W. S. LANGFORD.

BELTING.

APPLICATION FILED JAN. 6, 1909.

921,415. Patented May 11, 1909.

Fig. 1.

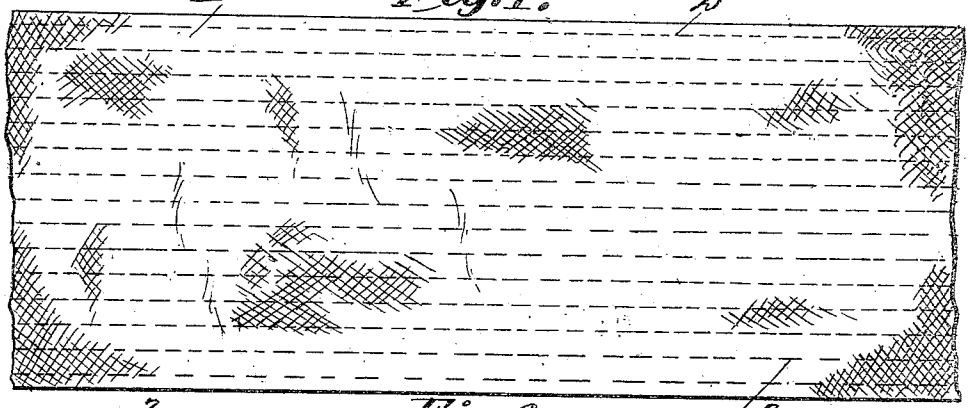


Fig. 2.

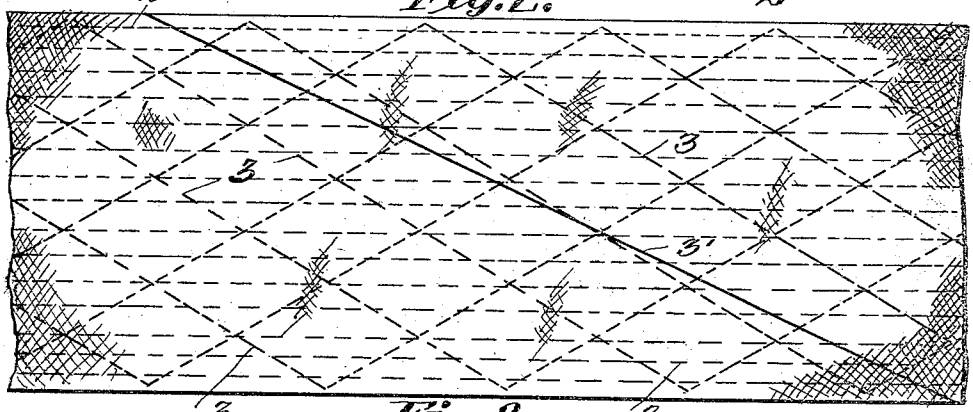
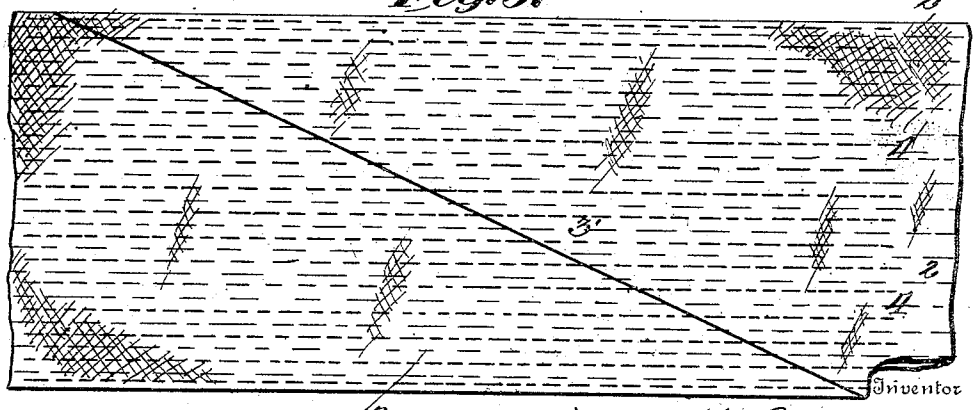


Fig. 3.



Witnesses

W. A. Rockwell

J. R. Nottingham

Inventor

William S. Langford.

By Wilkinson & Johnson

Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM S. LANGFORD, OF BALTIMORE, MARYLAND.

BELTING.

No. 921,415. Specification of Letters Patent. Patented May 11, 1909.

Application filed January 6, 1909. Serial No. 470,898.

To all whom it may concern:

Be it known that I, WILLIAM S. LANGFORD, a citizen of the United States, residing at Baltimore city, State of Maryland, have invented certain new and useful Improvements in Machinery-Belting, of which the following is a specification.

