

Sept. 22, 1942.

R. E. BLAIS ET AL
SURGICAL INSTRUMENT
Filed Dec. 9, 1941

2,296,594

2 Sheets-Sheet 1

Fig. 1.

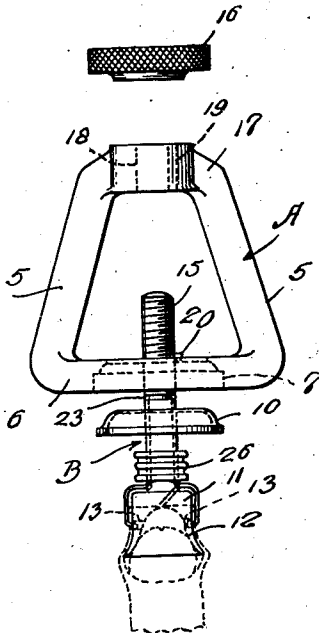


Fig. 2.

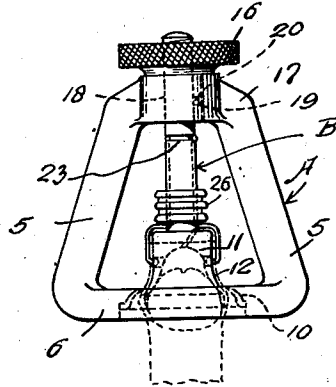


Fig. 3.

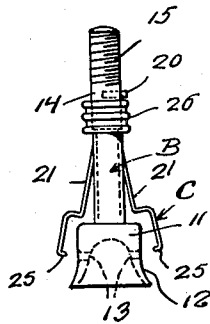


Fig. 4.

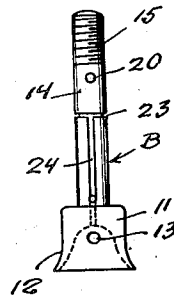
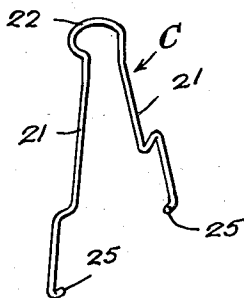


Fig. 5.



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2 Sheets-Sheet 2

Fig. 5.

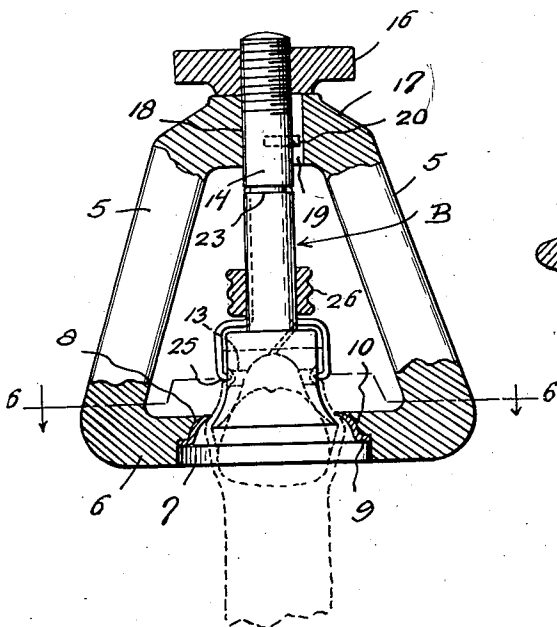


Fig. 6.

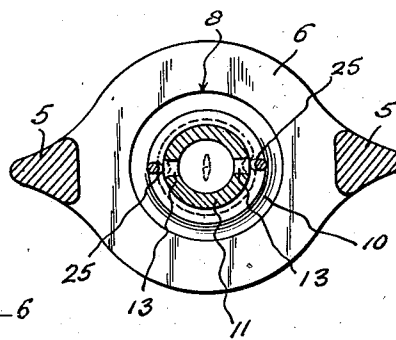


Fig. 7.

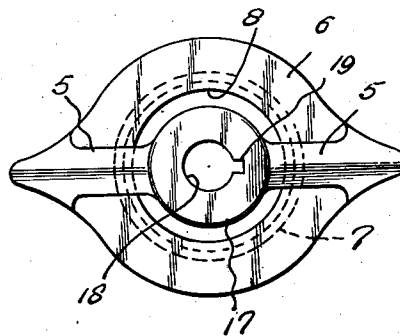
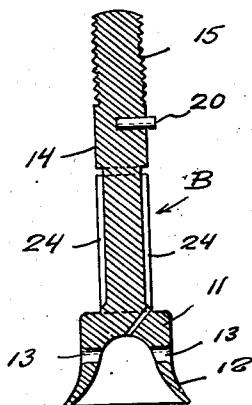


Fig. 8.



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2,296,594

SURGICAL INSTRUMENT

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Application December 9, 1941, Serial No. 422,278

3 Claims. (Cl. 128—346)

This invention relates to surgical instruments, and has more particular reference to instruments for use in performing circumcisions.

