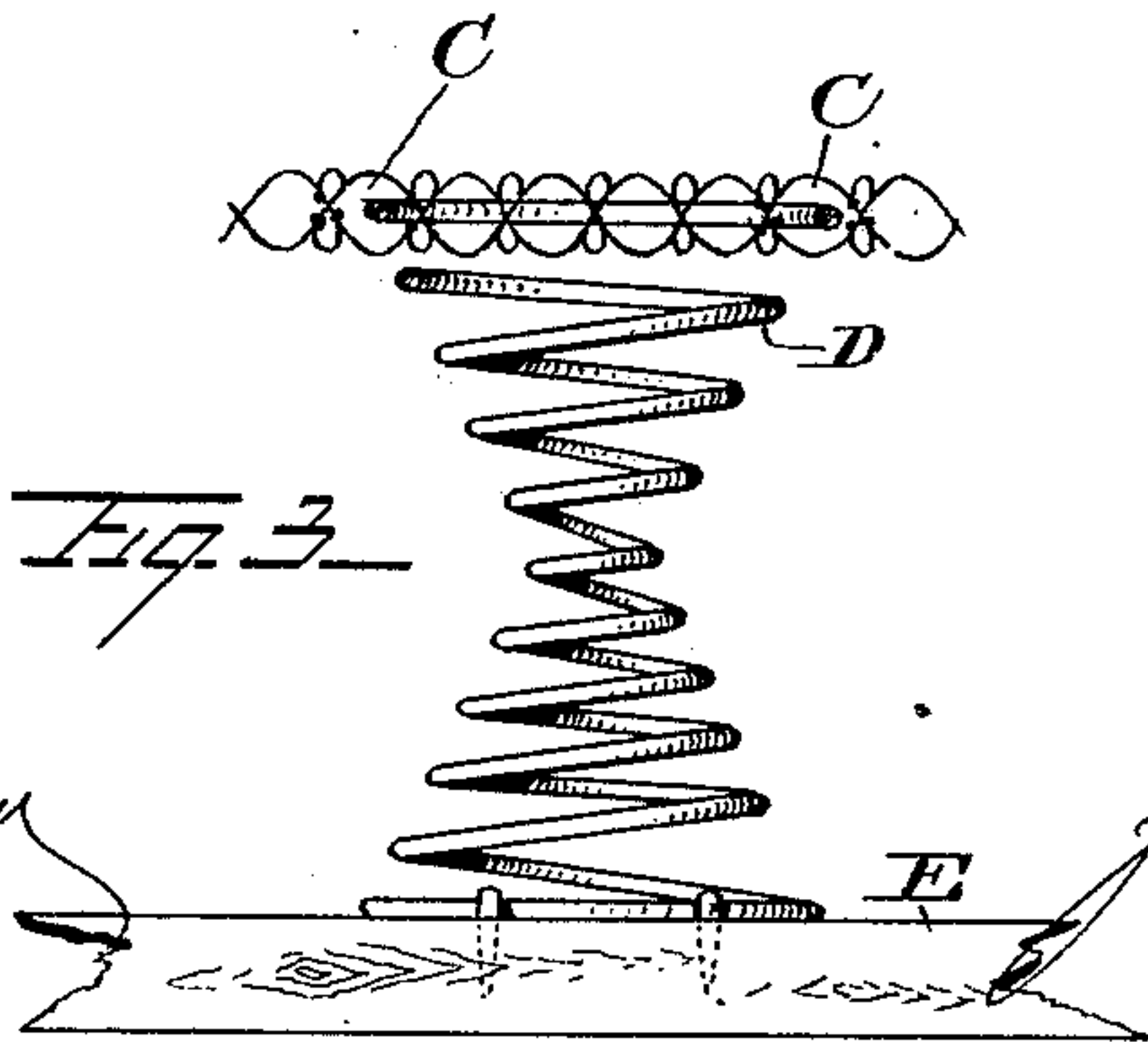
