

Feb. 13, 1934.

S. U. SIVON ET AL

1,946,642

PHIMOSIS HEMOSTATIC FORCEPS

Filed March 15, 1932

2 Sheets-Sheet 1

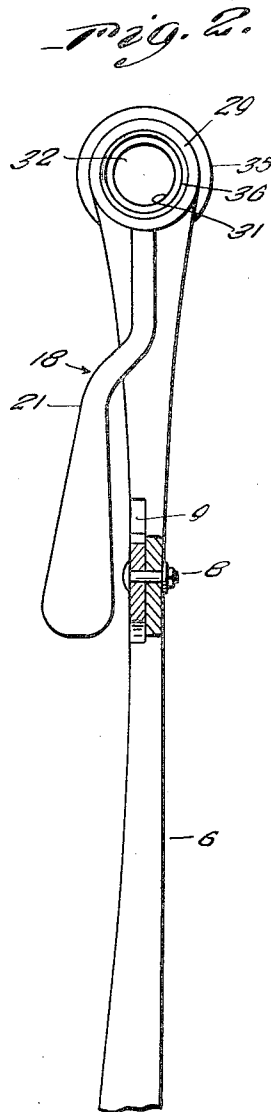
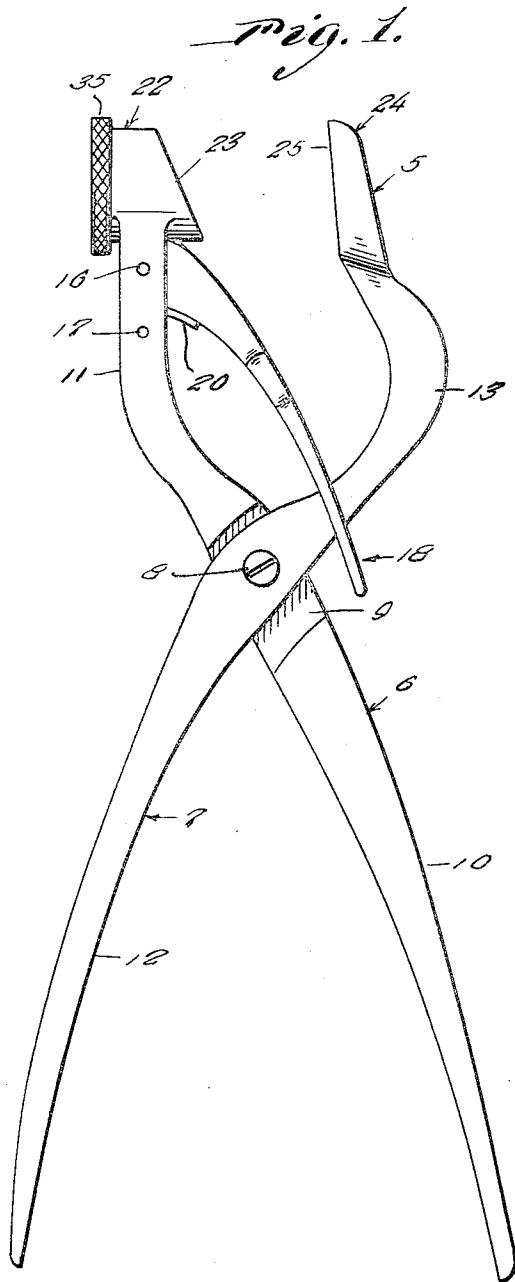
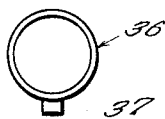


Fig. 3.



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2 Sheets-Sheet 2

Fig. 3.

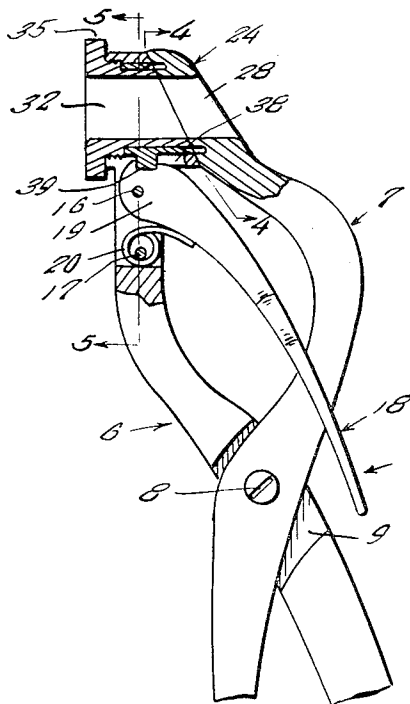


Fig. 4.

