C. W. SWICK.

COMBINED LEVEL AND PITCH GAGE.

APPLICATION FILED FEB. 1, 1911.

1,026,967. **Patented May 21, 1912.**

2 SHEETS—SHEET 1.

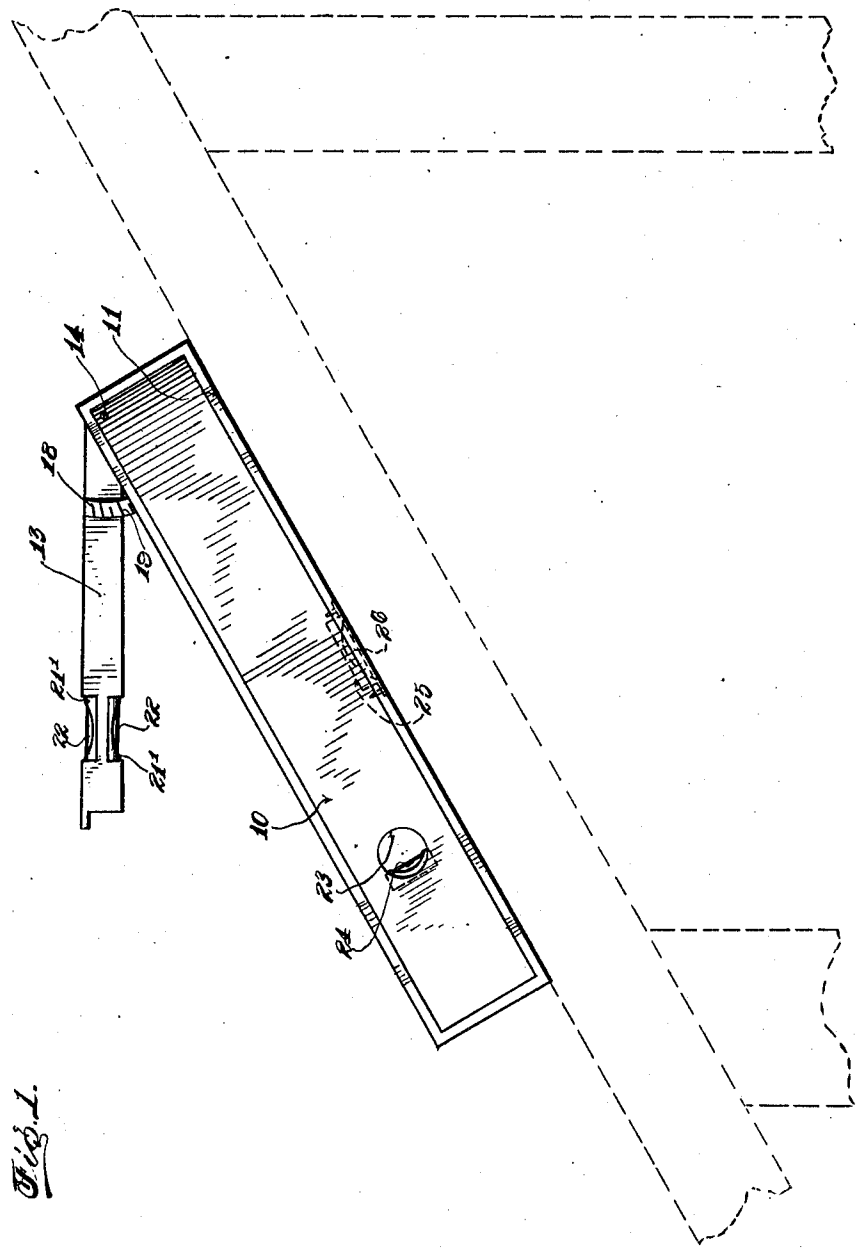


Fig. 1.

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Witnesses

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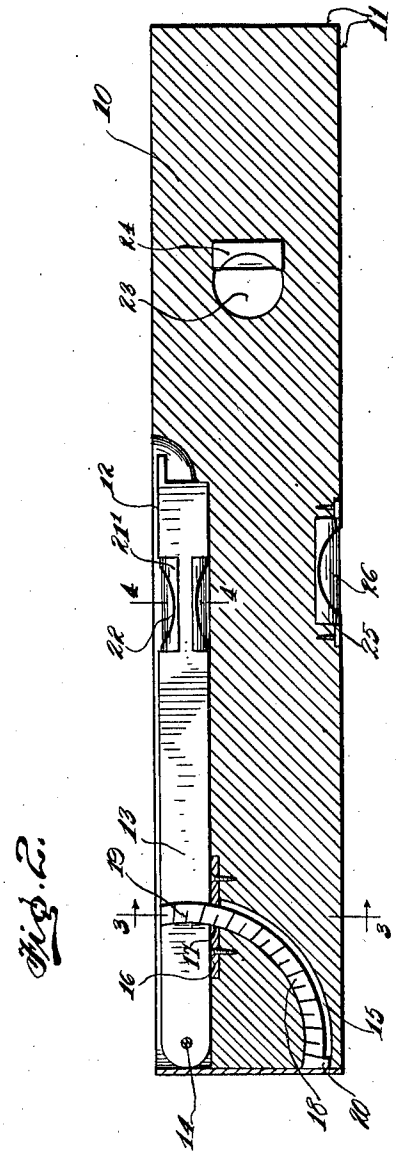


Fig. 2.