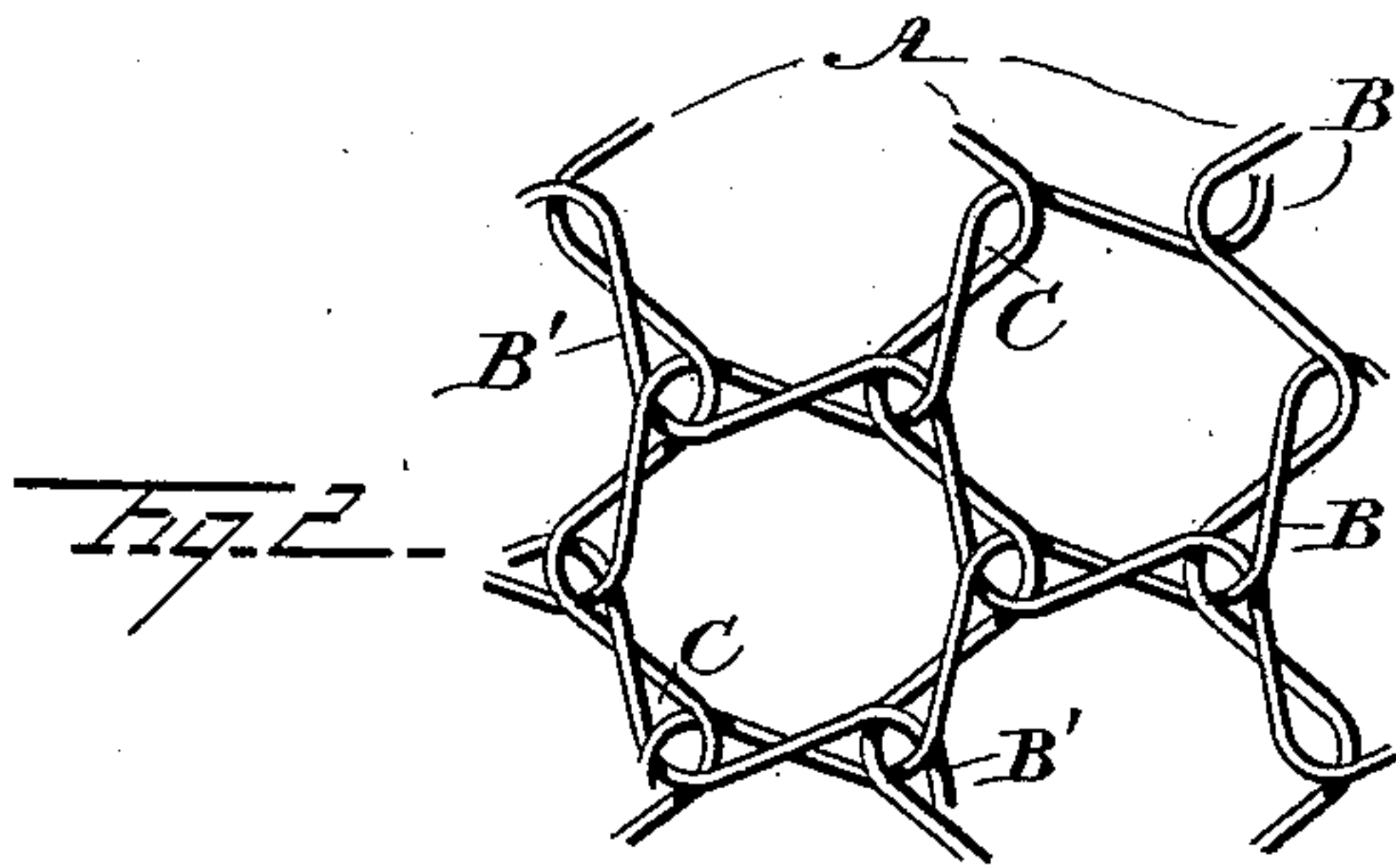
