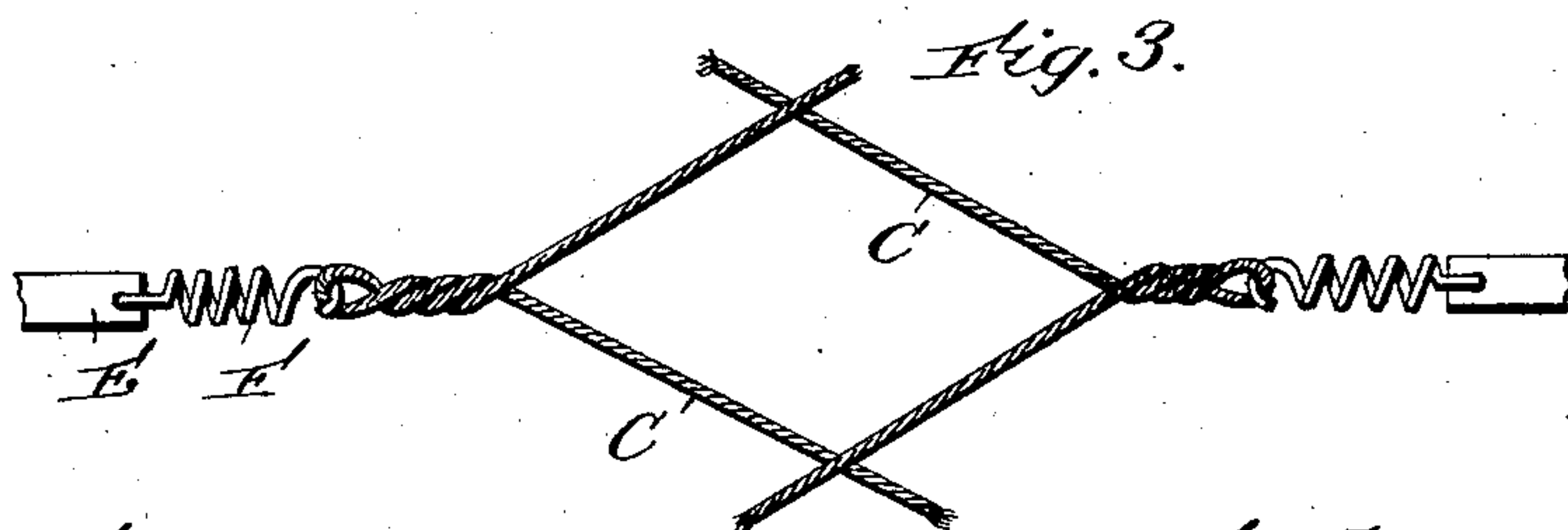
