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ENDLESS WOVEN BELT.

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912,474.

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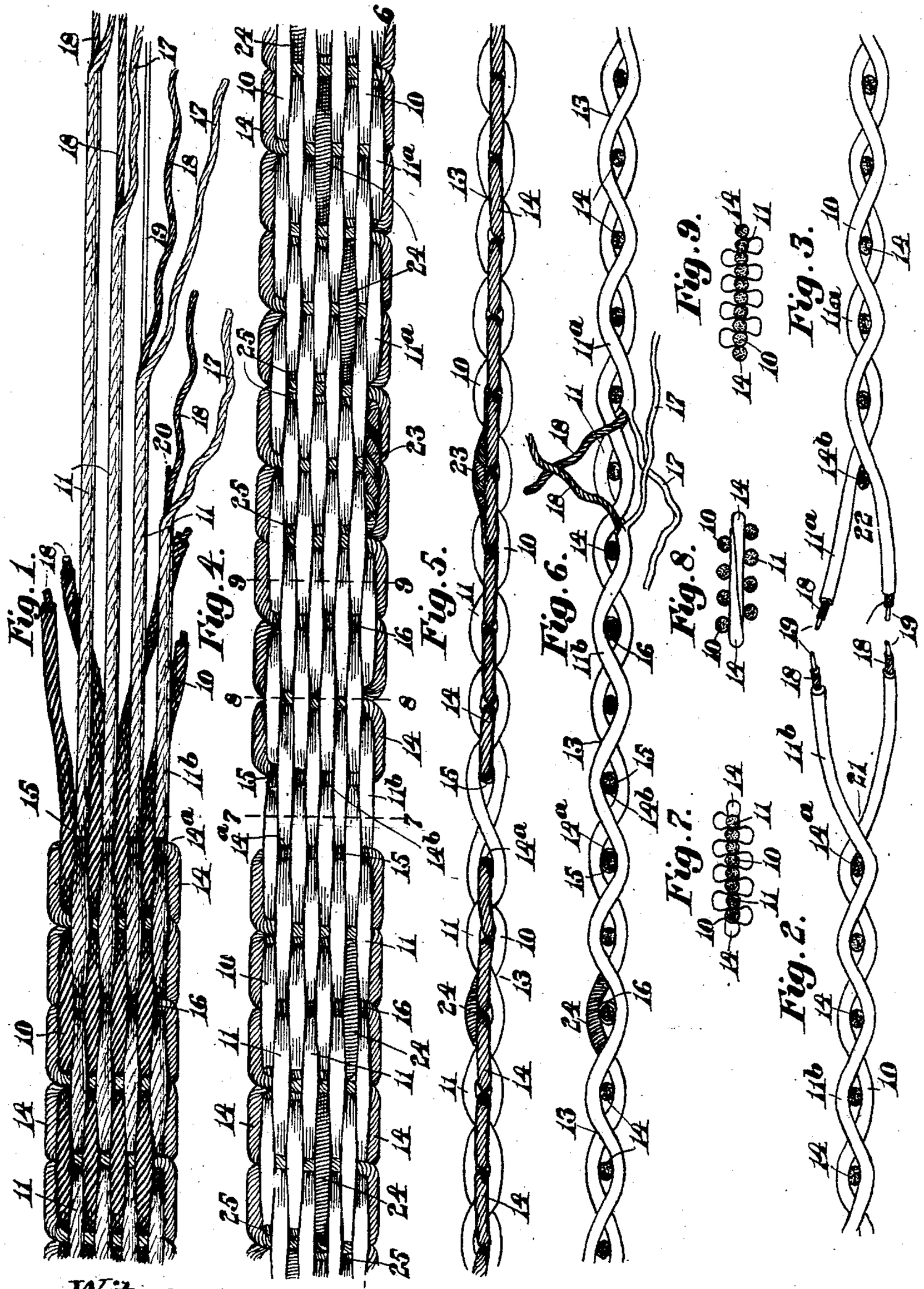

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ENDLESS WOVEN BELT.

No. 912,474. Specification of Letters Patent. Patented Feb. 16, 1909.

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To all whom it may concern:

Be it known that I, JACOB KAST, a citizen of the United States of America, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Endless Woven Belts, of which the following is a specification.

