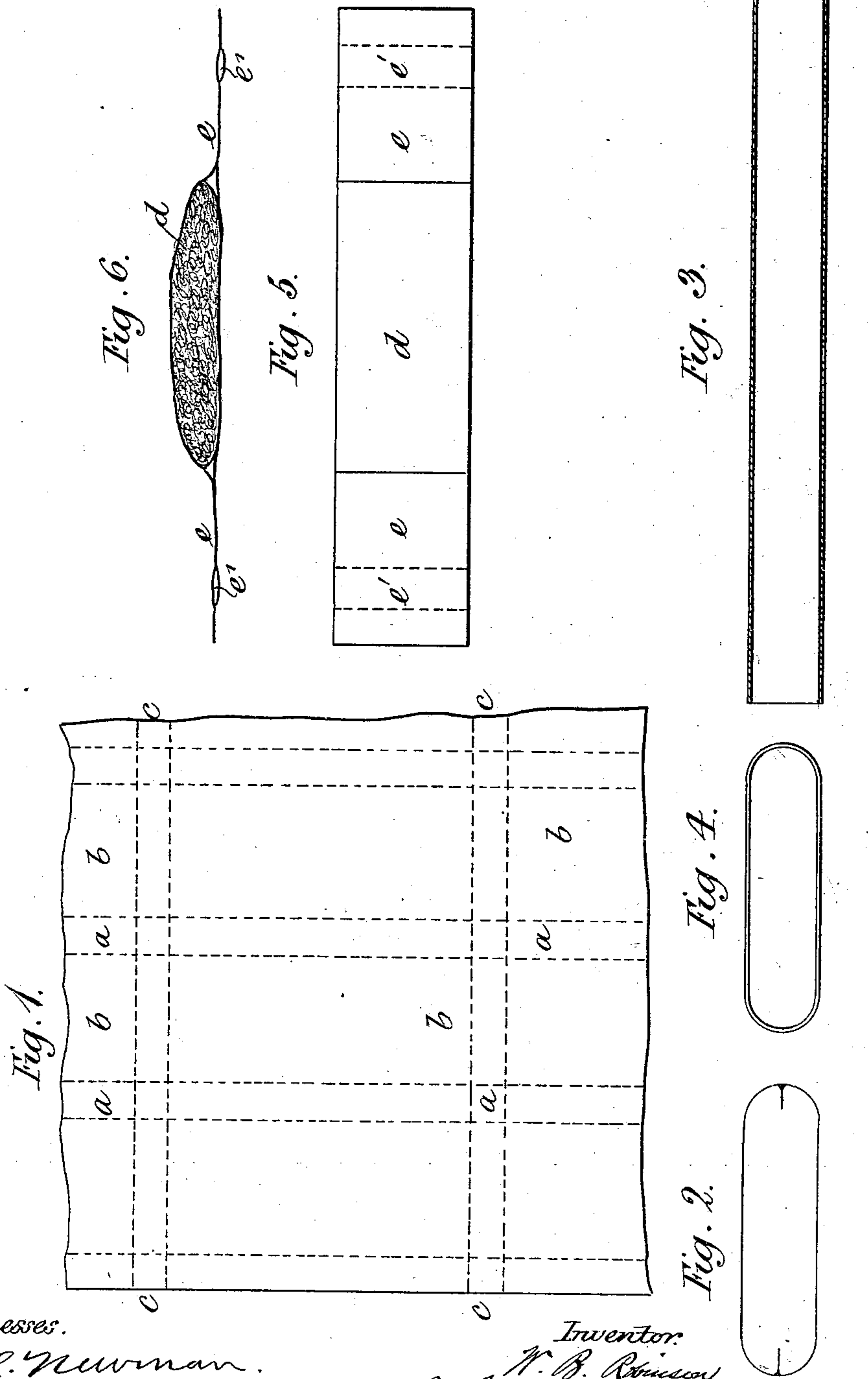


(No Model.)

W. B. ROBINSON.  
CATAMENIAL BANDAGE.

No. 370,415.

Patented Sept. 27, 1887.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

WILLIAM BRADBURY ROBINSON, OF BRAMPTON, COUNTY OF DERBY, AS-  
SIGNOR TO SOUTHALL BROS. & BARCLAY, OF BIRMINGHAM, ENGLAND.

## CATAMENIAL BANDAGE.

SPECIFICATION forming part of Letters Patent No. 370,415, dated September 27, 1887.

Application filed August 7, 1886. Serial No. 210,376. (No model.) Patented in England February 5, 1884, No. 2,753.

