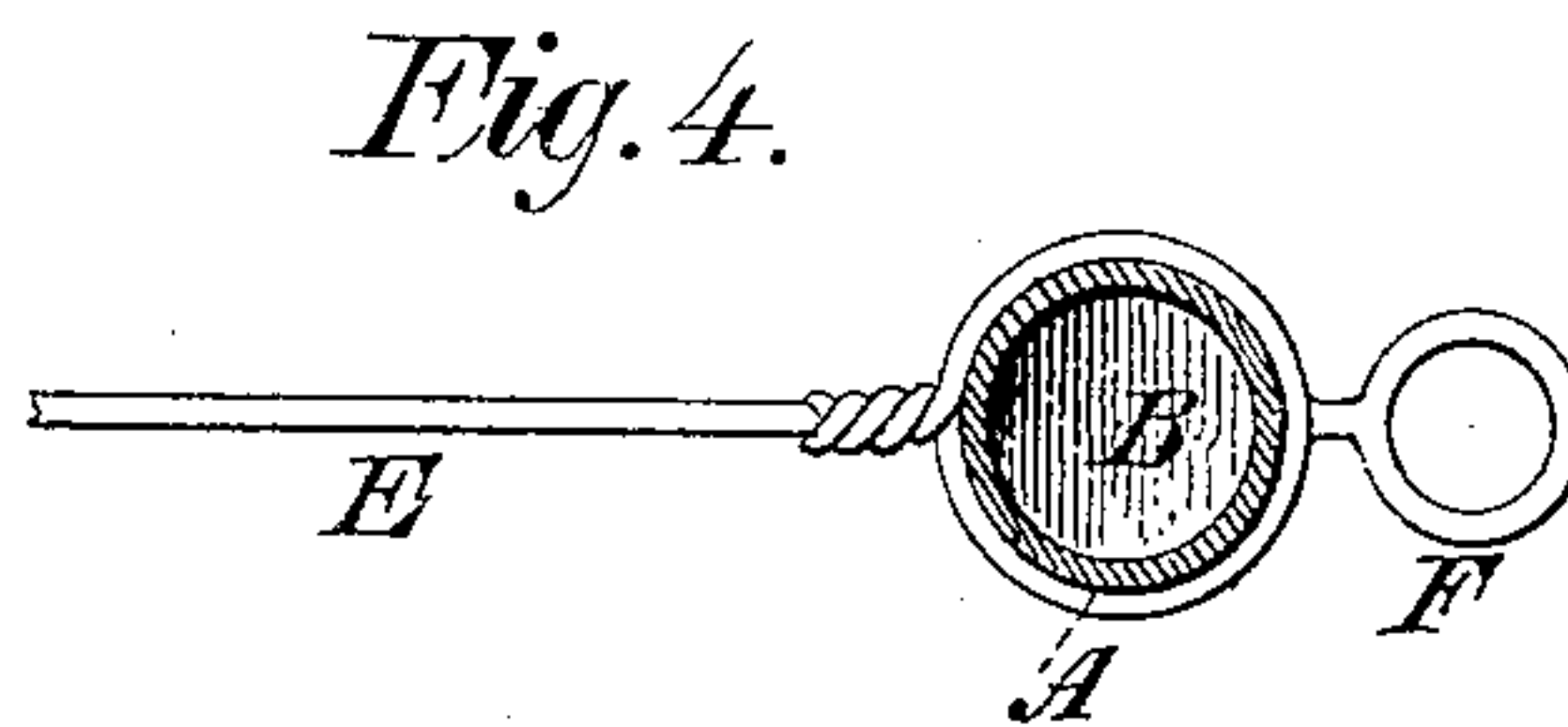
