

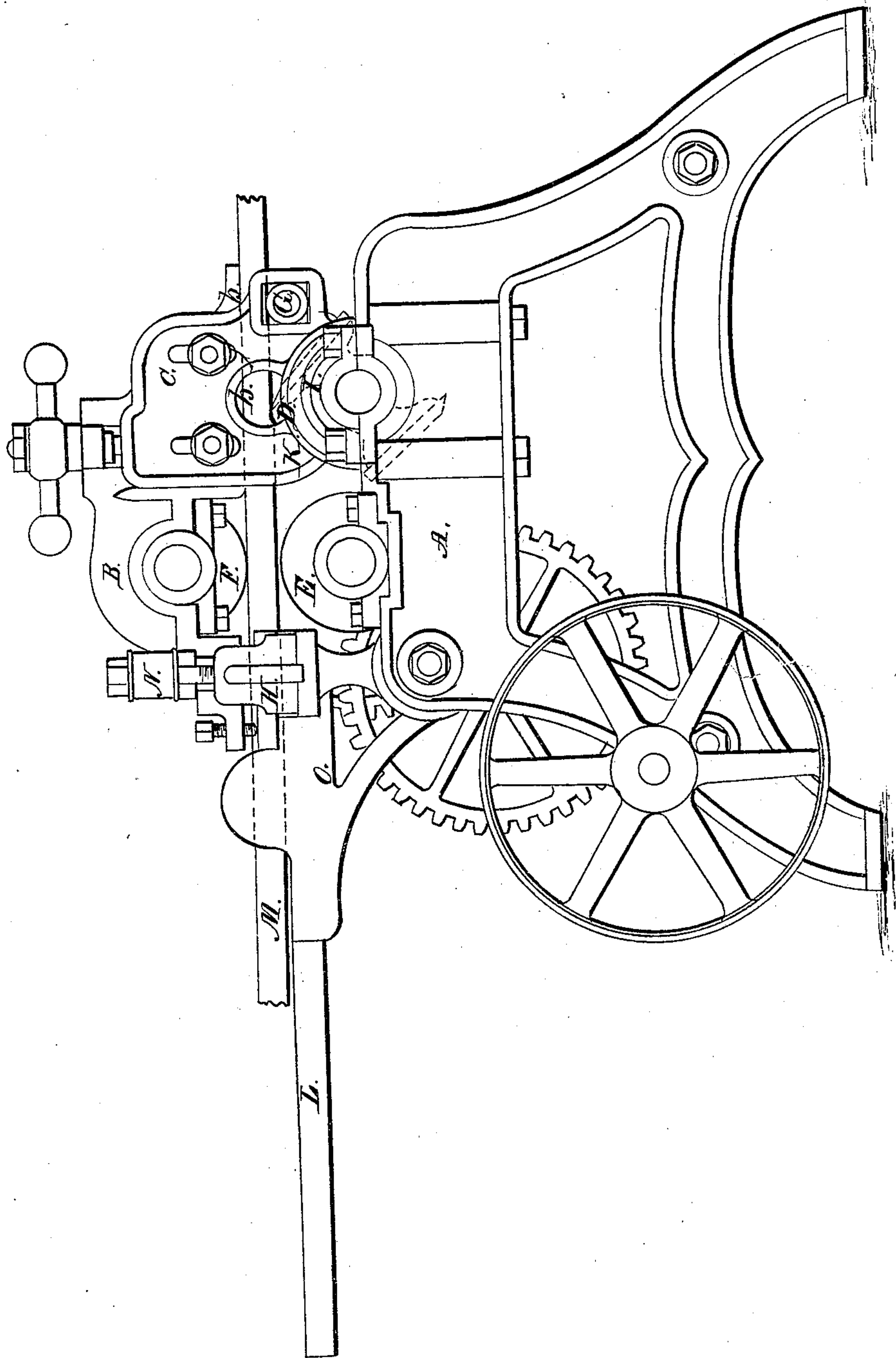
Sheet 1, 3 Sheets.

N. Barlow.
Planing Mach.

No 13,345.

Patented Jul. 31, 1855.

Fig. 1.



