United States Patent [19]

Wilson

[11] **3,744,486**

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[54] **APPARATUS FOR OBTAINING AN ARTIFICIAL ERECTION**

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[22] Filed: **Dec. 6, 1971**

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 7,515, Feb. 2, 1970, abandoned.

[52] **U.S. Cl.** **128/79**

[51] **Int. Cl.** **A61f 5/00**

[58] **Field of Search**..... 128/79, 303, 278, 128/299, 38–40

[56] **References Cited**

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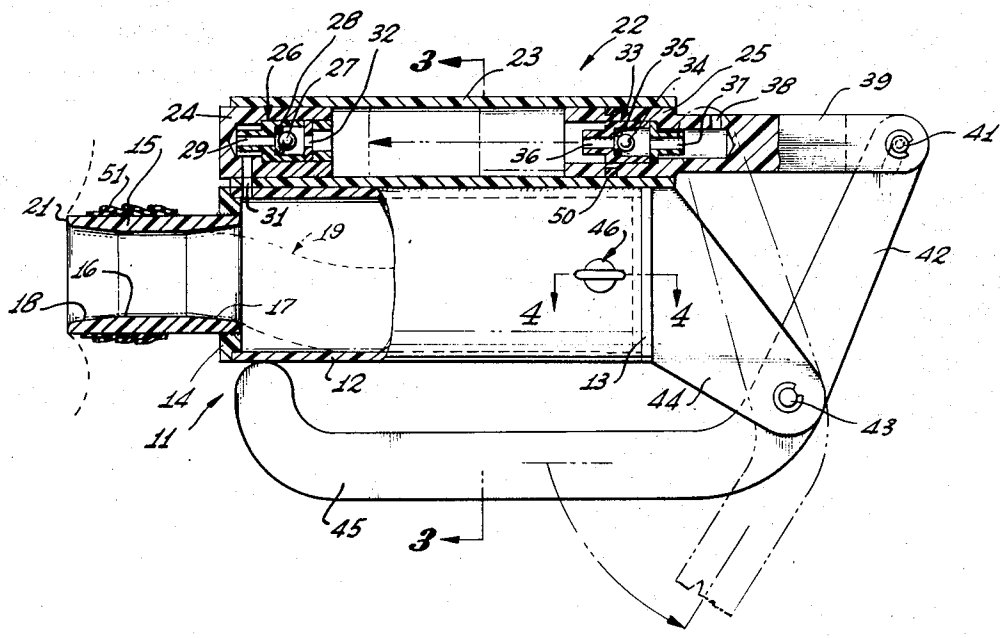
[57] **ABSTRACT**

Apparatus for obtaining an artificial erection by inducing flow of blood into the penis to stiffen it and applying a restrictor to its base to maintain the blood therein. A barrel chamber for the penis has a restricted tubular entrance and means for creating a vacuum in the chamber to which the penis is subjected to induce flow of blood thereinto. A resilient restrictor mounted on the entrance tube is shiftable therefrom to the base of the penis after erection to maintain the blood therein. The chamber has means for releasing the vacuum after which it may be withdrawn from the erected penis which may thereafter be used in normal copulation.

