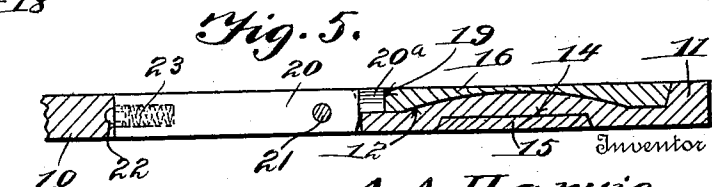
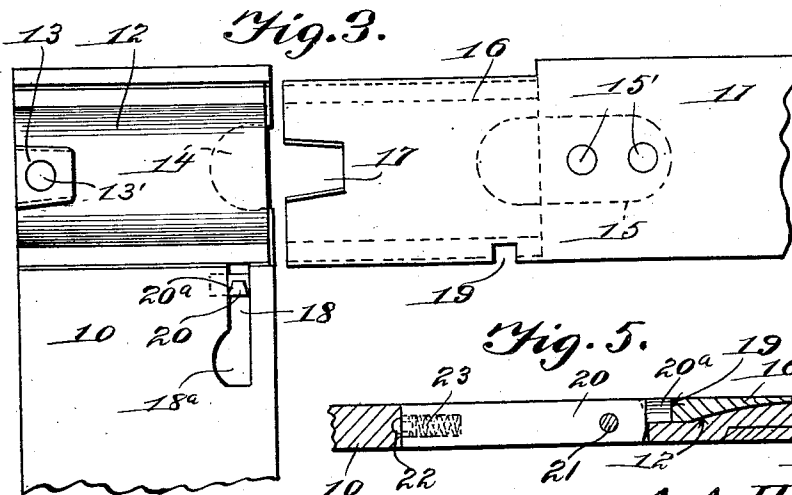
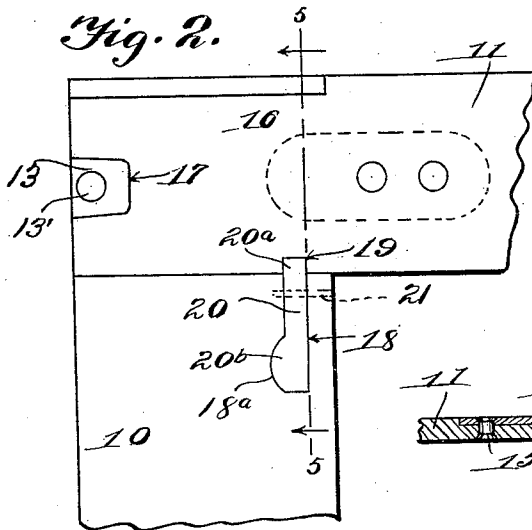
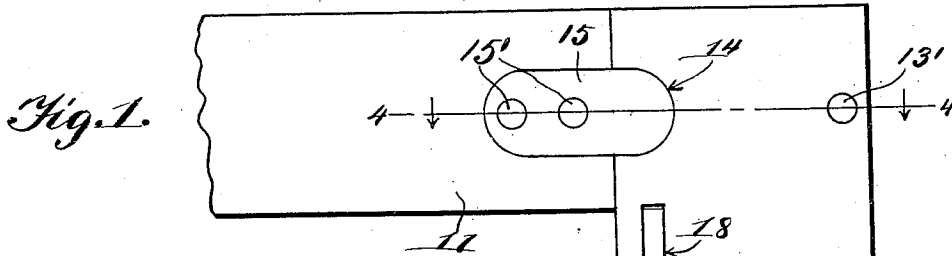


A. A. HARVIE.
CARPENTER'S SQUARE.
APPLICATION FILED NOV. 10, 1911.

1,049,230.

Patented Dec. 31, 1912.



Witnesses

William C. Linton.

Charles S. Wilson

By J. M. C. W. Linton

Attorney

A. A. Harvie.

UNITED STATES PATENT OFFICE.

ALBERT ARTHUR HARVIE, OF OTTUMWA, IOWA.

CARPENTER'S SQUARE.

1,049,230.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed November 10, 1911. Serial No. 659,635.

To all whom it may concern:

Be it known that I, ALBERT A. HARVIE, a citizen of the United States, residing at Ottumwa, in the county of Wapello and State of Iowa, have invented certain new and useful Improvements in Carpenters' Squares; 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 collapsible carpenters' squares, and is designed as an improvement over the construction set forth in my application for Letters Patent upon a similar construction, filed January 23, 1911, Serial No. 604,158. In the previous construction, as illustrated in the above noted application, the square comprises two sections, one of said sections being provided with a groove, the base of which is convexed and adapted to receive a tongue or projection formed on the opposite section, said tongue or projection being concaved to receive the convexed portion of the base of the groove. The forward terminal of the tongue or projection carried by one of the sections is provided with an annular recess which receives a lug or projection formed on the base of the groove formed in the opposite section; while the opposite side of the sections carrying a tongue or projection is provided with a small lip or smaller projection which is received within the curved depression formed in the under side of the grooved sections. This construction is sufficiently strong and substantial for the ordinary mechanic's use, but it is the object of the present invention to provide an additional locking means whereby the section may be locked from all lateral movement which might cause inaccuracy in the square.

