

(No Model.)

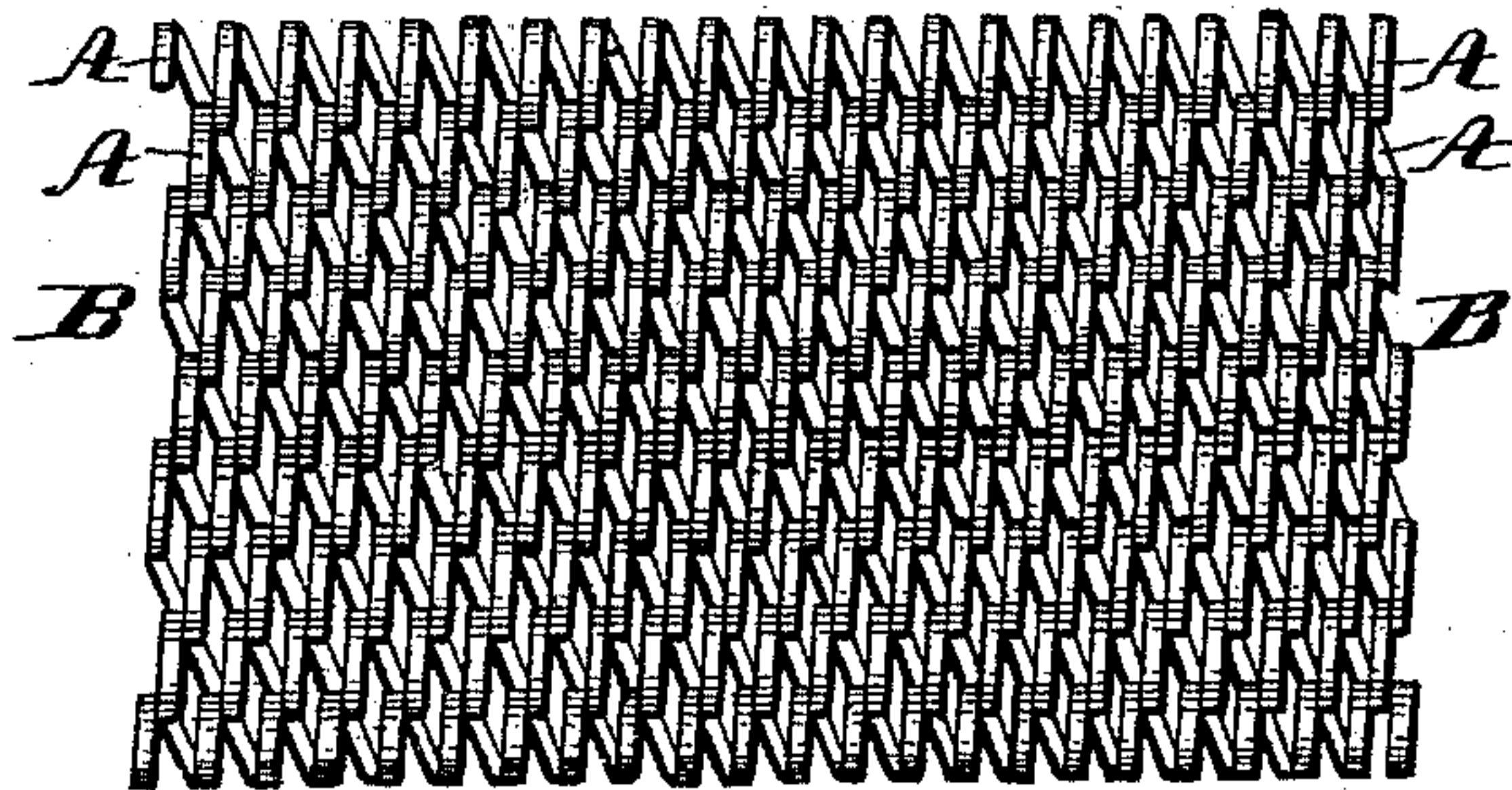
T. MIDGLEY.

