No. 727,145. PATENTED MAY 5, 1903.

R. W. JOHNSON.

STERILIZING AND PACKAGING SURGICAL ABSORBENT DRESSING.

APPLICATION FILED NOV. 4, 1901.

NO MODEL.

Fig. 1

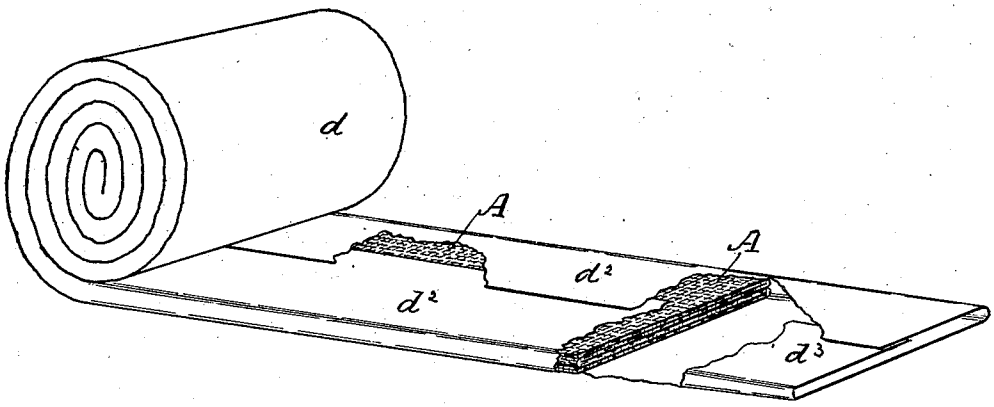
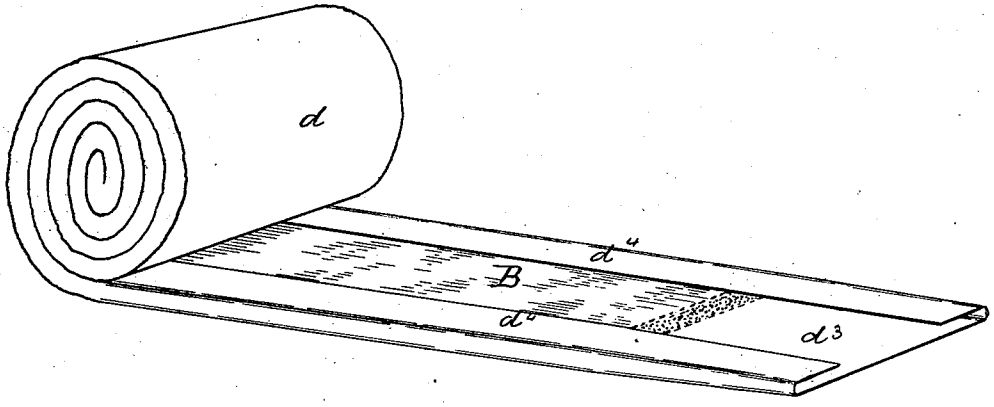


Fig. 2.



Inventor

Robert W. Johnson

Witnesses

R. F. Storm

I. J. Masson

By E. E. Masson

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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UNITED STATES PATENT OFFICE.

ROBERT W. JOHNSON, OF NEW BRUNSWICK, NEW JERSEY.

STERILIZING AND PACKAGING SURGICAL ABSORBENT DRESSING.

SPECIFICATION forming part of Letters Patent No. 727,145, dated May 5, 1903.

Application filed November 4, 1901. Serial No. 81,091. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. JOHNSON, a citizen of the United States, residing at New Brunswick, in the county of Middlesex and State of New Jersey, have invented certain new and useful Improvements in Sterilizing and Packaging Surgical Absorbent Dressings, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to surgical dressings of cotton gauze and also of absorbent cotton lint; and the objects of my invention are to render them sterile and to keep them sterile and free from infection after they have been sterilized, being so packed in an inexpensive wrapper that no falling dust particles or germs can come in contact with the gauze or lint, and a bandage can be cut by a surgeon without exposing to falling dust any portion of the lint or dressing remaining in the package, and is an improvement upon the mode of packing shown in Patent No. 582,925, granted to me May 18, 1897.

