

S. WALES.
SHIRRED FABRICS.

No. 194,062.

Patented Aug. 14, 1877.

Fig. 1.

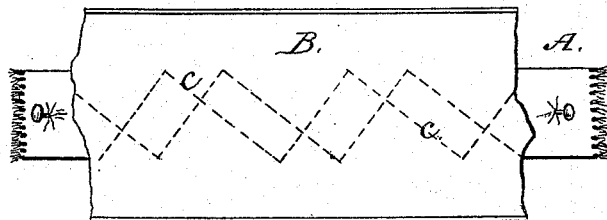


Fig. 2.

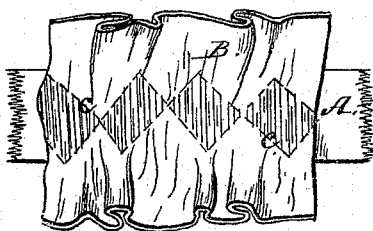


Fig. 3.

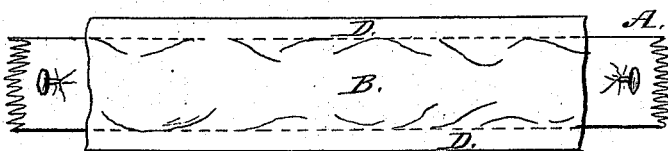
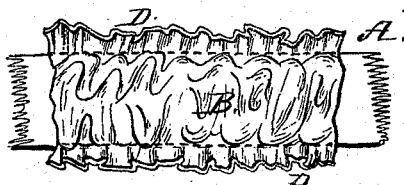


Fig. 4.



Witnesses:

David J. Wallace
N. H. Jones

Inventor.

Sigourney Wales

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Fig. 5.

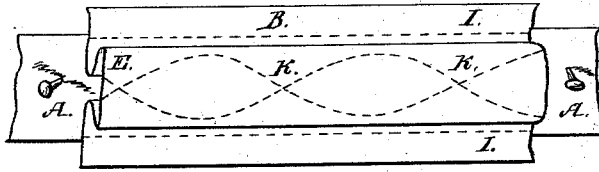


Fig. 6.

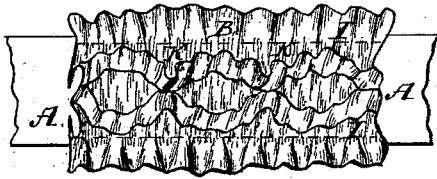


Fig. 7.

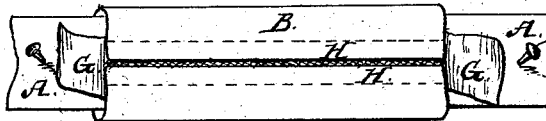


Fig. 8.



Fig. 9.

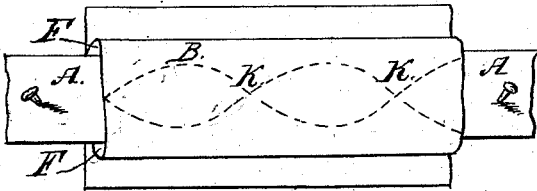
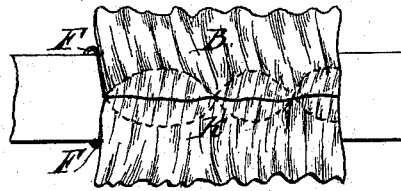


Fig. 10.



Witnesses:

N. H. Summers.
E. Grand

Inventor:

Sijourney Wales

UNITED STATES PATENT OFFICE.

SIGOURNEY WALES, OF NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT
TO NATHANIEL H. FURNESS, OF TARRYTOWN, N. Y.

IMPROVEMENT IN SHIRRED FABRICS.

Specification forming part of Letters Patent No. **194,062**, dated August 14, 1877; application filed
January 13, 1876.

To all whom it may concern:

Be it known that I, SIGOURNEY WALES, of New York city, county, and State, have invented certain Improvements in the Manufacture of Shirred Fabrics and other Flexible Material, of which the following is a specification:

My invention has for its object the production of ornamental shirring in that class of fabrics which are formed by joining two or more sheets together by sewing through and through them, while the elastic material is drawn out to a certain degree of tension, and held in a suitable frame for this purpose.