WIRE BELTING.

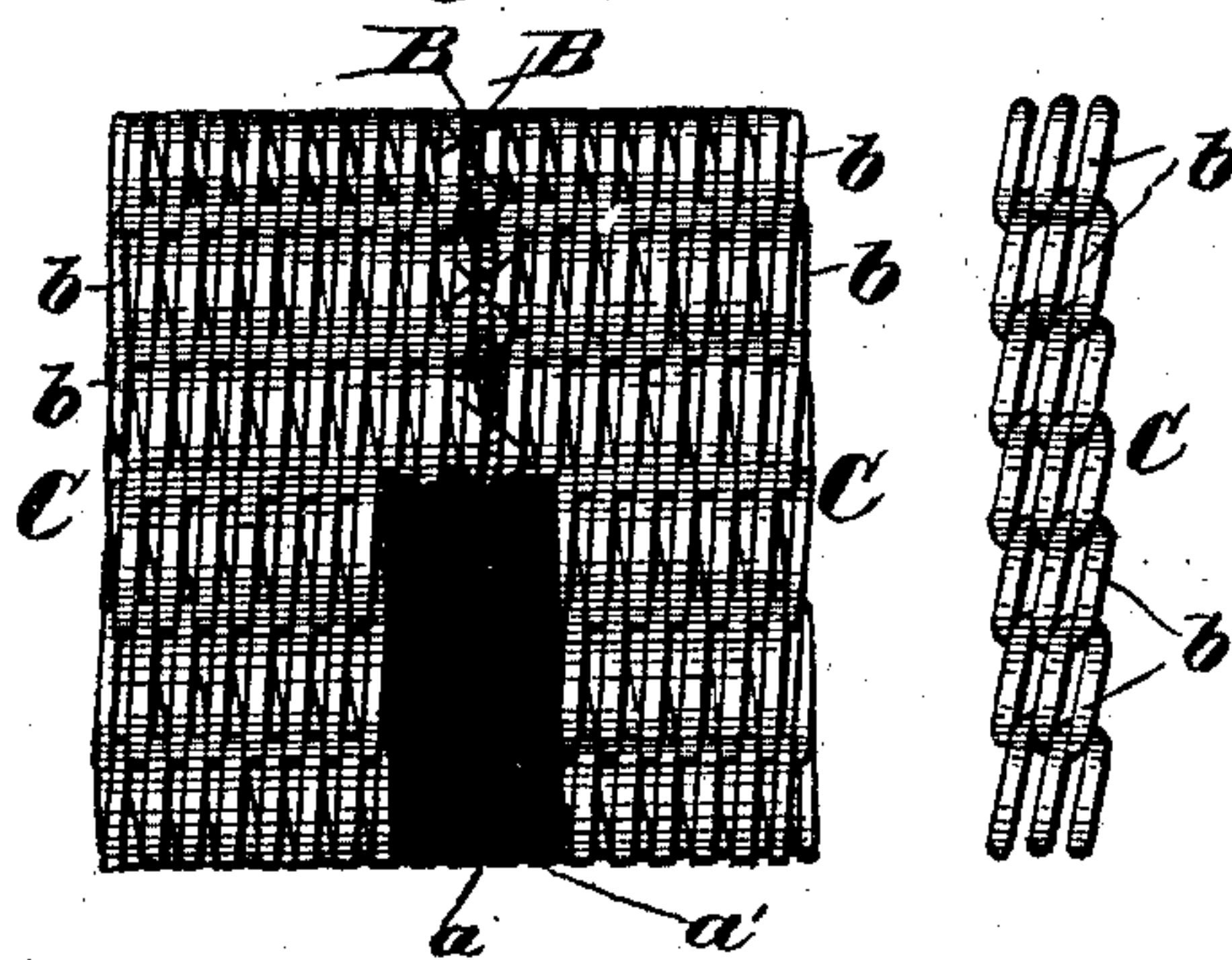
No. 398,423.

