

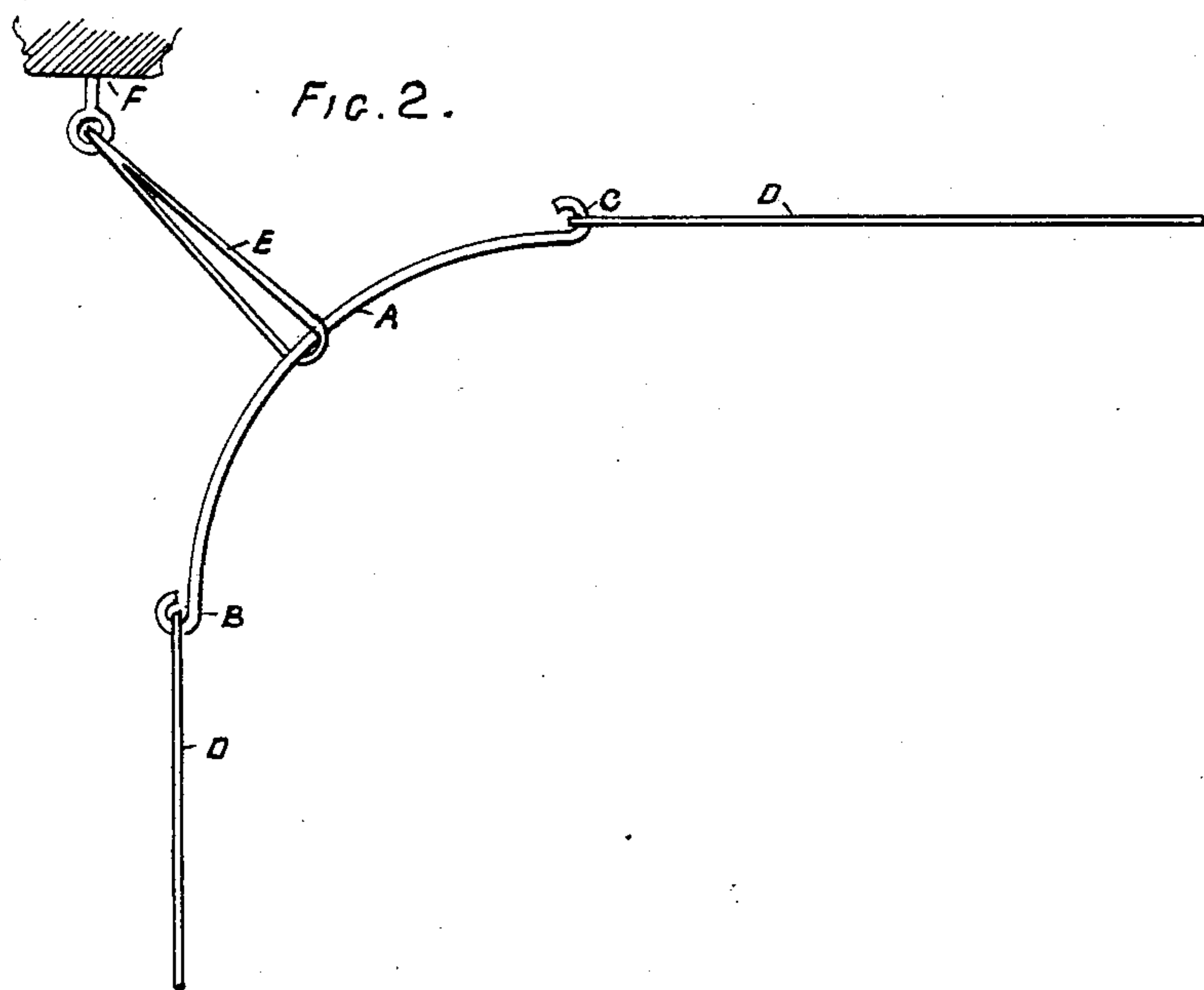
