

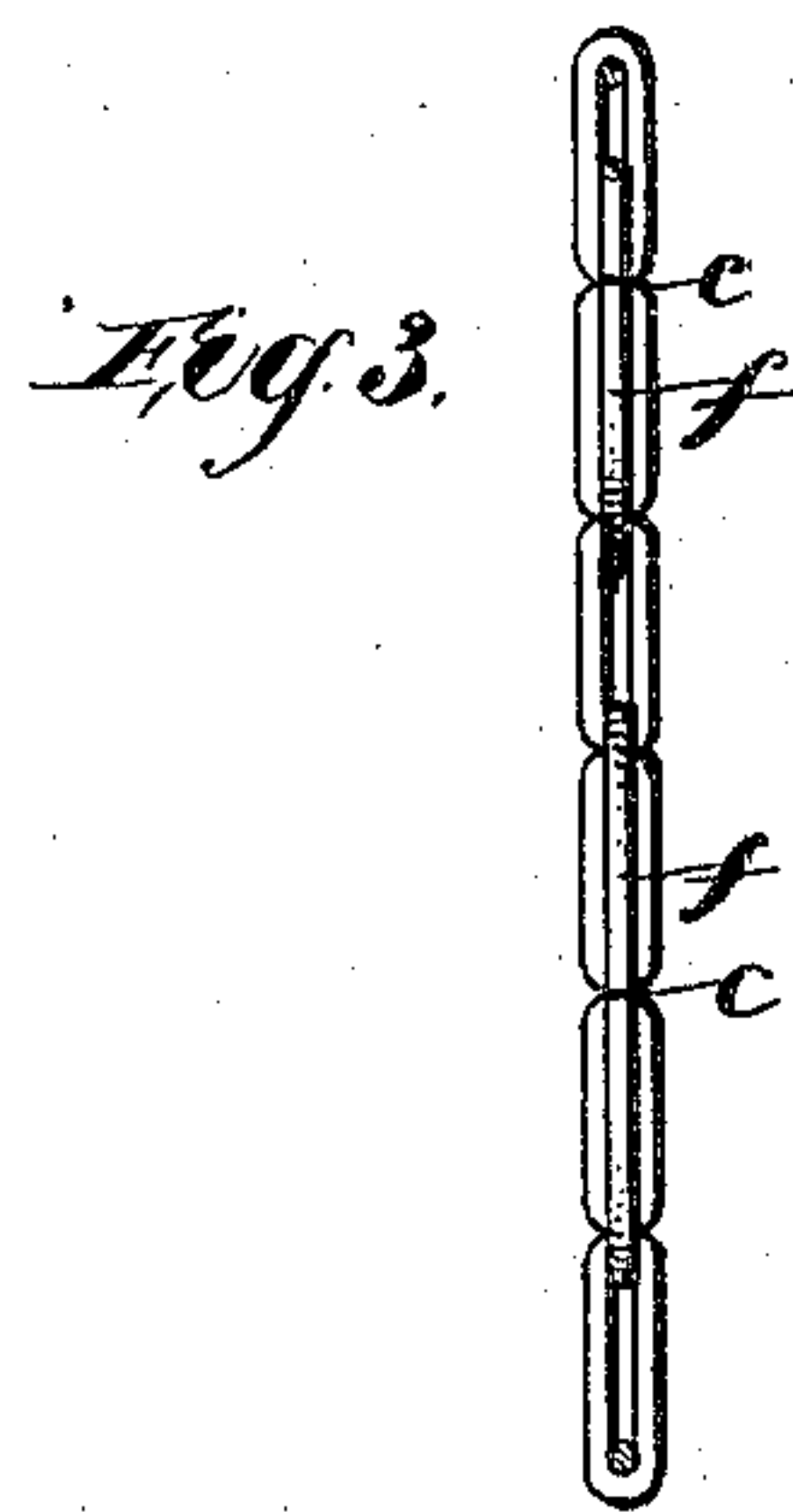
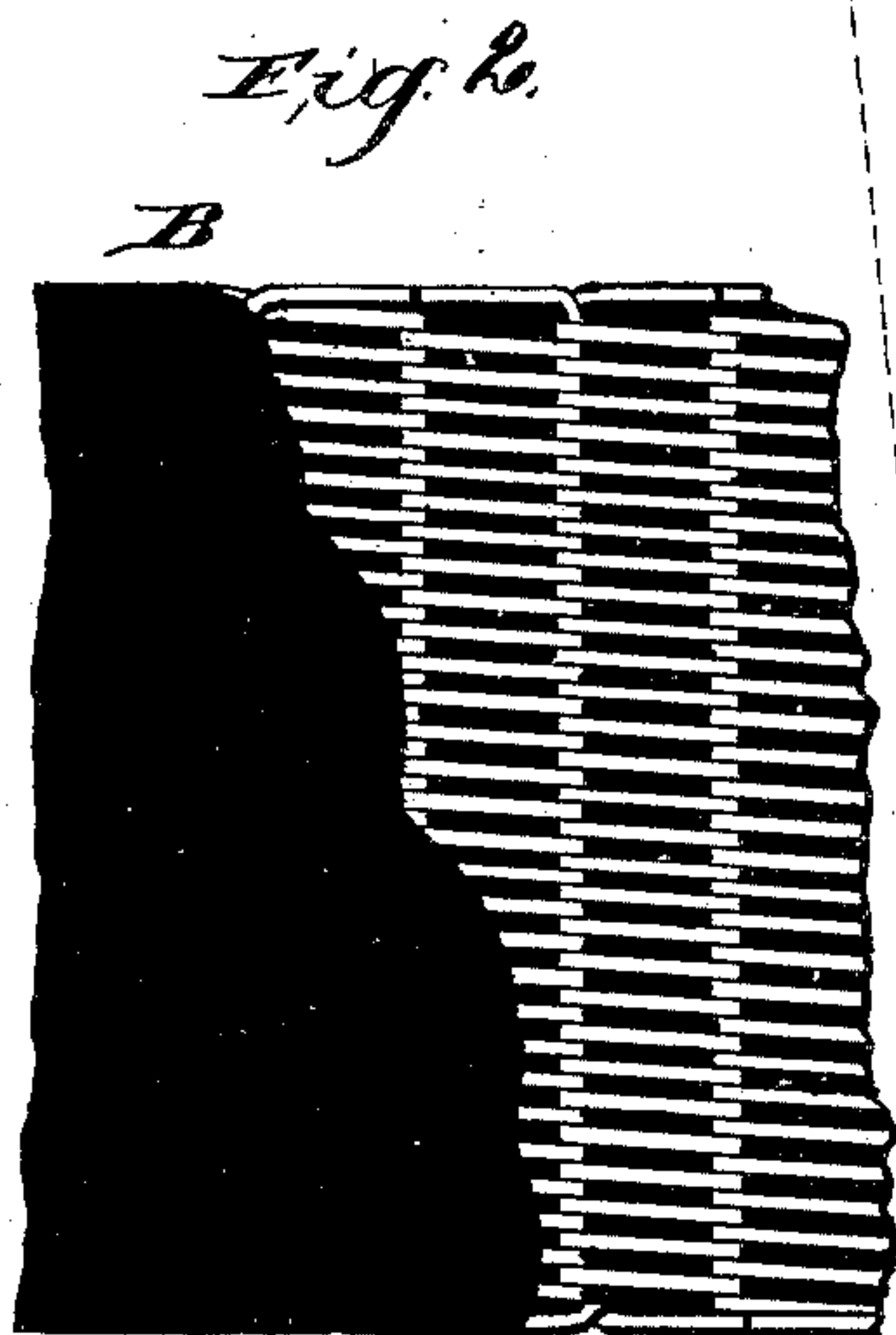
