No. 838,443. PATENTED DEC. 11, 1906.

R. B. OWINGS.

COMBINED CARPENTER'S SQUARE AND MITER GAGE.

APPLICATION FILED JULY 30, 1906.

Fig. 1.

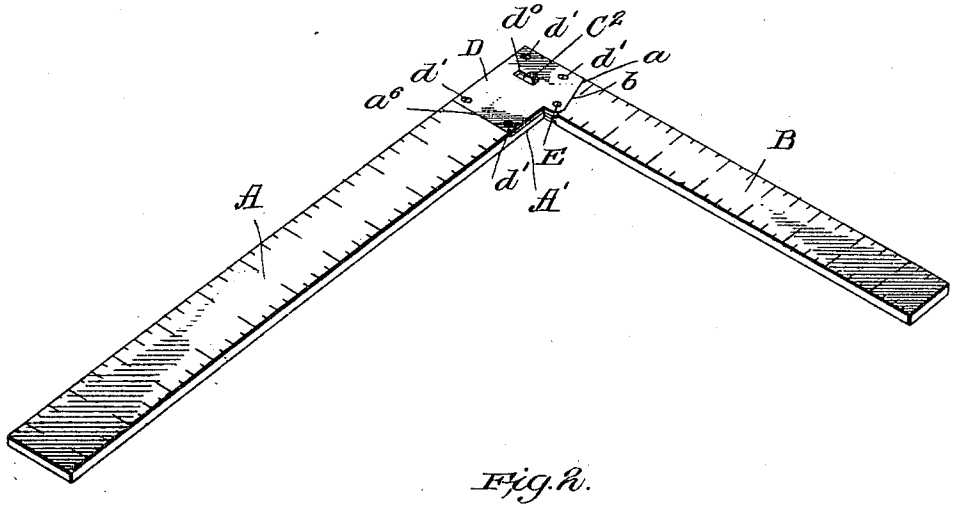


Fig. 2.

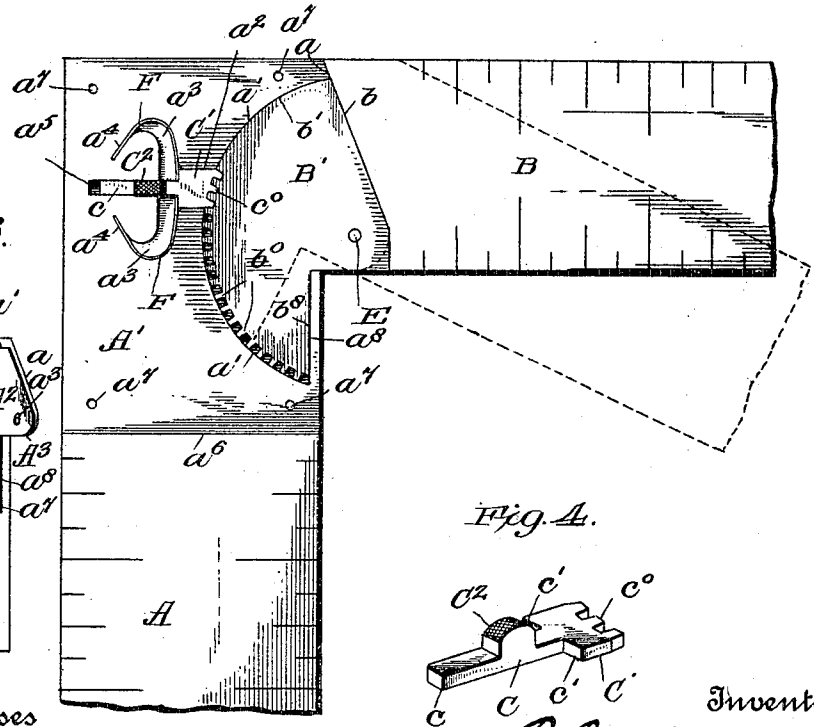


Fig. 3.

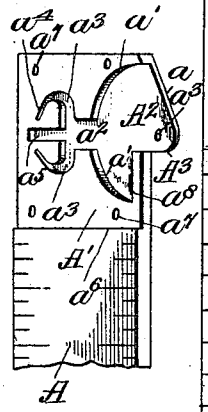


Fig. 4.

Witnesses

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COMBINED CARPENTER'S SQUARE AND MITER-GAGE.

No. 838,443. Specification of Letters Patent. Patented Dec. 11, 1906.

Application filed July 30, 1906. Serial No. 328,440.

To all whom it may concern:

Be it known that I, ROBERT B. OWINGS, a citizen of the United States, residing at Shady Side, in the county of Anne Arundel and State of Maryland, have invented certain new and useful Improvements in a Combined Carpenter's Square and Miter-Gage; 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 relates to an improved combined carpenter's square and miter-gage; and it consists in providing an implement which may be used either as an ordinary square or may be conveniently set to mark off lines at varying angles to each other.