20 Claims, 7 Drawing Figures



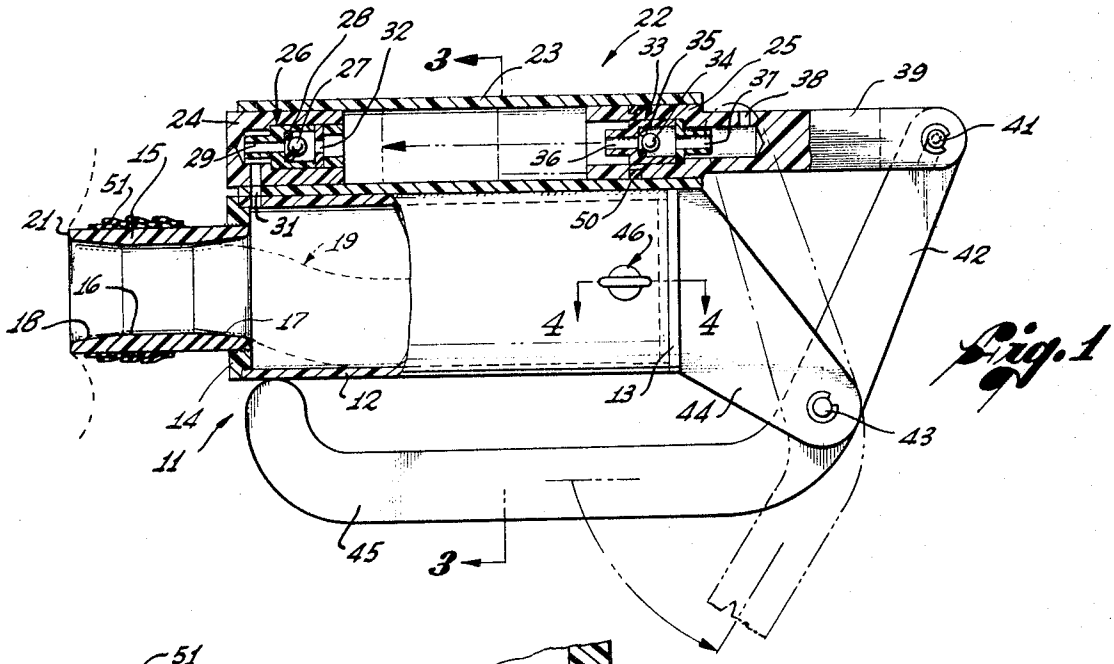


Fig. 1

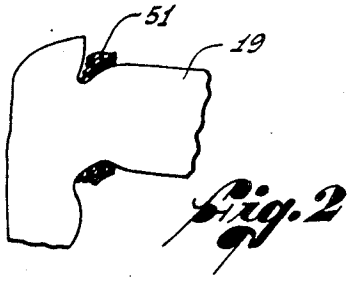


Fig. 2

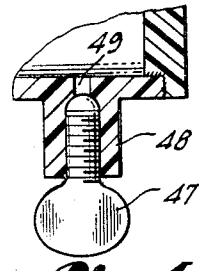


Fig. 4

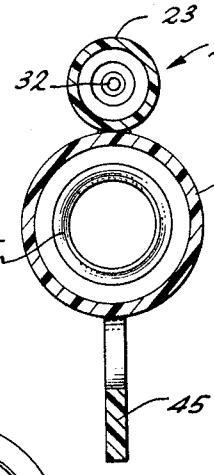


Fig. 3

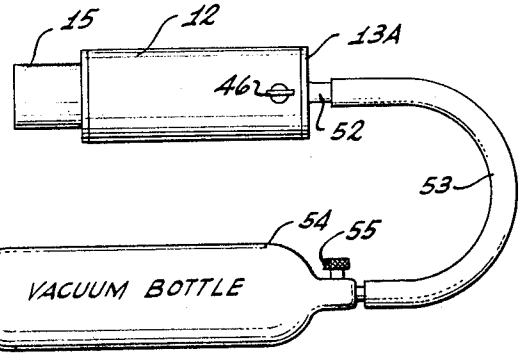


Fig. 5

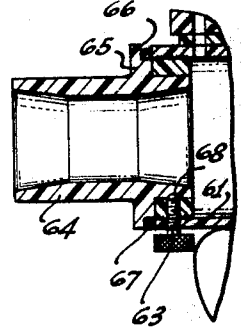


Fig. 7

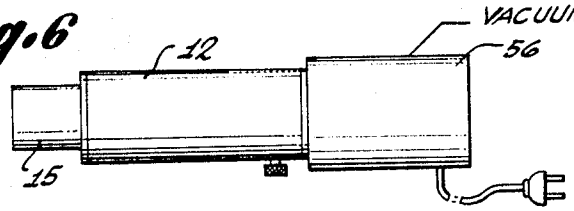


Fig. 6

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APPARATUS FOR OBTAINING AN ARTIFICIAL ERECTION

CROSS-REFERENCE TO RELATED APPLICATION

This application Is a continuation-in-part of my earlier abandoned application, Ser. No. 7,515, filed Feb. 2, 1970, entitled "METHOD AND APPARATUS FOR OBTAINING AN ARTIFICIAL ERECTION."

