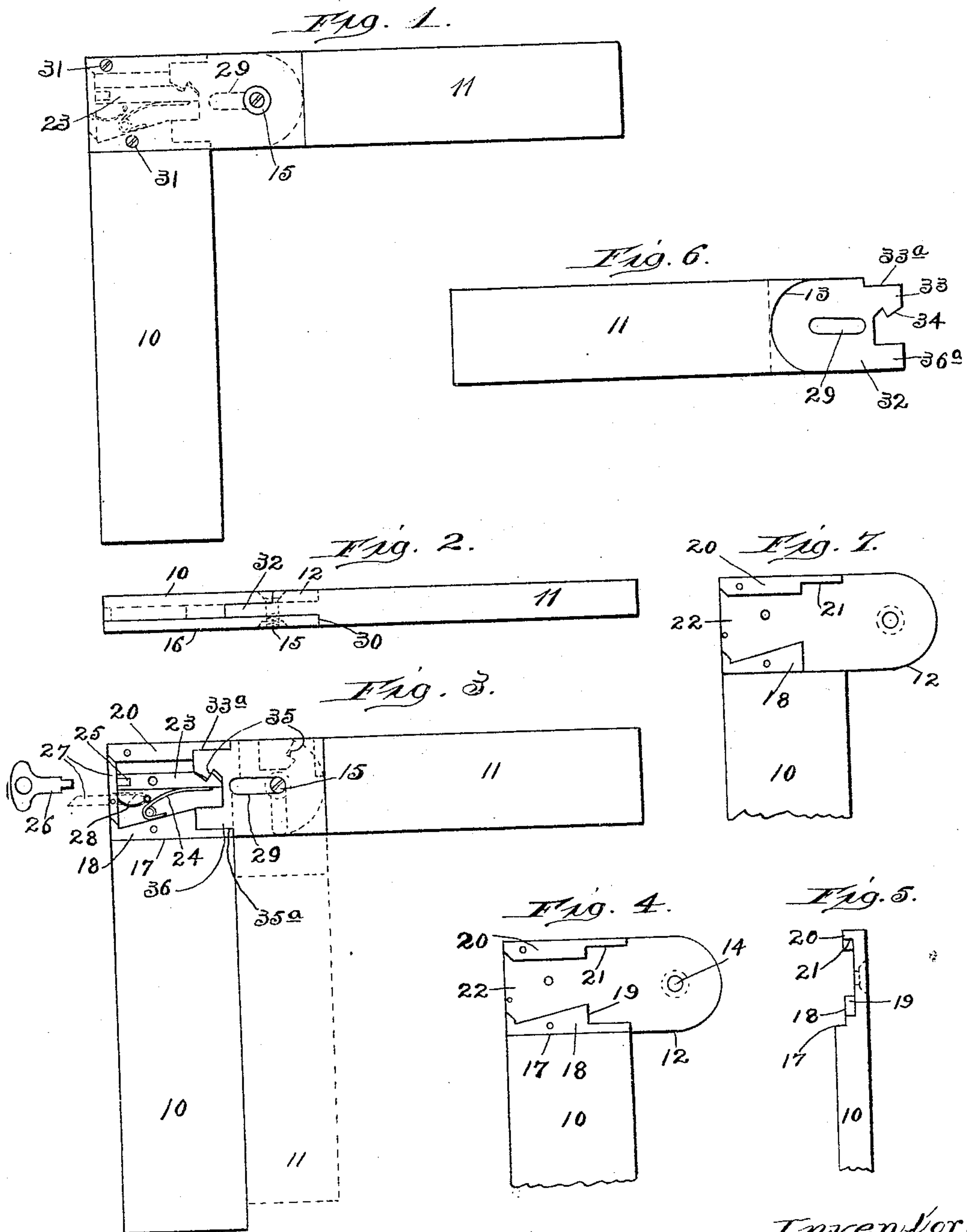


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PATENTED NOV. 7, 1905.