With the above and other objects in view, this invention consists in the construction, combination and arrangement of parts, all as hereinafter more particularly described, claimed and illustrated in the accompanying drawings, wherein:

Figure 1 is a fragmentary elevation of a square embodying all of the features of my previous application and the additional locking means forming the subject matter of the present application; Fig. 2 is a similar view taken on the opposite side thereof to Fig. 1; Fig. 3 is a view similar to Fig. 2, illustrating the elements thereof previous to

interengagement; Fig. 4 is a section taken along line 4—4 of Fig. 1; and Fig. 5 is a section taken along line 5—5 of Fig. 1.

Referring more particularly to the drawings, 10 indicates one section of a square constructed in accordance with the present invention, and 11 indicates the cooperating section. The section 10 is provided with a transverse groove 12, the base of which is convexed, as illustrated in Figs. 3 and 5, said groove being provided with a central lug or projection 13 secured thereto by a rivet 13'. On the opposite side of the section 10, and located on the under side of the groove 12 is a semi-circular depression 14, which receives the projecting terminal or lip of the plate 15 riveted to and counter-sunk in the section 11 by the rivets 15'. The section 11 is provided with a tongue or projection 16, the thickness of which is substantially one-half the thickness of the section 11 and the width is somewhat narrower than the section 11, said tongue or projection is adapted to be received in the groove 12 of the section 10, and has its under surface concaved to receive the convexed base of said groove 12. The free terminal of this tongue or projection 16 is provided with an annular depression 17, which is adapted to receive the projection or stud 13 carried in the base of the groove 12 forming the section 10. From this construction it will readily be seen that as the tongue or projection 16 of the section 11 is inserted in the groove 12 of the section 10, the annular recess 17 will receive the projection 13 and the projecting terminal of the plate 15 will be received in the semi-circular depression 14 of the section 10, thereby rigidly locking the said sections together.

The foregoing description briefly comprises the subject matter of my application heretofore referred to. The additional lock, which forms the subject matter of the present invention comprises a rectangular opening 18 completely piercing the section 10 adjacent to the groove 12 formed therein, said opening 18 having on one side thereof a curved enlargement 18^a, which is adapted to receive the actuating portion of the locking bar mounted within said opening. An annular recess 19 is formed in the tongue or projection 16 of the section 11 on the side thereof adjacent to the body of the section 10 in such a manner that when the section 11 is in cooperative engagement with the

section 10, the recess 19 will coincide and be in perfect alinement with the opening 18 of the section 10.

A rectangular locking bar 20 is pivotally mounted in the rectangular opening 18 through the instrumentality of the pin 21, said locking bar being provided at the terminal thereof adjacent to the tongue 16 of the section 11 with a projection 20^a, said projection adapted to be received in the rectangular recess 19 of the tongue 16. The longitudinal sides of the projection 20^a are tapered downwardly and are adapted to cooperate with the similarly formed sides of the recess 19 to draw a tongue into positive engagement with the recess 12 as said projection enters the recess 19. The rear terminal of the locking bar 20 is straight upon one side to conform with the opening 18, but is provided on the opposite side with an enlargement 20^b, which is adapted to be received in the enlargement 18^a of the opening 18 when the projection 20^a is in cooperative engagement with the rectangular recess 19 of the tongue 16. The rear terminal of the locking bar 20 is provided with a ball catch 22 actuated by a spring 23, said ball catch adapted to be received in an opening formed in the rear terminal of the opening 18 for the purpose of retaining the locking bar 20 in the position illustrated in Figs. 1, 2 and 5. From this construction it will readily be seen that when it is desired to release the sections 10 and 11, a pressure is exerted upon the enlargement 20^b, thereby swinging the locking bar 20 about its pivotal point 21 and moving the projection 20^a from engage-

ment with the recess 19, thereby permitting the section 11 to be drawn from engagement with the section 10.

The combination of the lock forming the subject matter of the present invention with the various elements embodied in my previous application provides a means whereby all possible movement laterally and torsional in connection with the square are positively overcome, and a rigid construction is produced. This rigid construction positively insures the accuracy of the square which has heretofore been unattainable, by reason of the necessarily loose cooperation of the various elements of the square.

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

In a carpenter's square, the combination with a plurality of interengaging sections, one of said sections being provided with an elongated opening, a locking bar mounted in said elongated opening, adapted to rest flush with the surface of the section carrying the same, a projection formed at one terminal of said locking bar adapted to engage the opposite section, and spring actuating means carried by the said locking bar, whereby the same may be retained in an operative position.

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

ALBERT ARTHUR HARVIE.

Witnesses:

CLARA IFADON,
FRED B. HARDROCK.

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