

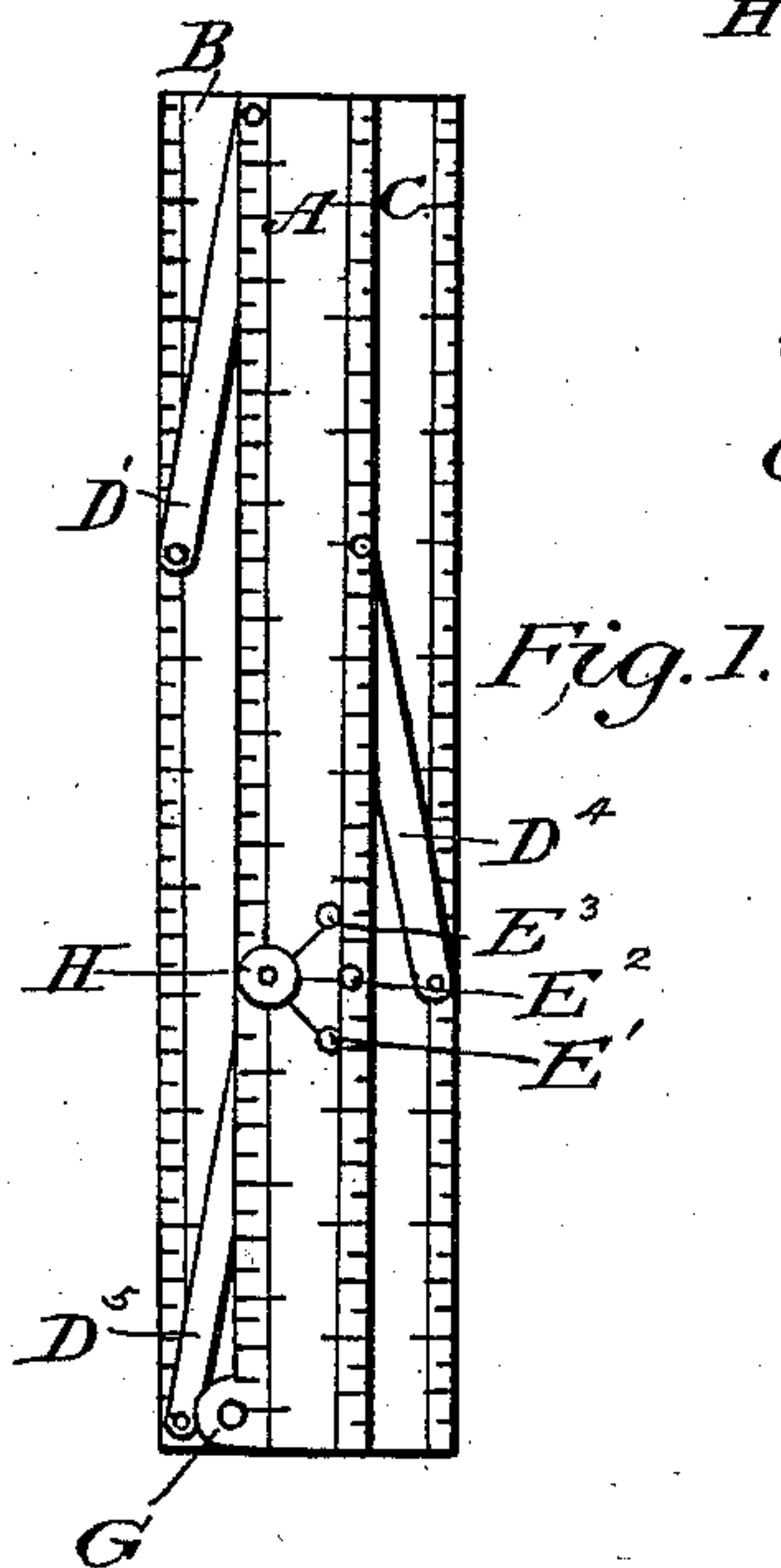
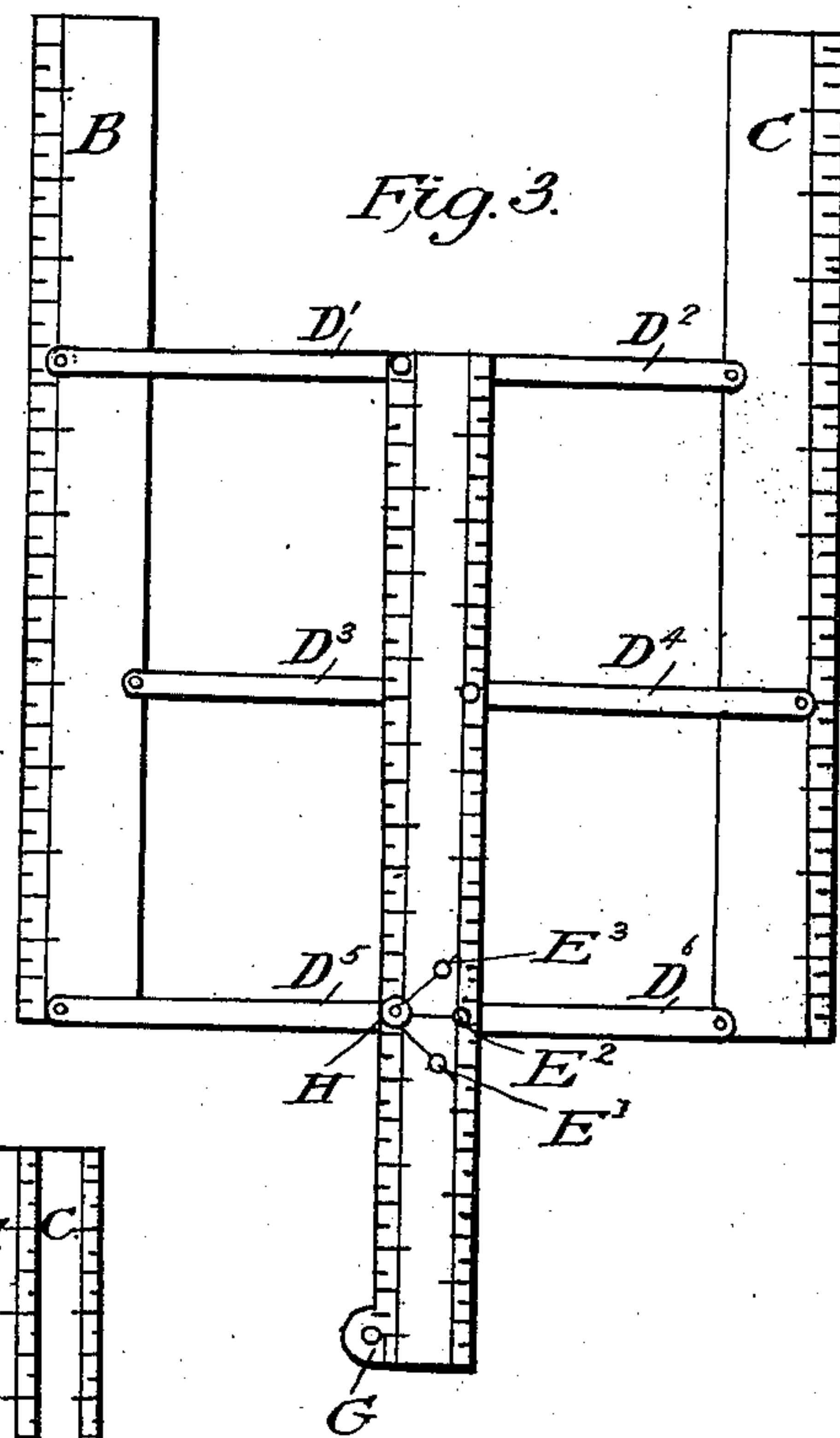