The primary object of the present invention is to provide a novel circumcision instrument which is of simple and durable design, easy to manipulate, and so constructed that its use enables a neat and clean circumcision to be readily effected.

Another object is to provide a novel circumcision instrument which will firmly and uniformly apply a clamping pressure to a definite circumferential area of the prepuce so as to permit a clean cut to be made and to enable haemostasis to be readily controlled.

Another object is to provide a novel instrument of the above kind in which simple and efficient provision is made for enabling the instrument to be adapted for performing circumcisions in connection with organs which vary in size.

Another object of the present invention is to provide an instrument of the above kind in which a movable clamp member is provided having a cup portion adapted to be applied over the glans penis, and manually operable clasp means for engaging and retaining the prepuce over said cup portion while the latter is being actuated to bring about the clamping pressure on the prepuce between the cup portion and a cooperating clamp member associated with the body of the instrument.

Other objects and features of the present invention will become apparent from the following description when considered in connection with the accompanying drawings, and the invention consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings:

Figure 1 is an elevational view of an instrument constructed in accordance with the present invention, the traction nut being disengaged from the threaded stem of the clamping member, and said clamping member being lowered in position to have its cup portion applied over the glans penis and the prepuce fitted over the outside of the cup portion of the clamping member.

Figure 2 is a view similar to Figure 1 with the traction nut operatively engaged with the threaded stem of the clamping member and the latter drawn in position so that a clamping pressure is applied on the prepuce between the cup

portion of the clamping member and an associated clamping ring carried by the body of the instrument.

Figure 3 is an elevational view of the clamping member per se and its associated prepuce clasp-
ing means, said clasp-
ing means being in released condition.

Figure 4 is a view looking towards the left of Figure 3 with the clasp-
ing means removed.

Figure 5 is a view similar to Figure 2, drawn on an enlarged scale and partially broken away and in section to more clearly reveal the details of construction of the instrument.

Figure 6 is a section on 6—6 of Figure 5.

Figure 7 is a top plan view of the body of the instrument.

Figure 8 is a central longitudinal sectional view of the clamping member shown in Figure 4, drawn on an enlarged scale, and

Figure 9 is an enlarged perspective view of the clasp forming part of the clasp-
ing means carried by the clamping member shown in Figure 3.

Referring in detail to the drawings, the present instrument comprises a rigid body member A, preferably of general triangular form, and which has side portions 5 forming hand grips adapted to be grasped by the hand of the operator. The side portions 5 are connected at their lower ends by an arm 6 having a circular cylindrical recess 7 formed in its lower side. A circular opening 8 is formed in arm 6 and provided with a wall of outwardly curved arcuate form in cross-section. Removably engaged in the recess 7 is the marginal flange 9 of a clamping ring 10 whose inner portion is curved to fit the wall of the opening 8 and extended inwardly to provide an annular clamping edge. By providing a separate clamping ring, rings of various internal diameters may be interchangeably employed to adapt the instrument for use in connection with organs of various sizes.

A clamp member B cooperates with clamping ring 10 and has its lower end 11 formed as an inverted cup having an outwardly flaring lower portion 12 of greater diameter than the central opening of clamping ring 10. Thus, when the lower portion of cup 11 and the upper or inner portion of ring 10 are brought into clamping engagement with the prepuce, the latter will be engaged by annular walls in such a way that rupture or cutting of the prepuce is avoided. Cup 11 is provided with opposed apertures 13 which serve to carry away any blood that may develop within the cup during the operation. Clamp member B also includes a central upward-

ly projecting stem 14 whose upper end is threaded as at 15 for cooperation with a traction nut 16, whereby forces are directly applied to the clamp in a rectilinear direction so that it will evenly and uniformly grip the prepuce and maintain it under a uniform pressure throughout the operation. Accordingly, an arm 17 connects the upper ends of the side members 5 and has a central opening 18 through which the stem 14 projects and is slidable. At one side of the opening 18, the arm 17 is provided with a longitudinal groove 19 into which slidably projects the outer end of a pin 20 fixed in the stem 14. Thus, pin 20 engages in groove 19 to prevent turning of the clamping member B while it is moved longitudinally through operation of nut 16.

