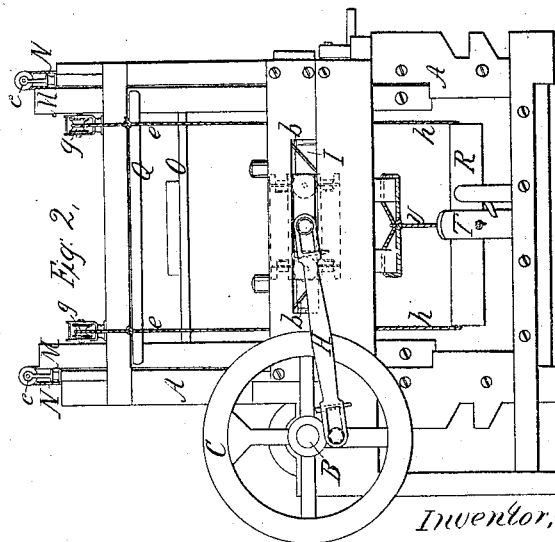
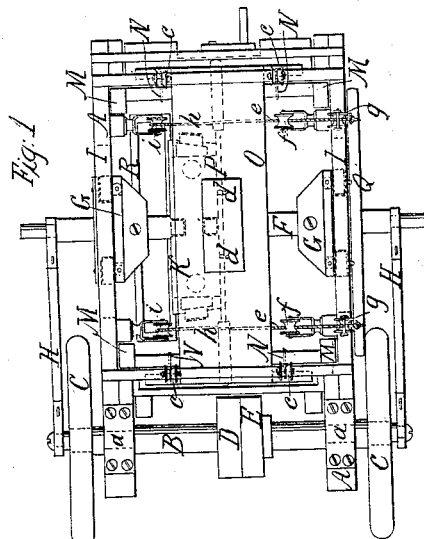
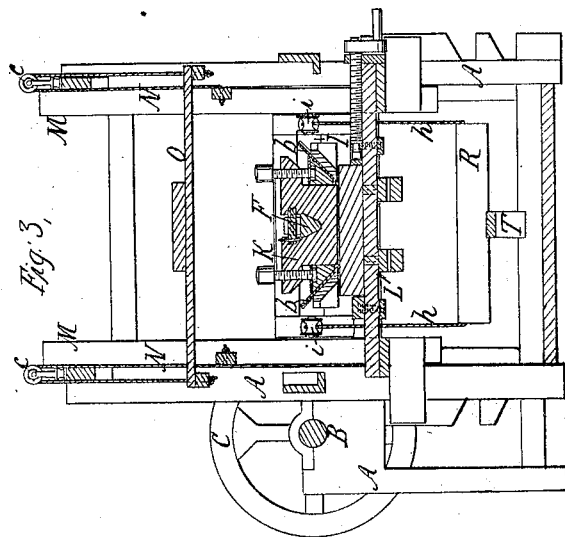
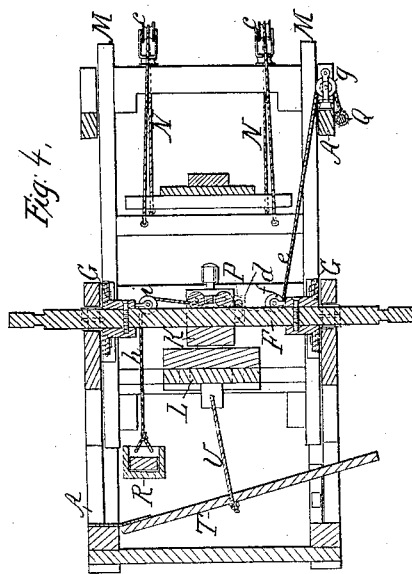


*F. Hoffman,*  
*Polishing Wood,*  
*No 52,044,* *Patented Jan. 16, 1866.*



Witnesses,  
*A. D. Hatch*  
*G. C. Washburn*

Inventor:  
*Frank Hoffman*  
 by his attorney  
*R. M. Eddy*

# UNITED STATES PATENT OFFICE.

FRANK HOFFMAN, OF WEST CAMBRIDGE, MASSACHUSETTS.

