

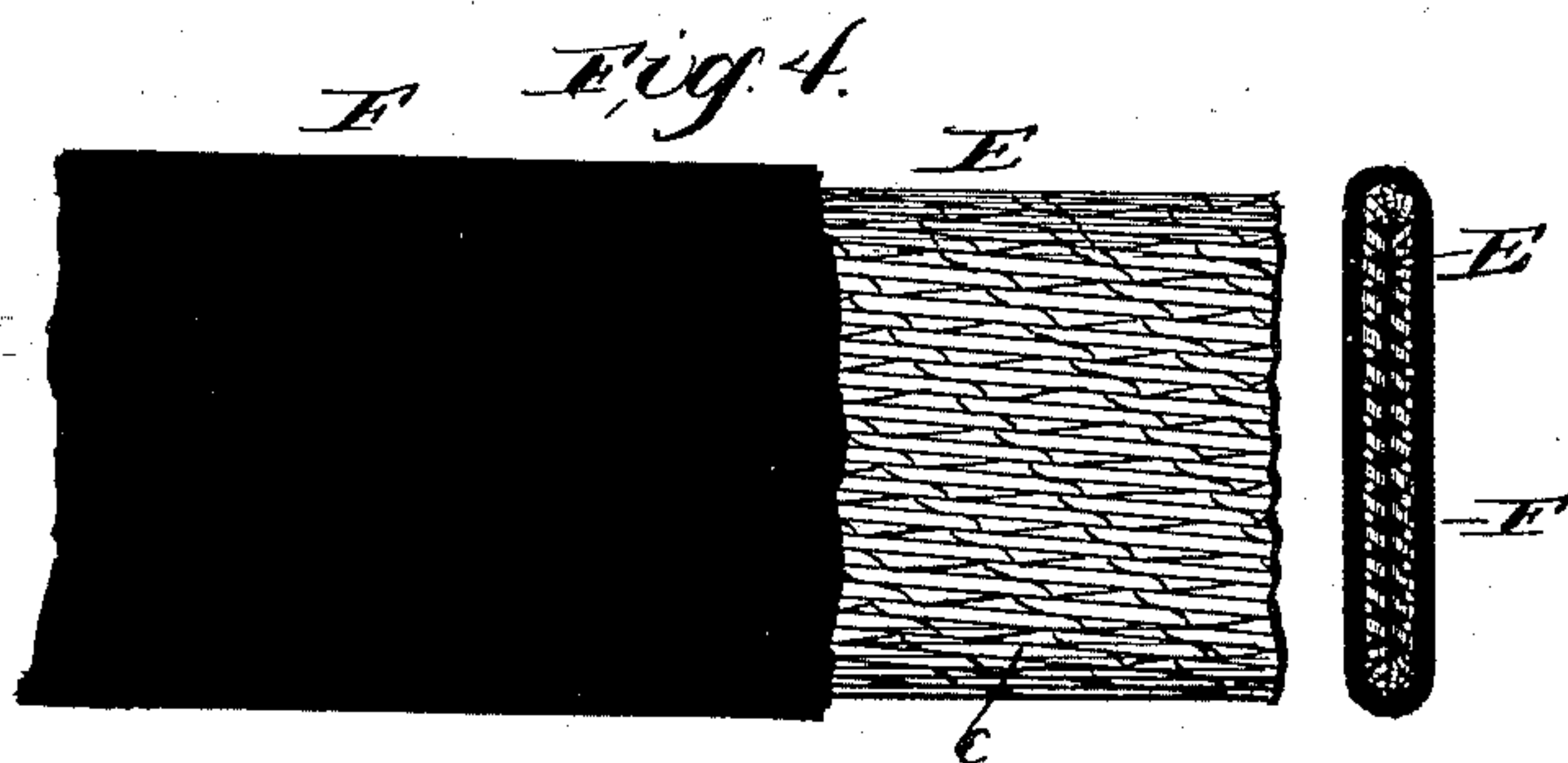