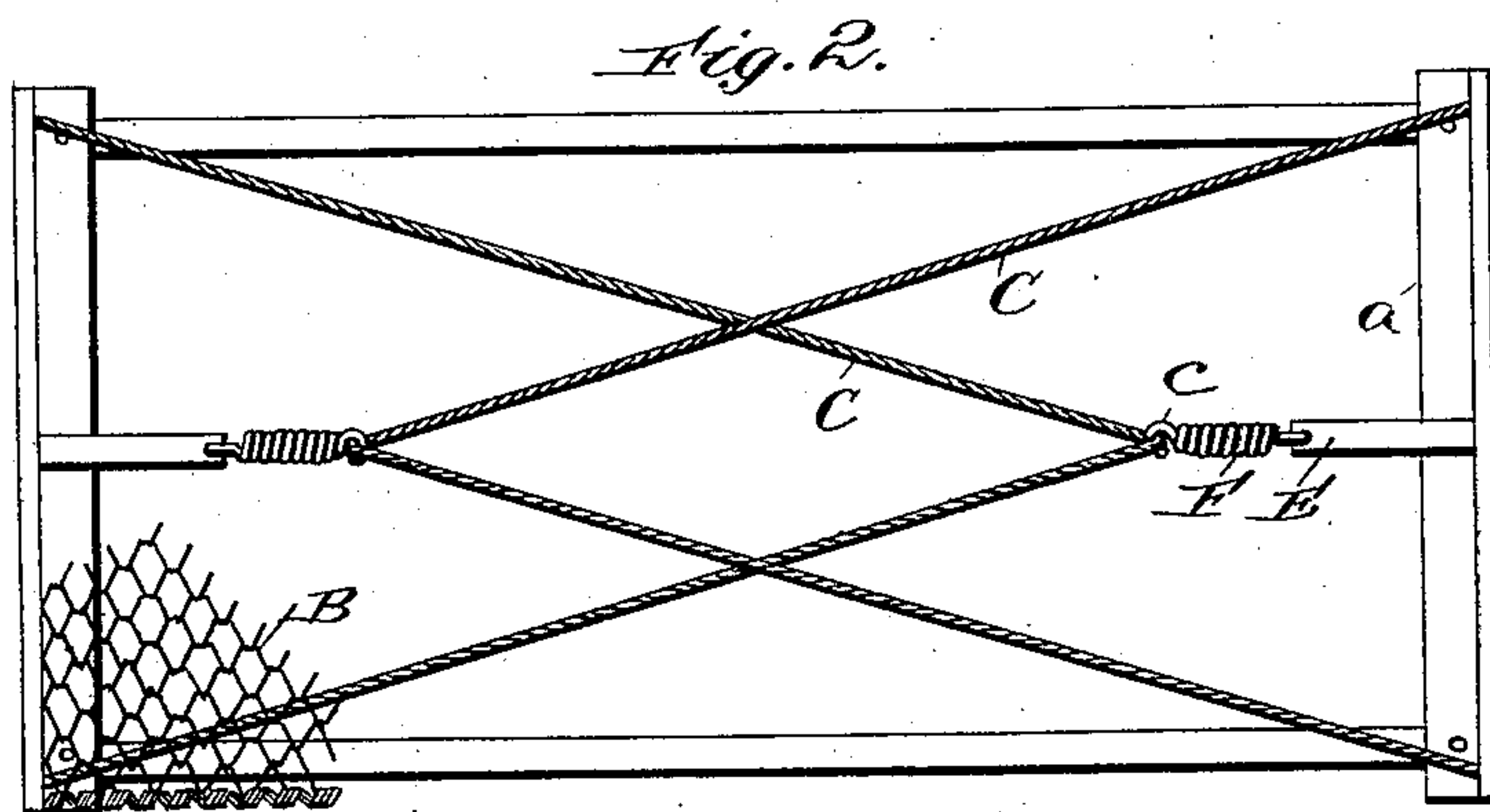
