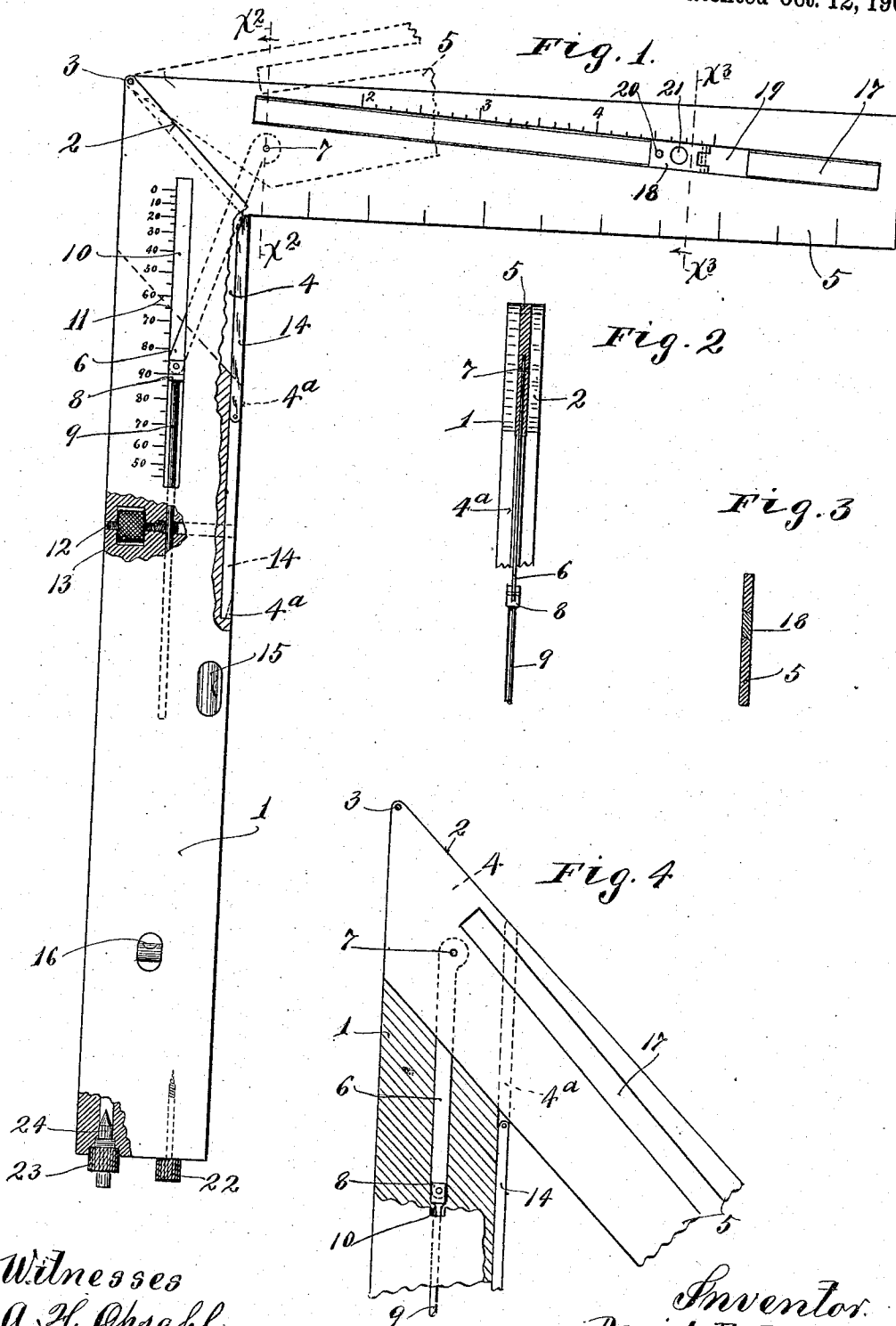


937,020.

Patented Oct. 12, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

DAVID E. BRANDT, OF CHISAGO CITY, MINNESOTA.

BEVEL-SQUARE.

937,020.

Specification of Letters Patent.

Patented Oct. 12, 1909.

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To all whom it may concern:

Be it known that I, DAVID E. BRANDT, a citizen of the United States, residing at Chisago City, in the county of Chisago and State of Minnesota, have invented certain new and useful Improvements in Bevel-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.

My invention has for its especial object to provide an improved bevel square, and to this end, it consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

The invention is illustrated in the accompanying drawings wherein like characters indicate like parts throughout the several views.

Referring to the drawings: Figure 1 is a plan view with some parts broken away, showing the improved tool; Fig. 2 is a fragmentary view taken in section on the line $x^2 x^2$ of Fig. 1, some parts being broken away; Fig. 3 is a section taken on the line $x^3 x^3$ of Fig. 1; and Fig. 4 is a plan view of the improved tool, with some parts broken away, and with some parts sectioned, showing the blade thereof turned into a position at an angle of forty-five degrees to the body or head of the tool.