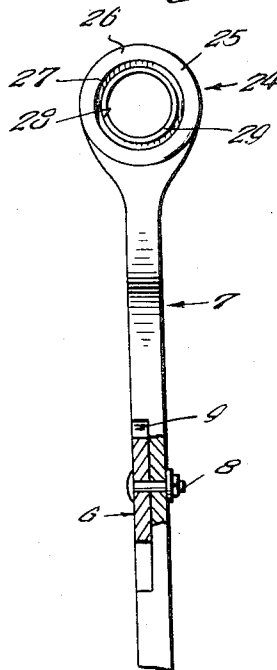


Fig. 5.

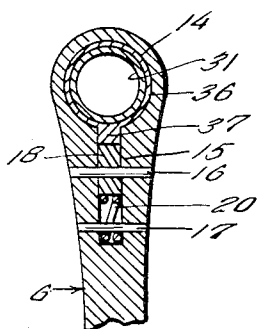
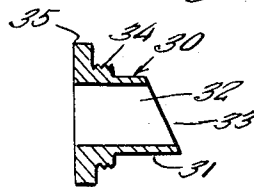


Fig. 6.



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PHIMOSIS HEMOSTATIC FORCEPS

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9 Claims. (Cl. 128—305)

Our invention relates generally to instruments for performing minor surgery, and particularly to a forceps for performing the operation known as circumcision.

It is an important object of our invention to provide a relatively inexpensive, mechanically efficient, device of the character described which enables the performance of surgically correct operations.

It is also an important object of our invention to provide an instrument of the character described which produces for the operation a hemostatic condition which remains after the performance of the operation of circumcision, so that ties and bandages are not necessary subsequent to the operation.

It is also an important object of our invention to provide an instrument of the character described with which the operation of circumcision may be performed so as to produce as a result of the operation, hemostatic surfaces co-related with the oval and angulated portion of the frenum of the penis operated upon, whereby to preserve the frenum and the circulation of the blood in the distal end thereof.

It is also an important object of our invention to provide an instrument of the type described for performing the operation of circumcision by the use of which the operation may be performed without requiring administration to the patient of anesthetics, the operation being practically painless and capable of being very quickly performed.

Other objects and advantages of our invention will be apparent from a reading of the following description in connection with the drawings, wherein for purposes of illustration we have shown a preferred embodiment of our invention.

In the drawings:—

Figure 1 is a general side elevational view of the embodiment.

Figure 2 is a transverse vertical sectional view through Figure 1.

Figure 3 is a vertical sectional view taken through Figure 1 at right angles to the view shown in Figure 2, showing the embodiment in closed position.

Figure 4 is a vertical transverse sectional view taken approximately on the line 4—4 of Figure 3 looking in the direction of the arrows.

Figure 5 is a vertical transverse sectional view taken through Figure 3 approximately on the line 5—5 and looking in the direction of the arrows.

Figure 6 is a transverse sectional view through a tubular member.

Figure 7 is an end view of the blade of the device

Referring in detail to the drawings, the numeral 5 generally designates the device of my invention which is composed of the normally stationary lever 6 and the normally movable lever 7 which are crossed on a common pivot 8. As shown in Figure 2 the lever 6 is wider at the point where the levers cross and is provided with an opening 9 in its side in which the lever 7 seats and works on the pivot 8.

The lever 6 comprises the handle portion 10 and the knife carrying portion 11. The lever 7 comprises the handle portion 12 and the knife accommodating portion 13.

The portion 11 of the normally stationary lever 6 has in its end a cylindrical opening 14 which faces the portion 13 of the lever 6. Extending toward the pivot 8 from the opening 14 is a narrow slot 15 which is traversed by a pivot pin 16 and a retainer pin 17. Working in the slot 15 and extending from the slot toward the portion 13 of the lever 7 is a knife operating lever 18 which has an enlarged head portion 19 which the pivot 16 traverses eccentrically so as to endow the head 19 with a cam action with respect to a knife structure which is axially movable in the opening 14 in the end of the lever in a manner to be described. A spring member 20 generally in the form of a numeral 6 having a suitable number of convolutions is arranged in the slot 15 about the pin 17 and engaged with the operating lever 18 in such a way that the lever 18 is normally positioned outwardly in the inoperative position. It will be observed that the handle portion of the lever 18 is offset to one side of the levers 6, 7 to a position convenient for operating the same while holding the levers 6 and 7 closed.

