into an opening **11** of shell **1** in such a manner that when plunger **2** is drawn back by cap **7**, thereby compressing spring **4**, hook **10** is pressed under a shoulder **12** of middle part **3** thereby securing plunger **2** in its raised position.

The lower end of shell **1** is provided with an inner thread **14** by means of which an extension **13**, provided with a longitudinal bore **15**, is screwed into said shell **1**. The inner diameter of said bore **15** is such that it serves as a sliding bearing for a needle-point **16** of a lancet **17**.

The upper end of lancet **17** is provided with a flange **18** being in loose contact with the lower end of plunger **2**, thus preventing the lancet **17** from sliding out of the longitudinal bore **15** by coming to rest after a certain travel upon the face of the threaded part of extension **13**.

When placing the foregoing described instrument upon a point **19** of the human body and putting locking mechanism **9**, **10** into the opening position, plunger **2** under pressure of spring **4** shoots forward, thereby advancing lancet **17**.

When the pricking needle **17** is to be cleaned, extension **13** is unscrewed from shell **1** and needle **17** drawn forth to have same replaced by a new or cleaned one.

The invention is not limited to the example of embodiment shown and described and different modifications can be embodied without exceeding its scope. For instance, the detachable connection between extension **13** and shell **1** may be provided by other means than by thread **14**, e. g., by a screw-cap, a bayonet closure, pawls etc.

What I claim is:

Scarifier comprising a shell, a plunger slidably arranged in longitudinal direction in said shell, a spring adapted to displace said plunger in longitudinal direction, a pointed needle adapted to emerge out of the shell when urged by the plunger, a releasable locking mechanism adapted to lock said plunger against the action of the spring, an extension threaded into the lower part of the shell, a longitudinal bore within the extension and adapted to serve as a sliding hearing for the needle, the upper end of said needle being formed as a flange having a larger diameter than said needle and said bores to limit outward movement of the needle in the extension, said needle being in loose contact with the plunger.

References Cited in the file of this patent

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