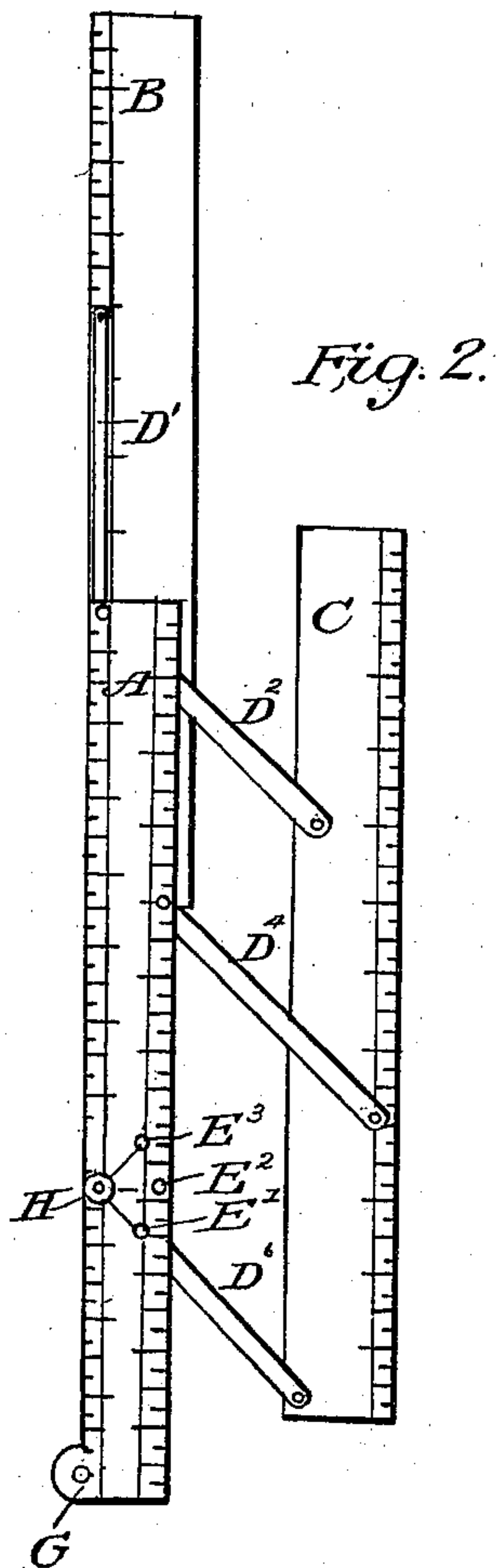
No. 692,794.

