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E. W. DAVIDSON

2,075,508

SUTURE RETAINER

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Fig. 1

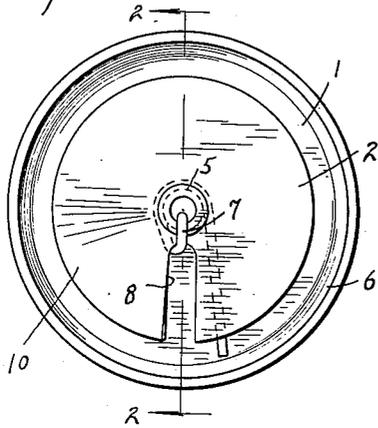


Fig. 2

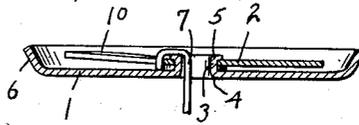


Fig. 3

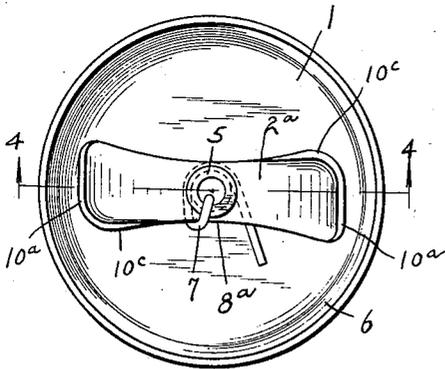
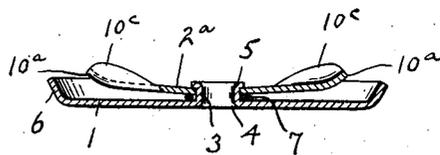


Fig. 4



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SUTURE RETAINER

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9 Claims. (Cl. 128—335)

This invention is a suture retainer providing extremely simple means whereby a suture may be fixed relative to a surgical button without the use of clamping tools.

5 It is the object of the invention to provide a retainer comprising a button and a cooperating clamping plate with these elements appreciably spaced from one another at one edge of the plate to permit a suture being readily received between the cooperating elements, and with the relative spacing of the elements gradually restricted so as to provide for wedging reception of the suture between the cooperating elements for securely clamping the suture.

15 It is a further object of the invention to provide a snubbing action cooperating with the wedging engagement to insure the suture being securely held.

Further objects of the invention will be readily understood from the following description of the accompanying drawing, in which:

Fig. 1 is a plan view of the retainer showing a suture held thereby.

Fig. 2 is a vertical section on the line 2—2 of Fig. 1.

Fig. 3 is a view similar to Fig. 1 showing a modified construction.

Fig. 4 is a vertical section on the line 4—4 of Fig. 3.

30 A button 1 which is preferably disc-shaped has a clamping plate mounted thereon, the clamping plate being shown as a disc 2 (Figs. 1 and 2) or a transverse strip 2a (Figs. 3 and 4). The clamping plate is preferably riveted to the button 1, and for this purpose a tube 3 may project integrally from the center of the button with the bore of the tube opening through the button as shown at 4, and with the clamping plate mounted on the tube and having the end of the tube riveted over the clamping plate as shown at 5.

45 The button 1 preferably has an upwardly flaring peripheral flange 6 so that the button is dished, with the clamping plate and its retaining tube 3 received within the dish so that the peripheral flange of the button protects against dressings catching on the clamping plate.

50 The rivet provides for limited spacing of the clamping plate from the surface of button 1, so that a suture 7 passed through the bore 4 and then caught under the clamping plate and wrapped around the tube 3, is squeezed between the button 1 and the cooperating clamping plate for securely clamping the suture, and is also held by the snubbing action resulting from the suture being wrapped around the tube 3.