*To all whom it may concern:*

Be it known that I, WILLIAM BRADBURY ROBINSON, a subject of the Queen of Great Britain, residing at Brampton, in the county of Derby, England, lint, cotton-wool, and bandage manufacturer, have invented certain new and useful Improvements in the Manufacture of Catamenial and other Medical Bandages, (which were patented in Great Britain February 5, 1884, No. 2,753,) of which the following is a specification.

This invention has for its object improvements in the manufacture of catamenial and other medical bandages.

I first produce tubes of an open gauze-like material, preferably of cotton. This I do by weaving cloth with alternate strips, double and single, lengthwise of the fabric. Where the fabric is double it forms a tube, and the warp in the fabric is in the direction of the length of the tube. The way to weave such double and single fabrics is well understood by weavers. For a catamenial bandage it will be suitable if each tubular or double part of the fabric measures from three to four inches from side to side. For other uses they may be wider. The intervening strips of narrow fabric may be conveniently about one inch in width. These portions of the fabric are denser than the tubular parts. I afterward divide the cloth from end to end through the single fabric, thus separating the tubes, and each tube I turn inside out. I bleach the fabric after weaving, and so render the cloth absorbent. I then fill the tubes with fibrous material of an absorbent nature. Bleached cotton in the sliver is suitable. For catamenial bandages I prefer to provide two or more layers—one absorbent and the other less so—the layer on the inner side being, say, of bleached cotton and the layer on the outer side of unbleached cotton.

For the purpose of introducing the filling I place the tube of fabric upon the exterior of a metal guide, which may be a tube or may be composed of separate rods. The guide serves to keep the fabric distended while the filling is passed into it.

The guide which I employ by preference is a trumpet-mouthed tube flattened at the top and bottom. Its size is such that the fabric

tube to the length of several yards can be accumulated upon it, and the slivers to fill the tube can pass freely through its interior. The fibrous filling is put through the guide, and as it emerges the fabric is drawn forward with it off the exterior of the guide. For making catamenial bandages the tube thus filled is cut into lengths of from nine to twelve inches each, suitable to form the pad for a bandage, and these are attached by sewing to a band, the ends of the tube being at the same time closed. This band is by preference woven with alternate strips, single and double. The double parts receive tapes, by which the bandage is supported. The band for the catamenial bandage is of a length to project beyond the end of the pad about six to twelve inches at either end. The double or tubular portion through which the tape is to be passed commences at about one inch from the extremity of the band, and is of a width of about one and a quarter inch. The band may be in one long length and extend along the pad, or it may be in two short lengths. In either case the pad is sewed by its ends to the band, and the sewing closes the ends of the external tube of the pad.

In weaving the tubes I sometimes beat up the cloth closer at intervals where the tube is cut through to divide it into lengths. In this way I make at intervals bands in which the fabric is solid, whereas elsewhere, as already stated, it is of an open gauze-like texture. So I obtain a firmer fabric for sewing in closing the pads at the ends and attaching them to the bands; or I can make the back of the tube stouter and closer than the front by introducing more warp and weft.

In the annexed drawings, Figure 1 is a plan of the fabric as it is woven in the loom. Fig. 2 is an end view to a larger scale of one of the tubular strips. Fig. 3 is a longitudinal section, and Fig. 4 is an end elevation, of the filling-guide. Fig. 5 is a plan, and Fig. 6 is a side elevation, of a completed catamenial bandage.

In Fig. 1 in the strips *a a* the fabric is single, while in the strips *b b* it is double. It is divided into separate tubes along the middle of the strips. Along the strips *c c* the weft of the fabric is beaten up closer. It is through



these strips that the tubular strips, after filling with fibrous material, are divided transversely. The tubular strip *b*, having been turned inside out, as in Fig. 2, is passed onto the outside of the filling-guide, Figs. 3 and 4, which is long enough to receive a strip several yards long. The filling is in the form of slivers. It is passed through the interior of the guide, and is drawn forward by hand while the strip is passed off the tube.

In Figs. 5 and 6, *d* is the pad composed of a length cut from the tubular strip after filling, and *ee* is the band connected with the pad by sewing, which at the same time closes the end of the pad. The band is woven double at *e' e'*, and tapes for attaching it are passed through.

I claim—

1. The process for producing bandages, con-

sisting in weaving a fabric alternately single and double, cutting the same into tubular strips, turning the tubular strip so as to bring the cut edges on the inner side, placing the tubular strip upon a guide, and passing fibrous filling through the interior of the guide into the tubular fabric as the same is drawn off from the guide.

2. The process for producing bandages, consisting in weaving a fabric alternately single and double, cutting the same into strips, and introducing a fibrous absorbent filling between the parts of the fabric where the same is double.

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Witnesses:

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