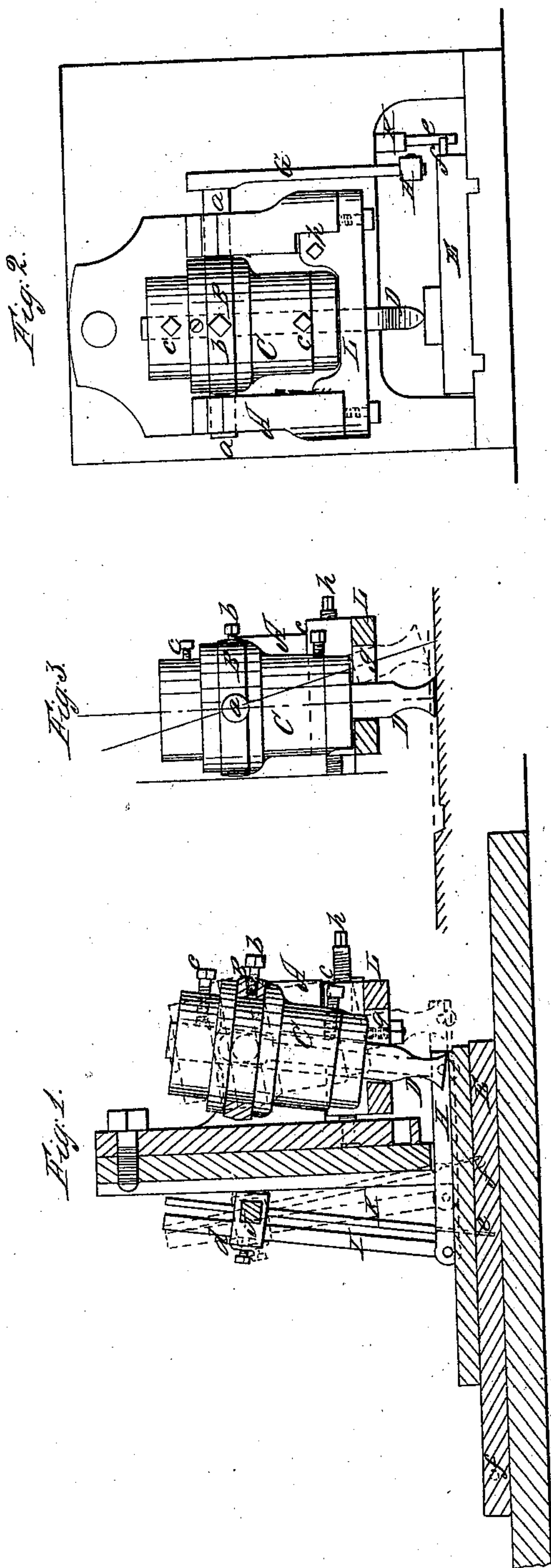


J. Mason,
Planing Metal,

Patented July 22, 1856.

No. 15,379.



UNITED STATES PATENT OFFICE.

JOSHUA MASON, OF PATERSON, NEW JERSEY.

IMPROVED CUTTER-STOCK FOR METAL-PLANERS.

Specification forming part of Letters Patent No. 15,379, dated July 22, 1856.

To all whom it may concern:

Be it known that I, JOSHUA MASON, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and Improved Cutter Head or Stock for Metal-Planing Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side view of my improvement, the frame or box in which the cutter head or stock is hung being bisected vertically. Fig. 2 is a front view of the same. Fig. 3 is a side view of the same, showing the manner in which the position of the cutter or tool is regulated.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists in placing the cutter head or stock within a ring or band which is hung upon journals within a frame or box, so that the head or stock may swing or oscillate therein, and operating or adjusting the head or stock and regulating its position, as will be hereinafter fully shown and described, so that the cutter or tool may cut while the bed and work are moving in either direction, and also cut at different heights, according as its position is regulated.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a frame or box, which is attached to a cross-bar of a metal planer so that it may slide thereon in the same way as the ordinary cutter or tool stocks in common use.

B is a ring or band which is suspended by journals *a a* within the frame or box A, and C is the cutter or tool stock, which is fitted within the ring or band B and prevented from turning therein by a set-screw *b*. The cutter or tool stock C is of cylindrical form, and the tool D is secured in its lower end by set-screws *c*, said screws passing horizontally into the stock. The tool D is double-edged—that is, it has a cutting-edge at its two opposite sides in the direction of the movement of the bed on which the article to be planed is secured. The bed E is fitted in the machine and works with a reciprocating motion in the usual manner.

F represents the stuff or work to be planed, which is placed on the bed E.

To one of the journals *a* of the ring or band B there is attached a lever G, the lower end of which is connected to one end of a horizontal lever H. The opposite end of the lever H is connected to a vertical lever I, the upper end of which is attached to a sliding collar *d* on a rock-shaft J, which works in proper bearings on the framing.

K is a lever, the upper end of which is also attached to the rock-shaft J. The lower end of this lever has a spring *e* attached to it, against which pins *f* on the side of the bed E strike at the end of each stroke of the bed.

To the under side of the frame or box A there is attached a sliding plate L. This plate has an oblong slot *g* made through it, through which slot the tool D passes, and the plate L may be adjusted farther forward or backward by means of a screw *h*, arranged in any proper way.

The operation will be readily seen. As the bed E works or moves back and forth the cutter-stock C will be adjusted or swung in an inclined position in consequence of the pins *f* striking against the spring *e*, and the stock will be adjusted at the end of each stroke of the bed E, so that the proper inclination will be given the tool D. By this arrangement the tool D will cut while the bed is moving in either direction. When the plate L is so placed that its slot *g* will be at equal distances, each side of the tool D will have the same inclination when moving in either direction, because the edges or ends of the slot *g* control the movement of the tool or limit the length of the vibrations or oscillations of the stock C; but when the plate L is so adjusted by turning the screw *h* as to throw the slot *g* one side of the tool D, so that one end of the slot will be farther from the tool when in a vertical position than the opposite end, as shown in Fig. 3, the tool will be more inclined when the bed is moving in one direction than it will when the bed is moving in the opposite direction, and the cutting-edge of the tool will be more elevated or at a greater distance from its work the greater the inclination given the tool. By this means work or articles to be planed having two different faces, one higher than the other, may be planed at one operation or at the same time, the tool acting upon the lower surface of the work at one stroke or movement of the bed and upon the other or

higher surface at the opposite movement of the bed. The tool may also be turned obliquely to the work by loosening the screw *b* and turning the stock *C* within the ring or band *B*.

I am aware that double-edged tools have been previously used in metal-planers, so that the work may be planed as the bed is moving in either direction. I therefore do not claim a swinging or adjustable cutter-stock, irrespective of the arrangement of the same as herein shown and described; but

What I do claim as new, and desire to secure by Letters Patent, is—

The cutter-stock *C*, placed within a ring or

band *B*, which is suspended by journals *a* within the frame or box *A*, the stock being provided with a sliding or adjustable plate *L*, provided with a slot *g*, and the stock adjusted or operated at the end of each stroke of the bed by the pins *f f* on the side of the bed and the levers *G H I K*, the above parts being arranged as shown and described, for the purpose specified.

JOSHUA MASON.

Witnesses:

WILLIAM D. QUIN,
WILLIAM TODD.