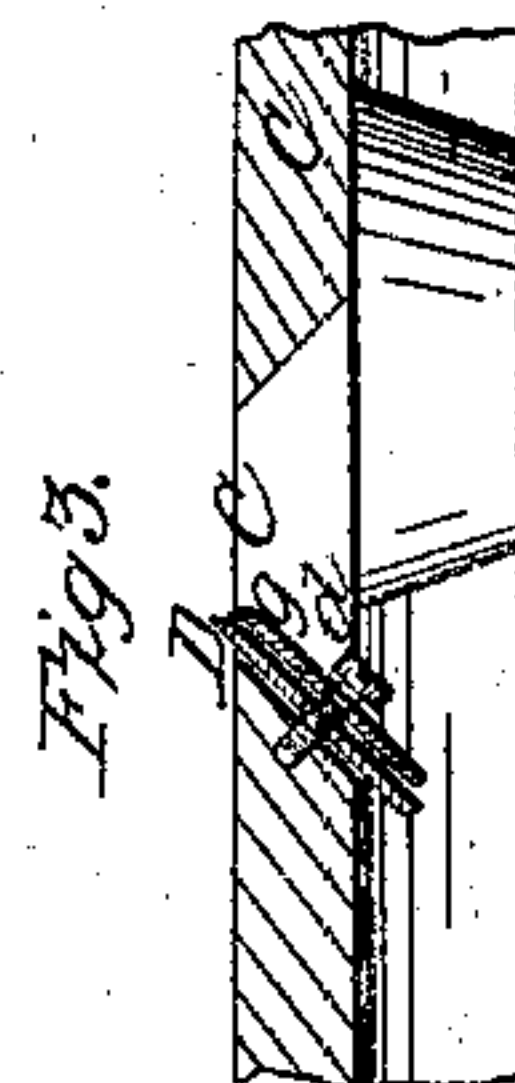
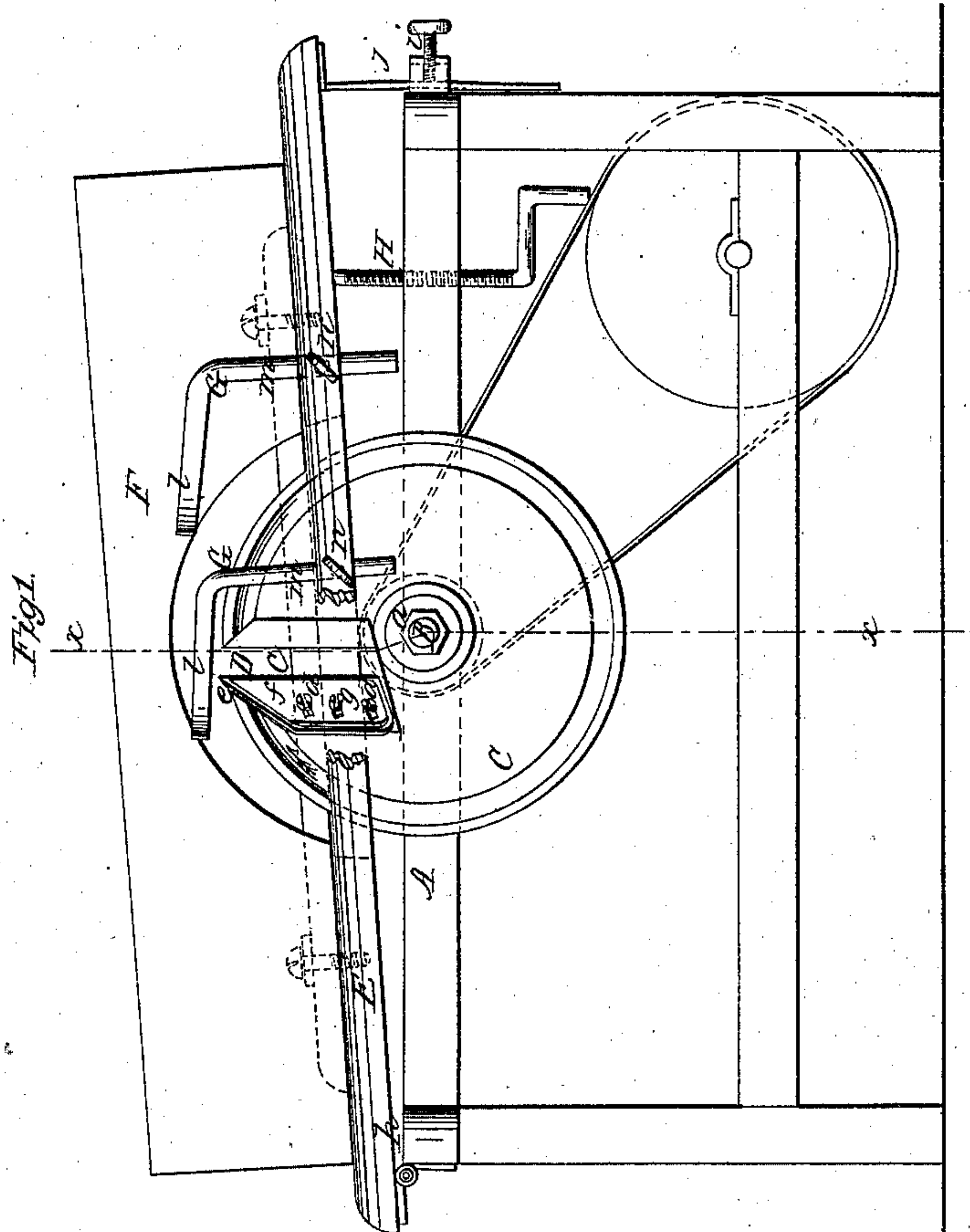