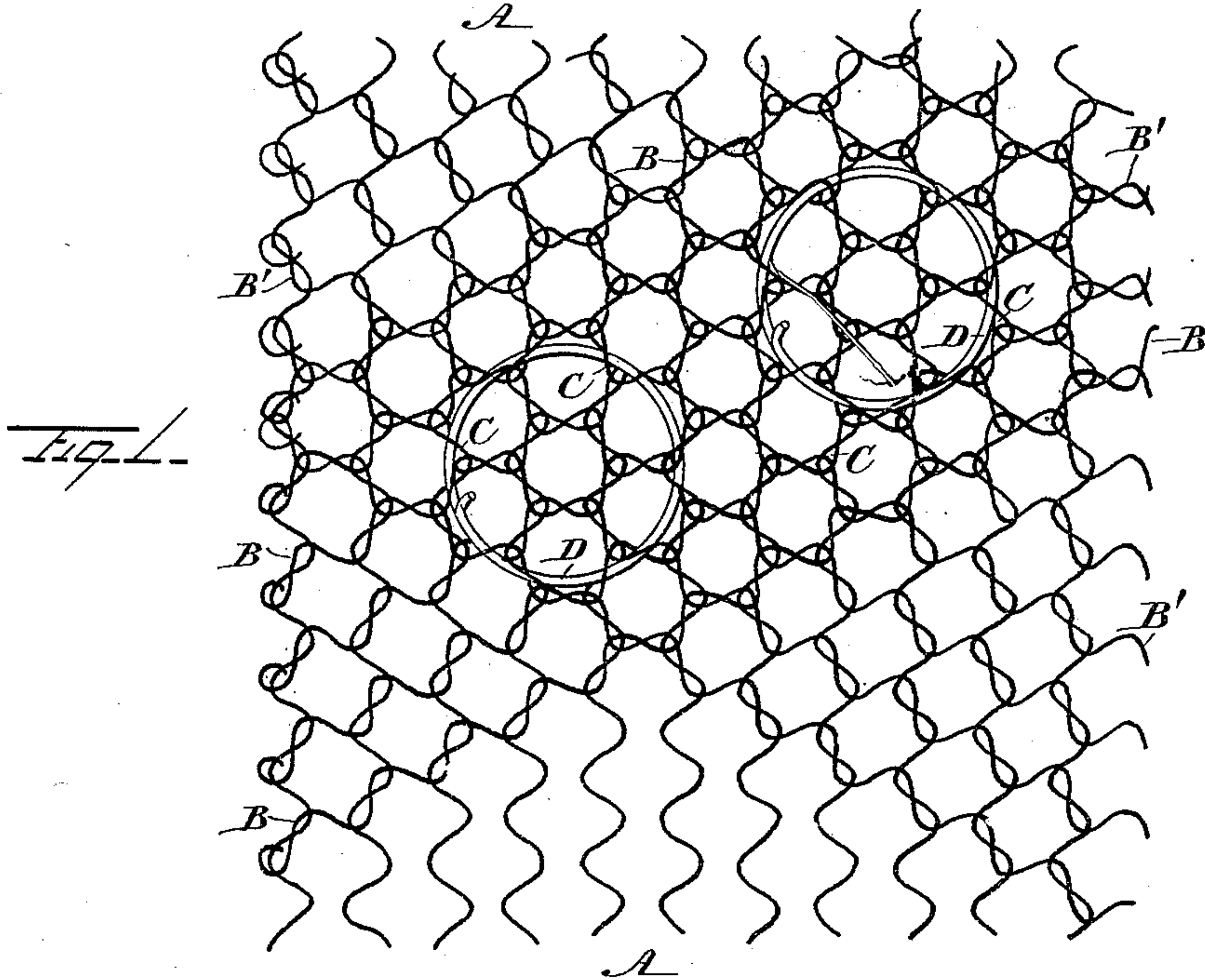


