

No. 875,439.

PATENTED DEC. 31, 1907.

S. KOPS.
ELASTIC WEBBING.
APPLICATION FILED MAY 28, 1907.

Fig. 1.

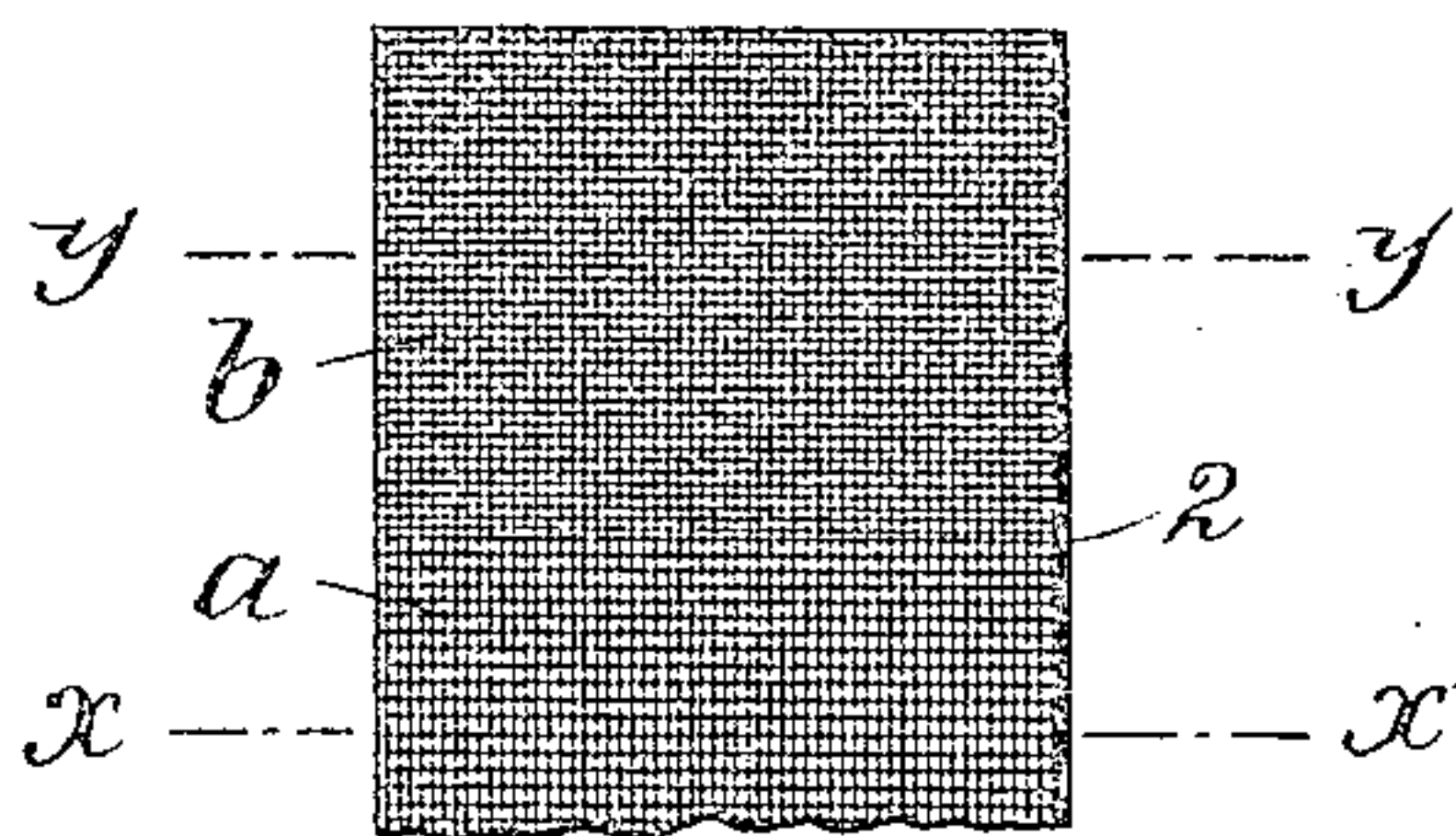
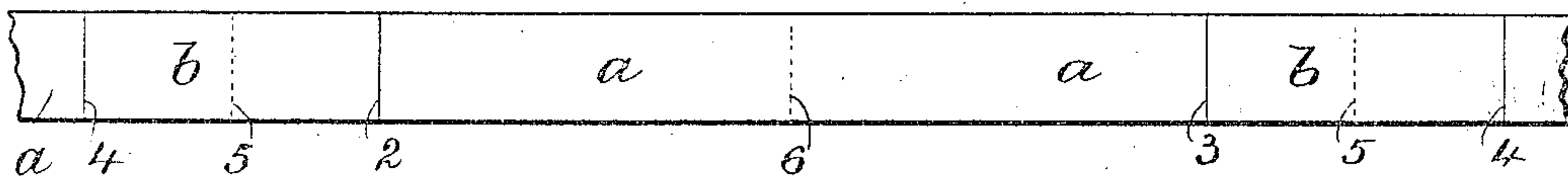


