

STERILISATION DEVICES

The present invention relates to sexual sterilisation devices and more particularly to sexual sterilisation clips adapted to be clamped on a fallopian tube or a vas deferens to effect occlusion thereof.

It is an object of the present invention to provide sterilisation clips which may be manufactured with a frame constructed from plastics material.

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The present invention provides a sexual sterilisation clip having a lower jaw member and an upper jaw member hingedly connected at one end to the lower jaw member both jaw members being of plastics material, the upper and lower jaw members being provided, at an opposite end thereof in relation to the hinge, with co-operating latch means to secure the clip in a closed position, the clip being provided in an open position with projection means to provide initial capture of a fallopian tube or vas deferens in which both the upper and lower jaw members are provided with a rubber lining, characterised in that the rubber lining of the upper jaw is provided with a bulge projecting towards the bottom jaw at the latch end of the upper jaw and in which the lining of the lower jaw is provided with a recess or relieved portion at the latch end of the lower

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jaw which co-operates with the bulge as the clip is closed to relieve pressure on the clip as the clip is closed.

Preferably the linings are made of silicone rubber.

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Embodiments of the present invention will now be described, by way of example with reference to the accompanying drawings, in which:-

Figure 1 shows in side elevation a clip illustrating a first
10 embodiment of the present invention;

Figure 2 shows the first clip in end elevation;

Figure 3 shows a clip in side elevation illustrating a second
15 embodiment of the present invention;

Figure 4 shows the clip of Figure 3 in end elevation, and

Figure 5 shows an alternative clip.

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With reference now to figures 1 and 3 the clip 10 comprises an upper jaw 12 and a lower jaw 14 hingedly connected at one end by a slightly thinner section 16 moulded integrally with the upper and lower jaws and relieved at the corners 18, 20 to allow closure of the clip.

Closure of clip 10 is effected by squeezing the two jaw members together and latching is effected by co-operating detente 22 and a recessed portion 24 on the lower jaw. Once latched the clip cannot be opened without substantial force.

The internal surfaces of upper and lower jaws 12, 14 are lined with a soft lining 26, preferably of silicone rubber, which may be formed in one piece as shown or may be in two pieces joined at an appropriate position near the hinge 16.

The lining on the upper jaw member is provided with a top profile 28 which is enlarged to form a bulge at the latch end of the clip.

The lining on the lower jaw 14 is preferably provided with a profile which is relieved at 30 to permit the top bulge 28 to access without excessive closing pressure being required for the clip.

The silicone lining forms a complete lining for the fallopian tube, completely filling the internal dimensions of the clip when closed thereby providing complete occlusion.

- 5 By suitable design of the detents 22 of the design of Figures 1 and 2 and the recessed portion 24, the clip when closed will present a substantially completely flat top, this feature being advantageous.

10 With reference now to Figures 3 and 4 an alternative embodiment of the clip shown in Figures 1 and 2 is shown. In Figures 3 and 4 those parts performing the same or equivalent functions are given the same reference numerals.

The alternative clip 200 comprises upper and lower jaw members 15 12, 14 silicone lining 26 with profiles 28, 30 and is hinged 16, 18, 20 as in Figures 1 and 2. The latch means however comprises interdigitating fingers 202 (upper jaw) and 204, 206 (lower jaw). Finger 202 is provided with a broadened portion 208, 210 which co-operates with two recessed portions 212, 214 on respective fingers 204, 206 to provide positive 20 latching for the clip.

This type of latching is particularly advantageous for the clip of Figures 1 and 2 since the finger 202 provides a support for profile 28.

The hinge for the clips may be of the type shown in Figure 1. The hinge in Figure 1 has the advantage that the clip is of one piece manufacture.

- 5 The type of latching shown in Figure 3 can be used with the clip design of Figure 2.

With reference now to Figure 5, an alternative clip design is shown which is similar to the design of Figures 1 and 2.

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The reference numerals of Figures 1 and 2 are used to identify parts performing similar functions. The practical dimensions (in mm) of the clip of Figure 5 are as follows :

15	L1	12.25
	L2	1.54
	L3	2.06
	L4	4.67
	L5	14.00
20	L6	2.75
	L7	1.59
	L8	0.71
	L9	1.59
	L10	5.06

CLAIMS

1. A sexual sterilisation clip having a lower jaw member and an upper jaw member hingedly connected at one end to the lower jaw member both jaw members being of plastics material, the upper and lower jaw members being provided, at an opposite end thereof in relation to the hinge, with co-operating latch means to secure the clip in a closed position, the clip being provided in an open position with projection means to provide initial capture of a fallopian tube or vas deferens in which both the upper and lower jaw members are provided with a rubber lining, characterised in that the rubber lining (26) of the upper jaw is provided with a bulge (28) projecting towards the bottom jaw (14) at the latch end of the upper jaw and in which the lining (26) of the lower jaw is provided with a recess or relieved portion (30) at the latch end of the lower jaw which co-operates with the bulge (28) as the clip is closed to relieve pressure on the clip as the clip is closed.

2. A sterilisation clip as claimed in claim 1 in which the co-operating latch means comprises a detent (22) on the upper jaw and a co-operating recessed portion (24) on the lower jaw.

3. A sterilisation clip as claimed in claim 1 in which the co-operating latch means comprises co-operating interdigitating fingers (202,204,206) provided respectively at the ends of the upper and lower jaws one of the fingers (202) on one of the jaws



being provided with a broadened portion (208) which co-operates with a recessed portion (214) on one of the fingers on the other jaw to provide a positive snap action latch for the clip.