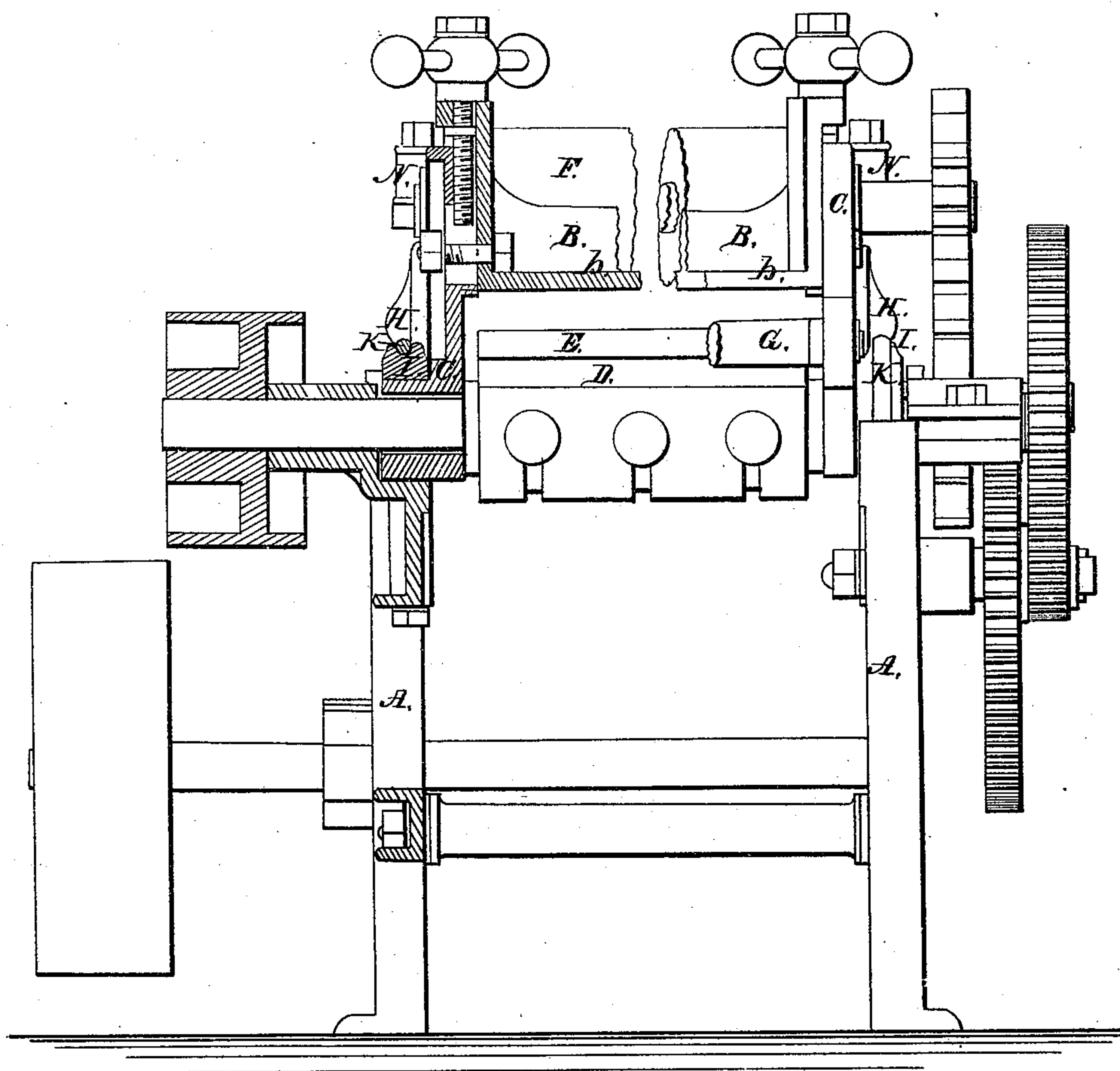
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Fig. 2.



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Fig: 4.