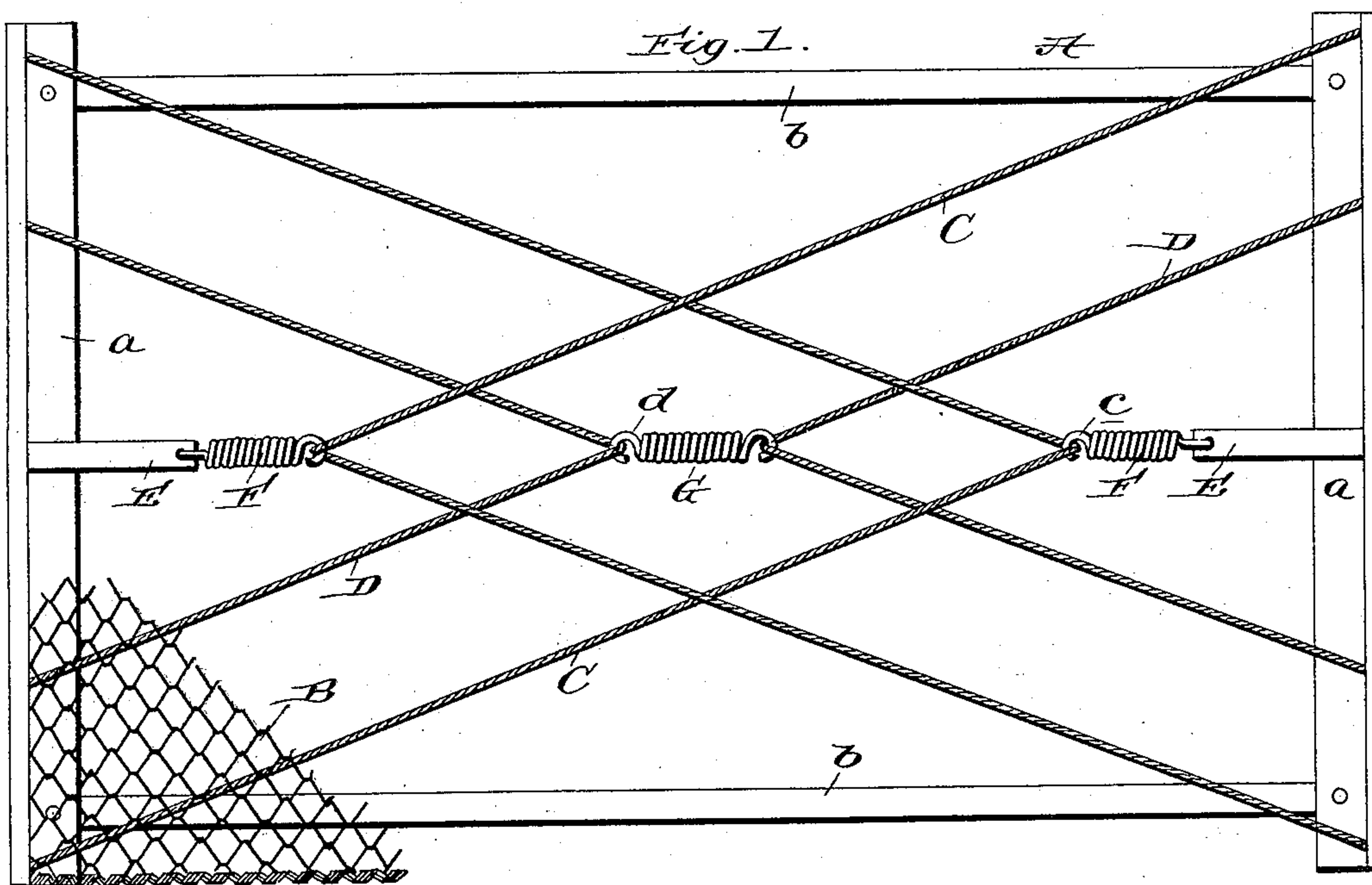