The prepuce is adapted to be fitted over the outside of the cup 11, and clamping means which is manually operable, is associated with the clamping member B for retaining the prepuce over said cup 11 until any desired time after the clamping action is effected on the prepuce between the cup 11 and clamping ring 10. This clamping means includes a resilient normally released clasp member C having normally outwardly sprung downwardly diverging clamping arms 21 connected at their upper ends by means of a horizontal C-shaped connecting portion 22. The stem 14 has a circumferential groove 23 into which the connecting portion 22 is snapped and resiliently retained, and the upper portions of the clamping arms 21 are arranged to lie in the upper end portions of further grooves 24 provided longitudinally of and in the lower portion of the stem 14. The lower ends of the arms 21 are shaped to extend outwardly over the upper end of the cup 11, and terminate in inwardly directed lower ends 25 arranged to enter the apertures 13 or to force portions of the prepuce into said apertures and effectively retain the prepuce over the lower portion of cup 11 when the arms 21 are forced inwardly and retained in inwardly forced position by suitable means such as a ring 26 slidably arranged on the stem 14 and adapted to pass over the upper portions of the clamping arms 21. In other words, when the ring 26 is slid downwardly, the arms 21 are forced inwardly and their lower ends are forced to clasp the prepuce and retain it on the cup 11.

The instrument is manipulated by removing the nut 16 from the stem 14 and lowering the clamping member as shown in Figure 1 so that the cup 11 may be readily placed over the glans penis, and so that the prepuce may be fitted over the outside of the cup 11 as illustrated by dotted lines in Figures 1 and 5. The parts are then drawn into the relationship shown in Figures 2 and 5, the nut 16 having been applied to the threaded stem portion 15 and turned so as to elevate the cup 11 and bring about a clamping action on the prepuce between the lower outwardly flared portion of cup 11 and the ring 10. The prepuce may be cut off flush with the upper surface of the clamping ring 10, using such surface as a cutting guide. Any blood finding its way inside the cup is drained away through the openings 13, which also serve to avoid suction effects incident to applying or removing the cup. Obviously, clamping members B having cups 11 of various sizes may be interchangeably employed with clamping rings 10 having openings of various sizes so as to readily adapt the instrument for use in connection with organs of different sizes.

From the foregoing description, it is believed 75

that the construction and operation, as well as the advantages of the present invention, will be readily understood and appreciated by those skilled in the art.

What we claim as new is:

1. In a surgical instrument of the character described, a body member having a pair of spaced substantially parallel arms at the opposite ends thereof, one of said arms having an opening and a recess in the underside thereof forming a seat, a clamping ring removably engaged in said opening and having a marginal flange engaging said seat, a clamping element extending through said opening and said clamping ring and having a portion cooperating with said clamping ring, and means cooperating with the other arm of said body member for pulling said clamping element rectilinearly in such direction as to draw the clamping portion thereof even toward said clamping ring, said means comprising a rigid threaded stem on the clamping element projecting through an aperture in the other arm of said body member, and a nut engaged with said threaded stem, said clamping element further including a lower cup portion adapted to be fitted over the glans penis and having an outwardly flared lower portion over which the prepuce is adapted to be fitted, and manually operable clamping means carried by said clamping element for retaining the prepuce over said cup portion.

2. In a surgical instrument of the character described, a body member having a pair of spaced substantially parallel arms at the opposite ends thereof, one of said arms having an opening and a recess in the underside thereof forming a seat, a clamping ring removably engaged in said opening and having a marginal flange engaging said seat, a clamping element extending through said opening and said clamping ring and having a portion cooperating with said clamping ring, and means cooperating with the other arm of said body member for pulling said clamping element rectilinearly in such direction as to draw the clamping portion thereof even toward said clamping ring, said means comprising a rigid threaded stem on the clamping element projecting through an aperture in the other arm of said body member, and a nut engaged with said threaded stem, said clamping element further including a lower cup portion adapted to be fitted over the glans penis and having an outwardly flared lower portion over which the prepuce is adapted to be fitted, and manually operable clamping means carried by said clamping element for retaining the prepuce over said cup portion, said clamping means comprising normally released clamping arms, and a ring slidable on the clamping element to spring said arms inwardly into gripping engagement with the prepuce.

3. In a surgical instrument of the character described, a body member having a pair of spaced substantially parallel arms at the opposite ends thereof, one of said arms having an opening and a recess in the underside thereof forming a seat, a clamping ring removably engaged in said opening and having a marginal flange engaging said seat, a clamping element extending through said opening and said clamping ring and having a portion cooperating with said clamping ring, and means cooperating with the other arm of said body member for pulling said clamping element rectilinearly in such direction as to draw the clamping portion thereof even toward said clamping ring, said means comprising a rigid threaded stem on the clamping element projecting through

an aperture in the other arm of said body member, and a nut engaged with said threaded stem, said clamping element further including a lower cup portion adapted to be fitted over the glans penis and having an outwardly flared lower portion over which the prepuce is adapted to be fitted, and manually operable clasping means carried by said clamping element for retaining the prepuce over said cup portion, said clasping means comprising normally released clasping arms, and a ring slidable on the clamping element to spring said arms inwardly into gripping

engagement with the prepuce, said clamping element having a stem provided with an annular groove and longitudinal grooves extending downwardly therefrom, said clasping means including a connecting portion snapped into said annular groove and clamping arms aligned with the longitudinal grooves and normally seated at their upper ends in the upper portions of said longitudinal grooves.

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