Fig. 2.

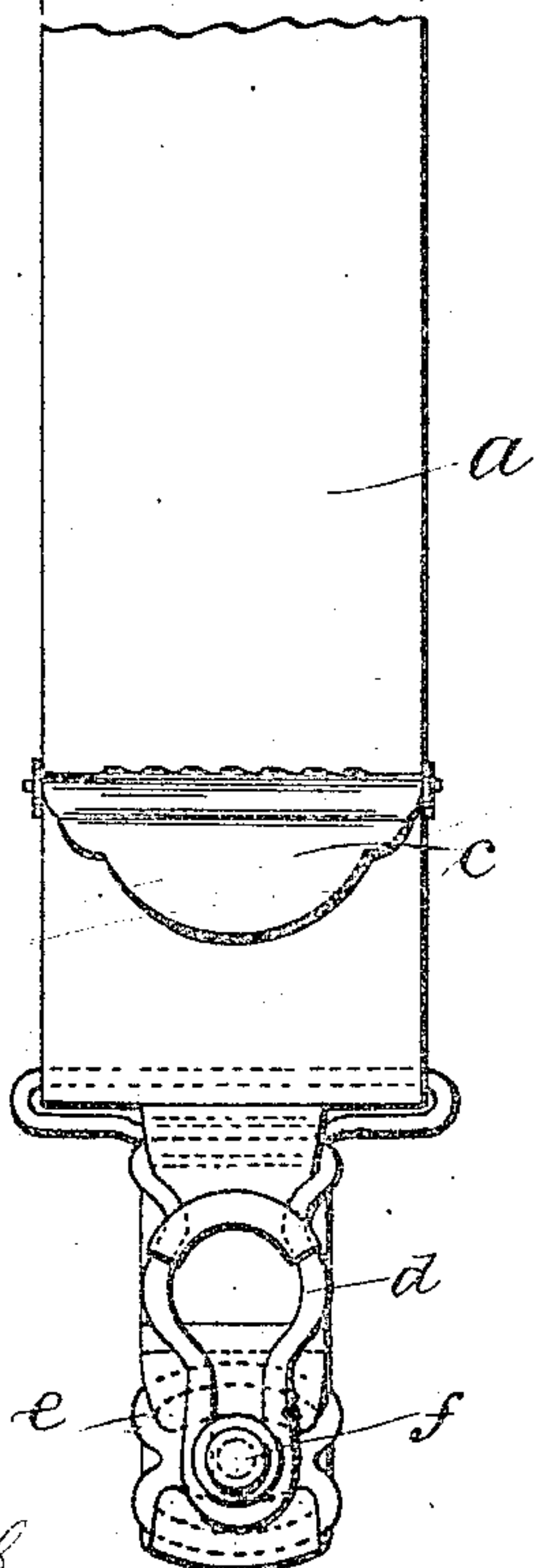


Fig. 4.



Fig. 3.



Fig. 5.

