

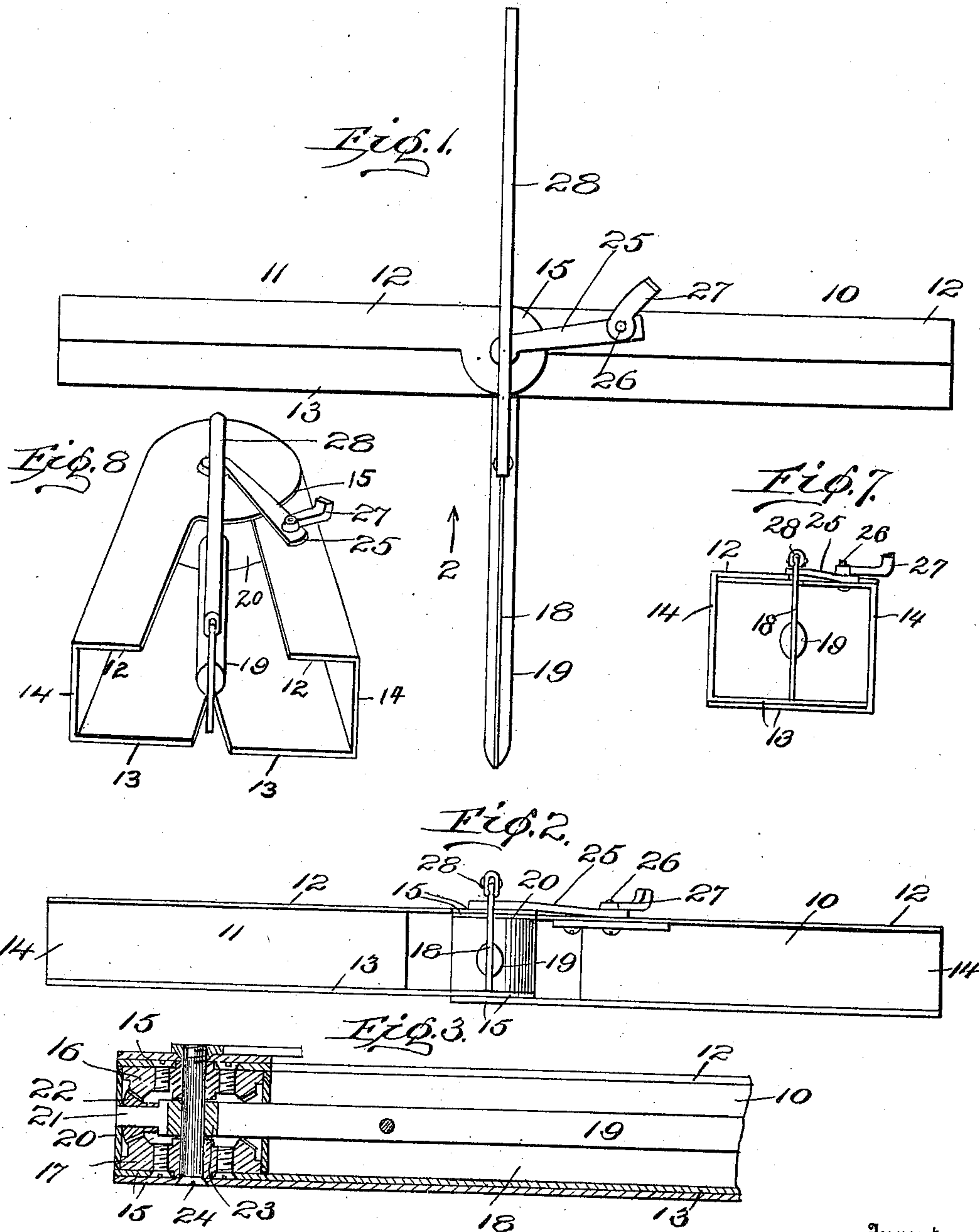
C. A. LYDIN.
ANGLE BISECTOR.

APPLICATION FILED SEPT. 4, 1908.

975,969.

Patented Nov. 15, 1910.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

CHARLES A. LYDIN, OF DENVER, COLORADO.

ANGLE-BISECTOR.

975,969.

Specification of Letters Patent.

Patented Nov. 15, 1910.

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To all whom it may concern:

Be it known that I, CHARLES A. LYDIN, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Angle-Bisectors; and I do hereby 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.

This invention relates to bisectors for any angle, and has for an object to provide an improved device of the class adapted to conform to an angle of any degree and to accurately bisect such angle either within or without.

A further object of the invention is to provide an improved device having two pivotal members adapted to conform themselves to the sides of an angle, with a marker member and mechanism to maintain the marker always at a position to bisect angles to which the pivoted members conform.