In carrying out my invention I use elastic webbing, composed of threads of permanently-elastic india-rubber and fibrous threads interwoven while the former is at a tension, or a sheet of elastic having one or both of its surfaces covered by coarse or open fabric firmly adhering thereto, the union being formed by suitable adhesions while the india-rubber is stretched to a greater or less degree, the object being to prevent the breaking of the needle-holes into one another; or the open fabric may be inclosed between two sheets of india-rubber drawn out to a suitable degree of tension.

These formations are in contradistinction to the use of sheets of india-rubber uncombined with a strengthening fabric, as shirrings have already been manufactured in combination with the latter, and failed of utility by reason of the destruction of the material forming the elastic sheet by the running of the needle-holes together.

I further combine the non-elastic fabric with the elastic, the former having a fold or plait taking the direction of the tension of the latter, for the purpose of obtaining an ornamental combination, consisting of shirring and puffing. This plait or fold may be double, and form in the middle of the non-elastic material what is commonly designated as a "box-plait;" or the two edges of the material of a suitable width may be wrapped about the elastic material, and folded so that these folds shall meet at the center on the under side, thus forming two ruffings springing from the two

rows of confining-stitches, which are a little way from the line of the meeting of the two folded edges.

I also make the combination of the non-elastic fabric and the elastic material, the former being of a suitable width to permit it to meet on the under side, after being wrapped about the elastic foundation. These edges are made to overlie a narrow strip of non-elastic fabric, the whole being confined by rows of stitching somewhat removed from these edges, so that when the tension is released these edges cockle into a narrow ruffling, and display the underlying strip, which may be of a strongly contrasting color.

I make use, also, of a sufficient width of non-elastic fabric in combination with the elastic foundation, to create a ruffling extending outward from both rows of stitching, which are placed at or near the edges of the elastic foundation, so that the required amount of non-elastic fabric extends beyond the elastic to form the ruffings.

Again, two such combinations may be placed with their elastic material faced together inside, and having their non-elastic surfaces outside, rows of stitching uniting the non-elastic fabrics only just without the selvage edge of the elastic material.

Again, the elastic foundation may receive a surface of non-elastic material on both faces, and the three be joined by rows of stitches, with other rows of stitches uniting the non-elastic fabric just outside the selvage edge of the elastic material.

Figure 1 represents a length of elastic webbing, A, stretched to a suitable tension, having the ribbon B sewed thereon, the stitches following the design *cc*.

Fig. 2 is the same released from the tension and contracted.

Fig. 3 represents a length of elastic webbing, A, stretched, and the ribbon B sewed only at the edges D D.

Fig. 4 is the same released from the tension and contracted, showing a plain shirring with frills at the edges, but no central design.

Fig. 5 shows the non-elastic fabric B formed

into a box-plait, E, having rows of stitching intersecting at K K, and the edges I I extending beyond the elastic foundation A.

Fig. 6 shows the result of the above combination when the tension is released.

Fig. 7 shows the non-elastic fabric B, of sufficient width to meet at the center of the foundation A when wrapped around it, and overlying, G, the strip of non-elastic fabric which conceals the foundation. H H are rows of stitches equidistant from the edges.

Fig. 8 shows the above combination as it appears when the tension is released.

Fig. 9 shows the non-elastic fabric B, wrapped around the elastic foundation A, and of sufficient width to admit of its being refolded upon itself at F F on the under or upper side, as the case may be. K K are the intersecting rows of stitching.

Fig. 10 shows the above combination as it appears when the tension is released.

It will be seen that, by the combination of the silk or other flexible material with an elastic foundation while the latter is stretched, it will, when released from the strain, contract or spring back to its original length or condition, carrying with it the material se-

cured to it, and produce a shirring, either ornamental or plain, according to the design of the connecting-threads and the parallel folds or plaits.

The above-mentioned combinations furnish an article of manufacture capable of many uses, and is particularly adapted to garters, suspenders, elastic wristbands, and other analogous uses.

I do not claim the use of the permanently-elastic sheets of india-rubber, as set forth in English patent of 1847, numbered 11,808, except so far as when the sheet has in combination a lining or surface covering of openly-woven fabric; but

I claim as my invention—

The combination of a non-elastic fabric with the elastic foundation, joined in the manner set forth, the whole forming an ornamental shirring of regular configurations, substantially as and for the purpose hereinbefore set forth and described.

SIGOURNEY WALES.

Witnesses:

DAVID S. WALLACE,
N. H. FURNESS.