This invention relates to endless belting and particularly to that class of belting which is woven from a plurality of strands of textile material and it relates particularly to the means of securing the ends of said belting together to form a continuous belt, both faces of which are without a break making the endless belting reversible.

The invention consists in a novel means of connecting the two ends of the woven belting together and uniting the same in such a manner that the connection between the two ends is as strong as any other part of the belting.

The invention further consists in certain novel features of construction and arrangement of parts which will be readily understood by reference to the description of the drawings and to the claims hereinafter given.

Of the drawings: Figure 1 represents a plan view of one end of a piece of woven belting showing the longitudinal strands extending beyond the ends of the filling members thereof, a portion of these longitudinal strands being unlaid to show the inner wire portions thereof. Fig. 2 represents a longitudinal section of the same showing the longitudinal strands, beyond the end of the filling members, crossed. Fig. 3 represents a similar longitudinal section of the opposite end of said belting showing the longitudinal strands beyond the end of the filling members uncrossed. Fig. 4 represents a plan of a portion of the endless belting showing the two ends brought together and united. Fig. 5 represents a side elevation of the same. Fig. 6 represents a longitudinal section of the same, the cutting plane being on line 6—6 on Fig. 4, and Figs. 7, 8, and 9 represent, respectively, transverse sections of said belting on lines 7—7, 8—8, and 9—9, on Fig. 4. Similar characters designate like parts throughout the several figures of the drawings.

In the drawing is represented a portion of the woven belting which is made up of a plurality of strands 10 and 11 which cross each other at 13 and are connected together by means of the cross members 14. These cross members 14 extend transversely of the belting between the longitudinal strands 10 and 11 and the ends of said cross members 14 at each end of the belting, before being united to form an endless belt, are united by suitable seizing 15 or any other means may be used which will connect the two ends of the cross member 14 together and prevent the lateral separation of the longitudinal strands 10 and 11. The filling members 14 may be similarly united together at another point by an additional seizing 16 if desired. The longitudinal strands 10 and 11 extend beyond the united ends of the filling members 14 as indicated in Fig. 1. Preferably the extending portions of the strands are of different lengths and a portion of the textile material 17 is unwound for a limited distance from the end of each strand, as indicated in Fig. 1. In like manner the wire portion 18 is similarly unwound from the wire core 19 for a limited distance from the end of said strand and after unwinding the wire portion 18 from the wire core 19 a section of said core 19 is cut away as indicated at 20 in Fig. 1. The opposite end of the wire belting has its corresponding strands 10 extending beyond the united filling members 14 in a similar manner and these extending portions of the strands 10 are similarly treated by having the textile material and wire portion unwound for a limited distance and the ends of the cores 19 cut away. When both ends of the filling have been thus treated and the ends of the filling members 14 united together by the seizing 15, the strands 10 and 11 are crossed as indicated at 21 in Fig. 2 while the strands 10 and 11 at the opposite end of the belting are left uncrossed, as indicated at 22 in Fig. 3. The two ends of the filling are then brought together until the transverse portion 14^a of the filling member 14 at one end of the belting and the transverse portion 14^b of the filling member 14 at the opposite end of the belting are about the same distance apart as the remaining transverse portions of the filling members 14 are separated from each other. When this has been done one of the

longitudinal strands 11, as, for instance, the strand 11^a, of the righthand end of the belting is unlaid and the strand 11^b of the lefthand end of the belting is inserted in its place, being interwoven with the filling members 14 for a limited distance. The textile material 17 is removed from the end of the longitudinal strand 11^a for a limited distance leaving exposed the wire portion 18 from which a section of a core 19 has been removed as previously described. The two ends of the coreless wire portions 18 of the strands 11^a and 11^b are brought together and twisted together as indicated at 23. When the two wire ends 18 have been thus twisted together the unwound textile material 17 is wound about the twisted wire portion 23 as indicated at 24 and also about the untwisted end portions 25 which have the textile material wound about them and are then inserted between the longitudinal strands 10 and 11, as shown in Fig. 4. Each strand 11 is similarly united with a corresponding strand 11 in the opposite end of the belting, the uniting of the different strands being at different points in the length of the belting. The strands 10 of the righthand section are similarly united to corresponding strands 10 in the lefthand section of the belting. The removal of the portion of the core 19 of each longitudinal strand 10 and 11 reduces the bulk of said strands at the point where the wire portions 18 are twisted together, thereby obviating an enlargement of the belting at that particular point, the twisting of the two wire ends 18 together leaving the diameter of the united strand practically the same as one of the strands with the wire core therein.

