

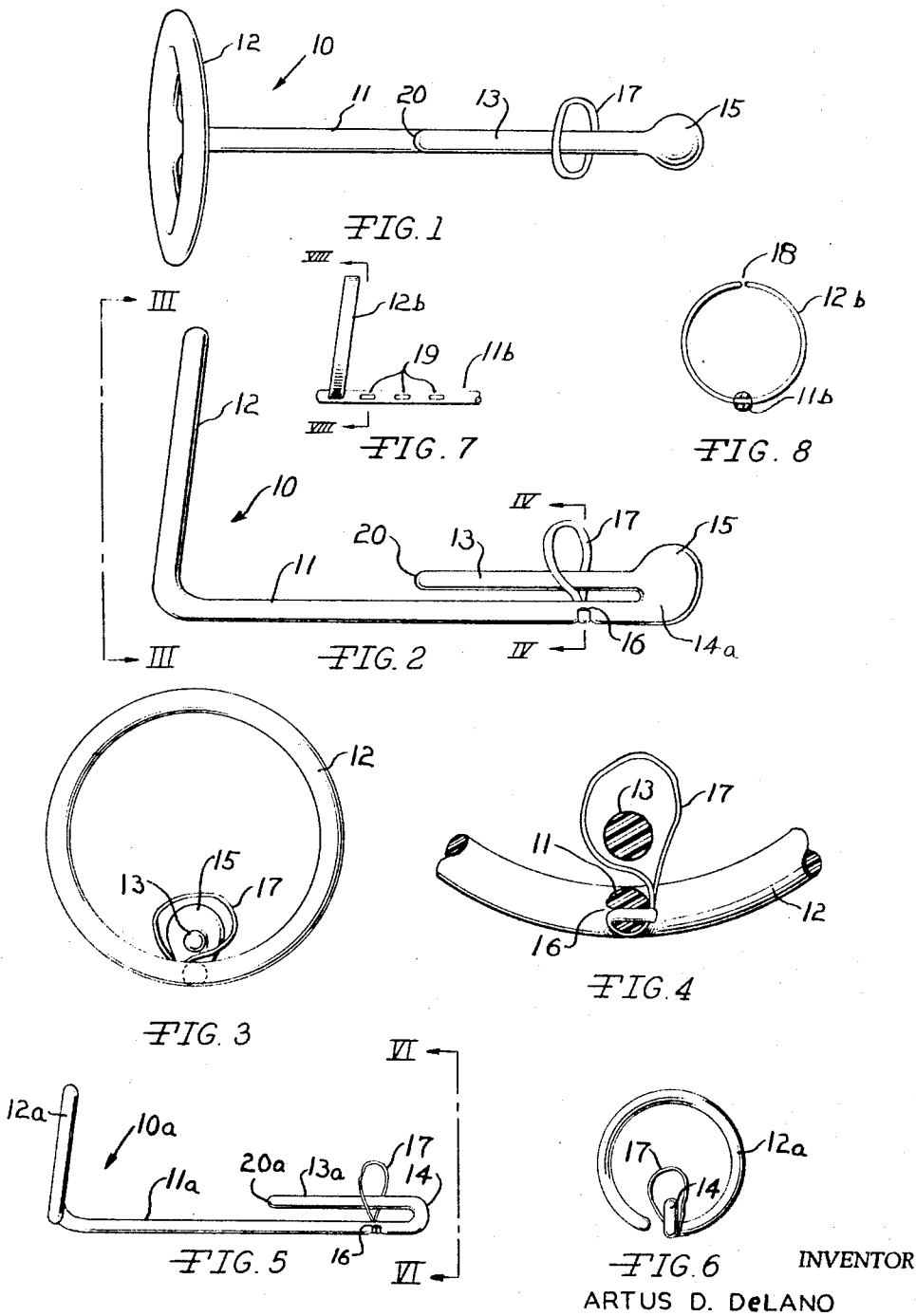
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SURGICAL SPLINT

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SURGICAL SPLINT

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ABSTRACT OF THE DISCLOSURE

A splint having a support means for the generative organ of the human male, said support means extending substantially full length of the splint and having in combination therewith a penetrator means insertable into the outer end of the urethra of the male organ to stabilize the assembly under conditions of use.

The present invention relates broadly to surgical splints, and in its specific phases to a support for the generative organ of the human male.

