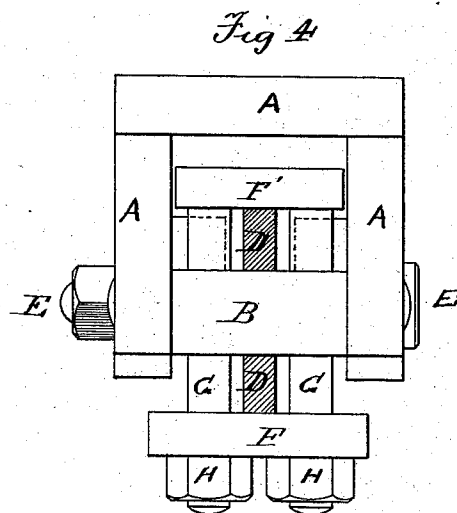
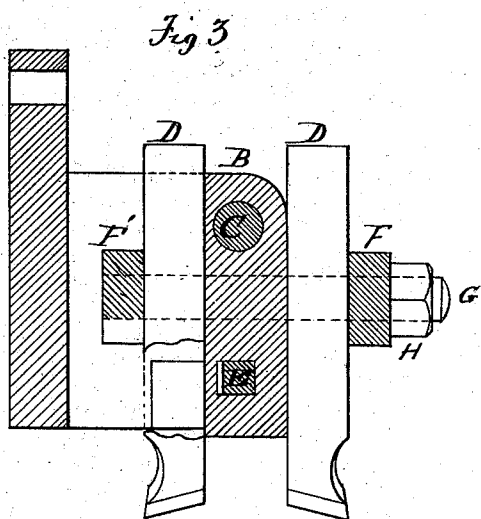
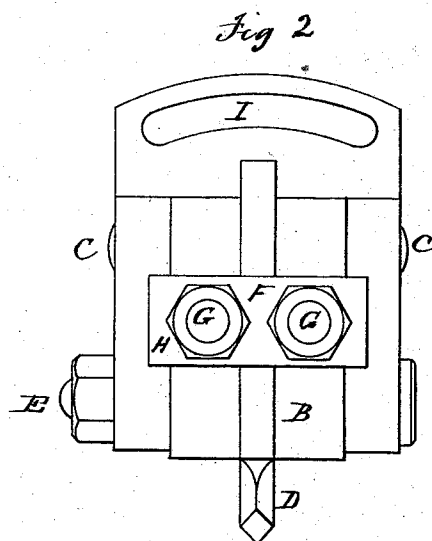
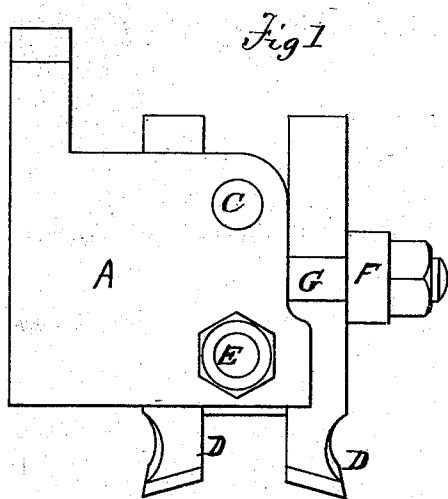


H. W. CARR & M. TURNBULL.
 Tool-Holders for Metal-Planers.
 No. 154,540. Patented Sept. 1, 1874.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY W. CARR AND MICHAEL TURNBULL, OF HAMILTON, CANADA.

IMPROVEMENT IN TOOL-HOLDERS FOR METAL-PLANERS.

Specification forming part of Letters Patent No. **154,540**, dated September 1, 1874; application filed February 26, 1874.

To all whom it may concern:

Be it known that we, HENRY WM. CARR and MICHAEL TURNBULL, of the city of Hamilton, in the county of Wentworth, in the Province of Ontario, Dominion of Canada, have invented a certain new and useful Improvement in Tool-Boxes and Cutters for Iron-Planers; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

The invention relates to the arrangement of a vibrating swinging block in a tool-box, hinged on a bolt, and carrying two cutters attached thereto by plates to cut backward and forward, and capable of being adapted to all kinds of planers.

By reference to the annexed drawings it will be seen that Figure 1 is a side view of a tool-box and cutter. Fig. 2 is a front view; Fig. 3, a section through the center; Fig. 4, a plan or top view.

A represents the box-frame, solid on three sides. B is the swinging block, which swings on the bolt C, passing through the box, as shown. D D are the forward and back cutters, respectively, for planing iron. E is a square bolt passing through the swing-block B and frame A. The said swing-block has a square hole through it somewhat larger than the bolt E, so as to allow the said swing-block and the cutter to oscillate slightly when the cutters are in operation. F F are two plates for assisting to hold the cutters D D in their position. G G are two bolts, which pass through the front plate F and are screwed into the rear plate F', and are secured and tightened by the nuts H H. This means firmly keeps the said cutters in their place. I is a slot through which a bolt passes to secure the box to the planer.

In operation, while the front cutter is cutting the rear cutter raises slightly to clear the surface of the object planed. On the return movement the rear cutter cuts while the front one rises above the surface by means of the hole in the swinging block being somewhat larger than the bolt E which passes through it. There is just sufficient oscillation given to the swinging block to enable the cutters D to clear the planed surface on each alternate return movement.

By this construction and combination of two tools with this simple device much time is saved, as double the work can be done with it. The device can be easily adapted to any planer at present in use, without the use of complicated machinery. It is a simple and durable device, and cannot easily get out of order. By removing the rear cutter and fastening a blank in its place the device can be used on any ordinary planer with one tool.

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination and arrangement, substantially as herein described, with the frame A, swinging block B, hung on bolt C and carrying the cutters D D, attached thereto by plates F F', and bolts G G, of the square bolt E passing through the elongated slot I and the swinging block to permit a slight vibration of the block, and thus raise and lower the tools alternately, as and for the purpose specified.

Dated at Hamilton, Canada, this 21st day of February, 1874.

HENRY WILLIAM CARR.
MICHAEL TURNBULL.

Signed in the presence of—
WM. BRUCE,
WM. B. BRUCE.