The wrapping of textile material such as marline about the united wire portions prevents the wire from rusting and deteriorating while at the same time it prevents wear of the parts when under considerable strain and creates sufficient friction to prevent the parts from becoming displaced.

When the two ends of the belting are united in the manner herein described the belting becomes endless, both faces being practically free from any protuberances and as a consequence when the inner face becomes slightly worn the belting may be reversed and what was formerly the outer face of the belting be placed next to the pulleys upon which the belting operates.

Constructed in the manner set forth the belting is of great tensile strength, the point of connection, as 7—7 being no weaker than any other portion of the belt. While the capability of reversing the belt is of some advantage a still greater advantage due to this construction is the great flexibility of the belt and the freedom from any rigid clamping members.

It is believed that from the foregoing the operation of the invention and its many advantages will be fully understood without further description.

Having thus described my invention, I claim:

1. A woven belting provided with a plurality of continuous filling members extending transversely thereof from each side thereof and secured together at their ends and having a plurality of longitudinal strands extending from one end of said belting and woven into the opposite end thereof.

2. A woven belting provided with a plurality of continuous filling members extending transversely thereof from each side thereof and secured together at their ends and having a plurality of longitudinal strands extending from one end of said belting and woven into the opposite end thereof, the end of each interwoven longitudinal strand being connected with the end of a similar strand which it replaces.

3. A woven belting provided with a plurality of continuous filling members extending transversely thereof from each side thereof and secured together at their ends and having a plurality of longitudinal strands extending from one end of said belting and woven into the opposite end thereof, a section of the central filling core of each longitudinal strand being removed.

4. A woven belting provided with a plurality of continuous filling members extending transversely thereof from each side thereof and secured together at their ends and having a plurality of longitudinal strands extending from one end of said belting and woven into the opposite end thereof, a section of the central filling core of each strand being removed, and the wires of each strand being united with the wires of the strand which it replaces.

5. A woven belting provided with a plurality of continuous filling members extending transversely thereof from each side thereof, the ends of the filling members at each end of the belting being united by a seizing and having a plurality of longitudinal strands extending from one end of said belting and woven into the opposite end thereof.

6. A woven belting provided with a plurality of continuous filling members extending transversely thereof from each side thereof and secured together at their ends and having a plurality of longitudinal strands extending from each end of said belting and woven into the opposite end thereof.

7. A woven belting provided with a plurality of continuous filling members extending transversely thereof from each side, the ends of which are secured together, and having a plurality of longitudinal strands extending beyond said connected filling members and interwoven with the filling members of the opposite end of said belting, the wire

portion of each strand being united to the wire portion of the strand it replaces.

8. A woven belting provided with a plurality of continuous filling members extending transversely thereof from each side and secured together at their ends and having a plurality of longitudinal strands extending beyond said connected filling members and interwoven with the filling members of the opposite end of said belting, the wire portion of each strand being united to the wire portion of a strand which it replaces and surrounded by a wrapping of flexible material.

9. A woven belting provided with a plurality of continuous filling members extending transversely thereof from each side and secured together at their ends and having a plurality of longitudinal strands extending beyond said connected filling members and interwoven with the filling members of the opposite end of said belting, the wire portion of each strand being united to the wire portion of a strand which it replaces, with the ends of both wire portions laid transversely of said belt between said filling members and surrounded by a wrapping of flexible material about said united wire portions.

10. A woven belting provided with a plurality of continuous filling members extending transversely thereof from each side and secured together at their ends and having a plurality of longitudinal strands at each end of said belting extending beyond said united filling members, those at one end being crossed and those at the other uncrossed, said strand extensions being interwoven with the strands of the opposite end of said belting and united thereto.

Signed by me at 7 Water st., Boston, Mass., this 25th day of May, 1908.

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Witnesses:
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