E. W. STEPHAN.

SURGICAL COTTON POINT.

APPLICATION FILED SEPT. 30, 1914.

1,210,720. Patented Jan. 2, 1917.




FIG. 1.

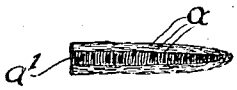


FIG. 2.




FIG. 3.

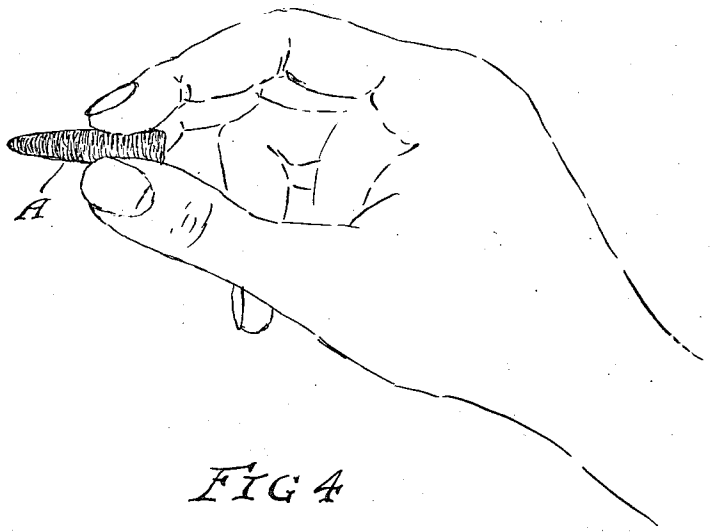


FIG 4

WITNESSES

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ATT'Y

# UNITED STATES PATENT OFFICE.

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## SURGICAL COTTON-POINT.

1,210,720. Specification of Letters Patent. Patented Jan. 2, 1917.

Application filed September 30, 1914. Serial No. 864,259.

*To all whom it may concern:*

Be it known that I, EDITH WHITELAW STEPHAN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Surgical Cotton-Points, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to a new article of manufacture consisting of a small firmly wound pointed body of absorbent cotton stiff enough to hold its shape and ready for use in place of the present unsanitary swabs twisted by the fingers on the end of a stick or other handle.

In another aspect my invention relates to the method of producing my improved cotton point. My cotton point is built up of many layers of very thin absorbent cotton wound one upon another under sufficient external pressure to cause each layer to effectively intermesh with its neighbor, preventing the point unwinding, and the resulting product is stiff enough so that it may be used without the necessity of a handle in treating the eyes, nose or any small cavity.

My cotton point is shown in the drawings hereof, in which—

Figure 1 is a perspective view of the article complete; Fig. 2 is a longitudinal section thereof; Fig. 3 is a cross section; Fig. 4 a view showing how the point is held by the operator's fingers in use.

As shown in the drawings, A designates the point complete; *a* indicates approximately various layers of the cotton in the point; $a^1$, the central bore resulting from the method of manufacture.

I find it convenient to manufacture my cotton point by feeding one or more laminæ, flakes or membranes of absorbent cotton to a revolving spindle and pressing the cotton toward the axis and along the spindle and beyond the point thereof as the cotton winds upon itself. The spindle is preferably grooved or fluted to cause the cotton to take hold thereof. I have obtained very satisfactory results by employing a tapered spindle of orange-stick rotated at about 1500 revolutions per minute.

By building up the point with flaky or membranous layers each layer becomes so intermeshed with the adjacent layer and there is no possibility of the finished product unwinding. This is an important point, as, with thick layers simply twisted about the spindle the material would unwind and not retain its projectile-shaped form. By reason of the thinness of the successive layers and the pressure against the cotton during winding the resulting product is a homogeneous body of compacted cotton fiber arranged about a center in an elongated, pointed form and having sufficient stiffness to be utilized without a handle.

These cotton points may be manufactured under very sanitary conditions and sterilized and supplied in sealed packages, ready for use. They are, accordingly, much more sanitary than a swab twisted by the fingers of an operator; they avoid the danger of the handle of the swab being poked through it, and they require no skill on the part of the operator. Thus they are adapted not only for surgeons', occulists' and nurses' use, but for household use for the cleaning of nostrils, ears, etc. By reason of their compactness and the intermeshing of the compressed fibers, these points may be dipped into antiseptic solutions or other liquids whenever desired without destroying their effective stiffness, which, as heretofore stated, enables them to be used without any additional handle.

Having thus described my invention, what I claim is:

1. A new article of manufacture comprising an elongated substantially projectile shaped surgical cotton point of sufficient stiffness to be used without a handle and composed of a plurality of superposed layers of thin flakes of cotton with the fibers intermeshing and compacted.

2. The method of forming an elongated projectile shaped cotton point of sufficient stiffness to be used without a handle, which comprises wrapping or winding about a spindle, loose cotton in the form of thin membranes or flakes and pressing the cotton toward the spindle and lengthwise thereof.

3. The method of forming an elongated projectile shaped surgical cotton point which comprises feeding a plurality of thin flakes of loose cotton upon a rotating spindle so

that they will be wound thereon and pressing the flakes toward the spindle and lengthwise thereof so as to cause the fibers to intermesh and be compacted and to cause the body thus formed to assume the elongated shape and to have sufficient stiffness to be used without a handle.

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

EDITH WHITELAW STEPHAN.

Witnesses:
ALBERT H. BATES,
BRENNAN B. WEST.