

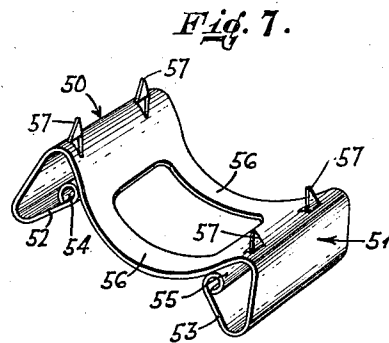
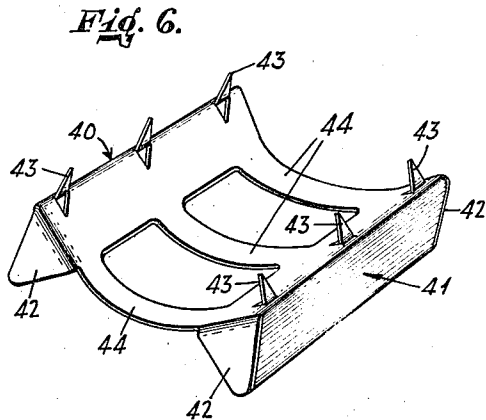
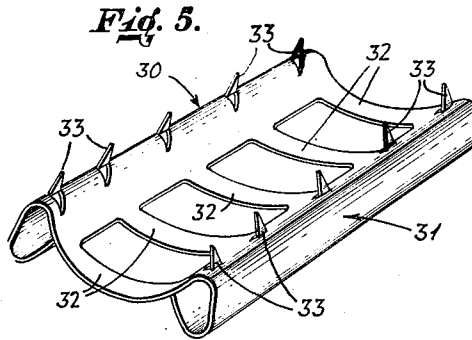
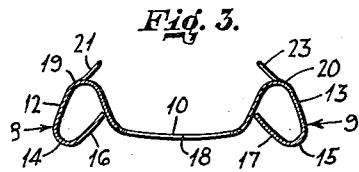
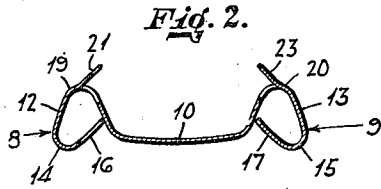
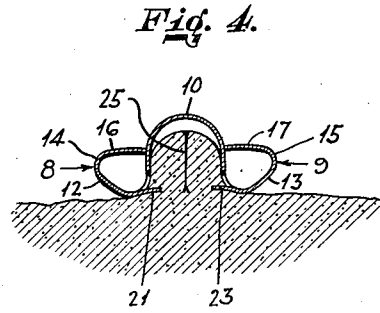
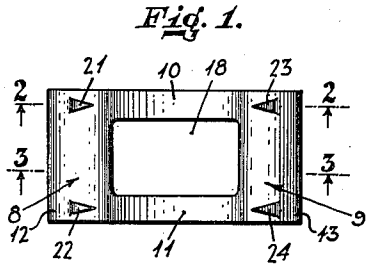
Sept. 2, 1941.

G. I. MILLER

2,254,620

CLIP

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# UNITED STATES PATENT OFFICE

2,254,620

CLIP

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1 Claim. (Cl. 128—337)

This invention refers to clips and relates more particularly to a wound clip for use in surgery and the like.

Wounds and tissues are now sewn by special needles and threads, and the stitches are left in the tissues for a considerable period of time until the wounds have healed and the tissues have grown together. The stitches remaining in the tissues often cause capillary bleeding and so-called stitch abscesses.

An object of the present invention is to eliminate the use of stitches in surgery and the like and to provide novel means for holding together tightly and firmly the torn or cut edges of skin and tissues until the wound is healed.

Another object is the provision of a wound clip which will not strangulate tissues, which may eliminate stitch abscesses, and by the use of which capillary bleeding may be avoided.

A further object is to eliminate the danger that a part of the stitches is left in the wound, thereby causing infection, to eliminate pain and mental anguish during the removal of the stitches, to facilitate a quick closing of the wound and to lessen the time period during which a patient is under anaesthesia.