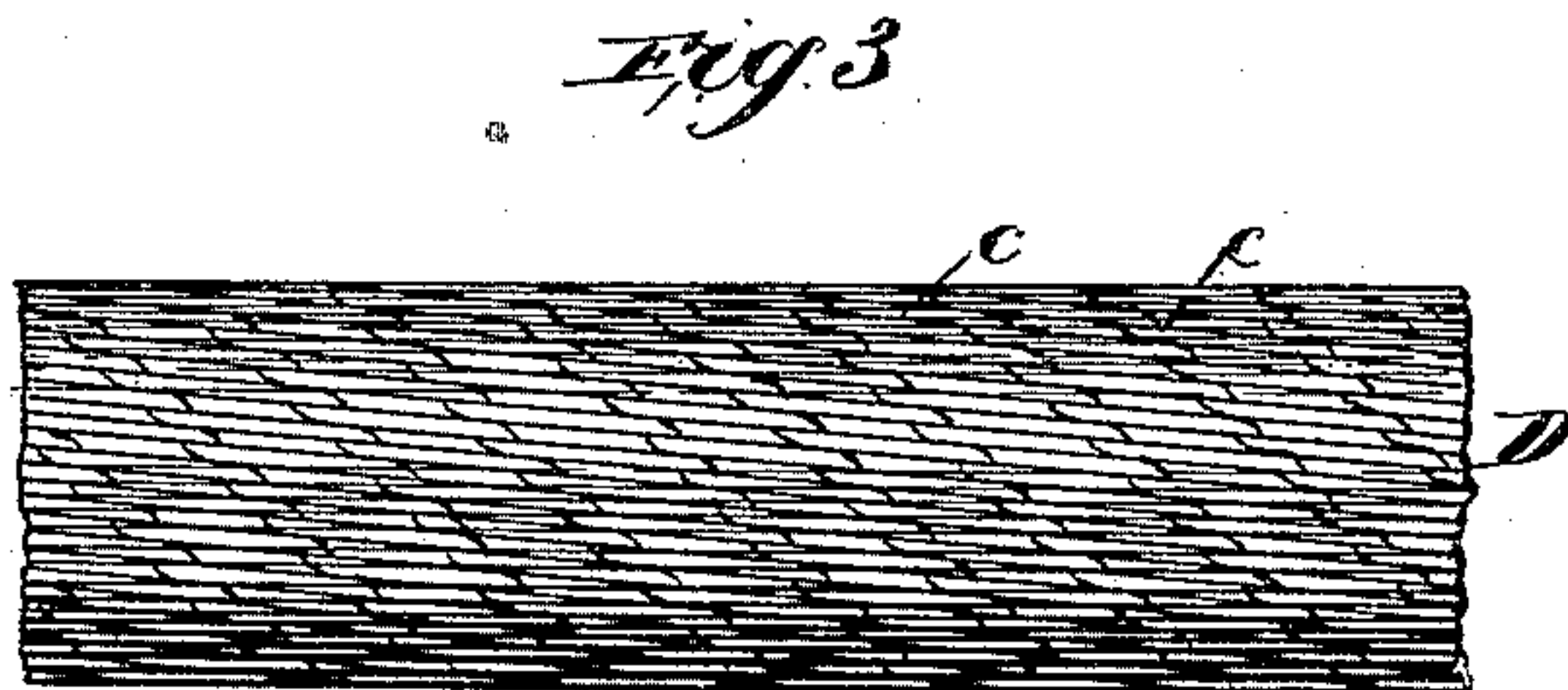
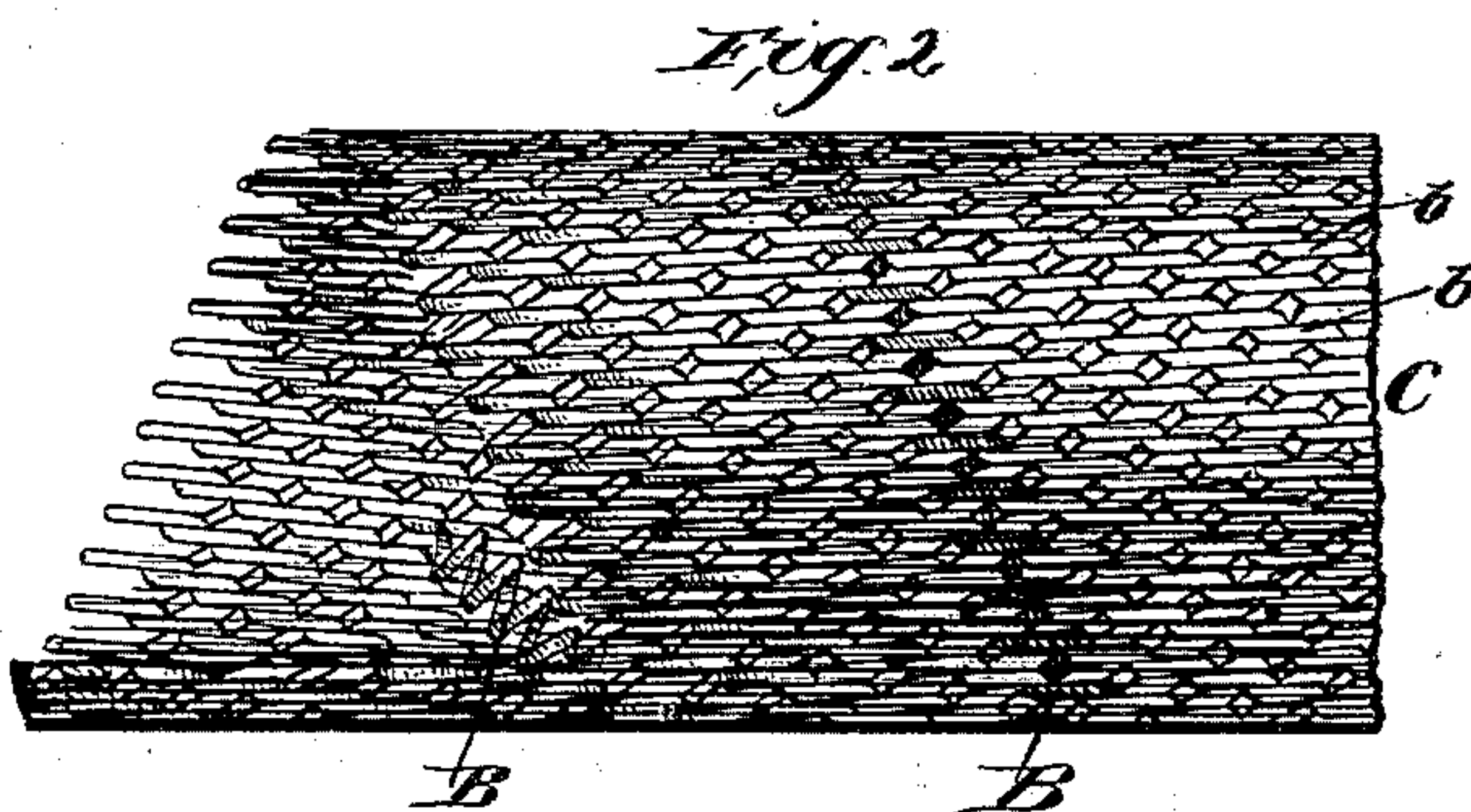