The head or body 1 of the square is preferably afforded by a wooden bar having parallel sides and edges, but provided at one end with a beveled edge 2 that extends at an angle of forty-five degrees to the parallel edges thereof. At the point of its beveled end, the body 1 is provided with a small pivot pin 3, the ends of which project and are formed with sharp points or centering pins, the purpose of which will presently appear. The end of the body 1 which is beveled, is provided with a quite long centrally located horizontal slot 4 which bifurcates that end of the said body and affords a seat for a blade 5, that is pivoted to the said body by the pin 3. The pivoted end of the blade 5 is also preferably beveled at an angle of forty-five degrees to its parallel edges, so that when the blade is turned into the position shown in Fig. 4, its upper or outermost edge will coincide with the beveled end 2 of the body 1, and the beveled end of said blade will coincide with the back edge of the said body 1.

The pivoted end of the blade 5 is preferably bifurcated to afford a seat for the interposed end of a thin metallic link 6, that is pivotally connected thereto at 7. The other end of this link 6 is pivotally connected to the head 8 of an adjusting plunger 9, that is mounted for sliding movements in a longitudinal seat formed in the body 1. The upper wing of the bifurcated end portion of the body 1 is formed with a longitudinal slot 10, in which the plunger head 8 is mounted to move, and through which the said plunger head is exposed to view. The plunger head 8 is preferably provided with a mark or indicator line, that coöperates with graduations 11 marked on the body 1 adjacent to one edge of the slot 10. These graduations 11, as will be noted, are variable in their spacings, and they are so proportioned as to indicate the proper position of the plunger head 8 for indicating the angular positions of the blade 5, in respect to the body 1. For instance, when the mark on the plunger head 8 is set at zero, the blade 5 will be turned into an extended position with its edges in line with the edges of the body 1, and when the said plunger head is set at the scale graduation ninety, the blade 5 will be set at an angle of ninety degrees to the said body 1. To secure the plunger 9 and hence, the blade 5 in any of several positions, an eye bolt 12 is seated in the body 1, with its eye surrounding said plunger 9, and a nut 13 on the threaded stem of said bolt is seated in the body 1, with portions thereof exposed at both sides of the said body. As is evident, when the nut 13 is turned in either direction from its loosened position, it will press the head of the eye bolt 12 tightly against the plunger 9, and thereby frictionally lock the same in any desired position.

As the device will probably be used more as a square than as any other kind of a device, a stop device preferably in the form of an arm 14 is pivotally connected at one end to the body 1, and fits a longitudinal groove 4^a therein. When this stop arm 14 is turned upward into the operative position shown in Fig. 1, its free end will engage the adjacent edge of the blade 5, and afford a stop which will limit the inward pivotal movement of the blade to a position in which the blade stands at a right angle to the body 1. When the arm 14 is turned into the inoperative position shown in Fig. 4, it permits the blade

to be moved toward the body 1 to a position at forty-five degrees thereto.

The numerals 15 and 16 indicate small level bulbs, the former of which is extended longitudinally, and the latter of which is extended transversely of the body 1, and both of which are set into the same so that the said body may be used as a level.

The plate 5 is provided with a long slot 17 which extends on a line radially outward from the sharp points of the pivot pin 3. A so-called marking head 18 is mounted to slide in the slot 17, and is held in place therein by beveled edges of said slot which engage grooves of the said head, as best shown in Fig. 3. A lock piece 19 is hinged to the marking head 18, and has beveled edges adapting it to be frictionally forced with a wedging action between the beveled edges of the slot 17. When the lock piece 19 is forced downward into the slot 17, it will frictionally hold the marking head 18 in any desired position, in which it may be set, but when the said lock piece is moved upward, the said marking head may be freely slid into any desired position within the said slot. The marking head 18 is shown as provided with a small threaded seat 20, and with a larger threaded seat 21.

A metal pointed scratching awl or pin 22 is adapted to be screwed through the seat 20, and a pencil holder 23 which holds a pencil 24 is adapted to be screwed through the seat 21. Preferably, the body 1 is formed in one end with seats adapted to receive and hold the said parts 22 and 23.

When the scratching tool 22 or pencil, as the case may be, is applied to the marking head 18 as above described, and one of the points of the pin 3 is placed at the desired point, the arc of a circle or a complete circle may be struck by the scratcher or pencil, simply by rotating the blade 5 around the

inserted pin point 3 as an axis. If desired, the plate 5 may be graduated along one edge of the slot 17 to indicate the radius of the circle which will be struck with the marking head in different positions.

A tool of the kind above described is especially adapted for use by carpenters or builders. It is particularly adapted for use in framing a building, in cutting roof joists, and laying out stairs and various other kinds of work. It may, of course, be made in various sizes and of various materials, and may be used wherever a tool of this character will serve the purpose.

What I claim is:

1. In a tool of the kind described, the combination with a body having a bifurcated beveled end, of a blade having a beveled end working in the bifurcated end of said body, the said body and blade being pivotally connected at the outer points of their beveled ends, of a plunger mounted to slide in said body, a link connecting said plunger to said blade, and means for locking said plunger and hence said blade in different adjustments in respect to said body, substantially as described.

2. In a tool of the kind described, the combination with a body and a blade pivoted thereto, of a plunger slidably mounted in said body, a link connecting said plunger to said blade, a screw eye seated in said body and through which said plunger is passed, and a nut on said screw seated in said body and having exposed portions at the opposite sides thereof, substantially as described.

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

DAVID E. BRANDT.

Witnesses:

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ARTHUR J. JASMIN.