

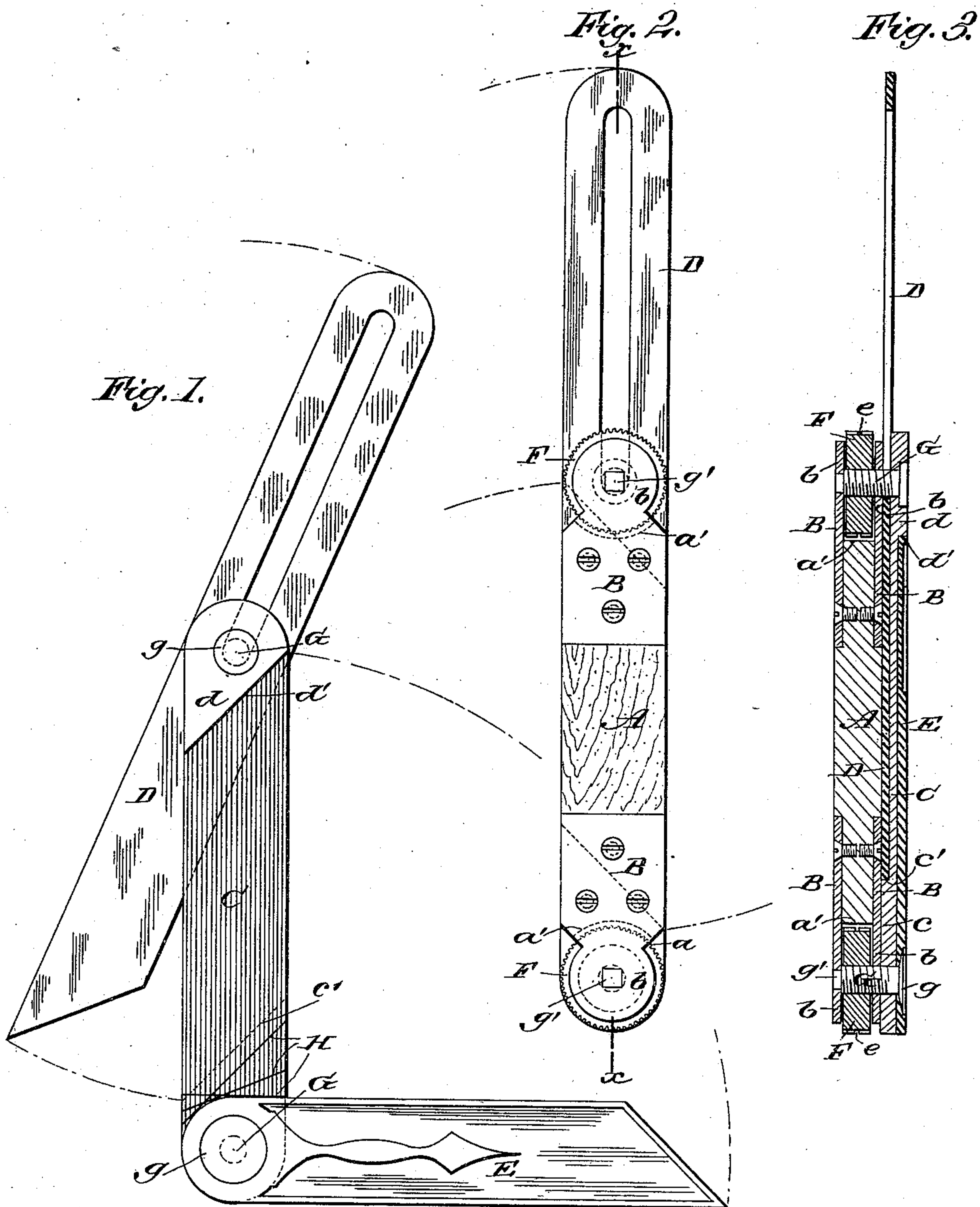
(No Model.)

F. E. WITTER.

BEVEL.

No. 358,181.

Patented Feb. 22, 1887.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## BEVEL.

SPECIFICATION forming part of Letters Patent No. 358,181, dated February 22, 1887.

Application filed October 19, 1886. Serial No. 216,652. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK ELLSWORTH WITTER, of Canterbury, in the county of Windham and State of Connecticut, have invented a new and Improved Bevel, of which the following is a full, clear, and exact description.

My invention relates to an improvement in bevels, and has for its object to provide the same with an extra short blade, forming a portion of one side, for use in cutting hips, valleys, jack-rafters, and that class of work, and also indicating on said blade three different gages—namely, an octagon, a square miter, and a try-square cut.

My further object is to so place the thumb-screws used in securing the blades in their various positions as that the said screws will not interfere with the proper handling of the bevel.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the bevel with both blades opened out, and Fig. 2 a plan view when closed. Fig. 3 is a central vertical section through line *xx* of Fig. 2.

