

June 26, 1962

M. H. CHESTER
CIRCUMCISION CLAMP

3,040,746

Filed Aug. 12, 1960

2 Sheets-Sheet 1

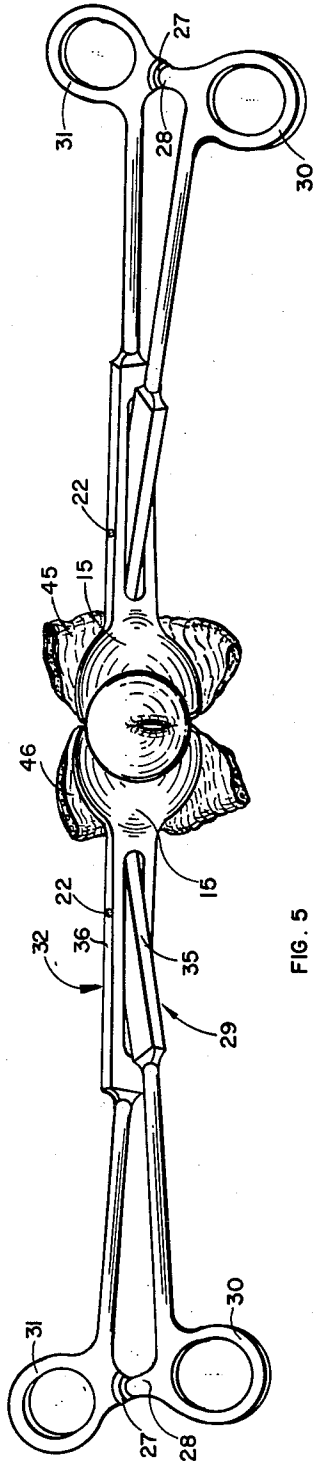


FIG. 5

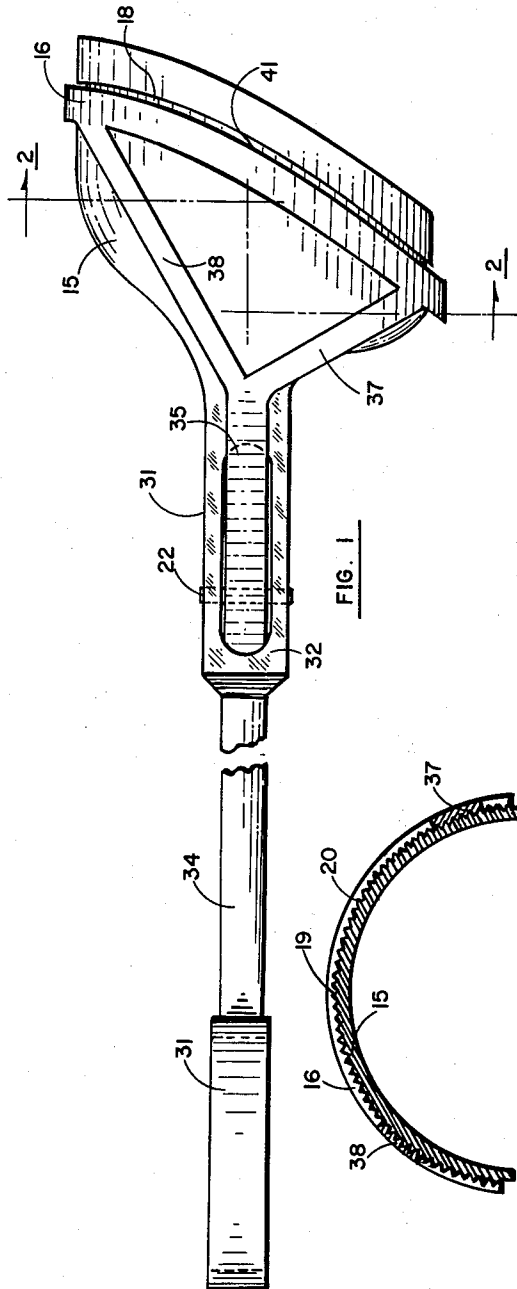


FIG. 1

FIG. 2

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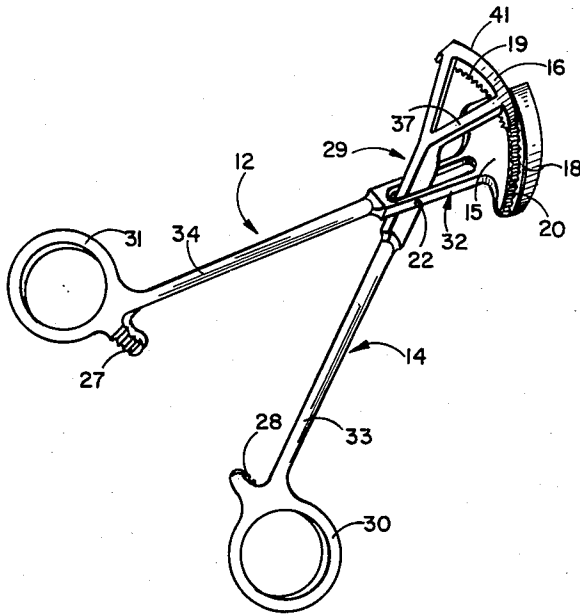