Many forms of devices have been proposed for use by older men whose procreative organs have recently become incapable of complete firm erection. Typical devices of this type have been in the form of rigid tubular or semi-tubular members, as well as wire devices having an extending portion with an outer loop-like end member to engage the rear shoulder of the glans penis on the end of the male genital organ. In other words, these devices are for the purpose of providing a mechanical aid for the erectile tissue of the corpora cavernosa of the genital organ so that fecundation may result even in the absence of full operation of the erectile tissue. These devices have not been wholly satisfactory since they commonly interfere with natural copulation, are injurious to either the user or his partner, or are incapable of properly fitting the male genital organ. It was a recognition of these problems and the difficulties encountered with them, and that while many forms of surgical splints for the noted purpose have been proposed no thoroughly satisfactory commercial device of this type has come onto the market, which led to the conception and development of the present invention.

Accordingly, among the objects of the present invention is the provision of a different type of support for the generative organ of the human male and which, when in conventional copulation use, makes possible normal penetration and facilitates coitus in accordance with natural propensity and without discomfort.

Another object of this invention is to provide a support for the generative organ of the human male whose erectile tissue does not fully function, and wherein the outer end portion of the support, when fully mounted ready for use, has a short rod-like portion extending endwise into the outer end of the male organ urethra while closely adjacent same, parallel, and on the underside of the generative organ is a support member carrying adjacent its outer end an elastic means for engaging behind the rear shoulder of the glans penis to thus hold this portion of the male generative organ in place while the rear end of the support rod is preferably provided with a suitable stop means which may be of ring shape, or the equivalent.

A further object of this invention is to provide a support for the generative organ of the human male wherein such support has a longitudinal support means which, at its rear end, may carry a removable support ring thus facilitating manufacturing the device by molding procedures, and moreover, the support means to which this removable ring is fastened in use, and which in a preferable form is a smooth rod, may be provided with spaced

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openings for receiving said ring, thus making possible varying the overall length of the assembly in accordance with varying requirements.

Still further objects and advantages of the invention will appear as the description of the invention proceeds.

To the accomplishment of the foregoing and related ends, the invention, then, consists of the means and features hereinafter fully described and particularly pointed out in the claims, the annexed drawing and the following description setting forth in detail certain illustrative embodiments of the invention, such disclosed embodiments illustrating, however, but several of various ways in which the principle of the invention may be used.

In the annexed drawing:

FIGURE 1 shows a top view of a preferred form of the surgical splint of the present invention.

FIGURE 2 is a side view of the surgical splint shown in FIGURE 1.

FIGURE 3 is an end view of the surgical splint as taken along line III—III of FIGURE 2, looking in the direction of the arrows.

FIGURE 4 is an enlarged fragmentary sectional view as taken along line IV—IV of FIGURE 2, looking in the direction of the arrows.

FIGURE 5 shows on a reduced scale a side view similar to that of FIGURE 2, but of a much simplified construction.

FIGURE 6 is an end view of the surgical splint as taken along line VI—VI of FIGURE 5, looking in the direction of the arrows.

FIGURE 7 shows on a reduced scale a fragmentary side view of a modified form of the rear end portion of the support means or rod of a surgical splint of the character described which has a removable ring and is modified so that the surgical splint is adjustable in length.

FIGURE 8 is a fragmentary end view of the surgical splint as taken along line VIII—VIII of FIGURE 7, looking in the direction of the arrows.

Referring more particularly to FIGURES 1, 2 and 3 it will be noted that the surgical splint 10 has an elongated support member 11, which may be of solid rod form, if desired, but is not limited to that specific construction since in cross section it may be tubular, flat, oval, semicircular, et cetera, and it is intended that the showing be considered as diagrammatically illustrating same. At one end of support member 11 it is provided with an upstanding, and preferably forward leaning, stop ring 12. This ring is preferably of a size to closely but freely encircle the male generative organ (not shown) at its base to position and support the rear end of the splint 10.

At the forward end of the support member 11, substantially parallel thereto, and moderately spaced from same, is a penetrator member 13 which is preferably round in cross section and of a diameter a little less than the inside diameter of the end portion of the male urethra into which it fits under conditions of use. This penetrator member 13 is preferably of a length in the range of about one-quarter to one-half the length of support member 11 to provide suitable stability under conditions of use.