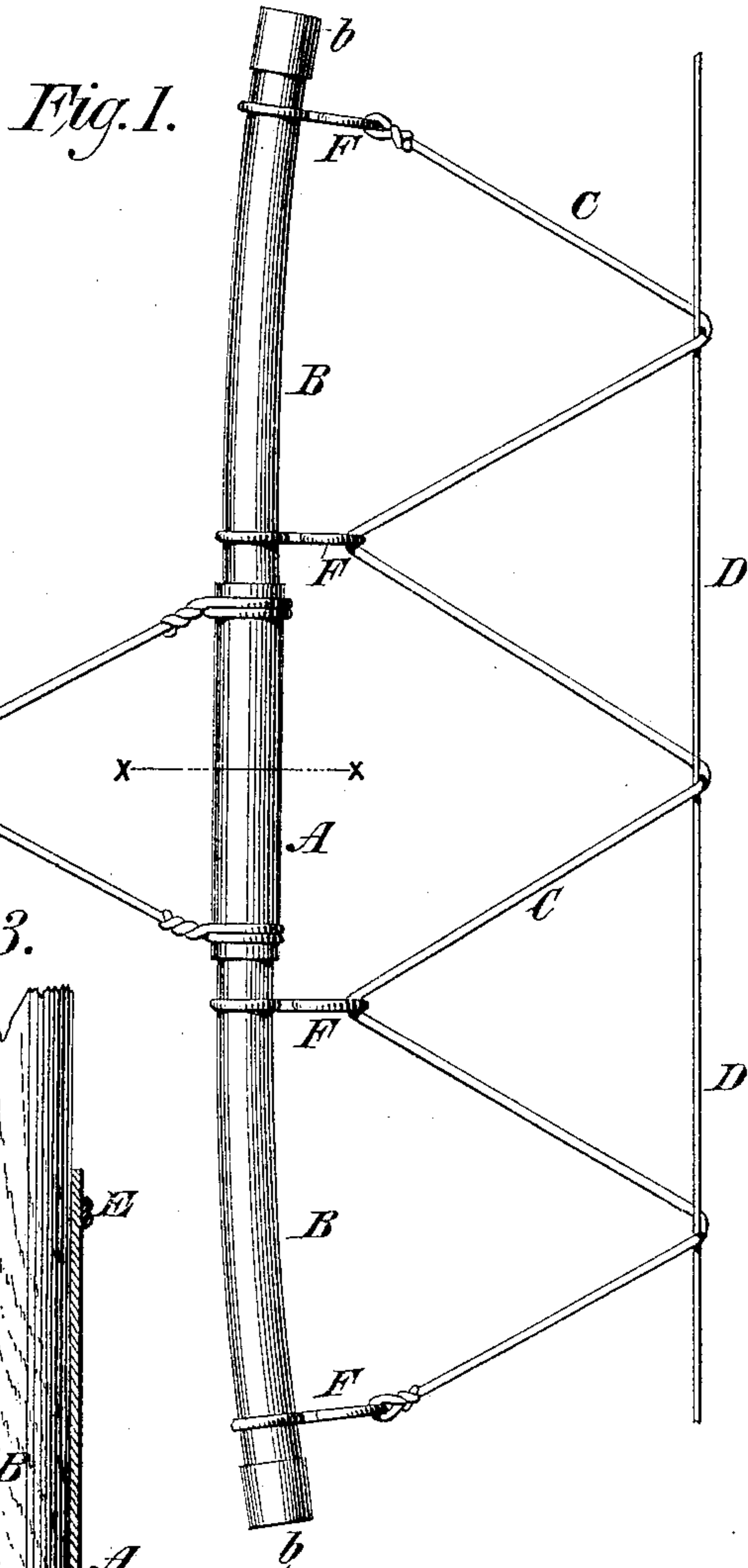


