

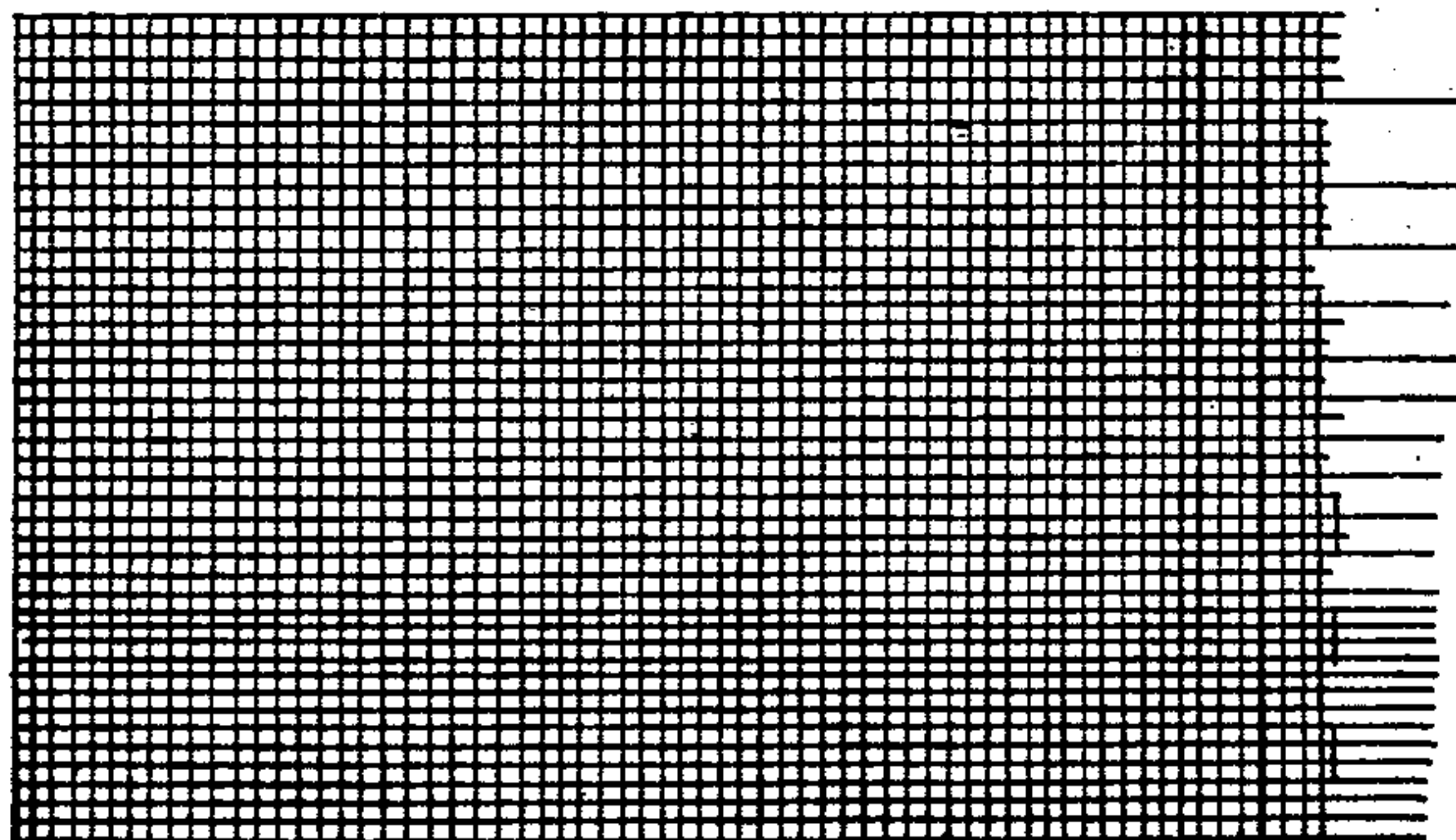
No. 684,369.

Patented Oct. 8, 1901.

W. A. HAGANS.  
TEXTILE FABRIC.

(Application filed Aug. 17, 1900.)

(No Model.)



WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM A. HAGANS, OF LOS ANGELES, CALIFORNIA.

## TEXTILE FABRIC.

SPECIFICATION forming part of Letters Patent No. 684,369, dated October 8, 1901.

Application filed August 17, 1900. Serial No. 27,206. (No specimens.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. HAGANS, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles, State of California, have invented new and useful Improvements in Textile Fabrics, of which the following is a specification.

My invention relates, primarily, to those fabrics which are used as lining to stiffen ladies' garments, more particularly dress-skirts, capes, and cloaks; and the object thereof is to provide a lining which will give a graduated stiffness from the bottom of the garment upward. I accomplish this object by the fabric described herein and illustrated in the accompanying drawing, which is a view of a piece of cloth representing my improved fabric.

Heretofore dress-skirts, capes, and cloaks in which was desired a stiffness greater than that of the cloth out of which the same was made required a lining to give the garment the additional stiffness. In garments of this class usually stiffness is only specially desirable in the bottom portion thereof. The linings for these garments have been made of different materials, such as haircloth, linen cloth, grass-cloth, and cotton cloth. In such linings as haircloth the natural resiliency of the material was sufficient to give the desired stiffness. Cotton and other cloths, however, required to be reinforced with a stiffening liquid, such as starch. When it was not desired to stiffen the garment from the bottom to the top, wherever the lining stopped a noticeable and oftentimes objectionable change was apparent in the garment. In order to avoid this objectionable appearance, it was necessary to run the lining to the top, there-

by making the garment more expensive and heavier. With my improved fabric I am able to provide a lining giving a graduated stiffness to the garment from the bottom upward and avoiding any noticeable change in the stiffness at any particular point.

I weave a lining of very light material of uniform transverse stiffness and apply to different longitudinal sections thereof, a stiffening liquid, such as starch of different degrees of density, graduating from a light stiffness on one side of the cloth to a heavier degree of stiffness on the other side. By running each separate section over kettles containing starch of different degrees of density and applying the contents thereof to the cloth as it passes thereover by means of revolving brushes a lining of graduated transverse stiffness is produced, which is a great improvement on a lining of uniform transverse stiffness.

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

As a new article of manufacture, a lining formed of warp-threads of uniform number, size and resiliency from one edge of the cloth to the other, reinforced in succeeding longitudinal sections by a stiffening liquid of gradual increasing density, substantially as described.

In witness that I claim the foregoing I have hereunto subscribed my name, this 11th day of August, 1900, at Los Angeles, California.

WILLIAM A. HAGANS.

Witnesses:

G. E. HARPHAM,  
MATTIE MCGINNIS.