To permit the suture to be passed under the clamping plate, the disc 2 of Figs. 1 and 2 is radially slotted as shown at 8 and the transverse strip 2a of Figs. 3 and 4 is of reduced width at its center as shown at 8a; and in order to guide the suture under the clamping plate that portion of the disc 2 which is adjacent that edge of slot 8 under which the suture is first passed when it is wrapped around tube 3, is centrifugally bent upwardly from the plane of disc 2 and circumferentially gradually merges into the plane of the disc as shown at 10, and the ends of strip 2a are curved upwardly as shown at 10a, and those side edges of the ends of strip 2a under which the suture is first passed when it is wrapped around the tube 3 are turned upwardly as shown at 10c.

The invention thus provides extremely simple means whereby a suture may be passed through the button 1 and then readily caught under an edge of a clamping plate which is bent upwardly from the button, with the suture then snubbed around the tube 3 and at the same time tightly wedged in the gradually restricted space between the clamping plate and the button, so as to securely clamp the suture relative to the button.

I claim:

1. A suture retainer comprising a button, a tube projecting from the button, and a clamping plate mounted on the tube, the bore of the tube opening through the button and plate for passage of a suture, and the button and plate being relatively spaced for reception of the end of the suture between the plate and button with the end of the suture snubbed around the tube and wedged between the cooperating plate and button.

2. A suture retainer comprising a button and a cooperating plate relatively spaced at an edge of the plate for ready reception of a suture between said cooperating elements, with said relative spacing restricted beyond said edge of the plate for wedging the suture between the cooperating elements, the button being adapted to press against the skin immediately adjacent the point where the suture emerges from the skin, and being adapted for immediate engagement by the suture upon its emergence.

3. A suture retainer comprising a button and a cooperating plate having a bore opening there-through for passage of a suture and relatively spaced at an edge of the plate for ready reception of the end of the suture between said cooperating button and plate, with said relative spacing restricted beyond said edge of the plate

for wedging the end of the suture between the cooperating plate and button.

4. A suture retainer comprising a button, a tube projecting from the button, and a clamping plate mounted on the tube, the bore of the tube opening through the button and plate for passage of a suture, and the button and plate being relatively spaced at an edge of the plate for ready reception of the end of the suture between the plate and button for snubbing the end of the suture around the tube, with said relative spacing restricted toward the tube for clamping the snubbed end of the suture between the cooperating plate and button.

5. A suture retainer comprising a button, a tube projecting from the button, and a clamping plate mounted on the tube, the bore of the tube opening through the button and plate for passage of a suture, and the button and plate being adapted for reception of the end of the suture between the plate and button with the end of the suture snubbed around the tube and clamped between the cooperating plate and button.

6. A suture retainer comprising a button and a cooperating element having a space therebetween so restricted that a single length of a suture forced into said restricted space is engaged by said button and said cooperating element at diametrically opposite points on the periphery of said single length of the suture for compressing and clamping said single length of the suture between the button and said cooperating element, the button being adapted to press against the skin immediately adjacent the point where the suture emerges therefrom, and being adapted for immediate engagement by the suture upon its emergence from the skin.

7. A suture retainer comprising a button and a cooperating element having a bore opening

therethrough for passage of a suture, the button and the cooperating element having a space therebetween so restricted that a single length of the suture forced into said restricted space is engaged by said button and said cooperating element at diametrically opposite points on the periphery of said single length of the suture for compressing and clamping said single length of the suture between the button and said cooperating element, the button being adapted to press against the skin around the bore and immediately adjacent the point where the suture emerges from the skin, and being adapted for immediate engagement at its bore by the suture upon its emergence from the skin.

8. A suture retainer comprising a button and a cooperating element having a bore opening therethrough for passage of a suture, the button and the cooperating element having a space therebetween so restricted that a single length of the suture forced into said restricted space is engaged by said button and said cooperating element at diametrically opposite points on the periphery of said single length of the suture for compressing and clamping said single length of the suture between the button and said cooperating element.

9. A suture retainer comprising a button, a tube projecting from the button, and a clamping plate mounted on the tube, the bore of the tube opening through the button and plate for passage of a suture and the button and plate having a space therebetween so restricted that a single length of the suture received in said restricted space is engaged by said button and said plate at diametrically opposite points on the periphery of said single length of the suture for compressing and clamping said single length of the suture between the button and the plate.

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