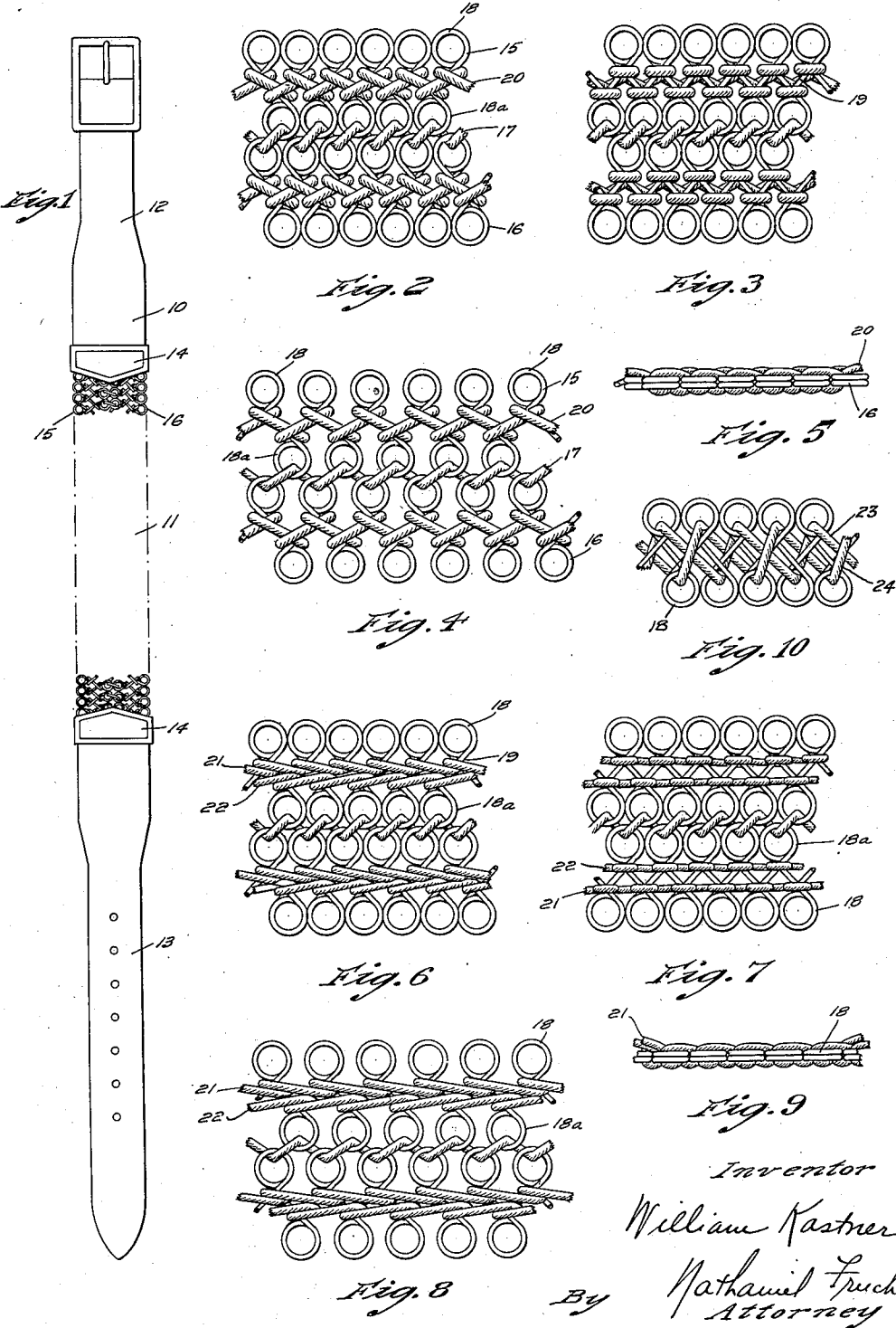


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SPRING BAND CONSTRUCTION
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SPRING BAND CONSTRUCTION

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1 Claim. (Cl. 241—8)

My present invention relates to the manufacture of spring bands for use in belts, suspenders, garters and the like, and has particular reference to a novel construction for limiting the stretch of the spring band.

Spring bands as heretofore used have been made of a single length of spring wire bent into zigzag form with spring loop coils at the bends of the wire. Such spring bands have been used as single units, or have been connected to contiguous spring bands by textile strands or cords so as to form a composite spring band, and have had other strands laced around the transverse parts of the springs to enhance the appearance. These textile strands have not heretofore limited the amount of stretch of the wire coils, whereby it has been found that the wire band may be pulled beyond its elastic limit, thus destroying its usefulness.