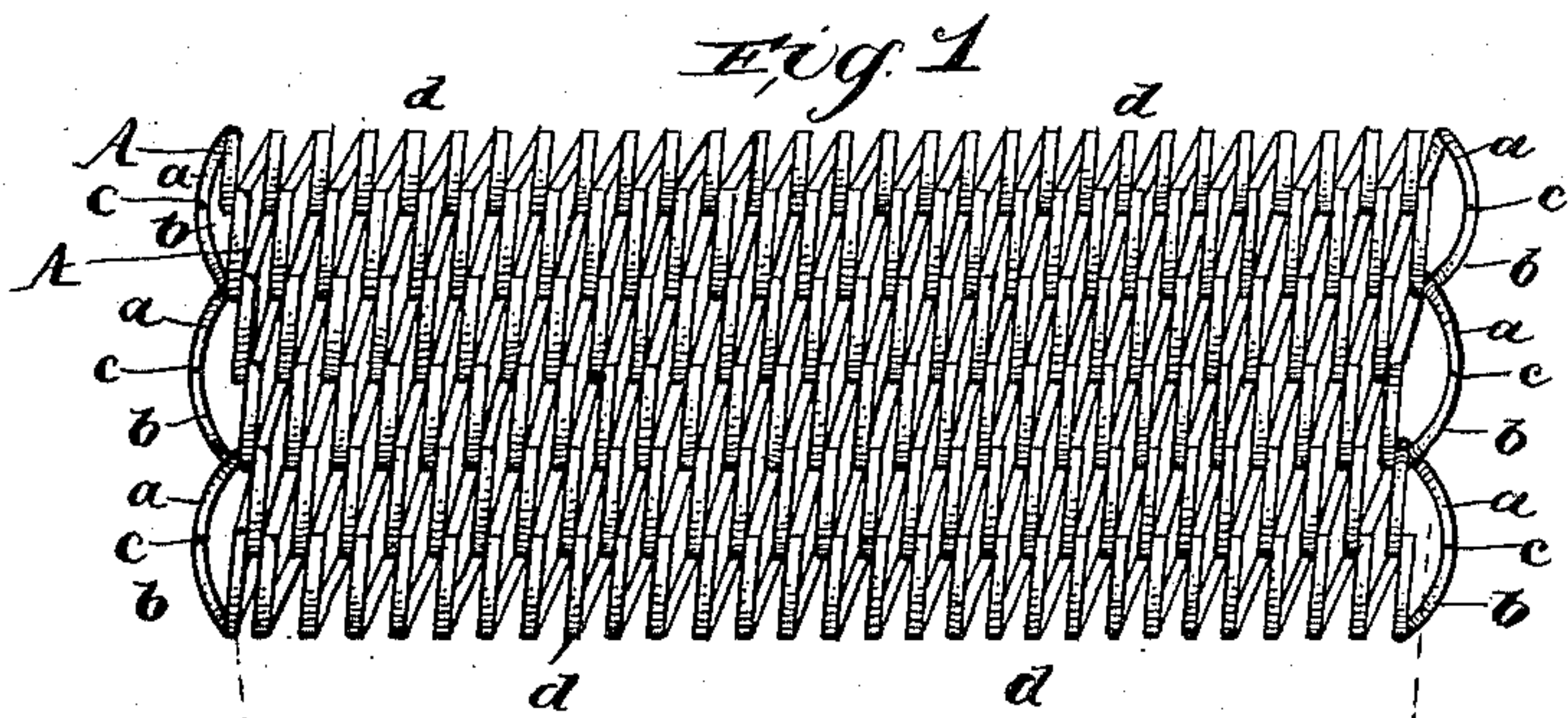
(No Model.)