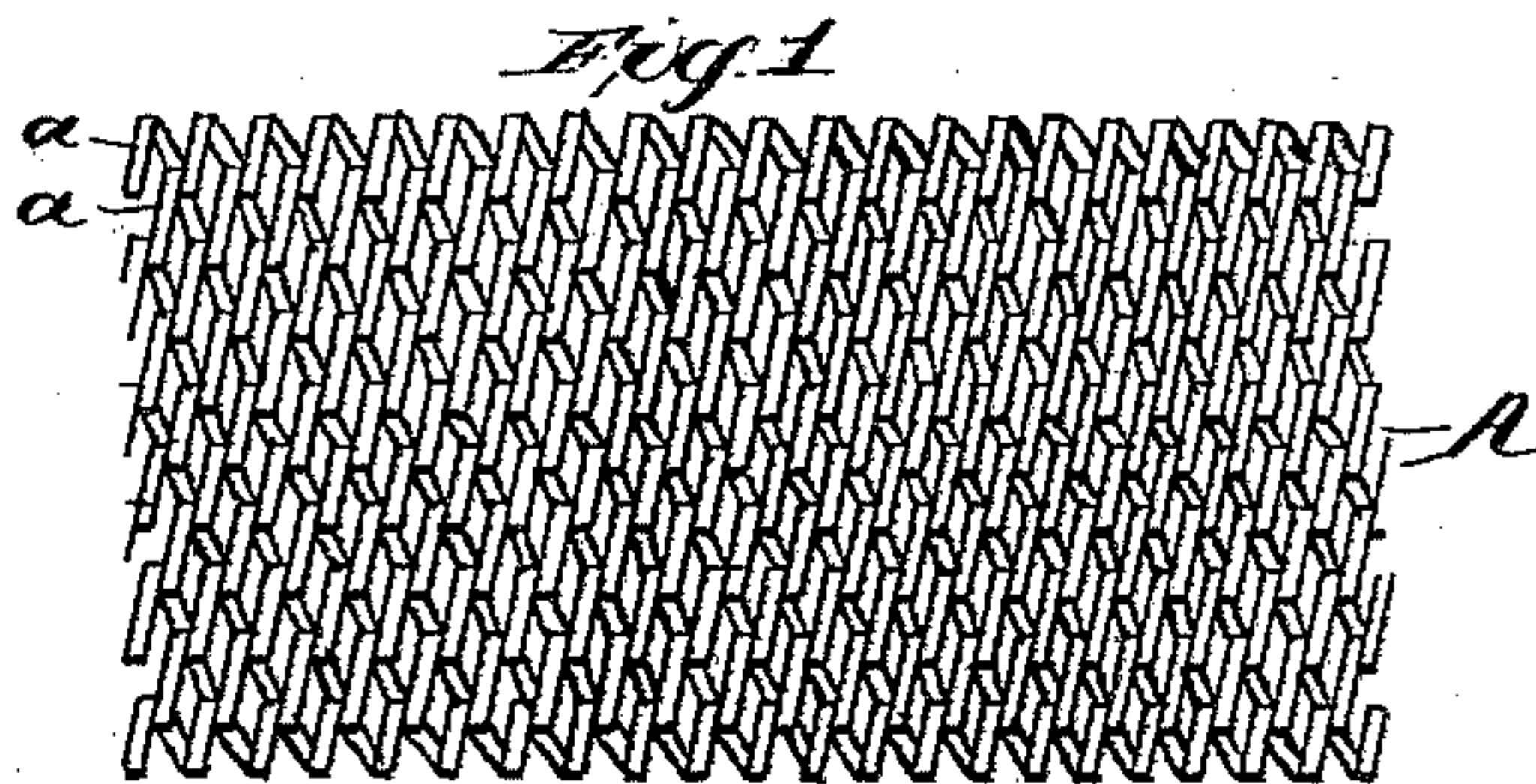
(No Model.)