FIG. 3

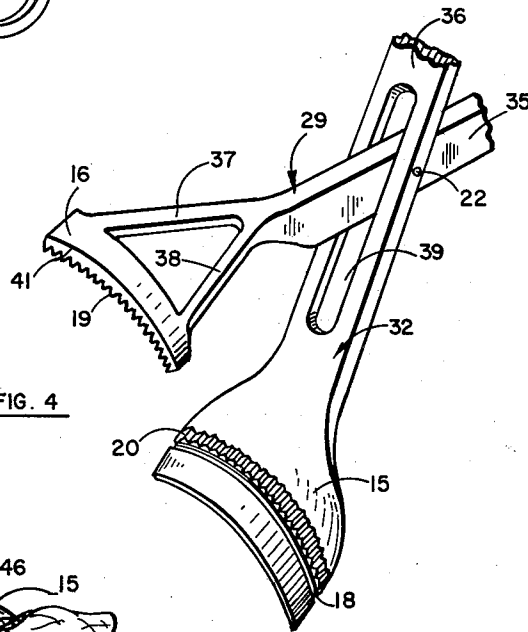


FIG. 4

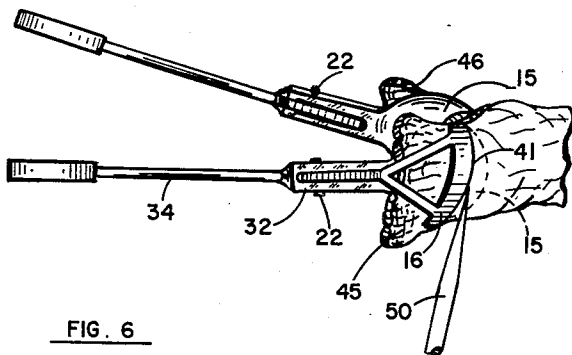


FIG. 6

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CIRCUMCISION CLAMP

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Filed Aug. 12, 1960, Ser. No. 49,284
5 Claims. (Cl. 128—321)

This invention relates to a circumcision clamp and more particularly to such a clamp especially suitable for use in adult circumcisions.

It is well known to those skilled in the medical art that a correct and effective circumcision operation requires that an adequate amount of prepuce or foreskin be excised. On the other hand, excision of an excessive amount of foreskin or prepuce could result in a painful scar. Additional hazards such as accidental amputation of glans penis and injury to the urethra have been reported in the surgical literature.

Several circumcision clamps are now in use for the so called bloodless circumcision operation. These include the Sheldon Clamp, the Yellen Clamp, the AL AKL Preputome, and the Ross Circumcision Clamp, all of which produce hemostasis by crushing the layers of the prepuce. These clamps produce the desired results in most infant circumcisions. Their use, however, in adult circumcisions will increase the risk of post operative hemorrhage. As noted on page 411 of Surgery for General Practice by Victor Richards published by C. V. Mosby Company, St. Louis, 1956, except in infants the advantages of bloodless type circumcision clamps is more apparent than real.

Consequently, in performing adult circumcisions, most surgeons prefer to use a technique which includes dorsal and ventral slitting of the prepuce followed by excising with circumscribing incisions. Active bleeding from small arteries is controlled by conventional surgical technique, the artery being clamped and a ligature applied.

The device of this invention facilitates and increases the safety of this type of operation. This is accomplished by providing means for clamping the inner and outer layer of the lateral flaps prepuce and means for guiding the scalpel or dissecting scissors. In this manner, the circumscribing incision of the prepuce is greatly facilitated with an optimum excision of skin readily achieved. Using the device of this invention, the operating surgeon can easily make an adequate excision of skin with a sufficient amount of prepuce being removed to produce the maximum benefits from the circumcision surgery. At the same time, the excision of excessive amounts of the prepuce is prevented so that enough prepuce is available to cover the corona and consequently increase the ease of suturing.

It is therefore an object of this invention to provide an improved circumcision clamp especially suited to adult circumcisions.

It is a further object of this invention to facilitate circumcision operations.

It is still a further object of this invention to lessen the hazards attendant to circumcision operations.

It is another object of this invention to lessen the time required for circumcision operations.