BACKGROUND OF THE INVENTION

1. This invention lies in the field of obtaining and maintaining an artificial erection.

2. Impotency in the human male is a serious problem which becomes more widespread with increasing age. It gives rise to sociological problems and mental stress, not only in the afflicted male, but also for his marriage partner. Both parties to the marriage may be forced to a life of frustration with grave danger to the continuance and happiness of the marriage contract.

Man has tried to combat impotency since the dawn of history with various medications and with mechanical aids such as splints, braces, and props. None of these has been very effective.

The apparatus according to the present invention secures an erection by inducing flow of blood into the penis to enlarge and stiffen it and holding the blood therein by means of a restrictor applied to the base of the penis. The result is similar to a natural erection and normal copulation with attendant pleasure and satisfaction for both parties can be secured.

SUMMARY OF THE INVENTION

The apparatus of this invention comprises barrel type means providing a chamber of a length to accommodate the enlarged and stiffened penis and of an interior diameter substantially larger than and loosely receiving the penis. Entrance to the barrel chamber is by way of a restricted diameter tube of relatively inelastic material having inner and outer frusto-conical ends to prevent bunching of the skin thereat. The interior diameter of the generally cylindrical portion of the entrance tube is preferably slightly less than the diameter of the enlarged penis to maintain a seal therebetween when the penis enlarges. The exterior of the entrance tube provides a surface on which a resilient restrictor may be mounted to be slid off onto the base of the penis after it has been erected within the barrel chamber.

Means are provided for inducing a vacuum within the barrel chamber of which the forms specifically illustrated include a manually operated vacuum pump, an electrically operated vacuum pump, and a vacuum bottle which is connectable to the tubular chamber. The vacuum chamber is also provided with a valve for releasing the vacuum therein when the unit is to be moved off the penis.

In use, the restrictor is first placed upon the exterior surface of the entrance tube and the penis, which has been lubricated with, for example, a thin mineral oil, is passed through the entrance tube and into the barrel chamber. The outer edge of the entrance tube is then pressed against the body skin about the base of the penis to establish a preliminary seal thereat and the pump is actuated or the vacuum bottle connected so as to establish a vacuum in the barrel chamber. This vacuum induces flow of blood into the penis and it swells to fill the entrance tube to seal thereto and finally reaches a fully enlarged and stiffened or erect condition. The restrictor is then slid off the entrance tube to the base of the penis where it acts to hold the blood therein. The vacuum in the barrel chamber is then released and the unit slid off the penis which remains erect under the action of the restrictor. Normal copulation may then be accomplished.

Erection of the penis will be substantially maintained as long as the restrictor is in place and insures that the female party will have an orgasm regardless of a premature orgasm by the male party which does not, as is natural, result in loss of stiffening. The invention is therefore also applicable in those cases where the problem is not impotency but premature orgasm in the male and overcomes the problems of both to insure an orgasm for the female party.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a view, partly in elevation and partly in secton, showing an erecting apparatus according to the present invention with a manual vacuum pump;

FIG. 2 is a partial diagrammatic representation of the restrictor in place at the base of a stiffened penis;

FIG. 3 is a transverse sectional view on the line 3—3 of FIG. 1;

FIG. 4 is a detail sectional view of the vacuum-releasing valve, taken on the line 4—4 of FIG. 1;

FIG. 5 is a diagrammatic representation of an apparatus using a vacuum bottle to establish the vacuum;

FIG. 6 is a diagrammatic representation of a device similar to FIG. 1, but using an electrically driven vacuum pump; and