(No Model.)

J. HANCOCK.
WIRE FABRIC.

No. 436,977.

Patented Sept. 23, 1890.



WITNESSES:
John A. Nolan
Wm. Collet

INVENTOR
John Hancock
BY *Joshua Pusey*
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN HANCOCK, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JOSEPH HANCOCK, OF SAME PLACE.

WIRE FABRIC.

SPECIFICATION forming part of Letters Patent No. 436,977, dated September 23, 1890.

Application filed March 21, 1890. Serial No. 344,727. (No specimens.)

To all whom it may concern:

Be it known that I, JOHN HANCOCK, a citizen of the United States, residing at the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Wire Fabrics, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 illustrates a piece of wire fabric made according to my invention. Fig. 2 is a magnified view of a couple of meshes of the fabric, showing more clearly the way in which the helices are entwined or looped. Fig. 3 is a partial section of a bed-bottom in which the fabric is used.

The nature of this invention is a wire fabric composed of a series of helices entwined or looped together in a novel manner, whereby certain advantages are secured, as hereinafter described.

Although the fabric is more particularly designed for use as or in connection with a bed-bottom or mattress, yet it is adapted for the purpose of mats, fire and window screens, fence-panels, and kindred devices.

The construction and operation of the invention will be duly described, and so much thereof as is considered new will be pointed out in the claims.

Referring to the annexed drawings, A represents a row or series of parallel elongated spiral springs or helices, which may be termed the "warp" of the fabric. These helices are disposed in the relative positions shown in Fig. 1—that is to say, they are set at regular intervals apart and in such wise that the helices are alternately pitched or bent in opposite directions. Woven or intertwined with these warp-helices is a series of diagonal or right-oblique helices B, whose relative arrangement is like that of the former. Woven or intertwined with both these sets of helices and of similar form and relative arrangement therewith is a series of oppositely-diagonal or left-oblique helices B'. These two diagonal sets of helices constitute, in effect, the weft of the fabric and they are by preference run through the warp at an angle of about thirty degrees thereto, more or less. There is thus produced a series of hexagonal or approxi-

mately hexagonal meshes, which impart to the fabric a novel and pleasing appearance. The angles or corners of each mesh are tied or bound together, as it were, and therefore the helices cannot slip upon each other under any conditions.

The fabric may be readily rolled or folded up for convenience of packing or transportation, but upon its being released it will immediately assume its normal or plane position. This is owing to the elasticity of the springs or helices comprising the fabric.

The fabric, by virtue of its resiliency, so to say, is especially desirable for use in conjunction with bed-bottoms or mattresses, for when a body is laid thereupon the fabric, yielding, will conform to a certain extent to the superincumbent body, but when the latter is removed the fabric will resume its former condition.

In each side of the individual meshes there is formed by the adjacent coils of the warp and weft helices a loop or eye C. When helical supporting springs, as D, are employed in connection with the fabric, I avail myself of these loops, using them as a means to sustain the end coils of the springs, which coils are turned or rove therein at proper points, as pictured in the drawings. The coils of the springs lie midway between the surfaces of the fabric, and are therefore supported at every point. Another advantage of this arrangement is that the springs do not extend to or above the top of the fabric, as was the case in previous constructions.

The springs may rest upon cross-slats, as E, Fig. 3, in the usual way; or, if desired, the lower coil may be supported, like the upper one, within another web of my improved fabric. This latter construction being obvious requires no illustration.

The ends of the helices comprising the fabric may be bent over upon each other, as seen at the left of Fig. 1; or, if preferred, a suitable border of stout wire may be used, depending, of course, upon the purposes for which the fabric is intended.

It is to be borne in mind that the foregoing-described fabric is an improved single or continuous fabric and not a double fabric. By a "double fabric" I mean one made up

of two single or continuous fabrics woven or looped together, each of said latter fabrics being composed of a series of interwoven parallel spiral springs or helices.

5 Having thus described my invention, I claim—

1. The herein-described wire fabric, comprising a series of parallel helices set at regular intervals apart, so that the adjacent helices
10 are not woven together, a second series of diagonal helices set in like manner and entwined or looped with said first series, and another series of oppositely-diagonal helices entwined or looped with the first and second series,
15 substantially as set forth.

2. The combination, with a wire fabric comprising a series of parallel helices set at regu-

lar intervals apart, so that the adjacent helices are not woven together, a second series of diagonal helices set in like manner and entwined
20 or looped with said first series, and another series of oppositely-diagonal helices entwined or looped with the first and second series, whereby the loops or eyes C are formed, of the supporting-springs having their end coils
25 turned or rove into said loops or eyes, substantially as described.

In testimony whereof I have hereunto affixed my signature this 28th day of February, A. D. 1890.

JOHN HANCOCK.

Witnesses:

W. S. SHOURDS,
A. J. DINGEE.