It is still another object of this invention to enable an operating surgeon in a circumcision operation to easily excise an optimum amount of skin with smooth even incisions.

Other objects of the invention will become apparent as the description proceeds in connection with the accompanying drawings in which:

FIG. 1 is a plan view of a preferred embodiment of the device of the invention;

FIG. 2 is a cross-sectional view of the embodiment illustrated in FIG. 1 taken along a plane as indicated by the line 2—2 in FIG. 1;

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FIG. 3 is a perspective view of the preferred embodiment of the device of the invention illustrated in FIG. 1;

FIG. 4 is a perspective view illustrating the details of the holding and guiding means of the embodiment of FIGS. 1-3;

FIG. 5 is a perspective view illustrating how the device of the invention is utilized in a circumcision operation; and
FIG. 6 is a second perspective view illustrating how the device of the invention is utilized in performing a circumcision operation.

Referring now to FIGS. 1 and 3, a plan and a perspective view of a preferred embodiment of the device of the invention are illustrated. The device comprises a first member 12 and a second member 14 mounted pivotally with respect to each other on pivot pin 22. These members are mounted so that they are capable of scissor-like motion about pin 22. Each member has a similar elongated arm 34 and 33 respectively. Attached to each of arms 34 and 33 is a respective finger grip 31 and 30. These finger grips may be integrally formed with their associated arms. Extending from finger grip 30 is a ratcheted piece 23. A similar ratcheted piece 27 extends from finger grip 31. Ratcheted pieces 27 and 23 are positioned so that they will mate with each other when finger grips 30 and 31 are drawn together to lock members 12 and 14 in clamping engagement. FIGS. 1 and 2 show members 12 and 14 in such clamping engagement.

Referring now to FIG. 4, in addition to FIGS. 1 and 3, the details of the holding and guiding portions of members 12 and 14 are shown. A holding member 29 is fixedly attached to arm 33 and pivotally mounted on pivot pin 22. Holding member 29 comprises a support portion 35, a pair of forked arms 37 and 38 extending therefrom, and a curved holding plate 16 attached to forked arms 37 and 38. Plate 16 has serrations 19 on the inner curved surface thereof.

A guide member 32 is fixedly attached to arm 34 and pivotally mounted on pivot pin 22. Guide member 32 has an elongated aperture 39 therein through which holding member 29 fits and is free to pivot relative to guide member 32. Guide member 32 includes a support portion 36, and a curved guide plate 15 attached thereto. Guide plate 15 has a serrated portion 20 on the outer curved surface thereof. The curvature of plate 15 must be similar to that of plate 16 so that the two plates will mate with each other when finger grips 30 and 31 are drawn together. This mating relationship is indicated in FIGS. 1 and 2 which shows plates 15 and 16 drawn together with serrated surface 19 mating with serrated portion 20 of the top surface of plate 15.

Plate 15 has a groove 18 in its outer circumferential surface running substantially parallel to the extreme edge of this plate. When plates 15 and 16 are drawn together, groove 18 is positioned adjacent to the extreme edge 41 of plate 16. The curvature of groove 18 and the extreme edge 41 of plate 16 approximates the curvature of one-half the corona of the human penis starting at the frenulum. The operation, as to be explained further on in the specification, is performed with a matched pair of circumcision clamps, one of these clamps having a plate 15 with a groove 18 and a plate 16 with an edge 41 having a curvature to match the shape of the corona of the penis on one side of the frenulum, the other of these clamps having such portions to match the shape of the corona on the other side of the frenulum. The device of the invention may be made with plates 15 and 16 of various sizes and curvatures to accommodate individual physical differences in patients.

Referring now to FIGS. 5 and 6, the use of the device of the invention in performing a circumcision operation is illustrated. Prior to the application of the clamps of the device of the invention, the glans and layers of the pre-

puce are prepared in the standard manner. Adhesions between the glans and prepuce are freed and a dorsal and ventral slit is made by cutting between conventional surgical clamps. The ventral slit is made in a line with the frenulum while the dorsal slit is made directly opposite this. This produces two lateral flaps of the prepuce. The surgeon now applies the clamps of the device of the invention as shown in FIGS. 5 and 6. A pair of clamps, one to hold the right lateral flap 45 and the other to hold the left lateral flap 46 is used. Each of these clamps should have a plate 16 with an edge portion 41 and a plate 15 with a groove 18 (see FIG. 4) having a curvature to match the associated left or right hand portion of the corona, as already noted. In inserting each lateral flap in its respective clamp, curved guide plate 15 is placed lateral to the glans with the clamp opened. The lateral flap is then pulled over this guide plate with care being taken not to produce undue tension on the prepuce. With the lateral flap placed in position on guide plate 15, the clamp is closed, and the inner and outer layers of the prepuce are fixedly held between serrated surfaces 19 and 20. Care must be taken not to injure the frenulum in this step. A scalpel 50 may then be used to excise the foreskin, the edge 41 of holding plate 16 and the groove 18 in guide plate 15 (see FIGS. 1, 3, and 4) being used as guides. The scalpel will be guided by the contours of edge 41 and groove 18 to make it relatively easy to accomplish a smooth even incision. After the incision has been completed, the bleeding points are clamped with standard surgical clamps, and the wound is closed in accordance with standard surgical technique. If so desired, dissecting scissors may be used in place of a scalpel for making the incision.

