



# UNITED STATES PATENT OFFICE.

JULIAN K. SMITH, OF BURRILLVILLE, RHODE ISLAND.

## IMPROVEMENT IN PLANING-MACHINES.

Specification forming part of Letters Patent No. **165,264**, dated July 6, 1875; application filed May 1, 1875.

*To all whom it may concern:*

Be it known that I, JULIAN K. SMITH, of Burrillville, in the county of Providence and State of Rhode Island, have invented an Improvement in Planing-Machines, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view, and Fig. 2 a side elevation, of my improved machine for matching boards.

Similar letters of reference indicate corresponding parts.

My invention relates to an improved device for matching boards, to be used separately or in connection with a planer, and to which boards of any width, with parallel or tapering edges, may be fed and matched with a saving of lumber and time.

The invention consists of a swinging and weighted arm, with the revolving matcher at the outer end, moving in an arc-shaped opening in the bed-plate or table, and adjusting the matcher, by a pivoted guide-piece, to the size of the board.

In the drawing, A represents the bed-frame or table of a planer or matching-machine, with guide-flange and stationary matcher at one edge, and a swinging arm, B, pivoted at suitable distance therefrom, and carrying at the outer movable end, in downward-extending bearings B', the revolving adjustable matcher C. The bed-plate A is provided with an arc-shaped opening, *a*, and stop-pin *b*, for the free swinging of matcher C, and the defining of the extent of motion of the same. The matcher is revolved by a pulley, *d*, of its shaft, which is connected by belting with a revolving pul-

ley, *d'*, on the pivot-pin of the swinging arm B, for the purpose of imparting the regular tension to the belt in every position of the cutter.

Arm B is carried, by means of a cord, *e*, passing over a pulley, *d'*, and having a weight, *f*, suspended therefrom, toward the end of the opening *a*, near the outer guide-flange of the bed-plate, and is forced readily sidewise, to adjust the matcher to the board, when the same is fed forward along the guide-flange. A guide-strip, E, is applied to the pivot-shaft of the matcher, and swings freely toward the edge of the board, for guiding it to the cutter, and causing also the uniform working of the same on the edge of the board, by equalizing, by a smaller depth of cut, any crooks or inequalities in the edge of the same.

The instant adjustment of the movable cutter to the width and shape of the board without any setting of guides produces a greater facility and rapidity in the working of the matching-machine, and a saving of lumber, time, and labor in matching boards.

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

The combination of the table A, having an arc-shaped slot, *a*, pivoted and weighted horizontal arm B, revolving cutter C, and pivoted side guide-strip E, as and for the purpose set forth.

JULIAN K. SMITH.

Witnesses:

F. M. WOOD,  
JOHN M. SMITH.