(No Model.)

J. B. RYAN.
BED BOTTOM.

No. 599,736.

Patented Mar. 1, 1898.



witnesses: *Fig. 4.*
Chas. Gauder
Jessie A. Crony

a'

Fig. 5.
a''

Inventor
J. B. Ryan
BY *James J. Sheehy*
Atty.

UNITED STATES PATENT OFFICE.

JAMES B. RYAN, OF NEW YORK, N. Y., ASSIGNOR TO THE NEW YORK
WOVEN WIRE MATTRESS COMPANY, OF SAME PLACE.

BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 599,736, dated March 1, 1898.

Application filed April 21, 1897. Serial No. 633,173. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. RYAN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Bed-Bottoms; and I do 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 bed-bottoms, and will be fully understood from the following description and claims when taken in conjunction with the annexed drawings, in which—
Figure 1 is a plan view of my improved bed-bottom with the fabric partly broken away. Fig. 2 is a similar view of a modification. Fig. 3 is a detail plan view illustrating the manner in which the slack of the cables is taken up, and Figs. 4 and 5 are detail views of modified connections for the supporting-cables.

Referring by letter to said drawings, and more particularly to Fig. 1 thereof, A designates the frame of the bed-bottom, which comprises end bars *a* and side bars *b*. B designates a mattress or fabric which rests over and is connected to the frame in the ordinary or any suitable manner, and C D designate V-shaped loops which serve to support the fabric B, so as to prevent undue sagging or sinking of the same, and thereby prolong its usefulness. These loops C D are formed of resilient spirally-coiled-wire cables for a purpose presently described.

The cables forming loops C are connected at their ends to the corners of the frame A, preferably to the ends of frame-bars *a*, and cross or intersect each other, so that their inner portions describe a diamond-shaped figure, as illustrated in Fig. 1. Said cables forming the loops C are also connected at their middles to hooks *c* at one end of tension-springs F, which springs are connected with the frame-bars *a*, preferably through the medium of metal straps E, as shown.

The cables forming the loops D are shorter than those forming the loops C and are connected at their ends to the frame-bars *a* at points intermediate of the ends and middle thereof and have their middles, which extend within the diamond described by the loops C,

connected by a tension-spring G, the said spring being preferably provided with hooks *d* at its ends to engage the cable, as shown.

The cables forming the loops C D serve to efficiently support the mattress at all points and yet preserve to the same all its elasticity. This is due to the fact that being formed of resilient spirally-coiled wire said cables possess endwise elasticity and will therefore expand and contract with the helical spring. This also renders the cables self-supporting, it being obvious that they will expand or stretch when the fabric B is depressed by weight imposed thereon and will contract when the weight is removed and resume their horizontal position. This renders the employment of an auxiliary device for supporting the cables unnecessary, which is an important advantage. Forming the loops C D of coiled-wire cables is also materially advantageous for the reason that when it is desired to stiffen the support or take up lost tension or slack the same may be readily accomplished by twisting the cables after disengaging them from the hooks of the springs or, in the case of the cables forming loops C, by disconnecting the springs from the straps E. After the cables are thus shortened they may again be readily connected in the manner shown in Fig. 3, as is obvious.

When a bed-bottom of less rigidity than that embodying the support shown in Fig. 1 is desired, the loops D and their connecting-spring G may be omitted, as shown in Fig. 2.

When it is desired to increase the rigidity or stiffness of the bed-bottom, especially at the center thereof, the spring G may be omitted and a link G' (see Fig. 4) or ring G² (see Fig. 5) employed for connecting the loops D, the link G' being preferable to the ring for the reasons before stated.

Having thus described my invention, what I claim is—

1. In a bed-bottom, the combination of the frame, the mattress connected to and arranged upon the frame, and the support for the mattress disposed below the same and comprising the loops C, formed by cables of resilient spirally-coiled wire; said cables being connected at their ends to the frame at or adjacent to the corners thereof and crossing or intersecting

each other so as to describe a diamond-shaped figure at the center of the bottom, coiled tension-springs connected at one end with the cables forming the loops C, at the middle thereof
5 and having their opposite ends connected with the end bars of the frame, the loops D, disposed below the loops C, and formed by the comparatively short cables of resilient spirally-coiled wire; said cables being connected
10 at their ends to the end bars of the frame and intersecting the cables forming the loops C, and a centrally-located connection between the middles of the cables forming the loops D, substantially as specified.
15 2. The combination with the frame and the woven-wire fabric secured thereon; of the ca-

bles of spirally-coiled wire secured at their ends to the end bars of the frame and looped one over the other in a longitudinal direction to form a diamond-shaped figure, and the tension-springs secured at one end to said end bars and detachably taking into the bight of the cables, whereby said cables may be detached and twisted to take up slack, substantially as specified. 20 25

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

JAMES B. RYAN.

Witnesses:

WM. JNO. BARR,
HERBERT REUVILLE.