

A. C. Jones.

Shaping and Slotting Metals.

N^o 5,301.

Patented Sept. 18, 1847.

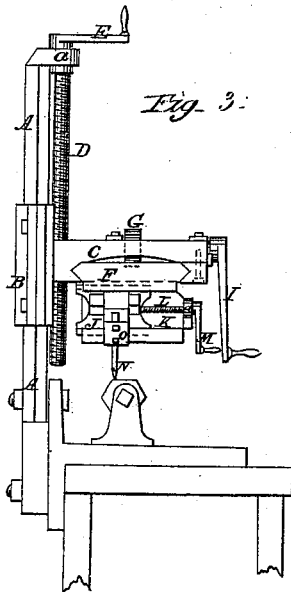


Fig. 3.

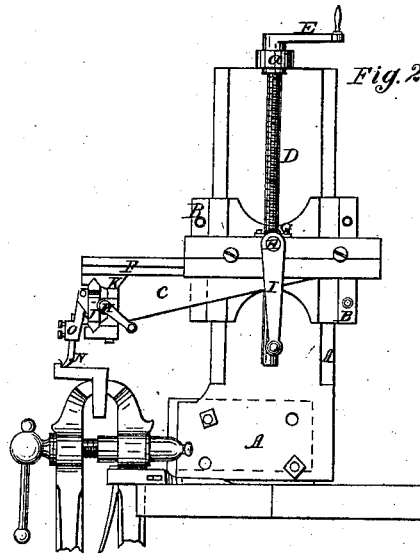


Fig. 2.

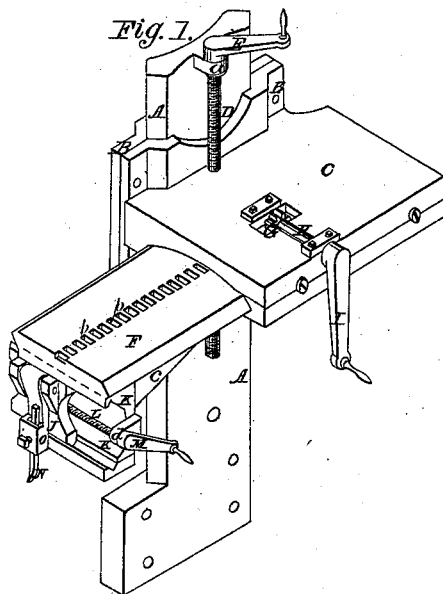


Fig. 1.

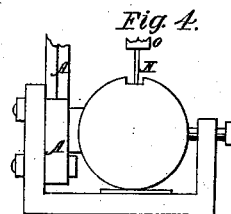


Fig. 4.

UNITED STATES PATENT OFFICE.

ALFRED C. JONES, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN PORTABLE MACHINERY FOR PLANING METALS.

Specification forming part of Letters Patent No. 5,301, dated September 18, 1847.

To all whom it may concern:

Be it known that I, ALFRED C. JONES, engineer and machinist, of the city of New Orleans, in the State of Louisiana, have invented a new and useful Portable Machine for Planing Metals; and I do hereby declare that the following is a full and exact description thereof.

The machine for the planing of metals is an instrument now well known in every good machine-shop, and is one of the most valuable of the tools used by the machinist. It is not adapted, however, to the operating upon small work, and is from its nature a fixture to which the article to be operated upon must be carried and affixed, and such is the arrangement of its parts that it cannot by a mere reduction of size be rendered portable, so as to adapt it to the advantageous working of such pieces as it is intended to work by my improved portable instrument, and the consequence has been that such pieces have been worked by means of the chisel and the file, even in establishments where the ordinary planing-machine is used. There are also operations to be performed on large masses of metal, such as the cutting of grooves or recesses for the seats of keys, and for other purposes which have now to be effected by the cold-chisel, but which by the aid of my portable instrument may be cut in a more perfect manner and much more rapidly than by hand.

In the accompanying drawings, Figure 1 is a perspective representation of the whole machine. Fig. 2 is a side view of it, showing said machine as affixed to a bench in such manner as that the planing-tool may be made to operate upon work held in the jaws of the common bench-vise. Fig. 4 will serve to show how the instrument may be attached to a large shaft for the purpose of cutting key-seats, &c.

In each of the figures where the same parts are represented they are designated by the same letters of reference.

A is a bar, which is to be attached in a vertical position to a work-bench or to the article on which the planing-tool is intended to operate. This bar has its edges V-formed and made perfectly parallel to each other, so as to constitute slides for the jaws B B, that are

made to embrace it. To these jaws are solidly fixed the horizontal movable table or plate C. A screw-nut formed in the table receives the screw D, which may be turned by the winch E, and the neck of which revolves in a collar *a* at the upper end of the bar A, by which arrangement the table C may be raised or lowered at pleasure.

F is a slide that passes back and forth in V-grooves on the under side of the plate C. This slide has rack-teeth *b b* formed along it to receive the leaves of a pinion G on a shaft H, that may be turned by the winch I.

J is the tool-slide, the edges of which are received in V-grooves making a part of the guide-plate K, that is solidly attached to the slide F. To enable this plate to sustain the cutting-tool without springing, a bracket or rib *c* is placed behind it. The tool-slide J is worked back and forth by means of a screw L, that is turned by a winch M, which screw works in a nut at the back of the slide and in a collar at *a*.

N is the tool, that is held by the hinged holdfast O in the same manner as in the ordinary planing-machine, there not being anything new in this part.

The manner of using this machine will be obvious to every competent machinist, the respective slides and the manner of operating them enabling the workman to adjust the tool to the work to be performed. When so adjusted, by turning the winch I the tool is moved horizontally, and in its forward motion will make a cut, and by reversing the motion the tool N will lift, and, being retracted, will be prepared to make another cut. If a vertical cut is required this may be made by turning the winch E, the cutting-edge of the tool being properly formed for that purpose.

Having thus fully described the manner in which I arrange the respective parts of my portable machine for planing metals, what I claim therein as new, and desire to secure by Letters Patent, is—

The particular manner in which the slides and the apparatus for moving them are arranged and combined with each other and with the bar A, by which arrangement and combination said instrument is rendered

portable and capable of being attached to a work-bench or to the work upon which it is to operate.

I do not make claim to either of the individual parts when taken alone, as of my invention, slides such as I have described, and the giving motion to them by means of screws or of rack and pinions, being well-known de-

vices. I therefore, as above stated, limit my claim to the particular combination herein set forth by which I have produced a tool which is substantially new and of great utility.

ALFRED C. JONES.

Witnesses:

A. L. ARCHAMBAULT,
I. P. WALDEN.