W. STEERS, SR.
CARPENTER'S AND JOINER'S FOLDING SQUARE.
APPLICATION FILED MAR. 20, 1905.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM STEERS, SR., OF CHICAGO, ILLINOIS.

CARPENTER'S AND JOINER'S FOLDING SQUARE.

No. 803,723.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed March 20, 1905. Serial No. 250,892.

To all whom it may concern:

Be it known that I, WILLIAM STEERS, Sr., a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Carpenter's and Joiner's Folding Square, of which the following is a specification.

This invention relates to improvements in a folding square to be used by carpenters, joiners, masons, and others; and it consists in certain peculiarities of the construction, novel arrangement and operation of the various parts thereof, as will be hereinafter more fully set forth, and specifically claimed.

The principal object of the invention is to provide a folding square which shall be simple and inexpensive in construction, strong, durable, and effective in operation, and so made that the parts or blades thereof will be effectually and rigidly held at right angles to each other, yet may be readily folded together, so that the square can be placed in a tool-box without projecting therefrom.

Another object of the invention is to so construct the different parts comprising the square that the surfaces and edges thereof will be flush with one another and smooth and straight.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a face view of a square embodying my invention, showing its members locked or secured in their extended positions and illustrating by dotted lines the inclosed mechanism and construction of the parts. Fig. 2 is a plan view thereof. Fig. 3 is a face view of the square with the removable plate detached and showing by continuous lines the members in their extended positions and by dotted lines their folded positions. Fig. 4 is a face view of a portion of the longer member or blade of the square. Fig. 5 is an edge view thereof. Fig. 6 is a side view of the shorter member; and Fig. 7 is a face view of a portion of the longer member, showing a modification in its construction.

Like numerals of reference refer to corresponding parts throughout the different views of the drawings.

The reference-numerals 10 and 11 indicate the longer and shorter members or blades, respectively, both of which may be provided with a scale representing feet, inches, and fractions thereof. These blades may be made of any suitable size, length, and material, but preferably of metal. The member or blade 10 is provided at one of its ends, which I will term its "upper" end, with a lateral extension 12, which has its free end rounded to normally rest in a rounded recessed portion 13 near the inner end of the member 11 or shorter one. The extension 12 of the member 10 is provided with an opening 14 to receive a pivot-screw 15, the ends of which are countersunk in the extension 12 and removable plate 16, so as to be flush with said parts when screwed up. The upper portion of the member 10 is provided with a transverse shoulder 17, which is located in alinement with the lower edge of the extension 12, as well as with the like edge of the shorter member when the same is in its extended position. Just above the shoulder 17 the member 10 is provided with a transverse enlargement 18, which is formed with a recess 19 in its portion adjacent to the end of the extension 12 on the longer member. At a suitable distance above the enlargement 18 the member 10 is provided with another transverse enlargement 20, which is also provided with a recess 21 in its end adjacent to the end of said extension.

By reference to the different views of the drawings it will be seen that the enlargements 18 and 20 not only form the recesses 19 and 21, but also a recess 22 for the reception and operation of the locking-lever 23 and its actuating-spring 24, one end of which rests against the lower surface of said lever and the other end against the upper surface of the enlargement 18, so as to normally press the inner end of the lever upwardly.

As shown in Fig. 3 of the drawings, the lever 23 is fulcrumed at a point between the enlargements 18 and 20 and has its outer end provided with a slot 25 for the reception of a key 26, used for operating the lever, so as to disengage it from the shorter member when it is desired to fold the parts of the square. By again referring to Fig. 3, it will be seen that the outer end of the lever 23 falls short of extending to the outer edge of the member 10 and plate 16, thus leaving a space between said plate and member in which is pivoted a door 27, which is normally held in its closed

