

W. H. WALKER.
 Combined Rules and Squares.

No. 134,333.

Patented Dec. 24, 1872.

Fig. 1.

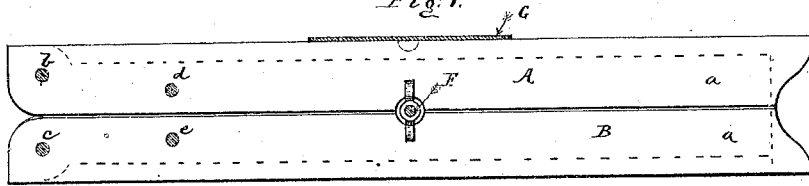
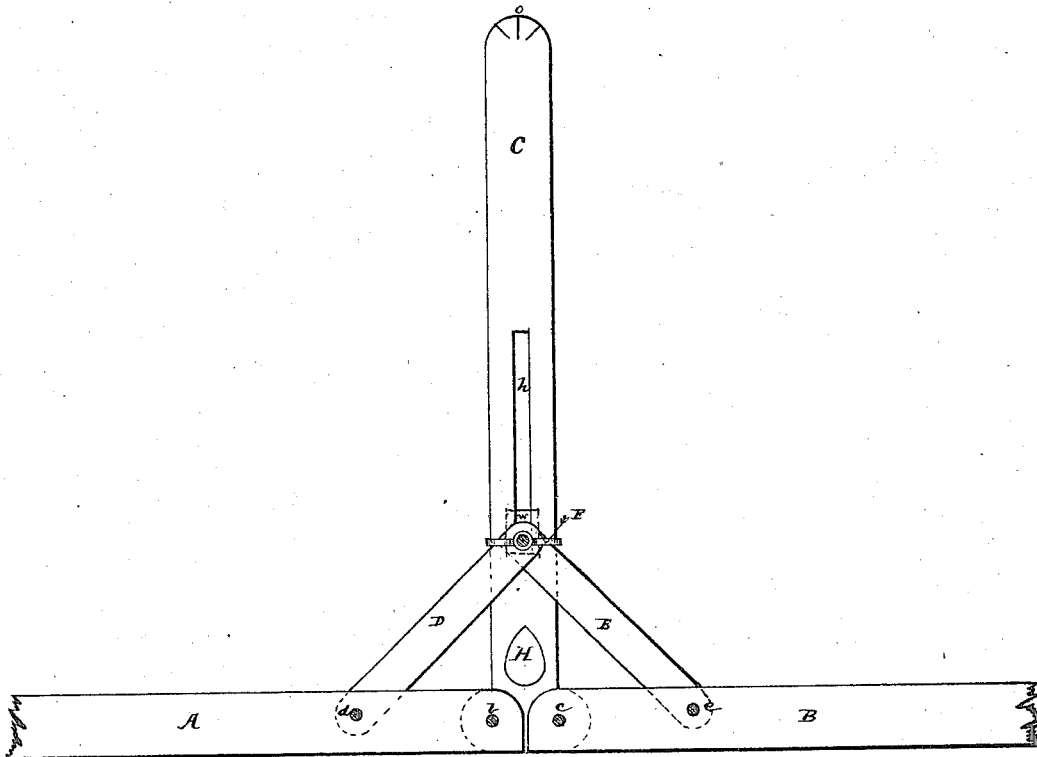


Fig. 2.



Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN COMBINED RULES AND SQUARES.

Specification forming part of Letters Patent No. 134,333, dated December 24, 1872.

To all whom it may concern:

Be it known that I, WILLIAM H. WALKER, of the city of Charleston, Charleston county, State of South Carolina, have invented certain Improvements in Combination Rules, of which the following is a specification:

The object of my invention is to produce a combination rule constructed in such a manner that it can be used either as a plumb, spirit-level, T-square, or right angle, thus dispensing with the instruments commonly used; and is, at the same time, made so portable that it can be carried in the pocket like an ordinary rule.

In order to describe my invention more fully, I will refer to the accompanying drawing.

Figure I is a front view of my combination rule folded together; Fig. II is a top view of the same; and Fig. III is a view showing the position of the rule when it is to be used for a plumb-line or T-square.

A and B are two separate parts of equal length of a rule ordinarily divided into parts, having a groove, *a*, cut into these parts on one side for the insertion of the part *c*. To this part *c* are pivoted the two parts A and B by pins or rivets *b* and *e*. D and E are two braces fastened to A and B by pins or rivets *d* and *e*, and fastened to the part C by means of a set-screw, F, attached to a slide, *w*, working into the groove *h*. On the upper side of the part A is mortised a spirit-level, G. When the parts A and B are set at any required angle they are held in their relative positions by aid of the set-screw F.

The great utility of this invention is that it combines a number of very necessary and indispensable instruments used in almost every trade.

If an ordinary rule is required, it is obtained by folding the two parts A and B together, as shown in Fig. I. If a plumb is wanted to which a plumb-line can be attached, it is only necessary to draw outward the parts A and B until they are on a straight line with each other, the piece C standing perpendicularly or at right angle to the parts. They are held in this position by means of the set-screw F. The plumb-line is then attached to slots *o* in the top of the piece C, and is allowed to hang down until the weight at the end corresponds

with the opening H in the part C. (See Fig. III.) This position also answers the purpose of a T-square.

It will be seen that the longitudinal groove *a* in each section A B is of a length equal to the length of section C, and is of a depth equal to the one-half of the width of said section, so that when the set-screw F is loosened the parts A B can be folded inward, entirely inclosing the section C, with the inner edges of the sections A B against each other, thereby forming a flat and compact ruler for ordinary uses.

The utility and portability of such a combination as is here effected are evident to anybody familiar with the use of these separate instruments.

I am aware that an implement consisting of two sections hinged at their inner ends to the exterior and lower end of a central section, and additionally connected thereto by two arms pivoted to the exterior of the two hinged sections, the upper ends of the arms being attached to a sleeve moving around the central section, is not new; hence I disclaim such to be my invention. I am aware of no implement consisting of the three sections and two arms where the two pivoted or hinged sections are longitudinally grooved, the central section slotted, and the arms connected to a slide moving in the slot, so that the central section and the two arms can be entirely inclosed.

By this construction of the parts the implement can be folded into a small compass, and readily used for the various purposes set forth.

Having thus fully described my invention, I desire to claim—

The within-described implement, consisting of the two longitudinally-grooved and hinged sections A B, the central section C with slot *h*, the arms D E pivoted in the grooves in the sections A B, the slide *w*, and set-screw F, all the parts being combined and used substantially as and for the purposes set forth.

W. H. WALKER.

Witnesses:

W. E. KLEIN,
T. BAMPFIELD.