

(No Model.)

W. C. ROLSTON.

CHANNEL CUTTING TOOL FOR PLANING MACHINES.

No. 508,982.

Patented Nov. 21, 1893.

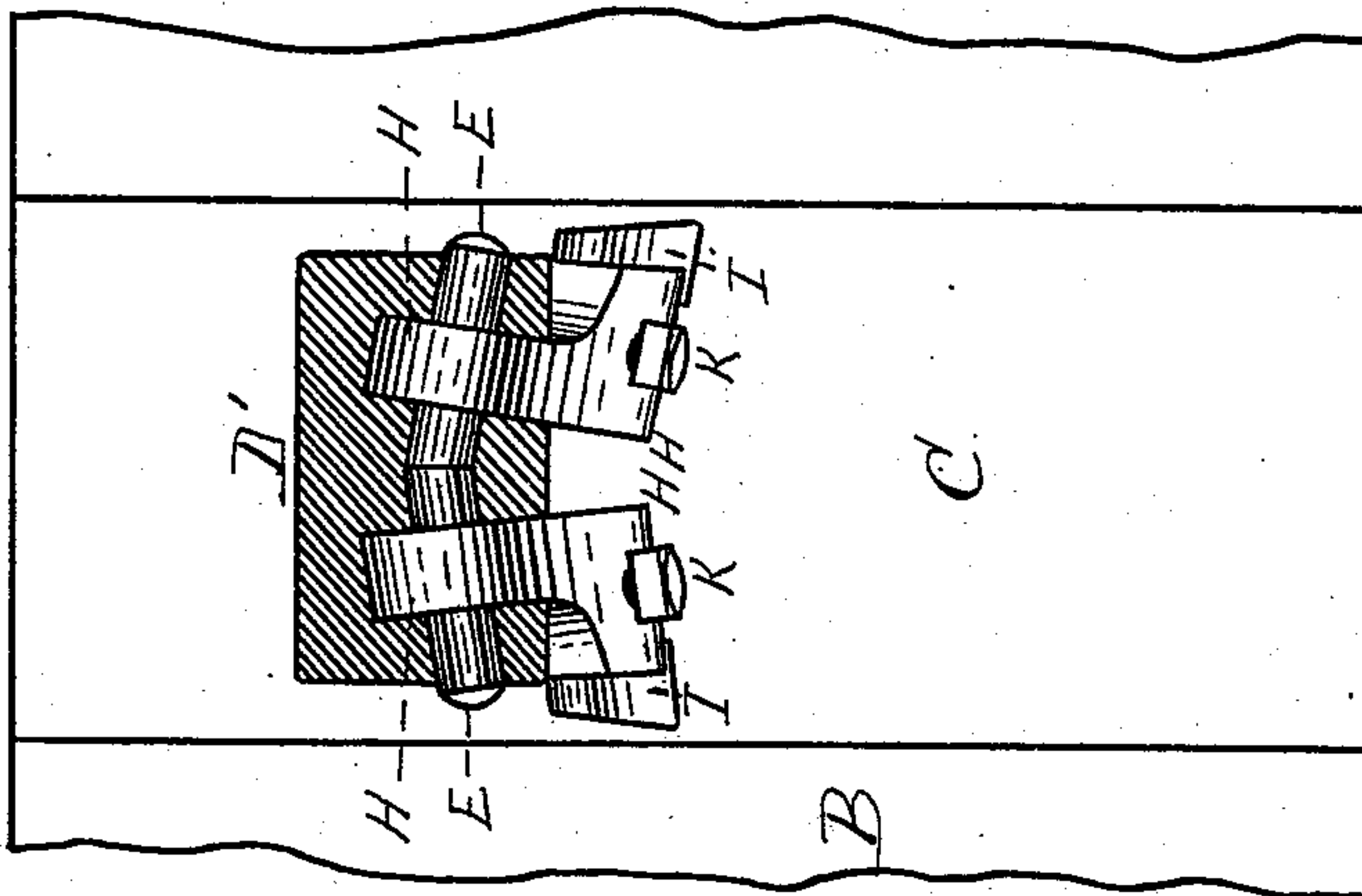


FIG. 2.