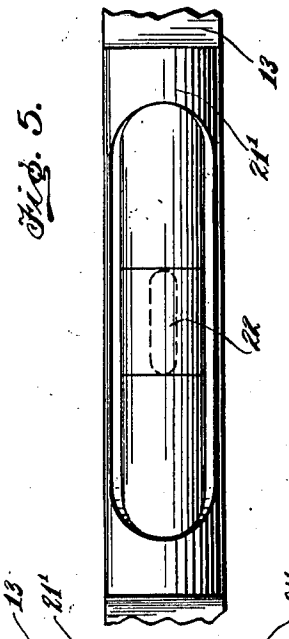


Fig. 5.

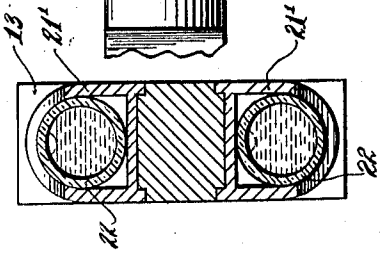


Fig. 4.

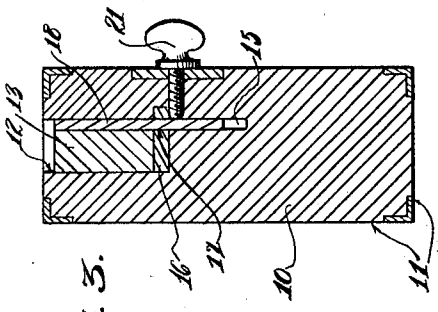


Fig. 3.

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UNITED STATES PATENT OFFICE.

CLEVELAND W. SWICK, OF GLENWOOD SPRINGS, COLORADO.

COMBINED LEVEL AND PITCH GAGE.

1,026,967. Specification of Letters Patent. Patented May 21, 1912.

Application filed February 1, 1911. Serial No. 606,003.

To all whom it may concern:

Be it known that I, CLEVELAND W. SWICK, a citizen of the United States, residing at Glenwood Springs, in the county of Garfield, State of Colorado, have invented certain new and useful Improvements in Combined Level and Pitch Gages; 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 that class of instruments which are used by carpenters for obtaining levels and the pitch of roofs and the like and the principal object is to provide a convenient device of this character which may readily be used for the purpose of the level or pitch gage, the device being capable of conversion from one to the other at will.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combination of parts to be hereinafter more fully described and pointed out in the appended claim.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views; and in which,

Figure 1 is a view showing the application of the device when used as a pitch gage; Fig. 2, an enlarged side elevation partly in section; Fig. 3, a section on the line 3—3 of Fig. 2; Fig. 4, a section on the line 4—4 of Fig. 2; and Fig. 5, an edge view of a portion of the device showing the bubble glass.

The invention consists of a body 10 which is preferably made of wood and bound with brass or other suitable metal for the protection of its edges. The body of course is provided with a true straight edge as indicated at 11 and in the edge opposite this straight edge there is an elongated recess 12 wherein is seated an arm 13 which is pivoted adjacent the end of the body 10 as indicated at 14. Concentric with this pivot 14 is an arcuate recess 15 which has its end covered by a plate 16 having an opening 17 formed therein. Through the opening 17 passes an arcuate arm 18 which is provided with degree graduations, said graduations being continued up across the member 13 as shown at 19. This arcuate arm is of sufficient length so that a lug 20 formed on its extremity will engage against the under side of the plate 16 when the member 13 is at right angles to the body 10. Extending through the body 10 and adapted to be forced against the arcuate arm 18 is a set screw 21. On the upper and lower sides of the arm 13 suitable recesses are provided for the reception of the bubble tube boxes 21′ containing the bubble tubes 22.

The body 10 is provided with an opening 23 at one side of which is mounted a spirit level 24 disposed transversely of the body. The body 10 is further provided with a recess 25 in which is mounted a spirit level 26 disposed longitudinally of the body. These spirit levels 24 and 26 enable the device when the arm 13 is seated in the recess 12 to be utilized as an ordinary level.

In using the device as a level, the arm 13 is folded into the recess and the device used in the ordinary manner. When it is desired to obtain the pitch of a roof or to set a beam at a given pitch, the arm 13 is swung out from the recess. In obtaining the pitch, the straight edge 11 is applied to the roof or other surface as indicated in Fig. 1 and the arms swung out until the bubble in the bubble tube is in its central position. The pitch may then be read from the device on the arcuate member 18. To set the device for a given pitch, the arm is swung out in the same manner to the proper degree and then the beam or other article raised with the body 10 applied thereto until the bubble assumes the central position.

In using the device as a square, the arm 13 is swung out until the lug 20 contacts with the under side of the plate 16 and the set screw is then used to lock the arm in this position.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

What is claimed is:—

In a device of the kind described, a body portion having a straight edge formed on one edge and a recess formed in the other edge, said recess having an arcuate extension adjacent the end of the body, a plate at the end of said extension adjacent the recess and partially covering the same, an arm pivoted to swing into and out of said recess, the

pivot of said arm being concentric with the arcuate extension, an arcuate member extending from said arm within the arcuate extension and provided with a lug at its extremity engaging beneath said plate when the arm is at right angles to the body, bubble tubes carried by said arm, and means to lock said arm in adjusted position.

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

CLEVELAND W. SWICK.

Witnesses:
CHARLES E. HUGHES,
J. IRA BURDGE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."