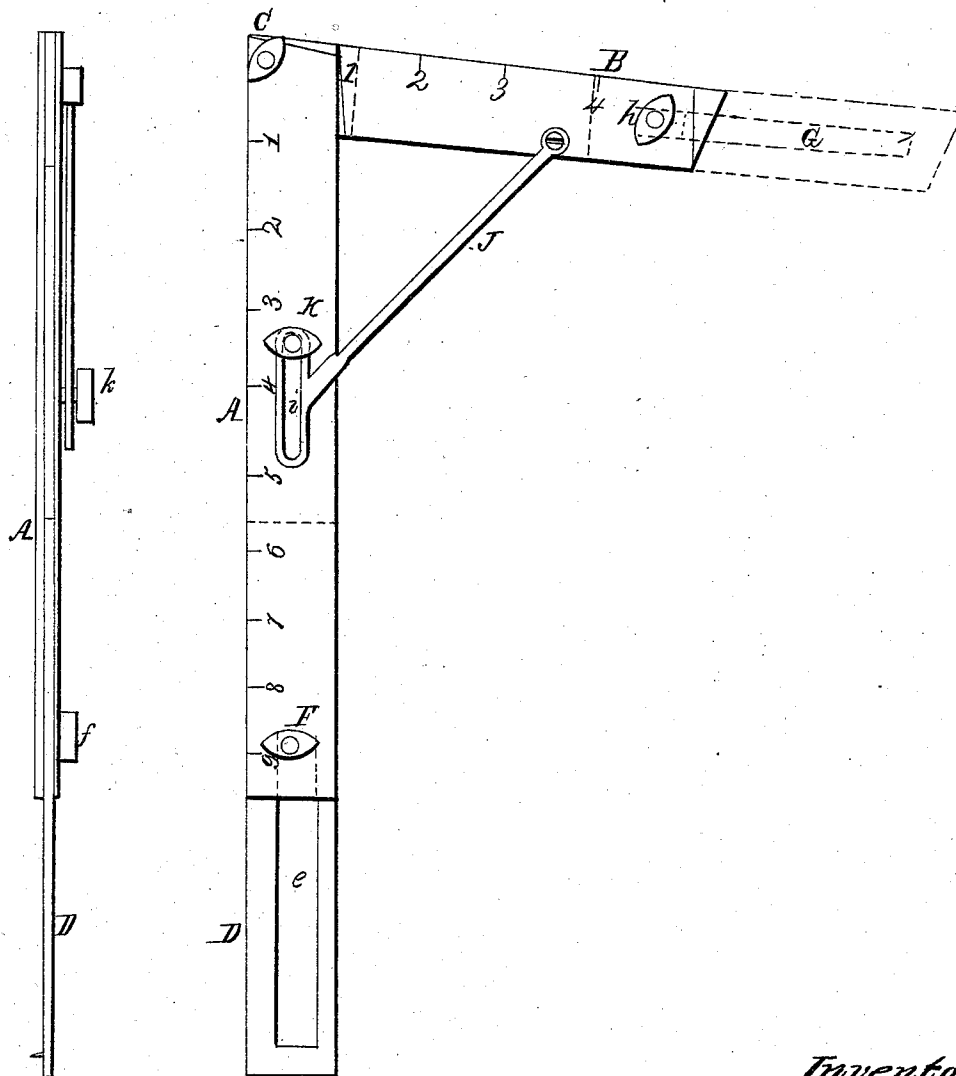


J. WILLIAMS.
Measuring Rule.

No. 81,720.

Patented Sept. 1, 1868.



Witnesses.
W. C. Ashbettle
J. W. Morgan

Inventor:
J. Williams
per Munnell
Attorneys

United States Patent Office.

ISAAC WILLIAMS, OF WESTFIELD, INDIANA.

Letters Patent No. 81,720, dated September 1, 1868.

IMPROVEMENT IN ADJUSTABLE MEASURING-RULE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ISAAC WILLIAMS, of Westfield, in the county of Hamilton, and State of Indiana, have invented a new and useful Improvement in Adjustable Measuring-Rule; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a rule which may be varied from a square or right angle, either way, to an obtuse or acute angle, with extension ends or slides in the body, as well as in the tongue of the rule; and the invention consists in the manner in which the rule is adjusted and extended, so as to enable the operator or workman to measure angles and distances, as I will proceed to describe.

Figure 1 represents a longitudinal view of the instrument, showing the manner of its construction and operation.

Figure 2 is an edge view of the same.

Similar letters of reference indicate corresponding parts.

A is the staff or body of the rule.

B is the tongue.

These two parts are connected together by a screw with a thumb-nut, as seen at the angle C, where they form a joint.

The friction between the two is increased or diminished by turning the thumb-nut.

Each part has an extension-end.

D is the part which is attached to A, and, as represented in the drawing, it is drawn out or extended.

This part D is slotted, as seen at *c*.

F is a screw, with a thumb-nut, by which it is held in place.

G is the extension-end of the tongue, shown in dotted lines in the drawing.

This is also slotted, and is held in place by a screw and thumb-nut, *h*.

J is a brace, formed with a slot-end, as seen at *i*.

The opposite end is attached by a pivot to the tongue B, upon which pivot the brace turns.

As the angle of A and B is varied, the slotted end of the brace slides up or down on the part A, and is confined in any desired position by a screw and thumb-nut, *k*.

The particular use for which this instrument is intended is for fitting sashes and doors into their respective frames, without compelling the joiner to "cut and try," as he usually does, as, by this invention, the exact angle, as well as the exact length and width, may be ascertained, and the door or sash marked and fitted accordingly.

The length and the width are ascertained by extending the ends D and G, and the angle is determined by varying the tongue B, as before stated.

It will be apparent that this instrument may be used for various other purposes than those named, as for measuring distances between fixed points, and for marking angles or bevels of various kinds, as any amount of variation may be given the tongue B by lengthening the slot *i*.

The body of the rule A, as well as the tongue B, is graduated or marked off into inches for the measurement of distances.

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

The combination of the pivoted adjustable brace J, slotted at *i*, with the graduated part B, and its slotted extension G, and with the graduated part A, and its slotted extension D, all constructed as described, for the purpose specified.

ISAAC WILLIAMS.

Witnesses:

ROBT. R. BROWN,

JOHN KENDALL.