FIG. 7 is a partial longitudinal sectional view of the entrance end of a modification.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to the device shown in FIGS. 1, 3 and 4, the penis stiffening and erecting device 11 comprises a substantially cylindrical, relatively rigid body or barrel 12 having an imperforate end cap 13 sealed thereto and an annular forward cap 14 also sealed thereto and having sealed therein a relatively rigid, inelastic entrance tube 15 preferably made of transparent plastic, such as Plexiglass or Lucite. The interior diameter of the central portion of the entrance tube is slightly smaller than the exterior diameter of the enlarged and stiffened penis which varies with the individual, and may come in a stock range of sizes of the order of 1 inch to 1-½ inch diameters in ⅛ inch in crements. This diameter is such as to make an effective seal with the enlarged penis and is preferably of a length of between ½ inch and 1 inch. The interior surface of the inner end of the tube 15 where it enters the barrel 12 is substantially frusto-conical for about ¾ inch with an angle at 17 preferably between 5° and 7° to the axis to prevent bunching of the skin thereat. This essential to facilitate removal of the tube after erection. The interior surface of the tube 15 at its outer end also presents a frusto-conical surface at 18 for about ¾ inch presenting an angle preferably between 5° and 7° to the axis. The overall length of the entrance tube 15 is preferably of the order of 2-½ inches.

FIG. 1 shows a limp penis within the device in dotted lines at 19 and with the outer end of the entrance tube 15 pressed against the skin of the body about the penis at 21. The barrel 12 has an internal diameter substantially larger than the erected penis and of the order of,

for example only, 2-¼ inches. On the side of the barrel 12 and parallel thereto is mounted a vacuum pump 22 comprising a tube 23 with a sealing end cap 24 and a piston plunger 25 slidable therein and sealed thereby by an O-ring 50. Interiorly of the end cap 24 are the parts of a check valve 26 including a check ball 27 sealing against an O-ring 28 about a passage 29 which communicates with a passage 31 leading into the interior of the chamber provided by the barrel 12. Opposite the passage 29 is a passage 32 leading to the interior of the tube 23. Within the piston 25 is another check valve 33 comprising a check ball 34 sealing against an O-ring 35 about a passage 36 leading from the interior of the tube 23. Opposite the passage 36, a passage 37 communicates through a hole 38 to the atmosphere.

The piston 25 is integral with a rod extension 39 pivotally connected at 41 to one end of a bell crank lever 42 which is pivotally mounted at 43 to a fixed bracket 44 integrally connected to the end plate 13. The bell crank lever 42 has a free end which serves as a handle 45 to rotate the lever and move the piston 25 within the tube 23 to establish a vacuum within the chamber of the barrel 12. Adjacent the end of the barrel 12, it is provided with a manual valve 46 in the form of a thumb screw 47 threaded into a boss 48 integral with the barrel 12 and acting when screwed tight to close an opening 49 into the barrel chamber. When the thumb screw 47 is loosened, it establishes communication within the barrel through the loose threads to the atmosphere.

An elastic restrictor 51 is mounted tightly upon the exterior surface of the entrance tube 15. It is tight and elastic so that when slid onto the base of the penis, as in FIG. 2, it will tightly grip the same to prevent return flow of blood out of the penis back into the body's circulatory system. The restrictor 51 may take any form. If a material of sufficient strength and resilience is available, it may be of ordinary O-ring configuration, but by actual test, it has been found that a rubber band giving several turns about the entrance tube and penis is particularly effective in providing sufficient tightness and elasticity to prevent the return flow of blood out of the stiffened penis. By way of example only, there has been effectively used a standard rubber band having a width of substantially one-quarter inch and an unstressed flat loop length of substantially three and one-half inches. Such a rubber band is placed on the entrance tube to be shifted to the penis in the number of turns which is found to be most effective without pain, which, in the band size given, has been found to be of the order of four turns.