My invention will be understood by reference to the accompanying drawings, in which—

Figure 1 shows a perspective view of the entire instrument when in use as a "square." Fig. 2 is an enlarged plan view of a portion of the instrument with the plate covering the hinged joint removed. Fig. 3 is a perspective view, on a smaller scale, of the head of the fixed arm of the instrument, the movable arm and spring-catch being removed. Fig. 4 is a detail showing the detent for locking the hinged arm at the desired angle.

The instrument comprises, in brief, a fixed member A, a hinged member B, pivoted thereto by means of the pivot-pin E, a detent C, thrown into engagement by the springs F, and a removable plate D, adapted to cover the hinged joint.

Referring to the parts in detail, the fixed member A is reduced in thickness, as at A′, so that the plate D may lie flush with the face of the member A, abutting against the shoulder a^6. The thickness of the part A′ is still further reduced, as at A^2, being cut away to form arc-shaped walls a', a straight slot a^2, and spring-recesses a^3, tapered, as at a^4, between which recesses is a straight slot a^5, all as shown in Fig. 3. This part A^2 of the fixed member is provided with a tongue A^3, perforated, as at A^0, for the pivot-pin E.

Holes a^7 are tapped for the screws d', by means of which the plate B is secured in place and which permit the plate to be conveniently removed for cleaning or repair of the parts beneath.

The movable member B is provided with an arc-shaped web B′, having shoulders b, adapted to engage the face a on the fixed member when the parts are in the square position, as shown in Figs. 1 and 2. This arc-shaped web has its curved edge b' dentated through a part of its length, as at b^0, to engage the teeth c^0 of the detent C. This detent has a broad head C′, with shoulders c' and the tailpiece c, behind which shoulders the springs F press, and thus tend to keep the detent normally in engagement with the teeth of the sector B′.

The tailpiece c of the detent travels in the guide-slot a^5, (see Fig. 3,) and the head C′ of the detent travels in the guide-slot a^2. The outer ends of the springs F are held in the narrow portion a^4 of the spring-slots a^3, and thus the free ends of these springs have a limited play in said slots, but are held in place without the necessity of any bolts or other fastening device. These springs are made of ordinary resilient metal, and should one break another one might be very readily substituted, or any ordinary mechanic could make the springs from material ordinarily in hand.

The detent C carries a thumb-lug C^2, which projects up through the slot d^0 in the slot D.

When the parts are in the square position, it will be seen that the shoulder b bears against the face a and the face b^8 of sector B′ bears against the shoulder a', while the teeth c^0 lock the two parts together rigidly in the square position, as shown in Fig. 2. Now if it is desired to alter the angle between the two members it will simply be necessary to pull back on the thumb-lug C^2, withdrawing the detent from engagement with the teeth b^0 and then swinging the movable member to the position desired—say that indicated in dotted lines in Fig. 2—when if the detent be released it will snap forward under the action of the springs F and lock the two members in the desired position.

It will be noted that the plate D is flush with the members A and B and presents a neat and smooth appearance, while at the same time the said plate adds rigidity to the structure, keeps out dirt, protects the parts beneath, and also serves as a positive lock to hold the springs and the detent in place, but in slidable relation, in the device.

It will be seen that I provide a cheap and

simple instrument which is not likely to get out of order and which if it does get out of order may be easily repaired and which may be used either as a square or may be set at the desired angle as a miter-gage.

It will be obvious that various modifications might be made in the herein-described device which could be used without departing from the spirit of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a device of the character described, the combination with a fixed member made recessed in its head and provided with a laterally-projecting tongue with faces and guide-slots, of a movable member pivoted to said tongue and having abutting faces adapted to engage the faces of the fixed member and also provided with a toothed sector fitting in said recess in the fixed member, a toothed detent traveling in guide-slots in said fixed member, and provided with a broad head having teeth on one side and shoulders on the other side, and also provided with a thumb-lug, springs secured in said fixed member and engaging said shoulders and normally pressing said detent into engagement with said sector, and a plate secured over the hinged joint and holding the parts in place, substantially as described.

2. In a device of the character described, the combination with a fixed member made thinner at its head and recessed in said thin portion and provided with a laterally-projecting tongue with faces and guide-slots, of a movable member pivoted to said tongue and having abutting faces adapted to engage the faces of the fixed member, and also provided with a toothed sector fitting in said recess in the fixed member, a toothed detent traveling in guide-slots in said fixed member, springs secured in said fixed member and normally pressing said detent into engagement with said sector, and a plate secured over the hinged joint and forming a flush surface with the two members, substantially as described.

3. In a device of the character described, the combination with a fixed member made thinner at its head and recessed in said thin portion and provided with a laterally-projecting tongue with faces and guide-slots, of a movable member pivoted to said tongue and having abutting faces adapted to engage the faces of the fixed member, and also provided with a toothed sector fitting in said recess in the fixed member, a detent traveling in guide-slots in said fixed member and provided with a broad head having teeth on one side and shoulders on the other side, and also provided with a thumb-lug, springs secured in said fixed member and engaging said shoulders and normally pressing said detent into engagement with said sector, and a plate secured over the hinged joint and forming a flush surface with the two members, substantially as described.

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

ROBT. B. OWINGS.

Witnesses:

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WM. W. OWINGS.