

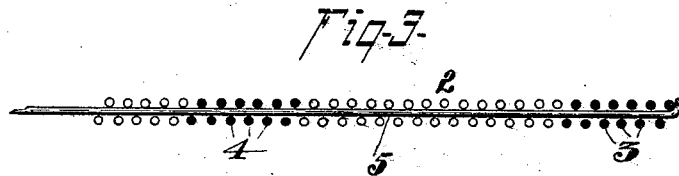
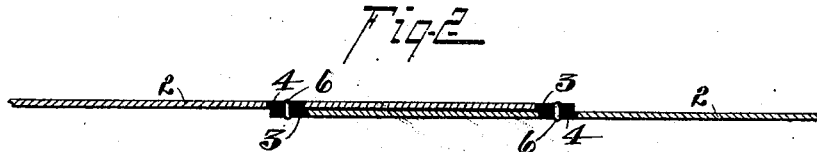
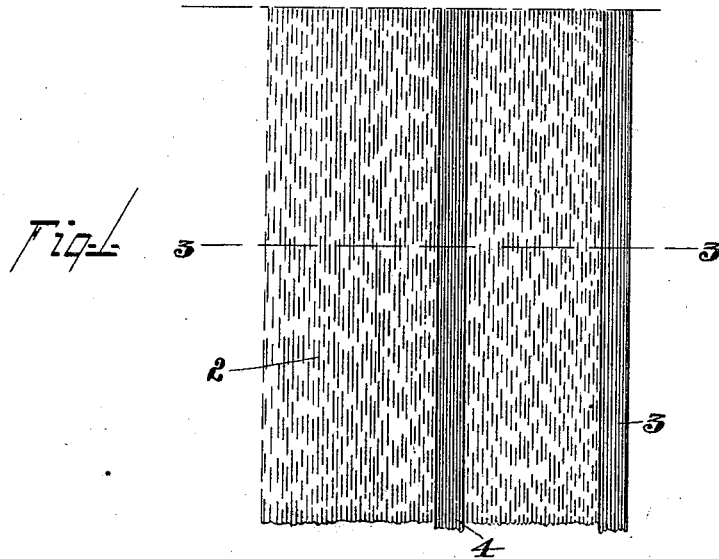
No. 645,808.

Patented Mar. 20, 1900.

W. G. HALKETT.  
CANVAS, DUCK, OR LIKE WOVEN FABRIC.

(Application filed Nov. 15, 1898.)

(No Model.)



WITNESSES:

Walter C. Pusey,  
A. V. Grouper

INVENTOR  
William G. Halkett,  
BY  
Joshua Pusey,  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

WILLIAM G. HALKETT, OF PHILADELPHIA, PENNSYLVANIA.

## CANVAS, DUCK, OR LIKE WOVEN FABRIC.

SPECIFICATION forming part of Letters Patent No. 645,808, dated March 20, 1900.

Application filed November 15, 1898. Serial No. 696,501. (No specimens.)

*To all whom it may concern:*

Be it known that I, WILLIAM G. HALKETT, a citizen of the United States, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Canvas, Duck, or Like Woven Fabrics, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a plan view of a piece of canvas or duck, showing my invention as applied thereto, the warp-threads only of the fabric being shown. Fig. 2 is a transverse section of two pieces of duck whose superposed margins are sewed together on the line of the waxed warp-threads. Fig. 3 is a section, enlarged, as on line 3 3, Fig. 1.

It has heretofore been customary in sewing together the overlapped margins of pieces of canvas, duck, or the like comparatively hard and closely-woven fabric for the workman to rub beeswax or other wax on the surface of the latter along the line upon which the sewing is to be done, so that the sewing-needle may the more readily be forced through the material. In such case although the use of the wax was advantageous it could not, obviously, be as satisfactory as if the wax penetrated the interior of the fabric.

The object of my improvement is to provide a fabric of the kind referred to in which certain of the threads are previously to being woven coated or saturated with wax or other like lubricant, said threads being on the line upon which the margins of pieces of the fabric are intended to be united by sewing, the threads of the other portions of the fabric being devoid of wax, whereby certain advantages are secured, as hereinafter mentioned.

In carrying out my invention, reference being had to the accompanying drawings, I cover or saturate with wax or the like a series of warp-threads, which when the fabric has been woven will be on the required or usual lines upon which two pieces of the fabric are to be sewed together. Although the wax may be applied to such threads in various ways, I prefer to pass the same through a vessel con-

taining melted wax. These threads thus treated are subsequently arranged contiguously in suitable position with relation to the other warp-threads in the loom and are interwoven with the weft-threads simultaneously with the other warp-threads. A portion of the wax upon the surface of the threads will usually adhere to the contiguous weft-threads, Fig. 3, when the weaving takes place. It being customary to unite superposed pieces of duck along two lines of stitching, I would ordinarily thus wax several of the warp-threads along and adjacent to the margin of the fabric and also a like number of the threads a suitable distance from the first, as shown, and as the waxed threads will be of a different shade or luster from that of the other warp-threads the said two lines of waxed thread may be easily discerned, and thus the two pieces of fabric may be readily properly superposed to bring the lines of waxed thread into proper position for sewing together through the two pieces, as seen in Fig. 2.

I have used in practicing my invention paraffin-wax; but the threads may be treated with beeswax, stearin, or other similar lubricating material or compound not injurious to the fabric.

The advantages of my improvement are that the fabric is ready for sewing together without requiring the workman to lubricate the same in the usual way, the passage of the needle through the interstices of the material is much facilitated, and the point of the needle is not so liable to catch in the threads in being thrust through the fabric, but rather to slide over or around the threads.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improved article of manufacture, canvas, duck, or the like fabric, having a series of warp-threads lubricated with wax or the like and woven in said fabric on predetermined lines only, the threads of the other portions of the fabric being devoid of the lubricant.

2. As an improved article of manufacture, canvas, duck, or the like fabric, having a series of warp-threads lubricated with wax or

the like and arranged along the margin of the fabric, and a second series of similarly-lubricated warp-threads a predetermined distance from the former series, the threads of  
5 each series being woven in said fabric, and the threads of the other portions of the fabric being devoid of the lubricant.

In testimony whereof I have hereunto affixed my signature this 8th day of November, A. D. 1898.

WILLIAM G. HALKETT.

Witnesses:

WALTER C. PUSEY,  
JOSHUA PUSEY.