With these and other objects in view, the invention comprises certain other novel arrangements, constructions and combinations of parts, as will be hereinafter more fully pointed out and claimed.

In the drawings: Figure 1 is a plan view of the device operated as a square. Fig. 2 is a view in edge elevation of the device as seen on arrow 2 of Fig. 1. Fig. 3 is a longitudinal, sectional view of the bisector diametrically through the operating parts. A portion of the brake and the marker extension are omitted. Fig. 4 is a view of the bisector in plan and employed upon an acute angle. Fig. 5 is a sectional view of one of the pivoted members removed. Fig. 6 is a plan view of the marker and associated parts disconnected from the pivoted member. Fig. 7 is a view of the device in end elevation. Fig. 8 is a perspective view of the device nearly in end elevation and partially open.

Like characters of reference designate corresponding parts throughout the several figures of the drawing.

The device forming the subject-matter of this application comprises a pair of members designated as a whole at 10 and 11 and each comprising a channel bar, the side flanges of which 12 and 13 are of different widths, the flange 13 being the wider. The flanges 12 and 13 are connected by a web 14, as indicated particularly in Figs. 7 and 8.

At the ends where the members are connected, each is provided at each of the flanges 12 and 13 with an enlarged portion 15. The member 10 carries a gear 16 rigidly secured to the enlarged portion 15 upon the side next to the flange 12, whereas the member 11 has a gear as 17 rigidly secured to the end of the flange 13.

A marker or divider 18 is provided centrally throughout its length with a stiffening bar 19 and carries at one end a cylindrical casing 20 proportioned to inclose the gears 16 and 17 and substantially equivalent in diameter to the enlarged portions 15. The stiffening rod 19 extends through the casing 20 and is provided with a stud 21 upon which is rotatably mounted a pinion 22 interengaging with both of the gears 16 and 17. The rod 19 is also provided with a central hub 23 through which a pivot pin 24 threaded at one end is inserted, forming the pivot for the members 11 and 12. Said pin is provided at one end with a brake 25 in the form of a bar into which the extremity of the pin 24 screws. Member 10 is provided with a screw 26 and nut 27 adapted to exert a tension upon the end of the brake 25 and to clamp it rigidly upon the enlarged portion 15 of the member 11, so that when the proper angle has been determined and the members 10 and 11 set at such angle, the nut 27 is tightened upon the screw 26 and the brake 25 clamped upon the enlarged portion 15 to hold such members in such positions.

The upper edge of the marker 18 is provided upon opposite sides with grooves in which the edges of an extension 28 slide so that when the marker 18 is employed to bisect, for instance, an angle less than 90 degrees, the extension may be slidingly moved upon the opposite side of the pivoted members to bisect the greater angle, as shown particularly in Fig. 1.

It will be understood that with the pinion 22 journaled upon the extension of the stiffening rod 19 such rod will always bisect the angle between the edges of the pivoted members 10 and 11 which respectively carry wheels 16 and 17 engaging with this pinion, and that when one of the pivoted members 10 or 11 is moved angularly relative to the marker 16 the other member will be similarly moved upon the opposite side of the marker, or when the two members are moved to conform to an angle the marker 18 will at all times determine the exact line

for accurately bisecting such angle. It will also be evident that the extension 28 will also determine the exact line upon which the angle will be bisected which is opposite that
5 bisected by the marker 18.

What I claim is:—

1. In a device of the character described, a pair of arms having their adjacent overlapping ends pivoted together, a marker extending from the pivotal point of said arms,
10 and a brake consisting of an arm connected to the pivot of said arms and provided with means for exerting a tension upon the end of the brake and clamping it against one of
15 the pivotal members.

2. In a device of the character described, a pair of members formed of flanged channel bars having their flanges on one side broader than those on the other, said members being formed with substantially circular overlapping adjacent ends, connected together by a pivot and a casing inclosing said pivot, a marker projecting centrally from said casing, an extension slidably
20 mounted on said marker, a brake consisting of a lever arm mounted on the pivot of said

members and having means for exerting tension on the end of the brake and clamping it upon one of said pivotal members.

3. In a device of the character described, 30 a pair of arms having their adjacent overlapping ends pivoted together, a pair of beveled gears rigidly secured to the arms and spaced apart, a pinion between and intergeared with the gears, an axle for the
35 pinion, and a marker disposed as an extension of the axle of the pinion.

4. In a device of the character described, a pair of arms, a pivot connecting such arms, a gear carried by each arm, the two
40 gears being arranged in axial alinement, the pivot of such arms serving as an axis for the gears, a pinion disposed between and intergeared with the gears, and a marker disposed between the arms and positioned as
45 an extension of the axis of the pinion.

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

CHARLES A. LYDIN.

Witnesses:

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CARLE WHITEHEAD.