It is the principal object of my invention to provide a construction for a spring band which utilizes textile material for limiting the separation of the wire coils, whereby it is impossible to stretch the wire band beyond its elastic limit.

It is a further object of my invention to devise a novel thread connection which has an attractive ornamental appearance, whereby the attractiveness of the article comprising the spring band is enhanced.

With the above and other objects and advantageous features in view, my invention consists of a novel arrangement of parts, and a novel method of weaving more fully disclosed in the detailed description following, in conjunction with the accompanying drawing, and more specifically defined in the claim appended hereto.

In the drawing,

Fig. 1 is a view of a belt having a spring band as its essential feature;

Fig. 2 is an enlarged view of a portion of the spring band showing a preferred manner of weaving a textile strand to the spring coils;

Fig. 3 is a rear view of Fig. 2;

Fig. 4 is a view similar to Fig. 2, showing the spring coils in extended relation;

Fig. 5 is a side view of Fig. 2;

Fig. 6 is a view similar to Fig. 2 but showing a modified weaving arrangement;

Fig. 7 is a bottom view of Fig. 6;

Fig. 8 is a view similar to Fig. 6 but showing the coils in extended position;

Fig. 9 is a side view of Fig. 6; and

Fig. 10 is a view showing a further modification.

It has been found desirable to provide a means for limiting the stretch of a spring band formed

of a single length of spring wire wound into coils in zigzag relation, in order to prevent stretching of the spring band beyond its elastic limit and to thus lengthen the effective life of the spring band. I have therefore utilized textile strands which are woven to the wire coils, and which are designed to grip the wire coils after they have stretched for a predetermined distance that is well within their elastic limit, whereby further stretch of the spring band is prevented. Moreover, I have formed the textile weave so as to combine with the wire in a manner to increase the attractiveness of the completed article.

Referring to the drawing, a representative article embodying a spring band is disclosed in Fig. 1, in which the belt 10 includes a spring band 11, a buckle fitting 12 and a tongue fitting 13, the two fittings being connected to the spring band by means of connections 14. The spring band 11, is preferably formed of two sections 15, 16 which are in contiguous relation and are connected by a textile strand or cord 17, each section being formed of a single length of wire wound zigzag into coils 18, 18a connected by transverse shanks 19. I have utilized a weaving 20 of textile strand or cord, which engages the spring coils so as to prevent separation beyond a predetermined distance. The textile strand 20 as shown is alternately woven over the shanks 19 of the coils 18 and 18a whereby the weave presents the appearance shown in Figs. 2 and 3. When the spring band is stretched as shown in Fig. 4 the adjacent coils 18 and 18a are separated, but the turns of the cord around the shanks are pinched at the coils, whereby the separation of the coils during elongation of the spring band is definitely limited; the textile material has very little elongation and serves as a stop for preventing further separating movement of the coils.

Although the weaving shown in Figs. 2 to 4 definitely limits the stretch of the spring band, and presents a very attractive appearance, other types of weaving may be used to accomplish a similar purpose, one modified type of weave being shown in Figs. 6 to 9 inclusive, in which two strands 21 and 22 are utilized instead of a single strand 20, these two strands being woven around the shanks 19 of contiguous coils 18 and 18a; this type of weaving produces strand lengths which are inclined at a smaller angle to the linear length of the spring band, whereby the stretching action as illustrated in Fig. 8 produces a somewhat smaller stretch of the cords, and a similar limiting of the stretch of the band.

The appearance produced by the weave shown in Figs. 6 to 9 is preferred for certain types of spring band articles. Fig. 10 shows a construction using two crossed strands 23, 24, which extend through the loops, and prevent excessive elongation of the spring band.

5 The essential feature of the weaving resides in the winding of the textile strand around the shanks of the coils adjacent the coil turns so that the stretch of the spring band pinches the separate sections of strand and limits further separating movement of adjacent spring coils.

10 While I have described specific constructional embodiments showing the manner of weaving a textile strand so as to produce the desired limiting effect it is obvious that changes in the material used for the strands, in the manner of weaving so as to obtain a permissible stretch for the

spring band, and in the use of one or more strands to obtain different weaving designs, may be made to suit the requirements for different spring band articles, without departing from the spirit and the scope of the invention as defined 5 in the appended claim.

I claim:

In combination, a spring band formed of a single length of elastic wire bent in zigzag form with spring loop coils at the bends of the wire 10 and transverse shanks, and a relatively inelastic strand wound around said shanks to cross over itself at each shank and to bind upon elongation of the band, the overall length of strand between adjacent coils being less than their elastic stretch. 15

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