H. W. ROELING.

SCALPEL.

APPLICATION FILED FEB. 5, 1920.

1,368,842. Patented Feb. 15, 1921.

Fig. 1.

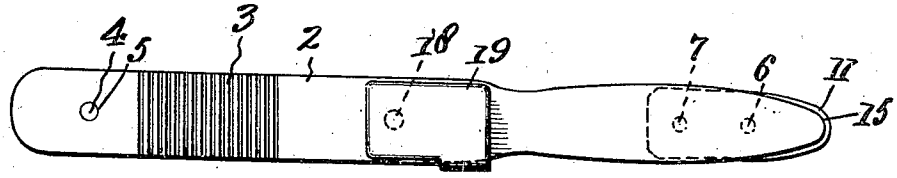


Fig. 2.



Fig. 5.

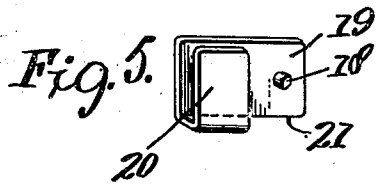


Fig. 3.

Fig. 4.

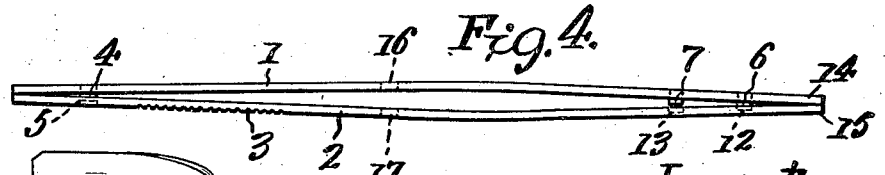




Fig. 6.

Inventor.
H. W. Roeling.
by Wilkinson & Giusta.
Attorneys.

UNITED STATES PATENT OFFICE.

HENRY WILLIAM ROELING, OF NEW ORLEANS, LOUISIANA.

SCALPEL.

1,368,842. Specification of Letters Patent. Patented Feb. 15, 1921.

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To all whom it may concern:

Be it known that I, HENRY WILLIAM ROELING, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Scalpels; and I do hereby 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.

The present invention relates to improvements in scalpels, and has for an object to provide an improved scalpel in which a minimum number of parts will be employed and arranged to be readily disassembled so that the same may be readily sterilized.

It is also an object of the present invention to provide an instrument which will be simple in construction, economical of manufacture , and at the same time capable of being readily assembled or separated into its various parts, whereby subsequent blades may be substituted quickly.

It is a further object of the present invention to provide an improved scalpel in which the blade is separable from the handle by which it is carried, which merely necessitates the discarding of the blade after the same becomes dull, whereas the handle may be used indefinitely and supplied with fresh sharp blades whenever occasion demands. This is a distinct improvement over the scalpel as at present in use, as the entire instrument must be discarded after being used once or twice.

A still further object of the present invention resides in providing an instrument of this character in which a guard is formed by the handle about the blade, allowing only a small portion of the blade to project. Of course this guard feature is so arranged and constructed in relation to the blade edge that it will not hamper or prevent the surgeon from making the incision, but in delicate operations the presence of a guard eliminates the danger of the blade accidentally slipping or of possible unsteadiness in the hand of the surgeon, which sometimes causes the blade to enter a vital part, thereby causing agony, and very often death. The improved guard prevents the blade from cutting any more than the thickness of the tissues which are to be separated, while holding such tissues apart.

In the accompanying drawings forming a part of this application, and in which similar reference symbols indicate corresponding parts in the several views:

Figure 1 is a plan view of an improved scalpel constructed in accordance with the present invention;

Fig. 2 is a longitudinal edge view thereof;

Fig. 3 is an elevation with the parts opened out;

Fig. 4 is an edge view of the two-part handle;

Fig. 5 is a perspective view of the improved holding clip; and

Fig. 6 is a plan view of the improved blade.

Referring more particularly to the drawings, wherein only a single embodiment of the invention is shown, 1 and 2 designate two elongated flat thin bars of resilient metal which, as indicated in Fig. 4, are bent centrally or bulged away from each other, while the ends are allowed to come into contact.

A portion 3 of the outer face of one of the members, say 2, is roughened, corrugated, or otherwise treated to afford a gripping surface for the thumb or other portion of the hand of the surgeon to facilitate his grip on the handle made up by the two bars 1 and 2. The bar 1, near the end thereof, is provided with a pin 4 adapted to enter a circular perforation 5 in the other bar 2 for the purpose of pivotally connecting the bars and centering the one bar on the other. The pin 4 is free to escape from the perforation 5 to allow the bars being separated.

