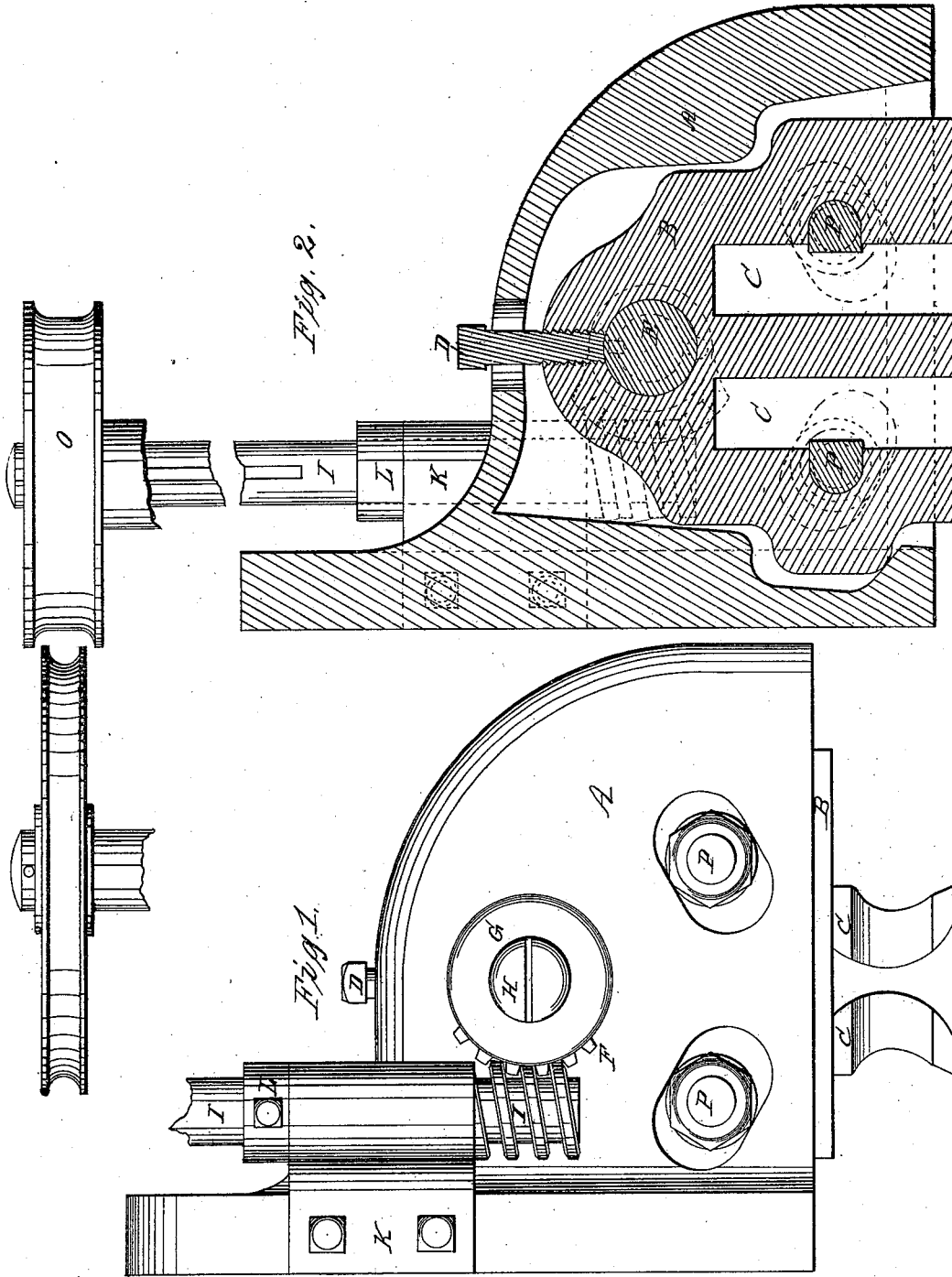


**W. B. SMITH.**  
**Cutter-Holder for Planing-Machines.**

No. 167,793.

Patented Sept. 14, 1875.