The cylindrical opening 14 in the end of the portion 11 of the lever 6 is located in a knife bearing head 22 which has an angularly arranged inward end generally designated 23, so that when the levers are brought together into the closed position the surface 23 engages the portion 13 of the lever 7 at an angle.

The end portion of the portion 13 of the lever 7 is generally circular in form providing a head 24 provided with a meeting face 25 at such an angle that when the meeting face 23 of the head 22 meets the meeting face 25 of the head 24, they will coincide and meet on all points.

Reference to Figure 4 will show that the meeting face 25 of the head 24 of the lever 7 has thereon the annular portion 26 which is rounded in contour and sloped slightly inwardly toward its

center and leads into an annular knife receiving groove 27 which is formed on an axis which coincides with the axis of the cylindrical opening 15 in the head 22 when the heads are registered.

5 Spaced concentrically inwardly from the groove 27 is a cylindrical passage 28 through which the penis of the patient is extended when the levers are brought together for producing the hemostatic condition referred to herein and during the

10 performance of the operation. The annular surface 26 is specially formed to cooperate with conformably convexed annular surface 29 on the meeting face 23 of the head 22 for producing the uniform hemostatic condition of the skin and

15 tissues which are to be placed between the meeting surfaces at the outset of the operation of circumcision and which are to be crushed by the bringing together of the meeting faces whereby the required hemostatic condition is produced

20 and localized.

The tubular guide generally designated 30 which is shown in section in Figure 6 and in Figure 3 has a tubular portion 31 having an axial opening 32 of the same size as the opening

25 28 in the head 24 on the lever 7, and its meeting end is cut off at an angle as indicated at 33 similar to the angle of the meeting face 25 of the head 24. The cross section of the tubular portion 31 is exactly the same as that of the annular

30 portion 29 as defined by the opening 28 and the groove 27 in the head 24, so that when the heads 22, 24 are brought together the end of the tubular portion 31 of the guide 30 and the portion 29 will register and engage at all points.

35 Outward of the tubular portion 31 is a portion of larger diameter 34 which is exteriorly screw-threaded for threading into the outer end of the head 22, and outward of the portion 34 is the portion of still larger diameter 35 which may be suitably knurled as shown in Figure 1 to enable

40 easily manipulating the same into and out of threaded engagement with the head 22.

Slidable in the annular chamber defined by the resulting space between the opening 14 in the

45 head 22 and the outside of the tubular portion 31 of the guide 30, is the cylindrical knife generally designated 36 whose working end is plane and flat and disposed at an angle similar to the angle at which the meeting face 23 is disposed,

50 the other end being square cut for seating against the shoulder defined by the tubular portion 31 and the threaded portion of greater diameter 34 on the guide 30. Projecting from one side of the cylindrical blade 36 is a boss 37 which works

55 in a slot 38 provided in the side of the head 22 and which communicates with the slot 15 in the portion 11 of the lever 6. A portion of the enlarged head 19 of the operating lever 18 removed from the pivotal center of the lever is formed with a

60 notch 39 for receiving the boss 37 in the manner shown in Figure 3. It will be obvious that when the lever 18 is moved in the direction of the arrows shown in Figure 3 that the cylindrical blade 36 will be moved toward the right. In the position

65 of the lever shown in Figure 3 the cutting end of the blade will then enter the annular groove 27 in the meeting face of the head 24 of the lever 7, and upon release of the lever 18 the spring 20 will return the blade to initial

70 position. The blade is shown in its initial position in Figure 3.

The axial opening 32 through the guide 30 in the stationary lever is registered with the opening 28 in the head 24 of the movable lever

75 when the levers are closed, so that a continuous

regular passage is provided for receiving the penis of the patient during the operation.

The operation is initiated by placing the prepared organ through the opening 32 in the lever 6, then arranging the prepared tissues and flesh properly upon the concave annular surface 29. Then lever 7 is swung so that its head 24 approaches the organ and receives the same through the opening 28, and the said tissues and flesh are then engaged on their other side by the convex annular surface 26 of the lever 7, whereupon pressure is exerted upon the levers to crush and hold the imprisoned portions of the tissues and flesh so as to produce the hemostatic condition

80 spoken of. When this condition has been achieved, the operating lever 18 is pressed so as to project the knife 36 into the annular groove 27 which accomplishes the necessary cutting of and severance of the foreskin and tissues of the penis of the patient at an angle corresponding to the angle of the frenum.