Patented Feb. 4, 1902.

F. A. MORLEY.
PARALLEL EXTENSIBLE RULER.

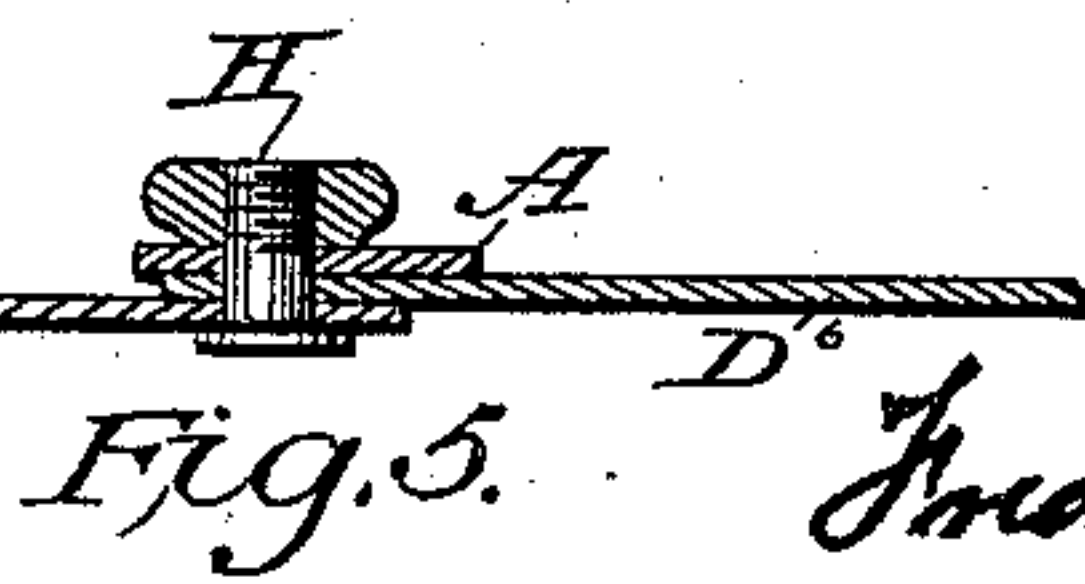
(Application filed Feb. 1, 1901.)

(No Model.)



WITNESSES:

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INVENTOR

Frederic A. Morley

UNITED STATES PATENT OFFICE.

FREDERIC A. MORLEY, OF BROOKLYN, NEW YORK.

PARALLEL EXTENSIBLE RULER.

SPECIFICATION forming part of Letters Patent No. 692,794, dated February 4, 1902.

Application filed February 1, 1901. Serial No. 45,648. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC A. MORLEY, a citizen of the United States and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Parallel Extensible Rulers, of which the following is a specification.

My invention relates to improvements in extensible parallel-rulers for marking and measuring parallel lines, &c.; and the objects of my invention are, first, to provide a ruler that can be extended on a perfectly straight line, so that a parallel line can be drawn from any given point of a straight line and to a much greater width than the ordinary parallel-ruler; second, to provide a parallel-ruler that can be extended in length when desired, thus obviating the necessity of having a long ruler to carry around or lie around in the way of other material; third, to provide a ruler with which diametrical lines can be drawn from a given center, from which a circle or any portion of a circle can be drawn, thus performing in a great measure the work done with compasses; fourth, to provide a ruler with which angles or angular lines can be drawn parallel to each other and for obtaining a square or miter or other angles, and, fifth, to provide a ruler having the combined advantages of a square and compasses, a diametrical ruler, a parallel-ruler, an extensible ruler, and a try-square. I attain these objects by means illustrated in the accompanying drawings, in which—

Figure 1 is a view of the ruler when closed in compact form. Fig. 2 is a view of the ruler when extended in length. Fig. 3 is a view of the ruler when extended in width, and Fig. 4 is a view of the center point F.

