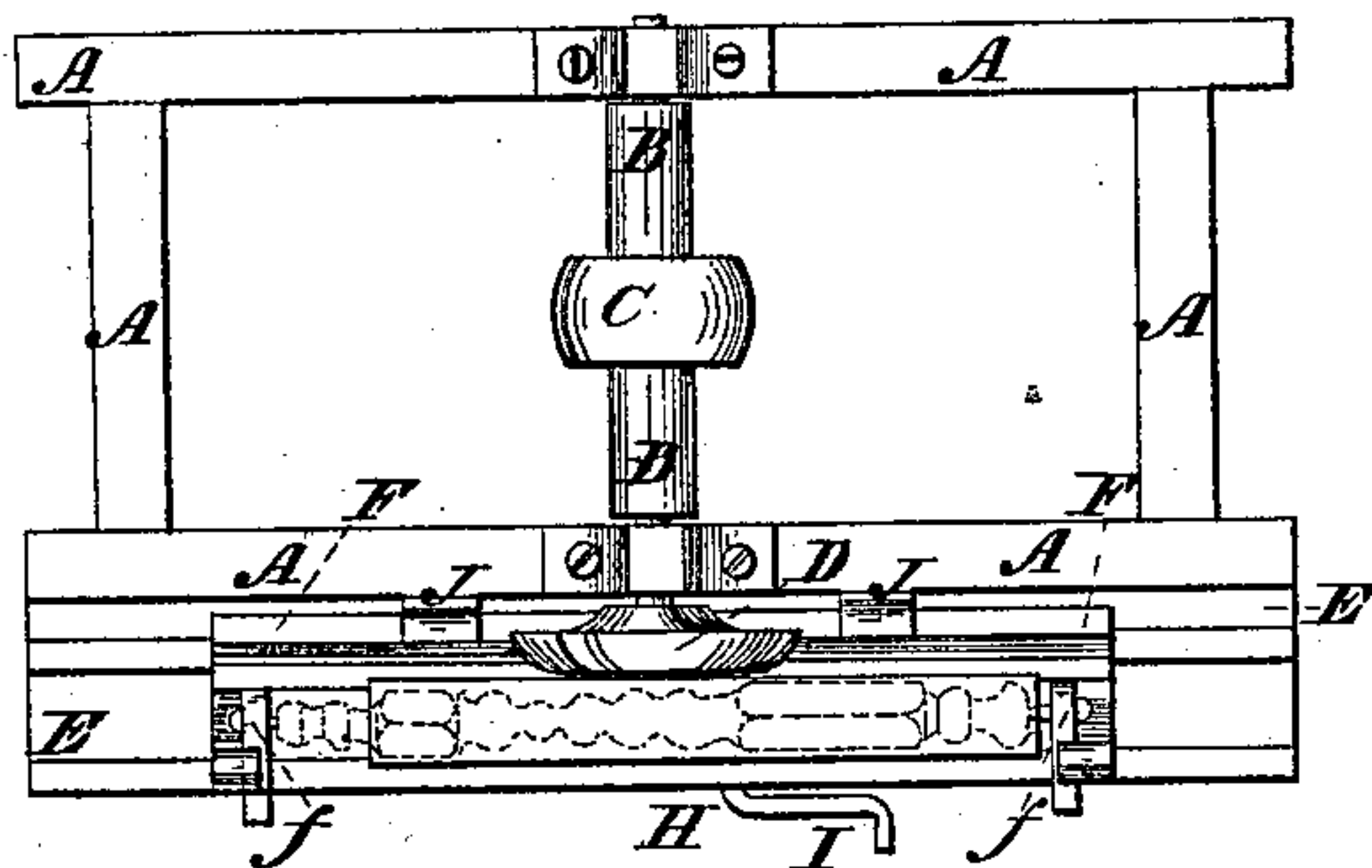
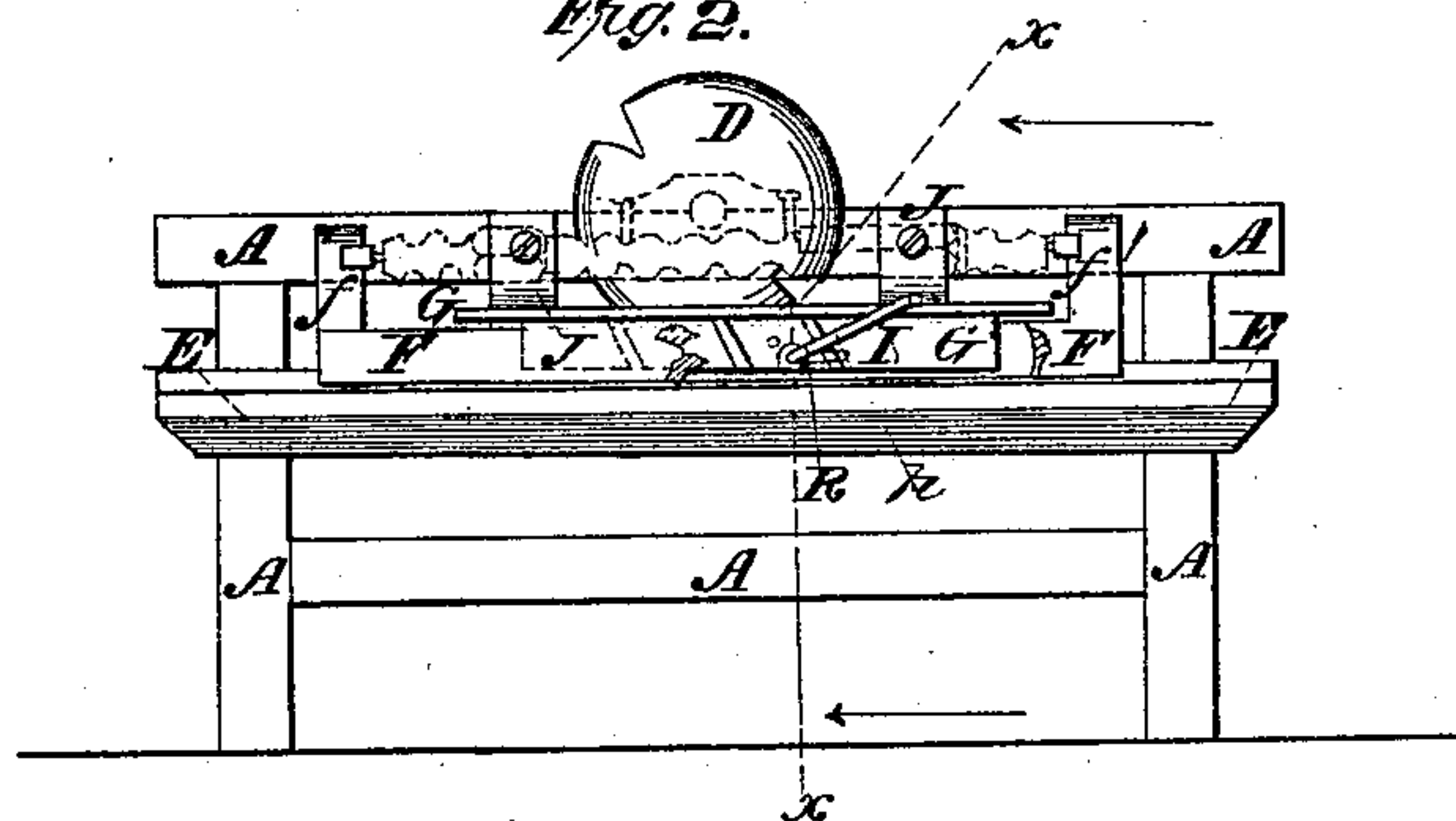


