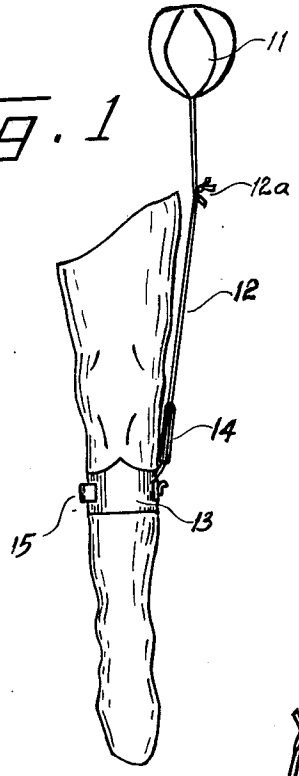
Feb. 6, 1962 L. R. LIMBECK 3,019,791

TRACTION STRAP FOR PROSTATIC SURGERY

Filed Feb. 10, 1960

Fig. 1



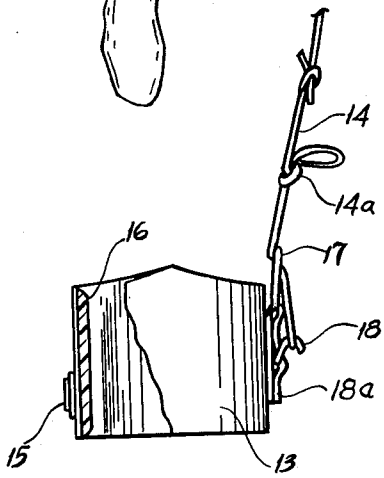


Fig. 2

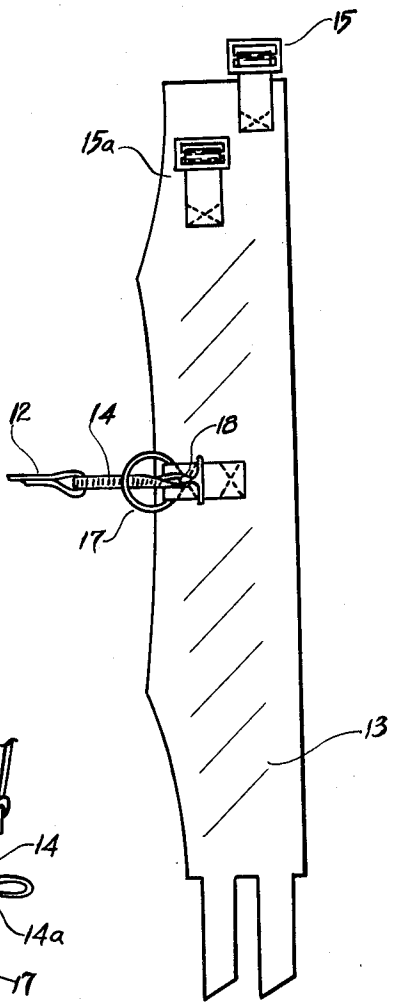


Fig. 3

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United States Patent Office 3,019,791 Patented Feb. 6, 1962

3,019,791

TRACTION STRAP FOR PROSTATIC SURGERY

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Filed Feb. 10, 1960, Ser. No. 7,949
2 Claims. (Cl. 128—349)

This invention relates to a surgical traction device and more particularly a device to apply continuous traction on a catheter bag.

In a surgical operation directed to the complete removal of the prostate gland, it is common practice to position a catheter bag in the prostate area to maintain continuous pressure for the purpose of preventing internal hemorrhage and it is common practice to hold the tie-off portion of the catheter bag by a wrapping of adhesive tape around the leg of the patient, which is both uncomfortable and insecure but does properly position the catheter bag.

It is therefore a primary object of my invention to provide a device in which the catheter bag is held in position by tension applied directionally downward.

It is yet another object of my invention to provide a device in which the tension member is of sufficient length to permit it to be anchored along the lower portions of the patient's leg.