Various means have been used to render surgical dressings as near aseptic as possible; but as the new system of antiseptic and aseptic surgery depends upon having perfectly-aseptic dressings new means had to be discovered to obtain this condition and retain it until the dressings are to be used. In the manufacture of cotton gauze and absorbent cotton great care is taken in first cleaning the material with filtered and substantially sterile water, handling said material by machinery rather than allowing human hands to touch it and sterilizing it by antiseptics or by heat of about 275° Fahrenheit; but a very important feature is to have the gauze or absorbent cotton remain protected from dust and germs while the package of material is removed from the box which may have contained it, as a surgeon can open a package of the wrapped gauze and cut one or more short bandages therefrom without spreading or uncovering the contents of the balance of the package, each portion of the surface and edges of the superposed layers or coils being itself as completely protected and aseptic as the whole package was when leaving the laboratory of the manufacturer.

The improvement in the art is partly illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a package of surgical gauze folded zigzag upon itself in parallel folds in the direction of the length of its web, with tissue-paper encircling its outer and inner surfaces and its edges, the encircled gauze being coiled spirally with its tissue-paper in the form of a roll, having the ends of each superposed coil protected by said tissue-paper. A portion of said paper is represented uncoiled and broken away to show the gauze therein. Fig. 2 is a perspective view of a package of aseptic cotton with tissue-paper inclosing the outer surface and also the edges of each superposed layer of cotton; but the paper is shown as a modification, slightly narrower than in Fig. 1.

In the accompanying drawings, A represents the plain absorbent or medicated gauze, which is folded in zigzag folds lengthwise of the web, so that the series of folds when opened generally measure a yard, or a bandage cut transversely through all the folds will measure a yard, the folded gauze constituting a long strip having parallel sides. Said gauze, which has been bleached and cleaned in distilled water and dried in a close room heated to about 250° Fahrenheit and folded, as above stated, is spread upon long strips of tissue-paper d, the width of said strips being about double the width of the folded gauze, the edges d^2 are folded around the edges and on top of said folded gauze, and both are wrapped spirally together into superposed layers in as compact a roll as possible, the length of the paper being such as to have its end d^3 extend beyond the end of the gauze, to be either folded around and upon said end or simply part way around the exterior of the roll to perfectly protect its sides and end against contact with the air and its impurities. The roll is then subjected to a temperature of about 275° Fahrenheit to doubly insure the sterilization of its contents and reaches the surgeon in a perfectly aseptic condition. When some of the contents are needed, the surgeon can unroll a portion, substantially as shown in Fig. 1, open for an instant a short portion of the folded edges d^2 of the tissue-paper, and cut with a pair of scissors the desired width of the zigzag folds,

and then fold a portion of the end d^3 upon the interior or coil it around the roll, the latter being kept in a tight condition with a rubber band or a short length of twine passed around it. The surgeon can take a portion of the aseptic cotton B which has been arranged in a long strip, as shown, and wrapped in tissue-paper around its periphery and edges d^4 in the same manner, in Fig. 2, by the same means and retain the balance of the strip in a reliable aseptic condition.

Having now fully described my invention, I claim—

1. The improvement in the art of treating and packing cotton gauze and cotton which consists in sterilizing the material and forming it into a long strip having parallel edges, placing said material on tissue-paper strips wider than the strip of sterilized material, folding the edges of the strip of tissue-paper around the edges of the material and wrapping it with the paper by coiling them in superposed layers, the outer layer having its end surrounded by a portion of the strip of paper used to cover the edges and back of each successive layer, whereby the sterility of the absorbent dressing is maintained, substantially as described.

2. A package of sterilized absorbent dressing formed into strips having parallel edges and laid upon paper strips of greater width, the edges of the paper strip being folded around the edges of the strip of dressing and both wound together, whereby the dressing is preserved in a sterile condition until entirely used up, each layer having its edges inclosed separately in the paper and rolled into a single package, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBT. W. JOHNSON.

Witnesses:
EDWARD MORRIS,
H. B. HINE.