position by means of a spring 28, secured at one of its ends to the member 10 and having its other end resting against the inner surface of said door. By using the key 26 or any other suitable instrument and pressing it against the lower portion of the door 27 it is evident that the same will be turned to the position indicated by dotted lines in Fig. 3, when the key or other instrument may be employed to engage the slot 25 in the lever for operating the same. The member 11 is provided near its inner end with an elongated opening 29 to receive the pivot 15 and is formed on one of its sides with a recess having the curved end 13 to receive the curved free end of the extension 12 and on its other side with a square-ended recess 30 to receive the rectangular plate 16, which is held in position by means of the rivet 15 and screws 31, which are countersunk. By forming the inner end of the member 11 with the recesses 13 and 30 it is apparent that a tongue 32 is provided, and this tongue has near its upper edge an extension 33, provided with a downwardly-projecting beveled tooth 34 to engage the beveled notch 35 on the inner upper portion of the locking-lever. The tongue 32 also has near its lower edge an inward extension 36 to fit in the recess 19 on the longer member. Instead of forming the enlargement 18 with the recess 19 I may sometimes omit the same, as shown in Fig. 7, in which case the tongue 32 is provided with an extension 36^a, (see Fig. 6,) in which construction the lower edge of said extension is in alinement with the lower edge of the tongue instead of being provided with an offset, as shown in Fig. 3 of the drawings.

From the foregoing and by reference to the drawings it will be seen and readily understood that when the parts are assembled as shown in Figs. 1, 2, and 3 the door 27 may be opened by pressing its lower portion inwardly, after which the lever 23 may be reached, so that its outer end may be raised, thus lowering its inner end and disengaging it from the beveled tooth 34 on the tongue of the shorter member. When thus released, the shorter member may be slid outwardly by reason of the elongated opening 29 and turned down to the position shown by dotted lines in Fig. 3. By raising the shorter member to a position at right angles to the longer member it is apparent that the shorter one may be automatically locked in its raised or extended position by pressing it inwardly. The upper and lower surfaces of the extensions 33 and 36, having the offsets or recesses 33^a and 35^a, respectively, will engage the inner recessed ends of the enlargements 18 and 20, so as to firmly brace the shorter member.

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

1. A folding square comprising two mem-

bers, one of said members having at one of its ends a recess and a lateral extension provided with an opening, transverse enlargements on the recessed part of said member spaced apart and formed to provide recesses for the locking-lever and inner portion of the other member, a spring-actuated lever fulcrumed in one of said recesses and having in its inner portion a beveled notch, the other member recessed on each of its sides to provide a tongue having an elongated opening, extensions on the free end of the tongue, one of said extensions having on its upper edge a recess to receive a portion of the upper transverse enlargement and on its lower edge a beveled tooth to engage the notch of the lever, a removable plate secured on said enlargements, and a pivot in the elongated opening of said tongue, substantially as described.

2. A folding square comprising two members, one of said members having at one of its ends a recess and a lateral extension provided with an opening, transverse enlargements on the recessed part of said member spaced apart and formed to provide recesses for the locking-lever and inner portion of the other member, a spring-actuated lever fulcrumed in one of said recesses and having in its inner portion a beveled notch, the other member recessed on each of its sides to provide a tongue having an elongated opening, extensions on the free ends of the tongue to fit in the other recesses formed by said enlargements, one of said extensions having on its lower edge a beveled tooth to engage the notch of the lever, a removable plate secured on said enlargements, and a pivot in the elongated opening of said tongue, substantially as described.

3. A folding square comprising two members, one of said members having at one of its ends a recess and a lateral extension provided with an opening, transverse enlargements on the recessed part of said member spaced apart and formed to provide recesses for the locking-lever and inner portion of the other member, a spring-actuated lever fulcrumed in one of said recesses and having in its inner portion a beveled notch, the other member recessed on each of its sides to provide a tongue having an elongated opening, extensions on the free end of the tongue, one of said extensions having on its upper edge a recess to receive a portion of the upper transverse enlargement and on its lower edge a beveled tooth to engage the notch of the lever, a removable plate secured on said enlargements, a spring-pressed door pivoted near the outer end of the lever, and a pivot in the elongated opening of said tongue, substantially as described.

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