H. SELIGMAN.

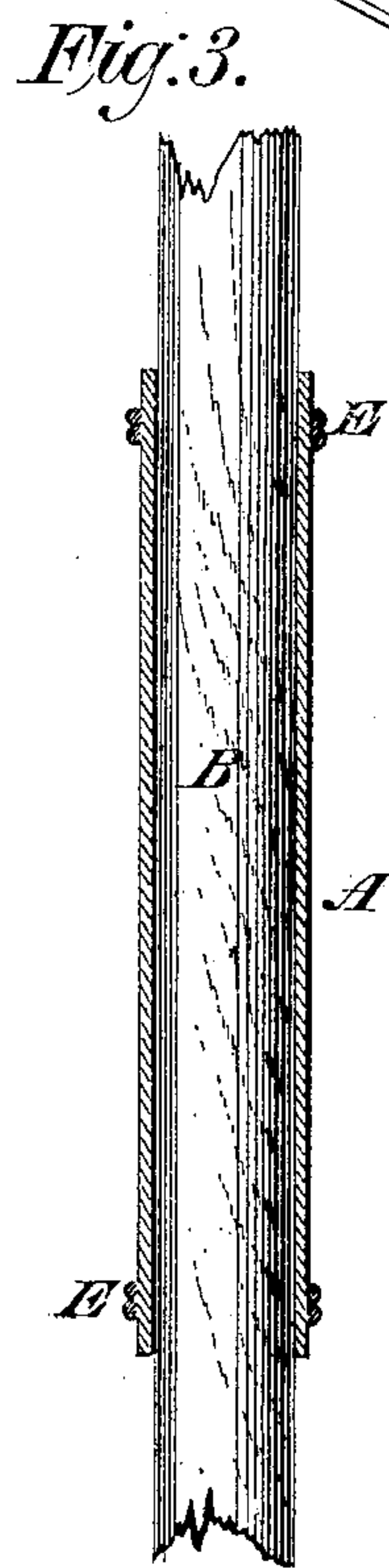
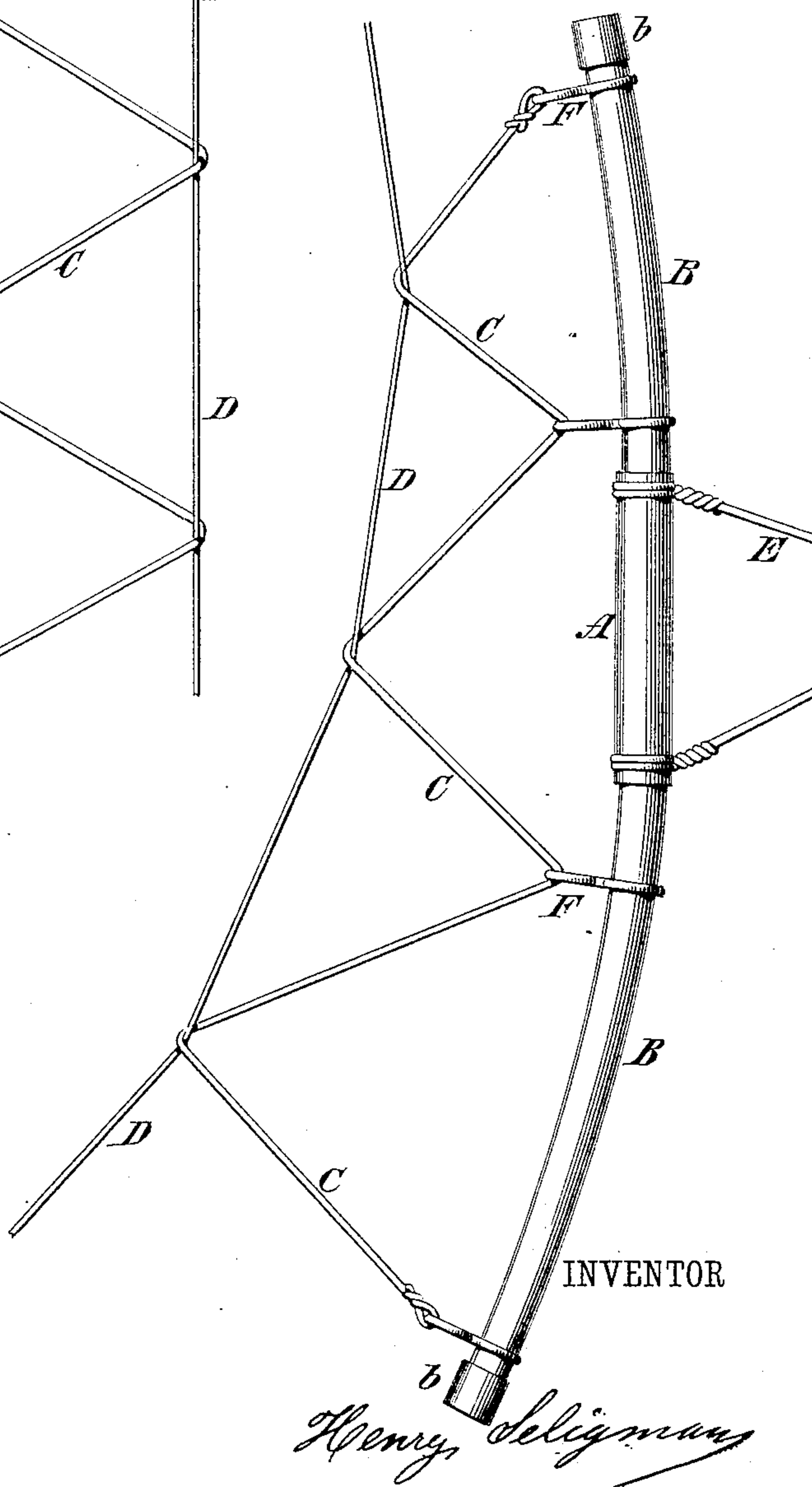
ANGLE HANGER FOR MECHANICAL TELEPHONE LINES.

