

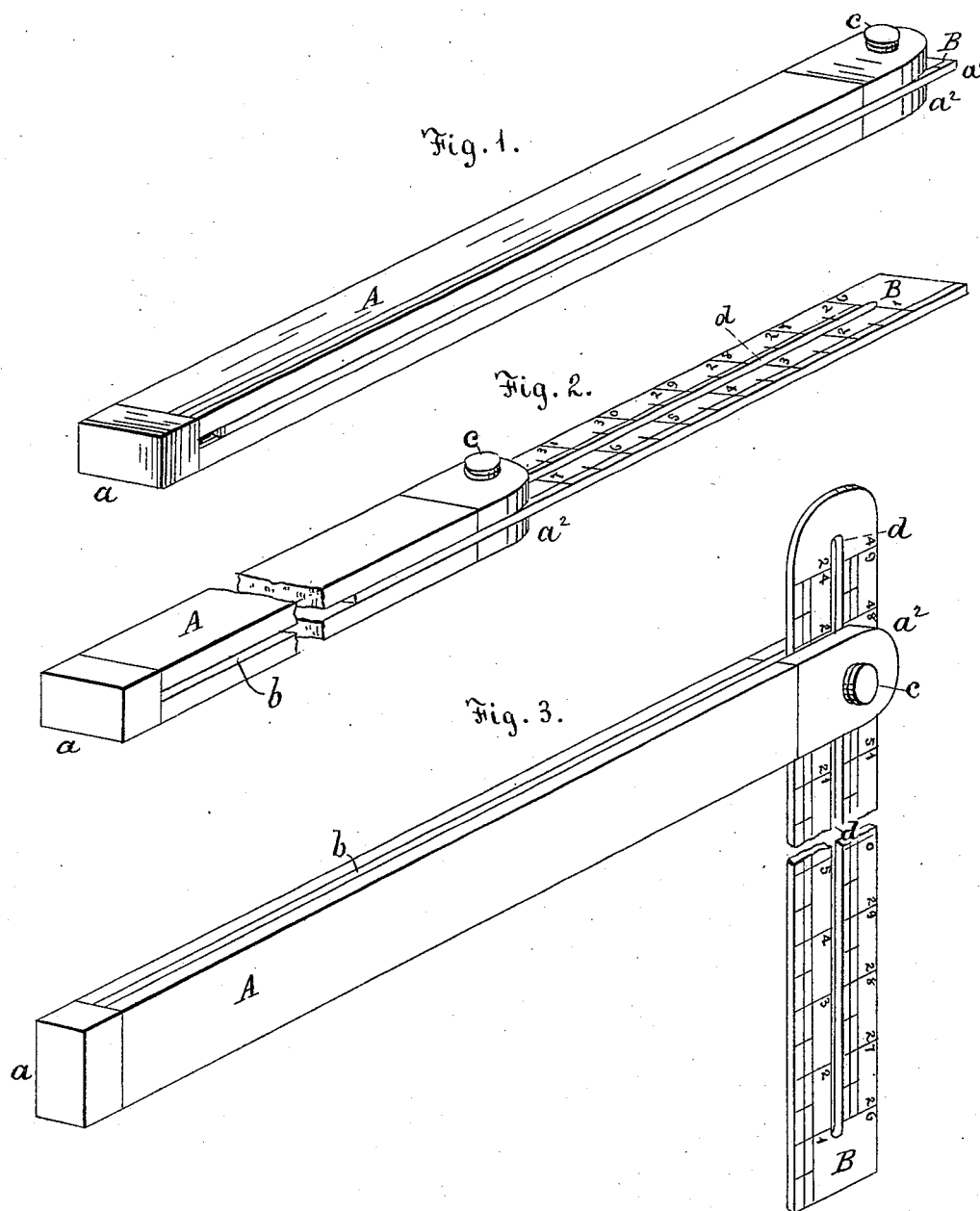
(No Model.)

J. S. THORNBURG.

BEVEL AND GAGE.

