

# The first absorbent cotton wool and gauze surgical dressing

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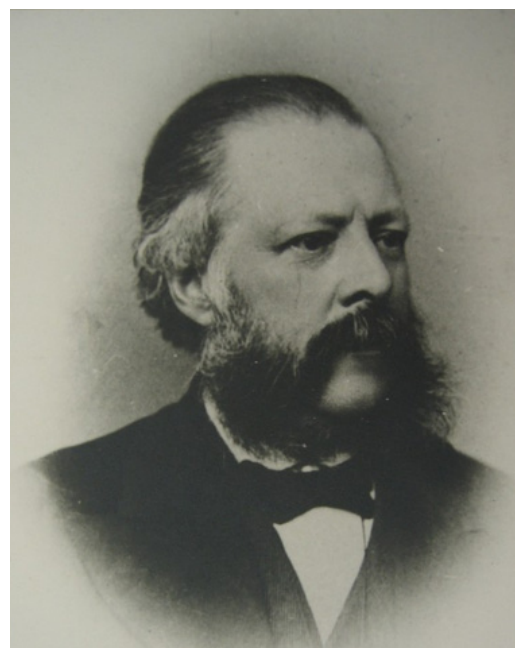
Prior to the acceptance of germ theory, brought about by Joseph Lister (1867) and Louis Pasteur (1880), physicians were content to reuse rags, wadding and bandaging in the interests of saving costs. “One of the most acceptable presents for a hospital was a bundle of old rags,” quotes William John Bishop in his book *A History of Surgical Dressings* (1959).

The demand for absorbent wadding materials heightened dramatically during the Crimean War (Dealey, 1994), wherein the parlous casualty count engendered the reuse of lint and bandages. However, once germ theory and aseptic technique had been accepted, such economies were out of the question. Lint, hand-scraped by teams of women, was no longer a viable option as it had been up until the 18th century (Bishop, 1959), and a demand for commercially produced quantities of cheap, sterile absorbent materials came to the fore.

## ARRIVAL OF THE FIRST COTTON WOOL AND MEDICAL DRESSING

The development of medical cotton wool as we know it was largely due to the work of Birmingham surgeon Sampson Gamgee (1828–1886). He discovered that bleaching cotton wool removed the grease and that an absorbent product suitable for use on wounds could be obtained. A proponent of the dry dressing approach (Kapadia, 2002), Gamgee demanded absolute cleanliness when around patients and was reportedly the first surgeon in Birmingham to wash his hands before and after surgery (Davis, 1960). He also advocated a gentle, sympathetic attitude to healing, avoiding the use of strong antiseptics, which was in vogue at the time (Boddington, 1954).

Gamgee collaborated with manufacturers to produce a grease-free, absorbent cotton wool for application to wounds, eventually resulting in the creation of Gamgee Tissue — a sandwich of the cotton wool covered by bleached, absorbent gauze. These pads were widely adopted, and grew to be the go-to dressing for all types of wounds, from gynaecological purposes to chronic ulcers.



Dr Joseph Sampson Gamgee was a surgeon in Birmingham, England. He pioneered aseptic surgery and, in 1880, invented Gamgee Tissue.

Furthermore, they could be employed either with or without styptic and antiseptic medication (Bishop, 1959). The Gamgee Tissue dressings reflected Gamgee’s gentle approach to wound care; they were soft and conformable, to the extent that one doctor thus remarked: “*Their great softness and elasticity render the pads, one might almost say, luxuriously comfortable to the patients*” (Berry, 1880).

While a patient’s comfort was not a new consideration — in the preceding centuries, old, dirty rags were preferred to new ones as they were less expensive, and less irritating to the patient — Gamgee’s dressings were sterile and absorbent and could be left in place for over a week, unlike the non-absorbent dressings of the time (Gamgee, 1935; Boddington, 1954).

Gamgee announced his use of the surgical gauze and cotton wool dressings in the *Lancet* in 1880 (Gamgee, 1880) and Gamgee Tissue became a registered trademark in 1911. Remarkably, it is still available today.

WUK

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