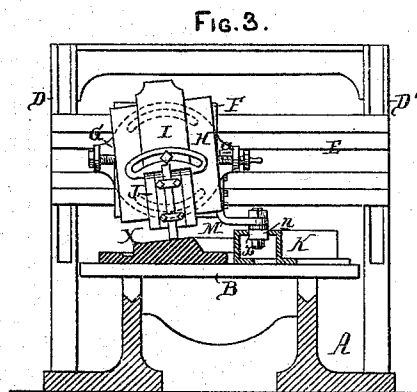
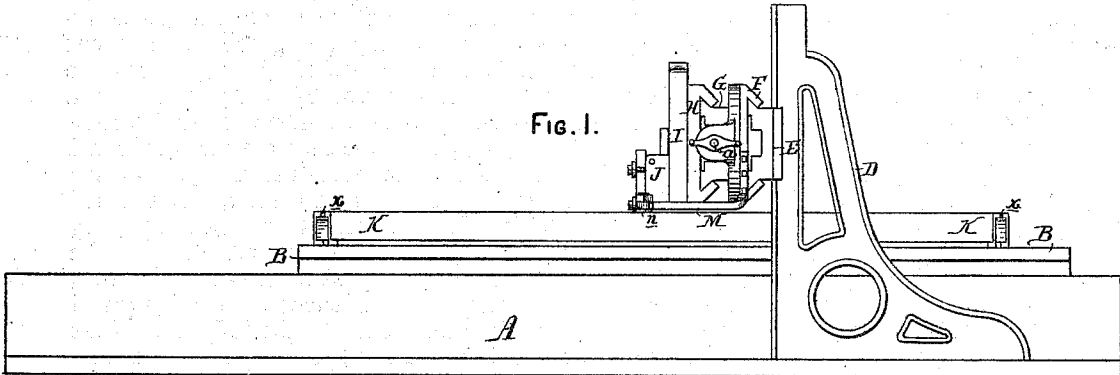
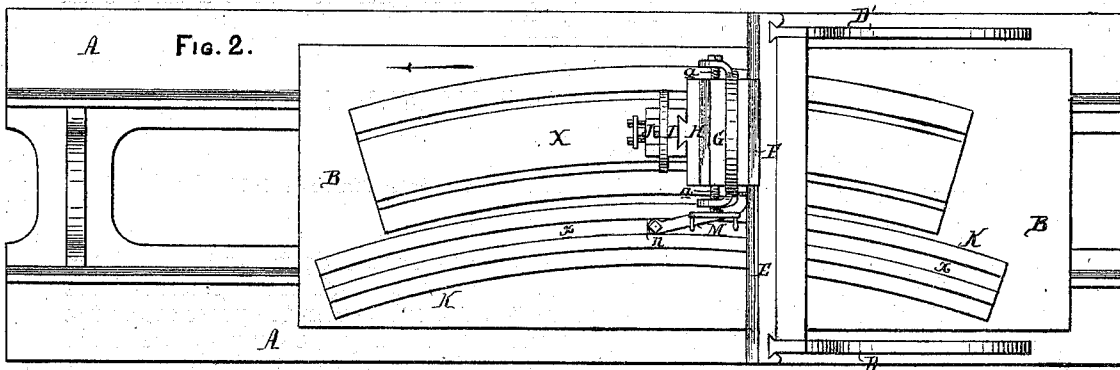


JOHN GRIFFEN.

Improvement in Planing Machines.

No. 124,813.

Patented March 19, 1872.



WITNESSES

John Parker
J. B. Harding

John Griffen
by his Attor
Nowson and Son.

UNITED STATES PATENT OFFICE.

JOHN GRIFFEN, OF PHOENIXVILLE, PENNSYLVANIA, ASSIGNOR TO PHOENIX IRON COMPANY.

IMPROVEMENT IN PLANING-MACHINES.

Specification forming part of Letters Patent No. 124,813, dated March 19, 1872.

Specification describing an Improvement in Planing-Machines, invented by JOHN GRIFFEN, of Phoenixville, Chester county, Pennsylvania.

My invention consists of a planing-machine in which the horizontal slide is controlled by a guide on the traversing-bed of the machine, substantially in the manner described hereafter, so that regularly or irregularly-curved objects, or objects partly curved and partly straight, may be planed with cuts in a line corresponding with the shape of the object.

Figure 1 is a side view of my improved planing-machine; Fig. 2, a plan view; and Fig. 3, an end view.

A is the foundation or frame of the machine, and B the bed, which is caused to slide to and fro on guiding-ways on the frame by any of the appliances common to other metal-planing machines. To the opposite standards D and D' of the frame is secured the usual transverse guide E, carrying a slide, F, which is controlled in the manner described hereafter. To the slide F is so secured a guiding-plate, G, that it can be readily adjusted to any angle on the said slide and secured after adjustment. To the guide-plate G is adapted a second slide, H, carrying a vertical slide, I, to which the tool-box J is pivoted in the usual manner. My invention is, in the present instance, applied to the planing of the inclined surface of a segment, X, forming part of the circular track for the anti-friction rollers of a turn-table, but the improvement may be applied to the planing of different curved shapes, as will appear hereafter. The horizontal movement of the slide F is under the control of a segmental guide, K, secured to the traversing bed B, and having a slot, *x*, formed on the arc of a circle, of the same radius as that of the segment X to be planed. The guide and the segment are placed side by side on the bed B, and are adjusted, in respect to each other, in the manner clearly shown in the drawing. To the slide F is secured an arm, M, furnished at the outer end with a vibrating block, *n*, which fits

snugly, but so as to slide freely in the slot *x*. The center of this block and the point of the cutting-tool should, when the parts are in the position shown in Fig. 2, be in the same radial line drawn through the centers of the segment X and segmental slot *x*, but this is not absolutely necessary, as the same end can be attained by extending the guide directly out from the slides, instead of placing it opposite the tool, as shown, and by setting the work a corresponding distance ahead in the direction of the arrow, Fig. 2, so that the said guide and tool may occupy the same relative positions in respect to the slot *x* and work. As the bed of the machine traverses, the slide F being controlled by the slot *x*, the cut made by the tool must necessarily be in the arc of a circle, corresponding to the curve of the slot *x* and having the same center as the segment X. As a surface inclined transversely has, in the present instance, to be planed on the segment, the guide-plate G is adjusted on the slide F at a corresponding inclination, and the slide H is moved on the guide-plate by turning a screw, *a*, adapted to a nut in the said slide H, and to bearings on the guide, so as to impart from time to time the proper feed to the cutting-tool.

Although I have described my invention as applied to the planing of a segment, it will be evident that other-shaped objects, having regular or irregular curves, or partly straight and partly curved, may be planed by making the guiding-slot, which controls the slide F, of a corresponding shape.

I claim as my invention—

A planing-machine, in which a guide on the bed is combined with the horizontal slide, substantially in the manner and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN GRIFFEN.

Witnesses:

WM. A. STEEL,
J. B. HARDING.