No. 267,381.

Patented Nov. 14, 1882.



Witnesses :

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# UNITED STATES PATENT OFFICE.

JOHN S. THORNBURG, OF CLINTON, IOWA.

## BEVEL AND GAGE.

SPECIFICATION forming part of Letters Patent No. 267,381, dated November 14, 1882.

Application filed June 13, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN S. THORNBURG, of Clinton city, in the county of Clinton and State of Iowa, have invented certain new and useful Improvements in a Combined Bevel, Protractor, and Measure; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to a combined tool consisting of a slotted stock having a slotted blade, and provided with a set-screw for holding the blade in position, the blade being provided with scales, the first number of which scales on one portion of the blade gives the combined lengths of the stock and blade, and the remaining numbers of that portion of the scale being arranged to give the combined lengths of the stock and blade when extended, and the other portion of the blade being provided with an ordinary scale of inches and fractions of inches for the purposes of taking the measurements and angles of openings, and for fitting accurately doors, sash, shutters, &c., as hereinafter fully described.

Figure 1 is a perspective of the tool, showing the blade as far as it can be inserted in the stock. Fig. 2 is a view of the tool with the blade extended in line with the stock. Fig. 3 shows the blade adjusted at an angle to the stock.

A is the stock, having a slot, *b*, and set-screw *c*, and provided with a blade, B, with a slot, *d*, similar to an ordinary bevel. On each side of the slot the blade is provided with scales. The scale on one portion of the blade begins with the number which gives in inches the length of the stock and blade combined when closed, this number being in this case 26—the number of inches from the end *a* of the stock to the end *a'* of the blade—as shown in Fig. 1 of the drawings. It will be seen by looking at Figs. 2 and 3 of the drawings that the end *a'* of the blade, when closed, extends just one inch beyond the end *a* of the stock, and hence the stock itself

is one inch less in length than the commencing number of the above-named portion of the scale.

It is evident that a tool embodying my invention may be made any required size by having the scale arranged and numbered as herein described, so that the commencing number will give the shortest length of the combined stock and blade and the remaining numbers will give the extended lengths; but the size herein given is preferred for the purposes for which I have used the tool. The other portion of the blade is provided with an ordinary scale of inches and fractions thereof, the numbers increasing from the end *a'* toward the stock, which scale is useful in measuring openings greater than the combined lengths of the stock and blade, and in measuring recesses.

This tool is especially useful in measuring openings, and in fitting doors, window-sash, shutters, &c. In fitting a door, for example, the tool is set as a bevel to the precise angle of the opening, and the stock being placed to the jointed edge of the door, the end of the door is marked by the blade, and being trimmed to the mark will fit exactly the opening.

In using the tool for measuring openings—such, for example, as an opening for a door—the end *a* is placed against one jamb and the blade is extended in line with the stock, as shown in Fig. 2, till the end *a'* of the blade strikes the other jamb, when the set-screw is tightened and the combined length of the stock and blade will be the width of the opening, which will be indicated in inches and fractions thereof on the blade at the end *a* of the stock by the scale whose commencing number is 26. It is evident that the height of the opening may be taken in the same way, the scale numbering from 1 to 24 being used for measuring the distance beyond the length of the stock and blade.

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

The combined bevel and extension rule, consisting of the combination, with the stock A, having the longitudinal slot *b*, of the blade B, adjustable at any angle to the stock, and having the slot *d*, extending nearly the whole length of the blade, and provided with the measuring-

scale, the stock and blade being constructed in  
relation to each other so that nearly the entire  
length of the blade may be inserted and ex-  
tended endwise in and out of the stock, and  
5 the scale on the blade being numbered, so as to  
give the exact combined lengths of the stock  
and blade closed or partly or wholly extended,  
substantially as and for the purposes described.

In testimony that I claim the foregoing as my  
own invention I affix my signature in presence 10  
of two witnesses.

JOHN SPRINGER THORNBURG.

Witnesses:

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