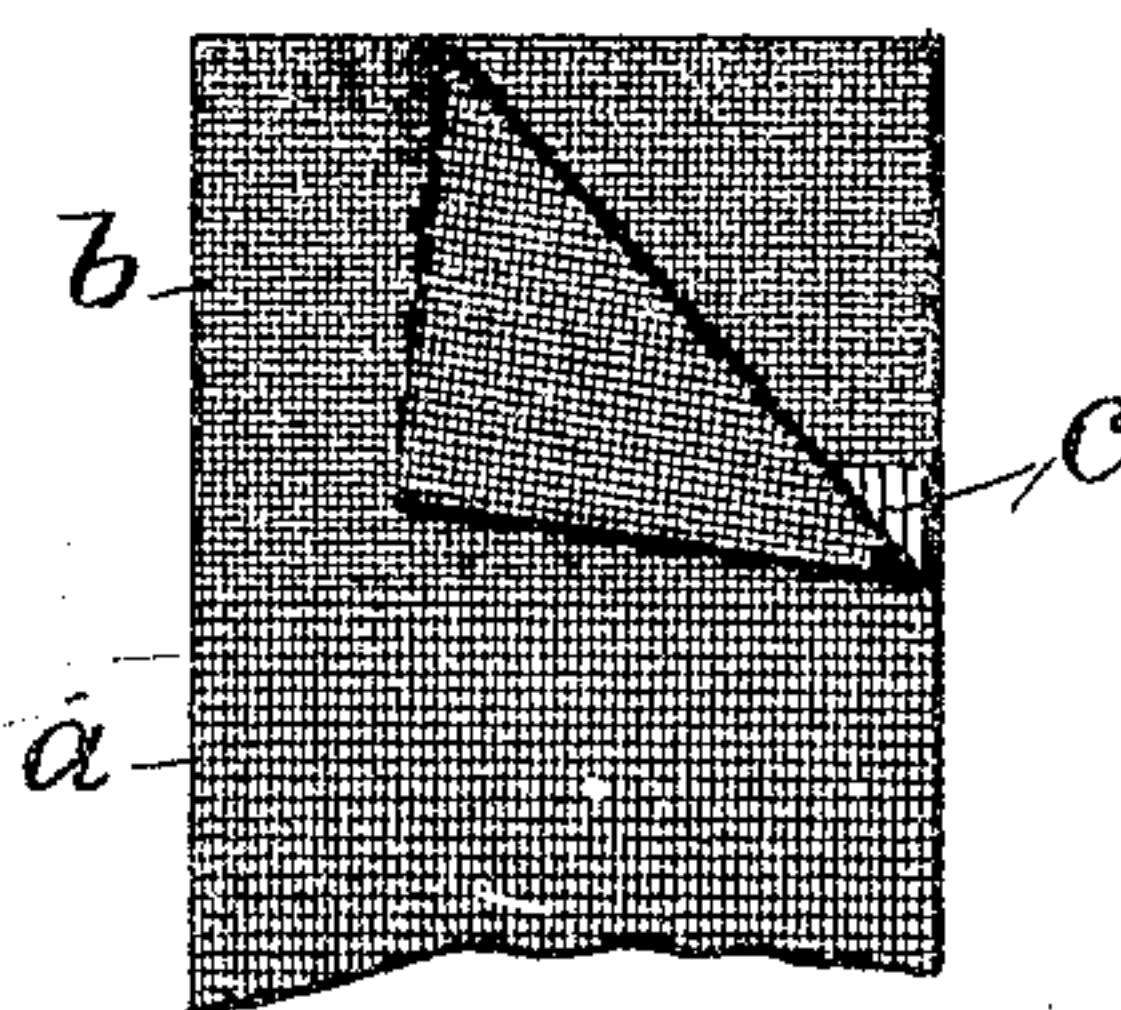
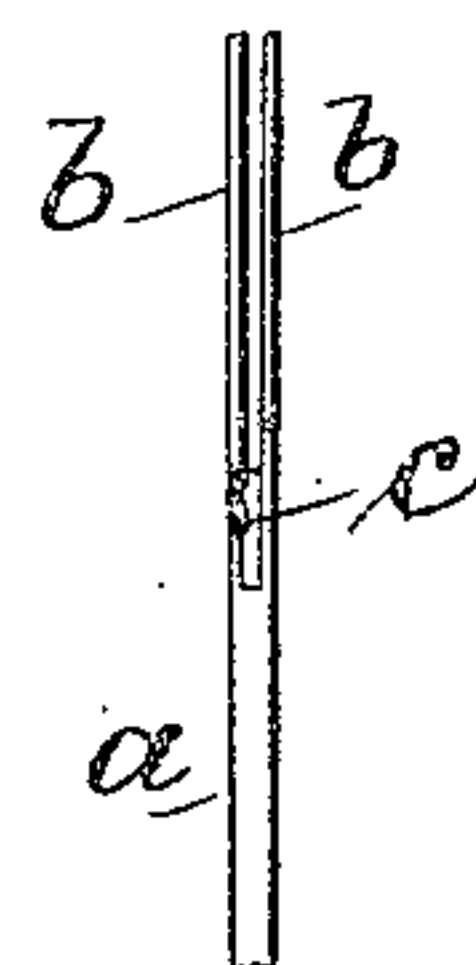


