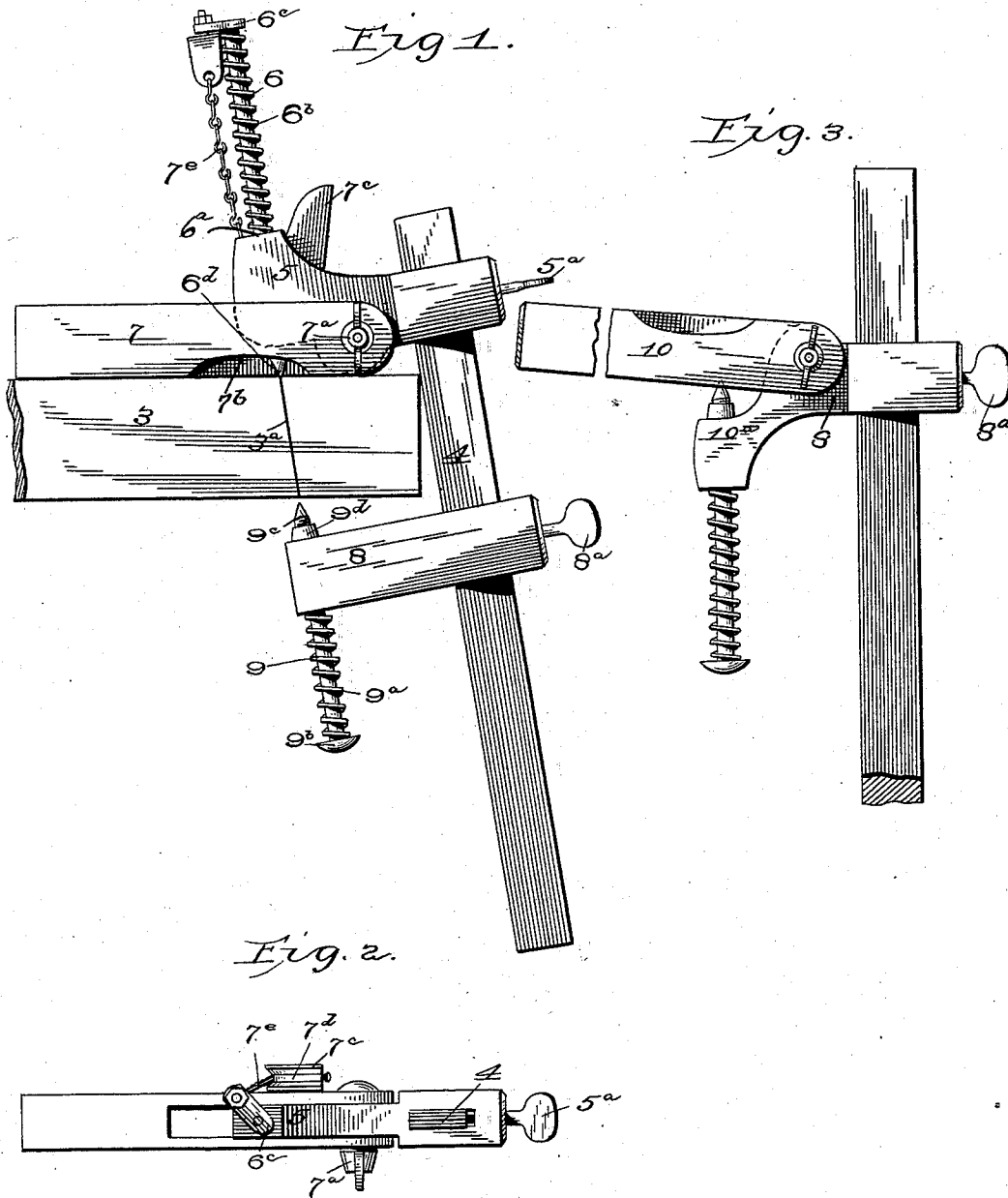


(No Model.)

W. H. COOMBS.
BEVEL.

No. 524,933.

Patented Aug. 21, 1894.



Attest.
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UNITED STATES PATENT OFFICE.

WILLIAM HENRY COOMBS, OF ROCKLAND, MAINE.

BEVEL.

SPECIFICATION forming part of Letters Patent No. 524,933, dated August 21, 1894.

Application filed April 13, 1894. Serial No. 507,438. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY COOMBS, a citizen of the United States of America, residing at Rockland, in the county of Knox and State of Maine, have invented certain new and useful Improvements in Bevels or Counter-Liners, of which the following is a specification.