*O. P. Furman,*  
*Wood Molding Machine.*  
*N<sup>o</sup> 76,740* *Patented Apr. 14, 1868.*

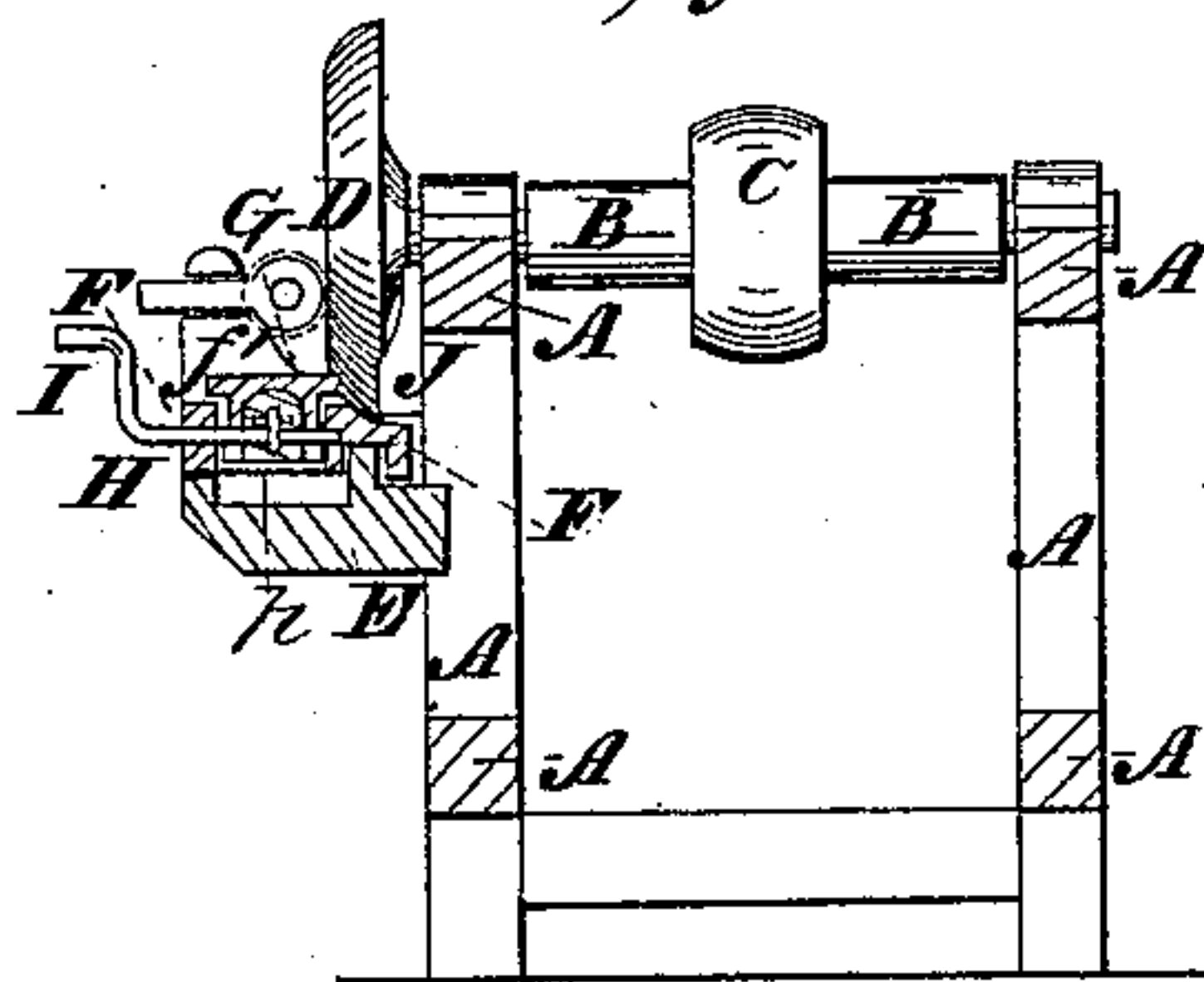
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*  
*Chas. Fische.*  
*Wm. Frewin.*