T. MIDGLEY.

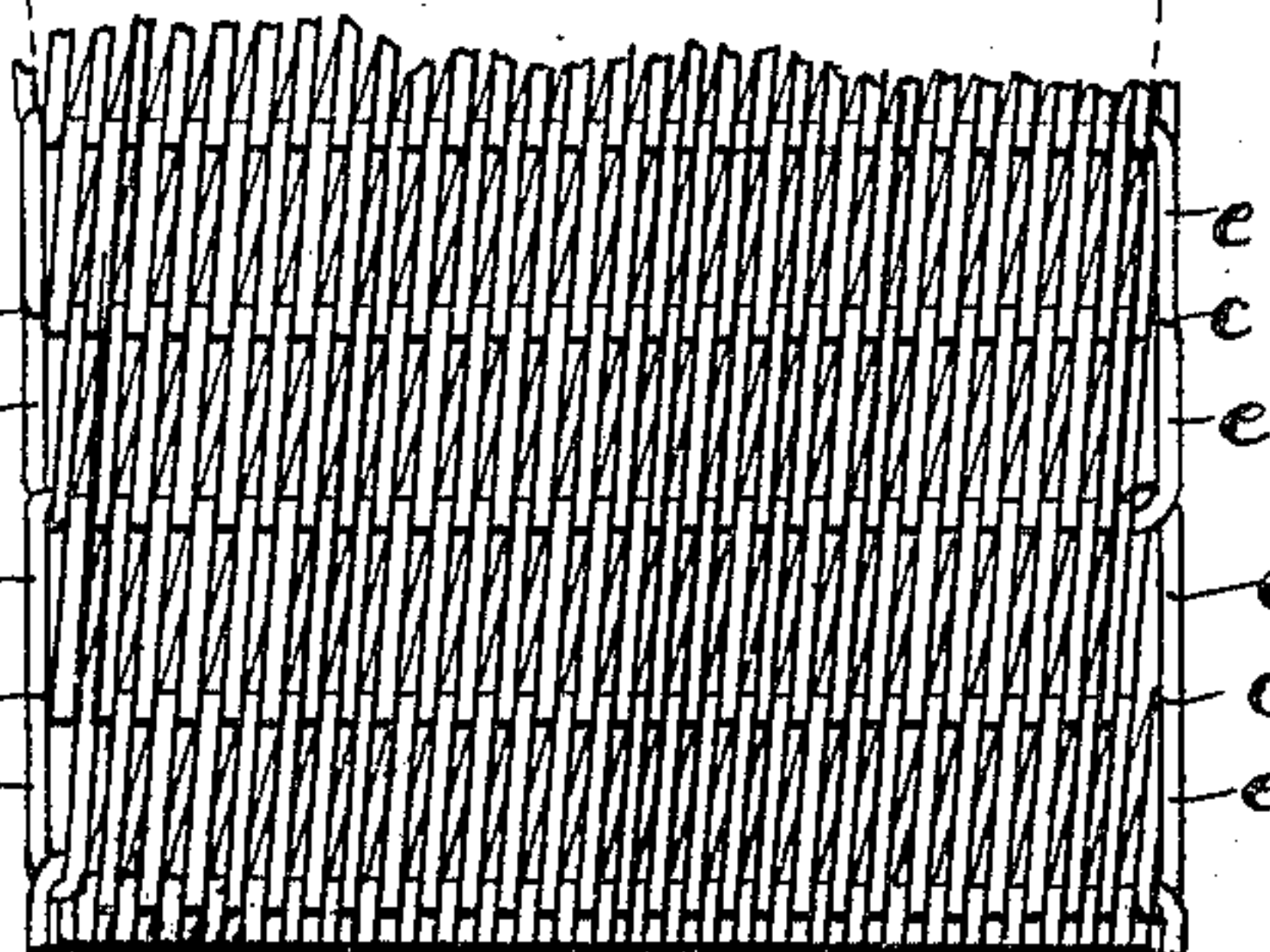
WIRE BELTING.