Patented Feb. 26, 1889.

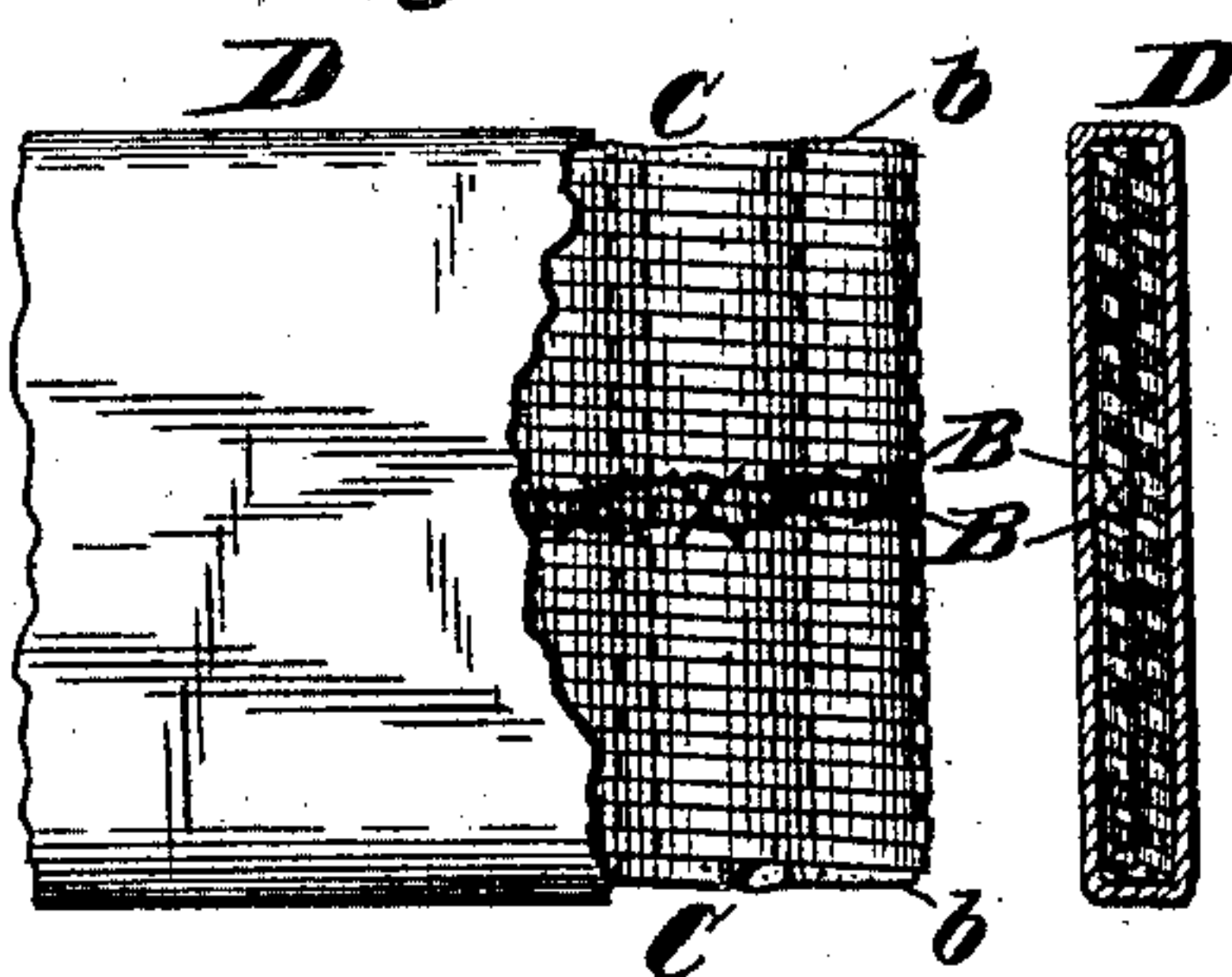
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses—*

*Wm. H. Scott.*  
*Wm. E. Dyre.*

*Inventor.*

*Thomas Midgley*  
*By Johnstone, Reinold & Dyre*  
*Attorneys*



# UNITED STATES PATENT OFFICE.

THOMAS MIDGLEY, OF BEAVER FALLS, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JAMES E. EMERSON, OF SAME PLACE.