The operation of the apparatus of this invention will now be described. The restrictor 51 with the desired number of turns is placed on the outside of the tube 15. The penis 19 is lubricated, as with a light mineral oil, and in limp condition inserted through the entrance tube 15 into the barrel 12, as shown in FIG. 1. The outer end 21 of the entrance tube 15 is then pressed against the skin of the body about the penis to establish a seal. The handle 35 is rapidly oscillated to move the piston 25 inwardly and outwardly of the tube 23, thereby withdrawing air therefrom and expelling it to atmosphere. This withdraws air through passages 29 and 31 from the chamber within the barrel 12 to establish a vacuum therein. The degree of vacuum required to induce flow of blood into the penis to effect the desired erection varies with the individual and may be in the range of four inches of mercury up to 20 inches of mercury or the maximum which can be secured with the pump; normally a vacuum of ten inches of mercury is effective and desirable. As blood is pumped into the penis 19, it swells to effect a seal at the surface 16 of the entrance tube 15, at which time the pressure at the outer end 21 can be released and the seal maintained by the engagement of the penis with the entrance tube section 16.

The vacuum is maintained in the barrel chamber until the penis reaches the desired erection, at which time the restrictor 51 is rolled or slid off the end of the entrance tube 15 to the base of the penis 19, as shown in FIG. 2. The restrictor prevents reverse flow of blood from the penis, so that the vacuum in the barrel chamber may be released at the valve 46 and, when the chamber has returned to atmospheric pressure, the device may be slid off the penis, leaving it in erect condition. This removal is easily accomplished by reason of the frusto-conical shape of the inner end 17 of the tube 15 and the lubricated condition of the penis skin. As the device is removed, there will be a temporary localized reduction in the penis diameter, and particularly the head thereof as it passes first into and through the enlarged conical portion 17 and then through the cylindrical section 16 of the entrance tube 15. Without the frust-conical portion 17, it is not possible to remove the tube 15 from the penis without considerable pain, if at all in some instances.

With the device removed, copulation can be proceeded with in the ordinary manner and the penis will remain reasonable stiff so long as the restrictor 51 is in place, regardless of a possible premature orgasm by the male.

To avoid possible injury, it is desirable that the time the restrictor is in place be limited, and as presently advised, it is recommended that it be used for no more than a period of 30 minutes, after which it is preferable to remove the restrictor and permit normal flow of blood through the penis.

With the artifically induced erection according to the present invention, copulation for the female is normal and it is normal for the male as well, except that in the male orgasm semen is not emitted, as it will not flow past the restrictor 21.

The barrel 12, entrance tube 15, and pump tube 23 may be formed of any appropriate material, preferably relatively transparent, such as an acrylic resin or plastic of the types marketed under the trademarks Plexiglass and Lucite. It is essential, however, that the tube 15 be inelastic, since otherwise removal after erection would be impossible, or very painful at best.

In the modification of the invention illustrated in FIG. 5, the device of the present invention uses the same barrel 12 and entrance tube 15, but instead of the pump 22, the end cap 13A has an exit tube 52 therefrom adapted to be connected by flexible tube 53 to a vacuum bottle 54 having a manual valve 55. The use of the device of FIG. 5 is the same as for FIG. 1, except that instead of pumping the vacuum into the chamber of the barrel 12, the valve 55 is opened until a sufficient vacuum is obtained within the chamber. The vacuum bottle 54 may be of any size consistent with the size of the chamber and the vacuum desired, and may have a capacity for several uses without requiring re-evacuation.

In the modification of FIG. 6, instead of the side pump 22, an electrical pump 56 is mounted at the end

of the barrel **12** to establish a vacuum in the chamber therein. This electrical pump may be of any well-known form, oscillating or rotary, and may be used where electric power is convenient to avoid the manual pump operation of the more universal form of FIG. **1.**

The modification of FIG. **7** shows a detachable and replaceable entrance tube to permit different sized tubes to be used with the same barrel body. Illustrated is a barrel body **61** having an end annulus **62** cemented therein and having a thumb screw **63** extending therethrough. The entrance tube **64** has the same internal dimensions and surface configuration as the tube **15.** At its inner end, the tube **64** has a flange **65** with an edge notch **66** in which is disposed an O-ring **67** pressed against the end surface of the barrel body **61** in sealing relation. The tube **64** is held in the barrel body by the end of thumb screw **63** extending into a groove **68** in the tube. With this construction, varied sized tubes **64** may be detachably and replaceably associated with the same barrel body **61.** The operation is the same as in the embodiments of FIGS. **1, 5** and **6.**

While certain preferred embodiments of the invention have been specifically illustrated and described, it will be understood that the invention is not limited thereto, as many variations thereof will be apparent to those skilled in the art.