No. 398,427.

Patented Feb. 26, 1889.



Witnesses
Wm. H. Scott
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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. 398,427, dated February 26, 1889.

Application filed October 20, 1888. Serial No. 288,626. (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 construction of the edges of a belt.

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, showing the sections of coiled wire with their ends welded before and after having been stretched. Fig. 2 is a similar view of a section of the belting after having been stretched and partly covered with rubber; and Fig. 3 is a section of the belting, showing one of its edges.

Reference being had to the drawings and the letters thereon, A represents sections of coiled wire, which are intertwined by securing one section into another until a sheet of any desired length and width has been formed. After the sheet has been formed the ends *a b* of the first and second sections A are drawn out slightly, as shown in Fig. 1, and made to abut. All of the ends of the sections A throughout the entire length of the sheet are drawn out and made to abut in the same manner. The ends are then welded at the point *c* by an electric current or by other suitable means, and the sheet made to present a continuous strand of wire and the edges of the sheet an unbroken surface. By this construction the ragged ends of the wire, heretofore a source of great annoyance and detriment to the practical use of wire belting, are entirely removed and a smooth and regular working-edge for the belt produced without the encircling of the edge with a separate longitudinal coil. After the ends *a b* have all been welded, the sheet is passed through a furnace heated to a proper degree (about a cherry-red heat) and the helices *d* stretched into elongated and flattened links *e* by applying longitudinal tension to the sheet while passing through the furnace.

The stretching of the helices may be effected by engaging the front end of the sheet in a suitable clamp and drawing the sheet by any suitable means, while the rear end of the sheet may be held upon a reel or made to pass between suitable tension-rolls.

In drawing the sheet through the furnace the projecting ends *a b* of the sections A are drawn back into their original position, and when the helices have been stretched and flattened the welded ends form long links *f*, as shown in Fig. 3. The sheet is then tempered, when it is ready for use as belting.

In stretching and flattening the helices the links are all made to seat evenly and regularly throughout the entire length of the sheet, and the stretch of the wire taken out of the belting before it is put into use. Furthermore, in stretching the helices the width of the sheet is reduced about one-third, while the length is increased to about double that of the original sheet.

The wire belting thus constructed may be covered with canvas and rubber, or with rubber or its equivalent—such as caoutchouc—alone, as shown at B in Fig. 2, and 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 of stretching the sheet is claimed in another application filed herewith, Serial No. 288,630.

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

1. Wire belting composed of intertwined transverse sections of coiled wire having the helices elongated, and the ends of the wires forming adjacent sections welded together to form an edge for the belt, substantially as described.

2. Wire belting composed of intertwined transverse sections of coiled wire having the helices elongated, and the ends of the wires forming adjacent sections welded together, and a covering of rubber or equivalent material, substantially as described.

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

THOMAS MIDGLEY.

Witnesses:

J. F. MERRIMAN,
JOHN REEVES.