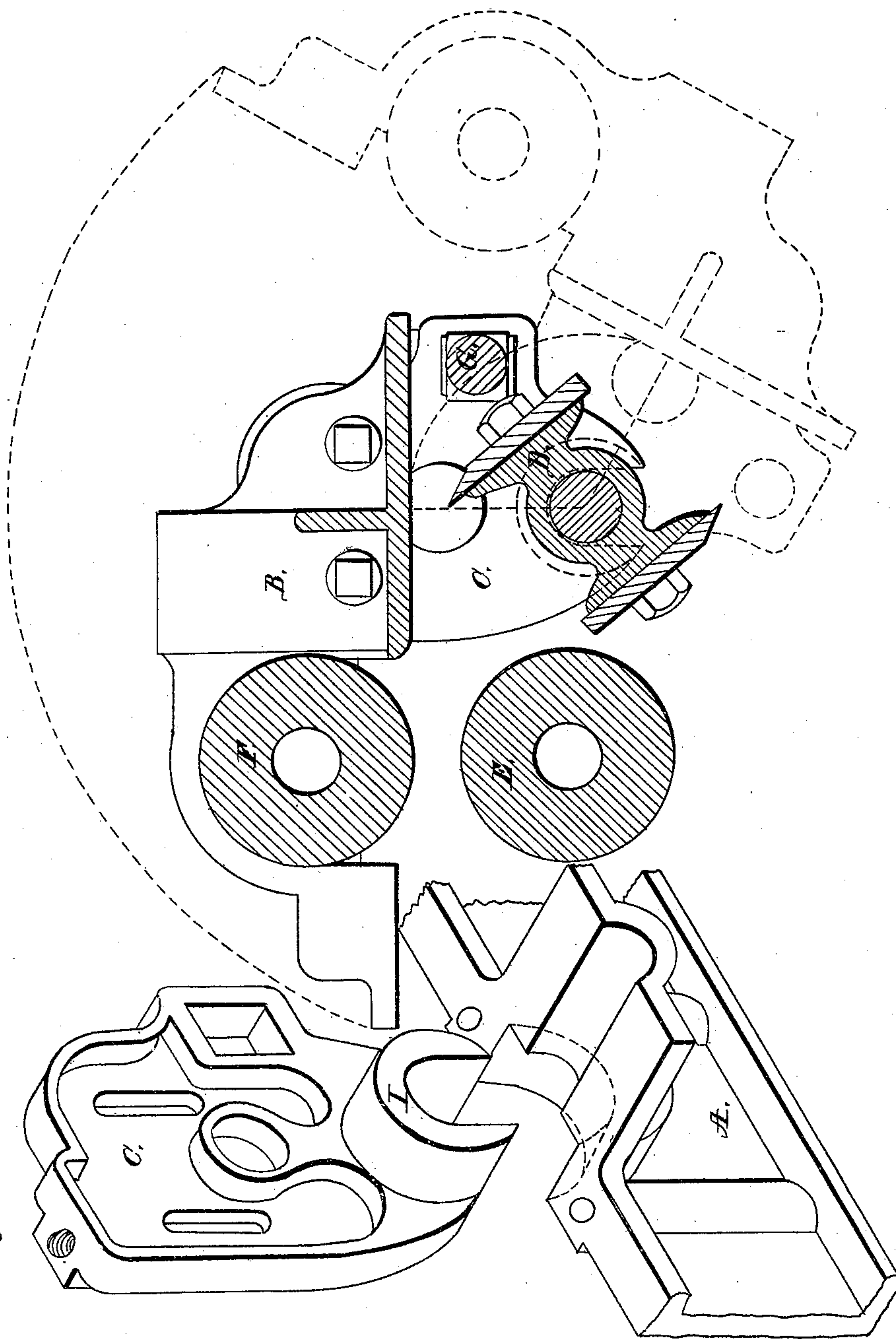


Fig: 3.

UNITED STATES PATENT OFFICE.

NELSON BARLOW, OF NEWARK, NEW JERSEY.

METHOD OF FEEDING PLANKS TO PLANING-MACHINES.

Specification of Letters Patent No. 13,345, dated July 31, 1855.