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More specific directions for utilizing the device of the invention are as follows:—

The foreskin of the organ is grasped with a hemostat and dilated, and then cut with scissors to the point of circumcision. With the hemostat the foreskin and the organ are pulled through the opening 32 of the device of our invention, the levers being opened as far as possible. Then the foreskin is grasped with preferably four hemostats equally spaced or divided, and the foreskin stretched so that the area of circumcision is placed accurately over the circular knife 36 and the concave annular portion 29. Then, the lever 7 is swung toward the lever 6 so as to register the convex annular portion 26 with the concave annular portion 29, with the foreskin interposed, and the levers are forcibly closed for a few seconds. While forcibly closing the levers the knife operating lever 18 is reciprocated until the desired severance is achieved.

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Then the hemostats are removed, the severed foreskin allowed to fall away, and the device of the invention removed from the penis of the patient.

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Though we have shown and described herein a preferred embodiment of our invention, it is to be definitely understood that we do not desire to limit the application of the invention thereto, and any change or changes may be made in material and structure and arrangement of parts, within the spirit of the invention and the scope of the subjoined claims.

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What is claimed is:—

1. An instrument of the type described comprising a pair of crossed levers, cooperating heads on said levers adapted to be registered, a knife on one of the heads, and a knife receiving opening provided in the other head, and penis receiving openings in said heads.

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2. An instrument of the type described comprising a pair of crossed levers, cooperating heads on said levers adapted to be registered, a knife on one of the heads, and a knife receiving opening provided in the other head, and penis receiving openings in said heads, said knife being movable, and knife operating lever means for moving the knife for severing a penis foreskin interposed and held between said heads.

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3. A surgical instrument of the type described comprising a pair of crossed levers, a cooperating head on one end of each of the levers adapted to be registered when the levers are closed, said heads being provided with axially registered openings adapted to be registered when the heads are

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- in cooperating relation, said openings being adapted to receive a penis when registered, portions on said heads for cooperation in holding portions of the foreskin of the penis for producing a localized hemostatic condition therein when the levers are forcibly closed, knife means on one of the heads for severing the foreskin, operating lever means for operating the knife carried by said lever head for operating the knife during the production of the hemostatic condition.
4. A surgical instrument of the type described comprising a pair of pivotally connected levers, cooperating heads on the levers provided with penis receiving openings arranged to register when the levers are closed, a tubular knife on one of the heads and a knife receiving opening provided in the other head.
5. A surgical instrument of the type described comprising a pair of pivotally connected levers, cooperating heads on the levers provided with penis receiving openings arranged to register when the levers are closed, a tubular knife on one of the heads and a knife receiving opening provided in the other head, said tubular knife and the knife receiving opening surrounding the penis receiving openings in the heads.
6. In a surgical instrument including a pair of pivotally connected levers, cooperating heads on the levers having penis receiving openings arranged to register when the levers are closed; penis foreskin hemostasis producing formations on the meeting portions of the heads, and knife means carried by one head and cooperable with the remaining head for severing the foreskin of the penis when hemostasis thereof has been accomplished.
7. In a surgical instrument including a pair of pivotally connected levers, cooperating heads on the levers having penis receiving openings arranged to register when the levers are closed; penis foreskin hemostasis producing formations on the meeting portions of the heads, and knife means carried by one head and cooperable with the remaining head for severing the foreskin of the penis when hemostasis thereof has been accomplished, said knife means being of tubular form and movable into an annular opening provided on the remaining head.
8. A surgical instrument of the type described comprising a pair of pivotally connected levers, cooperating heads on the levers provided with penis receiving openings arranged to register when the levers are closed, a tubular knife on one of the heads and a knife receiving opening provided in the other head, said tubular knife and the knife receiving opening surrounding the penis receiving openings in the heads, said tubular knife and said knife receiving opening being radially outwardly spaced from the penis receiving openings.
9. In a surgical instrument including a pair of pivotally connected levers, cooperating heads on the levers having penis receiving openings arranged to register when the levers are closed; penis foreskin hemostasis producing formations on the meeting portions of the heads, and knife means carried by one head and cooperable with the remaining head for severing the foreskin of the penis when hemostasis thereof has been accomplished, said hemostasis producing formations and the working end of the knife being disposed at an angle to the axis of the penis receiving openings to produce circular and angular amputation of the penis foreskin.
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