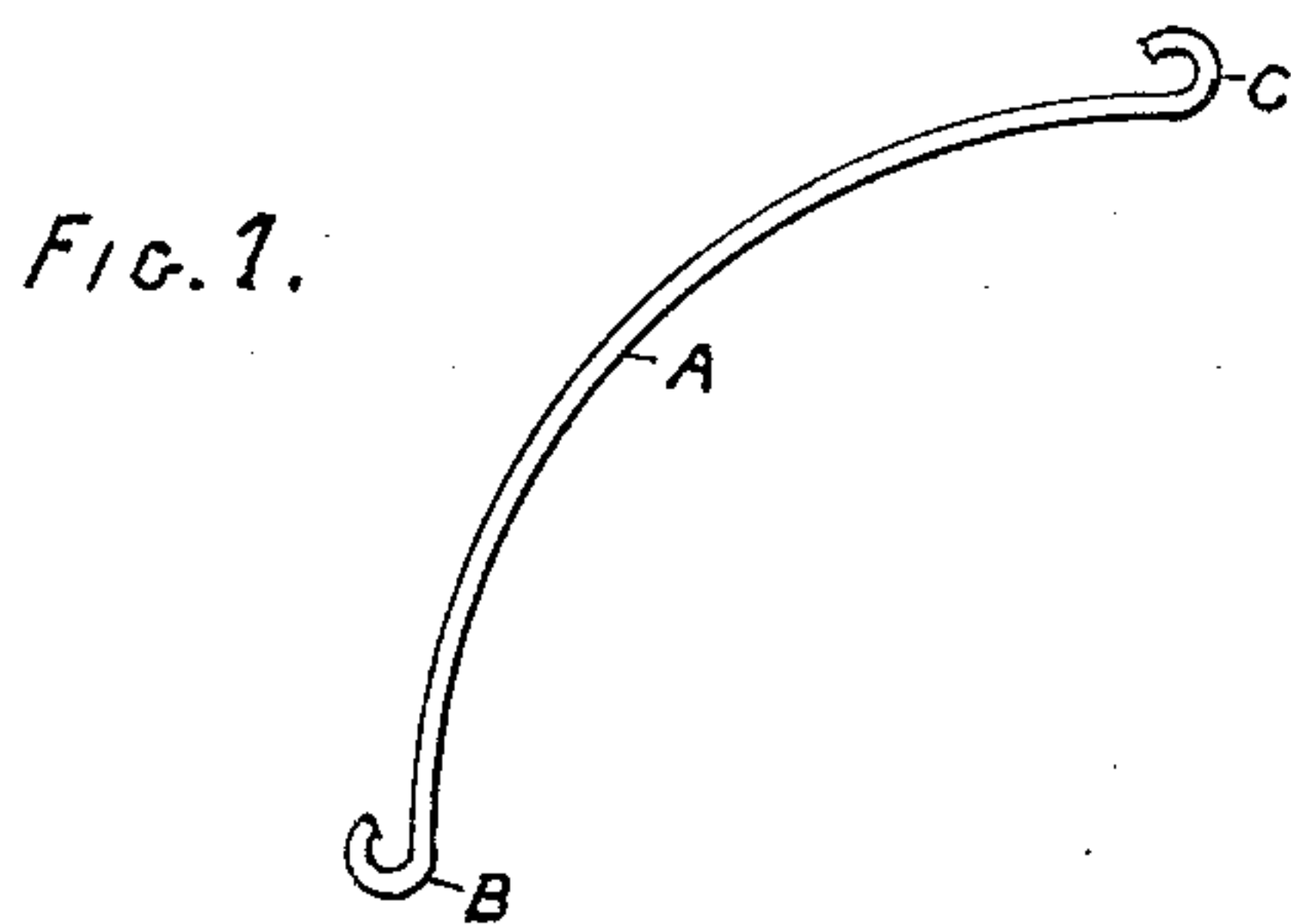
(No Model.)

