(Specimens.)

C. HOULT & T. W. HEINEMANN.

WOVEN FABRIC.

No. 356,836. Patented Feb. 1, 1887.

Fig. 1.

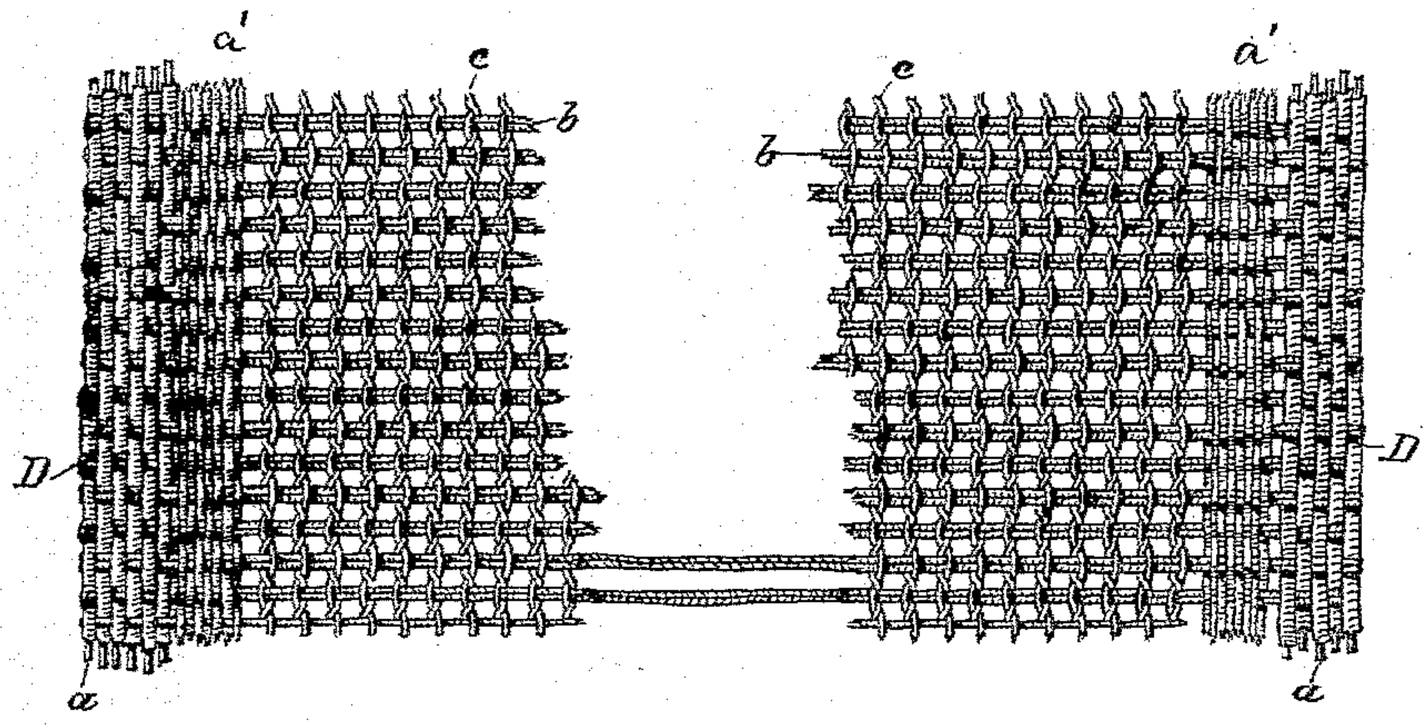
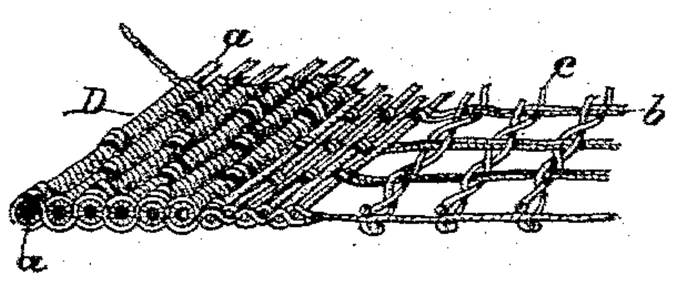


Fig. 2.



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UNITED STATES PATENT OFFICE.

CYRUS HOULT AND THEODORE W. HEINEMANN, OF CHICAGO, ILLINOIS;
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WOVEN FABRIC.

SPECIFICATION forming part of Letters Patent No. 356,836, dated February 1, 1887.

Application filed March 5, 1886. Serial No. 194,094. (Specimens.)

To all whom it may concern:

Be it known that we, CYRUS HOULT and THEODORE W. HEINEMANN, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Woven Fabrics, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a plan view of a piece of fabric made according to our invention, as it appears stretched in the loom, with a portion through its center removed. Fig. 2 shows, on an enlarged scale, a short fragment of our fabric in perspective, representing more clearly the manner in which the threads are interwoven with each other and how the elastic edges are formed.

Our invention is a woven fabric having open meshes of inelastic material provided with elastic selvages, constructed as follows:

In the drawings, *a* are india-rubber threads, which form the selvage D, either on both or only on one side, and said threads are made more or less numerous, as occasion may require, (five to eight being the usual number.) Prior to weaving the said threads they are stretched to two or three times their normal length, and when the finished fabric is cut from the loom the said elastic threads assume their normal length, and thereby cause the open woven net-work to pucker or fold in proportion as said threads were stretched while in the loom; but the selvages remain unpuckered. Said threads of the selvage, together with a number of adjoining inelastic threads, *a'*, are laid closely together, so as to form a band, and while being woven are stretched upon the loom, preferably to two or three times their normal length, so that the finished fabric, when removed from the loom, will have the proper degree of pucker or fold. The threads *a*, *a'*, and *c* form the warp of the fabric, and the threads *b* the woof, the warps *c* and woofs *b* being so spaced as to form between the selvages the open meshes or net-work, as shown, so as to allow a free circulation of air. The warp-threads *c* may be cross-woven, as shown, and (preferably) are prepared by passing them through a solution of gum or other adhesive material, and then dried before being put into the loom, being thus covered with a dry deposit of adhesive material. The weft-thread is then moistened with a solvent of the material deposited on the warp-thread before it is put into the shuttle, and by this moisture the adhesive material on the warp-thread is redissolved sufficiently to cause the interlaced threads to adhere to each other, thus fixing them in their relative positions to form the permanent open meshes. We may also pass the weft-thread from the shuttle over a sponge saturated with a dissolved gum while being woven in the loom.

What we claim is—

A loom-woven fabric the body of which consists of open inelastic puckered meshes cemented together at their intersection and elastic unpuckered edges having the warps thereof laid closely together to form bands, substantially as specified.

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