The body A of my bevel is constructed of the usual hard wood employed for that purpose, and in substantially the same proportions as the bevels now in use. The edges at the ends, however, are provided with an inward inclination, *a*, and the ends between said inclinations with a concavity, *a'*. Upon each side of said body A, at the ends, metallic plates B, preferably of sheet-brass, are secured upon each side in any approved manner, the said plates being provided with an inclination corresponding with the angle of inclination in the body A, and also at this point with an integral circular projecting portion, *b*, of a diameter slightly less than the width of the said body A. Within the projecting portions *b* of said end plates, B, upon one side of the body, circular apertures are centrally made therein, while within the corresponding portions of the end

plates, upon the opposite side, square apertures are formed in the same vertical plane with the said circular apertures.

I now construct a metallic plate, C, with an offset, *c*, upon the under side at one end, having the inner edge, *c'*, thereof formed at an angle, and a corresponding offset, *d*, is provided upon the upper side at the other end, having also an angular edge, *d'*, the reverse of the aforesaid angular edge *c'*. The aforesaid plate C, having its ends made rounding, is adapted to rest upon the body A, through its under offset, *c*, and cover the said body upon one side, the ends of the plate C being made to slightly overhang the projecting portions of the end plates, B. Thus between the bottom offset, *c*, and the opposite end of the bevel and the bottom of the plate C and the top of the body A a space is had, which space is adapted to be filled by the ordinary blade, D, common to all bevels, the slotted end thereof projecting in the usual manner at one end when not in use, as shown in Fig. 1, the angular edge of said blade engaging the corresponding inclined edge of the aforesaid under offset, *c*, of the cover-plate C.

Upon the cover or top plate, C, a second blade, E, is adapted to rest, its pivotal portion and margin being made thicker than the remaining portion thereof, so that the head of the pivotal bolt passing through it may be countersunk, so as to show flush with the outer surface of the blade, the angular edge of said blade being adapted to engage the inclined edge of the top offset, *d*, of the said top plate, C.

As a means for securing the blades D and E in proper positions, a circular thumb-nut, F, having milled edges and a groove, *e*, cut centrally in the periphery thereof, to facilitate turning the same, is inserted between the circular projecting portions *b* of the end plates, B, to extend outward in line with the ends of the top plate, C, and the said thumb-screws are further provided with a central threaded opening, through which is passed a screw-bolt, G. The tops *g* of said screw-bolts G are made to rest, respectively, in the upper offset, *d*, of the plate C and the thick end of the blade E, flush with the surface thereof, while their bottom surface, *g'*, is made square to engage the afore-



said square apertures in the bottom end plates, B, to prevent the said screw-bolts from turning with the said thumb-nut F.

The face of the top plate, C, near the pivotal point of the short blade E, is provided with a gage, H, cut therein, to which gage the said blade is respectively adjusted when it is desired to cut an octagon, a square miter, or on a line, as with a try-square. The short blade E is especially useful in working from plans, as both blade and handle are brought close thereto. Then as the bevel is turned over to mark the wood the thicker part of the handle is brought against the board to be cut.

By the use of the two blades in combination almost any angle may be obtained, and in cutting hips, valleys, and jack-rafters the small top blade will be found especially useful.

It will be seen that the means for tightening the blades are entirely out of the way and not liable, therefore, to form an obstruction in handling the tool or become broken or disarranged from a fall.

In use the bevel is held in the left hand, with the small blade on top. Either blade is then handily adjusted with the right hand.

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

1. The combination, with the body A, having end plates, B, provided with circular projections *b*, of the circular thumb-nut F, screw-bolt G, and slotted blade D, substantially as shown and described, whereby the said thumb-nut is protected by said circular projections and held from interference with the use of the tool, as set forth.

2. The combination, with the body A, hav-

ing beveled edges *a* and concaved ends *a'*, and end plates, B, beveled to correspond with said body, and provided with circular projections *b*, of the circular thumb-nut F, having an annular groove, *e*, the screw-bolt G, adapted to hold said thumb-nut between said circular projections *b*, the slotted blade D, and a top plate covering said blade, substantially as shown and described.

3. The combination, with the body A, constructed substantially as described, having end plates, B, provided with circular projections *b*, circular thumb-nuts F, held between said projections by screw-bolts G, and a slotted blade, D, pivoted at one end, of the top plate, C, having top and bottom offsets, *c* and *d*, and a short blade, E, pivoted on said plate at the end of the bevel, opposite said slotted blade D, substantially as shown and described, and for the purpose herein set forth.

4. The combination, with the body A, constructed as herein described, having end plates, B, provided with circular projections *b*, circular thumb-nuts F, held between said projections *b* by screw-bolts G, and a slotted blade, D, pivoted at one end of said body, of the top plate, C, having top and bottom offsets, *c* and *d*, and a gage, H, upon its upper face, and the short blade E, pivoted on said plate at the end opposite said slotted blade D, the said short blade E being made thicker at its pivotal end and margin, substantially as shown and described, and for the purposes herein set forth.

FRANK E. WITTER.

Witnesses:

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