Fig. 6.



Witnesses

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ELASTIC WEBBING.

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Specification of Letters Patent.

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To all whom it may concern:

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

The present custom in regard to hose supporters of elastic webbing is to attach them to corsets or sell them as separate articles to be attached so that the corset forms a place of anchorage for the holding tension applied to the supporter in use. In use elastic webbing hose supporters weaken and gradually become non-elastic adjacent to their place of attachment because the elastic strands are often cut in sewing the webbing to the corset, and they also pull through the channels in the fabric and as soon as this condition obtains the supporter soon becomes useless.

In the manufacture of elastic webbing for hose supporters the webbing is woven under tension at the maximum elastic limit of the webbing, that is, with the elastic strands stretched, the warp threads taut and the weft threads separated, consequently the limit of contraction brings the weft threads together with the warp threads loose but does not return the parts to their normal condition, therefore the elastic strands are gripped in the channels in the woven threads and cannot return to normal proportions, and the object of my invention, based on this condition, is the production of a woven section at one end of each strip of the ordinarily woven elastic webbing which is to be attached to the corset and in which device the disadvantages inherent in the present elastic webbing shall be overcome.

In carrying out my invention, I weave the desired amount of the elastic webbing as usual under tension at the maximum elastic limit of the webbing. I then release the tension and weave a predetermined length under normal conditions without any tension. The weaving under tension is performed with the elastic strands at a small cross sectional area. Consequently when tension is released the elastic threads increase in area, drawing the woven fabric together, but the strands are not up to

their maximum; while at the place of weaving under normal conditions and without tension the elastic strands are of normal cross section and the weaving close together, snugly holding the elastic strands. It is therefore apparent that at the line where the weaving under tension stops and the normal weaving begins, the increased cross sectional area of the elastic strands will prevent them pulling into the channels of the first aforesaid portion under the tension of use; therefore the useful life of the elastic webbing is increased.

The portion woven under normal conditions and without tension is the part sewed into the corset and it is my intention to leave a part of this weaving outside of the line of sewing, hence the sewing of the elastic webbing to a corset does not injure the elastic strands to which tension is applied or their anchorage, or impair the function they perform.

In the drawing, Figure 1 represents a length of the elastic webbing woven according to my invention. Fig. 2 represents by a broken plan a hose supporter of this elastic webbing according to my invention. Fig. 3 is a cross section at x, x , of Fig. 2. Fig. 4 is a cross section at y, y , of Fig. 2. Fig. 5 represents by a broken plan a modified form of my invention and Fig. 6 is an edge view of the webbing shown in Fig. 5, the part in Fig. 5 shown turned over being straight in Fig. 6.

I prefer to weave the elastic webbing of my improved hose supporter of a continuous strip or length in alternate sections; each alternate section a between the parts 2 and 3 being woven as usual under tension and substantially at the elastic limit of the completed webbing; the sections b between lines 2 and 4 and 3 and 4 being woven under normal conditions upon the entire release of tension, consequently the elastic strands in the section a when tension is released do not return to their normal condition but are gripped by the woven threads of the fabric and the weft threads of the weaving are not as close together as are the weft threads in the sections b . The sections b are woven under normal conditions without any tension on the elastic strands, consequently the weft threads of the weaving are close to-

gether and the elastic strands of the webbing are of full size and are held tightly in the weaving; there being a difference in the cross sectional area between the elastic strands in the sections *b* and said strands in the sections *a*.