R. C. M. BOWLES.

ANGLE HANGER FOR MECHANICAL TELEPHONE LINES.

No. 390,062.

Patented Sept. 25, 1888.



WITNESSES.
Albert W. Brown.
Arthur Johnson.

INVENTOR.
R. C. M. Bowles.

UNITED STATES PATENT OFFICE.

ROBERT C. M. BOWLES, OF BOSTON, MASSACHUSETTS.

ANGLE-HANGER FOR MECHANICAL-TELEPHONE LINES.

SPECIFICATION forming part of Letters Patent No. 390,062, dated September 25, 1888.

Application filed November 15, 1887. Serial No. 255,259. (No model.)

To all whom it may concern:

Be it known that I, ROBERT C. M. BOWLES, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Telephone Lines, of which the following is a specification.

In the various devices for dealing with angles in a telephone-line the prevailing idea is to subdivide said angles—particularly if a right angle or nearly so—into two or more obtuse angles, and to suspend the line at the respective apices of said subdividing angles. Assuming said idea of subdivision to be correct and that the more subdivisions the better, the logical result is infinitesimal subdivision—a curve. I have therefore conceived the idea of introducing into the line at the points thereof as occur such angles as mentioned, as an immediate attachment, part, and continuation thereof, a curved tempered elastic metal bar, preferably curved before tempering to nearly the required angle, the tension of the line completing its adjustment. The line is subtended at or near the middle of said bar by a single guy, not bound or fixed, but passing loosely through the loop of said guy, thus rendering it automatic and self-adjusting. Every point of attachment of the line between the telephones being a source of vibrations and consequent injury, this single guy, instead of two or more, as used in other devices, is in itself an improvement.

Another important point claimed for this invention is that by its use the angle can be located at the very point of the line's issuance from the telephone, thus making it practicable to carry the line perpendicularly from said issuing-point—a very desirable thing to do in a majority of cases.

I am aware that various devices have been introduced into the straight portions of the line for certain purposes—such as a bar with looped ends, or the doublelink of a chain, or of other straight form—but all of these are used for purposes entirely different from that of this invention, nor do they effect its pur-

poses. Again, a contrivance of the form and nature of a turning-fork has been devised, capable, if required, of changing the direction of the line; but this device is fixed to its support and makes angular connection with the line, which is the very objection that this invention is intended to and does remove.

In the drawings, forming part of this specification, Figure 1 is a view of the bar for making the line-connection. Fig. 2 is a view showing the bar in line-connection and subtended by guy.

In the drawings, A represents the bar for making the line-connection. This bar is made curving from end to end and of spring-tempered elastic metal, preferably curved to near a quadrant. Each end B C of the bar is made of hook or loop shape for convenience in connecting with the sections D D of the line. E is the loop of guy, which guy is attached to its support at F. The bar A passes loosely through said loop of guy, and this freedom, coupled with its elasticity, renders it capable of adaptation to any required angle.

Thus constituted, constructed, and adjusted the bar forms a very neat and simple connected curvilinear continuation of the sections of the line and overcomes to a large extent the great obstacle to satisfactory results in the operating of telephone-lines—namely, angles.

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

In combination with a telephone-line, a curving bar, A, made of elastic tempered metal adapted at each end for connection with the line-sections, and the loop E of a subtending guy, through which loop said bar loosely passes, substantially as described, and for the purpose specified.

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

ROBERT C. M. BOWLES.

Witnesses:

MARY W. BOWLES,
ALEXANDER BOYD.

It is hereby certified that in Letters Patent No. 390,062, granted September 25, 1888, upon the application of Robert C. M. Bowles, of Boston, Massachusetts, for an improvement in "Angle-Hangers for Mechanical-Telephone Lines," an error appears in the printed specification requiring the following correction: In line 49 the compound word "turning-fork" should be stricken out and the compound word *tuning-fork* inserted instead; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 23d day of October, A. D. 1888.

[SEAL.]

D. L. HAWKINS,

Assistant Secretary of the Interior.

Countersigned:

BENTON J. HALL,

Commissioner of Patents.