No. 689,808. Patented Dec. 24, 1901.

R. W. JOHNSON.

SURGEON'S SPONGE SUBSTITUTE.

(Application filed Sept. 26, 1898.)

(No Model.)

Fig. 1.

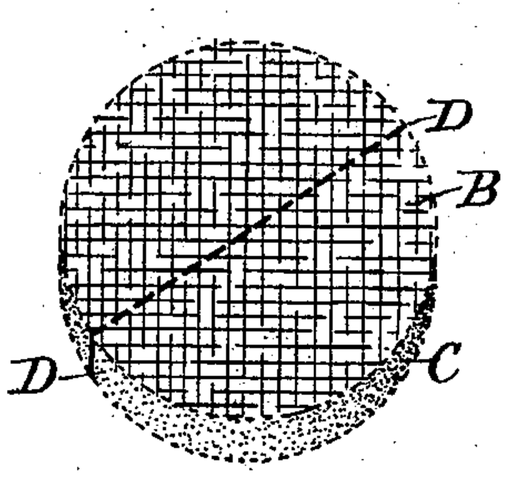


Fig. 2.

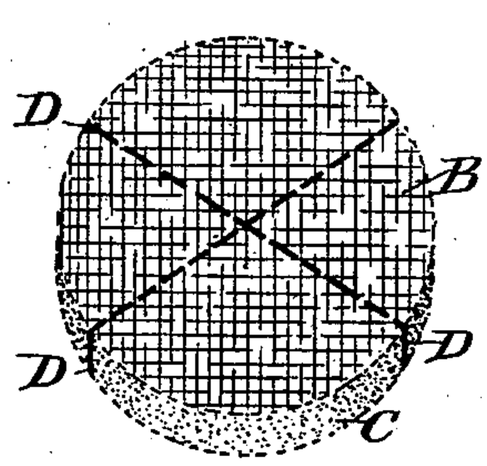


Fig. 4.

Fig. 3.

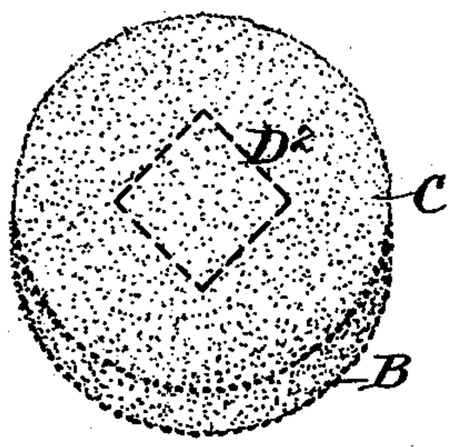
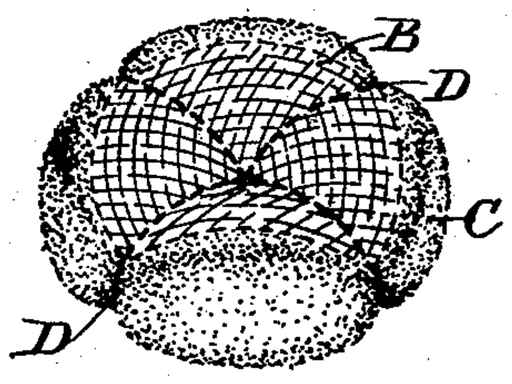


Fig. 5



WITNESSES

A. B. Driggs

L. D. Hinrichs

INVENTOR

Robert W. Johnson,

by E. E. Masson, *Attorney.*

UNITED STATES PATENT OFFICE.

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

SURGEON'S SPONGE SUBSTITUTE.

SPECIFICATION forming part of Letters Patent No. 689,808, dated December 24, 1901.

Application filed September 26, 1898. Serial No. 691,890. (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, State of New Jersey, have invented certain new and useful Improvements in Surgeons' Sponge Substitutes, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of my invention is to produce as a substitute for the sponges used by surgeons during surgical operations or in the treatment of wounds a mop having greater absorbent power than sponges and that is inexpensive and sterile and that can be kept more easily in a sterilized condition, and is an improvement upon the absorbent dressing for which a patent was granted to me May 18, 1897, No. 582,926, in which said dressing consisted of a tablet or disk of closely-compressed and sterilized absorbent cotton having one or more of the faces protected with sterilized gauze pressed thereon. In this improvement the protecting gauze wrapper is permanently attached to the mop of absorbent cotton, and the cohesion of the latter is centrally maintained by having the expansible mop and its wrapper sewed or riveted together after said parts have been subjected to a very heavy pressure.

In the accompanying drawings, Figure 1 is a perspective view of a disk or tablet of compressed sterilized cotton or sponge substitute having its top and bottom covered by sterilized gauze adhering thereto by compression and the component parts of said tablet permanently united together by a row of stitches made diametrically across said tablet. Fig. 2 is a perspective view of a similar tablet having its component parts permanently united together by two diametrical rows of stitches intersecting each other. Fig. 3 is a perspective view of a similarly-compressed tablet having its component parts permanently united by rows of stitches around its central portion, permitting the whole periphery of the tablet to become greatly swollen and vertically expanded when the tablet or its periphery is brought in contact with water, blood, or other liquid exuding from wounds. Fig. 4 is a transverse vertical section of one of the tablets through one of the rows of stitches shown in Figs. 1 and 2. Fig. 5 is a perspective view of a tablet similar to that shown in Fig. 2 after it has been dipped or its periphery dipped into water or other fluid.

In all the figures of said drawings, C represents the compressed tablet of sterilized cotton constituting the main portion of the sponge substitute.

B represents sterilized gauze applied to the top and bottom of said cotton in Figs. 1 and 2 and adhering thereto primarily by compression and retained permanently attached by a row of stitches D, passing diametrically therethrough, in Fig. 1 and by two rows of stitches D in Fig. 2, crossing each other in the center of the tablet.

In Fig. 3 the gauze B is applied only to one of the faces of the tablet and is shown applied to the bottom face, and the component parts B and C have their central portions permanently united together by rows of stitches D^2, arranged to form a continuous figure, as a square, although said figure may be a circle or an ellipse and accomplish the same object.

Although one of the faces of the tablet in Fig. 3 is not protected by gauze, its interior retains its sterilized condition from its outer layer of cotton, that forms a well-known protection against the passage of germs and microbes; but I prefer to have both faces protected by gauze adhering thereto primarily by pressure and permanently by stitches.

The means that I prefer to use to obtain the sterilized-cotton tablets consists in taking sheets of sterilized cotton fibers of suitable thickness or superposed sheets, placing them between sheets of sterilized gauze, cutting them with a die, and then bunching them, at the same time subjecting them to a very heavy pressure, and then sewing together centrally the component parts, as above described. The result is a tablet of closely-compressed and sterilized absorbent cotton having one or more of its faces protected by disks of other material, said parts permanently united together in the center or around

the center, but with the periphery free to greatly expand when in contact with liquids or damp fluids.

Having now fully described my invention, I claim—

A substitute for a surgeon's sponge consisting of a disk or circular tablet of closely-compressed and sterilized absorbent cotton having its faces protected with disks of other material pressed thereon and sewed centrally leaving the cotton exposed and free around the periphery, whereby said periphery is allowed to become swollen upwardly and downwardly and laterally substantially as shown and described.

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

ROBERT W. JOHNSON.

Witnesses:
CHARLES A. MCCORMICK,
EDWARD NORRIS.