T. MIDGLEY.

WIRE BELTING.

No. 398,429.

Patented Feb. 26, 1889.



Witnesses
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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. 398,429, dated February 26, 1889.

Application filed October 20, 1888. Serial No. 288,628. (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 improved construction of said class of belts.

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 represents a plan of a section of a sheet of intertwined sections of coiled wire; Fig. 2, a side elevation of a tube formed from said sheet; Fig. 3, a similar view of the tube after the helices have been elongated, and Fig. 4 a top and end view of a belt partly covered with rubber.

Reference being had to the drawings and the letters marked thereon, A indicates a sheet or body formed of intertwined sections *a* of coiled wire screwed one into another until a sheet of any desired length and width has been formed. The sheet is then wound spirally around a mandrel and the adjacent edges thereof secured together by a separate section, B, of coiled wire being intertwined into the helices of said edges and a tube, C, formed. The tube C is then passed through a furnace heated to about a cherry-red heat, and the helices *b* of the tube elongated, flattened, and seated in each other, (under longitudinal tension,) as shown at *c* in tube D, Fig. 3.

The tension may be applied to the tube C in any approved manner, and may be effected by grasping the tube at the front end of the furnace with a pair of suitable tongs or a clamp, attaching the tongs or clamp to a device for drawing upon the tube and stretching it as it passes through the furnace.

In stretching the tube C it increases in length about two and a half times, and is reduced in diameter in the same proportion. The tube D is then again heated and passed between rolls to flatten it into the form shown at E in Fig. 4, and produces a double belt in which all of the elongated links *c* cross the belt diagonally and present an unbroken and continuous working-surface on both sides and edges. By causing the links or helices to cross the belt diagonally the tensile strength of the belt is greatly increased, the tendency to stretch longitudinally and laterally overcome, and a belt produced in which there are no inequalities in its strength or surface, while the gripping qualities of the belt on the pulley are appreciably enhanced. The belt E is then tempered and may be used with or without a covering, F, of rubber or equivalent material. When it is desired to cover the belt, the rubber is laid upon one or both sides of the belt and passed between rolls suitably heated, and the rubber pressed into the interstices between the links and embedded therein.

The tube D herein shown is claimed in my application Serial No. 288,627.

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

1. Wire belting consisting of a double thickness or layers of intertwined elongated helices crossing the belt diagonally and presenting folded edges and a continuous and unbroken surface, substantially as described.

2. Wire belting composed of a double thickness or layers of intertwined elongated helices crossing the belt diagonally and presenting folded edges and a continuous and unbroken surface, and provided with a covering of rubber or equivalent material.

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

THOMAS MIDGLEY.

Witnesses:

J. F. MERRIMAN,
JOHN REEVES.