Other objects of the present invention will appear in the course of the following specification.

The objects of the present invention may be realized through the provision of a wound clip made of metal, plastic material or the like and consisting of one or several parts, each of which comprises bars interconnected by bendable webs and provided with spiculas. In operation, the bars are placed on both sides of the wound and are pressed toward each other, so that they hold tightly the edges of the wound due to the bending of the web and the action of the spiculas, which project into the upper layers of the skin or tissues.

The invention will appear more clearly from the following detailed description when taken in connection with the accompanying drawing showing by way of example preferred embodiments of the inventive idea.

In the drawing:

Figure 1 is a front view of a wound clip constructed in accordance with the principles of the present invention;

Figure 2 is a transverse section along the line 2—2 of Figure 1;

Figure 3 is a transverse section along the line 3—3 of Figure 1;

Figure 4 is a sectional view illustrating the use of the clip; and

Figures 5, 6 and 7 are perspective views illustrating different forms of the clips.

The clip shown in Figures 1 to 4 of the drawing comprises two bars 8 and 9 and two webs 10 and 11 interconnecting these bars. The clip may be made of any suitable metal, such as gold, silver, nickel silver, steel, aluminum, tin, or any other sheet metal which should be sufficiently flexible to enable the surgeon to move the bars 8 and 9 toward each other and thereby bend the webs 10 and 11 by the fingers of one hand and without the use of an instrument or tool.

As shown in Figures 2 and 3 the bars 8 and 9 are preferably hollow and similar to each other in form. They consist of bent edges of sheet metal and comprise inclined side surfaces 12 and 13, projecting portions 14 and 15 which are U-shaped in cross section, and inwardly bent edges 16 and 17, respectively.

The bars 8 and 9 are interconnected by thin and narrow strips or webs 10 and 11, which extend at both sides of an opening 18 and, preferably, have the form of a flat tray in cross section when the clip is not being used.

The bars 8 and 9 are also provided with portions 19 and 20 which are U-shaped in cross section, which are situated close to the webs 10 and 11 and which carry spiculas 21 to 24. The spiculas are, preferably, punched out of the sheet metal of which the clip is made and are triangular in form. The ends of the spiculas are sharp, so that they can easily pierce the skin and tissues.

The use of the described clip is illustrated in Figure 4. The clip is placed over the wound 25 in such manner that the spiculas 21 to 24 extend downwardly and the bars 8 and 9 are located on both sides of the wound and extend substantially parallel to the edges thereof. Then the surgeon presses with his fingers the bars 8 and 9 toward each other, causing the spiculas 21 to 24 to pierce the upper layers of the skin and tissues and bending the webs 10 and 11 until the clip acquires the form shown in Figure 4. The clip is left in this position holding tightly the edges of the skin and tissues until the wound is healed.

The clip shown in Figure 5 comprises bars 30 and 31 which are interconnected by five webs 32 and which are provided with spiculas 33.

Figure 6 shows a clip having bars 40 and 41, the ends of which are closed by means of flaps 42. The bars 40 and 41 carry spiculas 43 and are interconnected by webs 44.

The clip shown in Figure 7 comprises bars 50

and 51 having inwardly turned edges 52 and 53, respectively, which are bent once again to form tubular flanges 54 and 55 contacting the adjacent surfaces of the web 56. The bars 50 and 51 carry spiculas 57.

It is apparent that the specific illustrations shown above have been given by way of illustrations and not by way of limitation, and that the structures above described are subject to wide variations and modifications without departing from the scope of the invention. For instance, several of the illustrated clips may be placed one next to the other and held together by wires extending through their bars. All of such and other variations and modifications are to be in-

cluded within the scope of the present invention.

The expression "of appreciable length," as used in the claim is intended to describe clips the bars of which can be conveniently held by four fingers of one hand and which have an average length ranging between three-quarters of an inch and two and a half inches.

What is claimed is:

A wound clip, comprising hollow bars of appreciable length, bendable webs interconnecting said bars, spiculas carried by said bars, and flanges covering at least some of the ends of said hollow bars.

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