Jan. 16, 1923.

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W. O. EADS.

ADJUSTABLE SQUARE AND BEVEL.

FILED DEC. 13, 1919.

Fig. 1.

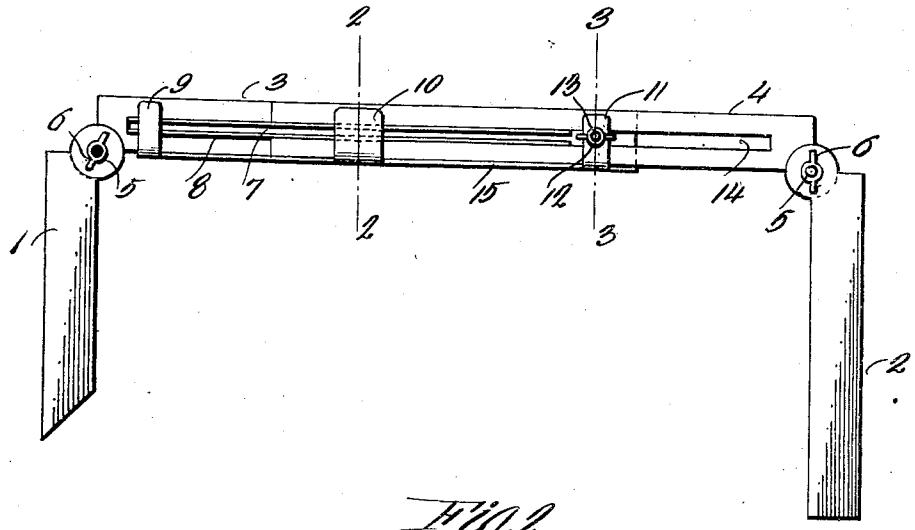


Fig. 2.

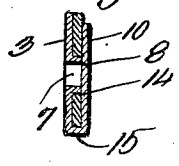


Fig. 3.

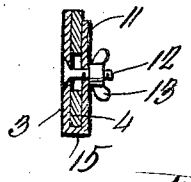


Fig. 4.

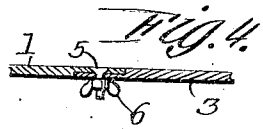
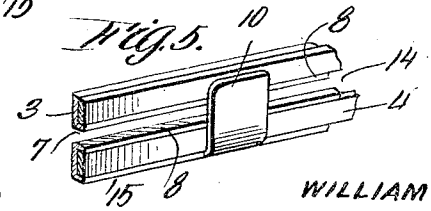


Fig. 5.



WITNESSES

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Patented Jan. 16, 1923. 1,442,136

UNITED STATES PATENT OFFICE.

WILLIAM O. EADS, OF KOKOMO, INDIANA.

ADJUSTABLE SQUARE AND BEVEL.

Application filed December 13, 1919. Serial No. 344,619.

To all whom it may concern:

Be it known that I, WILLIAM O. EADS, a citizen of the United States, residing at Kokomo, in the county of Howard and State of Indiana, have invented certain new and useful Improvements in Adjustable Squares and Bevels, of which the following is a specification.

This invention provides a device for the use of carpenters for laying out work and which may be readily converted to a square, bevel or an extension rule, the device being adjustable so as to be reduced to compact form when not required for immediate use and which may be quickly adjusted for the required work to be performed in laying off squares, or for lineal measurement.

The drawings illustrate a preferred embodiment of the invention. However, it is to be understood that in adapting the same to meet different conditions, various changes in the form, proportion and minor details of construction may be resorted to without departing from the nature of the invention as claimed hereinafter.

Referring to the accompanying drawings:—

Figure 1 is a view in elevation of a device embodying the invention showing the intermediate member extended and the end members disposed at a right angle to the intermediate member.

Figure 2 is a transverse section on the line 2—2 of Fig. 1,

Figure 3 is a cross section on the line 3—3 of Fig. 1.

Figure 4 is a sectional detail of the joint formed between an end member and the intermediate member.

Figure 5 is a detail perspective view of a portion of the intermediate member, showing more clearly the guide and retaining means for the companion elements.