## WIRE BELTING.

SPECIFICATION forming part of Letters Patent No. 398,423, dated February 26, 1889.

Application filed May 31, 1888. Serial No. 275,579. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS MIDGLEY, a citizen of the United States, residing at Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Wire Belting; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to wire belting, and has for its object an improvement in the belting shown and described in my application for a patent filed February 10, 1888, Serial No. 263,901.

The invention will be hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which form part of this specification, Figure 1 is a plan view of a section of wire belting before being flattened and folded. Fig. 2 is a similar view of a section of wire belting after it has been flattened and folded and an edge view of the same on an enlarged scale; and Fig. 3 represents a plan view of a section of flattened and folded wire belting partly covered with rubber and a cross-section thereof.

Reference being had to the drawings and the letters marked thereon, A represents helical coils of wire, which are twined together by one coil being screwed into another until a sheet or belt of any desired length and width is formed. The coils A are of a length equal to double the width of a finished belt, and the sheet is folded transversely throughout its length, bringing the edges B B together in or near the center of one side of the folded sheet, as shown in Fig. 2.

The edges may be secured by a strand of wire, *a*; or a strip of rubber, *a'*, may be applied over them and rolled into the interstices, which in either case will prevent them separating. After the sheet has been formed it is heated and the helices stretched and flattened into links *b*, as shown in Figs. 2 and 3, in any approved manner, and the links made

to seat one in the adjacent end of the adjoining links throughout the entire length of the sheet to prevent stretching of the completed belt when in use. The sheet is then folded transversely throughout its length, bringing the ends of the coils together at or near the center of one side of the folded sheet, and the whole tempered in a suitable furnace. The ends of the coils are then secured. If by a strip of rubber, the sheet is passed between rolls with a strip of rubber over the joint and rolled into the interstices of the sheet to cause it to adhere; if by a strand of wire, it is subsequently rolled to set the folds at the edges.

By folding the sheet transversely from both sides or ends of the coils A smooth working-edges C C are formed, which will not cut a shipper or the belt when running crossed, and a belt of double thickness is produced the weight of which is much less than a belt of single thickness possessing the same tensile strength.

In narrow belting the wire may be of lighter grade than in single belting of the same width, and the weight of the wire should be increased in proportion to an increased width of the belt.

A belt thus constructed may be covered on one side or both sides with rubber and canvas, or rubber or its equivalent material alone, as shown at D in Fig. 3, and again passed between rolls heated to about 170° to 172° Fahrenheit to cause the rubber to soften and embed itself in the interstices between the links and adhere thereto.

The method involved in my invention is claimed in another application, Serial No. 277,866, filed June 22, 1888.

Having thus fully described my invention, what I claim is—

1. A belt composed of a series of inter-twined wire helices with doubled-over edges, forming a substantially central longitudinal seam on one side of the belt, as and for the purpose set forth.

2. A belt composed of a series of inter-twined wire helices with doubled-over edges,

forming a substantially central longitudinal seam on one side of the belt, and secured in the manner substantially as described.

3: A belt composed of a series of inter-  
5 twined wire helices with doubled-over edges, forming a substantially central longitudinal seam on one side of the belt, and provided with a covering of rubber or equivalent material, substantially as described.

In testimony whereof I affix my signature in 10  
presence of two witnesses.

THOMAS MIDGLEY.

Witnesses:

J. F. MERRIMAN,  
GEO. W. MORRISON.