This invention relates to improvements in stitched machinery belting.

Heretofore, so far as I am aware, the layers of material of which the belt is made are secured together by parallel longitudinal rows of lock stitches, and it is the primary object of this invention to reinforce or strengthen such stitched belts, both longitudinally and laterally by a series of additional stitches that intersect the longitudinal stitches.

It is well known that, with the ordinary stitches, formed of two threads interlocked at about the center of the thickness of the belt, such stitches frequently, as the belt stretches, cut each other, thus impairing or destroying the life of the belt.

It is my purpose to reinforce the belt for its entire length with the additional stitches referred to, with resulting advantages which will become apparent in the description of the invention, following, and which will be particularly advantageous at the point of splice of endless belts. In the usual manner of stitching belts at the point of splice, additional stitches are run between the longitudinal stitches that run throughout the entire length of the belt. These additional parallel stitches ending abruptly a short distance on each side of the splice, present what is technically known as a "heel" at each end of the additional parallel stitches. This thickening or reinforcing of the belt at this particular point shocks the belt in passing over the pulley and ultimately causes its breakage adjacent to the "heels". With the stitching that I purpose to use, this objection is entirely overcome, as the strain is not in the direct line of the longitudinal stitches, and the material of the belt at the point of splice is not weakened as in the case of the additional longitudinal stitches.

A further object of the invention is to tie or anchor the longitudinal stitches by the additional stitches I provide, which intersect such longitudinal stitches, thus reducing to a minimum, the tendency of the belt to stretch and the tendency of the longitudinal stitches to cut each other, as a result of stretching.

Other objects and advantages resulting from my invention will become apparent to those skilled in this art, from the following description.

In the drawings illustrating the invention: Figure 1 is a plan view of a section of a belt stitched in the ordinary way; Fig. 2 is a similar view of a section of a belt, stitched in accordance with my invention, showing that portion of a section of belting where the line of splice in an endless belt appears; and Fig. 3 is a view showing the old way of reinforcing the belt at the point of splice.

My invention is particularly adapted for use in connection with stitched canvas belting, but it is obvious that it may be employed in connection with stitched belting of any suitable material, such as rubber and canvas, or other materials or combination materials.

In carrying out my invention, I fold the canvas in the ordinary way, bringing the layers together in number according to the ply of the belt to be manufactured, when the belt is stitched longitudinally throughout its entire length, with stitches arranged more or less close together, as the exigencies of manufacture may require.

In the drawings, the numeral 1 designates the material of the belt, 2 the longitudinal stitches commonly employed in belts of this character. The numeral 3 designates a series of additional stitches which I provide and in which my invention resides. These stitches are preferably run diagonally from one side of the belt to the other, and from opposite sides of the belt, so as to form a series of diamond-shape figures, as shown, the stitches being of the same character as the longitudinal stitches, but crossing or intersecting such stitches at intervals throughout the entire length of the belt, thus tying or anchoring the stitches of the longitudinal lines, with the result that said stitches, as before suggested, do not cut each other, nor does the belt stretch to the extent permitted by the ordinary stitching.

In Fig. 3 is shown a section of an endless belt reinforced at the point of splice 3′, with the ordinary parallel stitches placed in between the stitches which hold the layers of the belt together, and in this instance,

at the points 4, where the short stitches stop, the "heels" are presented, and the belt is thickened at the point of splice, thus creating a tendency to break, adjacent to the ends of the stitches, as the belt passes sharply over the pulley. Then too, the excessive number of stitches at the point of splice, weakens the belt laterally, creating a tendency to split along the stitches on account of the injury of the material of the belt.

Claims.

1. A new article of manufacture, belting composed of a plurality of layers having a plurality of longitudinally disposed lines of stitching, a plurality of straight lines of stitching disposed diagonally to the longitudinal lines, and another plurality of straight lines of stitching disposed diagonally to the other lines of diagonal stitching, the lines of diagonally disposed stitching forming angles adjacent to the edges of the belt, the several lines of diagonal stitching intersecting each other and the longitudinal lines at intervals.

2. A new article of manufacture, belting composed of a plurality of layers having a plurality of longitudinally disposed lines of stitching, a plurality of lines of straight stitching disposed diagonally to the longitudinal lines, and another plurality of lines of straight stitching disposed diagonally to the other lines of diagonal stitching, the lines of diagonally disposed stitching forming angles adjacent to the edges of the belt, the several lines of diagonal stitching intersecting each other and the longitudinal lines at intervals, and tying or anchoring the stitches of the longitudinal lines.

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

WILLIAM S. LANGFORD.

Witnesses:
TITIAN W. JOHNSON,
JAMES L. CRAWFORD.