To all whom it may concern:

Be it known that I, NELSON BARLOW, of the city of Newark, county of Essex, and State of New Jersey, (formerly of New York,) have invented new and useful Improvements in Rotary Planing-Machines, of which the following is a full and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of machine. Fig. 2 is an end view of the same (part in section.) Fig. 3 is a section showing the method of connecting the upper with the main frame, and Fig. 4 is a section exhibiting the radial action of the upper frame and connections.

The general principle of this invention consists in passing planks over a cylindrical cutter (of the usual form) which revolves in fixed journals in the frame of the machine and over a fixed roller or bed in front of the cylinder, while the planks are pressed down and controlled by an improved self adjusting frame acting upon their upper sides which are by this means brought to a uniform thickness.

A is the main frame which for machines of the largest size occupies a space of about four feet in length by three in width. Suitable fixed bearings in this frame receive the shaft of the cutting cylinder (D,) which is armed with cutters of the usual form and which is made to revolve and cut in a direction against the advance of the plank. Inside of the said bearings at either end of the cylinder are other bearings larger than the first and concentric therewith that receive a projecting axle (I) formed upon the sides of the standards (C,) through the center of which the shaft of the cylinder passes. The stands are by this means with suitable bolts and cap attached to the main frame and can be swung forward or backward upon the attachment thus formed.

The upper frame (B,) is attached to and rests upon the standards last described, adjusting screws connect with each and suitable guides are formed so that said frame may be depressed or raised as may be necessary in setting for planks of different thickness. This frame has a plate (b) at its lower part which extends from side to side between the stands, and bears upon the upper surface of the plank. In the forward part of the frame last described the upper

driving roller (F) is placed, its under side being in true line with the aforesaid bearing plate. The under driving roller (E,) is parallel with the first and is attached to the main frame in an unyielding position.

After the plank passes the cutting cylinder and has been reduced it rests upon and is supported by the small roller (G). As this roller is connected with the stands (C) and they being attached by means of an axle around the cylinder shaft—it follows that the roller occupies a fixed relative position to the under side of the plank and to the cylinder, no adjustment of this being necessary when changes are made for different thicknesses. A bar may be used in place of the roller, or a table may extend outward from the machine by which the planks shall be supported.

L, is the feeding table or platform. The part (O,) to which it is attached, is connected with the cross rail of the main frame on an axle by which it can if desirable be moved up or down, or it may be connected with the shaft of the lower roller.

H is a connection or link that through the medium of the rubber spring (N) and bolt attaches the upper to the lower frame and by elastic pressure controls the action of the former, giving such amount of bearing force upon the plank as may be necessary. The link has a lip at its lower edge that fits into a corresponding recess in the part (O). Its upper part has a longitudinal recess for its reception in the upper frame. These connections are removed when it is desirable to sharpen the cutters or for any purpose to obtain access to the interior of the machine. This leaves the upper frame free to be swung over and when in this position the cutters can be sharpened or adjusted with the utmost convenience.

The operation of the machine is the following: When a plank enters the feeding rollers (E and F) the upper one rises, being under elastic pressure as aforesaid. As the forward part of the frame to which this roller is attached rises while it is attached at another point by an axle—it follows that this upper frame (together with the plank) receives an inclination from its line which is greater or less according to the amount of surplus in thickness of the plank. As the plank passes forward from the rollers

its upper side rests against the bearing plate with considerable pressure from the fact that the weight of the plank acts upon the lower roller as a lever and also because of
5 the inclined position of the plate. This prevents the cutters from taking too deep hold and marring the ends of the plank on entering, and in passing out the small roller (G) has a similar agency in connection with
10 the weight of the plank to keep the last end of the same in firm contact with the plate aforesaid. The driving rollers occupy at all times parallel positions to each other, thereby bearing equally, which gives a more uni-

form feeding force than where their ends 15 are separately adjustable.

What I claim herein as new and desire to secure by Letters Patent is—

The self adjusting frame (B,) connected by axles or any equivalent means to the 20 main frame, when combined with the cylinder and fixed rollers as specified.

Newark, N. J., June 15th, 1855.

NELSON BARLOW.

Witnesses:

WM. S. HENSON,
GEO. NUTTMAN.