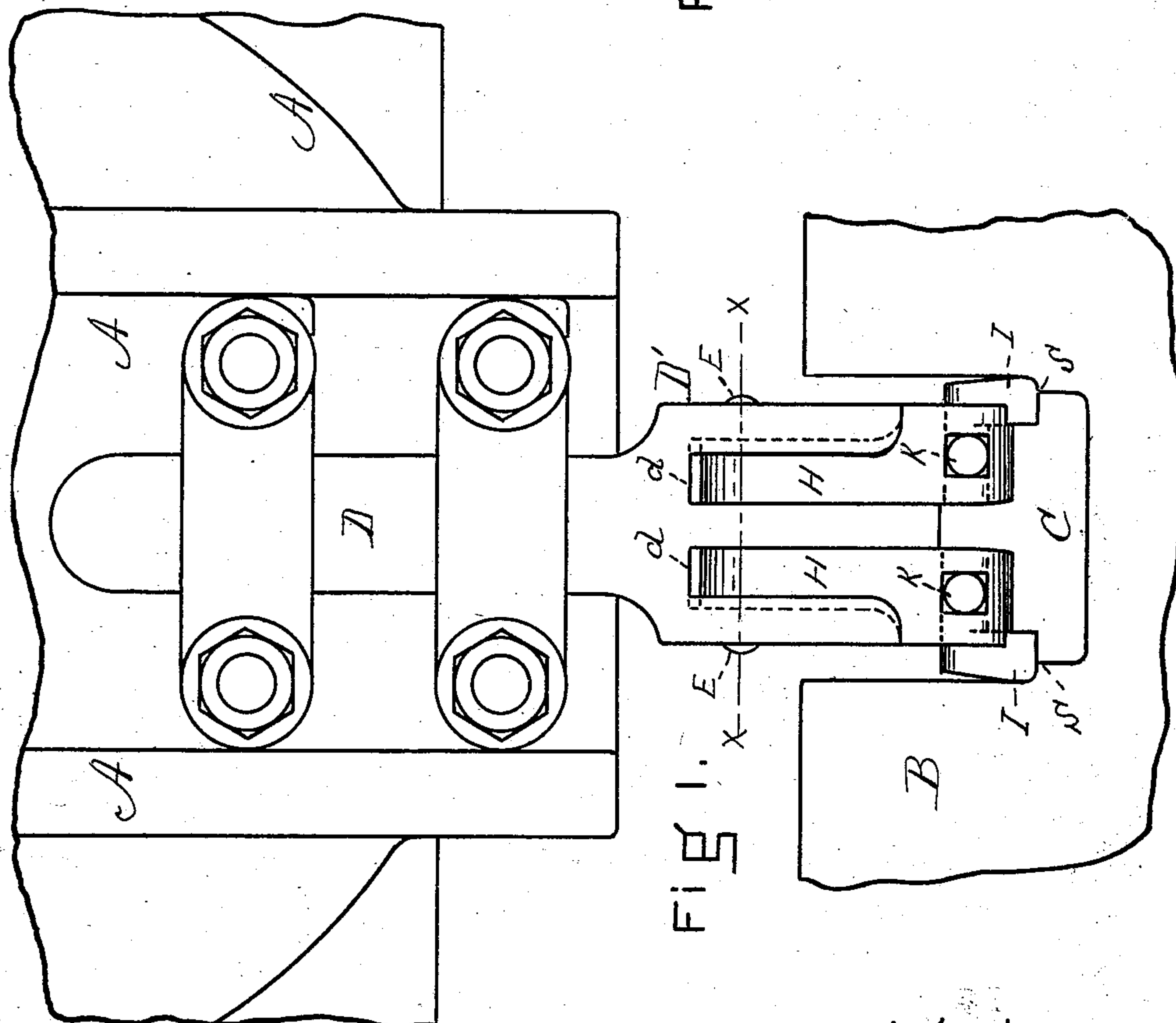


FIG. 1.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## CHANNEL-CUTTING TOOL FOR PLANING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 508,982, dated November 21, 1893.

Application filed January 31, 1893. Serial No. 460,279. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM C. ROLSTON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Channel-Cutting Tools for Planing-Machines, of which the following is a specification.

This is a tool especially adapted for use in connection with planing machines, for cutting channels or grooves. The tool in ordinary use for this purpose cuts or faces one side of the groove at a time, and then the entire tool has to be swung up at an angle, in order that it may clear the work while it returns to its former position for the purpose of again operating on the groove.

In this improvement the tool cuts both sides of the groove or channel at once, and when it returns, it clears the work by reason of the two cutters swinging up inwardly or toward the center, thus clearing the sides of the channel.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a front elevation of my improved channel-cutting tool attached to the ordinary swinging head of a planing machine. Fig. 2 is a horizontal section on line *x*, Fig. 1.

A represents the swinging head of a planing machine constructed as usual, and to which my improved tool is secured in any well known manner.

B is the "work" in which a channel or groove C is being cut or faced.

D is the shank of the tool, by means of which it is secured to the head A. The lower portion D' is provided with two substantially parallel vertical openings *d* which extend from the front of the tool rearward, but not entirely through it. These openings *d*, although they are parallel vertically, are not so horizontally, as they diverge from their front ends rearward, as shown in Fig. 2. Hung in each opening *d* and swinging from a pivot or pin E is a cutter-holder H. These pivots or pins E, although next each other, are not set on the same line, *i. e.*, they are not parallel with the front surface of the portion D' of the tool, but each pivot as set is shown in Fig. 2, so that its inner end is farther from the front

than its outer end. In other words the pins E are at right angles with the openings *d*. The lower ends of the cutter-holders H are provided with the cutters I set "wing and wing" and projecting below and beyond the outer edge of the holders, being adjustably secured by set-screws K.

In the drawings, the cutters are represented as in operation, having faced both sides of the groove or channel C down to the points indicated by S, Fig. 1. As the tool D D' is carried along, the cutter-holders H hang vertically and are pressed against the rear walls of the openings in which they are, and the cutters I act on both sides of the channel. When the tool is retracted or returned to its starting point to begin again on its work on the channel, the "work" lifts the cutters, causing the cutter-holders to swing up, and, owing to the angle at which the pivots E are placed, to swing inward and effectually clear the "work" and the sides of the channel. The tool itself D D' meanwhile remains in its vertical position.

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

The herein described improved channel-cutting tool for planing machines, consisting of the combination of the shank D and lower portion D' said portion D' being provided on its front side, *i. e.*, the side toward the channel to be faced, with the two vertically parallel openings *d* extending divergently rearward from the front side, the cutter-holders H hung from pivots in said openings and adapted to swing out therefrom and rest against the walls of the openings when hanging vertically, and the adjustable cutters I set at the lower ends of the cutter-holders and projecting outward sidewise therefrom, whereby the cutter-holders as the tool advances flank each other and face or cut both the side walls of the channel, and as the tool is retracted rise and swing inwardly and slip back over the work, substantially as set forth.

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Witnesses:

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