

Feb. 5, 1929.

1,701,207

R. W. JOHNSON

FILMATED SURGICAL GAUZE

Filed May 16, 1927

Fig. 1.

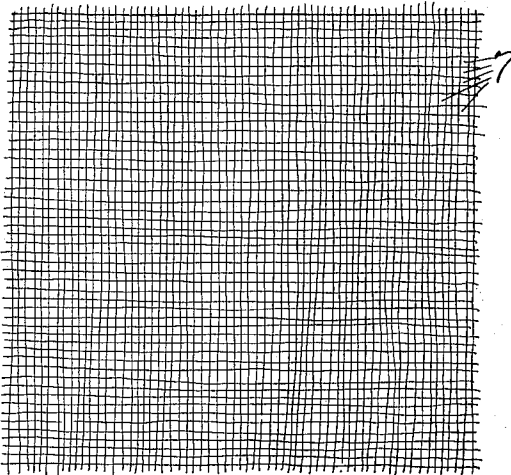


Fig. 2.

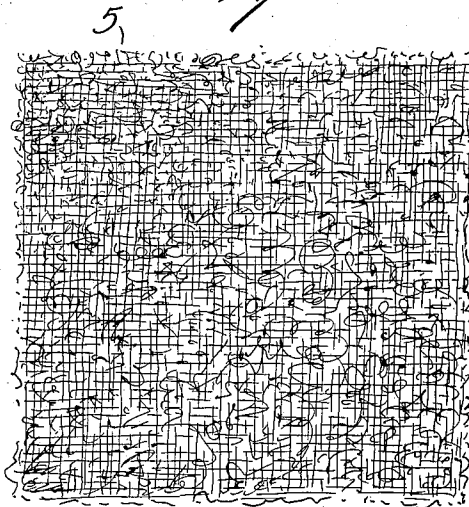


Fig. 3.

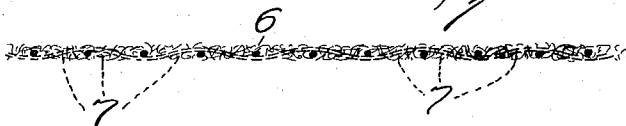
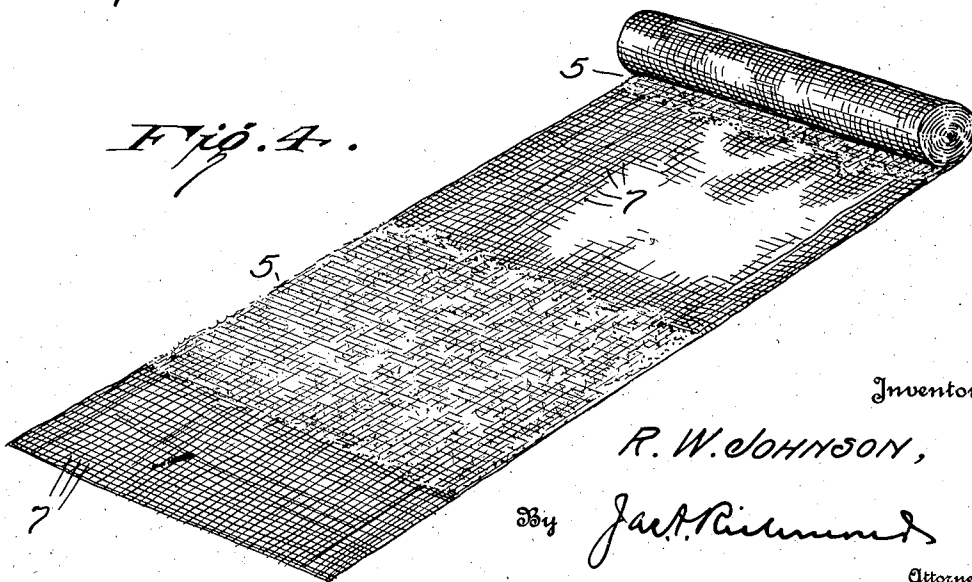


Fig. 4.



Inventor

R. W. JOHNSON,

By

Jack Richmond

Attorney

UNITED STATES PATENT OFFICE.