It is a further object of my invention to provide a device in which the aforesaid anchoring portion may be utilized without causing any undue constriction of the blood vessels.

Other and further features and objects of the invention will be more apparent to those skilled in the art upon a consideration of the accompanying drawings and following specifications, wherein is disclosed a single exemplary embodiment of the invention, with the understanding, however, that such changes may be made therein as fall within the scope of the appended claims, without departing from the spirit of the invention.

In said drawings:

FIGURE 1 is a view of the device as it is used on a post-operative patient.

FIGURE 2 is a detailed view of that portion of the device as it is attached to the patient's leg, and

FIGURE 3 is a view of the strap portion of the device positioned on a flat plane to show the construction thereof.

Referring now to FIGURE 1, I will set forth in detail the structure of my device. The device comprises three essential portions which are used in conjunction with a bag and catheter. As has been previously stated, in operations for the removal of the prostate gland, subsequent treatment requires that a constant pressure be maintained against the walls of the bladder for a period of time to prevent internal hemorrhages. For this purpose a catheter and bag, such as shown at **11** in FIGURE 1, is commonly used. This bag is inflated with water usually about 30 cubic centimeters. It is necessary to maintain pressure between the lower portion of this bag and the internal wall of the bladder and to accomplish this, the catheter is held downwardly under tension in a direction parallel to the patient's leg.

The structure which accomplishes the holding of the bag and catheter is fully shown in FIGURE 1 in position on the patient's leg. It comprises three main portions, namely a strap **13**, an elastic tension member **14**, and a thong **12** of substantial length. The strap **13** is wrapped around

the patient's leg and buckled on the outer side of the leg at **15**. On the inner side of the strap is a holding member in the form of a hook **18** which is stitched in position on the strap. Attached to the hook is the elastic band **14** which in turn is tied to the thong **12**, the other end of the thong being attached to the catheter at **12***a*.

To hold the elastic **14** in position in relation to the hook **18**, I have provided a ring member **17** which is also held in position by the stitched strap **18***a*. This ring is so positioned as to extend upwardly in relation to the patient's leg, the elastic band being threaded through the ring.

In order to vary the tension on the thong, the elastic band can be knotted at one or more points as indicated at **14***a*. This of course shortens the total combined length of the elastic and thong and can be adjusted to the individual needs of the patient.

The strap itself is a flat cloth structure having an inner lining **16** of foam rubber which serves to cushion the leg in relation to the strap and to prevent any undue binding action which might cause constriction of the blood vessels. The strap is adjustable in circumference by means of the two buckle members **15** and **15***a* which are positioned at different distances from the end of the strap to permit the aforesaid adjustment.

It will be undertood that this device is applied as a post-operative treatment, and while it may be retained in position for an indefinite period without injury to the patient, usually four to six hours appear to be sufficient. During this period the patient is still under recovery from the anesthetic and in a weakened condition and, therefore, little bodily movement will occur. However, since the device is attached to the patient's leg, rolling movement from side to side will not affect it since the relative position of the strap and the catheter bag remain the same.

The use of the device will be apparent from the foregoing description and practicing urologists have found it a desirable and effective traction device used for the purposes intended.

Although I have described a specific embodiment of my invention, it is apparent that modifications thereof may be made by those skilled in the art. Such modifications may be made without departing from the spirit and scope of my invention as set forth in the appended claims.

I claim as my invention:

1. In a medical traction device in combination with a catheter and bag attached to one end of said catheter, a thong of substantial length, a strap adapted to be fastened around the patient's leg, said strap having a hook thereon and a ring on said strap adjacent said hook, an elastic member attached to said hook and threaded upwardly through said ring, said thong attached to said elastic member and extending upwardly therefrom, said thong being tied to the aforesaid catheter and the assembly thus described being adapted to maintain constant tension upon said catheter and bag.

2. In a device as set forth in claim 1, said strap having a soft lining material positioned to be placed adjacent the skin of the patient's leg.

References Cited in the file of this patent

UNITED STATES PATENTS

1,161,261 Spalding ---------- Nov. 23, 1915