*Inventor:*  
*O. P. Furman.*  
*Per Munn & Co.*  
*Attorneys*

# United States Patent Office.

O. P. FURMAN, OF ADDISON, NEW YORK.

*Letters Patent No. 76,740, dated April 14, 1868.*

## IMPROVEMENT IN WOOD-PLANING MACHINES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, O. P. FURMAN, of Addison, in the county of Steuben, and State of New York, have invented a new and useful Improvement in Planing-Machines; 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 drawings forming part of this specification, in which—

Figure 1 is a top view of my improved machine.

Figure 2 is a front view of the same.

Figure 3 is a cross-section of the same, taken through the line *x x*, fig. 2.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved machine, by means of which the plane surfaces of turned work may be accurately and conveniently planed, whether said plane parts be square or polygonal in their cross-section; and it consists in the construction and combination of the compound slide, by means of which the work is held and fed forward to the cutters, with the frame of the machine, as hereinafter more fully described.

A is the frame of the machine. B is a shaft, to which motion may be given by a band passing around the pulley C, formed upon or attached to said shaft. D is the cutter-head, which is attached to the end of the shaft B, and to which cutters are attached in the ordinary manner.

To the side of the frame A, below the cutter-head D, is attached a stationary table, E, which has one or more cleats or slats attached to it for the slide F to move back and forth upon when feeding the work to the cutter. F is a slide, having a groove or grooves formed in its under side, to fit upon the way formed upon the table E. *f'* are arms, projecting upward from the ends of the slide F, to which are attached centres for holding the work to be planed in the same manner as the work is held in a lathe, so that it may be turned to plane one side after another, without detaching it from the machine.

The central part of the slide F is slotted longitudinally, and in the slot thus formed is placed a slide, G, which may be raised up against the under side of the work, to hold it securely and steadily while being operated upon by the cutters.

To the sides of the slide G are attached inclined cleats or slats, which enter and work in inclined grooves formed in the slide F, as shown in fig. 2. H is a shaft working in bearings in the slide F, and to the outer end of which is attached, or upon it is formed, a crank, I, for convenience in operating it. To the middle part of the shaft H is attached a short arm, *h'*, which works in a recess in the under side of the slide G, and which acts as a lever to raise and lower the said slide, G.

If desired, the arm *h'* may be replaced by a small gear-wheel, the teeth of which mesh into the teeth of a rack, attached to the slide G, to raise and lower the said slide.

J are guide-blocks, attached to the frame A in such positions as to hold the slide F down upon the table E while being moved back and forth.

In using the machine, the work is adjusted upon the centres of the slide F. The slide G is then raised, to hold the said work securely while being operated upon by the cutters. The slides F and G are then moved forward to the cutters. When one side or face of the work is finished, the slide G is lowered, and the work turned upon the centres, so as to present another side or face to be acted upon by the cutters, and the slide G is again raised, to hold it steady and firm. This is continued until all the sides or faces of the work have been operated upon.

I claim as new, and desire to secure by Letters Patent—

The slide G, having inclined ways upon its sides, working vertically in inclined grooves in the sides of the slide F, in combination with the crank-shaft H and lever *h'*, all constructed and operating as herein described, for the purpose specified.

Witnesses:

M. W. DARRIN,  
J. W. DARRIN.

O. P. FURMAN.