Similar letters refer to similar parts throughout the several views.

The bars A B C and the links D' D² D³ D⁴ D⁵ D⁶ constitute the device. To the bars A, B, and C are attached the links D' D² D³ D⁴ D⁵ D⁶ in such manner as to swing on pivots, and the links D' D² D³ D⁴ D⁵ D⁶ being of equal length keep the bars A, B, and C parallel to each other. (See Fig. 3.) When required to be lengthened, the bar B is extended until the bar A and bar B are on a line with

each other. (See Fig. 2.) On the lower end of bar A is a lip G, through which a hole is bored and a thread cut to receive the center point F. (See Fig. 4.) The center point F, provided with a thread, is screwed in from the under side of bar A, so that center of point F is on a direct line with edges of bar A and bar B, allowing the whole device to swing around on F as the pivotal point, so as to draw diametrical lines from the point F and also to draw circles or circular lines. By placing the bar C in position, as indicated in Fig. 2, and removing the point F from the lip G and inserting it into the lower hole E' through bar A, having a thread to receive point F, so that point F can also be inserted into a hole provided with a thread through link D⁶ to receive point F, so that the parts can be firmly secured together and an angle of forty-five degrees obtained. If point F is inserted in the upper hole E and link D⁶ is also turned to that point and secured, an angle of forty-five degrees is obtained. If point F is inserted in center hole E and link D⁶ is also carried to that point and secured, an angle of ninety degrees or a square is obtained.

To the bar A is attached a set-screw H, so that links D⁵ and D⁶ can be placed at any angle and firmly held by set-screw H, thereby making a substantial try-square.

The links D' D² D³ D⁴ can be of curved shape, so as to draw curves or curved lines, if so desired.

By reference to Fig. 3 it will be seen that the bars B and C are extended on a straight line from each other or can be extended either above or below, if desired. By placing the bar A on any given line or point a parallel line can be drawn from either or both sides of the bar A.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination in an extensible ruler of the ruling-bar A, and the ruling-bar B, connected together by means of the links D', D³ and D⁵ with the ruling-bar C connected to the ruling-bar A by means of the links D², D⁴ and D⁶, all being joined together in such manner so as to be capable of being extended in length to make a long ruler, and also capable

of being extended in width so as to make a wide ruler, for the purpose as herein set forth and described.

2. The combination in an extensible ruler 5 of the parallel bars A and B connected together by means of the links D' , D^3 and D^5 , and the bar C connected and parallel to the bar A by means of the links D^2 , D^4 and D^6 with the set-screw H to clamp the parts together so that the links D' , D^2 , D^3 , D^4 , D^5 , D^6 10 and the bars A, B and C can be secured and held at any desired point or angle, all being joined together in such manner as to be capable of being extended so as to make a long 15 parallel-ruler or a wide parallel-ruler, as herein set forth and described.

3. The combination in a parallel extensible ruler of the bar A having a lip G and center point F, the screw-holes E' , E^2 , E^3 , the set-screw H to clamp the parts together for trying and obtaining angles, the link D^6 having screw-hole to receive point F so that the parts can be clamped together for obtaining a square and angles, with the bars B and C and the 25 braces D' , D^2 , D^3 , D^4 , D^5 , all for the purpose as set forth and described.

4. The combination in a parallel-ruler of the bars A, B and C, capable of being extended in such manner as to lengthen the ruler or widen the ruler, with the links D' , D^2 , D^3 , D^4 , D^5 , D^6 , for obtaining squares and angles, all 30 being capable of being folded up in a compact form, substantially as set forth and described.

5. The combination in an extensible ruler 35 of the bar A having a lip G, a center point F, the holes E' , E^2 and E^3 and the set-screw H, of the parallel bars B and C, said bars A and B being connected by the links D' , D^3 and D^5 , said bars A and C being connected by the 40 links D^2 , D^4 and D^6 , said link D^6 being provided with a hole arranged to register with either of the said holes E' , E^2 or E^3 in the bar A, and to receive the point F passing there-through, substantially as described. 45

Signed at Brooklyn, in the county of Kings and State of New York, this 30th day of January, A. D. 1901.

FREDERIC A. MORLEY.

Witnesses:

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