I claim:

1. Apparatus for inducing an artificial erection in a human penis comprising:

means providing a chamber for the reception of the penis;

an inelastic entrance tube to said chamber through which the penis extends, the internal diameter of said tube being larger than the relaxed diameter and smaller than the enlarged diameter of said penis, the interior surface of the inner end of said tube having a substantially frusto-conical form;

means for evacuating said chamber to establish a vacuum about the penis to induce flow of blood thereinto and thereby increase the size and stiffness thereof; and

means for releasing said vacuum by admitting air into the chamber to facilitate removal of the barrel body and tube from said penis.

2. The device defined in claim **1** in which the interior surface of the outer end of said entrance tube has a substantially frusto-conical form.

3. The device defined in claim **2** in which the frusto-conical interior surface of the outer end of said entrance tube is at an angle in the order of 6° to the axis.

4. The device defined in claim **1** in which the frusto-conical interior surface of the inner end of said entrance is at an angle on the order of 6° to the axis.

5. The device defined in claim **1** in which the interior surface of the frusto-conical inner end of said entrance tube is at an angle of between approximately 5° and 7° to the axis.

6. The device defined in claim **2** in which the interior surface of the frusto-conical outer end of said entrance tube is at an angle of between approximately 5° and 7° to the axis.

7. The device defined in claim **2** in which the interior surfaces of the frusto-conical inner and outer ends of said entrance tube are at angles of between approximately 5° and 7° to the axis.

8. The device defined in claim **1,** and including in combination:

an elastic restrictor mounted on the exterior surface of said entrance tube to be slid onto the base of the penis to prevent return flow of blood therefrom.

9. The device defined in claim **8,** in which the relaxed diameter of said restrictor is substantially less than the diameter of the base of the penis.

10. The device defined in claim **1** including a vacuum pump mounted on said chamber to evacuate said chamber.

11. The device defined in claim **1** including means for detachably mounting said entrance tube to said chamber means in sealing relation thereto.

12. In an apparatus for inducing an artificial erection in a human penis, said apparatus including means providing a chamber for the reception of the penis, means for evacuating said chamber, and means for operatively associating an entrance tube with said chamber, the improvement which comprises:

an entrance tube adapted to be operatively associated with said chamber for introducing the penis into said chamber, said tube being inelastic and having an internal diameter larger than the relaxed diameter and smaller than the enlarged diameter of said penis;

the inner end of said tube leading into said chamber having a substantially frusto-conical form to facilitate removal of said tube from the enlarged penis.

13. The device defined in claim **12** in which the interior surface of the outer end of said entrance tube has a substantially frusto-conical form.

14. The device defined in claim **13** in which the frusto-conical interior surface of the outer end of said entrance tube is at an angle in the order of 6° to the axis.

15. The device defined in claim **12** in which the frusto-conical interior surface of the inner end of said entrance is at an angle in the order of 6° to the axis.

16. The device defined in claim **12** in which the interior surface of the frusto-conical inner end of said entrance tube is at an angle of between approximately 5° and 7° to the axis.

17. The device defined in claim **13** in which the interior surface of the frusto-conical outer end of said entrance tube is at an angle of between approximately 5° and 7° to the axis.

18. The device defined in claim **13** in which the interior surfaces of the frusto-conical inner and outer ends of said entrance tube are at angles of between approximately 5° and 7° to the axis.

19. The device defined in claim **12** and including in combination:

an elastic restrictor mounted on the exterior surface of said entrance tube to be slid onto the base of the penis to prevent return flow of blood therefrom.

20. The device defined in claim **19,** in which the relaxed diameter of said restrictor is substantially less than the diameter of the base of the penis.

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