

W. KOPS.
ELASTIC FABRIC.
APPLICATION FILED SEPT. 27, 1911.

1,030,893.

Patented July 2, 1912.

Fig. 1.

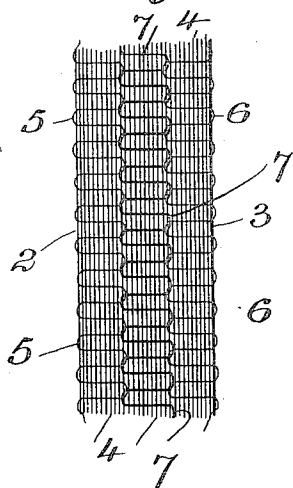


Fig. 2.

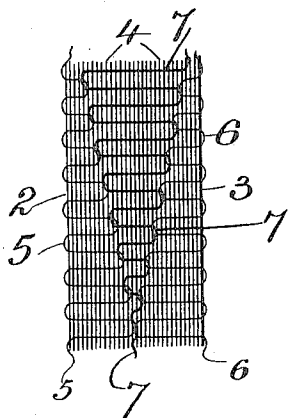
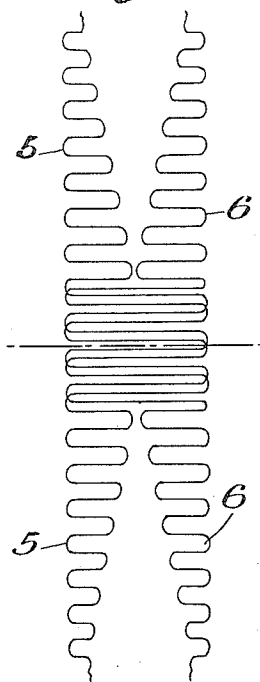


Fig. 3.



WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

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ELASTIC FABRIC.

1,030,893.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WALDEMAR KOPS, a citizen of the United States, residing in the borough of Manhattan, in the city, county, and State of New York, have invented an Improvement in Elastic Fabrics, of which the following is a specification.

My invention relates to an elastic fabric or webbing of parallel sided form, with the object of providing an elastic fabric suitable for use between the parts under tension and in the gores of corsets, slippers, etc., and wherever such forms of elastic fabric are useful in the arts and manufactures.

In the article of my invention I provide opposite borders or edges of inelastic fabric forming sewing sections by which the fabric is securely connected and anchored in the place where used, and between these sewing sections is an elastic part adapted to yield under the tension of use.

The fabric or webbing of my invention is woven as a continuous strip adapted to be cut up into sections or pieces of the required size or length, and in weaving certain parts are reversed.

In the fabric of my invention I employ parallel warp threads, as usual, and the weft threads are arranged in marginal and intermediate series. The intermediate series weft threads are elastic and the marginal weft threads of usual character. These are laid back and forth in the fabric, preferably with the returned ends of the several threads interlocked and thus having the same effect as if the weft threads extended from selvege to selvege, all of which is hereinafter more particularly set forth.

In the drawing, Figures 1 and 2 are diagrammatic and plan views representing distended forms of my invention, and Fig. 3 is a skeleton plan view representing only the arrangement of the cotton or other weft threads.

In the several figures the same numerals of reference indicate similar parts.

2 and 3 represent the selvege or opposite edges of the fabric or webbing strip.

4 represents the warp threads, 5 and 6 the weft threads and 7 the elastic strands. The warp threads 4 are parallel and in line with the selvege in the several forms of my invention, and are equally spaced apart. The weft threads 5 and 6 come within the selvege edges 2 3 and between said edges

and the elastic sections and comprise the inelastic or sewing sections and are advantageously laid in in the weaving by the employment of two shuttles. These weft threads do not extend into the elastic sections as in the elastic sections the elastic strands 7 constitute the weft threads and these elastic strands 7 are laid in in the weaving by a separate, independent and intermediate shuttle.

In Fig. 1 the weft threads 5 and 6 are laid back and forth from the selvege edges toward the center a predetermined distance by the shuttles carrying the same; and the elastic strand 7 fills in the gap in the width of the fabric or webbing between the weft threads being laid in by the separate, independent and intermediate shuttle, and I have shown and prefer to interlock the juxtaposed ends of the elastic strand or strands as laid back and forth through the central section and the near returned ends of the weft threads as laid back and forth in the marginal or sewing sections. This condition is also present in Fig. 2 except that in the parallel sided fabric or webbing shown in Fig. 2, the weft threads taper from a maximum breadth to a minimum breadth, the tapering being preferably along each edge of the fabric or webbing, gradually diminishing from the lower part of Fig. 2 to the upper part of Fig. 2 and the elastic strand 7 as laid back and forth and interlocked with the bent ends of the weft threads, as shown in Fig. 2, as increasing from the lower end of Fig. 2 to the upper end where the same is shown at its maximum width.

Fig. 3 shows the lay of the weft threads, as indicated in Fig. 2, as if the parts were continued into reverse sections. In one section the weft threads increase in width and then extend all across the webbing between the selvege into an inelastic section adapted to be severed and then from the maximum decrease to the minimum width before the increase in width starts again, and this condition is repeated progressively through the length of fabric or webbing that may be woven. In fact, the fabric of my invention may be woven any length that may be desired and may also be severed into smaller pieces at any desired place, particularly at the maximum and minimum portions of the weft threads.

I claim as my invention:

1. An elastic fabric or webbing comprising marginal inelastic or sewing sections in which the weft threads are laid back and forth for the width of said sections and an intermediate section between the inelastic and sewing sections which is made elastic and in which the ends of the elastic strand, as laid back and forth through the webbing, are interlocked with the adjacent or juxtaposed returned ends of the weft threads.

2. An elastic fabric or webbing comprising marginal inelastic or sewing sections in which the weft threads are laid back and forth for the width of said sections and an intermediate section between the inelastic and sewing sections which is made elastic and in which the ends of the elastic strand, as laid back and forth through the webbing, are interlocked with the adjacent or juxtaposed returned ends of the weft threads, and also in which the width of the inelastic sections increase from a minimum to a maximum and then decrease, and in which the width of the elastic sections simultaneously decrease from a maximum to a minimum, and then increase to the maximum again.

3. An elastic fabric or webbing comprising marginal inelastic or sewing sections in which the weft threads are laid back and forth for the width of said sections and an intermediate section between the inelastic and sewing sections which is made elastic and in which the ends of the elastic strand, as laid back and forth through the webbing, are interlocked with the adjacent or juxtaposed returned ends of the weft threads, and also in which the width of the inelastic sections increase from a minimum to a maximum and then decrease, and in which the width of the elastic sections simultaneously decrease from a maximum to a minimum, and then increase to the maximum again, and also in which at the place of maximum width of the inelastic sections, the weft threads extend across the full width of the strip of fabric or webbing between the selvage edges, establishing a line of separation.

Signed by me this 22nd day of September, 1911.

WALDEMAR KOPS.

Witnesses:

ARTHUR H. SERRELL,
GEO. T. PINCKNEY.