

REPUBLIC OF SOUTH AFRICA
PATENTS ACT, 1978**PUBLICATION PARTICULARS AND ABSTRACT**

(Section 32(3)(a) – Regulation 22(1)(g) and 31)

OFFICIAL APPLICATION NO.

LODGING DATE

ACCEPTANCE DATE

21	01	
----	----	--

22	29 JAN 2002
----	-------------

43	29.1.2003
----	-----------

INTERNATIONAL CLASSIFICATION

NOT FOR PUBLICATION

51	A61F; A61B
----	------------

CLASSIFIED BY: WIPO

FULL NAMES OF APPLICANTS

71	1. CANCEL, RICHARD 2. WALLACE, RICHARD 3. SASSI, GÉRARD
----	---

FULL NAMES OF INVENTORS

72	1. CANCEL, RICHARD 2. WALLACE, RICHARD 3. SASSI, GÉRARD
----	---

EARLIEST PRIORITY CLAIMED

COUNTRY

NUMBER

DATE

33	FR
----	----

31	99/10206
----	----------

32	5 AUG 1999
----	------------

TITLE OF INVENTION

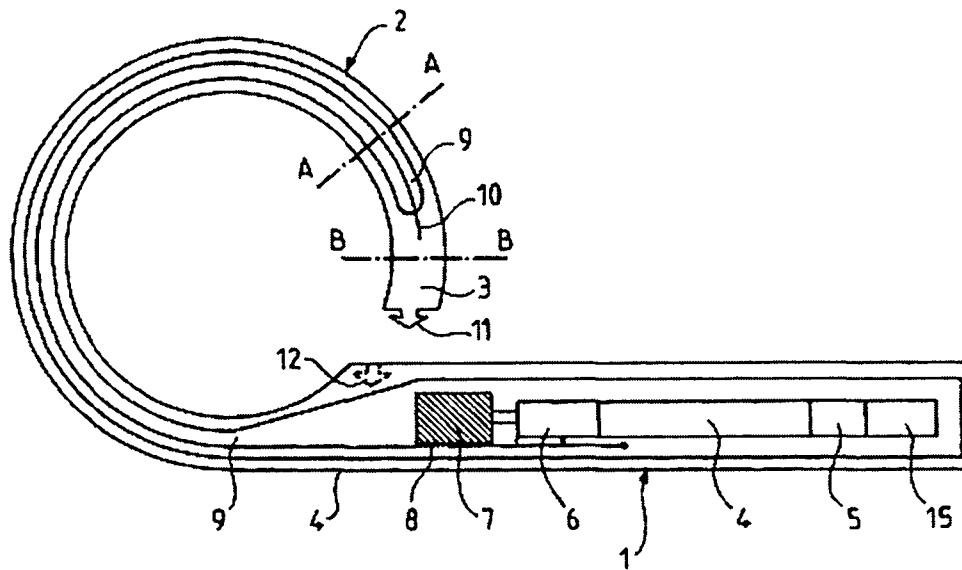
54	GASTRIC BAND REMOTE CONTROL DEVICE
----	------------------------------------

57	ABSTRACT (NOT MORE THAT 150 WORDS)
----	------------------------------------

NUMBER OF SHEETS	25
------------------	----

If no classification is finished, Form P.9 should accompany this form.
The figure of the drawing to which the abstract refers is attached.

T:\WIPO\PA132485_ABS.doc



Modified sheetGASTRIC BAND REMOTE CONTROL DEVICE

The present invention relates to a gastric band.

Such devices are particularly intended to reduce weight in patients suffering from severe obesity, by limiting food consumption. It is generally presented in the form of a sliding loop enabling laparoscopic positioning around the stomach, with the formation of a small gastric pouch and a contraction.

The European patent EP611561 discloses an adjustable laparoscopic gastric band comprising:

- 10 - a band component including a portion of band to surround the stomach so as to form the restricted stoma opening, the portion of band having a free end, wherein the band component also comprises an expansion section attached to the portion of band and comprising an inflatable oblong component extending completely along the portion of band such that the expansion section completely surrounds the stomach when the device is in position forming the restricted stoma opening; and being characterised by
- 20 - a first interlocking fixation means placed at a first predetermined fixed position on the portion of band

Modified sheet

in the vicinity of said free end, and a second interlocking fixation means placed at a second predetermined fixed position in an intermediate portion of the band component for interlocking with the first
5 interlocking fixation means to enable the fixation of said free end of the portion of band to the intermediate portion of said band at said second position such that the portion of band forms a circle of a predetermined fixed diameter which is predetermined by the locations of
10 the first and second fixed positions on the band component.