My invention relates to certain improvements in bevels or counter liners for the use of ship carpenters and other wood workers, and the object of the invention is to provide a device for marking from a given line upon one side of a plank or stick of timber a corresponding line upon the opposite side, at any angle required, to produce a beveled or inclined edge when the plank is cut on a plane passing through the two lines.

The invention is illustrated in the accompanying drawings, in which—

Figure 1, is an elevation of a bevel constructed according to my invention as applied to a plank shown in cross section. Fig. 2, is a top view of the same. Fig. 3 illustrates a modification.

Referring more particularly to the figures the plank to be operated upon is shown at 3 bearing the line 3^a which it is desired to transfer to the opposite side but nearer to or farther from the edge according to the angle which is desired. A standard or bar 4 serves to connect the upper and lower pointers or markers together. The upper marker is carried in a head 5 mortised to receive the bar 4, upon which it is vertically adjustable and is held in its adjusted position by a set screw 5^a. The upper pointer is shown at 6 and comprises a rod sliding in a recess 6^a in the upper head and pressed normally upward by a coiled spring 6^b surrounding the rod and bearing against a collar or head 6^c. The lower end of the rod is sharpened or pointed as at 6^d and this point is designed to be placed upon the line which it is desired to transfer, the marking being accomplished by the pointer or rod in the lower head as hereinafter described. The upper head 5 carries a bearing piece 7 which is pivotally connected to the head piece by means of a set screw 7^a by means of which it may be clamped at any desired angle.

The lower head 8 is connected to the bar 4

in a manner similar to the upper head 5 and clamped in position by the set screw 8^a. This head likewise carries a pointed rod as 9 held normally outward by a coiled spring 9^a encircling the same and bearing against the head 9^b whereby the point 9^c is held normally below the lower face of the plank. The downward movement of the rod is limited by a collar 9^d preferably screw threaded upon the upper end of the rod.

In the operation of the device the rod 4 is placed at an angle to the bearing piece 7 corresponding to the bevel which it is desired to give to the edge of the plank. The bearing piece 7 is then placed upon the upper face of the plank with its lower edge resting thereon and the point of the rod which is caused to project slightly below the lower edge of the bearing piece, which is cut away slightly at one side as shown at 7^b. The point of the rod is then placed upon the line 3^a and while in this position the lower rod is forced upward as by the blow of a hammer to cause the point to impinge against the lower face of the plank and mark thereon, this mark being nearer to or farther from the edge according to the angle of the bearing piece and bar as before stated. This operation is repeated at intervals along the whole length of the plank thus producing a series of points or marks by means of which a line may be laid out on the lower side corresponding to the line upon the upper side.

In order that the point of the upper rod may always project slightly below the bearing face a block 7^c is connected to the said bearing piece having a groove 7^d in which rests a chain or cord 7^e, the free end of which is connected to the upper end or head of the rod, and by this means any downward movement of the bearing piece will draw down the rod against the pressure of the spring.

It is sometimes found necessary to support the device from below instead of from above owing to the position of the plank. To accomplish this I provide a second lower bearing piece 10 carried upon a head 10^a similar to the upper head, and to which it is clamped by a set screw. This bearing piece 10 may be grasped by the hand and pressed against the lower face of the plank (after having been set at the proper angle) and the opera-

tion then proceeded with as before described, the only difference being that the hand grasps the bearing piece below the plank instead of above.

- 5 It will be understood that in this modification the upper head and bearing piece with the marking point are arranged and used as in the form first described.

Having thus described my invention, what
10 I claim is—

1. In combination, the connecting bar, the upper and lower heads thereon, pointed rods movable in said heads, and a bearing piece adjustably pivoted to one of said heads, substantially as described.

- 15 2. In combination, the connecting bar, the upper and lower heads adjustably mounted thereon, pointed rods movably supported by said heads and an adjustable bearing piece,
20 substantially as described.

3. In combination, the connecting bar, the

upper and lower heads adjustably mounted thereon, pointed rods movably supported in said heads, a bearing piece adjustably pivoted to the upper head, and connections between said bearing piece and upper rod whereby the point of the rod is maintained below the face of the bearing piece, substantially as described.

4. In combination, the connecting bar, the upper and lower heads adjustably mounted thereon, pointed rods movable vertically in said heads, and bearing pieces adjustably pivoted to said heads, substantially as described.

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

WM. HENRY COOMBS.

Witnesses:

FRANK B. MILLER,
ARTEMAS HEAL.