Near the other end of the bar 1 are secured a pair of spaced apart lugs 6 and 7 projecting at right angles from the inner face of said bar and arranged to receive, respectively, the perforations 8 and 9 in the blade 10. The blade 10 is advantageously constructed substantially after the manner shown in Fig. 6, being of the general rectangular form having the rounded cutting edge 11. The opposite bar 2 is provided in its inner face, opposite the lugs 6 and 7, with recesses or indentations 12 and 13 for receiving the lugs 6 and 7, respectively, when the two bars 1 and 2 are placed together.

The blade 10 fits the lugs 6 and 7 substantially in the way shown in Fig. 3, the cutting edge 11 projecting beyond the similarly rounded edge 14 of the bar 1. As

also shown in this figure, the edge 15 of the companion bar 2 is also rounded to conform to the curvature of the rounded end 14 of the bar 1, so that these two ends 14 and 15 accurately correspond and provide a guard on opposite sides of the projecting edge 11 of the blade, thus preventing too deep an incision or the passage of the knife into vital parts.

The bars 1 and 2, at or near their central parts, are provided with perforations 16 and 17 that are adapted to register when the bars are brought together, and provide for the entrance therethrough of a lug 18 carried by a holding clip 19. This clip 19 is shown in Fig. 5, and is made of rigid metal or other suitable material, having part thereof bent substantially U-shaped, as indicated at 20, while the remaining edge adjacent such U-shaped clip 20 is left free, as indicated at 21. The free edge 21 allows the rotation of the holding clip about the perforations 16 and 17. The U-shaped part 20 is of a width corresponding substantially to the width of the two bars 1 and 2 so as to clamp the same tightly together at their central bulged out portions, as shown in Fig. 2.

When the holding clip is in place, the bars 1 and 2 bulge out slightly between the clip and the blade, as indicated at 22 in Fig. 2. The tendency of the bars 1 and 2 to expand frictionally holds the U-shaped part 20 of the clip so that it is very difficult to rotate the same about the lug 18 to remove this U-shaped part 20 from the bars 1 and 2, but the compression of the bars 1 and 2 at the point 22, shown in Fig. 2, between the fingers, will relieve this frictional expansion to a great extent from the U-shaped part 20 of the clip, and will render it comparatively easy for the clip to be rotated to the dotted line position shown in Fig. 3 where the bars 1 and 2 may spring apart.

It will be understood from the foregoing that the improved scalpel consists of only three parts, excluding the blade which may be renewed from time to time, and which is provided with an effectual guard formed by the rounded edges 14 and 15 of the two handle bars 1 and 2.

It will furthermore be appreciated that the device is exceedingly simple in construction and cheap of manufacture, while allowing of the ready dismembering of the parts for purposes of sterilizing and the renewal of blades, but which will hold together most effectually and not be apt to become accidentally displaced when assembled and during the operation.

It is obvious that those skilled in the art may vary the details of construction and arrangements of parts without departing from the spirit of my invention, and therefore I do not wish to be limited to such features except as may be required by the claims.

I claim:

1. An improved scalpel including a pair of elongated flat thin resilient metal bars adapted to be placed together and having their central portions bulged away from each other, a pivot on one bar adapted to engage the other bar, a pair of spaced apart lugs at the other end of one of the bars for receiving the perforations in a removable blade having a rounded cutting edge extending beyond the adjacent end of said bar, said bar and the companion bar having similarly curved edges extending inwardly from the edge of the blade whereby to provide a guard therefor, said bars being perforated centrally, and a holding clip having a lug adapted to pass through the central perforations and formed with a U-shaped portion at the end of the clip remote from the lug, said U-shaped portion being of a width equal to the thickness of the two bars whereby to clamp the same tightly therebetween when the bars are in close contact, the edge of the holding clip beneath the lug being left free to permit swinging of the clip about said lug, said bars adapted to bulge out slightly between the holding clip and the blade when the clip is in position for engagement by the fingers to compress the bars whereby to ease the swinging of the holding clip, substantially as described.

2. An improved scalpel including a pair of elongated flat thin bars of resilient material adapted to be placed together flatwise and having their central portions bulged away from each other, a pivot on one bar adapted to engage the other bar to permit of the edgewise relative swinging of the bars in planes substantially parallel to each other, means at the other end of one of the bars for receiving a removable blade having a rounded cutting edge extending beyond the adjacent ends of said bars, said bars having similarly curved edges extending inwardly from the edge of the blade whereby to provide a guard therefor, said bars being perforated centrally, and a holding clip having a lug adapted to pass through the central perforations and formed with a substantially U-shaped portion at the end of the clip remote from the lug, said U-shaped portion being of a width substantially equal to the thickness of the two bars whereby to clamp the same tightly therebetween when the bars are in close contact, the edge of the holding clip beneath the lug being left free to permit swinging of the clip about said lug, said bars adapted to bulge out slightly between the holding clip and the blade when the clip is in position for engagement by the fingers to compress the bars whereby to ease the swinging of the holding clip, substantially as described.

HENRY WILLIAM ROELING.