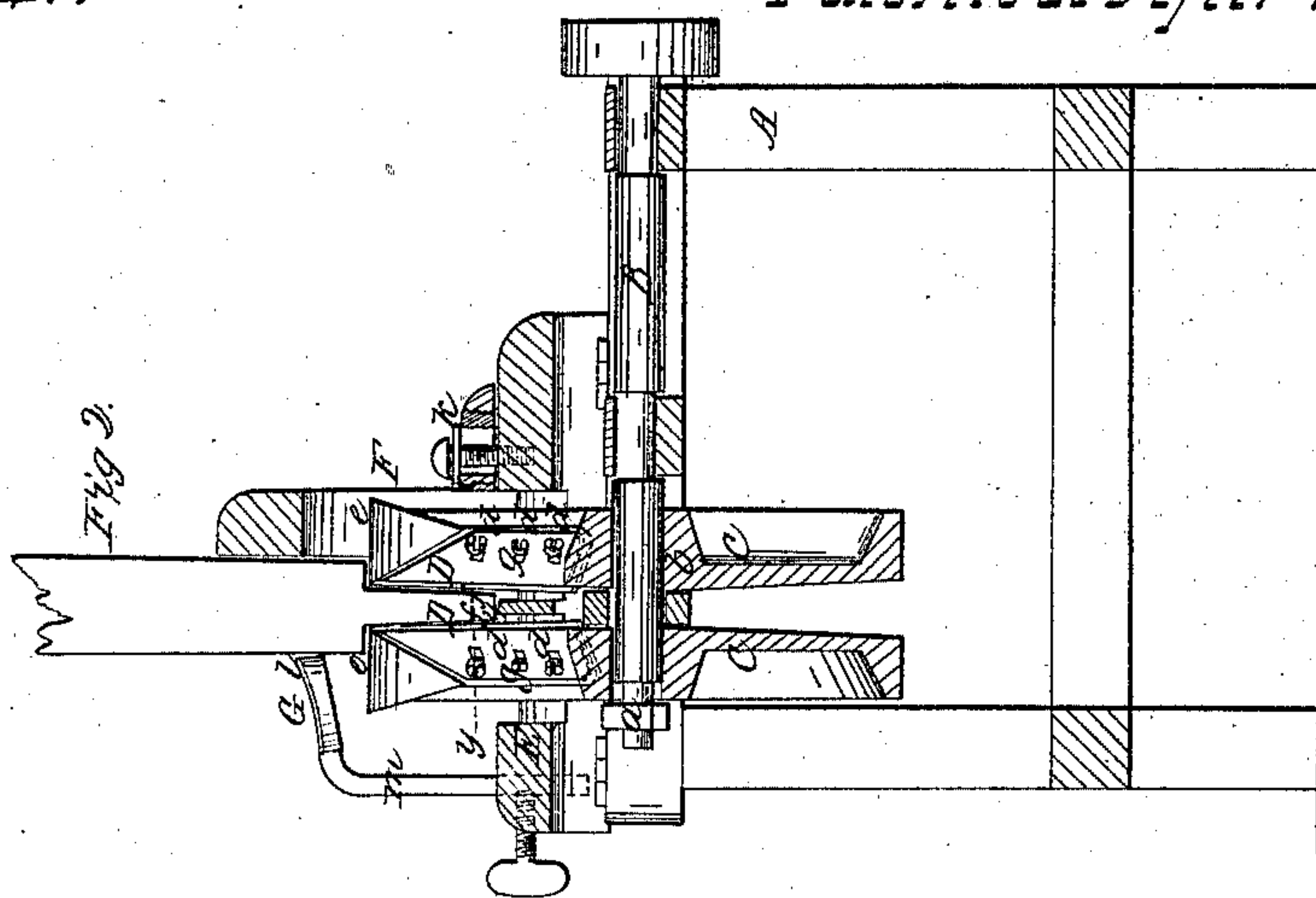


