N. Russell,

Planing Tool.

No. 113,800. Patented Apr. 18. 1871.

Fig 2.

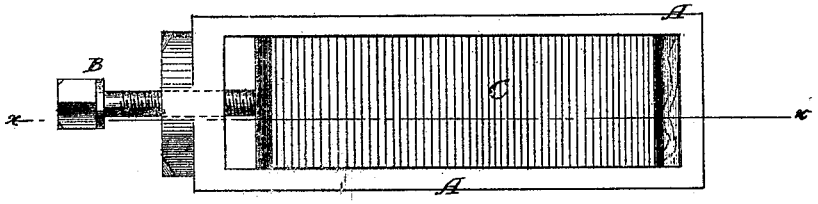
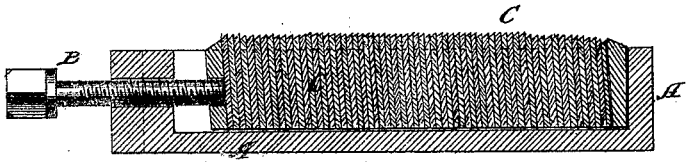


Fig 1.



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UNITED STATES PATENT OFFICE.

NATHANIEL RUSSELL, OF PLYMOUTH, MASSACHUSETTS.

IMPROVEMENT IN PLANING-TOOLS.

Specification forming part of Letters Patent No. **113,800**, dated April 18, 1871.

To all whom it may concern:

Be it known that I, NATHANIEL RUSSELL, of Plymouth, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Planing-Tool; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to a new and useful improvement in tools for planing wood and metals; and consists in confining a series of steel plates in a hollow block or case by means of a screw or keys or wedges, or in any substantial manner, so that the plates may be confined at any angle for use or for grinding, the cutting-edges of the said plates being either beveled or square, the construction and arrangement being as hereinafter more fully described.

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of Fig. 2, taken on the line *x x*. Fig. 2 is a top or plan view.

Similar letters of reference indicate corresponding parts.

A is a hollow block or case of suitable size and strength, made of metal, with a fastening-screw, B, passing through one end. C represents a series of thin steel plates, which correspond in width with the cavity in the block or case A, and which project up above the block or case, as seen in Fig. 1, more or less, as may be desired. The plates are of uniform size, and all rest upon the bottom of the cavity in the block. The outer edges of these plates are made beveling, by grinding or otherwise, and are fastened in an inclined position, as represented, so that sharp projecting cutting-angles will come in contact with the surface of the wood or metal, or other material to be planed or smoothed, giving the face a fine saw-tooth appearance.

The plates may be made with square edges and placed in an inclined position, and will operate in that manner; but the cutting-angles will, in that case, be simply right angles, and consequently not so sharp and well adapted to the purpose as when the edges are beveled.

The plates may be fastened by one or more screws, or by keys or wedges arranged and operating on the plates in any manner suitable for the purpose of holding them in any required position.

When the cutting-edges become dull from use, they are fastened in the block at any angle which will give their edges the required bevel or shape, and then they are all ground together and of uniform shape.

The planer may be applied to either wood, metal, or other material, and be operated by hand or other motive power.

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

The improved planing-tool herein described, consisting of the metallic box A, steel plates C, and set-screw B, constructed and arranged in relation to one another as described.

NATHANIEL RUSSELL.

Witnesses:

JNO. J. RUSSELL,

ALLEN DANFORTH.