F. KAWAI.

COTTON BELT.

APPLICATION FILED AUG. 1, 1917.

1,329,713. Patented Feb. 3, 1920.

Fig. 1

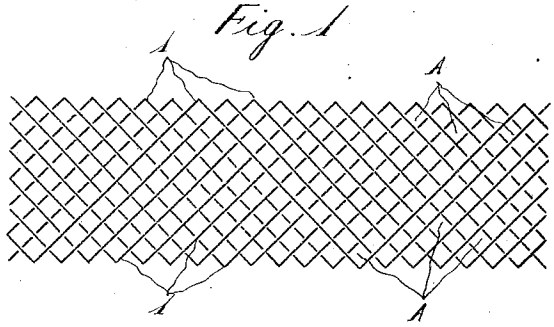


Fig. 2

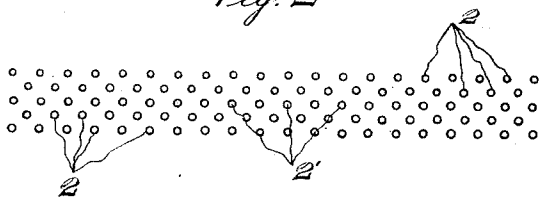


Fig. 3

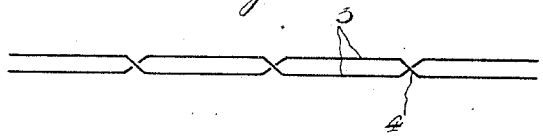
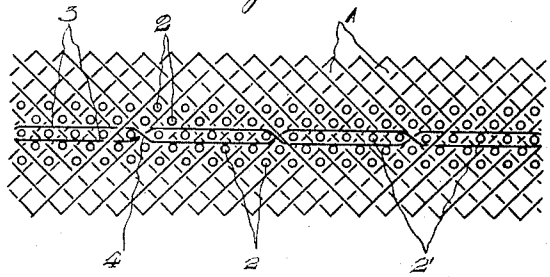


Fig. 4



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UNITED STATES PATENT OFFICE.

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COTTON BELT.

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Application filed August 1, 1917. Serial No. 184,004.

To all whom it may concern:

Be it known that I, FUDESUKE KAWAI, a subject of the Emperor of Japan, residing at No. 1 9-chome, Higashi-Shiri-Ike-Machi, Kobe, Japan, have invented certain new and useful Improvements in Cotton Belts, of which the following is a specification.

This invention relates to improvements in belts, and is more particularly aimed to provide a belt which embodies a construction preventing the stretching of the same after it has been in operation for some time, although not influencing its flexibility.

In order that the present invention may be understood, I have appended hereto one sheet of drawings in which:—

Figure 1 is a vertical sectional view of the longitudinal threads embraced in the belt.

Fig. 2 is a similar view but showing the cross threads in the belt.

Fig. 3 shows my flexible reinforcing member.

Fig. 4 is a vertical sectional view disclosing the assembled product.

The longitudinal threads 1 are of cotton and woven in net formation, as shown in Fig. 1, and disposed between the center portion of the longitudinal threads are the lateral threads 2 as shown in Figs. 2 and 4. The main feature of my invention, the parallel longitudinal metallic wires 3, are twisted as at 4, reference being had to Fig. 3, to provide intersected portions at equidistant points throughout their entire length. These wires 3 are disposed as shown in Fig. 4, and embraced between them, preferably are the central layer or layers, of the threads 2 whereby any movement of the threads or wires with respect of one to the other is prevented.

It will be noted that the arrangement of the wires 3 renders the same extremely flexible, whereby the belt loses none of its flexibility, although the same is prevented from stretching. Also, it will be noted that the dense portion of the belt, *i. e.*, the portion included between the uppermost and lowermost layers of threads 2, is disposed between an outer layer of net woven threads 1 of less density, whereby when the belt passes over a pulley, the threads 1 are capable of having placed upon them a slight stretching or compressing action due to passage over such pulley without such compression or stretching being transmitted to the body of the belt to such an extent as to cause a stretching of the entire belt.

The above is the greatest known defect in cotton belts as constructed today and it is believed that the construction illustrated in the accompanying drawings and described in the specification obviates the difficulties experienced in utilizing belts of this nature.

Having thus described my invention, what I claim is:

A belt comprising cotton threads forming a net weave; parallel longitudinal metallic wires, forming a central layer in said net weave, said wires being spaced apart and having spaced intersecting and intertwisted portions; and lateral threads woven in the net weave, certain of the said lateral threads forming the central layer thereof and being embraced by and held between the spaced parallel portions of the said wires.

In testimony whereof I affix my signature in presence of two witnesses.

FUDESUKE KAWAI. [L. S.]

Witnesses:

W. THIHARSH,

A. ARUSL.