

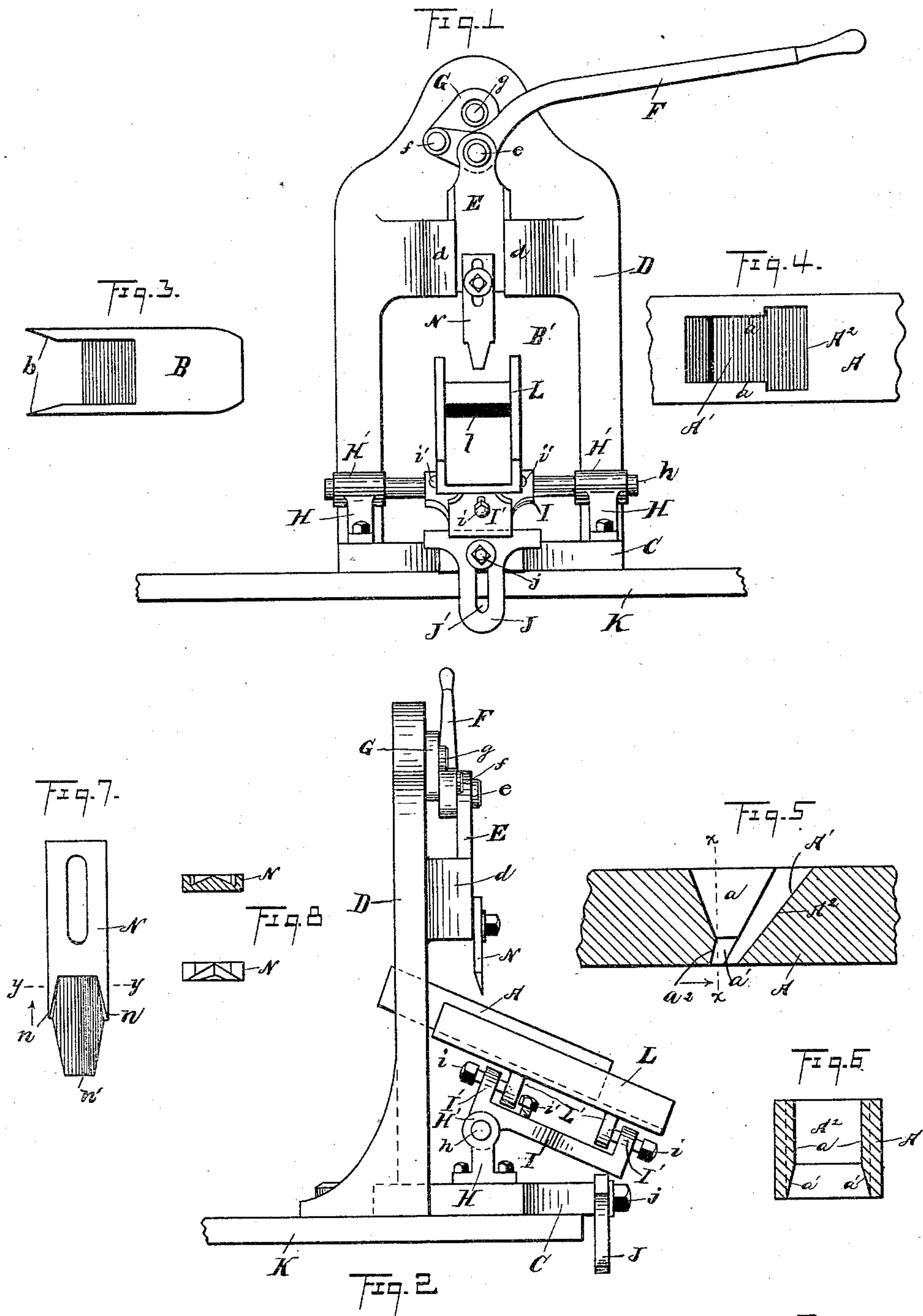
(No Model.)

J. A. MONTGOMERY.

MACHINE FOR BEVELING THE SO CALLED WEDGE GRIPS OF  
WOODEN PLANES.

No. 431,383.

Patented July 1, 1890.



Witnesses.

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# UNITED STATES PATENT OFFICE.

JOSEPH A. MONTGOMERY, OF SANDUSKY, OHIO, ASSIGNOR TO THE SANDUSKY TOOL COMPANY, OF SAME PLACE.

MACHINE FOR BEVELING THE SO-CALLED WEDGE-GRIPS OF WOODEN PLANES.

SPECIFICATION forming part of Letters Patent No. 431,383, dated July 1, 1890.

Application filed March 5, 1890. Serial No. 342,704. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH A. MONTGOMERY, of Sandusky, in the county of Erie and State of Ohio, have invented certain new and useful Improvements in Machines for Beveling the so-called Wedge-Grips of Wooden Planes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in machines for beveling the so-called "wedge-grips" of a wooden plane; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front side elevation. Fig. 2 is an end elevation. Fig. 3 is a plan of a wedge of ordinary construction for securing the plane-iron in the plane. Fig. 4 is a plan of a portion of a plane containing the throat. Fig. 5 is a longitudinal vertical section of the same; and Fig. 6 is an elevation in transverse section on line  $x x$ , Fig. 5. Figs. 7 and 8 are elevation and sections of the cutting-tool.