The penetrator member 13 is joined to support member 11 at the forward end of the surgical splint 10. Perhaps the most simple form of this is shown in FIGURE 5 where the connection is accomplished through a simple joinder bend 14. A preferable construction, as shown in FIGURES 1, 2 and 3, involves a joinder bend 14a including a small upstanding rounded or ball end portion 15 which extends forward, upward and sidewise of said support member 11. This end portion 15 protects the relatively tender inlet to the urethra into which the penetrator member 13 extends, and at the same time provides

a starting end to facilitate insertion of the male generative organ at the start of copulation.

In order to hold the surgical splint in place when the male generative organ has been placed thereon, the support member 11 is provided with any suitable form of small cross perforation 16, a preferred form being shown in FIGURES 2 and 4, with said perforation being spaced back on support member 11 from joinder bend 14 or 14a a relatively short distance. Through this cross perforation is threaded the end of a small, suitable size, rubber band 17 with the body of the rubber band than being passed through the loop end of the threaded through portion and drawn up tight with the body of the rubber band encircling the penetrator rod 13 as is best shown in FIGURES 2, 4 and 5. A suitable size of this rubber band is from one to three times the distance across support member 11 and penetrator 13 with approximately the intermediate of these sizes being shown in FIGURES 2 and 4.

A simple low cost form of the invention is shown in FIGURES 5 and 6 where it will be noted that the stop ring 12a, the support rod 11a, and the penetrator rod 13a are all formed from a single piece of rod or tubing conventionally bent to shape. The rod or tubing used here is preferably made of any suitable tough and relatively rigid plastic material, as are the other forms of the invention which have been illustrated, with that of FIGURE 1 preferably being of a suitable tough and rigid moldable plastic to facilitate forming same by molding procedures, even though hand or machine forming of the surgical splint 10 through well known thermo-plastic rod bending and welding procedures may be used, although the latter will normally be more expensive than molding of the finished or semi-finished item under higher rates of production.

Molding the complete surgical splint 10, except for the rubber band, from plastic with stop ring 12 in place, may require the development of a highly complex multiple piece molding die with extra unit costs of the final surgical splint. One way to avoid this is shown in FIGURES 7 and 8, where the ring 12b is a separate member having a cross opening 18. The support member 11b likewise may be provided with cross openings or perforations 19 in conventional manner such as by molding, drilling, or even punching in some instances. These openings 19 are preferably elongated as shown, and stop ring 12b may likewise be made in the form of a band having a flat sided cross section so as to take and hold the desired forward leaning position shown in FIGURE 7 when assembled in place. This type of construction also permits varying the effective length of support member 11b to meet the length requirements of the one who is going to use the surgical splint. After determining the proper length of support member 11b the excess portion of the support member may be conventionally removed, such as by cutting and smoothly rounding the cut end of 11b. Another advantage of the construction shown in FIGURES 7 and 8, when adapted to the construction shown in FIGURES 1, 2 and 3, is that the ring may be removed and the whole surgical splint packed for shipment or storage in a relatively thin flat package.

One typical size of the surgical splint shown in FIGURES 1, 2 and 3 is as follows: Overall length is 6 inches; inside diameter of the ring is 1½ inches, with the ring preferably inclining in the range of 0° to 20° to the right as shown in FIGURE 2, thus forming a large acute angle to support member 11; length of the penetrator member is 2 inches; the plastic rod from which the support member 11, ring 12 and penetrator 13 are made is ¼ inch in diameter; and the bulbular end portion 15 is approximately ¾ inch in diameter, with the spacing between support member 11 and penetrator 13 being ¾ inch, and the length of rubber band being 1½ inches from the top of support member 11 to the upper end of the band as shown in FIGURE 2 with the sides of the band together and not stretched, said rubber band being fastened to

support member 11 approximately ¾ inch to ½ inch from joinder bend 14.

The installation of the surgical splint 10 of the present invention on the male generative organ in its semi-erected condition, involves threading the latter through stop ring 12 until it comes up to the round end 20 of penetrator rod 13 with the rubber band 17 in the position shown in FIGURE 2. The end 20 of penetrator rod 13 is then passed into the outer end of the urethra of the male generative organ until the end of the latter almost or substantially reaches the joinder bend 14a, the rubber band in turn being stretched over the glans penis of the generative organ and moderately tightly hooked over the rear shoulder of same to anchor the surgical splint 10 in place. A surgical splint having an appropriate length support member 11, of course, having been chosen and fitted to the patient by the doctor to whom the patient had gone for treatment and fitting with the noted splint.