Witnesses.  
*J. W. Hernandez*  
*A. Seland Rivers*

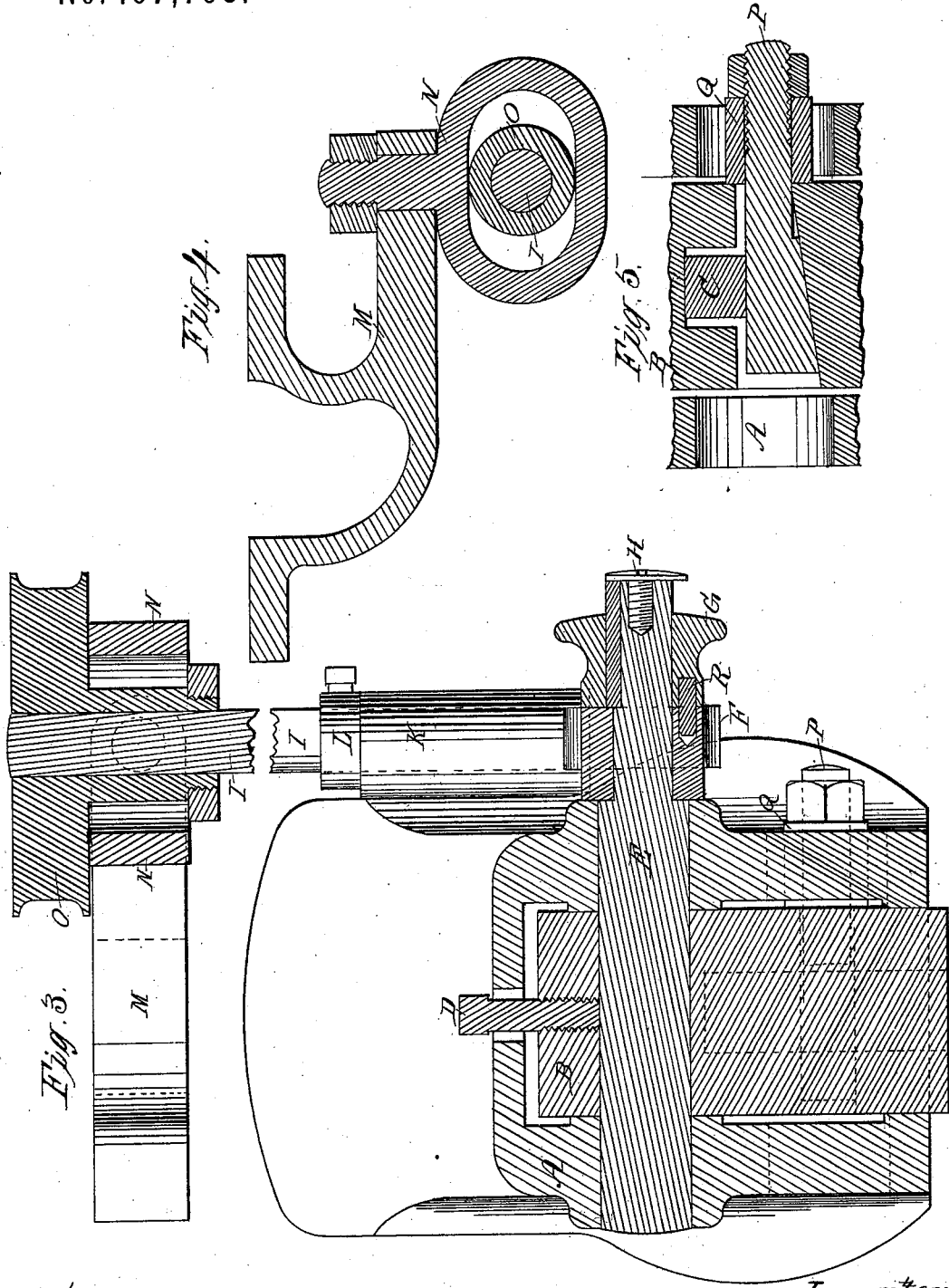
Inventor.  
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M. L. Rivers

W. B. Smith

# UNITED STATES PATENT OFFICE.

W. BELL SMITH, OF CHARLESTON, SOUTH CAROLINA.

## IMPROVEMENT IN CUTTER-HOLDERS FOR PLANING-MACHINES.

Specification forming part of Letters Patent No. **167,793**, dated September 14, 1875; application filed July 17, 1875.

*To all whom it may concern:*

Be it known that I, W. BELL SMITH, of Charleston, in the county of Charleston and the State of South Carolina, have invented a new and useful Improvement on a Planing-Machine for Planing Metals; and I do declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a side elevation. Fig. 2 represents a vertical section. Fig. 3 represents a front section. Fig. 4 represents a top view of bracket. Fig. 5 represents a section of wedge-bolt.

The invention relates to an improvement to be attached to the cross-head of any planer for planing metals, consisting of a box in which a tool-stock holding two tools vibrates for the purpose of utilizing the return stroke of the planer, which in all ordinary machines is lost.

A represents a box secured firmly to the cross-head of any planer, in which vibrates the tool-stock B, holding the tools C C, and secured by bolt D to the horizontal shaft E, which passes through the box. Upon this shaft a worm-wheel or segment, F, is placed, which is thrown in and out of gear by the clutch G, which slides upon a feather in the shaft. I I represent vertical spindle and worm, the latter geared into the segment F. The bracket K and collar L, secured by set-bolt, support the spindle. The bracket M N

(shown in Fig. 4) holds the sheave O in position, admitting of the spindle being moved from a perpendicular when necessary, a groove being in the spindle, so that it may glide through the sheave O when raising and depressing the tool-stock. P represents the wedge-bolts, having thimble and nuts arranged for tightening up the tool.

The operation of this device is as follows: Two sheaves are placed one on each end of the cross-head, one (the driver) being on a vertical shaft, for which motion may be obtained on any planer by the shifting arrangement at each stroke. An endless cord or belt is passed around the sheaves, embracing the sheave O upon the spindle I. At each stroke the spindle I revolves sufficiently, by means of the worm I and worm-wheel or segment F, to bring the tool-stock B alternately against the front and back of the box A, the tools C C consequently dropping by turns into position for their respective cuts.

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

The box A and double tool-stock B vibrating in same, in combination with worm and worm-wheel, all constructed and operating substantially as and for the purpose described.

W. BELL SMITH.

Witnesses:

I. W. HERNANDEZ,  
A. W. LELAND RIVERS.