ROBERT W. JOHNSON, OF NEW BRUNSWICK, NEW JERSEY, ASSIGNOR TO JOHNSON & JOHNSON, OF NEW BRUNSWICK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

FILMATED SURGICAL GAUZE.

Application filed May 16, 1927. Serial No. 191,761.

Surgical or absorbent gauze generally runs 20 x 12 to 44 x 40 threads to the inch. Its absorbing power is in proportion to its weight and the problem is to greatly increase the absorbing power without substantial increment of weight and without such alteration of inherent structure as would give the ultimate article a classification other than gauze, such as would be the case, for example, in superimposing upon gauze (as has been done) substantial sheets or bats of absorbent cotton or equivalent material.

Hence, the nature of the present invention is to modify surgical gauze in such way that without impairment of its mechanical and supporting action it will be exceedingly soft and yielding to the touch and possessed of marked absorbing power. In the attainment of this purpose I provide what may be defined as filmated gauze that is to say surgical gauze characterized by having an area or areas superficially charged with highly absorbent material in a state of free fibers, the modified gauze being self-sustaining and susceptible of handling like ordinary gauze notwithstanding that the added component is not cemented or otherwise positively joined thereto.

The invention is exemplified in the accompanying drawing, wherein

Figure 1 is a plan view of ordinary surgical gauze.

Fig. 2 is a similar view of ordinary gauze modified in accordance with my invention.

Fig. 3 is a sectional view of the same; and

Fig. 4 is a plan view of a varied form of the practice.

According to my invention, surgical gauze or woven cotton fabric of relatively open mesh, such as indicated in Fig. 1, is provided with a fibrous or superficial mat of absorbent material. The provision is such as not to alter the handling qualities of the gauze, the ultimate article being self-sustaining and in all respects classifiable as gauze. This is accomplished by employing, as the added component, absorbent material in a fluffy state of free fibers and having no positive connection with the gauze. Evidently

there are many materials qualified for this purpose. I prefer, however, to employ purified surgical cotton in the form of slivers 6, and while taking advantage of the inherent clinging properties of the slivers I also cause them to fill the interstices 7 of the gauze. The effect of this non-positive or relatively free union of the woven fabric and fibrous material is to completely change the character of the filmated face from the state of a relatively hard or harsh open structure of indifferent absorbing capacity to the state of a soft textured uniformly closed yet highly porous or absorbent material. And this effect is accomplished within substantial increase of weight and without impairing the mechanical or handling qualities of the gauze, because the fluffy fibers are present in the form of a superficial film and are independent of adhesive or other form of positive connection. Adhesive would serve no useful purpose, but on the contrary would stiffen the article, increase its weight, and seriously impair its absorbing power.

My improved gauze is intended to serve all the purposes of ordinary surgical gauze and greatly simplifies and lessens the cost of production of special dressings, sponges, wipes, compresses, pads, etc., for which purpose the filming may be spaced as indicated in Fig. 4.

Having described my invention, I claim:

1. As an article of manufacture, self-contained highly absorbent gauze, consisting of gauze modified by a superficial covering of free fibrous material, whereof a portion penetrates the interstices of the gauze.

2. As an article of manufacture, self-contained highly absorbent gauze consisting of gauze having spaced areas thereof modified by a superficial covering of cotton slivers some of which are interlocked with the interstices of the gauze.

3. As an article of manufacture, highly absorbent surgical gauze, consisting of surgical gauze and an application of free fibrous material rooted in the interstices of the gauze and whereof portions extend beyond the plane of one of the surfaces thereby to pro-

vide a filmy covering which modifies the texture of the gauze and greatly augments its absorbing power.

4. As an article of manufacture, a completely pervious absorbent material, consisting of loosely woven fabric of the classification of gauze whereof one face is down-textured by a filling of absorbent fibers col-

lectively attached to the gauze in marked film form and without positive connection, 10 whereby without such change of identity as would remove it from the classification of gauze, the fabric is rendered highly absorbent and extremely soft to the touch.

In testimony whereof I affix my signature.
ROBERT W. JOHNSON.