# Bain & Brown, Paneling Machine.

No 32,041.

Patented Apr. 10, 1861.



Witnesses:  
J. W. Correll  
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# UNITED STATES PATENT OFFICE.

JAMES BAIN AND SAM'L. C. BROWN, OF RICHMOND, INDIANA.

## TENONING-MACHINE.

Specification of Letters Patent No. 32,041, dated April 16, 1861.

*To all whom it may concern:*

Be it known that we, JAMES BAIN and S. C. BROWN, of Richmond, in the county of Wayne and State of Indiana, have invented a new and Improved Machine for Forming Door-Panels, Cutting Rabbets, &c.; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side view of our invention. Fig. 2, a transverse vertical section of the same, taken in the line *x, x*, Fig. 1. Fig. 3, a detached section of one of the cutter heads taken in the line *y, y*, Fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain a machine of very simple construction by which panels may be expeditiously formed for doors, and rabbets cut in doors, window blinds, and other articles.

The invention consists in the employment or use of one or more rotating cutter heads, peculiarly constructed and used in connection with an adjustable gage and guides and an adjustable table; all being arranged substantially as hereinafter described to effect the desired end.

To enable those skilled in the art to fully understand and construct our invention we will proceed to describe it.

A. represents a rectangular frame, which may be constructed in any proper way to support the working parts of the machine, and B. is a shaft which is placed transversely on the frame A. and has two wheels or circular heads C. C. secured on it by a nut *a*, which is fitted on a screw thread on the shaft B.

The wheels or heads C. C. are secured or kept at the desired distance apart by a small washer *b*, which is placed on the shaft B. as shown clearly in Fig. 2.

Each wheel or head C. has a slot *c*, made in it said slots being nearly in a radial position as shown in Fig. 1. The outer sides of the wheels or heads C. C. adjoining the slots *c*, are beveled to form throats for cutters D. D. which are secured by screws *d*, in an oblique position at one side of the slots.

The cutters D. D. are of angular form, the upper parts *e*, being parallel with the peripheries of the wheels or heads C. C., while the other parts *f*, are parallel with

the edges of the slots *c*, see Fig. 2. The lower parts of the cutters D. D. are covered by caps *g*, which serve the same purpose as the caps of ordinary joiners' planes, insuring a smooth cutting action.

The cutters D. may be adjusted in the slots *c*, so as to give them a greater or less depth of cut. This result is attained by having the slots, through which the screws *d*, pass, made oblong as shown in the figures.

The cutters D. D. project from the inner or face sides of the wheels or heads C. C. and these face sides are beveled or inclined slightly backward from the shaft B. as shown clearly in Fig. 2.

E. is a table or bed, one end of which is attached by hinges *h*, to the back end of the frame A. The table or bed E. is slotted to allow the wheels or heads C. C. to pass through it, and said table or bed may be secured at a greater or less degree of inclination by means of a set-screw *i*, and pendant *j*.

On the table or bed E. there is placed an adjustable gage F. This gage is secured to the table by set-screws *k, k*, one of which is shown in Fig. 2.

G. G. are two guides which are formed of two elastic metal strips *l, l*, which project at right angles from the upper ends of rods *m, m*, that are secured in the table or bed E. by set screws *n*.

H. is a screw by which the table or bed E. may be adjusted to have a greater or less degree of inclination as may be desired.

The operation is as follows: The stuff I. (shown in red) to be operated upon, is placed edgewise on the table or bed E. and adjusted in line with the space between the cutter heads C. C. by adjusting the gage F., the guides G. keeping the stuff against the gage. The shaft B. is rotated by any convenient power, and the stuff I. is fed along by hand or by mechanical means if desired, to the cutter heads C. C., the cutters D. D. of which act at opposite sides of the stuff and cut a rabbet at each side. If this operation is repeated, at each edge of the stuff, a panel will be formed at both sides of the stuff; the parts *e*, of the cutters acting in advance of the parts *f*, and cutting the edges of the projecting part or panel, while the parts *f*, take off a fine shaving and form smooth surfaces or faces for the reduced parts. The depth of the portion cut away

by the cutters is regulated by adjusting the bed E. In case a rabbet is to be formed at one side of the stuff, one of the cutter heads C. is removed from the shaft and a  
5 washer without a cutter substituted for it.

Having thus described our invention what we claim as new and desire to secure by Letters Patent; is,

The employment or use of one or two ro-  
0 tary cutter heads C. provided with bent or angular cutters D. D. as shown, in connec-

tion with the bed or table E. provided with the gage F. and guides G. G., all being arranged to operate as and for the purpose set forth.

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