The continuous fabric shown in Fig. 1 is advantageously severed into lengths for hose supporters upon the dotted lines 5 at the center of the sections *b* so that the sections *b* become the parts which are sewed in to the corset for connection therewith, and the sections *a* of predetermined length between the sections *b* are cut at the center on the line 6 and are to be woven of sufficient length to form the depending portions of two hose supporters.

In the enlarged view, Fig. 2, I have shown a clamp *c*, a loop member *d*, a plate *e* and stud *f* which are employed as usual to complete the hose supporter and form a means to contact with and grip the hose.

In Fig. 3, the section at *x, x*, is illustrative of the area of the elastic strands woven under tension and Fig. 4 illustrative of the area of the elastic strands woven without tension, or in other words, under normal conditions.

From the foregoing, it will be manifest that when this form of elastic webbing is employed as a hose supporter and the same is connected to the corset at the end woven under normal conditions, that the elastic strands cannot pull out or from the sections *b* into the sections *a*, and that because the elastic strands are thus anchored in the sections *b*, that there will at all times be the desired elastic character of the webbing unless some of the elastic strands should break which is unlikely in view of the even distribution of the tension. It will also be apparent that said strands cannot as has heretofore been common in elastic webbing, pull through the channels, in other words, that they must remain in position, and furthermore it will be apparent, that because of the extent of the enlarged elastic strands that are held in the sections *b* that there is sufficient of said strands gripped by the webbing under normal conditions as to form a safe, secure and permanent hold or anchorage for these strands, so that their useful life will be increased and be given a permanent character.

In the form of my invention shown in Figs. 5 and 6, the short section of fabric woven normal and without tension instead of being made solid as shown in Figs. 1-4 inclusive, and hereinbefore described is made double or in two parts, that is, there are two members as shown in Figs. 5 and 6, which are arranged parallel, each member being a complete woven material in itself with the elastic strands *c* free between the parts. In

this form of my invention the elastic sections woven under tension are of solid character and the sections woven under normal conditions without tension are prolongations of the former sections and also of solid character; the elastic strands between the parts of the latter sections are free.

Upon consideration of Figs. 5 and 6, it will be apparent that the elastic strands where they are free between the parts and of larger area than the same strands combined in the channels of the webbing in the section, that the free ends of these strands when the section is under tension cannot because of their increased area pull into the channels of the fabric in this section but are obliged to keep their place, consequently the tension is distributed evenly throughout the length of the said elastic strands in the webbing and there is nothing to injure these strands or to cause them to break with proper use. The useful life of the elastic webbing hose supporter is thus greatly increased; the said improvement increasing the value of the elastic webbing for hose supporters for these reasons. Furthermore, the solid fabric portions form a firm and substantial anchorage material to sew into the corset, which are not injured by any tension that may be applied by the fastening devices of the hose supporter to the webbing.

I claim as my invention:—

1. An elastic webbing for hose supporters, consisting of a flat strip formed of a section woven under tension and a section at one end woven under normal conditions without tension.

2. A length of elastic webbing adapted to be cut up into hose supporters, comprising alternate sections of predetermined length woven under tension and alternate intermediate short sections woven continuously therewith under normal conditions without tension and the same to be severed at intermediate points in the respective sections to form hose supporters of the desired length.

3. A strip of elastic webbing for hose supporters, having a maximum section woven under tension and a minimum section at one end of the aforesaid section woven under normal conditions without tension, and in which the elastic strands are of normal area and the woven threads close together, said minimum section in contrast to the maximum section being of close woven and solid character.

4. A length of elastic webbing adapted to be cut up into hose supporters, comprising alternate sections of predetermined length loose woven or with spaced weft threads adapted to yield under tension and alternate intermediate short sections tight woven or with close weft threads so as to be compara-

tively non-elastic, the said length of webbing to be severed at intermediate points in the respective sections to form hose supporters of the desired length.

- 5 5. An elastic webbing for hose supporters, formed of a section woven under tension and a section at one end woven under normal conditions without tension, said sections

being a continuation the one of the other and each section woven of solid character. 10
Signed by me this 24th day of May, 1907.

SAMUEL KOPS.

Witnesses:

ARTHUR H. SERRELL,
E. ZACHARIASEN.