

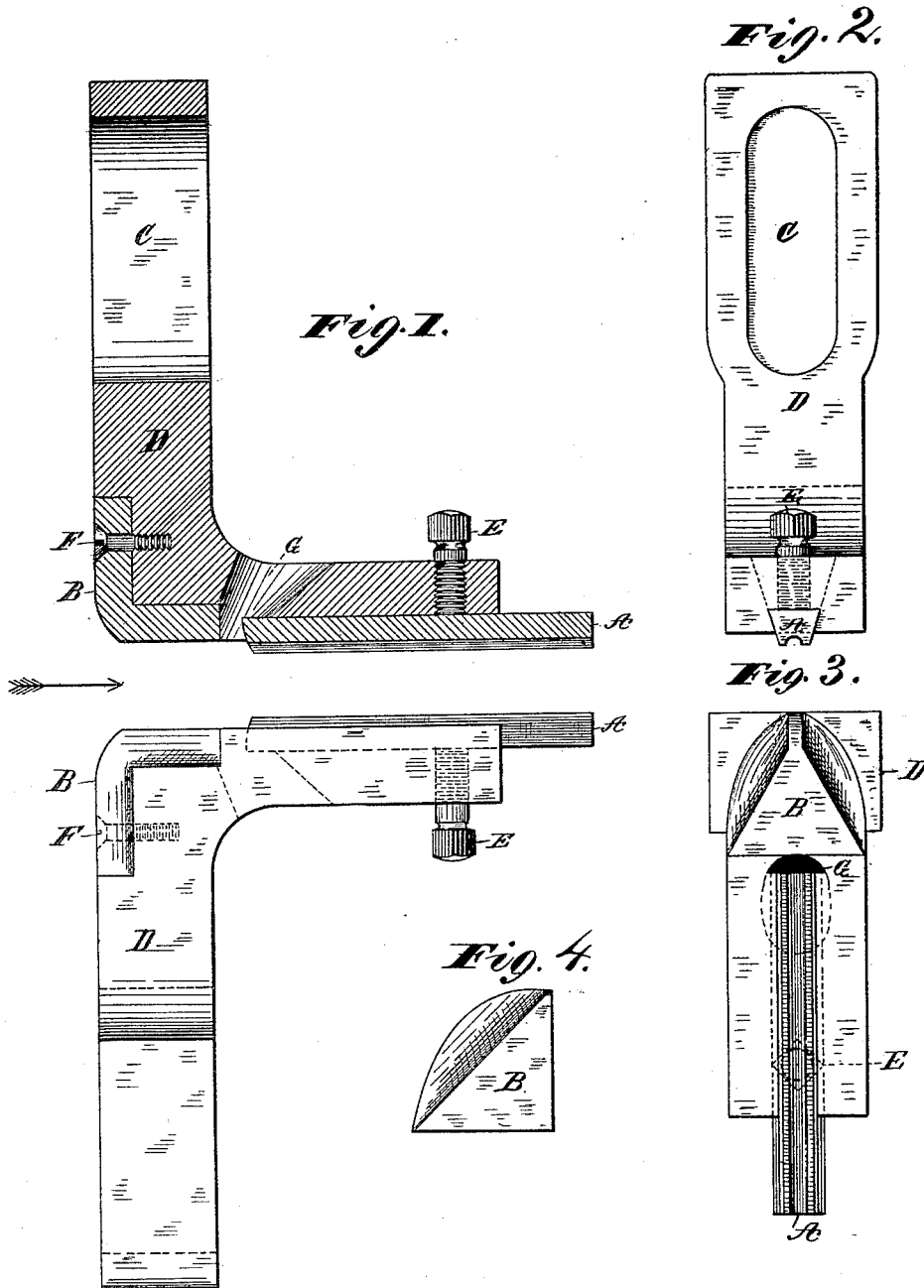
(No Model.)

E. C. MERSHON.

BEADING ATTACHMENT FOR PLANING MACHINES.

No. 418,920.

Patented Jan. 7, 1890.



Witnesses:
Edmund J. Galtier.
Wm. H. Capel.

Inventor
E. C. Mershon
By *J. C. Townsend*
Attorney

UNITED STATES PATENT OFFICE.

EDWARD C. MERSHON, OF EAST SAGINAW, MICHIGAN.

BEADING ATTACHMENT FOR PLANING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 418,920, dated January 7, 1890.

Application filed February 1, 1886. Serial No. 190,550. (No model.)

To all whom it may concern:

Be it known that I, EDWARD C. MERSHON, a citizen of the United States, and a resident of East Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Beading Attachments for Planing-Machines, of which the following is a specification.

My invention relates to devices for beading boards intended for ceiling and other purposes at the same time or in one continuous operation with the surface-planing of the boards. Its object is to more effectually prevent the "eating in" or tearing of the board, which is apt to occur with cutters or bead-ers as ordinarily constructed and arranged, and at the same time to produce a true, smooth, compressed, and polished bead of superior workmanship; and to this end it consists in the construction hereinafter described, and the novel features of which are specified in the claims.

Reference is to be had to the accompanying drawings, illustrating my invention, in which like letters indicate like parts, and in which—

Figure 1 is a vertical section and side elevation of the device, in duplicate, as arranged for beading both sides of the board at once. Fig. 2 is a rear elevation. Fig. 3 is a plan view from below. Fig. 4 shows a modification of the chip-breaker.

