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L. L. GROSE
SURGICAL INSTRUMENT
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2,457,464

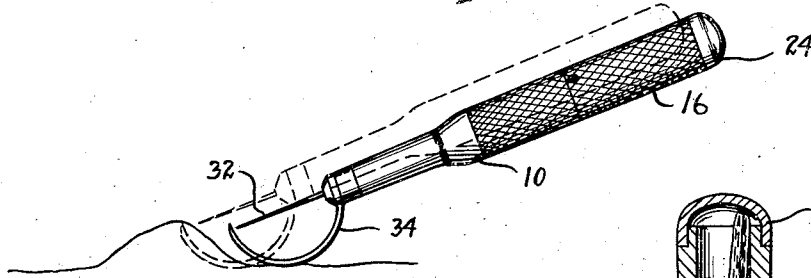


FIG 1

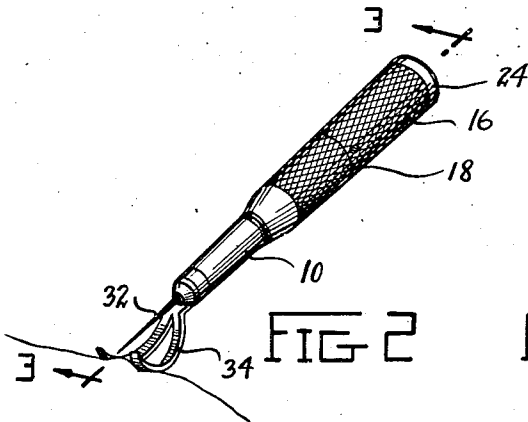


FIG 2

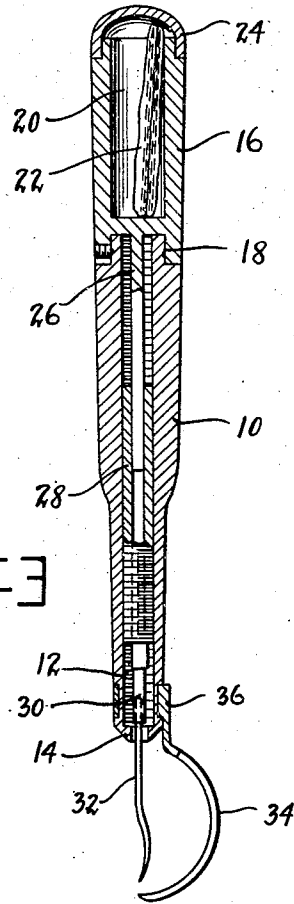


FIG 3

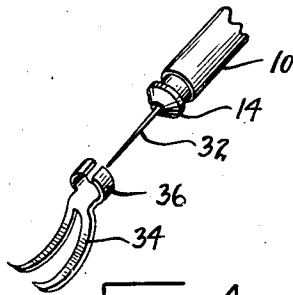


FIG 4

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UNITED STATES PATENT OFFICE

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SURGICAL INSTRUMENT

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1 Claim. (Cl. 128—347)

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This invention relates to surgical instruments and more particularly to a novel retractible needle provided with a guard member.

The object of the invention is to provide an instrument which can be used to penetrate the skin to a limited predetermined depth when used to facilitate the extraction of any unwanted or foreign bodies from the skin or for the puncture of the epidermis without undue injury to the dermis, blood vessels and other tissues, in the treatment of blisters, small localized infections and the like.

With this and other objects in view as will appear hereinafter, this invention consists of certain novel features of construction, combination and arrangement of parts as will be described hereinafter in detail and particularly set forth in the appended claim, reference being had to the accompanying drawings which form a material part of this application, and in which:

Figure 1 is a perspective view of my invention and indicates in dash lines the position of the instrument with relation to an upraised portion of the skin.

Figure 2 is a similar view designed to illustrate how the instrument is used to raise a limited portion of tissue relative to contiguous portions for operation thereon.

Figure 3 is an enlarged center sectional view taken on the line 3—3 in Figure 2, showing the detailed construction of the handle portion, and

Figure 4 is a detailed view of the bifurcated guard member and contiguous portions.

Similar characters of reference refer to similar or identical portions throughout the several views.

As shown best in Figure 3, the handle portion comprises an irregularly shaped barrel 10 which is interiorly threaded throughout approximately the entire length thereof as at 12, except in a relatively short nose section 14. At the other end of the barrel 10, a member 16 is rotatably mounted thereon as indicated at 18, and this member 16 contains a cavity 20 adapted to contain extra needles for the instrument. These needles are shown wrapped in Cellophane wrappers 22 and retained in the member 16 by the cap 24.

The portion 16 carries a relatively long projecting portion or pin 26, which may be made integral with the portion 16 and which extends centrally of the handle to contact in sliding relationship and to turn the cylinder 28, which cylinder 28 is moved longitudinally of the barrel, its exterior threads being engaged with the

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interior threads of the barrel. At the end of the cylinder 28 and rigidly secured thereto is a simple clutch or grasping device 30 which may be of the simple split tube type and adapted to hold firmly the end of a needle 32, the point end of the needle extending outside the barrel.

It will be noted that in Figure 3, there has been represented a needle arcuate throughout a portion of its length, while in the other figures, a straight needle has been shown, and it is envisaged that several types of needles may be used with this invention including the standard sewing needle of correct size.

A bifurcated guard member 34 of curved cross-section is secured to the barrel member 10 by a simple clip portion 36 which clamps the barrel member immediately to the rear of the nose cap 14, which nose cap may be merely an integral portion of the barrel or may be a separate portion constructed of heat resistant material.

With the foregoing description of the mechanical details of this invention in view, it will be obvious that this invention has many advantages both for clinical use and for use in the home. With proper use of the guard member 34 and the correct choice of the particular shaped needle best adapted for a particular use, an infinite number of operations can be performed by the use of this instrument. The extendible and retractible features, together with the use of the guard, makes the degree or depth of penetration of the needle an easily controlled matter, and the skillful use of the guard member 34 will make the local manipulation of the area to be operated on possible, an important feature of the invention. It will also be noted that my invention can be easily sterilized, and with this in view, the cap 14, needle 32 and guard 34 are constructed of materials which are heat resistant and also relatively inactive chemically.

Though there has been shown a particular embodiment of this invention, this application is not limited to this particular embodiment, but it is desired to include in the scope of this invention, the construction, combination and arrangement of parts substantially as set forth in the appended claim.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent of the United States is:

A surgical instrument including a handle, a needle secured to said handle, and a guard member of arcuate form carried by said handle having a central portion curving outwardly from said needle and a point portion extending be-

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yond and adjacent the point of said needle when extended and adapted to limit the penetration of said needle, said handle having an interiorly threaded barrel member operatively associated with an exteriorly threaded cylinder provided terminally with needle holding means, and a member rotatably mounted on said barrel with a portion thereof extending within said cylinder to rotate the same and thus extend and retract said needle.

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4**REFERENCES CITED**

The following references are of record in the file of this patent:

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