Corresponding and like parts are referred to in the following description and indicated in the several views of the drawings by like reference characters.

The device comprises end members 1 and 2 and an intermediate extensible member comprising relatively sliding elements 3 and 4. The end member 1 is pivotally connected to the outer end of the element 3 by a ruled joint. The end member 2 is similarly connected to the outer end of the element 4. An end member is made secure in the required adjusted position by means of suitable fastenings such as a bolt 5 and thumb screw 6. Obviously the end members may be turned so as to line with the intermediate member or may be adjusted to any relative angle. When the device is adapted for use as a square, either one or both of the end members is adjusted to a right angle relative to the intermediate member and is secured in the adjusted position by means of a fastening. When the device is adapted for use as a bevel, either one of the end members may be adjusted to an angle medially between a right angle as will be readily understood.

The intermediate member is extensible and comprises the elements 3 and 4 which have a sliding engagement. The element 3 is formed with a longitudinal slot 7. Guide lips 8 are disposed at the sides of the slot 7 and are formed by bending portions of the element 3 laterally if forming a longitudinal slit or cut in said element. A plurality of spring clips is disposed upon one side of the element 3. These clips are indicated at 9, 10 and 11. The clips form a part of the element 3 and consist of lateral extensions at one edge thereof bent so as to overlie or extend in front of the element 3 provided with the guide lips 8. One of the end clips as 11 is apertured to receive a bolt 12 and a thumb screw 13 whereby the two elements 3 and 4 are secured in the required adjusted position. The element 4 is provided with a longitudinal slot 14 of a width to receive the guide lips 8 whereby to prevent any relative play of the elements in the plane thereof. The guide lips 8 project from the face of the element 3 a distance equal to the thickness of the element 4 and the several clips are adapted to engage the outer face of the element 4 and prevent its displacement when the thumb screw 13 is loose. When the intermediate member is reduced to a minimum length, the several clips engage the element 4. However, the element 4 may be moved outwardly so as to be engaged by the clip 11 only. In any adjusted position of the element 4 it is made secure by tightening the thumb screw 13 as will be readily understood.

When the device is reduced to compact form the elements 3 and 4 are moved inward to their full length and the end members 1 and 2 are folded against the inter-

mediate member. When the device is to be used as a square, either one or both of the elements 1 and 2 may be turned so as to extend at a right angle to the intermediate member, said element or elements being made secure in the adjusted position by the fastening means 5 and 6. When the device is to be used as a measuring rule. the end members 1 and 2 are lined with the intermediate member and the latter may be extended to any position with its capacity of adjustment, the several pairs being made secure by the fastening means. It is to be understood that the several parts may consist of metal plates and that they may be graduated in a manner well understood so that the work may be laid off according to any required scale or measurement. It is also noted that the element 3 is provided along the edge from which the clips spring with a guide lip 15 which engages the adjacent edge of the companion elements 4 thereby materially assisting the guide lips 8 in retaining the elements in alinement.

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

1. In a device of the character specified, a member comprising relatively slidable elements, each being longitudinally slotted and one of the elements having lateral extensions in line with and entering the slot of the other element, and means holding the elements in adjusted position.

2. In a device of the character specified, a member comprising relatively slidable elements, guide means extending into the relatively sliding elements for permitting one element to slide upon the other element, and spring clips extending from the edge of one of the elements and overlapping and gripping the companion element.

3. In a device of the character specified, a member comprising relatively sliding elements, each being longitudinally slotted and one of the elements having guide lips along the sides of the longitudinal slot thereof entering the longitudinal slot of the companion element, and means securing the elements in adjusted superposed position.

4. A device of the character specified, comprising a member embodying relatively sliding elements, one of the elements having a longitudinal slot and provided at one edge and at opposite sides of the slot with laterally extending lips and the companion element being longitudinally slotted to receive the lips at the sides of the slot of the first mentioned element and having an edge engaging the adjacent lip and means for securing the elements in relatively adjusted superposed position.

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

WILLIAM O. EADS.

Witnesses:

LEWIS WAGNER,

JAMES W. MYERS.