A represents that portion of the plane having the mortise or so-called "throat"  $A'$ , and B represents the wedge that secures the plane-iron, (not shown,) the latter bearing against the inclined wall  $A^2$ , the so-called "wedge-grips" being shown at  $a a$ , against which the wedge bears. As shown in Fig. 3, the points of wedge B are beveled off from the inside, as shown at  $b b$ , and the grips or thicker portions of the side walls of the plane-throat must be correspondingly beveled, as shown at  $a' a'$ , Fig. 6, and this machine is for doing this work, that has heretofore been done by hand.

The machine shown is comparatively small, and is designed to set on a table K; but of course the machine could be provided with legs, if preferred, to give it the desired elevation. The body of the machine comprises a supporting-base C and standard D, these members being preferably cast integral. The standard has an opening  $B'$  of considerable size, and has vertical ways  $d d$ , that project forward from the standard, as shown in Fig. 2.

E is a slide or cross-head engaging and recip-

rocating between these ways. To the upper end of the slide is pivoted at  $e$  hand-lever F of the bell-crank variety. The short arm of this lever is pivoted at  $f$  to link G, the latter in turn being pivoted at  $g$  to the upper portion of the standard. To slide E is secured the depending cutting-tool or chisel N, hereinafter described, and by operating the hand-lever the slide and cutting-tool are reciprocated vertically. To the base are attached upwardly-projecting arms H, the hubs  $H'$  thereof being pierced to receive with an easy fit rods  $h$ , whereby the latter may turn on its axis or slide endwise. On the central portion of rod  $h$  is mounted arm I, the latter being secured to the rod, usually by means of a set-screw. Arm I extends forward from the supporting-rod, the arm near the forward end thereof resting on guide J. This guide has a slot  $J'$ , in which slot operates the securing stud or bolt  $j$ , that secures the guide to the base. By loosening this bolt or stud the guide may be adjusted vertically to give the desired inclination to arm I and attachments, and the guide being somewhat broad on top admits of sliding arm I thereon the limited distance necessary for the work. Arm I is provided at the extremes thereof with upwardly-projecting ears  $I'$ , these ears being pierced and the holes screw-threaded for receiving the conically-ended set-screws  $i$ , these set-screws being in line with each other.

L is a metal trough, adapted to receive a plane, this trough having depending ears  $L'$ , that extend down between ears  $I'$ , ears  $L'$  having conical depressions on their outer faces for receiving the points of set-screws  $i$ . With such construction trough L may be tilted laterally, and guide J may be raised or lowered to give the desired inclination to the trough, and the trough may be moved sidewise by sliding rod  $h$  endwise through its bearings.

Arm I, near the sides thereof, is provided with abutment-screws  $i'$ , to serve as stops in tilting trough L. The bottom wall of the trough is provided with a transverse slot  $l$  for receiving the cutting-tool N without contact with the trough. The cutting-edges of tool N are at  $n n$ , and the depending member  $n'$  serves as a guide or stop in adjusting the work. Tool N is placed in the machine with the face thereof (shown in Fig. 7) presenting



rearward. The trough L is supposed to be somewhat broader internally than the widest plane to be dressed. The plane is placed in the trough with what is shown as the left-hand end in Figs. 4 and 5 presenting forward, and of course inclining downward, guide J having been adjusted so that wall  $a^2$  (see Fig. 5) is vertical. The operator manipulates lever F with one hand and manipulates the plane and trough with the other hand. With tool N lowered until the cutting-edges thereof are just above walls  $a'$ , the plane is adjusted endwise until wall  $a^2$  bears against member  $n'$  of the tool. The operator then moves the plane sidewise in the trough, so as to bring it (I will suppose) against the right-hand side of the trough, and at the same time tilts the trough toward the right hand. The plane and trough are then moved toward the left hand until the opposing edge of member  $n'$  engages the right-hand wall  $a'$ . By means of lever F the tool is then operated to cut off thin shavings from wall  $a'$  to bevel the latter, as desired. The plane, with wall  $a^2$  still bearing against bearing  $n'$ , is then shifted to the other side of the trough, and the trough is tilted toward the left hand, and the trough is then moved toward the right hand until member  $n'$  engages the left-hand wall  $a'$ , after which this wall is beveled, thus completing the operation of the machine.

When I first constructed this machine I provided stops to limit the end movement of shaft  $h$  in either direction, which stops, of course, controlled the side movement of the trough, and I also provided a clamp for hold-

ing the plane in the trough; but after a little time I found that the workmen were not using these stops or the clamp, but considered them superfluous, and I have therefore dispensed with them.

What I claim is—

1. In a machine for beveling the wedge-grip of a plane, the combination, with a rod adapted to turn on its axis and be slid endwise, an arm mounted on such rod, a trough pivoted to the arm, and an adjustable guide adapted to engage such arm, of a vertically-reciprocating cutting-tool and means for actuating the same, substantially as set forth.

2. In combination, a rock-arm mounted on a rod, an adjustable guide adapted to engage such rock-arm, and a tilting trough mounted on the rock-arm, the latter bearing abutment-screws adapted to engage the trough, substantially as set forth.

3. The combination, with a tilting trough and means, substantially as indicated, for inclining the trough endwise, of a vertically-reciprocating tool having cutters at the edges thereof, and having a depending member between such cutting-edges adapted to serve as a stop in adjusting the work, and means, substantially as indicated, for operating the tools, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 30th day of January, 1890.

JOSEPH A. MONTGOMERY.

Witnesses:

C. H. DORER,

GEO. W. KING.