No. 315,078.

Patented Apr. 7, 1885.



*Fig. 2.*



WITNESSES:

*Gustave Dürich*  
*Fred. Heintz*

INVENTOR

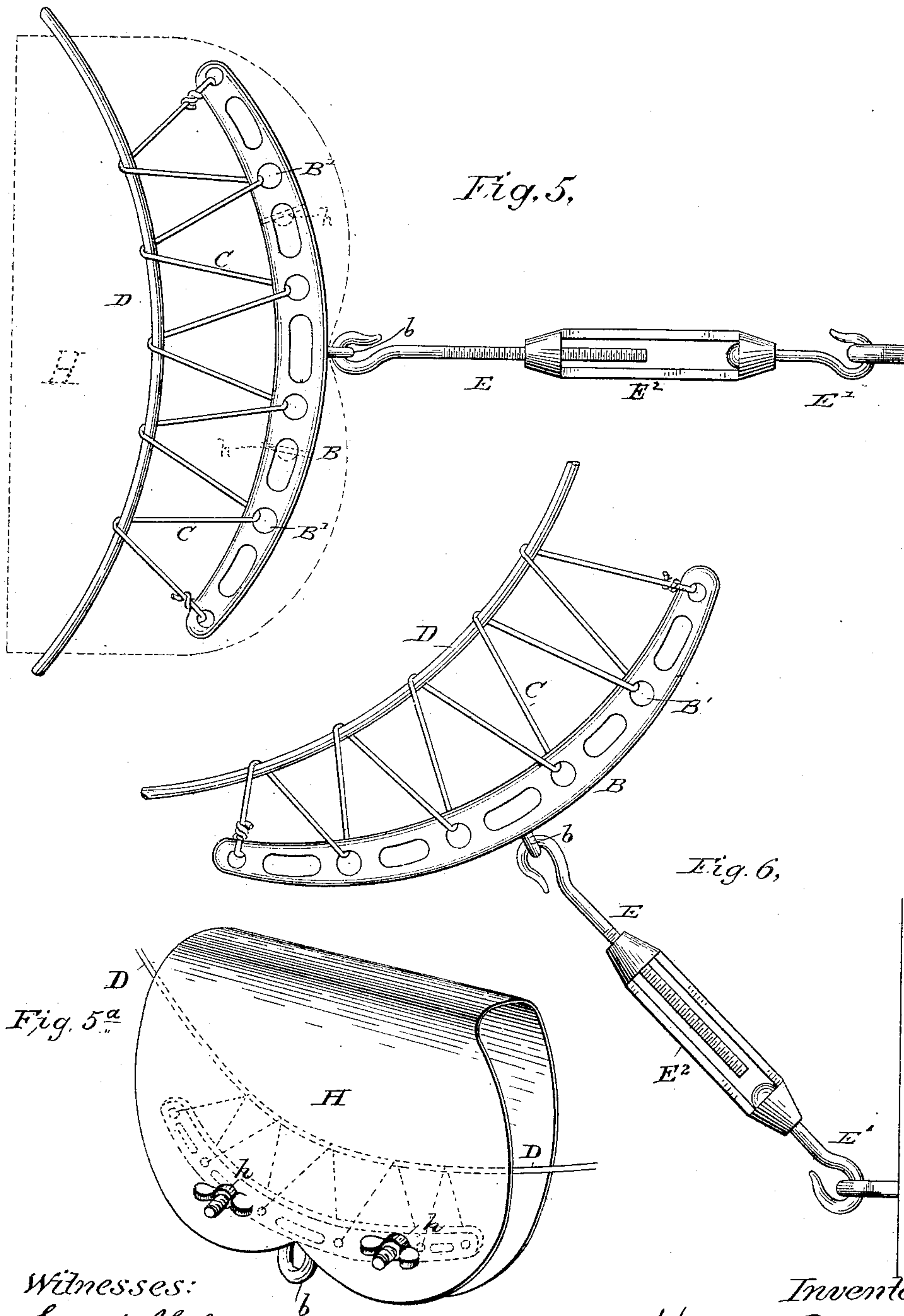
*Henry Seligman*

H. SELIGMAN.

ANGLE HANGER FOR MECHANICAL TELEPHONE LINES.

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Witnesses:  
Ernest Abshagen  
Gabriel J. W. Galster

Inventor:  
Henry Seligman  
By his Attorneys: Knight Bros.



# UNITED STATES PATENT OFFICE.

HENRY SELIGMAN, OF IRVINGTON, NEW YORK, ASSIGNOR TO EMMA SELIGMAN, OF SAME PLACE.

## ANGLE-HANGER FOR MECHANICAL TELEPHONE LINES.

SPECIFICATION forming part of Letters Patent No. 315,073, dated April 7, 1885.

Application filed February 18, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY SELIGMAN, of Irvington, on-Hudson, New York, have invented certain new and useful Improvements in Angle-Hangers for Mechanical Telephones, of which the following is a specification.

Heretofore devices for suspending the line-wires of mechanical telephones have been so constructed as to cause an unequal tension on the connecting parts between the said line-wire and the angle-hanger, inasmuch as the line-wire, either from a change in temperature or from other natural or artificial causes, will from time to time alter its position either in a horizontal or vertical plane, or both, which movement should result in a corresponding change in the position of the angle-hanger itself.

As the object of the angle-hanger, besides enabling the line-wire to gradually change its direction, is to prevent the molecular action of the wire from being deranged or modified in the least, it is of primary importance that said wire should not at any one point be subjected to undue pressure or tension, as the very objects of the hanger will be frustrated by the abrupt change in the direction of the wire, which would be the natural sequence of an extra tension at any one point.

The object of my invention, therefore, is to overcome these fatal objections and to supply an angle-hanger which shall at all times permit the free movement of the line-wire and retain on said wire a uniform tension at all connecting-points, and a consequent uniform change of direction in the bend. These results are accomplished by a cord which is securely attached to both ends of an angle-hanger, and is looped at intermediate points through or over the same and over the line-wire in such a manner that the pressure on all the loops will be automatically equalized by the sliding of the cord over its bearings.

Referring to the accompanying drawings, Figure 1 represents one form of my invention, the angle-hanger in this case being made of bamboo or of any other suitable material, and provided with a sliding tube, in which the said angle-hanger moves. This tube is also provided with means for supporting the hanger. Fig. 2 represents the same hanger, the line-

wire in this instance having been drawn down. Fig. 3 is a longitudinal section of the bamboo hanger and tube. Fig. 4 is a transverse section of the hanger on the line *xx*, Fig. 1. Fig. 5 is a modification of my angle-hanger. Fig. 5<sup>a</sup> is a perspective view illustrating the box or cover employed for protecting the hanger from the weather and supporting the line-wire in the event of the breaking of the sliding cords of said hanger. Fig. 6 is another view of this modification.