D is an L-shaped metal piece or stock carrying at its outer angle the chip-breaker B and at its rear part the straight knife or beader A, and having in its vertical portion a slot C, intended to permit vertical adjustment of the device upon a bolt or set-screw entering the frame of the tail end of the planing-machine, and by which the device, when adjusted to properly receive and act upon the boards as they are fed toward it in the direction of the arrow in Fig. 1, may be firmly secured in position.

The horizontal portion of the stock D is provided with a dovetailed groove to receive the knife-block beading-cutter A, the body of which is of corresponding form and considerable length, being rearwardly extended to form a compressing and polishing surface, while its under surface is grooved throughout its whole length in the contour of the bead to be produced. The forward edge of this

groove forms the cutting-edge or knife proper, and the cutting-edge lies nearly in the plane of the chip-breaker and to the rear of the beveled portion hereinafter described. The knife-block may be adjusted in its groove in the stock to any desired position and then firmly secured by the set-screw E.

The chip-breaker B is secured to the outer angle of the stock D by a screw F, as shown in Figs. 1 and 3. It is of a wedge or flat-iron shape—that is, beveled or cut away at its front end on both sides obliquely to the line of feed and to a point, or nearly so, and with the point directed so as to meet the board or lumber as it comes from the planers. The object in making the chip-breaker pointed is to deflect any chips, shavings, or extraneous rubbish that may come along with the board, and so prevent them getting under the chip-breaker or knife so as to clog the device and injure the work. Although I have found that this object is best attained by making the chip-breaker of flat-iron shape—that is, with its point in line with the longitudinal central axis of the knife or cutter—good results may be obtained with it when made as shown in Fig. 4—that is, beveled clear across from one side to the other in a plane oblique to the line of feed, so that the point is in a line parallel with one lateral edge of the horizontal part of stock D. It will be noticed that in both cases the chip-breaker extends across the whole width of the stock D. It is intended to extend far enough across the board its whole width, if necessary, to preclude the possibility of rubbish getting under it or the knife. The chip-breaker preferably consists of a single piece or block.

The horizontal part of stock D has a vertical funnel-shaped aperture, into which the forward end of the cutter projects so as to leave a small opening or throat-like space between itself and the squared heel of the chip-breaker, through which the shavings come up at right angles to the board.

It will be noticed that the under surface of the knife-block or cutter lies substantially in the plane of the surface of the board operated upon, so as to ride upon the bead being cut in the board as it passes underneath. The object and effect of this arrangement is not only to assist in the prevention of eating in

or tearing, but by the forcible pressure of the knife upon the material to compress and polish the bead, and thereby produce a better quality of work.

- 5 The beader constructed as described makes a perfectly true and smooth bead, does not tear and sliver when properly adjusted, requires sharpening only about one-quarter as often as rotary cutters, and is easily adjusted.
 10 It is obvious that it may be used to bead one side only or both sides of the material simultaneously.

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

1. In a beading attachment for planing-machines, a chip-breaker having its side beveled at its front end in a plane oblique to the line of the feed for the purpose of deflecting chips and rubbish, in combination
 20 with a beading-cutter arranged with its cutting-edge nearly in the plane of the face of the chip-breaker and to the rear of the beveled portion, substantially as and for the purpose set forth.

2. In a beading attachment for planing-machines, a chip-breaker consisting of a single piece or block and having its side beveled across its whole width at its front end
 30 in a plane oblique to the line of the feed for the purpose of deflecting chips and rubbish, in combination with a beading-cutter arranged with its cutting-edge nearly in the plane of the face of the chip-breaker and to the rear of the beveled portion, substantially
 35 as and for the purpose set forth.

3. In a beading attachment for planing-machines, the combination of a supporting-stock, a pressure-knife carried by said stock
 40 and having a grooved compressing and pol-

ishing surface arranged in the plane of the surface of the material being operated upon to ride upon and polish the work by compressing the fibers of the wood, all arranged and combined for service substantially as
 45 herein shown and described, for the purpose set forth.

4. In a beading attachment for planing-machines, the combination, with a supporting-stock, substantially as described, of a longitudinal pressure-knife carried by said stock
 50 and arranged in the line of feed of the material being operated upon, said knife having a grooved compressing and polishing surface arranged to ride upon and polish the work
 55 by compression, substantially as and for the purpose described.

5. In a beading attachment for planing-machines, the combination of a supporting-stock provided with a grooved foot, a pressure-knife fitted in the groove of the foot, and
 60 a set-screw for clamping the knife to the foot, substantially as described.

6. In an attachment for planing-machines, the combination, with the adjustable and apertured stock, of the chip-breaker located immediately in front of the aperture, and the
 65 elongated knife projecting into the aperture from behind.

7. An attachment for planing-machines, 70 consisting of the stock D, carrying the chip-breaker and the elongated knife A and slotted to admit of vertical adjustment.

Signed at East Saginaw, in the county of Saginaw and State of Michigan, this 20th day
 75 of January, A. D. 1886.

EDWARD C. MERSHON.

Witnesses:

GEORGE GRANT,
 WM. G. FORREST.