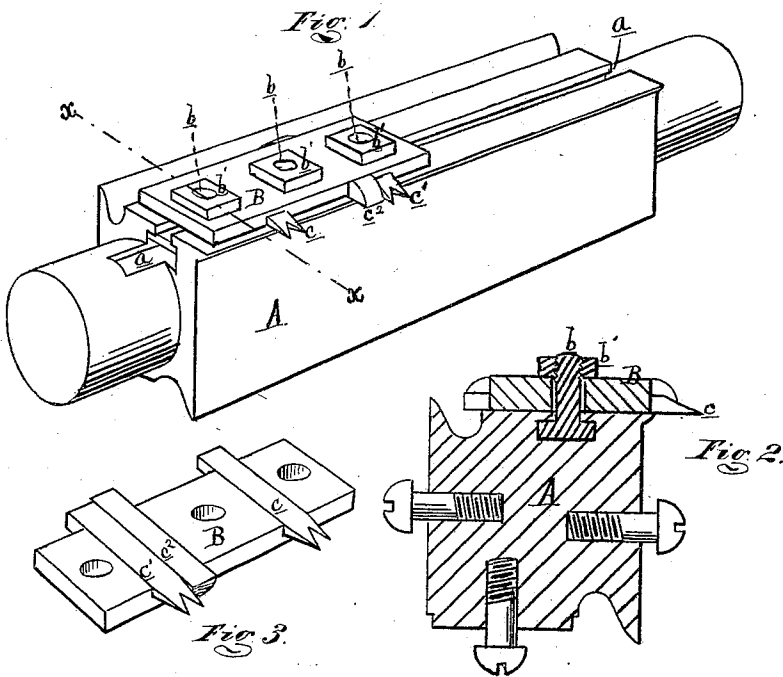


E. G. RICHARDS.

Cutter-Heads for Planing-Machines.

No. 142,731.

Patented September 9, 1873.



ATTEST:

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Chas. E. Sweet's

INVENTOR:

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UNITED STATES PATENT OFFICE.

EPHRAIM G. RICHARDS, OF DETROIT, MICHIGAN.

IMPROVEMENT IN CUTTER-HEADS FOR PLANING-MACHINES.

Specification forming part of Letters Patent No. 142,731, dated September 9, 1873; application filed July 14, 1873.

To all whom it may concern:

Be it known that I, EPHRAIM G. RICHARDS, of Detroit, in the county of Wayne and State of Michigan, have invented certain Improvements in Cutter-Heads for Planing-Machines, of which the following is a specification:

This invention has for its object to provide an adjustable beading attachment to any two-knife planing-machine cylinder, by means of which a ceiling-strip may have a groove or bead cut in its middle as well as at the tongue-edge.

Heretofore such beading has been done by means of a separate head after the strip has been operated upon by the planing-cylinder; the cylinders of planing-machines have been, however, fitted with a single beading-bit, cutting a bead at the edge of the strip only, which bit could not, however, be adjusted without loosening the knife in front of it.

The invention consists in cutting a dovetail groove in one side of the knife-head to receive the heads of three bolts, which secure a bit-holder thereto, under which are clamped two beading-bits, which can be adjusted to bead the middle and one edge of either six or seven inch ceiling-stuff, and at either end of the head, as more fully hereinafter set forth.

Figure 1 is a perspective view of a planing-machine knife-cylinder fitted with my improved beading attachment. Fig. 2 is a cross-section of the same at *xx*. Fig. 3 is a perspective view of the inner face of the bit-holder and bits.

Like letters refer to like parts in the several figures.

In the drawing, A represents the knife head or cylinder of a planing-machine, in one of

whose blank sides I cut a longitudinal dovetail groove, *a*, in which I insert the square heads of three bolts *b*, which pass through a bit-holder, B, and receive the nuts *b'*, which secure the bit-holder to the cylinder. The bit-holder has two transverse rabbets cut in its inner face one narrow and the other wider. The former receives a beading-bit, *c*, which beads the tongue-edge of a ceiling-strip, and the other a plain beading-bit, *c'*, which beads the middle of said strip. The rabbet also receives a gib, *c''*, which lies alongside the bit, between it and the bit *c*, when beading seven-inch strips. When beading six-inch strips the bit *c'* is placed nearest the bit *c* and the gib outside. As soon as one end of the knives is dulled, the bits and bit-holder are moved over to the other end of the head, until that end of the knives is dulled, before the latter need be ground, thus causing the knives to wear equally upon both ends. Should the bits become dulled and turn up a fuzz on the strips, the knives will shave it smooth, and not leave it, as is the case with machines having a separate beading-head, which operates upon the strips after the knives have surfaced them.

What I claim as my invention, and desire to secure by Letters Patent, is—

The cylinder A, having the double-tailed groove *a* in one of its blank sides, in combination with the bit-holder B, bolts and nuts *b b'*, bits *c c'*, and gib *c''*, as and for the purpose described.

EPHRAIM G. RICHARDS.

Witnesses:

H. S. SPRAGUE,
CHAS. E. B. HUESTIS.