It is readily noted that the guide plate 15 of the device of the invention functions as measuring means so that a constant and sufficient amount of prepuce will be excised from the right and left lateral flaps. In addition, guide plate 15 serves to protect the glans and urethra from injury by the dissecting instrument. Furthermore, the curvature of the guide plate is such as to enable the operator to easily avoid cutting the frenulum and the frenular artery which is a common source of post operative bleeding.

The device of the invention, as can be seen, greatly facilitates a circumcision operation and considerably lessens the hazards attendant thereto. A smooth ideal excision of the prepuce is made readily achievable. Post operative complications such as urethral fistula, lacerations or amputation of the glans, lacerations or amputation of the urethral meatus, and partial removal of the prepuce are readily avoided. At the same time, excessive removal of the prepuce is prevented, thereby avoiding residual painful scars.

While the device of the invention has been explained and illustrated in detail, it is to be clearly understood that this is intended by way of illustration and example only, the scope of the invention being limited only by the terms of the appended claims.

I claim:

1. A circumcision clamp comprising first and second members, and pivot means for supporting said members pivotally with respect to each other, said first member having a curved guide plate at one end thereof, said second member having a curved holding plate at one end thereof, the surface of said holding plate opposite said guide plate being substantially narrower than the opposing surface of said guide plate, said guide plate having a groove in the outer surface thereof, said groove extending transversely across said guide plate and having a curvature similar to that of the oppositely positioned edge of said holding plate, said second member having a pair of forked arms attached to said holding plate, said members further having means for clamping said guide

plate and said holding plate into engagement with each other with the extreme edge of said holding plate adjacent to said groove in said guide plate.

2. The device as recited in claim 1 wherein said clamping means comprises a finger grip on each of said members, said finger grips having ratcheted pieces thereon, said pieces being adapted to mate with each other when said finger grips are drawn together.

3. The device as recited in claim 1 wherein the inner curved surface of said holding plate is serrated and the portion of said guide plate opposite to the inner curved surface of said holding plate is serrated to mate with the serrated surface of said holding plate.

4. In a circumcision clamp; a guide member comprising a support portion, a curved guide plate fixedly attached to said support portion, said guide plate having a groove running transversely across the outer surface thereof; a holding member comprising a support portion, a pair of arms extending from said support portion, and a curved holding plate supported by said arms; pivot means for supporting said guide and holding members rotatably with respect to each other about a pivot axis; and separate means attached to said guide member and said holding member for drawing said guide plate and said holding plate into said clamping engagement with each other; the engaging surface of said holding plate being substantially narrower than the opposite engaging surface of said guide plate; the extreme edge of said holding plate having a curvature similar to that of said guide plate groove, whereby when said guide plate and said holding plate are drawn into clamping engagement with each other the extreme edge of said holding plate is adjacent said guide plate groove.

5. In a circumcision clamp; a guide member comprising a support portion having an elongated aperture therein and a curved guide plate fixedly attached to said support portion, said guide plate having a groove running transversely across the outer surface thereof, a portion of the outer curved surface of said guide plate being serrated; a holding member comprising a support portion, a pair of forked arms extending from said support portion, and a curved holding plate fixedly attached to said forked arms, said holding plate being serrated on the inner broad surface thereof; pivot means for supporting said guide and holding members rotatably with respect to each other about a single pivot axis, the support portion of said holding member being fitted within the aperture in said guide member support portion; a separate elongated arm fixedly attached to the support portions of said guide member and said holding member respectively, one end of each of said arms being attached to said support portions on the extreme ends thereof opposite to the ends attached respectively to said guide plate and said forked arms; and a finger grip fixedly attached to the other end of each of said arms, each of said finger grips having a ratcheted piece extending therefrom, said ratcheted pieces being positioned and adapted to mate with each other when said finger grips are drawn together; the extreme edge of said holding plate having a curvature similar to that of said guide plate groove, whereby when said finger grips are drawn together said guide plate and said holding plate are brought into clamping engagement with each other with the serrated surface of said holding plate held against the serrated portion of the outer surface of said guide plate and the extreme edge of said holding plate adjacent said guide plate groove.

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