## IMPROVEMENT IN MACHINES FOR POLISHING WOOD.

Specification forming part of Letters Patent No. 52,044, dated January 16, 1866.

*To all whom it may concern:*

Be it known that I, FRANK HOFFMAN, of West Cambridge, in the county of Middlesex and State of Massachusetts, have invented an Improved Machine for Planing, Scraping, Smoothing, or Polishing Wood or various other Materials; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a front elevation, Fig. 3 a longitudinal section, and Fig. 4 a transverse section, of it.

In the said drawings, A denotes the frame of the machine, which is to be suitably formed for supporting the main operative parts, to be hereinafter described. At one end of such frame is a driving-shaft, B, which is sustained in bearings *a a*, and provided with two fly-wheels, C C, a fast pulley, D, and a loose pulley, E. A long bar, F, extending across the frame, and duly supported by the carriers or slides G G, has its ends connected with the two fly-wheels by two connecting-rods, H H, applied to crank-pins projecting from them. The slides G G are duly supported in horizontal slots I I, made in the frame, the same being so that the two slides, with the bar F, may be simultaneously moved longitudinally within the frame. The said bar F goes through a plane-stock, K, which is applied to the bar so as to be capable of being slid freely in a direction from either of the carriers G G. The said stock is fitted with two plane-irons or cutters, *b b*, arranged so as to cut in opposite directions—that is, so that whichever way the stick may be moved longitudinally one of such cutters will be in action on the article subjected to them—and placed and fixed on a platform, L, arranged underneath the plane-stock.

Instead of plane-irons, scrapers or other tools, for scraping or polishing or for creasing, may be substituted.

The platform L should be provided with mechanism for securing to it the piece of wood or article to be worked or reduced, and such platform should also be furnished with upright guides M M M M, for the purpose of guiding it in its vertical movements within the frame A. Furthermore, the platform is supported by four cords or chains, N N N N, which are attached to it and go around pul-

leys *c c c c*, and are fastened to another platform, O, on which weights may be laid for the purpose of drawing the platform L, or what may be placed on it, up to the plane with the necessary force.

A bar, P, is arranged on the bar F and alongside of the plane-stock, which has two projections, *d d*, that hook around or on the bar in such manner as to cause the plane to be moved laterally with the bar when the latter is so moved. From the said bar two cords, *e e*, go to and around guide-pulleys *f f*, and thence upward to and around other guide-pulleys, *g g*, from whence they proceed to and are fastened to a bar, Q. Besides the said cords there are two others—viz., *h h*—which extend from the bar P in directions opposite to those of the cords *ee*. The said cords *h h* go around pulleys *i i*, and thence down, and are fastened to a weight-holding box, R. By means of the cords *ee h h* and the bars P Q, and the weight-box R, loaded with a weight sufficient to draw the plane laterally on the bar F, a person, when laying hold of the bar Q, can easily cause the plane, while moving longitudinally, to be moved laterally, as occasion may require, over the article to be planed.

A treadle, T, extending underneath the platform L, and connected to it by a cord, U, serves to enable an attendant to depress the said platform, as the same may be necessary.

The machine so made has been found to be very useful for planing or reducing or polishing piano-forte tops and other veneered work, it being specially designed therefor. The plane or reducing-implement cuts both ways.

I claim—

The combination as well as the arrangement of the supporting-bar F and the mechanism—that is, the rods H H and cranked wheels C C—for moving the said bar and the plane-stock over the bed with the plane-stock K and the weighted box R, the two bars, P Q, their cords *ee h h*, and the sustaining-pulleys thereof, the whole being substantially as and for the purpose or purposes as hereinbefore set forth.

FRANK HOFFMAN.

Witnesses:

R. H. EDDY,  
F. P. HALE, Jr.