In the drawings, A represents a tube provided with supporting-wires E. In the tube A is placed the bow B, formed of any suitable material, and made as long or as short as the exigency of the particular case may require. D is the line-wire, and C the connecting-cord. F are rings or eyes placed upon the bow B, through which the cord C is strung or looped. The end rings or eyes are rigidly fastened to the bow B, and to these end rings are tied the ends of the cord C. The tube A and the intermediate eyes or rings, F, both slide freely over the bow B. The cord C also is adapted to slide over the line-wire and through the eyes or rings. By this arrangement of the cord C a means for equalizing the tension of a line-wire in turning a corner is provided, as the cords will slide in and out of the openings in the bow B, and will automatically relieve the pressure at any one point on the said line-wire.

The advantage of having the loops formed of a continuous cord extending from one end of the bow to the other is evident, as separate cords connecting the bow and the wire would not produce the same result, inasmuch as they would tend to bind and prevent the proper operation of the hanger, as well as forming a sharper angle in the line-wire than is desirable in mechanical or molecular telephones. I desire it to be understood that any connecting string, cord, or thread consisting of hemp, cotton, india-rubber, leather, &c., may be employed, and I reserve the right to use any of the above. When the line-wire D is drawn in one direction or the other, as is illustrated by Fig. 2, the bow B will slip in the tube A, and the cord C will follow the line-wire D automatically. This device has been found by experiment to be of great practical importance



in turning corners and in making the necessary exits and entrances from rooms and buildings. In Figs. 5 and 6 the openings B' are substituted for the rings or eyes F. In this form of the device the hanger B is supported by a link which is so constructed as to allow a universal swinging motion thereto, while at the same time being capable of adjustment for the purpose of taking up slack in the line-wire. This device consists of a hook, E', on the shank of which is loosely swiveled a link, E<sup>2</sup>, the other end of which is provided with a screw-threaded opening for the reception of the screw-threaded shank of a second hook, E, which is passed through a loop, b, on the hanger B.

H is a metallic cover, which is secured over the angle-hanger in the manner and for the purposes now to be described. It consists simply of a piece of sheet metal, which may have any desired contour, bent double, as represented in Fig. 5<sup>a</sup>, and pierced with holes for any desired number of retaining-bolts. When the angle-hanger is rigged as represented, it is ready for the cover. With the form of the device shown on Sheet 1 of the drawings the cover is slipped on from the side on which the line-wire is suspended until its bolt-holes are beyond the piece B. The bolts are then inserted and the whole secured in place by the thumb-nuts h.

With the device shown on Sheet 2 of the drawings the retaining-bolts are passed through the eyes in the piece B, as represented in dotted lines in Fig. 5.

It will be seen that should the cords C, which support the line-wire D, become worn out or break, the line-wire would be caught by the cover and prevented from dropping. The cover is also beneficial in protecting the hanger from the weather.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The combination of a line-wire and an angle-hanger, the said angle-hanger being provided with a sliding cord looped thereover and over said line-wire for equalizing the tension of the latter, as set forth.

2. The combination of the line-wire, the angle-hanger, the sliding cord attached to both ends of said angle-hanger and looped intermediately, as described, and a supporting device for allowing a universal swinging motion to the hanger, as described.

3. A line-wire for mechanical telephones and an angle-hanger therefor, consisting of a bow-shaped piece of wood, metal, or other suitable material provided with openings, in combination with a sliding cord attached at its ends to said bow and looped intermediately over the said line-wire and bow, as and for the purpose set forth.

4. In combination with an angle-hanger substantially as hereinbefore described, a box or cover therefor, consisting of a piece of sheet metal bent at its center and secured at its edges to said hanger, which it incloses, as and for the purposes set forth.

5. In combination with the line-wire and a suitable angle-hanger therefor, a shield or guard secured to said hanger and embracing said line-wire, substantially as and for the purpose set forth.

6. The combination, with the line-wire of a mechanical telephone, of a hanger therefor and an adjustable link supporting the same, substantially as and for the purposes set forth.

7. The combination, with the line-wire of a mechanical telephone, of an angle-hanger consisting of a suitable rigid frame and flexible cords looped thereon for engagement with said wire, as set forth.

HENRY SELIGMAN.

Witnesses:

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