Other patents according to the prior art disclose such devices.

The patent US5549621 discloses a device comprising
15 two components pivoting in relation to each other to close the wall of the gastric pouch.

The American patent US4696288 discloses a device comprising a toroidal balloon that can be inserted into the stomach.

20 The Swedish patent SE8503144 discloses a gastric implant for the treatment of obesity.

The American patent US4592339 discloses a device to contract the stoma with an expandable band.

The international patent application WO 96/01597
25 discloses a bodily duct blocking device, said device comprising a body 45 extended by a band component 60, 63 including a portion of band to surround the duct, the portion of band having a free end, said body 45 containing motorised means and the band being driven by
30 remote-controlled means.

In this device, the band 60, 63 comprises a non-compressible part 60 and closes onto itself.

Modified sheet

The invention aims to improve gastric bands so as to enable adjustment of the tightening loop after positioning, with no surgical intervention. The purpose is particularly to enable the progression of the treatment according to the patient's reactions.

To this end, the invention relates, according to its most general embodiment, to a gastric band device to form a restricted stoma opening in the stomach so as to restrict the intake of food to a lower digestive part of the stomach comprising a band component including a portion of band to surround the stomach so as to form the restricted stoma opening, the portion of band having a free end, characterised in that the band is remote-controlled.

Preferentially, it is formed from a hollow material wherein a tensioning device slides, one of the ends of which is attached to the free end of the band and the other end of which is driven longitudinally by motorised means.

Preferentially, the motorised means comprise a worm screw driving the end of the tensioning device.

Advantageously, the motorised means comprise a remote-controlled electric motor.

According to a specific alternative embodiment, the tensioning device is formed by a tape made of an elastic material.

According to a specific embodiment, the band comprises one end equipped with co-operation means with the body containing the motorised means.

According to an alternative embodiment, the co-operation means are formed by an anchoring system in an

Modified sheet

additional cavity provided on the body containing the motorised means.

The invention will be understood more clearly upon reading the following description, with reference to a
5 non-restrictive example of an embodiment and the appended figures where:

- figure 1 represents a section view of the device according to the invention;

- figure 2 represents a view along a section plane
10 AA of the band.

- figure 3 represents a view along a section plane BB of the free end of the band.

The gastric band device according to the invention comprises a body 1 extended by a band 2.

15 The band 2 is formed by a hollow silicone body, comprising one free end 3 and one opposite end attached to the body 1.

The hollow body has a length of approximately 60 millimetres and a cross-section of approximately 10
20 millimetres. It contains an electric motor 4 and its electric power supply 15, along with a high frequency receiver 5.

The motor 4 drives a gear 6 wherein the output drives a worm screw 7. Said worm screw moves the end 8 of
25 a tape 9. Said tape comprises one end 8 comprising specific locking means to co-operate with the worm screw 8, and one end 10 attached to the free end 3 of the band.

Said free end 3 comprises a specific fish hook shaped anchoring system 11 to co-operate with an
30 additional locking system 12 provided on the body 1.

Modified sheet

The device is positioned laparoscopically. The band 2 is positioned around the stomach and is then closed to engage the free end 3 in the locking system 12.

The loop is tightened by remote control, by 5 adjusting the position of the worm screw by means of the remote-controlled electric motor.

Modified sheetCLAIMS

1. Gastric band device to form a restricted stoma opening in the stomach so as to restrict the intake of food to a lower digestive part of the stomach, said device comprising a body extended by a band component including a portion of band to surround the stomach so as to form the restricted stoma opening, the portion of band having a free end, said body containing motorised means and the band being driven by remote-controlled means, characterised in that said band comprises one end equipped with co-operation means with said body containing the motorised means.

2. Gastric band device to form a restricted stoma opening in the stomach according to claim 1, characterized in that the band is formed from a hollow material wherein a tensioning device slides, one of the ends of which is attached to the free end of the band and the other end of which is driven longitudinally by motorised means.

3. Gastric band device to form a restricted stoma opening in the stomach according to claim 2, characterized in that the motorised means comprise a worm screw driving the end of the tensioning device.

4. Gastric band device to form a restricted stoma opening in the stomach according to claim 1, 2 or 3, characterized in that the motorised means comprise a remote-controlled electric motor.

Modified sheet

5. Gastric band device to form a restricted stoma opening in the stomach according to claim 2, 3 or 4, characterized in that the tensioning device is formed by a tape made of an elastic material.

6. Gastric band device to form a restricted stoma opening in the stomach according to claim 1, 2, 3, 4 or 5, characterized in that the co-operation means are formed by an anchoring system in an additional cavity provided on the body containing the motorised means.