While only a few forms and variations of the surgical splint of this invention have been shown and described, other forms utilizing the new principle involved will now be apparent to those skilled in the surgical splint art. Therefore, the embodiments shown in the drawing are to be considered as having been set forth merely for illustrative purposes, and are not intended to limit the spirit and scope of the invention as above described and illustrated in the drawing.

Other modes of applying the principle of my invention may be employed, instead of those explained, change being made as regards the surgical splint and the details herein disclosed, provided the features and combinations stated by any of the following claims be employed.

I therefore particularly point out and distinctly claim as my invention:

1. A surgical splint of the character described, which comprises a support means extending substantially full length of the splint, stop means at one end of said support means, a penetrator means, means for smoothly joining one end of said penetrator means to the end of said support means remote from said stop means, said penetrator means being substantially parallel to said support means and close to but spaced a short distance from same, an elastic band means through which said penetrator means may readily pass, and means for releasably anchoring said elastic band means to said support means a short distance from the point of joinder of said penetrator means to said support means.

2. A surgical splint as set forth in claim 1, wherein said penetrator means is of a length substantially in the range of one-quarter to one-half the length of said support means, and said elastic band means is of a length in the range of approximately one to three times the distance across the combination of said support means and said penetrator means substantially parallel thereto.

3. A surgical splint as set forth in claim 1, wherein said means for smoothly joining one end of said penetrator means to the end of said support means includes a small, rounded, substantially bulbular enlargement of same which extends ahead, sidewise, and a little above said penetrator means.

4. A surgical splint as set forth in claim 1, wherein said support means has an opening therein spaced a short distance from said penetrator joining means for threadedly receiving and releasably anchoring said elastic band in place.

5. A surgical splint as set forth in claim 1, wherein both said stop means and said penetrator means are at the same side of said support member and substantially in alignment, and said stop means is in the form of a ring member.

6. In a surgical splint for a male generative organ, including a support means for the organ extending substantially the full length of the splint comprising, in combination therewith a penetrator means to stabilize the assembly under conditions of use when said means is inserted into

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the outer end of the urethra of the male generative organ.

7. In a surgical splint as set forth in claim 6, wherein said penetrator means is of smooth, substantially straight, rod-like form, and shorter than the male generative organ.

8. A surgical splint for a male generative organ, which comprises a support member extending substantially full length of said splint, a stop ring member of a size to suitably receive said male generative organ with the latter extending along said support member, means for anchoring said stop ring member on one end of said support member so as to project substantially wholly from one side of same, said stop ring member varying from substantially perpendicular to said support member to a large acute angle to same, a penetrator member, means for smoothly joining said penetrator member to the end of said support member remote from said stop ring member but on the same side thereof as said stop ring member, said penetrator member being substantially parallel to said support member and close to but spaced a short distance from same, an elastic band means through which said penetrator member may readily pass, and means for smoothly and releasably anchoring said elastic band means to said support member a short distance toward said stop ring means from the point of joinder of said penetrator means to said support means.

9. A surgical splint as set forth in claim 8, wherein said penetrator member is of a length substantially in the range of one-quarter to one-half the length of said support member.

10. A surgical splint as set forth in claim 8, wherein said stop ring member is separate from said support member, and said support member has means for removably mounting and stabilizing said stop ring member thereon.

11. A surgical splint as set forth in claim 10, wherein said stop ring member is of substantially cylindrical flat band construction and open crosswise at one point, and said support member, in the stop ring receiving area, is cross slotted in longitudinal direction to closely but freely

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threadedly receive and support said stop ring member in generally upright position.

12. A surgical splint as set forth in claim 8, wherein said means for smoothly joining one end of said penetrator member to the end of said support member includes a small, rounded, substantially bulbular enlargement of same which extends ahead, sidewise, and a little above said penetrator member.

13. A surgical splint as set forth in claim 8, wherein said stop ring member is of substantially cylindrical flat band construction and open crosswise at one point, with said support member, in the ring receiving area, being cross slotted in longitudinal direction to closely but freely threadedly receive and support said stop ring member in generally upright position, and wherein said means for smoothly joining one end of said penetrator member to the end of said support member includes a small, rounded, substantially bulbular enlargement of same which extends ahead, sidewise, and a little above said penetrator member.

14. A surgical splint as set forth in claim 13, wherein said elastic band means is of a length in the range of approximately one to three times the distance across the combination of said support member and said penetrator member substantially parallel thereto.

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