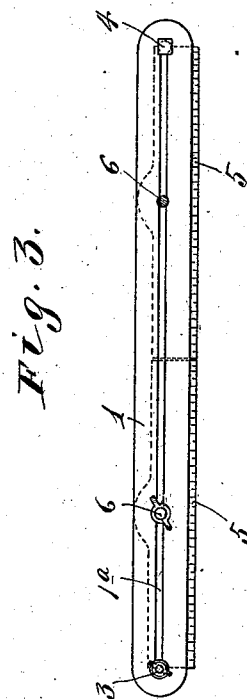
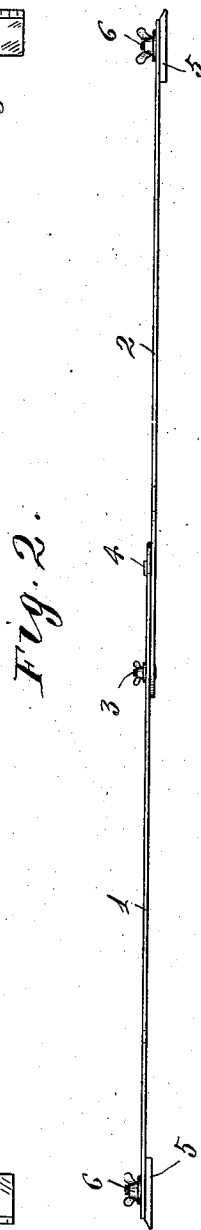
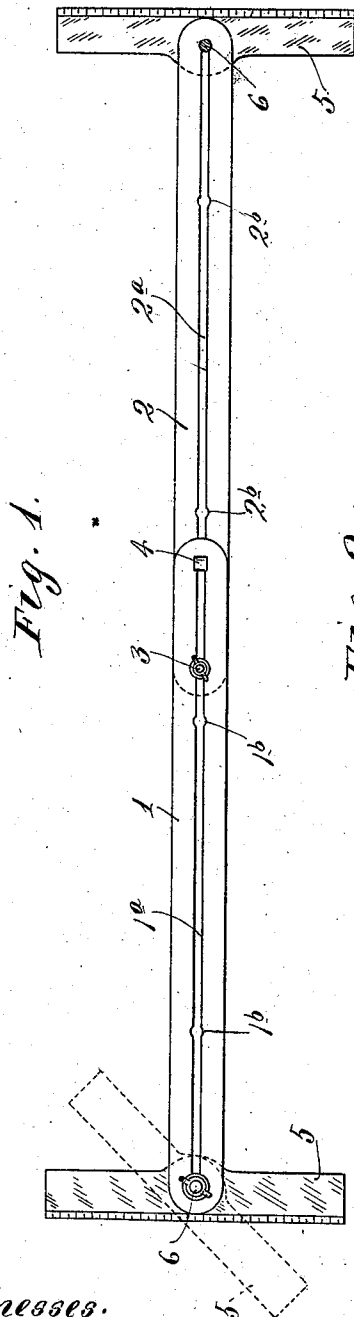


M. BARBO.
ANGLE MEASURING TOOL.
APPLICATION FILED OCT. 3, 1906.



Witnesses.
A. H. Opsahl.
H. D. Kilgore.

Inventor.
Michael Barbo.
By his Attorneys.
Williamson Merchand

UNITED STATES PATENT OFFICE.

MICHAEL BARBO, OF BUTTE, MONTANA.

ANGLE-MEASURING TOOL.

No. 847,720.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed October 3, 1906. Serial No. 337,202.

To all whom it may concern:

Be it known that I, MICHAEL BARBO, a citizen of the United States, residing at Butte, in the county of Silverbow and State of Montana, have invented certain new and useful Improvements in Angle-Measuring Tools; 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.

My invention has for its object to provide an improved angle-measuring tool; and to this end it consists of the novel devices and combinations of devices hereinafter described, and defined in the claim.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a plan view showing the improved tool, some parts being sectioned. Fig. 2 is an elevation of the improved tool, and Fig. 3 is a plan view of the tool with the parts thereof bolted.

The tool comprises a longitudinal extensible connecting-bar and a pair of angle-bars pivotally connected to the ends thereof.

The extensible connecting-bar is made up of overlapping sections 1 and 2, that are provided with long slots 1^a and 2^a, respectively, that run nearly from end to end thereof. The overlapping ends of the sections 1 and 2 are held for true straight-line sliding movements by a nutted clamping-bolt 3 and a headed stud 4. The headed stud 4, as shown, is secured to the bar member 2 and works through the slot 1^a of the bar member 1. The nutted bolt 3 is passed through the end of the bar 2 and works in the slot 1^a of said bar member 1.

The so-called "angle-bars" are pivotally connected to the ends of the respective bar members 1 and 2 by means of short nutted bolts 6. The nuts on the bolts 3 and 6 are preferably in the form of thumb-nuts. By means of the nutted bolt 3 the connecting-bar may be adjusted to any desired length and the sections thereof securely clamped together, so that the proper adjustment will not be lost, simply by tightening the nut of the said bolt 3. The angle-bars 5, when adjusted to the desired angle with respect to each other and to the extensible connecting-bar, may be secured in their set positions by tightening the nutted bolt 6.

The tool above described is employed for a great many different purposes, but will be found particularly serviceable for use in building box-stairs, in cutting miters for stair treads and risers, in setting window-stools, or for framing wood and iron, as frequently required in erecting buildings.

When it is desired to fold the tool into a small compass, so it may be easily carried or may be placed within a tool chest or box, the angle-plates 5 can be removed. The two sections 1 and 2 of the extensible connecting-bar move so that one entirely overlies the other, and then the said angle-plates may be secured, as shown in Fig. 3.

It will be noted that the bolts 6 are of slightly greater diameter than the width of the slots 1^a and 2^a. To permit the said bolts to be passed through the intermediate portions of said slots when the bar-sections 1 and 2 are adjusted, as shown in Fig. 3, the said slots 1^a and 2^a are formed with enlargements 1^b and 2^b, which are arranged to register and form seats for the bolt 6 when the parts are adjusted, as shown in Fig. 3.

Preferably the outer edges of the so-called "angle-bars" 5 are graduated to indicate inches and fractions thereof. The tool described, while of small cost, has in practice been found extremely efficient for the purposes had in view.

I have found by the use of this tool that many kinds of carpenter-work can be performed in about one-half the time that it would take to do the same without the use of the tool.

What I claim is—

The combination with the bars 1 and 2, having slots 1^a and 2^a with intermediate enlargements 1^b and 2^b, of means for guiding said bars 1 and 2, and securing the same in different adjustments, comprising a nutted bolt 3, angle-bars 5 applied to the ends of said bars 1 and 2, and the nutted bolts 6 detachably and pivotally connecting said bars 5 to said bars 1 and 2, and which bolts 6 are insertible through the registered slot enlargements 1^b and 2^b to secure the parts in compact form but are too large to enter the slots 1^a and 2^a, substantially as described.

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

MICHAEL BARBO.

Witnesses:

M. D. KERN,
JACOB OJANPERA.